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May 7, 2012

Mr. Keith Nowell, P.G., C.H.G.
Alameda County Health Care Services
Environmental Protection Division
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Reference: Semi-Annual Groundwater Monitoring Report (March 2012)
Former Hegenberger Maintenance Station
555 Hegenberger Road
Oakland, California

TO WHOM IT MAY CONCERN:

Attached for your review is the Semi-Annual Groundwater Monitoring Report (March 2012) for the Former Hegenberger Maintenance Station, 555 Hegenberger Avenue, Oakland, California. This report was prepared for the Alameda County Health Care Services Environmental Protection Division by Stantec Consulting Corporation.

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

If you have any questions, please do not hesitate to contact me or Stantec Project Manager Gary Messerotes at 408.356.6124 extension 252.

Sincerely,

For Ray Boyer

Ray Boyer, P.E.
Office of Environmental Engineering
Division of Environmental Planning & Engineering
Caltrans District 04
Ray_boyer@dot.ca.gov

Stantec Consulting Services Inc.
15575 Los Gatos Boulevard Building C
Los Gatos CA 95032
Tel: (408) 356-6124
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May 7, 2012

Mr. Keith Nowell, P.G., C.H.G.
Alameda County Health Care Services Agency
Environmental Protection Division
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Dear Mr. Nowell:

Reference: **Semi-Annual Groundwater Monitoring Report (March 2012)**
Former Hegenberger Maintenance Station
555 Hegenberger Road
Oakland, California

Stantec Consulting Services Inc. (Stantec) has prepared this report describing the first quarter 2012 semi-annual groundwater monitoring event conducted at the California Department of Transportation (Caltrans) Former Hegenberger Maintenance Station, located at 555 Hegenberger Road, Oakland, California (Site; Figure 1). The semi-annual groundwater sampling activities were conducted in accordance with requirements stated in the letter from the Alameda County Health Care Services Agency (ACHCSA) dated February 3, 2012 and Stantec's response letter dated February 21, 2012.

The conclusions presented in this report are professional opinions based on data described herein. Limitations associated with this report are described in Appendix A.

BACKGROUND

The Site was formerly occupied by Caltrans to store and service maintenance vehicles and equipment and is currently vacant on the eastern portion of the property and occupied as a parking lot for General Motors Corporation (GMC) Truck Center on the western portion. In September 1995, five groundwater monitoring wells (MW-1 through MW-5) were installed to assess the vertical and lateral extent of impacts to soil and groundwater from the former underground storage tanks (USTs) and pump island at the Site.

Previous groundwater monitoring events were intermittent between 1995 and 1998. Groundwater monitoring resumed in 2001 and had been conducted on an annual basis between 2001 and 2005. No groundwater sampling events were conducted between 2005 and September 2011.

The groundwater samples were originally sampled for total petroleum hydrocarbons (TPH) as gasoline (GRO); TPH as diesel (DRO); TPH as motor oil (MO); oil and grease (O&G); benzene, toluene, ethylbenzene, and xylenes (BTEX); methyl-tertiary butyl ether (MTBE). Volatile organic compounds (VOCs) were added to the groundwater sampling program in March 2001. Due to low concentrations, the ACHCSA approved the removal of TPH-MO, O&G, MTBE, and VOCs from the groundwater monitoring program, however analysis for MTBE and other fuel oxygenates have been reinstated.

GROUNDWATER MONITORING

Monitoring Well Redevelopment

On March 26 and 27, 2012, Gregg Drilling & Testing, Inc. (Gregg) redeveloped MW-1 through MW-5 using a surge block, submersible pump, and Teflon® bailer. Approximately ten well casing volumes of water were removed from each well. Upon completion of well development activities, groundwater monitoring wells MW-1 through MW-5 were capped, secured, and left to recharge. Well Development logs are provided in Appendix B.

Monitoring Well Resurveying

Stantec resurveyed monitoring wells MW-1 through MW-5 on March 30, 2012. Latitude and longitude were determined from the US State Plane Zone 3 Coordinate System, NAD 83 Datum; elevations were measured against a nearby NAVD 88 Benchmark and referenced to mean sea level. Updated monitoring well elevations are listed with well construction details in Table 1. Geo XY and Geo Z files containing the updated data were uploaded to Geotracker on April 26, 2012.

Groundwater Level Measurements

On March 30, 2012, Stantec measured groundwater levels in groundwater monitoring wells MW-1 through MW-5 to the nearest 0.01-foot using a Solinst™ electronic water level meter. Depth-to-water and calculated well volumes were recorded on Groundwater Sample Field Data Sheets (Appendix B). Depth-to-water measurements and groundwater elevations are presented in Table 1; groundwater elevations are illustrated on Figure 2.

Monitoring Well Purging and Sampling

On March 30, 2012, MW-1 through MW-5 were purged and sampled. Clean disposable bailers were used to purge and sample each well. Physical parameters, including pH, temperature, oxidation reduction potential (ORP), conductivity, and clarity, were monitored during purging and recorded on field data sheets (Appendix B).

Groundwater samples were transferred from the bailers to laboratory-supplied containers. Sample containers were sealed, labeled, and placed on ice for transport to APPL Laboratories in Clovis, California, a California-certified analytical laboratory. Field instruments were cleaned with a non-phosphate cleanser, a tap-water rinse, and a final de-ionized water rinse prior to use and between each well sampled. New nitrile gloves were used for each sampling point. Rinse and purge water was containerized in a 55-gallon drum, pending analysis.

Analytical Methods

The groundwater samples from each well were analyzed for TPH-GRO and TPH-DRO by EPA Method 8015B with silica gel cleanup, and for fuel oxygenates including BTEX, MTBE, tertiary amyl methyl ether (TAME), ethyl tertiary butyl ether (ETBE), diisopropyl ether (DIPE), tertiary butyl alcohol (TBA), ethylene dibromide (EDB), and 1,2-dichloroethane (EDC) by EPA Method 8260B. During this monitoring event, groundwater samples were also analyzed for total dissolved solids (TDS) by EPA Method 160.1 and for salinity by SM 2520B.

GROUNDWATER MONITORING RESULTS

The current groundwater flow direction appears to be radially outward from MW-1, with gradients ranging between 0.004 feet per foot (ft/ft) to 0.02 ft/ft. The groundwater elevation for MW-1 has historically been anomalous making it difficult to determine a true flow direction and gradient at the Site. Historical and current groundwater elevations are presented in Table 1.

DATA SUMMARY

Concentrations of TPH constituents, BTEX, and fuel oxygenates from this sampling event were generally within historic concentration ranges. TPH-GRO concentrations ranged between 120 micrograms per liter (µg/L) (MW-2) and 5,400 µg/L (MW-3), with MW-1 (630 µg/L) and MW-5 (200 µg/L) near historic lows; TPH-DRO concentrations ranged between non-detect (MW-2) to 780 µg/L (MW-3); and benzene concentrations ranged between 0.32 µg/L (MW-2) to 640 µg/L (MW-3), with MW-1 (14 µg/L) and MW-5 (1.5 µg/L) at or near their historic lows.

The San Francisco Regional Water Quality Control Board Environmental Screening Levels (ESLs, May 2008) where groundwater is not a current or potential source of drinking water for Commercial/Industrial land use was exceeded in groundwater monitoring wells MW-1 (TPH-GRO and TPH-DRO), MW-3 (TPH-GRO, TPH-DRO, and benzene), MW-4 (TPH-GRO, TPH-DRO, and benzene), and in MW-5 (TPH-DRO). All other analytes were below their respective ESLs or were not detected above the laboratory method detection limit.

TDS and salinity results indicate that the groundwater in the Site monitoring wells appears to not be impacted by salt-water intrusion from the nearby San Francisco Bay.

QUALITY CONTROL

Stantec reviewed laboratory quality control (QC) data provided in the certified analytical reports. Based on the review, the soil and groundwater analytical data are of adequate quality for the intended use.

According to the laboratory, for the EPA 8260B analysis of samples from MW-3, MW-4, and DUP-1, the results for the dilution did not match the initial undiluted injection; beyond the concentration of 100 µg/L, the instrument detector becomes saturated. The EPA 8015B TPH-GRO analysis for sample MW-1 recovered the surrogate 4-Bromofluorobenzene above the 130% upper control limit at 134% due to the matrix. Additionally, the laboratory control surrogate recovered the 4-Bromofluorobenzene at 135%. The TPH-GRO was recovered within acceptable limits.

Duplicate soil and grab groundwater samples were collected (Soil Dup and GW Dup) and the analytical results were within acceptable limits of the initial sample. Table 2 presents a summary of groundwater analytical results from the Site monitoring wells; the complete Certified Analytical Laboratory Reports and chain-of-custody documents are included in Appendix C.

FUTURE ACTIVITIES

In a separate report, Stantec will submit a site conceptual model containing a summary of the soil and groundwater characterization conducted between April 2 and April 6, 2012. Stantec will continue semi-annual groundwater monitoring at the Site in the third quarter 2012.

If you have any questions regarding this submittal, please contact Gary Messerotes at (408) 356-6124 extension 252.

Sincerely,

STANTEC CONSULTING SERVICES INC.

Jack C. Hardin, R.E.A.
Managing Principal

Gary P. Messerotes, P.G.
Project Manager

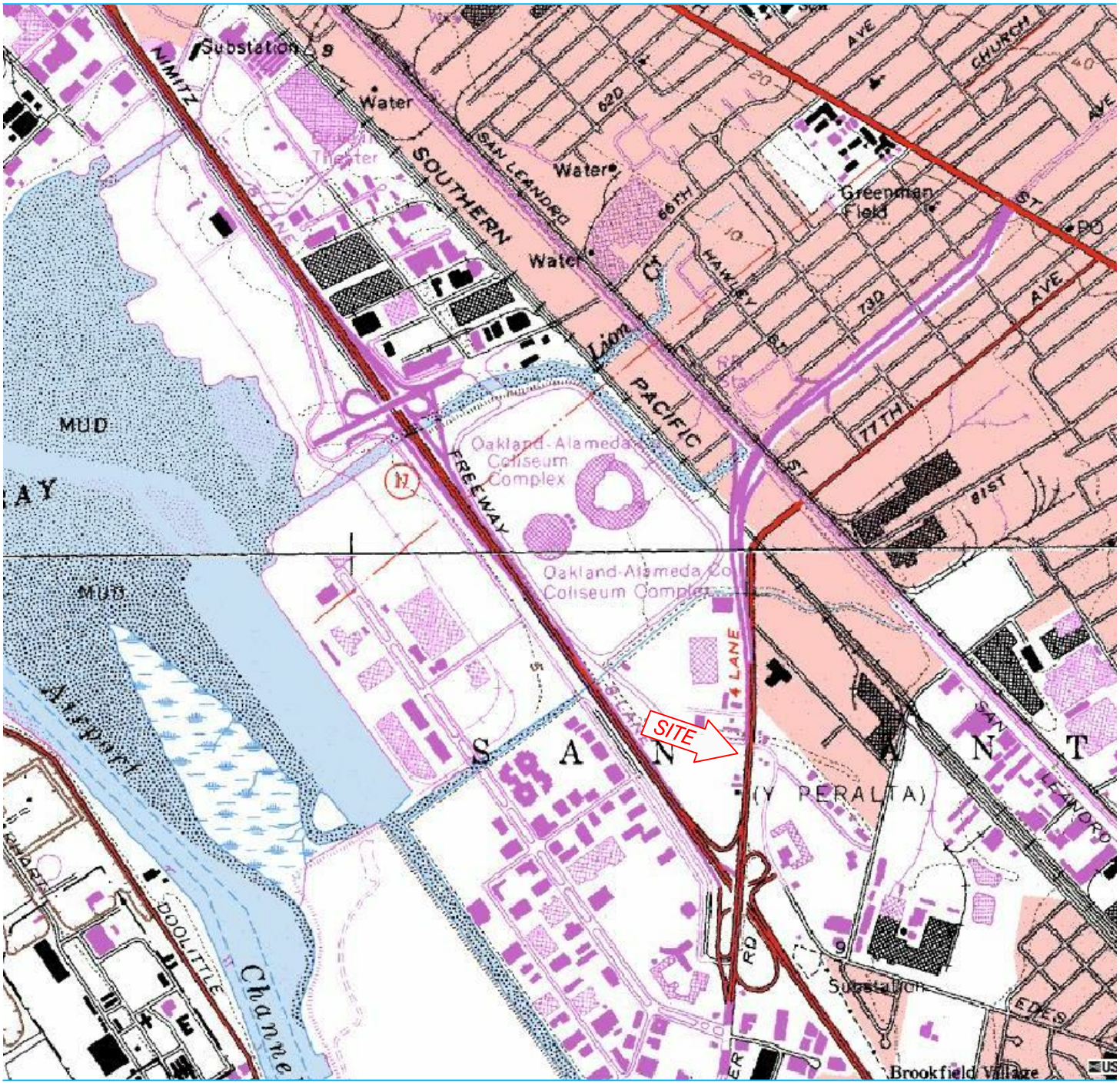
Attachments:

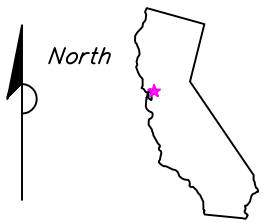
Table 1 – Historical Groundwater Elevation Data
Table 2 – Historical Groundwater Analytical Results

Figure 1 – Site Location Map
Figure 2 – Groundwater Elevations – First Quarter 2012

Appendix A – Statement of Limitations
Appendix B – Monitoring Well Development Logs and Groundwater Sample Field Data Sheets
Appendix C – Certified Analytical Laboratory Reports and Chain-of-Custody Documents

FIGURES





1 1/2 0 1

SCALE (MILES)

1000 0 1000 2000 3000 4000 5000 6000 7000

SCALE (FEET)

REFERENCE: USGS 7.5 MINUTE QUADRANGLE, OAKLAND, CALIFORNIA

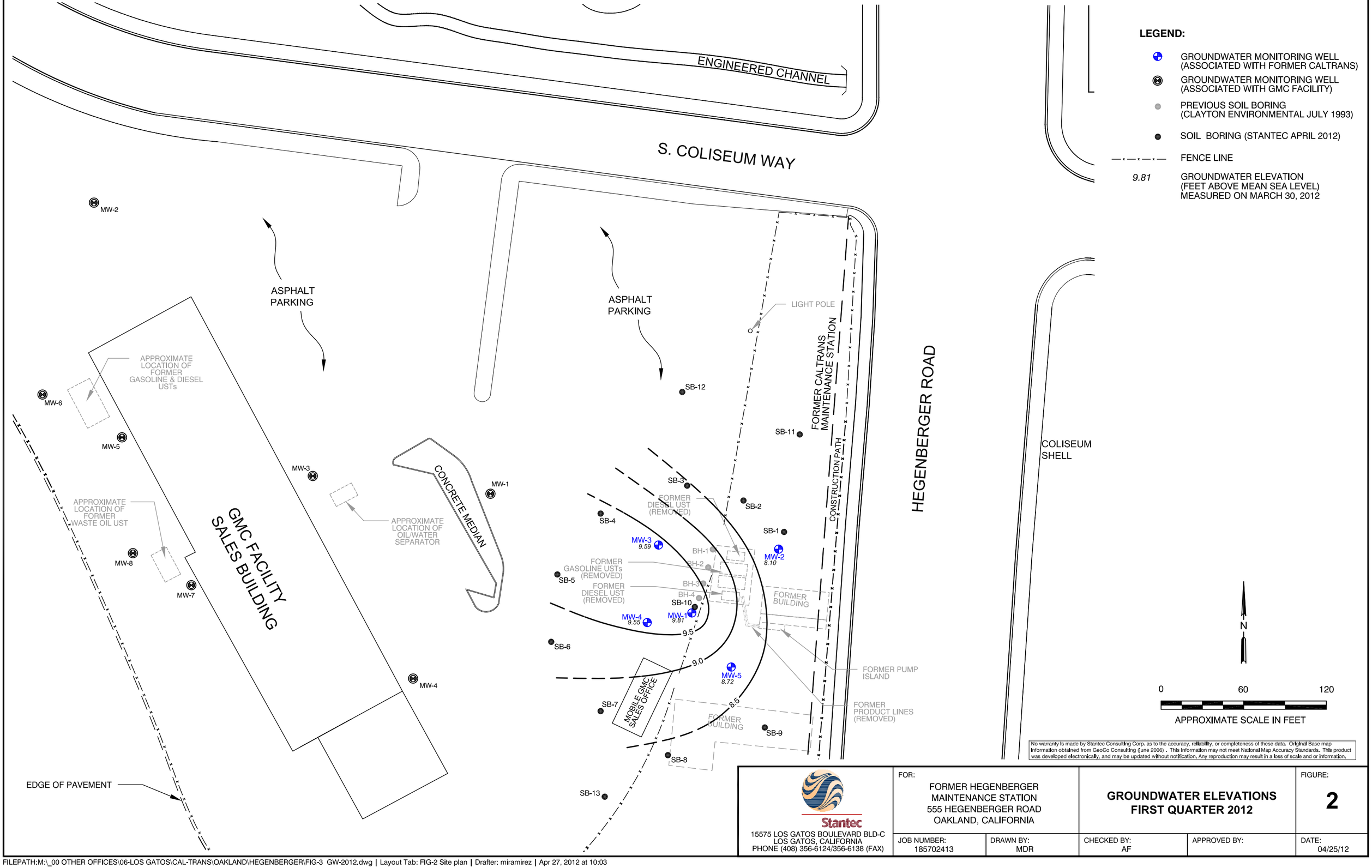
Stantec
15575 LOS GATOS BOULEVARD BLD-C
LOS GATOS, CALIFORNIA
PHONE (408) 356-6124/356-6138 (FAX)

FOR:
FORMER HEGENBERGER
MAINTENANCE STATION
555 HEGENBERGER ROAD
OAKLAND, CALIFORNIA

SITE LOCATION MAP

FIGURE: **1**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185702413	MDR	AF	--	10/13/11



LEGEND:

- GROUNDWATER MONITORING WELL (ASSOCIATED WITH FORMER CALTRANS)
- GROUNDWATER MONITORING WELL (ASSOCIATED WITH GMC FACILITY)
- PREVIOUS SOIL BORING (CLAYTON ENVIRONMENTAL JULY 1993)
- SOIL BORING (STANTEC APRIL 2012)
- FENCE LINE
- *9.81* GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL) MEASURED ON MARCH 30, 2012

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555 HEGENBERGER ROAD
OAKLAND, CALIFORNIA

GROUNDWATER ELEVATIONS FIRST QUARTER 2012

FIGURE: **2**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185702413	MDR	AF		04/25/12

FILEPATH:M:_00 OTHER OFFICES\06-LOS GATOS\CAL-TRANS\OAKLAND\HEGENBERGER\FIG-3 GW-2012.dwg | Layout Tab: FIG-2 Site plan | Drafter: miramirez | Apr 27, 2012 at 10:03

TABLES

TABLE 1
Historical Groundwater Elevation Data
Caltrans Former Hegenberger Maintenance Station
555 Hegenberger Road
Oakland, CA

Sample ID	Well Screen Interval (feet)	Date	TOC Elevation (feet, msl)	DTW (feet)	GW Elevation (feet, msl)
MW-1	4.5-19.5	10/11/95	99.73	6.55	93.18
		01/17/96	99.73	5.64	94.09
		04/16/96	99.73	5.46	94.27
		08/26/96	99.73	5.91	93.82
		11/14/96	99.73	6.16	93.57
		02/18/98	99.73	3.82	95.91
		03/30/01	99.73	6.19	93.54
		*12/26/01	10.26	4.08	6.18
		*9/30/2002	10.26	5.79	4.47
		*2/20/2003	10.26	4.49	5.77
		*1/12/2004	10.26	4.41	5.85
		*5/12/2005	10.26	4.45	5.81
		*9/29/2011	10.26	5.57	4.69
		**3/30/2012	13.31	3.50	9.81
MW-2	5-20	10/11/95	99.68	6.88	92.80
		01/17/96	99.68	5.32	94.36
		04/16/96	99.68	5.81	93.87
		08/26/96	99.68	5.98	93.70
		11/14/96	99.68	6.72	92.96
		02/18/98	99.68	5.01	94.67
		03/30/01	99.68	6.54	93.14
		*12/26/01	10.22	5.53	4.69
		*9/30/02	10.22	6.48	3.74
		*2/20/03	10.22	5.98	4.24
		*1/12/04	10.22	5.69	4.53
		*5/12/05	10.22	5.55	4.67
		*9/29/11	10.22	6.21	4.01
		**3/30/12	13.10	5.00	8.10
MW-3	4.5-19.5	10/11/95	98.92	6.42	92.50
		01/17/96	98.92	5.82	93.10
		04/16/96	98.92	5.85	93.07
		08/26/96	98.92	5.72	93.20
		11/14/96	98.92	6.28	92.64
		02/18/98	98.92	4.65	94.27
		03/30/01	98.92	5.62	93.30
		*12/26/01	9.46	4.66	4.80
		*9/30/02	9.46	5.84	3.62
		*2/20/03	9.46	5.55	3.91
		*1/12/04	9.46	4.77	4.69
		*5/12/05	9.46	4.63	4.83
		*9/29/11	9.46	5.50	3.96
		**3/30/12	12.34	2.75	9.59
MW-4	4-19	10/11/95	99.46	6.63	92.83
		01/17/96	99.46	5.77	93.69
		04/16/96	99.46	5.89	93.57

TABLE 1
Historical Groundwater Elevation Data
Caltrans Former Hegenberger Maintenance Station
555 Hegenberger Road
Oakland, CA

Sample ID	Well Screen Interval (feet)	Date	TOC Elevation (feet, msl)	DTW (feet)	GW Elevation (feet, msl)
MW-4 (cont.)		08/26/96	99.46	6.14	93.32
		11/14/96	99.46	6.72	92.74
		02/18/98	99.46	5.02	94.44
		03/30/01	99.46	6.21	93.25
		*12/26/01	10.00	5.37	4.63
		*9/30/02	10.00	6.40	3.60
		*2/20/03	10.00	5.83	4.17
		*1/12/04	10.00	5.41	4.59
		*5/12/05	10.00	5.59	4.41
		*9/29/11	10.00	6.23	3.77
		**3/30/12	12.85	3.30	9.55
MW-5	5-20	10/11/95	99.91	6.68	93.23
		01/17/96	99.91	5.74	94.17
		04/16/96	99.91	5.85	94.06
		08/26/96	99.91	5.99	93.92
		11/14/96	99.91	6.70	93.21
		02/18/98	99.91	5.74	94.17
		03/30/01	99.91	6.73	93.18
		*12/26/01	10.34	5.23	5.11
		*9/30/02	10.34	6.18	4.16
		*2/20/03	10.34	5.80	4.54
		*1/12/04	10.34	5.60	4.74
		*5/12/05	10.34	6.18	4.16
		*9/29/11	10.34	6.37	3.97
		**3/30/12	13.33	4.61	8.72

Notes
Data prior to September 29, 2011 was provided by Geocon Consultants, Inc.
TOC = Top of Casing
DTW = Depth to groundwater
GW = groundwater
msl = mean sea level
* Monitoring wells were resurveyed with latitude and longitude coordinates referenced to the California state Coordinate system, Zone III (NAD83) and elevations reverenced to NGVD 29 Benchmark Elevation = 10.76 feet
** Stantec resurveyed the wells on March 30, 2012. Latitude and longitude were determined from the US State Plane Zone 3 Coordinate System, NAD 83 Datum; elevations were measured against a NAVD 88 Benchmark and referenced to mean sea level.

Table 2
Historical Groundwater Analytical Results
Caltrans Former Hegenberger Maintenance Station
555 Hegenberger Road
Oakland, CA

Sample ID	Date	TPH-GRO (µg/L)	TPH-DRO (µg/L)	TPH-MO (µg/L)	O&G (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Other VOCs (µg/L)	TAME (µg/L)	ETBE (µg/L)	DIPE (µg/L)	TBA (µg/L)	EDB (µg/L)	EDC (µg/L)	TDS (mg/L)	Salinity (s)
ESL where groundwater IS NOT a current or potential source of drinking water		210	210	210	210	46	130	43	100	1,800	NE	NE	NE	NE	18,000	NE	200	NE	NE
MW-1	10/11/1995	**720**	<50	<50	<5,000	**660**	13	4.7	2.8	--	--	--	--	--	--	--	--	--	--
	1/17/1996	**4,400**	<50	<50	--	**1,000**	30	21	17	--	--	--	--	--	--	--	--	--	--
	4/16/1996	**6,050**	**7,450**	--	--	**914**	34.7	34.4	15.8	--	--	--	--	--	--	--	--	--	--
	8/26/1996	**3,800**	**430**	--	--	**780**	23	21	20	--	--	--	--	--	--	--	--	--	--
	11/14/1996	**2,600**	**270**	--	--	**500**	18	14	8.9	--	--	--	--	--	--	--	--	--	--
	2/18/1998	**3,100**	**800**	--	--	**240**	18	7.8	11	20	--	--	--	--	--	--	--	--	--
	3/30/2001	**3,600**	**480**	--	--	**150**	13	0.7	10.8	<0.5	<5	--	--	--	--	--	--	--	--
	12/26/2001	**3,000**	**1,100**	--	--	**86**	11	3.4	10.5	<5	Isopropylbenzene = 7.9 n-butylbenzene = 5.1 n-propylbenzene = 5.9	-- -- --	-- -- --	-- -- --	-- -- --	-- -- --	-- -- --	-- -- --	-- -- --
	9/30/2002	**590**	<50	--	--	12	2.7	<0.5	1.6	<0.5	--	--	--	--	--	--	--	--	--
	2/20/2003	**2,660**	--	--	--	36.9	10.6	7	18.1	<5	--	--	--	--	--	--	--	--	--
	1/12/2004	**1,610**	--	--	--	6.8	1.8	1.8	1.4	--	--	--	--	--	--	--	--	--	--
	5/12/2005	**1,200**	--	--	--	20	<5	<5	<5	--	--	--	--	--	--	--	--	--	--
	9/30/2011	**950**	**530**[++]	--	--	14	6.5	0.36[J]	6.9	<0.19	<0.14 - <10.00	<0.14	<0.19	<0.16	<10.00	<0.20	<0.14	--	--
	3/30/2012	**630**	**280**[++]	--	--	14	4.4	0.36[J]	4.9	<0.26	<0.14 - <10.00	<0.14	<0.19	<0.16	<10.00	<0.20	<0.14	435	0.44 [J]
MW-2	10/11/1995	<50	<50	<50	<5,000	<0.3	<0.3	<0.3	<0.5	--	--	--	--	--	--	--	--	--	--
	1/17/1996	**4,900**	<50	<50	--	**2,100**	<1.5	<15	<15	--	--	--	--	--	--	--	--	--	--
	4/16/1996	<50	<50	--	--	1.0	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--	--
	8/26/1996	<50	<50	--	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--	--
	11/14/1996	<50	56	--	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--	--
	2/18/1998	<50	**260**	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
	3/30/2001	<200	**370**	--	--	2.7	0.8	<0.5	0.8	<0.5	<5	--	--	--	--	--	--	--	--
	12/26/2001	86	140	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<5	--	--	--	--	--	--	--	--
	9/30/2002	<50	<50	--	--	<0.5	<5	<0.5	<1.5	<0.5	--	--	--	--	--	--	--	--	--
	2/20/2003	110	--	--	--	6.6	<0.5	<0.5	<1	<0.5	--	--	--	--	--	--	--	--	--
	1/12/2004	67	--	--	--	<0.5	<0.5	<0.5	<1	--	--	--	--	--	--	--	--	--	--
	5/12/2005	**330**	--	--	--	<1	<1	<1	<1	--	--	--	--	--	--	--	--	--	--
	9/30/2011	130	<40.40	--	--	<0.16	<0.17	<0.23	<0.19	<0.19	<0.14 - <10.00	<0.14	<0.19	<0.16	<10.00	<0.20	<0.14	--	--
	3/30/2012	120	<40.40	--	--	0.32 [J]	0.24 [J]	<0.23	0.44 [J]	<0.26	<0.14 - <10.00	<0.14	<0.19	<0.16	<10.00	<0.20	<0.14	853	0.93 [J]
MW-3	10/11/1995	**1,300**	<50	<50	<5,000	1.0	<0.3	<0.3	<0.3	--	--	--	--	--	--	--	--	--	--
	1/17/1996	171	<50	<50	--	**64**	<0.3	1	<0.3	--	--	--	--	--	--	--	--	--	--
	4/16/1996	**6,740**	**565**	--	--	**2,770**	31	13.9	21.9	--	--	--	--	--	--	--	--	--	--
	8/26/1996	**700**	**700**	--	--	**180**	4.2	1	4.6	--	--	--	--	--	--	--	--	--	--
	11/14/1996	**300**	120	--	--	6.2	1.2	0.7	1.4	--	--	--	--	--	--	--	--	--	--
	2/18/1998	**11,000**	**2,500**	--	--	**3,070**	50	**54**	19	25	--	--	--	--	--	--	--	--	--
	3/30/2001	**9,900**	**490**	--	--	**2,000**	48	39	39	<0.5	Isopropylbenzene = 92 n-butylbenzene = 38 n-propylbenzene = 280 sec-butylbenzene = 13	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --	-- -- -- --
	12/26/2001	**9,400**	**1,700**	--	--	**1,500**	45	33	28	12	Isopropylbenzene = 85 n-butylbenzene = 39 n-propylbenzene = 250	-- -- --	-- -- --	-- -- --	-- -- --	-- -- --	-- -- --	-- -- --	-- -- --
	9/30/2002	**2,020**	**570**	--	--	**775**	17.2	1	8.4	<0.5	--	--	--	--	--	--	--	--	--
	2/20/2003	**4,010**	--	--	--	**1,120**	<50	<50	<100	<50	--	--	--	--	--	--	--	--	--
	1/12/2004	**3,520**	--	--	--	**632**	26.9	<25	<50	--	--	--	--	--	--	--	--	--	--
	5/12/2005	**5,200**	--	--	--	**1,000**	30	20	10	--	--	--	--	--	--	--	--	--	--
	9/30/2011	**3,800**	**900**[++]	--	--	**390**	16	1.1	14	<0.14	<0.14 - <10.00	<0.14	<0.19	<0.16	<10.00	<0.20	<0.14	--	--
	3/30/2012	**5,400**	**780**[++]	--	--	**640**	29	10	24	<0.26	<0.14 - <10.00	<0.14	<0.19	<0.16	<10.00	<0.20	<0.14	1,380	1.6 [J]

Table 2
Historical Groundwater Analytical Results
Caltrans Former Hegenberger Maintenance Station
555 Hegenberger Road
Oakland, CA

Sample ID	Date	TPH-GRO (µg/L)	TPH-DRO (µg/L)	TPH-MO (µg/L)	O&G (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Other VOCs (µg/L)	TAME (µg/L)	ETBE (µg/L)	DIPE (µg/L)	TBA (µg/L)	EDB (µg/L)	EDC (µg/L)	TDS (mg/L)	Salinity (s)
ESL where groundwater IS NOT a current or potential source of drinking water		210	210	210	210	46	130	43	100	1,800	NE	NE	NE	NE	18,000	NE	200	NE	NE
MW-4	10/11/1995	**500**	<50	<50	<5,000	17	1.1	<0.3	0.5	--	--	--	--	--	--	--	--	--	--
	1/17/1996	**460**	<50	<50	--	**72**	4.1	<0.3	1.7	--	--	--	--	--	--	--	--	--	--
	4/16/1996	**2,200**	<50	--	--	**851**	7.7	1.4	5.7	--	--	--	--	--	--	--	--	--	--
	8/26/1996	**300**	110	--	--	**55**	4.9	1.2	<0.5	--	--	--	--	--	--	--	--	--	--
	11/14/1996	200	200	--	--	3.4	<0.5	--	<0.5	--	--	--	--	--	--	--	--	--	--
	2/18/1998	**1,500**	**260**	--	--	**320**	9.1	1	0.6	1.7	--	--	--	--	--	--	--	--	--
	3/30/2001	**2,700**	**350**	--	--	**320**	16	5.3	13.6	<0.5	Isopropylbenzene = 6.4	--	--	--	--	--	--	--	--
	12/26/2001	**600**	200	--	--	33	3	<0.5	1.7	0.8	<5	--	--	--	--	--	--	--	--
	9/30/2002	67	<50	--	--	<0.5	<0.5	<0.5	<1.5	<0.5	--	--	--	--	--	--	--	--	--
	2/20/2003	**570**	--	--	--	**107**	<10	<10	<2.0	<10	--	--	--	--	--	--	--	--	--
	1/12/2004	**700**	--	--	--	**122**	13.5	0.6	8.8	--	--	--	--	--	--	--	--	--	--
	5/12/2005	**760**	--	--	--	14	5.7	<5	<5	--	--	--	--	--	--	--	--	--	--
	9/30/2011	14 J	<40.40	--	--	<0.16	<0.17	<0.23	<0.19	<0.19	<0.14 - <10.00	<0.14	<0.19	<0.16	<10.00	<0.20	<0.14	--	--
DUP-1	9/30/2011	15 J	<40.40	--	--	<0.16	<0.17	<0.23	<0.19	<0.19	<0.14 - <10.00	<0.14	<0.19	<0.16	<10.00	<0.20	<0.14	576	0.57 J
	3/30/2012	**2,200**	**340 ++**	--	--	**340**	23	2.8	19	<0.26	<0.14 - <10.00	<0.14	<0.19	<0.16	<10.00	<0.20	<0.14	731	0.80 J
DUP-1	3/30/2012	**2,300**	**310 ++**	--	--	**330**	23	2.9	19	<0.26	<0.14 - <10.00	<0.14	<0.19	<0.16	<10.00	<0.20	<0.14	576	0.57 J
MW-5	10/11/1995	**1,000**	<50	<50	<5,000	45	15	1.9	6.1	--	--	--	--	--	--	--	--	--	--
	1/17/1996	<50	<50	<50	--	2	<0.3	<0.3	<0.3	--	--	--	--	--	--	--	--	--	--
	4/16/1996	**1,740**	**855**	--	--	**157**	20.1	3.9	22.4	--	--	--	--	--	--	--	--	--	--
	8/26/1996	**900**	**270**	--	--	**55**	6.4	0.9	3.7	--	--	--	--	--	--	--	--	--	--
	11/14/1996	**700**	**320**	--	--	31	5.7	0.7	0.38	--	--	--	--	--	--	--	--	--	--
	2/18/1998	**1,200**	**580**	--	--	14	5.2	0.8	5.5	**9.5**	--	--	--	--	--	--	--	--	--
	3/30/2001	**1,500**	**480**	--	--	7.2	6.5	<0.5	10.7	<0.5	n-propylbenzene = 5.1	--	--	--	--	--	--	--	--
	12/26/2001	**5,000**	**7,200**	--	--	0.8	10.5	3.8	10.5	3.6	Isopropylbenzene = 6	--	--	--	--	--	--	--	--
	9/30/2002	**560**	**430**	--	--	1.8	5.2	<0.5	6.5	<0.5	--	--	--	--	--	--	--	--	--
	2/20/2003	**1,040**	--	--	--	<2.5	8.6	<2.5	11.3	<2.5	--	--	--	--	--	--	--	--	--
	1/12/2004	**1,820**	--	--	--	4.2	8	0.6	12.8	--	--	--	--	--	--	--	--	--	--
	5/12/2005	**1,300**	--	--	--	<5	<5	<5	<5	--	--	--	--	--	--	--	--	--	--
	9/30/2011	**960**	**440 ++**	--	--	0.34 J	0.52 J	<0.23	1.8	<0.19	<0.14 - <10.00	<0.14	<0.19	<0.16	<10.00	<0.20	<0.14	--	--
	3/30/2012	200	**270 ++**	--	--	1.5	2.4	<0.23	5.2	<0.26	<0.14 - <10.00	<0.14	<0.19	<0.16	<10.00	<0.20	<0.14	576	0.57 J
Trip Blank	3/30/2012	<8.60	<40.40	--	--	<0.16	<0.17	<0.23	<0.19	<0.26	<0.14 - <10.00	<0.14	<0.19	<0.16	<10.00	<0.20	<0.14	576	0.57 J
EB-1	9/30/2011	<8.60	<40.40	--	--	<0.16	<0.17	<0.23	<0.19	<0.19	<0.14 - <10.00	<0.14	<0.19	<0.16	<10.00	<0.20	<0.14	576	0.57 J
EB-1	3/30/2012	<8.60	<40.40	--	--	<0.16	0.20 J	<0.23	0.26 J	<0.26	<0.14 - <10.00	<0.14	<0.19	<0.16	<10.00	<0.20	<0.14	576	0.57 J

Table 2
Historical Groundwater Analytical Results
Caltrans Former Hegenberger Maintenance Station
555 Hegenberger Road
Oakland, CA

Sample ID	Date	TPH-GRO (µg/L)	TPH-DRO (µg/L)	TPH-MO (µg/L)	O&G (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Other VOCs (µg/L)	TAME (µg/L)	ETBE (µg/L)	DIPE (µg/L)	TBA (µg/L)	EDB (µg/L)	EDC (µg/L)	TDS (mg/L)	Salinity (s)
ESL where groundwater IS NOT a current or potential source of drinking water		210	210	210	210	46	130	43	100	1,800	NE	NE	NE	NE	18,000	NE	200	NE	NE

Notes:
Data prior to September 30, 2011 was provided by Geocon Consultants, Inc.
All groundwater concentrations measured in parts per billion (ppb), or micrograms per Liter (µg/L)
BOLD denote concentration levels at or above ESL where groundwater IS NOT a potential drinking water source for Commercial/Industrial land use as set forth by the San Francisco Bay Regional Water Quality Control Board in May 2008
amsl - above mean sea level
ESL = Environmental Screening Level for Commercial/Industrial Land Use
NE = Not established for compounds detected
TPH-GRO = Total petroleum hydrocarbons as gaseline range organics
TPH-DRO = Total petroleum hydrocarbons as diesel range organics
TPH-MO = Total petroleum hydrocarbons as motor oil range organics
O&G = Oil and Grease
MTBE = Methyl tertiary butyl ether
TAME = Tertiary amyl methyl ether
ETBE = Ethyl tertiary butyl ether
DIPE = Diisopropyl ether
TBA = Tertiary butyl alcohol
EDB = Ethylene dibromide
EDC = 1,2-dicholorethane
Only volatile organic compounds detected above laboratory reporting limits or practical quanitation limits are noted
-- = Analysis not performed
++ = The analyst has noted that the chromatogram of this sample is mainly lower boiling hydrocarbons.
J = Estimated value.

APPENDIX A
STATEMENT OF LIMITATIONS

Stantec	LIMITATIONS AND CERTIFICATIONS FOR NON-PHASE I REPORTS	QA/QC-302B	
		Page 1 of 1	
		Rev. 1.1	Apr 3, 2007

This report was prepared in accordance with the scope of work outlined in Stantec's contract and with generally accepted professional engineering and environmental consulting practices existing at the time this report was prepared and applicable to the location of the Site. It was prepared for the exclusive use of The California Department of Transportation (Caltrans) for the express purpose stated above. Any re-use of this report for a different purpose or by others not identified above shall be at the user's sole risk without liability to Stantec. To the extent that this report is based on information provided to Stantec by third parties, Stantec may have made efforts to verify this third party information, but Stantec cannot guarantee the completeness or accuracy of this information. The opinions expressed and data collected are based on the conditions of the Site existing at the time of the field investigation. No other warranties, expressed or implied are made by Stantec.

Prepared by:

Alicia Falk, R.E.A.
Project Scientist

Reviewed by:

Jack Hardin, R.E.A.
Managing Principal

All information, conclusions, and recommendations provided by Stantec in this document regarding the Site have been prepared under the supervision of and reviewed by the Licensed Professional whose signature appears below:

Licensed Approver:

Name: **Gary P. Messerotes, P.G.**

Signature:

Date: May 7, 2012

Stamp:

PROFESSIONAL GEOLOGIST
GARY P. MESSEROTES
No. 6[illegible]
exp 07/31/12
STATE OF CALIFORNIA

APPENDIX B
MONITORING WELL DEVELOPMENT LOGS AND GROUNDWATER SAMPLE FIELD DATA SHEETS

GREGG

MONITORING WELL DEVELOPMENT LOG

All measurements taken from: ☐ Top of Casing ☐ Protective Casing ☐ Ground Level

Sample ID ______

Qty. of Drilling Fluid Lost ______

Well Number: MW-1

Date: 3/26/12 / 3/27/12

Time Start: 12:40 End: 4:00

Client: Stanfac

Project: [illegible]

Job Number: [illegible]

Installation Date ______

Well Diameter: 4"

Borehole Diameter: 10"

Screen Length: 15'

Measured Depth (pre-development): 19.3'

Measured Depth (post-development): 19.3'

Static Water Level (ft.): 3.6'

Standing Water Column (ft.): 15.7'

One Well Volume (gal.): 10.36

One Annulus Vol. (gal.) ______

Minimum Gal. to be Purged ______

Development Method: Bail / surge, Bail / pump

Purging Equipment: pump

Water Level Equipment: Solinst

pH/EC Meter: Hanna

Turbidity Meter: Hach

Other ______

Time	Amount Purged (gal.)	Field Parameters Measured: pH	EC	Turbidity	D.O.	D.O. Temp.	SAL.	GPM / W.L.	Comments	Field Tech.
3/26/12										
1:20	15gal	–	–	–	–	–	–	–	Bail, surge, Bail	
1:50	20gal	8.72	1.08	949	–	18.9	.04	1/15'	– pump	
2:05	30gal	6.42	.854	826	–	18.6	.03	1.0/16'	– pump	
2:25	40gal	7.32	.877	999	–	19.3°	.03	.10/17'	– pump	
3:12	50gal	7.15	.790	667	–	18.7°	.03		– well went Dry @ 2:36	
3:25	55gal	7.19	.752	685	–	18.7°	.03		– let well recharge 2:36–3:11	
4:05	60gal	7.41	.690	691	–	18.3	.02		– let well recharge 3:30–4:00	
4:10	65gal	7.22	.653	603	–	17.8°	.02		– [illegible]	
3/27/12										
7:17	75gal	7.39	.696	460	–	17.1	.02			
7:30	85gal	7.09	.683	145	–	17.0°	.02			
FINAL FIELD PARAMETER MEASUREMENTS										
7:35	95gal	6.39	.680	78	–	17.2°	.02			

GREGG

MONITORING WELL DEVELOPMENT LOG

All measurements taken from: ☑ Top of Casing ☐ Protective Casing ☐ Ground Level

Sample ID ______

Qty. of Drilling Fluid Lost ______

Well Number: MW-2

Date: 3/17/10

Time Start: 6:30 End: 12:18

Client: Stantec

Project: ~~D~~ Former [illegible]

Job Number: DE120134

Installation Date ______

Well Diameter: 4"

Borehole Diameter: 6"

Screen Length: 15'

Measured Depth (pre-development): 19.1'

Measured Depth (post-development): 19.1'

Static Water Level (ft.): 5.3'

Standing Water Column (ft.): 13.8'

One Well Volume (gal.): 7.1

One Annulus Vol. (gal.) ______

Minimum Gal. to be Purged ______

Development Method: Bail / surge / Bail / pump

Purging Equipment: pump / PVC

Water Level Equipment: Solinst

pH/EC Meter: Horiba

Turbidity Meter: Horiba

Other ______

Time	Amount Purged (gal.)	pH	EC	Turbidity	D.O.	D.O. Temp.	SAL.	GPM / W.L.	Comments	Field Tech.
10:35	15gal								Bail, surge, Bail	
11:00	25gal	6.61	1.40	999	—	17.1°	.89			
11:19	35gal	6.64	1.34	999	—	16.4°	.86			
11:29	45gal	6.67	1.39	999	—	17.6°	.88			
11:38	55gal	6.71	1.41	999	—	18.1°	.89			
11:49	65gal	6.73	1.44	630	—	18.2°	.92			
11:55	75gal	6.73	1.38	210	—	17.6°	.88			
12:07	85gal	6.79	1.51	113	—	18.3°	.96			
12:16	95gal	6.81	1.58	48	—	17.2°	.99			

FINAL FIELD PARAMETER MEASUREMENTS

GREGG

MONITORING WELL DEVELOPMENT LOG

All measurements taken from: ☒ Top of Casing ☐ Protective Casing ☐ Ground Level

Sample ID ____

Qty. of Drilling Fluid Lost ____

Well Number: MW-3

Date: 3/26/12 3/27/12

Time Start: 7:40am End: 5:00

Client: STANTEC

Project: Former Caltrans

Job Number: DE120164

Installation Date: ____

Well Diameter: 4"

Borehole Diameter: 10"

Screen Length: 15'

Measured Depth (pre-development): 19.3'

Measured Depth (post-development): 17.3'

Static Water Level (ft.): 3.2'

Standing Water Column (ft.): 16.1'

One Well Volume (gal.): 10.6 gallons

One Annulus Vol. (gal.): ____

Minimum Gal. to be Purged: 100

Development Method: Bail/surge; Bail/pump

Purging Equipment: pump

Water Level Equipment: Solinst

pH/EC Meter: Horiba

Turbidity Meter: Horiba

Other: ____

Time	Amount Purged (gal.)	pH	EC	Turbidity	D.O.	~~D.O.~~ Temp.	SAL.	GPM / W.L.	Comments	Field Tech.
		Field Parameters Measured								
7:42am	35gallons	—	—	—	—	—	—	—	-Bail, surge, Bail	VJack
9:35am	1gallon	7.29	2.71	999	—	15.7°		← .45	-hole dewater let recharge	
9:58am	6gallons	7.35	2.80	999	—	18.6	—	← .13	to surge 8:45-	
4:34	10gallons	7.18	2.35	999	—	19.2	—	← .14	-9:45 well dewatered	
4:42	15gallons	7.03	2.90	999	—	18.3	—	← .14	-Bail hole for readings	
4:47	20gallons	7.10	2.92	999	—	18.9°	.14	—	-10:00 let hole recharge	
4:52	25gallon	7.19	3.16	999	—	19.2°	.15	—	-4:15 surge well again	
3/27/12									then rebail	
8:00am	35gallons	6.56	2.80		—	17.5°	.13	—	-well went Dry	
8:03am	45gallons	6.56	3.11	522	—	17.1°	.15	—		
8:10am	55gallons	7.88	3.48	702	-	17.9	.17			

FINAL FIELD PARAMETER MEASUREMENTS

Time	Amount Purged (gal.)	pH	EC	Turbidity	D.O.	Temp.	SAL.	GPM / W.L.	Comments	Field Tech.
8:16	65gallons	6.80	5.01	561	—	17.3	.18	—		

GREGG

MONITORING WELL DEVELOPMENT LOG

Page ______ of ______

Sample ID ______

All measurements taken from: ☒ Top of Casing ☐ Protective Casing ☐ Ground Level

Qty. of Drilling Fluid Lost ______

Well Number: MW-4	Borehole Diameter: 10"	Minimum Gal. to be Purged:
Date: 7/26/12	Screen Length: 15'	Development Method: Bail / surge / Bail
Time Start: 10:15am End: 12:30pm	Measured Depth (pre-development): 15.4'	
Client: Stantec	Measured Depth (post-development): 16.5'	Purging Equipment: ———
Project: Former [illegible]	Static Water Level (ft.): 5.6'	Water Level Equipment: Solinst
Job Number: [illegible]	Standing Water Column (ft.): 9.8'	pH/EC Meter: Horiba
Installation Date:	One Well Volume (gal.): 6.4 gal	Turbidity Meter: Horiba
Well Diameter: 4"	One Annulus Vol. (gal.):	Other:

Field Parameters Measured

Time	Amount Purged (gal.)	pH	EC	Turbidity	D.O.	D.O. Temp.	SAL.	GPM / W.L.	Comments	Field Tech.
10:15	Bail well out has 4' of sand / gravel / [illegible]								-Bail / surge	
	bar stuck keeps coming off / well weight broke								-Hauled out 50' [illegible]	
	Broke								found piece of bottom	
11:15 -	Surge well								cap.	
11:58	6 gal	5.49	3.18	999	—	17.2	.17			
12:10	7 gal	5.98	2.96	999	—	17.8	.14			
12:15	8 gal	6.08	2.92	999	—	17.7	.14			
12:20	9 gal	6.20	3.02	999	—	17.8	.14			
12:26	10 gal	6.22	2.91	999	—	17.7	.14			

FINAL FIELD PARAMETER MEASUREMENTS

GREGG

MONITORING WELL DEVELOPMENT LOG

Page 1 of ____

All measurements taken from: ☒ Top of Casing ☐ Protective Casing ☐ Ground Level

Sample ID ____

Qty. of Drilling Fluid Lost ____

Well Number MW-5

Date 3/27/12

Time Start: 8:50 End: 3:00

Client STANTEC

Project Former Coltrans

Job Number 72170104

Installation Date ____

Well Diameter 4"

Borehole Diameter 10"

Screen Length 15'

Measured Depth (pre-development) 19.1'

Measured Depth (post-development) 19.1'

Static Water Level (ft.) 6'

Standing Water Column (ft.) 13'

One Well Volume (gal.) 8.58 gal

One Annulus Vol. (gal.) ____

Minimum Gal. to be Purged ____

Development Method Bail, Surge, Bail, Pump

Purging Equipment Pump

Water Level Equipment Solinst

pH/EC Meter Horiba

Turbidity Meter Horiba

Other ____

Time	Amount Purged (gal.)	pH	EC	Turbidity	D.O.	D.O. Temp.	SAL.	GPM / W.L.	Comments	Field Tech.
9:55am	15 gallons								Bail / surge Bail	
9:45am	25 gallons	6.34	.922	779	—	16.4°C	.058		- pump	
10:13am	35 gallons	6.41	1.07	626	—	17.8°C	.68		- pump low b/c recharge (wait 15:30)	
10:28am	45 gallons	6.87	1.42	332	—	11.7°C	.70			
12:47pm	55 gallons	6.83	1.35	291	—	17.7°C	.86		- well dewatered low recharge	
2:10	65 gallons	6.97	1.81	125	—	16.7°C	1.15			
2:52	70 gallons	6.93	1.48	100	—	17.4	.94			
3:00	80 gallons	6.92	1.53	215	—	17.3	.97			

FINAL FIELD PARAMETER MEASUREMENTS

STANTEC CONSULTING
GROUNDWATER SAMPLE FIELD DATA SHEET

Project No. 185702413 Purged By: DO Well I.D.: MW-1
Client Name: Caltrans Sampled By: DO Sample I.D.: MW-1
Location: Hegenberger What QA Samples?:

Date Purged: 9-29-11 Start (2400hr): 1122 End (2400hr): 755
Date Sampled: 9-30-11 Sample Time (2400hr): 750

Casing Diameter:	2"	3"	4"	5"	6"	8"	Other
Casing Volume: (gallons per foot)	(0.17)	(0.38)	(0.67)	(1.02)	(1.50)	(2.60)	( )
			X				

Total depth (feet) = 19.47 Casing Volume (gal) = 9.313
Depth to water (feet) = 5.57 Calculated Purge (gal) = 27.93 (3 casing vols.)
Water column height (feet) = 13.90 Actual Purge (gal) = 30.00

FIELD MEASUREMENTS

Date	Time (2400hr)	Volume (gal)	Temp. (degrees C)	Conductivity (umhos/cm)	pH (units)	Color (visual)	ORP ~~DTW~~ (ft)	
9-29-11	1125	0	23.3	1167	7.10	clear	-60	
	1130	10	22.2	1306	7.10	cloudy	-0	odor
	1135	20	20.9	1345	7.18	grey	524	odor
	1300	30	20.6	1436	7.60	grey	515	S. odor
							17.8 @ 1300	

D.O. _____ mg/l, _____ %

80% = 9.8 ft

PURGING EQUIPMENT

___ Well Wizard Bladder Pump
___ Active Extraction Well Pump
___ Submersible Pump
___ Peristaltic Pump
Other: _____
Pump Depth: _____ (feet)

X Bailer (disposable)
___ Bailer (PVC)
___ Bailer (Stainless Steel)
___ Dedicated _____

SAMPLING EQUIPMENT

___ WW Bladder Pump
___ Sample Port
___ Submersible Pump
___ Peristaltic Pump
Other: _____

X Bailer (disposable)
___ Bailer (PVC)
___ Bailer (Stainless Steel)
___ Dedicated: _____

Analyses: _____
Sample Vessel / Preservative: _____ Odor: _____

Well Integrity: _____
Remarks: Slow Recharge.

Signature: _____ Page 1 of __

STANTEC CONSULTING
GROUNDWATER SAMPLE FIELD DATA SHEET

Project No. 185702413 Purged By: DO Well I.D.: MW-2
Client Name: Caltrans Sampled By: DO Sample I.D.: MW-2
Location: Hegenberger What QA Samples?:

Date Purged: 9-29-11 Start (2400hr): 1448 End (2400hr): 840
Date Sampled: 9-30-11 Sample Time (2400hr): 835

Casing Diameter:	2"	3"	4"	5"	6"	8"	Other
Casing Volume: (gallons per foot)	(0.17)	(0.38)	(0.67)	(1.02)	(1.50)	(2.60)	( )
			X				

Total depth (feet) = 19.30 Casing Volume (gal) = 8.77
Depth to water (feet) = 6.21 Calculated Purge (gal) = 26.31 (3 casing vols.)
Water column height (feet) = 13.09 Actual Purge (gal) = 30.00

FIELD MEASUREMENTS

Date	Time (2400hr)	Volume (gal)	Temp. (degrees C)	Conductivity (umhos/cm)	pH (units)	Color (visual)	ORP ~~DTW~~ (ft)	
9-29-11	1450	0	24.5	1823	7.09	clear	-60	S. Odor
	1510	10	22.7	1812	6.91	cloudy	-49	S. Odor
	1530	20	22.2	1790	6.96	S. cloudy	-65	—
	1555	30	21.8	1783	6.94	clear	-0	—

D.O. _____ mg/l, _____ %

PURGING EQUIPMENT

___ Well Wizard Bladder Pump
___ Active Extraction Well Pump
___ Submersible Pump
✓ Peristaltic Pump
Other: _____
Pump Depth: _____ (feet)

___ Bailer (disposable)
___ Bailer (PVC)
___ Bailer (Stainless Steel)
___ Dedicated _____

SAMPLING EQUIPMENT

___ WW Bladder Pump
___ Sample Port
___ Submersible Pump
___ Peristaltic Pump
Other: _____

X Bailer (disposable)
___ Bailer (PVC)
___ Bailer (Stainless Steel)
___ Dedicated: _____

Analyses: _____
Sample Vessel / Preservative: _____ Odor: _____

Well Integrity: _____
Remarks: Well Box Thread striped. Needs Replacing

Signature: _____

STANTEC CONSULTING
GROUNDWATER SAMPLE FIELD DATA SHEET

Project No. 185702413 | Purged By: DO | Well I.D.: MW-3
Client Name: Caltrans | Sampled By: DO | Sample I.D.: MW-3
Location: Hegenberger | What QA Samples?:

Date Purged: 9-29-11 | Start (2400hr): 1502 | End (2400hr): 850
Date Sampled: 9-30-11 | Sample Time (2400hr): 845

Casing Diameter:	2"	3"	4"	5"	6"	8"	Other
Casing Volume: (gallons per foot)	(0.17)	(0.38)	(0.67)	(1.02)	(1.50)	(2.60)	( )

Total depth (feet) = 19.46
Depth to water (feet) = 5.50
Water column height (feet) = 13.96

Casing Volume (gal) = 9.35
Calculated Purge (gal) = 28.05 (3 casing vols.)
Actual Purge (gal) = 28.00

FIELD MEASUREMENTS

Date	Time (2400hr)	Volume (gal)	Temp. (degrees C)	Conductivity (umhos/cm)	pH (units)	Color (visual)	ORP ~~DTW~~ (ft)	
9-29-11	1504	0	26.4	2864	6.79	clear	529	odor
	1515	10	23.6	3232	6.86	Grey	518	odor
	1625	20	22.3	3430	6.88	Grey	-0	odor
	1705	28	22.2	3498	6.84	Grey	517	odor

D.O. _____ mg/l, _____ %

PURGING EQUIPMENT

___ Well Wizard Bladder Pump
___ Active Extraction Well Pump
___ Submersible Pump
___ Peristaltic Pump
Other: _____
Pump Depth: _____ (feet)

X Bailer (disposable)
___ Bailer (PVC)
___ Bailer (Stainless Steel)
___ Dedicated _____

SAMPLING EQUIPMENT

___ WW Bladder Pump
___ Sample Port
___ Submersible Pump
___ Peristaltic Pump
Other: _____

X Bailer (disposable)
___ Bailer (PVC)
___ Bailer (Stainless Steel)
___ Dedicated: _____

Analyses: _____
Sample Vessel / Preservative: _____ Odor: _____

Well Integrity: _____
Remarks: Slow Recharge, Well box threads striped. Needs Replacing

Signature: _____

STANTEC CONSULTING
GROUNDWATER SAMPLE FIELD DATA SHEET

Project No. 185702413 Purged By: DD Well I.D.: MW-4
Client Name: Caltrans Sampled By: DD Sample I.D.: MW-4
Location: Hegenberger What QA Samples?:

Date Purged: ~~9-29-11~~ 9-29-11 Start (2400hr): 1038 End (2400hr): 810
Date Sampled: 9-30-11 Sample Time (2400hr): 800 * Dup Sample taken *

Casing Diameter: 2"___ 3"___ 4"X 5"___ 6"___ 8"___ Other___
Casing Volume: (gallons per foot) (0.17) (0.38) (0.67) (1.02) (1.50) (2.60) ( )

Total depth (feet) = 15.78 Casing Volume (gal) = 6.398
Depth to water (feet) = 6.23 Calculated Purge (gal) = 19.19 (3 casing vols.)
Water column height (feet) = 9.55 Actual Purge (gal) = 60.00

FIELD MEASUREMENTS

Date	Time (2400hr)	Volume (gal)	Temp. (degrees C)	Conductivity (umhos/cm)	pH (units)	Color (visual)	ORP ~~DTW~~ (ft)	
9-29-11	1040	0	24.0	5008	6.64	clear	32	odor
	# @ 0 Surged with Bailer for 5 min						—	—
	1052	10	22.7	10.94	6.67	grey	22	odor
	1116	20	23.0	9290	6.93	grey	520	S. odor
	1146	30	21.2	8917	6.83	cloudy	22	S. odor
	1233	40	21.3	8875	6.78	cloudy	32	S. odor
	1320	50	21.7	8745	6.93	cloudy	-0	
	1415	60	21.8	8735	6.81	cloudy	-23	

D.O. ____ mg/l, ____ %

PURGING EQUIPMENT

___ Well Wizard Bladder Pump
___ Active Extraction Well Pump
___ Submersible Pump
X Peristaltic Pump
___ Bailer (disposable)
___ Bailer (PVC)
___ Bailer (Stainless Steel)
___ Dedicated ____
Other: ____
Pump Depth: ____ (feet)

SAMPLING EQUIPMENT

___ WW Bladder Pump
___ Sample Port
___ Submersible Pump
___ Peristaltic Pump
X Bailer (disposable)
___ Bailer (PVC)
___ Bailer (Stainless Steel)
___ Dedicated: ____
Other: ____

Analyses: ____
Sample Vessel / Preservative: ____ Odor: ____

Well Integrity: ____
Remarks: Slow Recharge. Dup Sample taken. No bolts, Well Box Thread stripped. Needs Replacing.

Signature: [signature]

Page 1 of 1

STANTEC CONSULTING
GROUNDWATER SAMPLE FIELD DATA SHEET

Project No. 185702413 Purged By: DO Well I.D.: MW-5
Client Name: Caltrans Sampled By: DO Sample I.D.: MW-5
Location: Hegenberger What QA Samples?:

Date Purged: 9-29-11 Start (2400hr): 1206 End (2400hr): 825
Date Sampled: 9-30-11 Sample Time (2400hr): 820

Casing Diameter:	2"	3"	4"	5"	6"	8"	Other
Casing Volume: (gallons per foot)	(0.17)	(0.38)	(0.67)	(1.02)	(1.50)	(2.60)	( )

Total depth (feet) = 19.34 Casing Volume (gal) = 8.69
Depth to water (feet) = 6.37 Calculated Purge (gal) = 26.07 (3 casing vols.)
Water column height (feet) = 12.97 Actual Purge (gal) = 30.00

FIELD MEASUREMENTS

Date	Time (2400hr)	Volume (gal)	Temp. (degrees C)	Conductivity (umhos/cm)	pH (units)	Color (visual)	ORP ~~DTW~~ (ft)	
9-29-11	1208	0	23.1	1712	7.20	clear	-50	
	1214	10	21.5	1699	7.03	grey	-47	odor
	1222	20	20.6	1725	7.18	grey	-46	S.odor
	1540	30	21.1	1980	7.22	grey	-50	S.odor

D.O. _____ mg/l, _____ %

PURGING EQUIPMENT

___ Well Wizard Bladder Pump
___ Active Extraction Well Pump
___ Submersible Pump
___ Peristaltic Pump
Other: _____
Pump Depth: _____ (feet)

X Bailer (disposable)
___ Bailer (PVC)
___ Bailer (Stainless Steel)
___ Dedicated _____

SAMPLING EQUIPMENT

___ WW Bladder Pump
___ Sample Port
___ Submersible Pump
___ Peristaltic Pump
Other: _____

X Bailer (disposable)
___ Bailer (PVC)
___ Bailer (Stainless Steel)
___ Dedicated: _____

Analyses: _____
Sample Vessel / Preservative: _____ Odor: _____

Well Integrity: _____
Remarks: Slow Recharge, Well box Thread Striped. Needs Replacing.

Signature: _____ Page 1 of __

APPENDIX C
CERTIFIED ANALYTICAL LABORATORY REPORTS AND CHAIN-OF-CUSTODY DOCUMENTS

APPL LABS
www.applinc.com
908 North Temperance Ave. ▼ Clovis, CA 93611 ▼ Phone 559.275-2175 ▼ Fax 559.275-4422

NELAP Certification Number: 05233CA (HW)

April 27, 2012

Stantec Consulting, Inc.
15575 Los Gatos Boulevard, Building C
Los Gatos, California 95032

Attn: Gary Messerotes

Subject: Report of data: Case 67417

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Dear Mr. Messerotes:

Eight water samples for project "185702413 Former Caltrans Station, Oakland" were received April 4, 2012, in good condition. Plastic containers were not received for samples EB-1 and DUP-1; the TDS analysis was canceled. Written results are being provided on this April 27, 2012, for the requested analyses. All holding times were met.

For the EPA 8015B TPH-Diesel analysis, the samples were extracted according to EPA 3510C. The extracts were cleaned with silica gel according to EPA method 3630C.

For the EPA 8260B analysis, the samples were purged according to EPA method 5030B. For samples MW-3, MW-4, and DUP-1, the results for the dilution do not match the initial undiluted injection; beyond a concentration of 100ug/L, the detector becomes saturated on the instrument Chico.

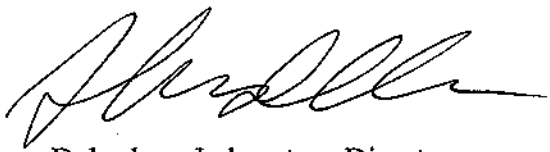
For the EPA 8015B TPH-Gas analysis, the samples were purged according to EPA method 5030B. Sample MW-1 recovered the surrogate 4-Bromofluorobenzene above the 130% upper control limit at 134% due to the matrix. Additionally, the 120410A LCSD recovered 4-Bromofluorobenzene at 135%. The Gasoline was recovered within acceptable limits.

For the EPA 160.1 and SM2520B analyses, the sample were prepared and analyzed according to the methods.

No other unusual problems or complications were encountered with this sample set.

If you have any questions or require further information, please contact us at your convenience. Thank you for choosing APPL, Inc.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. These test results meet all requirements of NELAC. Release of the hard copy has been authorized by the Laboratory Manager or her designee, as verified by the following signature.



Sharon Dehmlow, Laboratory Director
APPL, Inc.

SD/cm
Enclosure
cc: File

Number of pages in this report: 46

EPA 8015B TPH Diesel Water

Stantec Consulting, Inc.
15575 Los Gatos Blvd., Bldg C
Los Gatos, CA 95032

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Gary Messerotes
Project: 185702413 Former Caltrans Station, Oakla

ARF: 67417
Sample ID: MW-1
APPL ID: AY58488
Sample Collection Date: 03/30/12
QCG: #TPHD-120405A-166036

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8015B-	DIESEL FUEL	280 ++	50.0	40.40	ug/L	04/05/12	04/06/12
EPA 8015B-	SURROGATE: OCTACOSANE (S)	80.7	28-142		%	04/05/12	04/06/12
EPA 8015B-	SURROGATE: ORTHO-TERPHENYL (	65.2	49-128		%	04/05/12	04/06/12

++(T2M) The analyst has noted that the chromatogram of this sample is mainly lower boiling hydrocarbons.

Quant Method:	TPH0306.M
Run #:	406008
Instrument:	Apollo
Sequence:	120406
Dilution Factor:	1
Initials:	MA

Printed: 04/20/12 12:51:50 PM
APPL-F1-SC-NoMC-REG MDLs

EPA 8015B TPH Diesel Water

Stantec Consulting, Inc.
15575 Los Gatos Blvd., Bldg C
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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Gary Messerotes

Project: 185702413 Former Caltrans Station, Oakla

ARF: 67417

Sample ID: MW-2

APPL ID: AY58489

Sample Collection Date: 03/30/12

QCG: #TPHD-120405A-166036

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8015B-	DIESEL FUEL	Not detected	50.0	40.40	ug/L	04/05/12	04/06/12
EPA 8015B-	SURROGATE: OCTACOSANE (S)	63.5	28-142		%	04/05/12	04/06/12
EPA 8015B-	SURROGATE: ORTHO-TERPHENYL (	51.2	49-128		%	04/05/12	04/06/12

Quant Method:	TPH0306.M
Run #:	406009
Instrument:	Apollo
Sequence:	120406
Dilution Factor:	1
Initials:	MA

Printed: 04/20/12 12:51:50 PM

APPL-F1-SC-NoMC-REG MDLs

EPA 8015B TPH Diesel Water

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Los Gatos, CA 95032

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Gary Messerotes

Project: 185702413 Former Caltrans Station, Oakla

ARF: 67417

Sample ID: MW-3

APPL ID: AY58490

Sample Collection Date: 03/30/12

QCG: #TPHD-120405A-166036

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8015B-	DIESEL FUEL	780 ++	50.0	40.40	ug/L	04/05/12	04/06/12
EPA 8015B-	SURROGATE: OCTACOSANE (S)	81.8	28-142		%	04/05/12	04/06/12
EPA 8015B-	SURROGATE: ORTHO-TERPHENYL (	66.8	49-128		%	04/05/12	04/06/12

++(T2M) The analyst has noted that the chromatogram of this sample is mainly lower boiling hydrocarbons.

Quant Method:	TPH0306.M
Run #:	406010
Instrument:	Apollo
Sequence:	120406
Dilution Factor:	1
Initials:	MA

Printed: 04/20/12 12:51:50 PM
APPL-F1-SC-NoMC-REG MDLs

EPA 8015B TPH Diesel Water

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15575 Los Gatos Blvd., Bldg C
Los Gatos, CA 95032

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Gary Messerotes

Project: 185702413 Former Caltrans Station, Oakla

ARF: 67417

Sample ID: MW-4

APPL ID: AY58491

Sample Collection Date: 03/30/12

QCG: #TPHD-120405A-166036

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8015B-	DIESEL FUEL	340 ++	50.0	40.40	ug/L	04/05/12	04/06/12
EPA 8015B-	SURROGATE: OCTACOSANE (S)	71.2	28-142		%	04/05/12	04/06/12
EPA 8015B-	SURROGATE: ORTHO-TERPHENYL (	58.0	49-128		%	04/05/12	04/06/12

++(T2M) The analyst has noted that the chromatogram of this sample is mainly lower boiling hydrocarbons.

Quant Method:	TPH0306.M
Run #:	406011
Instrument:	Apollo
Sequence:	120406
Dilution Factor:	1
Initials:	MA

Printed: 04/20/12 12:51:50 PM
APPL-F1-SC-NoMC-REG MDLs

EPA 8015B TPH Diesel Water

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15575 Los Gatos Blvd., Bldg C
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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Gary Messerotes

Project: 185702413 Former Caltrans Station, Oakla

ARF: 67417

Sample ID: MW-5

APPL ID: AY58492

Sample Collection Date: 03/30/12

QCG: #TPHD-120405A-166036

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8015B-	DIESEL FUEL	270 ++	50.0	40.40	ug/L	04/05/12	04/06/12
EPA 8015B-	SURROGATE: OCTACOSANE (S)	77.7	28-142		%	04/05/12	04/06/12
EPA 8015B-	SURROGATE: ORTHO-TERPHENYL (	63.0	49-128		%	04/05/12	04/06/12

++(T2M) The analyst has noted that the chromatogram of this sample is mainly lower boiling hydrocarbons.

Quant Method:	TPH0306.M
Run #:	406012
Instrument:	Apollo
Sequence:	120406
Dilution Factor:	1
Initials:	MA

Printed: 04/20/12 12:51:50 PM
APPL-F1-SC-NoMC-REG MDLs

EPA 8015B TPH Diesel Water

Stantec Consulting, Inc.
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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Gary Messerotes

Project: 185702413 Former Caltrans Station, Oakla

ARF: 67417

Sample ID: EB-1

APPL ID: AY58493

Sample Collection Date: 03/30/12

QCG: #TPHD-120405A-166036

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8015B-	DIESEL FUEL	Not detected	50.0	40.40	ug/L	04/05/12	04/20/12
EPA 8015B-	SURROGATE: OCTACOSANE (S)	67.9	28-142		%	04/05/12	04/20/12
EPA 8015B-	SURROGATE: ORTHO-TERPHENYL (	60.6	49-128		%	04/05/12	04/20/12

Quant Method:	TPH0306.M
Run #:	419045
Instrument:	Apollo
Sequence:	120419
Dilution Factor:	1
Initials:	MA

Printed: 04/23/12 12:25:52 PM
APPL-F1-SC-NoMC-REG MDLs

EPA 8015B TPH Diesel Water

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Los Gatos, CA 95032

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Gary Messerotes

Project: 185702413 Former Caltrans Station, Oakla

ARF: 67417

Sample ID: DUP-1

APPL ID: AY58494

Sample Collection Date: 03/30/12

QCG: #TPHD-120405A-166036

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8015B-	DIESEL FUEL	310 ++	50.0	40.40	ug/L	04/05/12	04/06/12
EPA 8015B-	SURROGATE: OCTACOSANE (S)	72.8	28-142		%	04/05/12	04/06/12
EPA 8015B-	SURROGATE: ORTHO-TERPHENYL (	58.4	49-128		%	04/05/12	04/06/12

++(T2M) The analyst has noted that the chromatogram of this sample is mainly lower boiling hydrocarbons.

Quant Method: TPH0306.M
Run #: 406014
Instrument: Apollo
Sequence: 120406
Dilution Factor: 1
Initials: MA

Printed: 04/20/12 12:51:50 PM
APPL-F1-SC-NoMC-REG MDLs

EPA 8260B BTEX Oxy W - UST

Stantec Consulting, Inc.
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Los Gatos, CA 95032

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Gary Messerotes

Project: 185702413 Former Caltrans Station, Oakla

ARF: 67417

Sample ID: MW-1

APPL ID: AY58488

Sample Collection Date: 03/30/12

QCG: #26UW-120404AC-165780

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	Not detected	0.6	0.14	ug/L	04/04/12	04/04/12
EPA 8260B	1,2-ETHYLENE DIBROMIDE	Not detected	0.6	0.20	ug/L	04/04/12	04/04/12
EPA 8260B	BENZENE	14	0.4	0.16	ug/L	04/04/12	04/04/12
EPA 8260B	DI-ISOPROPYL ETHER	Not detected	0.5	0.16	ug/L	04/04/12	04/04/12
EPA 8260B	ETHYL-TERT-BUTYL ETHER	Not detected	0.5	0.19	ug/L	04/04/12	04/04/12
EPA 8260B	ETHYLBENZENE	0.36 J	0.6	0.23	ug/L	04/04/12	04/04/12
EPA 8260B	METHYL TERT-BUTYL ETHER	Not detected	0.5	0.26	ug/L	04/04/12	04/04/12
EPA 8260B	TERT-AMYL METHYL ETHER	Not detected	0.5	0.14	ug/L	04/04/12	04/04/12
EPA 8260B	TERT-BUTYL ALCOHOL	Not detected	25.0	10.00	ug/L	04/04/12	04/04/12
EPA 8260B	TOLUENE	4.4	1.1	0.17	ug/L	04/04/12	04/04/12
EPA 8260B	XYLENES	4.9	0.5	0.19	ug/L	04/04/12	04/04/12
EPA 8260B	SURROGATE: 1,2-DICHLOROETHAN	102	75-125		%	04/04/12	04/04/12
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	102	62-139		%	04/04/12	04/04/12
EPA 8260B	SURROGATE: DIBROMOFLUOROME	101	75-125		%	04/04/12	04/04/12
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	96.7	75-125		%	04/04/12	04/04/12

J = Estimated value.

Quant Method:	CALLW.M
Run #:	0404C12
Instrument:	Chico
Sequence:	C120402
Dilution Factor:	1
Initials:	ARS

Printed: 04/11/12 5:23:21 PM

APPL-F1-SC-NoMC-REG MDLs

EPA 8260B BTEX Oxy W - UST

Stantec Consulting, Inc.
15575 Los Gatos Blvd., Bldg C
Los Gatos, CA 95032

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Gary Messerotes

Project: 185702413 Former Caltrans Station, Oakla

ARF: 67417

Sample ID: MW-2

APPL ID: AY58489

Sample Collection Date: 03/30/12

QCG: #26UW-120404AC-165780

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	Not detected	0.6	0.14	ug/L	04/04/12	04/04/12
EPA 8260B	1,2-ETHYLENE DIBROMIDE	Not detected	0.6	0.20	ug/L	04/04/12	04/04/12
EPA 8260B	BENZENE	0.32 J	0.4	0.16	ug/L	04/04/12	04/04/12
EPA 8260B	DI-ISOPROPYL ETHER	Not detected	0.5	0.16	ug/L	04/04/12	04/04/12
EPA 8260B	ETHYL-TERT-BUTYL ETHER	Not detected	0.5	0.19	ug/L	04/04/12	04/04/12
EPA 8260B	ETHYLBENZENE	Not detected	0.6	0.23	ug/L	04/04/12	04/04/12
EPA 8260B	METHYL TERT-BUTYL ETHER	Not detected	0.5	0.26	ug/L	04/04/12	04/04/12
EPA 8260B	TERT-AMYL METHYL ETHER	Not detected	0.5	0.14	ug/L	04/04/12	04/04/12
EPA 8260B	TERT-BUTYL ALCOHOL	Not detected	25.0	10.00	ug/L	04/04/12	04/04/12
EPA 8260B	TOLUENE	0.24 J	1.1	0.17	ug/L	04/04/12	04/04/12
EPA 8260B	XYLENES	0.44 J	0.5	0.19	ug/L	04/04/12	04/04/12
EPA 8260B	SURROGATE: 1,2-DICHLOROETHAN	101	75-125		%	04/04/12	04/04/12
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	99.8	62-139		%	04/04/12	04/04/12
EPA 8260B	SURROGATE: DIBROMOFLUOROME	100	75-125		%	04/04/12	04/04/12
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	98.3	75-125		%	04/04/12	04/04/12

J = Estimated value.

Quant Method: CALLW.M
Run #: 0404C13
Instrument: Chico
Sequence: C120402
Dilution Factor: 1
Initials: ARS

Printed: 04/11/12 5:23:21 PM
APPL-F1-SC-NoMC-REG MDLs

EPA 8260B BTEX Oxy W - UST

Stantec Consulting, Inc.
15575 Los Gatos Blvd., Bldg C
Los Gatos, CA 95032

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Gary Messerotes

Project: 185702413 Former Caltrans Station, Oakla

ARF: 67417

Sample ID: MW-3

APPL ID: AY58490

Sample Collection Date: 03/30/12

QCG: #26UW-120404AC-165780

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	Not detected	0.6	0.14	ug/L	04/04/12	04/04/12
EPA 8260B	1,2-ETHYLENE DIBROMIDE	Not detected	0.6	0.20	ug/L	04/04/12	04/04/12
EPA 8260B	BENZENE	120 E	0.4	0.16	ug/L	04/04/12	04/04/12
EPA 8260B	DI-ISOPROPYL ETHER	Not detected	0.5	0.16	ug/L	04/04/12	04/04/12
EPA 8260B	ETHYL-TERT-BUTYL ETHER	Not detected	0.5	0.19	ug/L	04/04/12	04/04/12
EPA 8260B	ETHYLBENZENE	10	0.6	0.23	ug/L	04/04/12	04/04/12
EPA 8260B	METHYL TERT-BUTYL ETHER	Not detected	0.5	0.26	ug/L	04/04/12	04/04/12
EPA 8260B	TERT-AMYL METHYL ETHER	Not detected	0.5	0.14	ug/L	04/04/12	04/04/12
EPA 8260B	TERT-BUTYL ALCOHOL	Not detected	25.0	10.00	ug/L	04/04/12	04/04/12
EPA 8260B	TOLUENE	29	1.1	0.17	ug/L	04/04/12	04/04/12
EPA 8260B	XYLENES	24	0.5	0.19	ug/L	04/04/12	04/04/12
EPA 8260B	SURROGATE: 1,2-DICHLOROETHAN	98.5	75-125		%	04/04/12	04/04/12
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	104	62-139		%	04/04/12	04/04/12
EPA 8260B	SURROGATE: DIBROMOFLUOROME	98.4	75-125		%	04/04/12	04/04/12
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	101	75-125		%	04/04/12	04/04/12

E = The reported value exceeds linear range.

Quant Method: CALLW.M
Run #: 0404C14
Instrument: Chico
Sequence: C120402
Dilution Factor: 1
Initials: ARS

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APPL-F1-SC-NoMC-REG MDLs

EPA 8260B BTEX Oxy W - UST

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Los Gatos, CA 95032

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Gary Messerotes

Project: 185702413 Former Caltrans Station, Oakla

ARF: 67417

Sample ID: MW-3

APPL ID: AY58490

Sample Collection Date: 03/30/12

QCG: #26UWD-120405AC-165781

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	640	4.0	1.60	ug/L	04/05/12	04/05/12
EPA 8260B	SURROGATE: 1,2-DICHLOROETHAN	96.1	75-125		%	04/05/12	04/05/12
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	95.6	62-139		%	04/05/12	04/05/12
EPA 8260B	SURROGATE: DIBROMOFLUOROME	98.8	75-125		%	04/05/12	04/05/12
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	95.4	75-125		%	04/05/12	04/05/12

Quant Method: CALLW.M
Run #: 0405C14
Instrument: Chico
Sequence: C120402
Dilution Factor: 10
Initials: ARS

Printed: 04/11/12 5:26:22 PM
APPL-F1-SC-NoMC-REG MDLs

EPA 8260B BTEX Oxy W - UST

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Los Gatos, CA 95032

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Gary Messerotes

Project: 185702413 Former Caltrans Station, Oakla

ARF: 67417

Sample ID: MW-4

APPL ID: AY58491

Sample Collection Date: 03/30/12

QCG: #26UW-120404AC-165780

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	Not detected	0.6	0.14	ug/L	04/04/12	04/04/12
EPA 8260B	1,2-ETHYLENE DIBROMIDE	Not detected	0.6	0.20	ug/L	04/04/12	04/04/12
EPA 8260B	BENZENE	170 E	0.4	0.16	ug/L	04/04/12	04/04/12
EPA 8260B	DI-ISOPROPYL ETHER	Not detected	0.5	0.16	ug/L	04/04/12	04/04/12
EPA 8260B	ETHYL-TERT-BUTYL ETHER	Not detected	0.5	0.19	ug/L	04/04/12	04/04/12
EPA 8260B	ETHYLBENZENE	2.8	0.6	0.23	ug/L	04/04/12	04/04/12
EPA 8260B	METHYL TERT-BUTYL ETHER	Not detected	0.5	0.26	ug/L	04/04/12	04/04/12
EPA 8260B	TERT-AMYL METHYL ETHER	Not detected	0.5	0.14	ug/L	04/04/12	04/04/12
EPA 8260B	TERT-BUTYL ALCOHOL	Not detected	25.0	10.00	ug/L	04/04/12	04/04/12
EPA 8260B	TOLUENE	23	1.1	0.17	ug/L	04/04/12	04/04/12
EPA 8260B	XYLENES	19	0.5	0.19	ug/L	04/04/12	04/04/12
EPA 8260B	SURROGATE: 1,2-DICHLOROETHAN	96.2	75-125		%	04/04/12	04/04/12
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	97.7	62-139		%	04/04/12	04/04/12
EPA 8260B	SURROGATE: DIBROMOFLUOROME	101	75-125		%	04/04/12	04/04/12
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	95.5	75-125		%	04/04/12	04/04/12

E = The reported value exceeds linear range.

Quant Method: CALLW.M
Run #: 0404C15
Instrument: Chico
Sequence: C120402
Dilution Factor: 1
Initials: ARS

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APPL-F1-SC-NoMC-REG MDLs

EPA 8260B BTEX Oxy W - UST

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15575 Los Gatos Blvd., Bldg C
Los Gatos, CA 95032

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Gary Messerotes

Project: 185702413 Former Caltrans Station, Oakla

ARF: 67417

Sample ID: MW-4

APPL ID: AY58491

Sample Collection Date: 03/30/12

QCG: #26UWD-120405AC-165781

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	340	4.0	1.60	ug/L	04/05/12	04/05/12
EPA 8260B	SURROGATE: 1,2-DICHLOROETHAN	101	75-125		%	04/05/12	04/05/12
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	97.9	62-139		%	04/05/12	04/05/12
EPA 8260B	SURROGATE: DIBROMOFLUOROME	104	75-125		%	04/05/12	04/05/12
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	96.6	75-125		%	04/05/12	04/05/12

Quant Method: CALLW.M
Run #: 0405C15
Instrument: Chico
Sequence: C120402
Dilution Factor: 10
Initials: ARS

Printed: 04/11/12 5:26:22 PM
APPL-F1-SC-NoMC-REG MDLs

EPA 8260B BTEX Oxy W - UST

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Los Gatos, CA 95032

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Gary Messerotes

Project: 185702413 Former Caltrans Station, Oakla

ARF: 67417

Sample ID: MW-5

APPL ID: AY58492

Sample Collection Date: 03/30/12

QCG: #26UW-120404AC-165780

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	Not detected	0.6	0.14	ug/L	04/04/12	04/04/12
EPA 8260B	1,2-ETHYLENE DIBROMIDE	Not detected	0.6	0.20	ug/L	04/04/12	04/04/12
EPA 8260B	DI-ISOPROPYL ETHER	Not detected	0.5	0.16	ug/L	04/04/12	04/04/12
EPA 8260B	ETHYL-TERT-BUTYL ETHER	Not detected	0.5	0.19	ug/L	04/04/12	04/04/12
EPA 8260B	ETHYLBENZENE	Not detected	0.6	0.23	ug/L	04/04/12	04/04/12
EPA 8260B	METHYL TERT-BUTYL ETHER	Not detected	0.5	0.26	ug/L	04/04/12	04/04/12
EPA 8260B	TERT-AMYL METHYL ETHER	Not detected	0.5	0.14	ug/L	04/04/12	04/04/12
EPA 8260B	TERT-BUTYL ALCOHOL	Not detected	25.0	10.00	ug/L	04/04/12	04/04/12
EPA 8260B	TOLUENE	2.4	1.1	0.17	ug/L	04/04/12	04/04/12
EPA 8260B	XYLENES	5.2	0.5	0.19	ug/L	04/04/12	04/04/12
EPA 8260B	SURROGATE: 1,2-DICHLOROETHAN	101	75-125		%	04/04/12	04/04/12
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	100	62-139		%	04/04/12	04/04/12
EPA 8260B	SURROGATE: DIBROMOFLUOROME	102	75-125		%	04/04/12	04/04/12
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	98.5	75-125		%	04/04/12	04/04/12

Quant Method: CALLW.M
Run #: 0404C16
Instrument: Chico
Sequence: C120402
Dilution Factor: 1
Initials: ARS

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APPL-F1-SC-NoMC-REG MDLs

EPA 8260B BTEX Oxy W - UST Rx

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Los Gatos, CA 95032

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Gary Messerotes

Project: 185702413 Former Caltrans Station, Oakla

ARF: 67417

Sample ID: MW-5

APPL ID: AY58492

Sample Collection Date: 03/30/12

QCG: #26UWR-120405AC-165782

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	1.5	0.4	0.16	ug/L	04/05/12	04/05/12
EPA 8260B	SURROGATE: 1,2-DICHLOROETHAN	103	75-125		%	04/05/12	04/05/12
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	94.9	62-139		%	04/05/12	04/05/12
EPA 8260B	SURROGATE: DIBROMOFLUOROME	103	75-125		%	04/05/12	04/05/12
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	93.6	75-125		%	04/05/12	04/05/12

Quant Method: CALLW.M
Run #: 0405C13
Instrument: Chlco
Sequence: C120402
Dilution Factor: 1
Initials: ARS

Printed: 04/11/12 5:24:19 PM
APPL-F1-SC-NoMC-REG MDLs

EPA 8260B BTEX Oxy W - UST

Stantec Consulting, Inc.
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Los Gatos, CA 95032

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Gary Messerotes
Project: 185702413 Former Caltrans Station, Oakla
Sample ID: EB-1
Sample Collection Date: 03/30/12

ARF: 67417
APPL ID: AY58493
QCG: #26UW-120404AC-165780

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	Not detected	0.6	0.14	ug/L	04/04/12	04/04/12
EPA 8260B	1,2-ETHYLENE DIBROMIDE	Not detected	0.6	0.20	ug/L	04/04/12	04/04/12
EPA 8260B	DI-ISOPROPYL ETHER	Not detected	0.5	0.16	ug/L	04/04/12	04/04/12
EPA 8260B	ETHYL-TERT-BUTYL ETHER	Not detected	0.5	0.19	ug/L	04/04/12	04/04/12
EPA 8260B	ETHYLBENZENE	Not detected	0.6	0.23	ug/L	04/04/12	04/04/12
EPA 8260B	METHYL TERT-BUTYL ETHER	Not detected	0.5	0.26	ug/L	04/04/12	04/04/12
EPA 8260B	TERT-AMYL METHYL ETHER	Not detected	0.5	0.14	ug/L	04/04/12	04/04/12
EPA 8260B	TERT-BUTYL ALCOHOL	Not detected	25.0	10.00	ug/L	04/04/12	04/04/12
EPA 8260B	TOLUENE	0.20 J	1.1	0.17	ug/L	04/04/12	04/04/12
EPA 8260B	XYLENES	0.26 J	0.5	0.19	ug/L	04/04/12	04/04/12
EPA 8260B	SURROGATE: 1,2-DICHLOROETHAN	96.8	75-125		%	04/04/12	04/04/12
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	99.4	62-139		%	04/04/12	04/04/12
EPA 8260B	SURROGATE: DIBROMOFLUOROME	97.7	75-125		%	04/04/12	04/04/12
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	98.8	75-125		%	04/04/12	04/04/12

J = Estimated value.

Quant Method: CALLW.M
Run #: 0404C18
Instrument: Chico
Sequence: C120402
Dilution Factor: 1
Initials: ARS

Printed: 04/11/12 5:23:22 PM
APPL-F1-SC-NoMC-REG MDLs

EPA 8260B BTEX Oxy W - UST Rx

Stantec Consulting, Inc.
15575 Los Gatos Blvd., Bldg C
Los Gatos, CA 95032

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Gary Messerotes

Project: 185702413 Former Caltrans Station, Oakla

ARF: 67417

Sample ID: EB-1

APPL ID: AY58493

Sample Collection Date: 03/30/12

QCG: #26UWR-120405AC-165782

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	Not detected	0.4	0.16	ug/L	04/05/12	04/05/12
EPA 8260B	SURROGATE: 1,2-DICHLOROETHAN	104	75-125		%	04/05/12	04/05/12
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	97.2	62-139		%	04/05/12	04/05/12
EPA 8260B	SURROGATE: DIBROMOFLUOROME	102	75-125		%	04/05/12	04/05/12
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	94.3	75-125		%	04/05/12	04/05/12

Quant Method: CALLW.M
Run #: 0405C12
Instrument: Chico
Sequence: C120402
Dilution Factor: 1
Initials: ARS

Printed: 04/11/12 5:24:19 PM
APPL-F1-SC-NoMC-REG MDLs

EPA 8260B BTEX Oxy W - UST

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15575 Los Gatos Blvd., Bldg C
Los Gatos, CA 95032

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Gary Messerotes

Project: 185702413 Former Caltrans Station, Oakla

ARF: 67417

Sample ID: DUP-1

APPL ID: AY58494

Sample Collection Date: 03/30/12

QCG: #26UW-120404AC-165780

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	Not detected	0.6	0.14	ug/L	04/04/12	04/04/12
EPA 8260B	1,2-ETHYLENE DIBROMIDE	Not detected	0.6	0.20	ug/L	04/04/12	04/04/12
EPA 8260B	BENZENE	200 E	0.4	0.16	ug/L	04/04/12	04/04/12
EPA 8260B	DI-ISOPROPYL ETHER	Not detected	0.5	0.16	ug/L	04/04/12	04/04/12
EPA 8260B	ETHYL-TERT-BUTYL ETHER	Not detected	0.5	0.19	ug/L	04/04/12	04/04/12
EPA 8260B	ETHYLBENZENE	2.9	0.6	0.23	ug/L	04/04/12	04/04/12
EPA 8260B	METHYL TERT-BUTYL ETHER	Not detected	0.5	0.26	ug/L	04/04/12	04/04/12
EPA 8260B	TERT-AMYL METHYL ETHER	Not detected	0.5	0.14	ug/L	04/04/12	04/04/12
EPA 8260B	TERT-BUTYL ALCOHOL	Not detected	25.0	10.00	ug/L	04/04/12	04/04/12
EPA 8260B	TOLUENE	23	1.1	0.17	ug/L	04/04/12	04/04/12
EPA 8260B	XYLENES	19	0.5	0.19	ug/L	04/04/12	04/04/12
EPA 8260B	SURROGATE: 1,2-DICHLOROETHAN	97.2	75-125		%	04/04/12	04/04/12
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	100	62-139		%	04/04/12	04/04/12
EPA 8260B	SURROGATE: DIBROMOFLUOROME	103	75-125		%	04/04/12	04/04/12
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	98.3	75-125		%	04/04/12	04/04/12

E = The reported value exceeds linear range.

Quant Method: CALLW.M
Run #: 0404C17
Instrument: Chico
Sequence: C120402
Dilution Factor: 1
Initials: ARS

Printed: 04/11/12 5:23:22 PM
APPL-F1-SC-NoMC-REG MDLs

EPA 8260B BTEX Oxy W - UST

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Los Gatos, CA 95032

Attn: Gary Messerotes

Project: 185702413 Former Caltrans Station, Oakla

Sample ID: DUP-1

Sample Collection Date: 03/30/12

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 67417

APPL ID: AY58494

QCG: #26UWD-120405AC-165781

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	330	4.0	1.60	ug/L	04/05/12	04/05/12
EPA 8260B	SURROGATE: 1,2-DICHLOROETHAN	97.1	75-125		%	04/05/12	04/05/12
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	98.3	62-139		%	04/05/12	04/05/12
EPA 8260B	SURROGATE: DIBROMOFLUOROME	102	75-125		%	04/05/12	04/05/12
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	96.0	75-125		%	04/05/12	04/05/12

Quant Method: CALLW.M
Run #: 0405C16
Instrument: Chico
Sequence: C120402
Dilution Factor: 10
Initials: ARS

Printed: 04/11/12 5:26:22 PM
APPL-F1-SC-NoMC-REG MDLs

EPA 8260B BTEX Oxy W - UST

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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Gary Messerotes

Project: 185702413 Former Caltrans Station, Oakla

ARF: 67417

Sample ID: TRIP BLANK

APPL ID: AY58495

Sample Collection Date: 03/30/12

QCG: #26UW-120404AC-165780

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	Not detected	0.6	0.14	ug/L	04/04/12	04/04/12
EPA 8260B	1,2-ETHYLENE DIBROMIDE	Not detected	0.6	0.20	ug/L	04/04/12	04/04/12
EPA 8260B	BENZENE	Not detected	0.4	0.16	ug/L	04/04/12	04/04/12
EPA 8260B	DI-ISOPROPYL ETHER	Not detected	0.5	0.16	ug/L	04/04/12	04/04/12
EPA 8260B	ETHYL-TERT-BUTYL ETHER	Not detected	0.5	0.19	ug/L	04/04/12	04/04/12
EPA 8260B	ETHYLBENZENE	Not detected	0.6	0.23	ug/L	04/04/12	04/04/12
EPA 8260B	METHYL TERT-BUTYL ETHER	Not detected	0.5	0.26	ug/L	04/04/12	04/04/12
EPA 8260B	TERT-AMYL METHYL ETHER	Not detected	0.5	0.14	ug/L	04/04/12	04/04/12
EPA 8260B	TERT-BUTYL ALCOHOL	Not detected	25.0	10.00	ug/L	04/04/12	04/04/12
EPA 8260B	TOLUENE	Not detected	1.1	0.17	ug/L	04/04/12	04/04/12
EPA 8260B	XYLENES	Not detected	0.5	0.19	ug/L	04/04/12	04/04/12
EPA 8260B	SURROGATE: 1,2-DICHLOROETHAN	105	75-125		%	04/04/12	04/04/12
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	99.3	62-139		%	04/04/12	04/04/12
EPA 8260B	SURROGATE: DIBROMOFLUOROME	104	75-125		%	04/04/12	04/04/12
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	96.0	75-125		%	04/04/12	04/04/12

Quant Method: CALLW.M
Run #: 0404C08
Instrument: Chico
Sequence: C120402
Dilution Factor: 1
Initials: ARS

Printed: 04/11/12 5:23:22 PM
APPL-F1-SC-NoMC-REG MDLs

Gas-Water

Stantec Consulting, Inc.
15575 Los Gatos Blvd., Bldg C
Los Gatos, CA 95032

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Gary Messerotes

Project: 185702413 Former Caltrans Station, Oakla

ARF: 67417

Sample ID: MW-1

APPL ID: AY58488

Sample Collection Date: 03/30/12

QCG: #GAS-120410A-166026

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
8015	GASOLINE	630	20.0	8.60	ug/L	04/11/12	04/11/12
8015	SURROGATE: BFB-FID (S)	134 #	70-130		%	04/11/12	04/11/12

= Recovery (or RPD) is outside QC limits.

Quant Method:	HGAS.M
Run #:	0410H17
Instrument:	Harpo
Sequence:	120129
Dilution Factor:	1
Initials:	LF

Printed: 04/19/12 4:01:18 PM

APPL-F1-SC-NoMC-REG MDLs

Gas-Water

Stantec Consulting, Inc.
15575 Los Gatos Blvd., Bldg C
Los Gatos, CA 95032

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Gary Messerotes

Project: 185702413 Former Caltrans Station, Oakla

ARF: 67417

Sample ID: MW-2

APPL ID: AY58489

Sample Collection Date: 03/30/12

QCG: #GAS-120410A-166026

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
8015	GASOLINE	120	20.0	8.60	ug/L	04/11/12	04/11/12
8015	SURROGATE: BFB-FID (S)	121	70-130		%	04/11/12	04/11/12

Quant Method: HGAS.M
Run #: 0410H18
Instrument: Harpo
Sequence: 120129
Dilution Factor: 1
Initials: LF

Printed: 04/19/12 4:01:18 PM
APPL-F1-SC-NoMC-REG MDLs

Gas-Water

Stantec Consulting, Inc.
15575 Los Gatos Blvd., Bldg C
Los Gatos, CA 95032

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Gary Messerotes

Project: 185702413 Former Caltrans Station, Oakla

ARF: 67417

Sample ID: MW-3

APPL ID: AY58490

Sample Collection Date: 03/30/12

QCG: #GAS-120410A-166026

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
8015	GASOLINE	5400	200.0	86.00	ug/L	04/11/12	04/11/12
8015	SURROGATE: BFB-FID (S)	128	70-130		%	04/11/12	04/11/12

Quant Method: HGAS.M
Run #: 0410H19
Instrument: Harpo
Sequence: 120129
Dilution Factor: 10
Initials: LF

Printed: 04/19/12 4:01:18 PM
APPL-F1-SC-NoMC-REG MDLs

Gas-Water

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Los Gatos, CA 95032

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Gary Messerotes

Project: 185702413 Former Caltrans Station, Oakla

ARF: 67417

Sample ID: MW-4

APPL ID: AY58491

Sample Collection Date: 03/30/12

QCG: #GAS-120410A-166026

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
8015	GASOLINE	2200	200.0	86.00	ug/L	04/11/12	04/11/12
8015	SURROGATE: BFB-FID (S)	114	70-130		%	04/11/12	04/11/12

Quant Method: HGAS.M
Run #: 0410H20
Instrument: Harpo
Sequence: 120129
Dilution Factor: 10
Initials: LF

Printed: 04/19/12 4:01:18 PM
APPL-F1-SC-NoMC-REG MDLs

Gas-Water

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Los Gatos, CA 95032

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Gary Messerotes
Project: 185702413 Former Caltrans Station, Oakla
Sample ID: MW-5
Sample Collection Date: 03/30/12

ARF: 67417
APPL ID: AY58492
QCG: #GAS-120410A-166026

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
8015	GASOLINE	200	20.0	8.60	ug/L	04/11/12	04/11/12
8015	SURROGATE: BFB-FID (S)	117	70-130		%	04/11/12	04/11/12

Quant Method: HGAS.M
Run #: 0410H21
Instrument: Harpo
Sequence: 120129
Dilution Factor: 1
Initials: LF

Printed: 04/19/12 4:01:18 PM
APPL-F1-SC-NoMC-REG MDLs

Gas-Water

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Los Gatos, CA 95032

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Gary Messerotes

Project: 185702413 Former Caltrans Station, Oakla

ARF: 67417

Sample ID: EB-1

APPL ID: AY58493

Sample Collection Date: 03/30/12

QCG: #GAS-120410A-166026

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
8015	GASOLINE	Not detected	20.0	8.60	ug/L	04/11/12	04/11/12
8015	SURROGATE: BFB-FID (S)	123	70-130		%	04/11/12	04/11/12

Quant Method:	HGAS.M
Run #:	0410H22
Instrument:	Harpo
Sequence:	120129
Dilution Factor:	1
Initials:	LF

Printed: 04/19/12 4:01:18 PM

APPL-F1-SC-NoMC-REG MDLs

Gas-Water

Stantec Consulting, Inc.
15575 Los Gatos Blvd., Bldg C
Los Gatos, CA 95032

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Gary Messerotes

Project: 185702413 Former Caltrans Station, Oakla

ARF: 67417

Sample ID: DUP-1

APPL ID: AY58494

Sample Collection Date: 03/30/12

QCG: #GAS-120410B-166027

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
8015	GASOLINE	2300	200.0	86.00	ug/L	04/11/12	04/11/12
8015	SURROGATE: BFB-FID (S)	118	70-130		%	04/11/12	04/11/12

Quant Method: HGAS.M
Run #: 0410H45
Instrument: Harpo
Sequence: 120129
Dilution Factor: 10
Initials: LF

Printed: 04/19/12 4:01:18 PM
APPL-F1-SC-NoMC-REG MDLs

Gas-Water

Stantec Consulting, Inc.
15575 Los Gatos Blvd., Bldg C
Los Gatos, CA 95032

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Gary Messerotes

Project: 185702413 Former Caltrans Station, Oakla

ARF: 67417

Sample ID: TRIP BLANK

APPL ID: AY58495

Sample Collection Date: 03/30/12

QCG: #GAS-120410A-166026

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
8015	GASOLINE	Not detected	20.0	8.60	ug/L	04/11/12	04/11/12
8015	SURROGATE: BFB-FID (S)	127	70-130		%	04/11/12	04/11/12

Quant Method: HGAS.M
Run #: 0410H10
Instrument: Harpo
Sequence: 120129
Dilution Factor: 1
Initials: LF

Printed: 04/19/12 4:01:18 PM
APPL-F1-SC-NoMC-REG MDLs

Wetlab Results

ARF: 67417

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Stantec Consulting, Inc.
15575 Los Gatos Blvd., Bldg C
Los Gatos, CA 95032

Attn: Gary Messerotes

Method	Analyte	Result	PQL	MDL	Units	Prep Date	Analysis Date
APPL ID: AY58488 -Client Sample ID: MW-1			-Sample Collection Date: 03/30/12			Project: 185702413 Former Caltr	
EPA 160.1	TOTAL DISSOLVED SOLID	435	10	4.4	mg/L	04/04/12	04/04/12
SM2520B	SALINITY	0.44 J	2.0	0.38	s	04/10/12	04/10/12
APPL ID: AY58489 -Client Sample ID: MW-2			-Sample Collection Date: 03/30/12			Project: 185702413 Former Caltr	
EPA 160.1	TOTAL DISSOLVED SOLID	853	10	4.4	mg/L	04/04/12	04/04/12
SM2520B	SALINITY	0.93 J	2.0	0.38	s	04/10/12	04/10/12
APPL ID: AY58490 -Client Sample ID: MW-3			-Sample Collection Date: 03/30/12			Project: 185702413 Former Caltr	
EPA 160.1	TOTAL DISSOLVED SOLID	1380	20	8.8	mg/L	04/04/12	04/04/12
SM2520B	SALINITY	1.6 J	2.0	0.38	s	04/10/12	04/10/12
APPL ID: AY58491 -Client Sample ID: MW-4			-Sample Collection Date: 03/30/12			Project: 185702413 Former Caltr	
EPA 160.1	TOTAL DISSOLVED SOLID	731	10	4.4	mg/L	04/04/12	04/04/12
SM2520B	SALINITY	0.80 J	2.0	0.38	s	04/10/12	04/10/12
APPL ID: AY58492 -Client Sample ID: MW-5			-Sample Collection Date: 03/30/12			Project: 185702413 Former Caltr	
EPA 160.1	TOTAL DISSOLVED SOLID	576	10	4.4	mg/L	04/04/12	04/04/12
SM2520B	SALINITY	0.57 J	2.0	0.38	s	04/10/12	04/10/12

J = Estimated value.

Printed: 04/19/12 1:51:33 PM

Method Blank

EPA 8015B TPH Diesel Water

Blank Name/QCG: **120405W-58488 - 166036**
Batch ID: #TPHD-120405A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
BLANK	DIESEL FUEL	Not detected	50.0	40.40	ug/L	04/05/12	04/06/12
BLANK	SURROGATE: OCTACOSANE (S)	92.3	28-142		%	04/05/12	04/06/12
BLANK	SURROGATE: ORTHO-TERPHENYL (	74.4	49-128		%	04/05/12	04/06/12

Quant Method:TPH0306.M
Run #:406005
Instrument:Apollo
Sequence:120406
Initials:MA

GC SC-Blank-REG MDLs
Printed: 04/20/12 12:43:22 PM

Laboratory Control Spike Recoveries
EPA 8015B TPH Diesel Water

APPL ID: **120405W-58488 LCS - 166036**
Batch ID: #TPHD-120405A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
DIESEL FUEL	2000	1220	1270	61.0	63.5	61-143	4.0	30
SURROGATE: OCTACOSANE (S)	150	124	128	82.7	85.3	28-142		
SURROGATE: ORTHO-TERPHENYL (S)	150	113	116	75.3	77.3	49-128		

Comments: _____

Primary	SPK	DUP
Quant Method :	TPH0306.M	TPH0306.M
Extraction Date :	04/05/12	04/05/12
Analysis Date :	04/06/12	04/06/12
Instrument :	Apollo	Apollo
Run :	406006	406007
Initials :	MA	

Printed: 04/20/12 12:43:29 PM

Method Blank

EPA 8260B BTEX Oxy W - UST

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **120404W-58488 - 165780**
Batch ID: #26UW-120404AC

Sample Type	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
BLANK	1,2-DICHLOROETHANE	Not detected	0.6	0.14	ug/L	04/04/12	04/04/12
BLANK	1,2-ETHYLENE DIBROMIDE	Not detected	0.6	0.20	ug/L	04/04/12	04/04/12
BLANK	BENZENE	Not detected	0.4	0.16	ug/L	04/04/12	04/04/12
BLANK	DI-ISOPROPYL ETHER	Not detected	0.5	0.16	ug/L	04/04/12	04/04/12
BLANK	ETHYL-TERT-BUTYL ETHER	Not detected	0.5	0.19	ug/L	04/04/12	04/04/12
BLANK	ETHYLBENZENE	Not detected	0.6	0.23	ug/L	04/04/12	04/04/12
BLANK	METHYL TERT-BUTYL ETHER	Not detected	0.5	0.26	ug/L	04/04/12	04/04/12
BLANK	TERT-AMYL METHYL ETHER	Not detected	0.5	0.14	ug/L	04/04/12	04/04/12
BLANK	TERT-BUTYL ALCOHOL	Not detected	25.0	10.00	ug/L	04/04/12	04/04/12
BLANK	TOLUENE	Not detected	1.1	0.17	ug/L	04/04/12	04/04/12
BLANK	XYLENES	Not detected	0.5	0.19	ug/L	04/04/12	04/04/12
BLANK	SURROGATE: 1,2-DICHLOROETHAN	107	75-125		%	04/04/12	04/04/12
BLANK	SURROGATE: 4-BROMOFLUOROBEN	99.0	62-139		%	04/04/12	04/04/12
BLANK	SURROGATE: DIBROMOFLUOROME	104	75-125		%	04/04/12	04/04/12
BLANK	SURROGATE: TOLUENE-D8 (S)	96.3	75-125		%	04/04/12	04/04/12

Quant Method: CALLW.M
Run #: 0404C07
Instrument: Chico
Sequence: C120402
Initials: ARS

GC SC-Blank-REG MDLs
Printed: 04/11/12 5:23:27 PM

Method Blank

EPA 8260B BTEX Oxy W - UST Rx

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **120405W-58492 - 165782**
Batch ID: #26UWR-120405AC

Sample Type	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
BLANK	BENZENE	Not detected	0.4	0.16	ug/L	04/05/12	04/05/12
BLANK	SURROGATE: 1,2-DICHLOROETHAN	101	75-125		%	04/05/12	04/05/12
BLANK	SURROGATE: 4-BROMOFLUOROBEN	102	62-139		%	04/05/12	04/05/12
BLANK	SURROGATE: DIBROMOFLUOROME	101	75-125		%	04/05/12	04/05/12
BLANK	SURROGATE: TOLUENE-D8 (S)	99.1	75-125		%	04/05/12	04/05/12

Quant Method: CALLW.M
Run #: 0405C08
Instrument: Chico
Sequence: C120402
Initials: ARS

GC SC-Blank-REG MDLs
Printed: 04/11/12 5:24:24 PM

Laboratory Control Spike Recoveries

EPA 8260B BTEX Oxy W - UST

APPL ID: **120404W-58488 LCS - 165780**
Batch ID: #26UW-120404AC

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
1,2-DICHLOROETHANE	10.00	8.73	8.97	87.3	89.7	68-127	2.7	20
1,2-ETHYLENE DIBROMIDE	10.00	9.05	9.11	90.5	91.1	70-130	0.66	20
BENZENE	10.00	8.89	8.85	88.9	88.5	75-125	0.45	20
DI-ISOPROPYL ETHER	10.00	8.83	8.83	88.3	88.3	70-130	0.0	20
ETHYL-TERT-BUTYL ETHER	10.00	8.68	8.97	86.8	89.7	70-130	3.3	20
ETHYLBENZENE	10.00	9.23	9.22	92.3	92.2	75-125	0.11	20
METHYL TERT-BUTYL ETHER	10.00	8.26	8.77	82.6	87.7	70-130	6.0	20
TERT-AMYL METHYL ETHER	10.00	8.59	8.61	85.9	86.1	70-130	0.23	20
TERT-BUTYL ALCOHOL	125	155	136	124	109	49-167	13.1	20
TOLUENE	10.00	8.94	9.09	89.4	90.9	74-125	1.7	20
XYLENES	30.0	27.6	28.0	92.0	93.3	70-130	1.4	20
SURROGATE: 1,2-DICHLOROETHANE-D	19.5	18.4	18.8	94.6	96.6	75-125		
SURROGATE: 4-BROMOFLUOROBENZE	24.3	24.5	24.7	101	102	62-139		
SURROGATE: DIBROMOFLUOROMETH	20.3	20.1	20.8	99.3	103	75-125		
SURROGATE: TOLUENE-D8 (S)	22.6	22.5	23.1	99.6	102	75-125		

Comments: _____

Primary	SPK	DUP
Quant Method :	CALLW.M	CALLW.M
Extraction Date :	04/04/12	04/04/12
Analysis Date :	04/04/12	04/04/12
Instrument :	Chico	Chico
Run :	0404C03	0404C04
Initials :	ARS	

Printed: 04/11/12 5:23:31 PM

Laboratory Control Spike Recoveries

EPA 8260B BTEX Oxy W - UST Rx

APPL ID: **120405W-58492 LCS - 165782**
Batch ID: #26UWR-120405AC

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
BENZENE	10.00	8.65	9.54	86.5	95.4	75-125	9.8	20
SURROGATE: 1,2-DICHLOROETHANE-D	19.5	18.5	18.8	95.1	96.6	75-125		
SURROGATE: 4-BROMOFLUOROBENZE	24.3	23.0	24.2	94.8	99.8	62-139		
SURROGATE: DIBROMOFLUOROMETH	20.3	19.9	20.2	98.3	99.7	75-125		
SURROGATE: TOLUENE-D8 (S)	22.6	21.9	22.6	97.0	100	75-125		

Comments:

Primary	SPK	DUP
Quant Method :	CALLW.M	CALLW.M
Extraction Date :	04/05/12	04/05/12
Analysis Date :	04/05/12	04/05/12
Instrument :	Chico	Chico
Run :	0405C03	0405C05
Initials :	ARS	

Method Blank
Gas-Water

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **120410W-58488 - 166026**
Batch ID: #GAS-120410A

Sample Type	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE	Not detected	20.0	8.60	ug/L	04/10/12	04/10/12
BLANK	SURROGATE: BFB-FID (S)	115	70-130		%	04/10/12	04/10/12

Quant Method:HGAS.M
Run #:0410H05
Instrument:Harpo
Sequence:120129
Initials:LF

GC SC-Blank-REG MDLs
Printed: 04/19/12 4:01:13 PM

Method Blank
Gas-Water

Blank Name/QCG: **120410W-58494 - 166027**
Batch ID: #GAS-120410B

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE	Not detected	20.0	8.60	ug/L	04/11/12	04/11/12
BLANK	SURROGATE: BFB-FID (S)	123	70-130		%	04/11/12	04/11/12

Quant Method:HGAS.M
Run #:0410H27
Instrument:Harpo
Sequence:120129
Initials:LF

GC SC-Blank-REG MDLs
Printed: 04/19/12 4:01:13 PM

Laboratory Control Spike Recoveries

Gas-Water

APPL ID: **120410W-58488 LCS - 166026**
Batch ID: #GAS-120410A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
GASOLINE	300	323	305	108	102	73-120	5.7	25
SURROGATE: BFB-FID (S)	25.0	32.4	33.7	130	135 #	70-130		

= Recovery is outside QC limits.

Comments:

Primary	SPK	DUP
Quant Method :	HGAS.M	HGAS.M
Extraction Date :	04/10/12	04/10/12
Analysis Date :	04/10/12	04/10/12
Instrument :	Harpo	Harpo
Run :	0410H03	0410H04
Initials :	LF	

Printed: 04/19/12 4:01:16 PM

Laboratory Control Spike Recoveries
Gas-Water

APPL ID: **120411W-58494 LCS - 166027**
Batch ID: #GAS-120410B

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
GASOLINE	300	294	284	98.0	94.7	73-120	3.5	25
SURROGATE: BFB-FID (S)	25.0	30.3	31.9	121	128	70-130		

Comments: _____

Primary	SPK	DUP
Quant Method :	HGAS.M	HGAS.M
Extraction Date :	04/11/12	04/11/12
Analysis Date :	04/11/12	04/11/12
Instrument :	Harpo	Harpo
Run :	0410H25	0410H26
Initials :	LF	

Printed: 04/19/12 4:01:16 PM

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	PQL	MDL	Units	Prep Date	Analysis Date	QC Group
SM2520B	SALINITY	Not detected	2.0	0.38	s	04/10/12	04/10/12	#SLHP-120410A-AY58488
EPA 160.1	TOTAL DISSOLVED SOLIDS E	Not detected	10	4.4	mg/L	04/04/12	04/04/12	#TDS-120404-AY57613

Wetlab SC-Blank-REG MDLs
Printed: 04/19/12 1:51:38 PM

Laboratory Control Spike Recoveries

WETLAB DISSOLVED

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
EPA 160.1	TOTAL DISSOLVED SOLID	221	222	222	100	100	0.0	20	80-120	04/04/12	04/04/12	04/04/12	04/04/12	#TDS-120404-AY57613

Comments: _____

Laboratory Control Spike Recoveries

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvls	SPK Ress	DUP Ress	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
M2520B	SALINITY	0.783	0.770	0.767	98.3	98.0	0.39	10	75-125	04/10/12	04/10/12	04/10/12	04/10/12	#SLHP-120410A-AY58488

Comments: _____

WETLAB

Sample/Sample Duplicate Results

Stantec Consulting, Inc.
15575 Los Gatos Blvd., Bldg C
Los Gatos, CA 95032

Attn: Gary Messerotes

Project: 185702413 Former Caltrans Station, Oakla

Sample ID: AY58488
Client ID: MW-1

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

ARF: 67417

Method	Analyte	Sample ID	Sample Result	Sample Dup Result	RPD	RPD Max	MDL	PQL	Units	Sample Extract Date	Sample Analysis Date	Sample Dup Extract Date	Sample Dup Analysis Date
SM2520B	SALINITY	AY58488	0.44	0.44	NA	10	0.38	2.0	s	04/10/12	04/10/12	04/10/12	04/10/12

Printed: 04/19/12 1:51:44 PM

Dup-SCII (NoMC)

67417 2.0 2.0 2.0

STANTEC Los Gatos Office
15575 Los Gatos Blvd., Bldg C
Los Gatos, CA
TEL: (408) 356-6124 FAX: (408) 356-6138

STANTEC CONSULTING

CHAIN OF CUSTODY RECORD

Stantec Contact(s) for Invoice: Gary Messerotes
eMAIL: gary.messerotes@stantec.com

STANTEC Project #: 185702413

DATE: 3-30-12

PAGE: OF

Project Name: Former Caltrans Station

Address: 555 Hegenberger, Oakland, CA

Sampler(s) Printed Name: Devon Owens

Sampler(s) Signature:

Laboratory:
APPL, Inc.
908 N. Temperance Avenue,
Clovis,CA 93611
(559) 275-2175

Lab Use Only:

Turn-around Time (Business Days):
☒ 10 DAYS ☐ 5 DAYS ☐ 72 HR ☐ 48 HR ☐ 24 HR ☐ <24 HR

☐ OTHER

Special Instructions or Notes:

Temperature Upon Receipt (C):

EDF Required: T0600101696

Fuel Oxygenates list includes: BTEX, EDB, EDC, MTBE, TAME, ETBE, DIPE, and TBA)

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MAT-RIX	No. of Cont.	Pre-serve	Fuel Oxygenates (BTEX, EDB, EDC, MTBE, TAME, ETBE, DIPE, and TBA) by 8260B	TPH-GRO by 8015M	TPH-DRO by 8015M silca gel cleanup	Total Dissolved Solids by 160.1	Salinity by SM2520B							Other:	Laboratory Notes
	MW-1	3/30/12	11:15	W	8	5 VOA HCl	X	X	X	X	X								
	MW-2	3/30/12	9:35	W	8	5 VOA HCl	X	X	X	X	X								
	MW-3	3/30/12	11:30	W	8	5 VOA HCl	X	X	X	X	X								
	MW-4	3/30/12	10:45	W	8	5 VOA HCl	X	X	X	X	X								
	MW-5	3/30/12	11:15	W	8	5 VOA HCl	X	X	X	X	X								
	EB-1	3/30/12	14:00	W	7	5 VOA HCl	X	X	X	X									
	Dup-1	3/30/12	12:00	W	7	5 VOA HCl	X	X	X	X									
	TRIP BLANK	3/30/12		W	3	HCl	X	X											

	Date:	Time:	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	4/3/2012	15:00		4/4/12	1005
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time: