DEPARTMENT OF TRANSPORTATION
111 GRAND AVENUE
P.O. BOX 23660, MS-8C
OAKLAND, CA 94623-0660
PHONE (510) 286-5647
FAX (510) 286-5639
TTY (800) 735-2929
www.dot.ca.gov

Flex your power!
Be energy efficient!

RECEIVED
By Alameda County Environmental Health at 4:18 pm, May 09, 2013

May 8, 2013

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 2013)**
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 2013) 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 Services Inc.

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 don't hesitate to contact me or Stantec Project Manager Gary Messerotes at 408.356.6124 extension 252.

Sincerely,

for Ramin Boker

Ray Boyer, P.E.
Office of Environmental Engineering
Division of Environmental Planning & Engineering
Caltrans District 04

Stantec Consulting Services Inc.
15575 Los Gatos Boulevard Building C
Los Gatos CA 95032
Tel: (408) 356-6124
Fax: (408) 356-6138

May 8, 2013

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 2013)**
Caltrans Former Hegenberger Maintenance Station
555 Hegenberger Road
Oakland, California

Stantec Consulting Services Inc. (Stantec) has prepared this report describing the first quarter 2013 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. 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. Figure 2 shows former Site features and groundwater monitoring well locations.

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, when Stantec initiated semi-annual monitoring.

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); and 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.

CURRENT SITE CONDITIONS

The Site currently consists of an asphalt parking lot and concrete pad and is surrounded by an eight-foot high chain link fence that is topped by barbed wire. To the immediate south of the Site is undeveloped land. Adjacent to the west of the Site is a property owned by Argonaut Holdings Inc., a Delaware limited liability company, which leases the property to TEC of California, Inc. The current tenant is a General Motors Corporation (GMC) Truck Center facility. Coliseum Way abuts the Site on the north and Hegenberger Road is adjacent to the east.

In mid to late 2012, the Bay Area Rapid Transit (BART) commenced construction activities for the BART rail extension to the Oakland Airport, which runs along Hegenberger Road. A portion of this project includes concrete columns that will support the elevated rail line. Some of these columns are located along the eastern portion of the Site. The construction of these columns required a large excavation of approximately 20 feet by 20 feet and an unknown depth. At least one or two of these excavations were located in the area of suspected petroleum-impacted soil and groundwater. To Caltrans knowledge, no soil or grab groundwater samples were collected during the excavation activities.

GROUNDWATER MONITORING

Monitoring Well Box Status

During previous Site visits, Stantec observed damage to the well boxes for monitoring wells MW-2 and MW-5. The well box damages were caused by the construction crew working on Site for the BART extension. Stantec oversaw the BART construction crew replace the damaged well box for MW-2 on October 23, 2012 and the damaged well box for MW-5 January 8, 2013. Photos of the completed well boxes are presented in Appendix B. The threads on the well box for MW-4 are rusted, so the well lid cannot be secured with bolts. The well boxes for MW-3 and MW-1 are in good condition.

Groundwater Level Measurements

On March 20, 2013, Stantec measured groundwater levels in groundwater monitoring wells MW-1 through MW-5 to the nearest 0.01-foot using a Solinst^{TM} electronic water level meter. Depth-to-water and calculated well volumes were recorded on Groundwater Sample Field Data Sheets (Appendix C). Depth-to-water measurements and groundwater elevations are presented in Table 1; groundwater elevations are illustrated on Figure 3.

Monitoring Well Purging and Sampling

Since the Site wells have demonstrated slow recharge following purging, MW-1 through MW-5 were purged on March 20, 2013 and then sampled the following morning on March 21, 2013. 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 C).

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.

GROUNDWATER MONITORING RESULTS

The current groundwater flow direction continues to exhibit an abnormal pattern. As previously stated in Stantec's *Site Conceptual Model and Current Subsurface Investigation Results* report for this Site, dated June 7, 2012, it is believed that the former UST excavation near MW-1, extending to approximately 18 ft below ground surface (bgs), accumulates precipitation within the more permeable backfill of the former UST excavation and flows radially outward from the excavation. This groundwater trend was documented in Appendix E of the aforementioned *Site Conceptual Model* report for 13 events of groundwater monitoring at the Site. Since the monitoring wells at the Site were installed in 1995, the groundwater flow direction has either been radially outward from MW-1 or generally west or northwest towards MW-3. During this monitoring event, groundwater flows generally southeastward (from a high at MW-3) and then more northeasterly towards MW-2. A groundwater gradient was not calculated for this event. 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, however, concentrations for many of the constituents increased this sampling event over levels detected the previous (September 2012) event. For this monitoring event, TPH-GRO concentrations ranged between 110 micrograms per liter (µg/L) (MW-2) and 4,900 µg/L (MW-3); with sample results from four of the five monitoring wells exhibiting TPH-GRO concentrations that essentially doubled since the September 2012 monitoring event, with the exception of MW-2 which increased an order of magnitude.

TPH-DRO concentrations ranged between <40.40 µg/L (MW-2) to 1,000 µg/L (MW-3); with sample results from four of the five monitoring wells exhibiting stable or slightly diminished concentrations with the exception of the TPH-DRO result from MW-3, which increased almost 500 percent.

Benzene concentrations ranged between 0.86 µg/L (MW-5) to 930 µg/L (MW-3), with results from three of the monitoring wells (MW-1, MW-2 and MW-5) continuing to exhibit stabilization at very low concentrations. However, benzene concentrations for MW-4 doubled (220 µg/L) and increased over an order of magnitude (930 µg/L) for MW-3 over the previous event.

The San Francisco Regional Water Quality Control Board Environmental Screening Levels (ESLs, February 2013) 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, MW-3, MW-4, and MW-5 for TPH-GRO, and in MW-3 and MW-4 for TPH-DRO and benzene. All other analytes were below their respective ESLs or were not detected above the laboratory method detection limit.

Analytical results of selected constituents are presented on Figure 4.

QUALITY CONTROL

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

A duplicate groundwater sample was collected (Dup) and the analytical results were within acceptable limits of the initial sample. The analytical results from the equipment blank (EB-1) had a concentration of toluene at 0.19 µg/L with a "J" qualifier. The "J" qualifier indicates that the concentration is an estimated value between the laboratory method detection limit and the practical quantitation limit. 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 D.

FUTURE ACTIVITIES

Stantec is still awaiting response from the ACHCSA regarding the findings and recommendations of the *Site Conceptual Model* submitted in June 2012. Stantec will continue semi-annual groundwater monitoring at the Site in the third quarter 2013.

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
Managing Principal

Gary P. Messerotes, P.G.
Project Manager

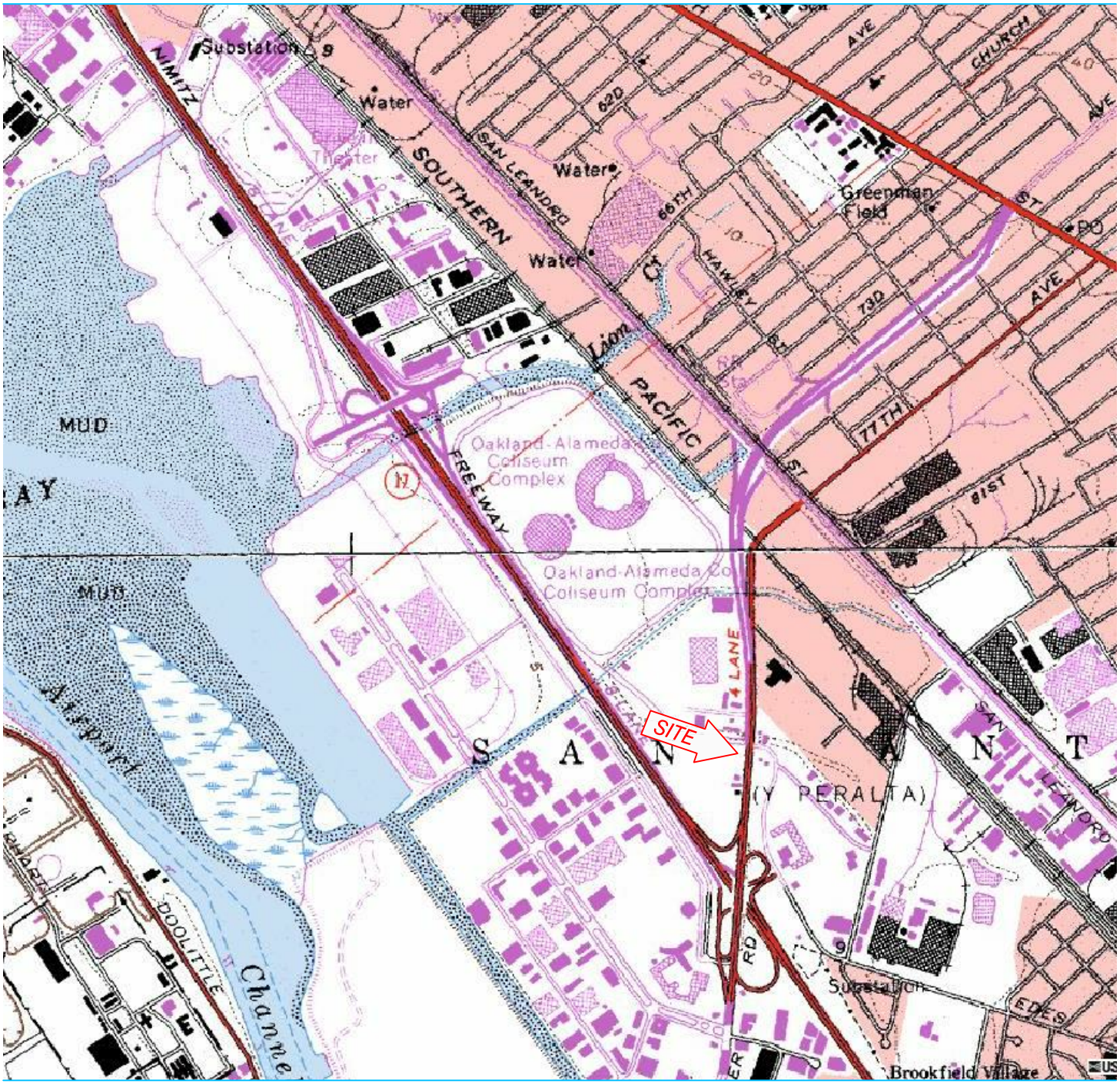
Attachments:

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

Figure 1 – Site Location Map
Figure 2 – Site Plan
Figure 3 - Groundwater Elevation Contour Map – March 2013
Figure 4 – Groundwater Monitoring Well Concentration Map – March 2013

Appendix A – Statement of Limitations
Appendix B – Well Box Replacement Photos
Appendix C – Groundwater Sample Field Data Sheets
Appendix D – Certified Analytical Laboratory Reports and Chain-of-Custody Documents

FIGURES



North

CALIFORNIA

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

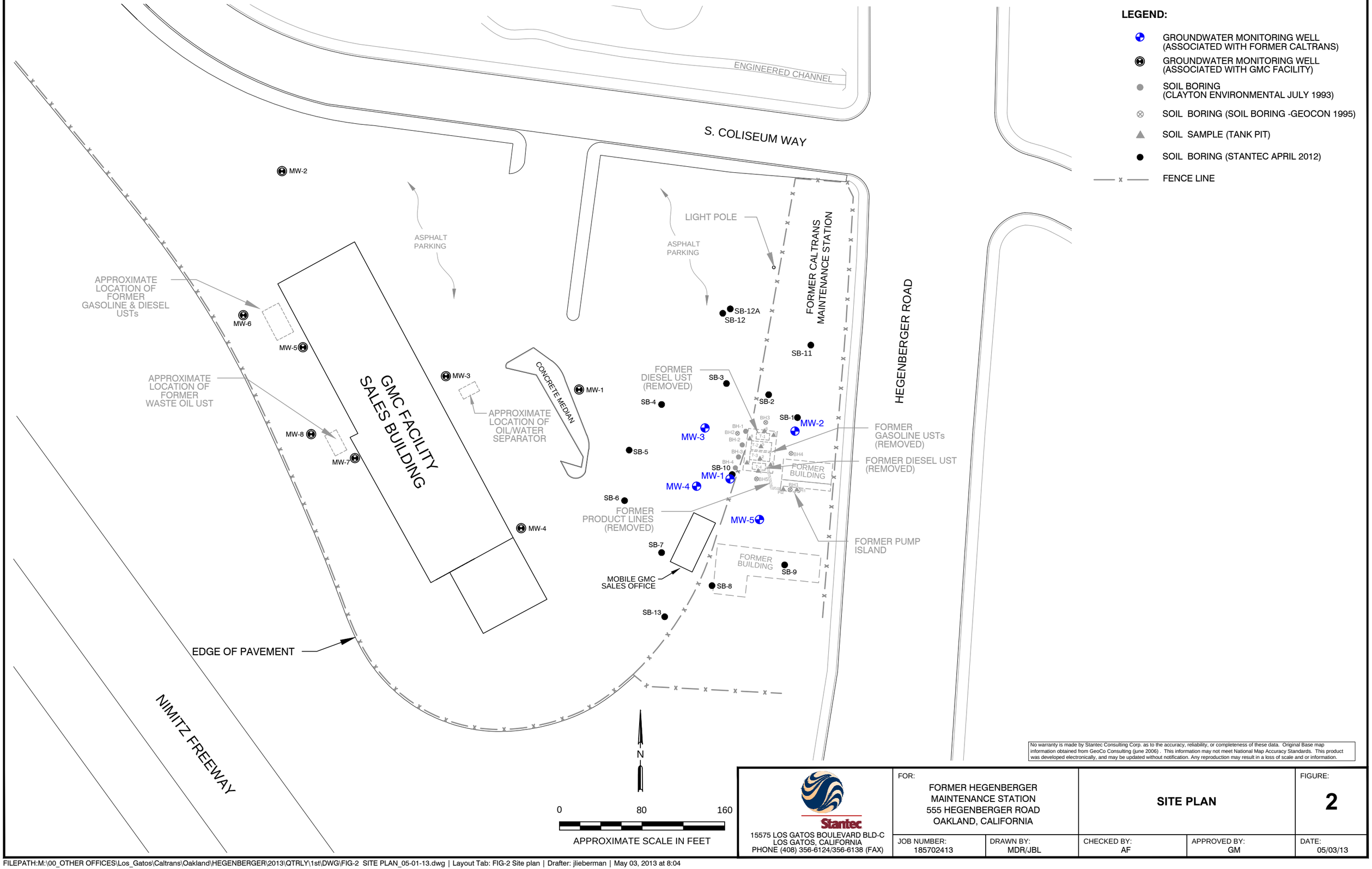
Stantec
15575 LOS GATOS BOULEVARD BLD-C
LOS GATOS, CALIFORNIA
PHONE (408) 356-6124/356-6138 (FAX)

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



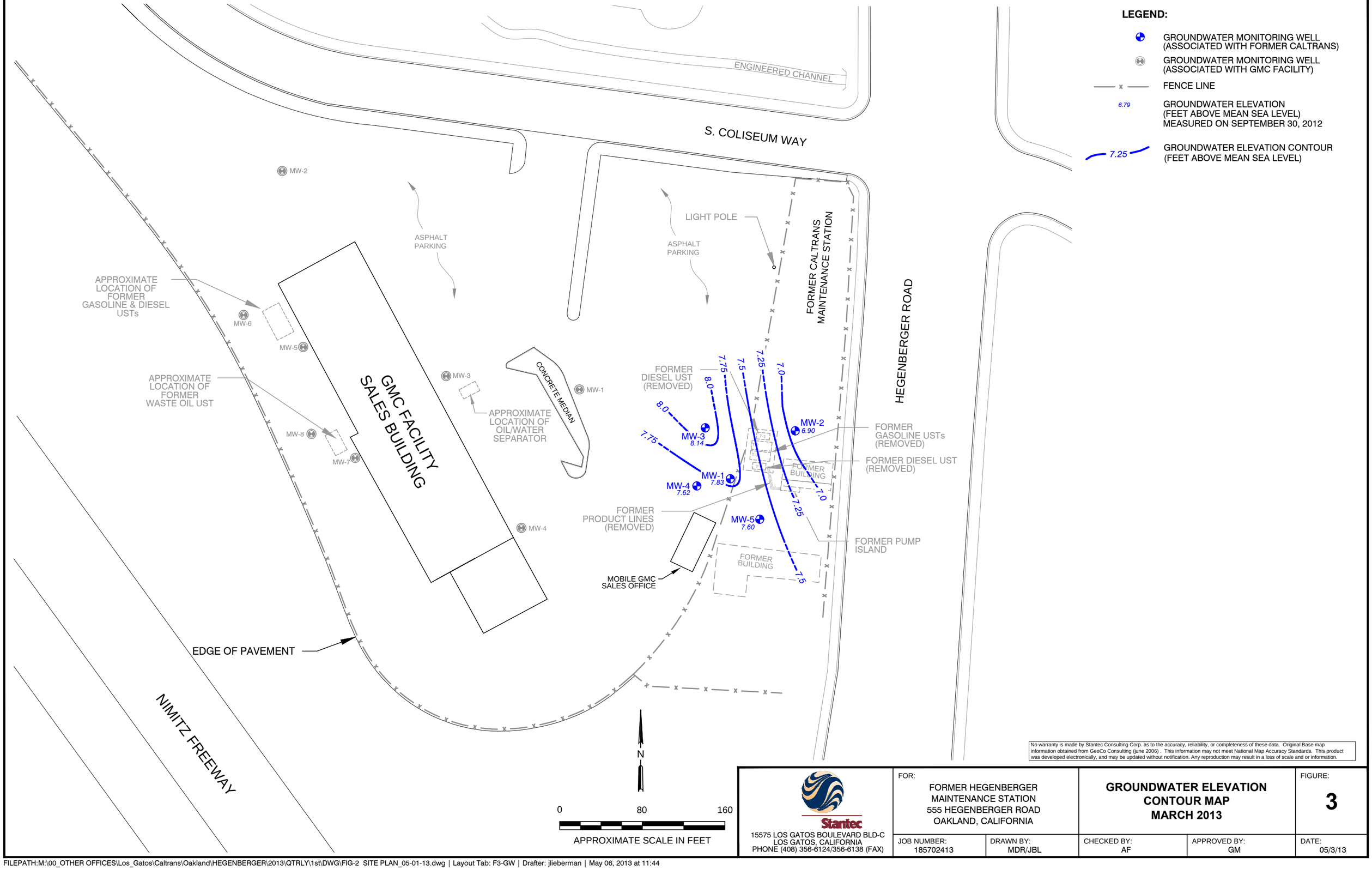
Stantec
15575 LOS GATOS BOULEVARD BLD-C
LOS GATOS, CALIFORNIA
PHONE (408) 356-6124/356-6138 (FAX)

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

SITE PLAN

FIGURE: **2**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185702413	MDR/JBL	AF	GM	05/03/13



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

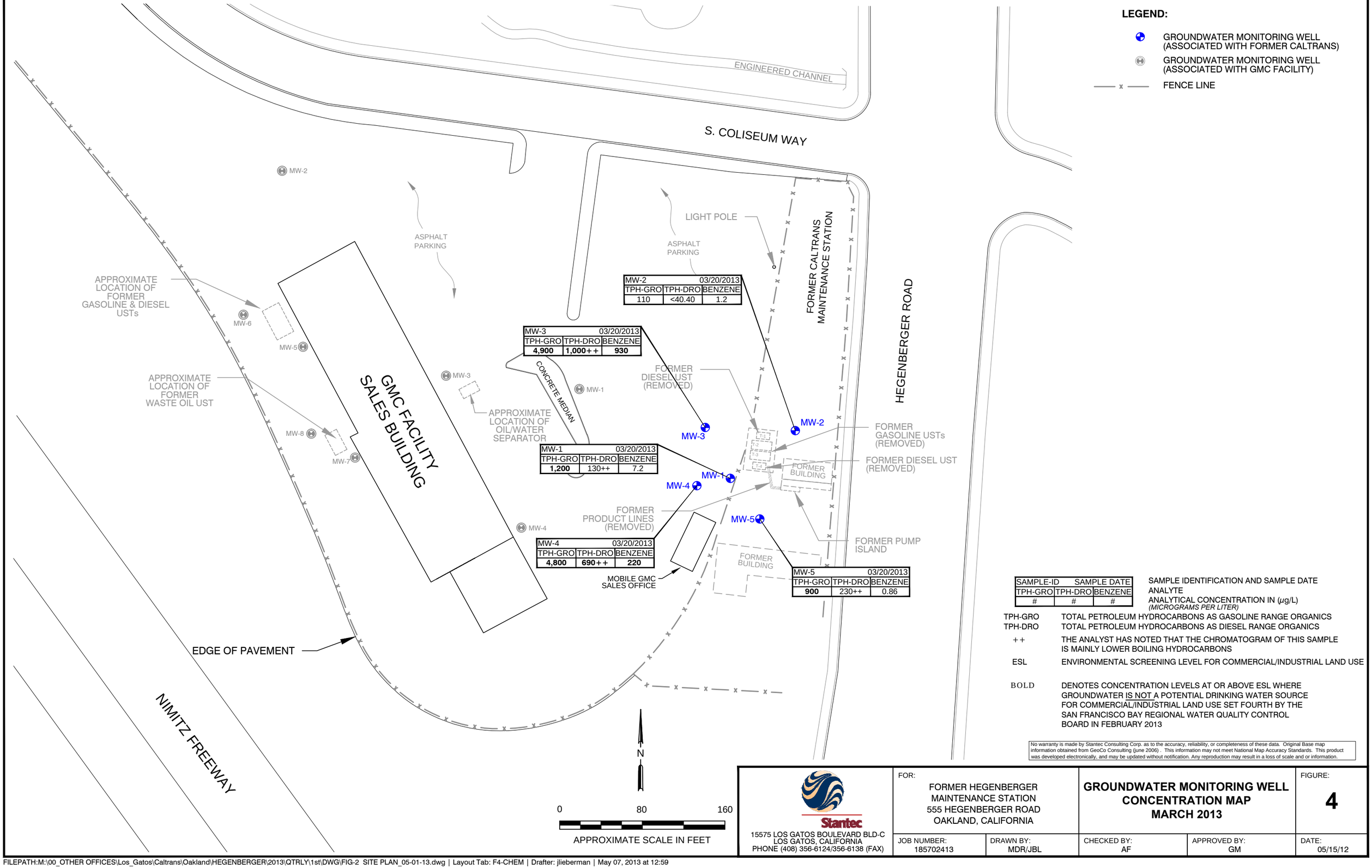
FOR:
FORMER HEGENBERGER MAINTENANCE STATION
555 HEGENBERGER ROAD
OAKLAND, CALIFORNIA

GROUNDWATER ELEVATION CONTOUR MAP MARCH 2013

FIGURE: **3**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185702413	MDR/JBL	AF	GM	05/3/13

FILEPATH:M:\00_OTHER OFFICES\Los_Gatos\Caltrans\Oakland\HEGENBERGER\2013\QTRLY\1st\DWG\FIG-2 SITE PLAN_05-01-13.dwg | Layout Tab: F3-GW | Drafter: jlieberman | May 06, 2013 at 11:44



LEGEND:

- GROUNDWATER MONITORING WELL (ASSOCIATED WITH FORMER CALTRANS)
- GROUNDWATER MONITORING WELL (ASSOCIATED WITH GMC FACILITY)
- FENCE LINE

SAMPLE-ID	SAMPLE DATE	
TPH-GRO	TPH-DRO	BENZENE
#	#	#

SAMPLE IDENTIFICATION AND SAMPLE DATE
ANALYTE
ANALYTICAL CONCENTRATION IN (µg/L)
(MICROGRAMS PER LITER)

TPH-GRO TOTAL PETROLEUM HYDROCARBONS AS GASOLINE RANGE ORGANICS
TPH-DRO TOTAL PETROLEUM HYDROCARBONS AS DIESEL RANGE ORGANICS
++ THE ANALYST HAS NOTED THAT THE CHROMATOGRAM OF THIS SAMPLE IS MAINLY LOWER BOILING HYDROCARBONS
ESL ENVIRONMENTAL SCREENING LEVEL FOR COMMERCIAL/INDUSTRIAL LAND USE
BOLD DENOTES CONCENTRATION LEVELS AT OR ABOVE ESL WHERE GROUNDWATER IS NOT A POTENTIAL DRINKING WATER SOURCE FOR COMMERCIAL/INDUSTRIAL LAND USE SET FOURTH BY THE SAN FRANCISCO BAY REGIONAL WATER QUALITY CONTROL BOARD IN FEBRUARY 2013

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

GROUNDWATER MONITORING WELL CONCENTRATION MAP MARCH 2013

FIGURE: **4**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185702413	MDR/JBL	AF	GM	05/15/12

FILEPATH:M:\00_OTHER OFFICES\Los_Gatos\Caltrans\Oakland\HEGENBERGER\2013\QTRLY\1st\DWG\FIG-2 SITE PLAN_05-01-13.dwg | Layout Tab: F4-CHEM | Drafter: jlieberman | May 07, 2013 at 12:59

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
		*09/30/02	10.26	5.79	4.47
		*02/20/03	10.26	4.49	5.77
		*01/12/04	10.26	4.41	5.85
		*05/12/05	10.26	4.45	5.81
		*09/29/11	10.26	5.57	4.69
		**03/30/12	13.31	3.50	9.81
		09/11/12	13.31	6.15	7.16
		03/20/13	13.31	5.48	7.83
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
		*09/30/02	10.22	6.48	3.74
		*02/20/03	10.22	5.98	4.24
		*01/12/04	10.22	5.69	4.53
		*05/12/05	10.22	5.55	4.67
		*09/29/11	10.22	6.21	4.01
		**03/30/12	13.10	5.00	8.10
		09/11/12	13.10	6.29	6.81
		03/20/13	13.10	6.20	6.90
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
		*09/30/02	9.46	5.84	3.62
		*02/20/03	9.46	5.55	3.91
		*01/12/04	9.46	4.77	4.69
		*05/12/05	9.46	4.63	4.83
		*09/29/11	9.46	5.50	3.96
		**03/30/12	12.34	2.75	9.59
		09/11/12	12.34	5.55	6.79
		03/20/13	12.34	4.20	8.14

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	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
		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
		*09/30/02	10.00	6.40	3.60
		*02/20/03	10.00	5.83	4.17
		*01/12/04	10.00	5.41	4.59
		*05/12/05	10.00	5.59	4.41
		*09/29/11	10.00	6.23	3.77
		**03/30/12	12.85	3.30	9.55
		09/11/12	12.85	5.86	6.99
		03/20/13	12.85	5.23	7.62
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
		*09/30/02	10.34	6.18	4.16
		*02/20/03	10.34	5.80	4.54
		*01/12/04	10.34	5.60	4.74
		*05/12/05	10.34	6.18	4.16
		*09/29/11	10.34	6.37	3.97
		**03/30/12	13.33	4.61	8.72
		09/11/12	13.33	6.40	6.93
		03/20/13	13.33	5.73	7.60

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)	DCA (µg/L)	TDS (mg/L)	Salinity (s)
ESL where groundwater IS NOT a current or potential source of drinking water		500	640	640	640	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]
	9/11/2012	**600**	470[++]	--	--	5.5	4.7	0.30[J]	6.0	<0.26	--	<0.14	<0.19	<0.16	<10.00	<0.20	<0.14	--	--
	3/21/2013	**1,200**	130[++]	--	--	7.2	4.0	0.35[J]	4.8	<0.26	--	<0.14	<0.19	<0.16	<10.00	<0.20	<0.14	--	--
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]
	9/11/2012	13[J]	<40.40	--	--	<0.16	<0.17	<0.23	<0.19	<0.26	--	<0.14	<0.19	<0.16	<10.00	<0.20	<0.14	--	--
DUP-1	9/11/2012	11[J]	<40.40	--	--	<0.16	<0.17	<0.23	<0.19	<0.26	--	<0.14	<0.19	<0.16	<10.00	<0.20	<0.14	--	--
	3/21/2013	110	<40.40	--	--	1.2	0.59 [J]	<0.23	0.77	<0.26	--	<0.14	<0.19	<0.16	<10.00	<0.20	<0.14	--	--
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]
	9/12/2012	**2,000**	210[++]	--	--	22	7.4	<0.23	5.8	<0.26	--	<0.14	<0.19	0.27[J]	<10.00	<0.20	<0.14	--	--
	3/21/2013	**4,900**	**1000**[++]	--	--	**930**	32	5.9	19	<0.26	--	<0.14	<0.19	<0.16	<10.00	<0.20	<0.14	--	--

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)	DCA (µg/L)	TDS (mg/L)	Salinity (s)
ESL where groundwater IS NOT a current or potential source of drinking water		500	640	640	640	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	<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
	9/11/2012	**2,500**	310 ++	--	--	**92**	16	1.3	16	<0.52	--	<0.28	<0.38	<0.32	<20.00	<0.40	<0.28	--	--
	3/21/2013	**4,800**	**680 ++**	--	--	**200**	21	3.7	21	<0.26	--	<0.14	<0.19	<0.16	<10.00	<0.20	<0.14	--	--
DUP	3/21/2013	**4,500**	**690 ++**	--	--	**220**	21	3.6	21	<0.26	--	<0.14	<0.19	<0.16	<10.00	<0.20	<0.14	--	--
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
	9/12/2012	**550**	200 ++	--	--	1.0	1.6	<0.23	3.2	<0.26	--	<0.14	<0.19	<0.16	<10.00	<0.20	<0.14	--	--
	3/21/2013	**900**	230 ++	--	--	0.86	1.3	<0.23	3.3	<0.26	--	<0.14	<0.19	<0.16	<10.00	<0.20	<0.14	--	--
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
	9/6/2012	<8.60	--	--	--	<0.16	<0.17	<0.23	<0.19	<0.26	<0.14 - <10.00	--	--	--	--	--	--	--	--
	3/21/2013	<8.60	--	--	--	<0.16	<0.17	<0.23	<0.19	<0.26	--	<0.14	<0.19	<0.16	<10.00	<0.20	<0.14	--	--
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
	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
	9/12/2012	<8.60	<40.40	--	--	<0.16	<0.17	<0.23	<0.19	<0.26	--	<0.14	<0.19	<0.16	<10.00	<0.20	<0.14	--	--
	3/21/2013	<8.60	<40.40	--	--	<0.16	0.19 J	<0.23	<0.19	<0.26	--	<0.14	<0.19	<0.16	12 J	<0.20	<0.14	--	--

Abbreviations:
ESL = Environmental Screening Level for Commercial/Industrial Land Use
NE = Not established for compounds detected
TPH-GRO = Total petroleum hydrocarbons as gasoline 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
DCA = 1,2-dicholorethane
-- = 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:

Devon Owens
Geologic Staff

Reviewed by:

Jack Hardin
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 8, 2013

Stamp:

PROFESSIONAL GEOLOGIST
GARY P. MESSEROTES
No. 5650
exp 07/31/14
STATE OF CALIFORNIA

APPENDIX B

WELL BOX REPLACEMENT PHOTOS

STANTEC CONSULTING SERVICES INC
PHOTOGRAPHIC RECORD

Client: Caltrans	**Job Number:** 185702413
Site Name: 555 Hegenberger Rd, Oakland, CA	

PHOTO No. 1, October 23, 2012

View of the completed well box of MW-2.

PHOTO No. 2, January 8, 2013

View of the completed well box of MW-5.

APPENDIX C
GROUNDWATER SAMPLE FIELD DATA SHEETS

STANTEC CONSULTING
GROUNDWATER SAMPLE FIELD DATA SHEET

Project No. 185702413 Purged By: Clark Mateer Well I.D.: MW-1
Client Name: Caltrans Sampled By: Devon Owens Sample I.D.: MW-1
Location: 555 Heyenberger Rd What QA Samples?:

Date Purged: 3/20/13 Start (2400hr): 1205 End (2400hr): 1225
Date Sampled: 3/21/13 Sample Time (2400hr): 810
DTW 3/21 = 5.45

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) = 19.50 Casing Volume (gal) = 9.39
Depth to water (feet) = 5.48 Calculated Purge (gal) = 28.18 (3 casing vols.)
Water column height (feet) = 14.02 Actual Purge (gal) = 30
DEPTH TO WATER @ 80% RECHARGE = 8.28 FEET

FIELD MEASUREMENTS

Date	Time (2400hr)	Volume (gal)	Temp. (degrees C)	Conductivity (umhos/cm)	pH (units)	Color (visual)	~~BTW~~ WP (ft)	
3/19/13	12:05	0	17.4	1012	6.89	CLEAR	-145	
3/20/13	12:10	10	17.5	985.2	7.12	CLEAR	-118	
3/20/13	12:15	20	17.1	990.1	7.50	TURBID BROWN	4	
3/21/13	12:20	30	17.7	1027	7.36	TURBID BROWN	-75	

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: Yes

Well Integrity: O.K. Rusty
Remarks: Sheen present

Signature: _____ Page 1 of __

STANTEC CONSULTING
GROUNDWATER SAMPLE FIELD DATA SHEET

Project No. 185702413 Purged By: CLARK MARKS Well I.D.: MW-2
Client Name: Caltrans Sampled By: Devon Owens Sample I.D.: MW-2
Location: 555 Hegenberger RA What QA Samples?: _____

Date Purged: 3/20/13 Start (2400hr): 1040 End (2400hr): 1059
Date Sampled: 3/21/13 Sample Time (2400hr): 950
DTW 3/21 = 6.08

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) = 8.78
Depth to water (feet) = 6.20 Calculated Purge (gal) = 26.34 (3 casing vols.)
Water column height (feet) = 13.1 Actual Purge (gal) = _____
DEPTH TO WATER @ 80% RECHARGE = 8.82 FEET

FIELD MEASUREMENTS

Date	Time (2400hr)	Volume (gal)	Temp. (degrees C)	Conductivity (umhos/cm)	pH (units)	Color (visual)	O&P DTW (ft)	
3/20/13	10:40	0	18.7	1651	6.83	CLEAR	159	
3/20/13	10:45	9	19.9	1716	6.82	CLEAR	157	
3/20/13	10:50	18	19.7	1689	6.81	TURBID BROWN	157	
3/20/13	10:55	27	19.5	1661	6.80	TURBID BROWN	155	

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: yes

Well Integrity: Good
Remarks: _____

Signature: _____ Page 1 of __

STANTEC CONSULTING
GROUNDWATER SAMPLE FIELD DATA SHEET

Project No. 185702413 Purged By: Clark Mafi Well I.D.: MW-3
Client Name: Caltrans Sampled By: Devon Owens Sample I.D.: MW-3
Location: 555 Hegenberger RD What QA Samples?:

Date Purged: 3/20/13 Start (2400hr): 1256 End (2400hr): 1328
Date Sampled: 3/21/13 Sample Time (2400hr): 830
DTW 3/21 = 4.72

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) = 19.50 Casing Volume (gal) = 10.25
Depth to water (feet) = 4.20 Calculated Purge (gal) = 30.75 (3 casing vols.)
Water column height (feet) = 15.3 Actual Purge (gal) = 30
DEPTH TO LAYER @ 80% RECHARGE = 7.296

FIELD MEASUREMENTS

Date	Time (2400hr)	Volume (gal)	Temp. (degrees C)	Conductivity (umhos/cm) MS	pH (units)	Color (visual)	ORP ~~DTW~~ (ft)	
3/20/13	1256	0	17.6	3666	7.02	clear	-90	
3/20/13	1301	10	18.3	3820	6.92	cloudy	-95	
3/20/13	1309	20	18.8	3864	6.98	cloudy	-93	
3/20/13	1325	30	18.8	3890	7.10	cloudy	-93	

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: Yes

Well Integrity: Good
Remarks: Sheen present

Signature: _____ Page 1 of __

STANTEC CONSULTING
GROUNDWATER SAMPLE FIELD DATA SHEET

Project No. 185702413 Purged By: Devon Owens Well I.D.: MW-4
Client Name: Caltrans Sampled By: Devon Owens Sample I.D.: MW-4
Location: 555 Hegenberger Rd What QA Samples?: Dup

Date Purged: 3/20/13 Start (2400hr): 1210 End (2400hr): 1240
Date Sampled: 3/21/13 Sample Time (2400hr): 855
DTW 3/21 = 5.26

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) = 16.70 Casing Volume (gal) = 7.68
Depth to water (feet) = 5.23 Calculated Purge (gal) = 23.04 (3 casing vols.)
Water column height (feet) = 11.47 Actual Purge (gal) = 24
DEPTH TO WATER @ 80% RECHARGE = 7.52 FEET

FIELD MEASUREMENTS

Date	Time (2400hr)	Volume (gal)	Temp. (degrees C)	Conductivity (umhos/cm) us	pH (units)	Color (visual)	ORP ~~DTW~~ (ft)	
3/20/13	1210	0	16.7	2229	7.27	clear	-118	
3/20/13	1215	8	16.6	2869	7.21	clear	-103	
3/20/13	1221	16	16.6	2841	7.28	cloudy	-105	
3/20/13	1238	24	16.6	2868	7.35	cloudy	-109	

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: Yes

Well Integrity: OK. Rusty, no bolts
Remarks: Sheen present

Signature: _____ Page 1 of __

STANTEC CONSULTING
GROUNDWATER SAMPLE FIELD DATA SHEET

Project No. 185702413 Purged By: Devon Owens Well I.D.: MW-5
Client Name: Caltrans Sampled By: Devon Owens Sample I.D.: MW-5
Location: 555 Hegenberger Rd What QA Samples?: _____

Date Purged: 3/20/13 Start (2400hr): 1040 End (2400hr): 1155
Date Sampled: 3/21/13 Sample Time (2400hr): 930
DTW 3/21 = 6.07

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) = 19.35 Casing Volume (gal) = 9.13
Depth to water (feet) = 5.73 Calculated Purge (gal) = 27.39 (3 casing vols.)
Water column height (feet) = 13.62 Actual Purge (gal) = ~~30~~ 27
DEPTH TO WATER @ 80% RECHARGE = 8.454 FEET

FIELD MEASUREMENTS

Date	Time (2400hr)	Volume (gal)	Temp. (degrees C)	Conductivity ~~(umhos/cm)~~ us	pH (units)	Color (visual)	ORP ~~DTW~~ (ft)	
3/20/13	1040	0	18.4	1776 us	6.58	clear	-87	
3/20/13	1053	10	18.7	1850	6.98	cloudy	-98	
3/20/13	1102	20	19.2	1866	7.14	cloudy	-105	
3/20/13	1150	~~27~~ ~~30~~	19.2	1811	7.31	cloudy	-106	

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: Yes

Well Integrity: Good
Remarks: Sheen present. slow recharge

Signature: _____ Page 1 of __

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

908 North Temperance Ave. ∇ Clovis, CA 93611 ∇ Phone 559-275-2175 ∇ Fax 559-275-4422

NELAP Certification Number: 05233CA (HW)

April 10, 2013

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

Attn: Gary Messerotes

Subject: Report of data: Case 70249

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 March 21, 2013, in good condition. Written results are being provided on this April 10, 2013, 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 samples and QC 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 the EPA 8015B TPH-Gas analysis, the samples were purged according to EPA method 5030B.

No unusual problem or complication was 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: ____

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 Stn, Oakland

ARF: 70249

Sample ID: MW-1

APPL ID: AY77512

Sample Collection Date: 03/21/13

QCG: #TPHD-130327A-176376

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8015B-	DIESEL FUEL	130 ++	50.0	40.40	ug/L	03/27/13	04/05/13
EPA 8015B-	SURROGATE: OCTACOSANE (S)	51.4	28-142		%	03/27/13	04/05/13
EPA 8015B-	SURROGATE: ORTHO-TERPHENYL (	51.7	49-128		%	03/27/13	04/05/13

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

Quant Method:	TPH0327.M
Run #:	401196
Instrument:	Apollo
Sequence:	130401
Dilution Factor:	1
Initials:	PJA

Printed: 04/09/13 3:33:26 PM

APPL-F1-SC-NoMC-REG MDLs

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 Stn, Oakland

ARF: 70249

Sample ID: MW-2

APPL ID: AY77513

Sample Collection Date: 03/21/13

QCG: #TPHD-130327A-176376

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8015B-	DIESEL FUEL	Not detected	50.0	40.40	ug/L	03/27/13	04/05/13
EPA 8015B-	SURROGATE: OCTACOSANE (S)	46.5	28-142		%	03/27/13	04/05/13
EPA 8015B-	SURROGATE: ORTHO-TERPHENYL (	51.8	49-128		%	03/27/13	04/05/13

Quant Method: TPH0327.M
Run #: 401197
Instrument: Apollo
Sequence: 130401
Dilution Factor: 1
Initials: PJA

Printed: 04/09/13 3:33:26 PM
APPL-F1-SC-NoMC-REG MDLs

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 Stn, Oakland

ARF: 70249

Sample ID: MW-3

APPL ID: AY77514

Sample Collection Date: 03/21/13

QCG: #TPHD-130327A-176376

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8015B-	DIESEL FUEL	1000 ++	50.0	40.40	ug/L	03/27/13	04/08/13
EPA 8015B-	SURROGATE: OCTACOSANE (S)	37.5	28-142		%	03/27/13	04/08/13
EPA 8015B-	SURROGATE: ORTHO-TERPHENYL (	64.9	49-128		%	03/27/13	04/08/13

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

Quant Method:	TPH0327.M
Run #:	408015
Instrument:	Apollo
Sequence:	130408
Dilution Factor:	1
Initials:	PJA

Printed: 04/09/13 3:33:26 PM

APPL-F1-SC-NoMC-REG MDLs

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 Stn, Oakland

ARF: 70249

Sample ID: MW-4

APPL ID: AY77515

Sample Collection Date: 03/21/13

QCG: #TPHD-130327A-176376

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8015B-	DIESEL FUEL	680 ++	50.0	40.40	ug/L	03/27/13	04/05/13
EPA 8015B-	SURROGATE: OCTACOSANE (S)	49.4	28-142		%	03/27/13	04/05/13
EPA 8015B-	SURROGATE: ORTHO-TERPHENYL (	53.3	49-128		%	03/27/13	04/05/13

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

Quant Method:	TPH0327.M
Run #:	401199
Instrument:	Apollo
Sequence:	130401
Dilution Factor:	1
Initials:	PJA

Printed: 04/09/13 3:33:26 PM

APPL-F1-SC-NoMC-REG MDLs

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 Stn, Oakland
Sample ID: MW-5
Sample Collection Date: 03/21/13

ARF: 70249
APPL ID: AY77516
QCG: #TPHD-130327A-176376

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8015B-	DIESEL FUEL	230 ++	50.0	40.40	ug/L	03/27/13	04/05/13
EPA 8015B-	SURROGATE: OCTACOSANE (S)	47.7	28-142		%	03/27/13	04/05/13
EPA 8015B-	SURROGATE: ORTHO-TERPHENYL (	53.5	49-128		%	03/27/13	04/05/13

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

Quant Method:	TPH0327.M
Run #:	401200
Instrument:	Apollo
Sequence:	130401
Dilution Factor:	1
Initials:	PJA

Printed: 04/09/13 3:33:26 PM
APPL-F1-SC-NoMC-REG MDLs

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 Stn, Oakland
Sample ID: EB-1
Sample Collection Date: 03/21/13

ARF: 70249
APPL ID: AY77517
QCG: #TPHD-130327A-176376

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8015B-	DIESEL FUEL	Not detected	50.0	40.40	ug/L	03/27/13	04/05/13
EPA 8015B-	SURROGATE: OCTACOSANE (S)	44.6	28-142		%	03/27/13	04/05/13
EPA 8015B-	SURROGATE: ORTHO-TERPHENYL (	49.8	49-128		%	03/27/13	04/05/13

Quant Method:	TPH0327.M
Run #:	401201
Instrument:	Apollo
Sequence:	130401
Dilution Factor:	1
Initials:	PJA

Printed: 04/09/13 3:33:26 PM
APPL-F1-SC-NoMC-REG MDLs

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 Stn, Oakland

ARF: 70249

Sample ID: DUP

APPL ID: AY77518

Sample Collection Date: 03/21/13

QCG: #TPHD-130327A-176376

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8015B-	DIESEL FUEL	690 ++	50.0	40.40	ug/L	03/27/13	04/05/13
EPA 8015B-	SURROGATE: OCTACOSANE (S)	50.6	28-142		%	03/27/13	04/05/13
EPA 8015B-	SURROGATE: ORTHO-TERPHENYL (	57.0	49-128		%	03/27/13	04/05/13

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

Quant Method:	TPH0327.M
Run #:	401202
Instrument:	Apollo
Sequence:	130401
Dilution Factor:	1
Initials:	PJA

Printed: 04/09/13 3:33:26 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 Stn, Oakland
Sample ID: MW-1
Sample Collection Date: 03/21/13

ARF: 70249
APPL ID: AY77512
QCG: #26UW-130328AT-176181

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	Not detected	0.6	0.14	ug/L	03/28/13	03/28/13
EPA 8260B	1,2-ETHYLENE DIBROMIDE	Not detected	0.6	0.20	ug/L	03/28/13	03/28/13
EPA 8260B	BENZENE	7.2	0.4	0.16	ug/L	03/28/13	03/28/13
EPA 8260B	DI-ISOPROPYL ETHER	Not detected	0.5	0.16	ug/L	03/28/13	03/28/13
EPA 8260B	ETHYL-TERT-BUTYL ETHER	Not detected	0.5	0.19	ug/L	03/28/13	03/28/13
EPA 8260B	ETHYLBENZENE	0.35 J	0.6	0.23	ug/L	03/28/13	03/28/13
EPA 8260B	METHYL TERT-BUTYL ETHER	Not detected	0.5	0.26	ug/L	03/28/13	03/28/13
EPA 8260B	TERT-AMYL METHYL ETHER	Not detected	0.5	0.14	ug/L	03/28/13	03/28/13
EPA 8260B	TERT-BUTYL ALCOHOL	Not detected	25.0	10.00	ug/L	03/28/13	03/28/13
EPA 8260B	TOLUENE	4.0	1.1	0.17	ug/L	03/28/13	03/28/13
EPA 8260B	XYLENES	4.8	0.5	0.19	ug/L	03/28/13	03/28/13
EPA 8260B	SURROGATE: 1,2-DICHLOROETHAN	97.2	75-125		%	03/28/13	03/28/13
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	100	62-139		%	03/28/13	03/28/13
EPA 8260B	SURROGATE: DIBROMOFLUOROME	97.2	75-125		%	03/28/13	03/28/13
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	101	75-125		%	03/28/13	03/28/13

J = Estimated value.

Quant Method: TALLW.M
Run #: 0328T18
Instrument: Thor
Sequence: T130326
Dilution Factor: 1
Initials: DG

Printed: 04/03/13 1:24:14 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 Stn, Oakland
Sample ID: MW-2
Sample Collection Date: 03/21/13

ARF: 70249
APPL ID: AY77513
QCG: #26UW-130328BT-176182

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	Not detected	0.6	0.14	ug/L	03/29/13	03/29/13
EPA 8260B	1,2-ETHYLENE DIBROMIDE	Not detected	0.6	0.20	ug/L	03/29/13	03/29/13
EPA 8260B	BENZENE	1.2	0.4	0.16	ug/L	03/29/13	03/29/13
EPA 8260B	DI-ISOPROPYL ETHER	Not detected	0.5	0.16	ug/L	03/29/13	03/29/13
EPA 8260B	ETHYL-TERT-BUTYL ETHER	Not detected	0.5	0.19	ug/L	03/29/13	03/29/13
EPA 8260B	ETHYLBENZENE	Not detected	0.6	0.23	ug/L	03/29/13	03/29/13
EPA 8260B	METHYL TERT-BUTYL ETHER	Not detected	0.5	0.26	ug/L	03/29/13	03/29/13
EPA 8260B	TERT-AMYL METHYL ETHER	Not detected	0.5	0.14	ug/L	03/29/13	03/29/13
EPA 8260B	TERT-BUTYL ALCOHOL	Not detected	25.0	10.00	ug/L	03/29/13	03/29/13
EPA 8260B	TOLUENE	0.59 J	1.1	0.17	ug/L	03/29/13	03/29/13
EPA 8260B	XYLENES	0.77	0.5	0.19	ug/L	03/29/13	03/29/13
EPA 8260B	SURROGATE: 1,2-DICHLOROETHAN	95.5	75-125		%	03/29/13	03/29/13
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	96.5	62-139		%	03/29/13	03/29/13
EPA 8260B	SURROGATE: DIBROMOFLUOROME	98.6	75-125		%	03/29/13	03/29/13
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	100	75-125		%	03/29/13	03/29/13

J = Estimated value.

Quant Method: TALLW.M
Run #: 0328T40
Instrument: Thor
Sequence: T130326
Dilution Factor: 1
Initials: DG

Printed: 04/03/13 1:24:14 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

Attn: Gary Messerotes

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Project: 185702413 Former Caltrans Stn, Oakland

ARF: 70249

Sample ID: MW-3

APPL ID: AY77514

Sample Collection Date: 03/21/13

QCG: #26UW-130328AT-176181

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	Not detected	0.6	0.14	ug/L	03/28/13	03/28/13
EPA 8260B	1,2-ETHYLENE DIBROMIDE	Not detected	0.6	0.20	ug/L	03/28/13	03/28/13
EPA 8260B	BENZENE	730 E	0.4	0.16	ug/L	03/28/13	03/28/13
EPA 8260B	DI-ISOPROPYL ETHER	Not detected	0.5	0.16	ug/L	03/28/13	03/28/13
EPA 8260B	ETHYL-TERT-BUTYL ETHER	Not detected	0.5	0.19	ug/L	03/28/13	03/28/13
EPA 8260B	ETHYLBENZENE	5.9	0.6	0.23	ug/L	03/28/13	03/28/13
EPA 8260B	METHYL TERT-BUTYL ETHER	Not detected	0.5	0.26	ug/L	03/28/13	03/28/13
EPA 8260B	TERT-AMYL METHYL ETHER	Not detected	0.5	0.14	ug/L	03/28/13	03/28/13
EPA 8260B	TERT-BUTYL ALCOHOL	Not detected	25.0	10.00	ug/L	03/28/13	03/28/13
EPA 8260B	TOLUENE	32	1.1	0.17	ug/L	03/28/13	03/28/13
EPA 8260B	XYLENES	19	0.5	0.19	ug/L	03/28/13	03/28/13
EPA 8260B	SURROGATE: 1,2-DICHLOROETHAN	99.4	75-125		%	03/28/13	03/28/13
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	98.6	62-139		%	03/28/13	03/28/13
EPA 8260B	SURROGATE: DIBROMOFLUOROME	97.2	75-125		%	03/28/13	03/28/13
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	101	75-125		%	03/28/13	03/28/13

E = The reported value exceeds linear range.

Quant Method:	TALLW.M
Run #:	0328T20
Instrument:	Thor
Sequence:	T130326
Dilution Factor:	1
Initials:	DG

Printed: 04/03/13 1:24:14 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 Stn, Oakland

ARF: 70249

Sample ID: MW-3

APPL ID: AY77514

Sample Collection Date: 03/21/13

QCG: #26UWD-130328BT1-17618

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	930	4.0	1.60	ug/L	03/29/13	03/29/13
EPA 8260B	SURROGATE: 1,2-DICHLOROETHAN	97.7	75-125		%	03/29/13	03/29/13
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	103	62-139		%	03/29/13	03/29/13
EPA 8260B	SURROGATE: DIBROMOFLUOROME	97.4	75-125		%	03/29/13	03/29/13
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	103	75-125		%	03/29/13	03/29/13

Quant Method: TALLW.M
Run #: 0328T51
Instrument: Thor
Sequence: T130326
Dilution Factor: 10
Initials: DG

Printed: 04/03/13 1:24:58 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 Stn, Oakland
Sample ID: MW-4
Sample Collection Date: 03/21/13

ARF: 70249
APPL ID: AY77515
QCG: #26UW-130328BT-176182

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	Not detected	0.6	0.14	ug/L	03/29/13	03/29/13
EPA 8260B	1,2-ETHYLENE DIBROMIDE	Not detected	0.6	0.20	ug/L	03/29/13	03/29/13
EPA 8260B	BENZENE	240 E	0.4	0.16	ug/L	03/29/13	03/29/13
EPA 8260B	DI-ISOPROPYL ETHER	Not detected	0.5	0.16	ug/L	03/29/13	03/29/13
EPA 8260B	ETHYL-TERT-BUTYL ETHER	Not detected	0.5	0.19	ug/L	03/29/13	03/29/13
EPA 8260B	ETHYLBENZENE	3.7	0.6	0.23	ug/L	03/29/13	03/29/13
EPA 8260B	METHYL TERT-BUTYL ETHER	Not detected	0.5	0.26	ug/L	03/29/13	03/29/13
EPA 8260B	TERT-AMYL METHYL ETHER	Not detected	0.5	0.14	ug/L	03/29/13	03/29/13
EPA 8260B	TERT-BUTYL ALCOHOL	Not detected	25.0	10.00	ug/L	03/29/13	03/29/13
EPA 8260B	TOLUENE	21	1.1	0.17	ug/L	03/29/13	03/29/13
EPA 8260B	XYLENES	21	0.5	0.19	ug/L	03/29/13	03/29/13
EPA 8260B	SURROGATE: 1,2-DICHLOROETHAN	94.7	75-125		%	03/29/13	03/29/13
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	101	62-139		%	03/29/13	03/29/13
EPA 8260B	SURROGATE: DIBROMOFLUOROME	96.4	75-125		%	03/29/13	03/29/13
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	103	75-125		%	03/29/13	03/29/13

E = The reported value exceeds linear range.

Quant Method: TALLW.M
Run #: 0328T42
Instrument: Thor
Sequence: T130326
Dilution Factor: 1
Initials: DG

Printed: 04/03/13 1:24:14 PM
APPL-F1-SC-NoMC-REG MDLs

EPA 8260B BTEX Oxy W - UST - Dilution

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 Stn, Oakland

ARF: 70249

Sample ID: MW-4

APPL ID: AY77515

Sample Collection Date: 03/21/13

QCG: #26UW-130328BT-176182

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	200	2.0	0.80	ug/L	03/29/13	03/29/13
EPA 8260B	SURROGATE: 1,2-DICHLOROETHAN	90.9	75-125		%	03/29/13	03/29/13
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	96.6	62-139		%	03/29/13	03/29/13
EPA 8260B	SURROGATE: DIBROMOFLUOROME	96.3	75-125		%	03/29/13	03/29/13
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	102	75-125		%	03/29/13	03/29/13

Quant Method: TALLW.M
Run #: 0328T47
Instrument: Thor
Sequence: T130326
Dilution Factor: 5
Initials: DG

Printed: 04/03/13 1:26:15 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 Stn, Oakland

ARF: 70249

Sample ID: MW-5

APPL ID: AY77516

Sample Collection Date: 03/21/13

QCG: #26UW-130328AT-176181

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	Not detected	0.6	0.14	ug/L	03/28/13	03/28/13
EPA 8260B	1,2-ETHYLENE DIBROMIDE	Not detected	0.6	0.20	ug/L	03/28/13	03/28/13
EPA 8260B	BENZENE	0.86	0.4	0.16	ug/L	03/28/13	03/28/13
EPA 8260B	DI-ISOPROPYL ETHER	Not detected	0.5	0.16	ug/L	03/28/13	03/28/13
EPA 8260B	ETHYL-TERT-BUTYL ETHER	Not detected	0.5	0.19	ug/L	03/28/13	03/28/13
EPA 8260B	ETHYLBENZENE	Not detected	0.6	0.23	ug/L	03/28/13	03/28/13
EPA 8260B	METHYL TERT-BUTYL ETHER	Not detected	0.5	0.26	ug/L	03/28/13	03/28/13
EPA 8260B	TERT-AMYL METHYL ETHER	Not detected	0.5	0.14	ug/L	03/28/13	03/28/13
EPA 8260B	TERT-BUTYL ALCOHOL	Not detected	25.0	10.00	ug/L	03/28/13	03/28/13
EPA 8260B	TOLUENE	1.3	1.1	0.17	ug/L	03/28/13	03/28/13
EPA 8260B	XYLENES	3.3	0.5	0.19	ug/L	03/28/13	03/28/13
EPA 8260B	SURROGATE: 1,2-DICHLOROETHAN	96.8	75-125		%	03/28/13	03/28/13
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	99.0	62-139		%	03/28/13	03/28/13
EPA 8260B	SURROGATE: DIBROMOFLUOROME	98.9	75-125		%	03/28/13	03/28/13
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	103	75-125		%	03/28/13	03/28/13

Quant Method: TALLW.M
Run #: 0328T15
Instrument: Thor
Sequence: T130326
Dilution Factor: 1
Initials: DG

Printed: 04/03/13 1:24:14 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 Stn, Oakland

ARF: 70249

Sample ID: EB-1

APPL ID: AY77517

Sample Collection Date: 03/21/13

QCG: #26UW-130328AT-176181

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	Not detected	0.6	0.14	ug/L	03/28/13	03/28/13
EPA 8260B	1,2-ETHYLENE DIBROMIDE	Not detected	0.6	0.20	ug/L	03/28/13	03/28/13
EPA 8260B	BENZENE	Not detected	0.4	0.16	ug/L	03/28/13	03/28/13
EPA 8260B	DI-ISOPROPYL ETHER	Not detected	0.5	0.16	ug/L	03/28/13	03/28/13
EPA 8260B	ETHYL-TERT-BUTYL ETHER	Not detected	0.5	0.19	ug/L	03/28/13	03/28/13
EPA 8260B	ETHYLBENZENE	Not detected	0.6	0.23	ug/L	03/28/13	03/28/13
EPA 8260B	METHYL TERT-BUTYL ETHER	Not detected	0.5	0.26	ug/L	03/28/13	03/28/13
EPA 8260B	TERT-AMYL METHYL ETHER	Not detected	0.5	0.14	ug/L	03/28/13	03/28/13
EPA 8260B	TERT-BUTYL ALCOHOL	12 J	25.0	10.00	ug/L	03/28/13	03/28/13
EPA 8260B	TOLUENE	0.19 J	1.1	0.17	ug/L	03/28/13	03/28/13
EPA 8260B	XYLENES	Not detected	0.5	0.19	ug/L	03/28/13	03/28/13
EPA 8260B	SURROGATE: 1,2-DICHLOROETHAN	100.0	75-125		%	03/28/13	03/28/13
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	96.1	62-139		%	03/28/13	03/28/13
EPA 8260B	SURROGATE: DIBROMOFLUOROME	99.0	75-125		%	03/28/13	03/28/13
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	98.4	75-125		%	03/28/13	03/28/13

J = Estimated value.

Quant Method: TALLW.M
Run #: 0328T16
Instrument: Thor
Sequence: T130326
Dilution Factor: 1
Initials: DG

Printed: 04/03/13 1:24:14 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

Attn: Gary Messerotes

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Project: 185702413 Former Caltrans Stn, Oakland

ARF: 70249

Sample ID: DUP

APPL ID: AY77518

Sample Collection Date: 03/21/13

QCG: #26UW-130328AT-176181

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	Not detected	0.6	0.14	ug/L	03/28/13	03/28/13
EPA 8260B	1,2-ETHYLENE DIBROMIDE	Not detected	0.6	0.20	ug/L	03/28/13	03/28/13
EPA 8260B	BENZENE	240 E	0.4	0.16	ug/L	03/28/13	03/28/13
EPA 8260B	DI-ISOPROPYL ETHER	Not detected	0.5	0.16	ug/L	03/28/13	03/28/13
EPA 8260B	ETHYL-TERT-BUTYL ETHER	Not detected	0.5	0.19	ug/L	03/28/13	03/28/13
EPA 8260B	ETHYLBENZENE	3.6	0.6	0.23	ug/L	03/28/13	03/28/13
EPA 8260B	METHYL TERT-BUTYL ETHER	Not detected	0.5	0.26	ug/L	03/28/13	03/28/13
EPA 8260B	TERT-AMYL METHYL ETHER	Not detected	0.5	0.14	ug/L	03/28/13	03/28/13
EPA 8260B	TERT-BUTYL ALCOHOL	Not detected	25.0	10.00	ug/L	03/28/13	03/28/13
EPA 8260B	TOLUENE	21	1.1	0.17	ug/L	03/28/13	03/28/13
EPA 8260B	XYLENES	21	0.5	0.19	ug/L	03/28/13	03/28/13
EPA 8260B	SURROGATE: 1,2-DICHLOROETHAN	94.6	75-125		%	03/28/13	03/28/13
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	101	62-139		%	03/28/13	03/28/13
EPA 8260B	SURROGATE: DIBROMOFLUOROME	98.0	75-125		%	03/28/13	03/28/13
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	104	75-125		%	03/28/13	03/28/13

E = The reported value exceeds linear range.

Quant Method:	TALLW.M
Run #:	0328T17
Instrument:	Thor
Sequence:	T130326
Dilution Factor:	1
Initials:	DG

Printed: 04/03/13 1:24:14 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 Stn, Oakland

ARF: 70249

Sample ID: DUP

APPL ID: AY77518

Sample Collection Date: 03/21/13

QCG: #26UWD-130328BT1-17618

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	220	2.0	0.80	ug/L	03/29/13	03/29/13
EPA 8260B	SURROGATE: 1,2-DICHLOROETHAN	97.0	75-125		%	03/29/13	03/29/13
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	101	62-139		%	03/29/13	03/29/13
EPA 8260B	SURROGATE: DIBROMOFLUOROME	98.2	75-125		%	03/29/13	03/29/13
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	103	75-125		%	03/29/13	03/29/13

Quant Method: TALLW.M
Run #: 0328T49
Instrument: Thor
Sequence: T130326
Dilution Factor: 5
Initials: DG

Printed: 04/03/13 1:24:59 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 Stn, Oakland

ARF: 70249

Sample ID: TRIP BLANK

APPL ID: AY77519

Sample Collection Date: 03/21/13

QCG: #26UW-130328AT-176181

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	Not detected	0.6	0.14	ug/L	03/28/13	03/28/13
EPA 8260B	1,2-ETHYLENE DIBROMIDE	Not detected	0.6	0.20	ug/L	03/28/13	03/28/13
EPA 8260B	BENZENE	Not detected	0.4	0.16	ug/L	03/28/13	03/28/13
EPA 8260B	DI-ISOPROPYL ETHER	Not detected	0.5	0.16	ug/L	03/28/13	03/28/13
EPA 8260B	ETHYL-TERT-BUTYL ETHER	Not detected	0.5	0.19	ug/L	03/28/13	03/28/13
EPA 8260B	ETHYLBENZENE	Not detected	0.6	0.23	ug/L	03/28/13	03/28/13
EPA 8260B	METHYL TERT-BUTYL ETHER	Not detected	0.5	0.26	ug/L	03/28/13	03/28/13
EPA 8260B	TERT-AMYL METHYL ETHER	Not detected	0.5	0.14	ug/L	03/28/13	03/28/13
EPA 8260B	TERT-BUTYL ALCOHOL	Not detected	25.0	10.00	ug/L	03/28/13	03/28/13
EPA 8260B	TOLUENE	Not detected	1.1	0.17	ug/L	03/28/13	03/28/13
EPA 8260B	XYLENES	Not detected	0.5	0.19	ug/L	03/28/13	03/28/13
EPA 8260B	SURROGATE: 1,2-DICHLOROETHAN	101	75-125		%	03/28/13	03/28/13
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	97.5	62-139		%	03/28/13	03/28/13
EPA 8260B	SURROGATE: DIBROMOFLUOROME	101	75-125		%	03/28/13	03/28/13
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	99.6	75-125		%	03/28/13	03/28/13

Quant Method: TALLW.M
Run #: 0328T09
Instrument: Thor
Sequence: T130326
Dilution Factor: 1
Initials: DG

Printed: 04/03/13 1:24:14 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 Stn, Oakland

ARF: 70249

Sample ID: MW-1

APPL ID: AY77512

Sample Collection Date: 03/21/13

QCG: #GAS-130330A-176116

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
8015	GASOLINE	1200	100.0	43.00	ug/L	03/30/13	03/30/13
8015	SURROGATE: BFB-FID (S)	112	70-130		%	03/30/13	03/30/13

Quant Method:	HGAS.M
Run #:	0330H20
Instrument:	Harpo
Sequence:	130118
Dilution Factor:	5
Initials:	LF

Printed: 04/02/13 2:36:33 PM

APPL-F1-SC-NoMC-REG MDLs

Gas-Water

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

Attn: Gary Messerotes

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Project: 185702413 Former Caltrans Stn, Oakland

ARF: 70249

Sample ID: MW-2

APPL ID: AY77513

Sample Collection Date: 03/21/13

QCG: #GAS-130402B-176117

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
8015	GASOLINE	110	20.0	8.60	ug/L	04/02/13	04/02/13
8015	SURROGATE: BFB-FID (S)	94.5	70-130		%	04/02/13	04/02/13

Quant Method: HGAS.M
Run #: 0401H31
Instrument: Harpo
Sequence: 130118
Dilution Factor: 1
Initials: LF

Printed: 04/02/13 2:36:33 PM
APPL-F1-SC-NoMC-REG MDLs

Gas-Water

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

Attn: Gary Messerotes

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Project: 185702413 Former Caltrans Stn, Oakland

Sample ID: MW-3

Sample Collection Date: 03/21/13

ARF: 70249

APPL ID: AY77514

QCG: #GAS-130330A-176116

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
8015	GASOLINE	4900	100.0	43.00	ug/L	03/30/13	03/30/13
8015	SURROGATE: BFB-FID (S)	110	70-130		%	03/30/13	03/30/13

Quant Method: HGAS.M
Run #: 0330H22
Instrument: Harpo
Sequence: 130118
Dilution Factor: 5
Initials: LF

Printed: 04/02/13 2:36:33 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 Stn, Oakland

ARF: 70249

Sample ID: MW-4

APPL ID: AY77515

Sample Collection Date: 03/21/13

QCG: #GAS-130330A-176116

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
8015	GASOLINE	4800	100.0	43.00	ug/L	03/30/13	03/30/13
8015	SURROGATE: BFB-FID (S)	110	70-130		%	03/30/13	03/30/13

Quant Method: HGAS.M
Run #: 0330H23
Instrument: Harpo
Sequence: 130118
Dilution Factor: 5
Initials: LF

Printed: 04/02/13 2:36:33 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 Stn, Oakland
Sample ID: MW-5
Sample Collection Date: 03/21/13

ARF: 70249
APPL ID: AY77516
QCG: #GAS-130330A-176116

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
8015	GASOLINE	900	100.0	43.00	ug/L	03/30/13	03/30/13
8015	SURROGATE: BFB-FID (S)	117	70-130		%	03/30/13	03/30/13

Quant Method: HGAS.M
Run #: 0330H24
Instrument: Harpo
Sequence: 130118
Dilution Factor: 5
Initials: LF

Printed: 04/02/13 2:36:33 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 Stn, Oakland
Sample ID: EB-1
Sample Collection Date: 03/21/13

ARF: 70249
APPL ID: AY77517
QCG: #GAS-130330A-176116

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
8015	GASOLINE	Not detected	20.0	8.60	ug/L	03/30/13	03/30/13
8015	SURROGATE: BFB-FID (S)	110	70-130		%	03/30/13	03/30/13

Quant Method: HGAS.M
Run #: 0330H17
Instrument: Harpo
Sequence: 130118
Dilution Factor: 1
Initials: LF

Printed: 04/02/13 2:36:33 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 Stn, Oakland

ARF: 70249

Sample ID: DUP

APPL ID: AY77518

Sample Collection Date: 03/21/13

QCG: #GAS-130330A-176116

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
8015	GASOLINE	4500	100.0	43.00	ug/L	03/30/13	03/30/13
8015	SURROGATE: BFB-FID (S)	117	70-130		%	03/30/13	03/30/13

Quant Method: HGAS.M
Run #: 0330H25
Instrument: Harpo
Sequence: 130118
Dilution Factor: 5
Initials: LF

Printed: 04/02/13 2:36:33 PM
APPL-F1-SC-NoMC-REG MDLs

Gas-Water

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

Attn: Gary Messerotes

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Project: 185702413 Former Caltrans Stn, Oakland

ARF: 70249

Sample ID: TRIP BLANK

APPL ID: AY77519

Sample Collection Date: 03/21/13

QCG: #GAS-130330A-176116

Method	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
8015	GASOLINE	Not detected	20.0	8.60	ug/L	03/30/13	03/30/13
8015	SURROGATE: BFB-FID (S)	109	70-130		%	03/30/13	03/30/13

Quant Method: HGAS.M
Run #: 0330H07
Instrument: Harpo
Sequence: 130118
Dilution Factor: 1
Initials: LF

Printed: 04/02/13 2:36:33 PM
APPL-F1-SC-NoMC-REG MDLs

Method Blank

EPA 8015B TPH Diesel Water

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **130327W-77512 - 176376**
Batch ID: #TPHD-130327A

Sample Type	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
BLANK	DIESEL FUEL	Not detected	50.0	40.40	ug/L	03/27/13	04/08/13
BLANK	SURROGATE: OCTACOSANE (S)	35.3	28-142		%	03/27/13	04/08/13
BLANK	SURROGATE: ORTHO-TERPHENYL (	57.9	49-128		%	03/27/13	04/08/13

Quant Method: TPH0327.M
Run #: 408014
Instrument: Apollo
Sequence: 130408
Initials: PJA

GC SC-Blank-REG MDLs
Printed: 04/09/13 3:33:22 PM

Laboratory Control Spike Recoveries

EPA 8015B TPH Diesel Water

APPL ID: **130327W-77512 LCS - 176376**
Batch ID: #TPHD-130327A

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	1420	1490	71.0	74.5	61-143	4.8	30
SURROGATE: OCTACOSANE (S)	150	74.7	79.1	49.8	52.7	28-142		
SURROGATE: ORTHO-TERPHENYL (S)	150	86.9	92.4	57.9	61.6	49-128		

Comments:

Primary	SPK	DUP
Quant Method :	TPH0327.M	TPH0327.M
Extraction Date :	03/27/13	03/27/13
Analysis Date :	04/05/13	04/05/13
Instrument :	Apollo	Apollo
Run :	401194	401195
Initials :	PJA	

Printed: 04/09/13 3:33:23 PM
APPL Standard LCSD

Method Blank

EPA 8260B BTEX Oxy W - UST

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **130328W-77512 - 176181**
Batch ID: #26UW-130328AT

Sample Type	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
BLANK	1,2-DICHLOROETHANE	Not detected	0.6	0.14	ug/L	03/28/13	03/28/13
BLANK	1,2-ETHYLENE DIBROMIDE	Not detected	0.6	0.20	ug/L	03/28/13	03/28/13
BLANK	BENZENE	Not detected	0.4	0.16	ug/L	03/28/13	03/28/13
BLANK	DI-ISOPROPYL ETHER	Not detected	0.5	0.16	ug/L	03/28/13	03/28/13
BLANK	ETHYL-TERT-BUTYL ETHER	Not detected	0.5	0.19	ug/L	03/28/13	03/28/13
BLANK	ETHYLBENZENE	Not detected	0.6	0.23	ug/L	03/28/13	03/28/13
BLANK	METHYL TERT-BUTYL ETHER	Not detected	0.5	0.26	ug/L	03/28/13	03/28/13
BLANK	TERT-AMYL METHYL ETHER	Not detected	0.5	0.14	ug/L	03/28/13	03/28/13
BLANK	TERT-BUTYL ALCOHOL	Not detected	25.0	10.00	ug/L	03/28/13	03/28/13
BLANK	TOLUENE	Not detected	1.1	0.17	ug/L	03/28/13	03/28/13
BLANK	XYLENES	Not detected	0.5	0.19	ug/L	03/28/13	03/28/13
BLANK	SURROGATE: 1,2-DICHLOROETHAN	102	75-125		%	03/28/13	03/28/13
BLANK	SURROGATE: 4-BROMOFLUOROBEN	101	62-139		%	03/28/13	03/28/13
BLANK	SURROGATE: DIBROMOFLUOROME	104	75-125		%	03/28/13	03/28/13
BLANK	SURROGATE: TOLUENE-D8 (S)	103	75-125		%	03/28/13	03/28/13

Quant Method: TALLW.M
Run #: 0328T08
Instrument: Thor
Sequence: T130326
Initials: DG

GC SC-Blank-REG MDLs
Printed: 04/03/13 1:24:18 PM

Method Blank

EPA 8260B BTEX Oxy W - UST

Blank Name/QCG: **130328W-77513 - 176182**
Batch ID: #26UW-130328BT

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
BLANK	1,2-DICHLOROETHANE	Not detected	0.6	0.14	ug/L	03/29/13	03/29/13
BLANK	1,2-ETHYLENE DIBROMIDE	Not detected	0.6	0.20	ug/L	03/29/13	03/29/13
BLANK	BENZENE	Not detected	0.4	0.16	ug/L	03/29/13	03/29/13
BLANK	DI-ISOPROPYL ETHER	Not detected	0.5	0.16	ug/L	03/29/13	03/29/13
BLANK	ETHYL-TERT-BUTYL ETHER	Not detected	0.5	0.19	ug/L	03/29/13	03/29/13
BLANK	ETHYLBENZENE	Not detected	0.6	0.23	ug/L	03/29/13	03/29/13
BLANK	METHYL TERT-BUTYL ETHER	Not detected	0.5	0.26	ug/L	03/29/13	03/29/13
BLANK	TERT-AMYL METHYL ETHER	Not detected	0.5	0.14	ug/L	03/29/13	03/29/13
BLANK	TERT-BUTYL ALCOHOL	Not detected	25.0	10.00	ug/L	03/29/13	03/29/13
BLANK	TOLUENE	Not detected	1.1	0.17	ug/L	03/29/13	03/29/13
BLANK	XYLENES	Not detected	0.5	0.19	ug/L	03/29/13	03/29/13
BLANK	SURROGATE: 1,2-DICHLOROETHAN	97.8	75-125		%	03/29/13	03/29/13
BLANK	SURROGATE: 4-BROMOFLUOROBEN	98.5	62-139		%	03/29/13	03/29/13
BLANK	SURROGATE: DIBROMOFLUOROME	100	75-125		%	03/29/13	03/29/13
BLANK	SURROGATE: TOLUENE-D8 (S)	102	75-125		%	03/29/13	03/29/13

Quant Method: TALLW.M
Run #: 0328T38
Instrument: Thor
Sequence: T130326
Initials: DG

GC SC-Blank-REG MDLs
Printed: 04/03/13 1:24:18 PM

Method Blank

EPA 8260B BTEX Oxy W - UST

Blank Name/QCG: **130328W-77514 - 176184**
Batch ID: #26UWD-130328BT1

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
BLANK	BENZENE	Not detected	0.4	0.16	ug/L	03/29/13	03/29/13
BLANK	SURROGATE: 1,2-DICHLOROETHAN	97.8	75-125		%	03/29/13	03/29/13
BLANK	SURROGATE: 4-BROMOFLUOROBEN	98.5	62-139		%	03/29/13	03/29/13
BLANK	SURROGATE: DIBROMOFLUOROME	100	75-125		%	03/29/13	03/29/13
BLANK	SURROGATE: TOLUENE-D8 (S)	102	75-125		%	03/29/13	03/29/13

Quant Method: TALLW.M
Run #: 0328T38
Instrument: Thor
Sequence: T130326
Initials: DG

GC SC-Blank-REG MDLs
Printed: 04/03/13 1:25:36 PM

Laboratory Control Spike Recoveries

EPA 8260B BTEX Oxy W - UST

APPL ID: **130328W-77512 LCS - 176181**
Batch ID: #26UW-130328AT

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	10.4	9.89	104	98.9	68-127	5.0	20
1,2-ETHYLENE DIBROMIDE	10.00	10.4	10.3	104	103	70-130	0.97	20
BENZENE	10.00	10.1	9.82	101	98.2	75-125	2.8	20
DI-ISOPROPYL ETHER	10.00	10.1	10.1	101	101	70-130	0.0	20
ETHYL-TERT-BUTYL ETHER	10.00	9.88	9.85	98.8	98.5	70-130	0.30	20
ETHYLBENZENE	10.00	10.1	10.1	101	101	75-125	0.0	20
METHYL TERT-BUTYL ETHER	10.00	9.61	9.66	96.1	96.6	70-130	0.52	20
TERT-AMYL METHYL ETHER	10.00	9.98	9.81	99.8	98.1	70-130	1.7	20
TERT-BUTYL ALCOHOL	125	119	122	95.2	97.6	49-167	2.5	20
TOLUENE	10.00	10.3	10.1	103	101	74-125	2.0	20
XYLENES	30.0	31.1	30.9	104	103	70-130	0.65	20
SURROGATE: 1,2-DICHLOROETHANE-D	43.3	43.8	42.6	101	98.5	75-125		
SURROGATE: 4-BROMOFLUOROBENZE	41.4	41.8	41.3	101	99.6	62-139		
SURROGATE: DIBROMOFLUOROMETH	39.4	39.3	38.7	99.6	98.1	75-125		
SURROGATE: TOLUENE-D8 (S)	42.8	42.4	42.1	99.1	98.4	75-125		

Comments:

Primary	SPK	DUP
Quant Method :	TALLW.M	TALLW.M
Extraction Date :	03/28/13	03/28/13
Analysis Date :	03/28/13	03/28/13
Instrument :	Thor	Thor
Run :	0328T04	0328T05
Initials :	DG	

Printed: 04/03/13 1:24:11 PM
APPL Standard LCSD

Laboratory Control Spike Recoveries

EPA 8260B BTEX Oxy W - UST

APPL ID: **130329W-77513 LCS - 176182**
Batch ID: #26UW-130328BT

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	9.76	9.59	97.6	95.9	68-127	1.8	20
1,2-ETHYLENE DIBROMIDE	10.00	10.0	9.36	100	93.6	70-130	6.6	20
BENZENE	10.00	10.1	9.81	101	98.1	75-125	2.9	20
DI-ISOPROPYL ETHER	10.00	9.95	9.49	99.5	94.9	70-130	4.7	20
ETHYL-TERT-BUTYL ETHER	10.00	9.75	9.39	97.5	93.9	70-130	3.8	20
ETHYLBENZENE	10.00	10.3	9.76	103	97.6	75-125	5.4	20
METHYL TERT-BUTYL ETHER	10.00	9.22	8.76	92.2	87.6	70-130	5.1	20
TERT-AMYL METHYL ETHER	10.00	9.54	9.32	95.4	93.2	70-130	2.3	20
TERT-BUTYL ALCOHOL	125	92.7	88.7	74.2	71.0	49-167	4.4	20
TOLUENE	10.00	10.1	9.99	101	99.9	74-125	1.1	20
XYLENES	30.0	30.6	29.7	102	99.0	70-130	3.0	20
SURROGATE: 1,2-DICHLOROETHANE-D	43.3	42.1	42.3	97.3	97.8	75-125		
SURROGATE: 4-BROMOFLUOROBENZE	41.4	41.7	41.6	101	100	62-139		
SURROGATE: DIBROMOFLUOROMETH	39.4	39.4	39.0	99.9	98.9	75-125		
SURROGATE: TOLUENE-D8 (S)	42.8	43.3	42.9	101	100	75-125		

Comments:

Primary	SPK	DUP
Quant Method :	TALLW.M	TALLW.M
Extraction Date :	03/29/13	03/29/13
Analysis Date :	03/29/13	03/29/13
Instrument :	Thor	Thor
Run :	0328T33	0328T34
Initials :	DG	

Printed: 04/03/13 1:24:11 PM
APPL Standard LCSD

Laboratory Control Spike Recoveries

EPA 8260B BTEX Oxy W - UST

APPL ID: **130329W-77514 LCS - 176184**
Batch ID: #26UWD-130328BT1

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	10.1	9.81	101	98.1	75-125	2.9	20
SURROGATE: 1,2-DICHLOROETHANE-D	43.3	42.1	42.3	97.3	97.8	75-125		
SURROGATE: 4-BROMOFLUOROBENZE	41.4	41.7	41.6	101	100	62-139		
SURROGATE: DIBROMOFLUOROMETH	39.4	39.4	39.0	99.9	98.9	75-125		
SURROGATE: TOLUENE-D8 (S)	42.8	43.3	42.9	101	100	75-125		

Comments: _____

Primary	SPK	DUP
Quant Method :	TALLW.M	TALLW.M
Extraction Date :	03/29/13	03/29/13
Analysis Date :	03/29/13	03/29/13
Instrument :	Thor	Thor
Run :	0328T33	0328T34
Initials :	DG	

Printed: 04/03/13 1:24:55 PM
APPL Standard LCSD

Method Blank
Gas-Water

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **130330W-77489 - 176116**
Batch ID: #GAS-130330A

Sample Type	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE	Not detected	20.0	8.60	ug/L	03/30/13	03/30/13
BLANK	SURROGATE: BFB-FID (S)	113	70-130		%	03/30/13	03/30/13

Quant Method:HGAS.M
Run #:0330H05
Instrument:Harpo
Sequence:130118
Initials:LF

GC SC-Blank-REG MDLs
Printed: 04/02/13 2:36:21 PM

Method Blank
Gas-Water

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **130402W-77513 - 176117**
Batch ID: #GAS-130402B

Sample Type	Analyte	Result	PQL	MDL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE	Not detected	20.0	8.60	ug/L	04/02/13	04/02/13
BLANK	SURROGATE: BFB-FID (S)	110	70-130		%	04/02/13	04/02/13

Quant Method:HGAS.M
Run #:0401H30
Instrument:Harpo
Sequence:130118
Initials:LF

GC SC-Blank-REG MDLs
Printed: 04/02/13 2:36:22 PM

Laboratory Control Spike Recoveries
Gas-Water

APPL ID: **130330W-77489 LCS - 176116**
Batch ID: #GAS-130330A

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	348	343	116	114	73-120	1.4	25
SURROGATE: BFB-FID (S)	30.0	28.8	29.6	96.0	98.7	70-130		

Comments: _____

Primary	SPK	DUP
Quant Method :	HGAS.M	HGAS.M
Extraction Date :	03/30/13	03/30/13
Analysis Date :	03/30/13	03/30/13
Instrument :	Harpo	Harpo
Run :	0330H03	0330H04
Initials :	LF	

Printed: 04/02/13 2:36:23 PM
APPL Standard LCSD

Laboratory Control Spike Recoveries
Gas-Water

APPL ID: **130402W-77513 LCS - 176117**
Batch ID: #GAS-130402B

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	303	293	101	97.7	73-120	3.4	25
SURROGATE: BFB-FID (S)	30.0	29.9	30.0	99.7	100	70-130		

Comments: _____

Primary	SPK	DUP
Quant Method :	HGAS.M	HGAS.M
Extraction Date :	04/02/13	04/02/13
Analysis Date :	04/02/13	04/02/13
Instrument :	Harpo	Harpo
Run :	0401H28	0401H29
Initials :	LF	

Printed: 04/02/13 2:36:23 PM
APPL Standard LCSD

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: 3-21-13

PAGE: 1 OF 1

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
☒ Standard

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	MATRIX	No. of Cont.	Preserve	Fuel Oxygenates (BTEX, EDB, EDC, MTBE, TAME, ETBE, DIPE, and TBA) by 8260B	TPH-GRO by 8015M	TPH-DRO by 8015M silica gel cleanup									Other:	Laboratory Notes
	MW-1	3/21/2013	810	H2O	7	HCl	X	X	X										
	MW-2	3/21/2013	950	H2O	7	HCl	X	X	X										
	MW-3	3/21/2013	830	H2O	7	HCl	X	X	X										
	MW-4	3/21/2013	856	H2O	7	HCl	X	X	X										
	MW-5	3/21/2013	930	H2O	7	HCl	X	X	X										
	EB-1	3/21/2013	1005	H2O	7	HCl	X	X	X										
	Dup	3/21/2013	—	H2O	7	HCl	X	X	X										
	Trip Blank	3/21/2013		H2O	6	HCl	X	X											
					10	DRS	3/25/13												

	Date:	Time:		Date:	Time:	
Relinquished by: (Signature)	3-21-13	1351	Received by: (Signature)			
Relinquished by: (Signature)	3.21.13	1337	Received by: (Signature)			
Relinquished by: (Signature)			Received by: (Signature)			

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

STANTEC CONSULTING

70249

CHAIN OF CUSTODY RECORD

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

STANTEC Project #: 185702413

DATE: 3-21-13

PAGE: 1 OF 1

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

☒ Standard

Special Instructions or Notes:

Temperature Upon Receipt (C): 0.5°c, 0.6°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									Other:	Laboratory Notes
	MW-1	3/21/2013	810	H2O	7	HCl	X	X	X										
	MW-2	3/21/2013	950	H2O	7	HCl	X	X	X										
	MW-3	3/21/2013	830	H2O	7	HCl	X	X	X										
	MW-4	3/21/2013	856	H2O	7	HCl	X	X	X										
	MW-5	3/21/2013	930	H2O	7	HCl	X	X	X										
	EB-1	3/21/2013	1005	H2O	7	HCl	X	X	X										
	Dup	3/21/2013	—	H2O	7	HCl	X	X	X										
	Trip Blank	3/21/2013		H2O	3	HCl	X	X											

	Date	Time		Date	Time	
Relinquished by: (Signature)	3-21-13	1337	Received by: (Signature)			
Relinquished by: (Signature)	3.21.13	1337	Received by: (Signature)			
Relinquished by: (Signature)			Received by: (Signature)	3.21.13	1713	