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FIRST QUARTER 2014 GROUNDWATER MONITORING REPORT

FORMER CALTRANS HEGENBERGER
MAINTENANCE STATION
555 HEGENBERGER ROAD
OAKLAND, ALAMEDA COUNTY, CALIFORNIA



GEOCON
CONSULTANTS, INC.

GEOTECHNICAL
ENVIRONMENTAL
MATERIALS

PREPARED FOR

CALIFORNIA DEPARTMENT OF
TRANSPORTATION, DISTRICT 4
OFFICE OF ENVIRONMENTAL ENGINEERING
111 GRAND AVENUE, 14TH FLOOR
OAKLAND, CA

PREPARED BY

GEOCON CONSULTANTS, INC.
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LIVERMORE, CA 94550

CALTRANS CONTRACT NO. 04A4337
TASK ORDER NO. 1

GEOCON PROJECT NO. E8722-02-01B

JULY 2014



Geocon Project No. E8722-02-01B

July 11, 2014

Mr. Ramin Behani
Caltrans – District 4
Office of Environmental Engineering, MS 8C
111 Grand Avenue, 14th Floor
Oakland, California 94623

Subject: FIRST QUARTER 2014
GROUNDWATER MONITORING REPORT
FORMER CALTRANS HEGENBERGER MAINTENANCE STATION
555 HEGENBERGER ROAD
OAKLAND, ALAMEDA COUNTY, CALIFORNIA

Dear Mr. Behani:

Geocon has prepared this *First Quarter 2014 Groundwater Monitoring Report* for the Former Caltrans Maintenance Station site. The report contains details of field services and laboratory analytical results.

Caltrans' authorization to submit this report is provided as Appendix C.

If there are any questions concerning the contents of this report, or if Geocon may be of further service, please contact the undersigned at your convenience.

Sincerely,

GEOCON CONSULTANTS, INC.

John Love
Sr. Project Geologist



Richard Day, CEG, CHG
Senior Geologist

- (5) Addressee
(1) Keith Nowell, Alameda County LOP

TABLE OF CONTENTS

FIRST QUARTER 2014 GROUNDWATER MONITORING REPORT	Page
1.0 GROUNDWATER MONITORING.....	1
1.1 Groundwater Level Measurements	1
1.2 Groundwater Sampling	1
1.3 Laboratory Analysis and Sample Results	2
1.4 Purgewater Disposal	2
2.0 CONCLUSIONS AND RECOMMENDATIONS.....	3
3.0 LIMITATIONS	4

FIGURES

1. Vicinity Map
2. Site Plan
3. Groundwater Elevation Map – March 2014
4. Groundwater Sample Results Map – March 2014

TABLES

1. Monitoring Well Construction Details
2. Depth to Water and Groundwater Sample Results

APPENDICES

- A. Monitoring Well Sampling and Data Sheets
- B. Analytical Laboratory Data Sheets and Chain-of-Custody
- C. Caltrans Authorization Letter

FIRST QUARTER 2014 GROUNDWATER SAMPLING REPORT

1.0 GROUNDWATER MONITORING

Geocon conducted groundwater monitoring at the Former Caltrans Hegenberger Maintenance Station site on March 31, 2014, as directed by the Alameda County Health Care Services Agency (ACHCSA) in their letter dated July 25, 2011. The site is located along the southwest corner of the intersection of South Coliseum Way and Hegenberger Road in Oakland, California (Figure 1).

There are currently five groundwater monitoring wells (MW-1 to MW-5) associated with the Former Caltrans Hegenberger Maintenance Station site. The well locations are shown on Figure 2 and their construction details are provided in Table 1.

Depth to groundwater measurements and groundwater samples were not collected from MW-2 or MW-5 during this sample event. These wells were inaccessible due to Bay Area Rapid Transit (BART) construction. The area where these two wells are located was fenced-off and locked by BART's construction contractor.

1.1 Groundwater Level Measurements

Depths to groundwater were measured in MW-1, MW-3, and MW-4 using an electronic water level indicator. Depths to water below top of casings (TOC) ranged from 3.48 feet in MW-3 to 4.10 feet in MW-3. Current and historical depth to groundwater measurements for each monitoring well are presented in Table 2.

Figure 3 presents the groundwater elevation contours and gradients as measured on March 31, 2014. The calculated groundwater flow direction is towards the northwest at a magnitude of 0.007 foot per foot.

1.2 Groundwater Sampling

Groundwater samples were collected from MW-1, MW-3, and MW-4 by purging each well using a submersible pump and collecting groundwater samples for laboratory analysis using a disposable polyethylene bailer. Approximately three well casing volumes of groundwater were purged from MW-1 and MW-4 well prior to sample collection, and approximately two well casings were purged from MW-3 before the well went dry. The well was allowed to partially recover before a groundwater sample was collected from MW-3.

Field parameters such as temperature and pH were monitored after each casing volume had been removed to insure representative groundwater from the surrounding formation had entered the well casing prior to sample collection. The Monitoring Well Sampling Data Sheets are provided as Appendix A.

Groundwater samples were collected in 40-milliliter (ml) glass vials (HCl), labeled, and placed in a chest cooled with ice for transport to the analytical laboratory.

1.3 Laboratory Analysis and Sample Results

The groundwater samples collected from MW-1, MW-3, and MW-4 were submitted under chain-of-custody protocol to Advanced Technology Laboratories, a State of California-certified laboratory located in Signal Hill, California. The samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) and as diesel (TPHd) following EPA Test Method 8015B; and benzene, toluene, ethylbenzene, xylenes (BTEX), fuel oxygenate compounds (FOCs), and lead scavengers 1,2-dichloroethane (1,2-DCA) and ethylene dibromide (EDB) following EPA Test Method 8260B.

TPHg and TPHd were reported in the groundwater sample collected from MW-1 at concentrations of 620 micrograms per liter (ug/l) and 570 ug/l, in MW-3 at 3,600 ug/l and 1,400 ug/l, and in MW-4 at 6,100 ug/l and 1,000 ug/l.

Benzene was reported in the groundwater sample collected from MW-1, MW-3, and MW-4 at concentrations ranging from 5.7 ug/l in MW-1 to 660 ug/l in MW-3. Toluene, ethylbenzene, and xylenes were also reported in groundwater samples analyzed from these three wells at concentrations ranging from 2.3 ug/l to 21.1 ug/l.

FOCs and lead scavengers were reported as non-detect in the groundwater samples collected from MW-1, MW-3, and MW-4.

Groundwater sample results are tabulated in Table 2, and copies of the analytical laboratory data sheets are provided as Appendix B.

1.4 Purgewater Disposal

Purgewater generated during this sample event was transported back to Geocon's warehouse in Livermore, California, where it was combined in a 55-gallon drum containing petroleum hydrocarbon-impacted groundwater from another site. The wastewater will be disposed by Advanced Veteran Logistical Services, Inc. during their next milk run.

2.0 CONCLUSIONS AND RECOMMENDATIONS

A *Site Conceptual Model*, prepared by Stantec Consulting Services, Inc. (Stantec), dated June 7, 2012, was submitted to the ACHCSA for review and comment. Recommendations included in the *Site Conceptual Model* included the following:

- Install five additional groundwater monitoring wells located radially outward from the existing wells.
- Drill a boring within the footprint of the former UST complex to assess the backfill soil type and possible residual petroleum hydrocarbon impacts to soil and groundwater within the former excavation.
- Drill one boring immediately outside the former excavation to determine whether additional excavation is warranted as a possible remedial option.
- Collect a water sample, if possible, from the storm drain located west of the former excavation area and MW-3.

Geocon generally concurs with the recommendations presented in the *Site Conceptual Model* report; however, until comments are received from the ACHCSA we recommend continuing the semi-annual groundwater sampling program.

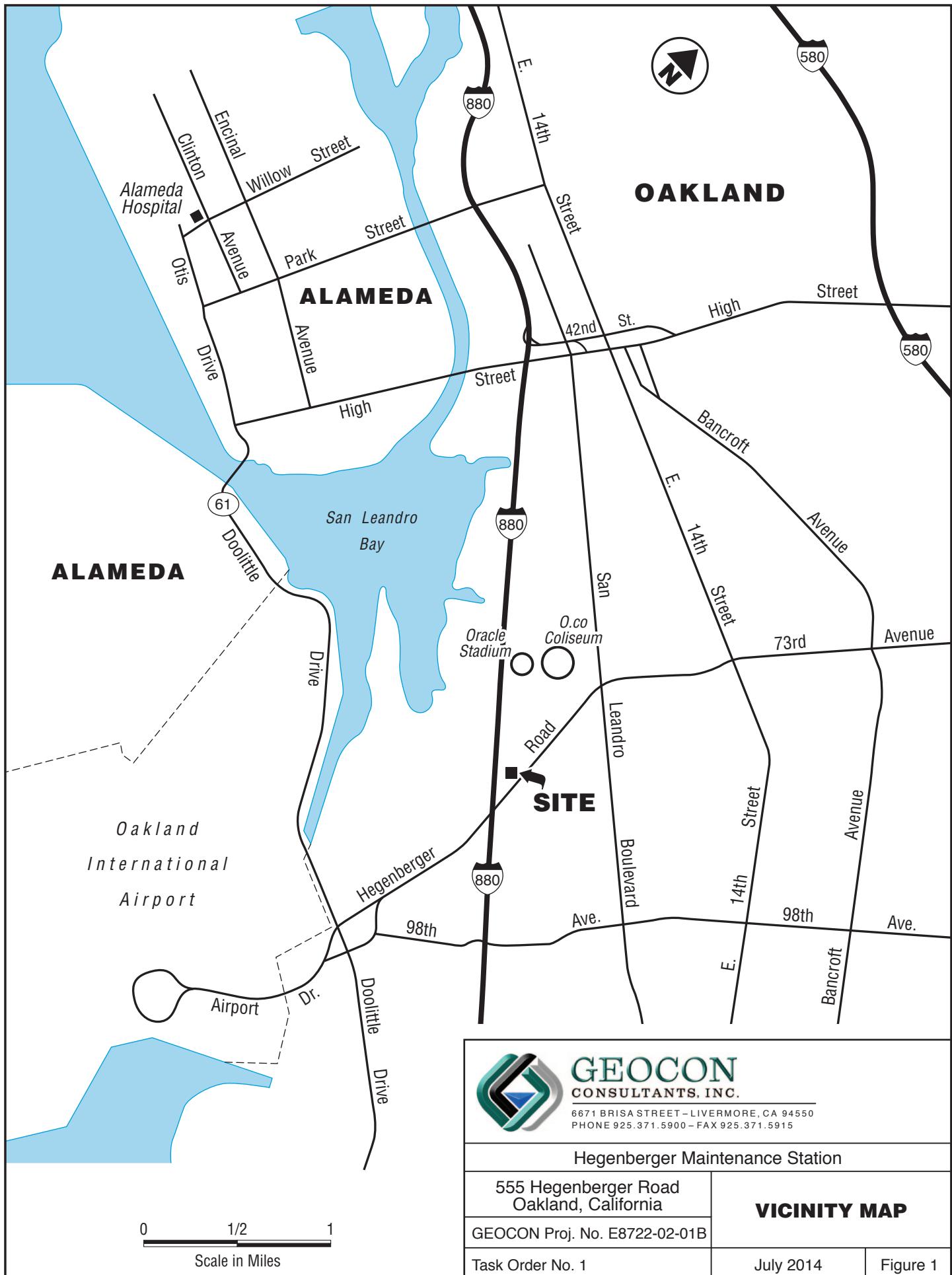
We also recommends eliminating the analysis of FOCs, 1,2-DCA, and EDB from the semi-annual sampling program as these compounds are not being detected in site wells.

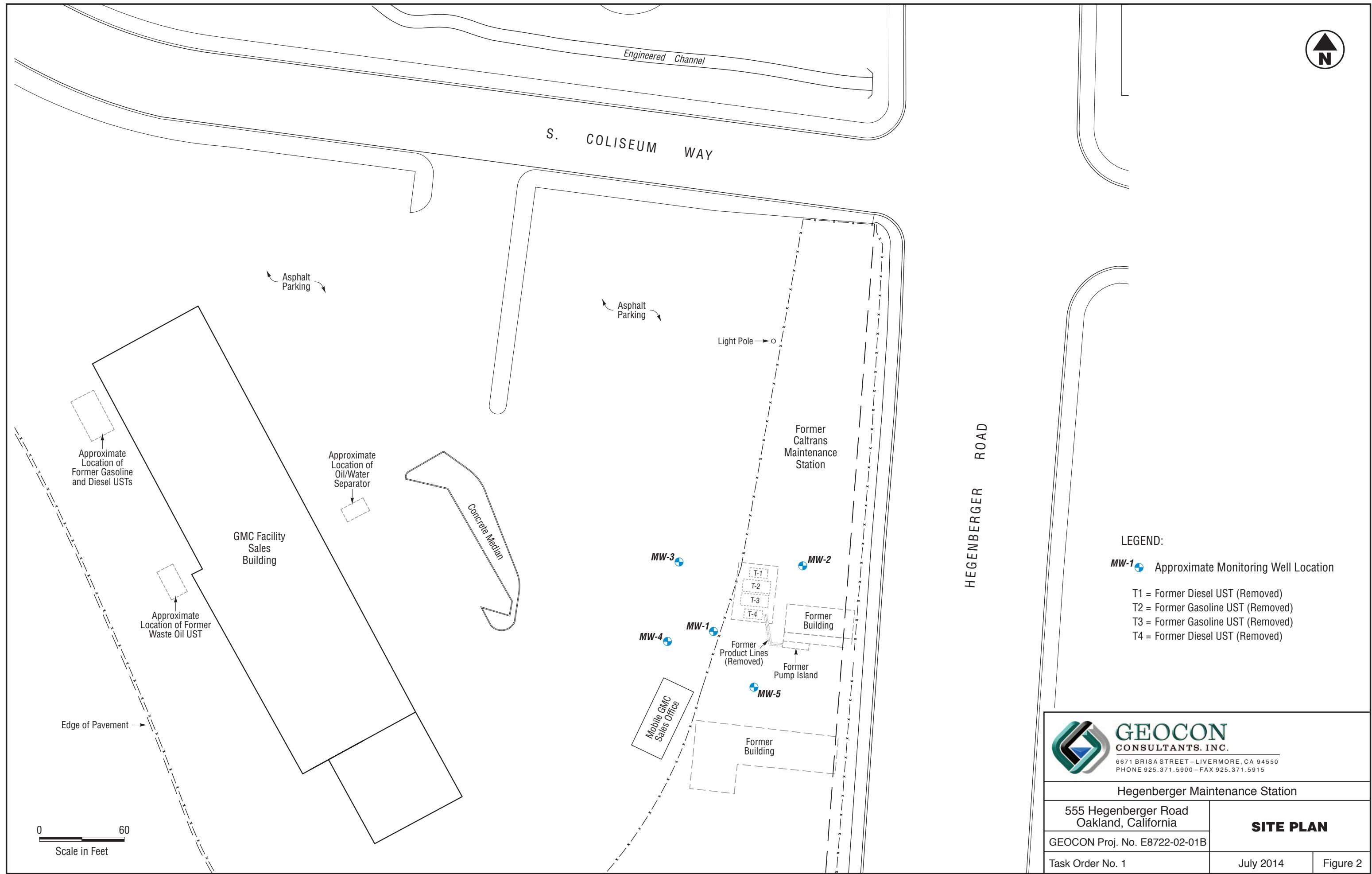
3.0 LIMITATIONS

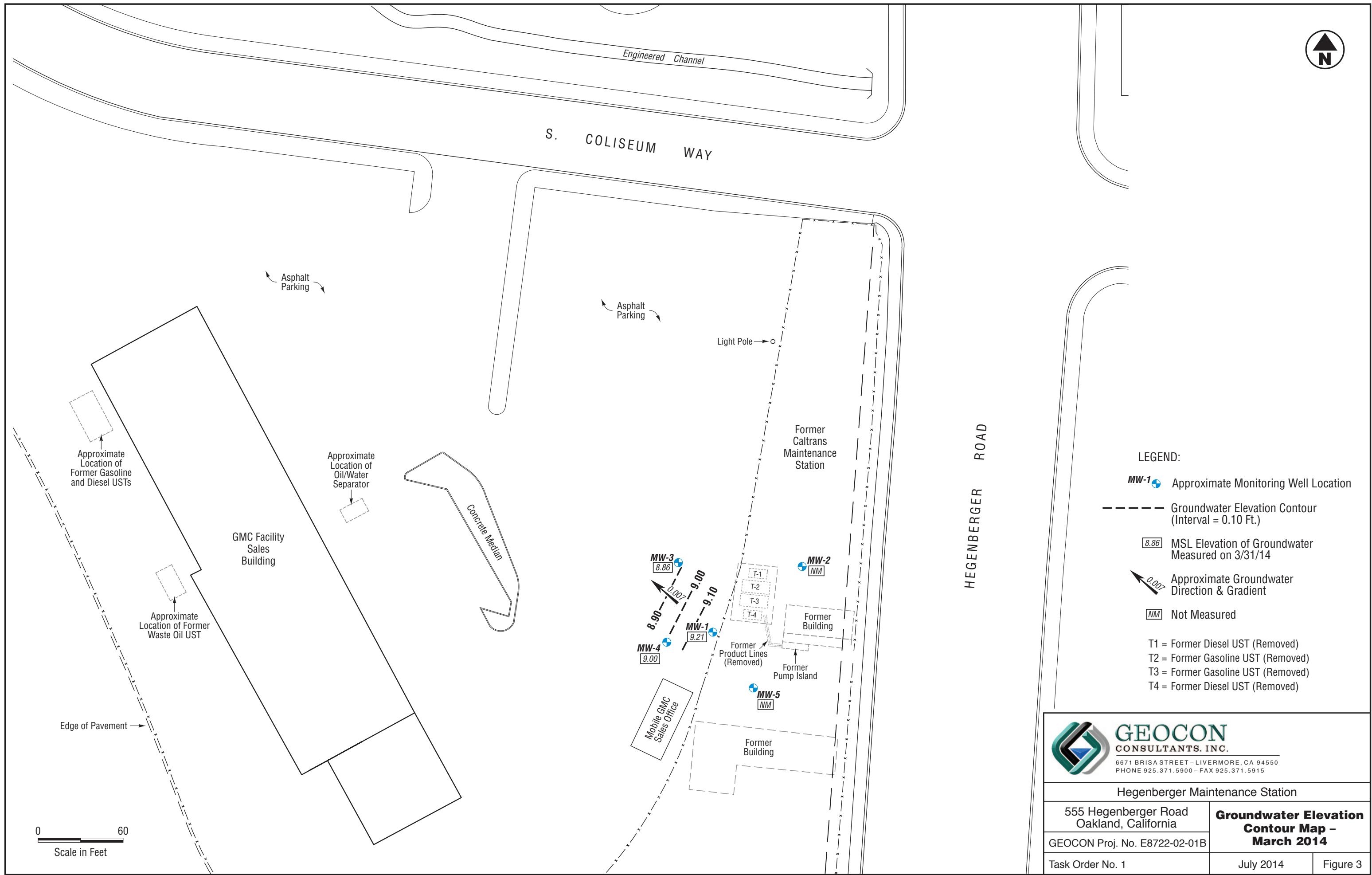
Geocon has prepared this report exclusively for Caltrans. The information contained herein is only valid as of the date of the report, and will require an update to reflect additional information obtained.

The Client should not construe this report as a comprehensive site characterization. The results of the limited sampling and laboratory testing performed predicate the findings as presented in this report. In addition, the information obtained is not intended to address potential impacts related to sources other than those specified herein.

Therefore, the report is conclusive with respect to the information obtained. Geocon implies no guarantee or warranty of the results of the report, within the intent of this report or any subsequent reports, correspondence or consultation either expressed or implied. Geocon strived to perform the services summarized herein in accordance with the local standard of care in the geographic region at the time.







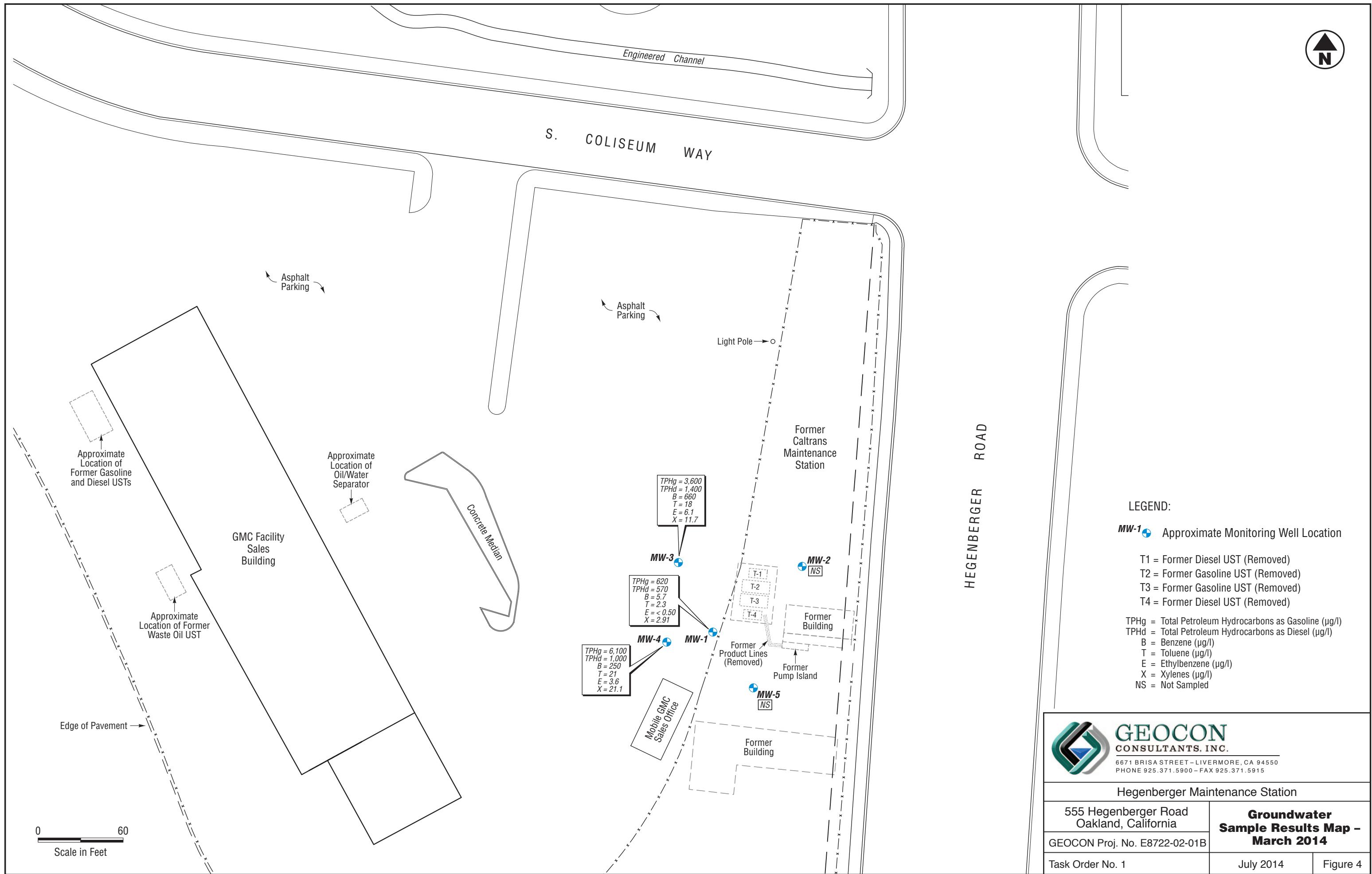


TABLE 1
Monitoring Well Construction Details
Former Hegenberger Maintenance Station
555 Hegenberger Road
Oakland, California

Well No.	Date Constructed	Total Depth (feet)	Casing Diameter (inches)	Screened Interval (feet)	Blank PVC Interval (feet)
MW-1	10/95	19.5	4	4.5-19.5	0-4.5
MW-2	10/95	20	4	5-20	0-5
MW-3	10/95	19.5	4	4.5-19.5	0-4.5
MW-4	10/95	19	4	4-19	0-4
MW-5	10/95	20	4	5-20	0-5

TABLE 2
Depth to Water and Groundwater Sample Results
Former Hegenberger Maintenance Station
555 Hegenberger Road
Oakland, California

Monitoring Well	Sample Date	TOC	Elevation (ft)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	Change in Elevation (ft)	TPHg (ug/l)	TPHd (ug/l)	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Xylenes (ug/l)	1,2-DCA (ug/l)	EDB (ug/l)	DIPE (ug/l)	ETBE (ug/l)	MTBE (ug/l)	TAME (ug/l)	TBA (ug/l)
MW-1	10/11/95	13.31	6.55	6.76	--	720	<50	660	13	4.7	2.8	--	--	--	--	--	--	--	--
	1/17/96	13.31	5.64	7.67	0.91	4,400	<50	1,000	30	21	17	--	--	--	--	--	--	--	--
	4/16/96	13.31	5.46	7.85	0.18	6,050	7,450	914	34.7	34.4	15.8	--	--	--	--	--	--	--	--
	8/26/96	13.31	5.91	7.40	-0.45	3,800	430	780	23	21	20	--	--	--	--	--	--	--	--
	11/14/96	13.31	6.16	7.15	-0.25	2,600	270	500	18	14	8.9	--	--	--	--	--	--	--	--
	2/18/98	13.31	3.82	9.49	2.34	3,100	800	240	18	7.8	11	--	--	--	--	--	20	--	--
	3/30/01	13.31	6.19	7.12	-2.37	3,600	480	150	13	0.7	10.8	--	--	--	--	<0.5	--	--	--
	12/26/01	13.31	4.08	9.23	2.11	3,000	1,100	86	11	3.4	10.5	--	--	--	--	<5	--	--	--
	9/30/02	13.31	5.79	7.52	-1.71	590	<50	12	2.7	<0.5	1.6	--	--	--	--	<0.5	--	--	--
	2/20/03	13.31	4.49	8.82	1.3	2,660	--	36.9	10.6	7	18.1	--	--	--	--	<5	--	--	--
	1/12/04	13.31	4.41	8.90	0.08	1,610	--	6.8	1.8	1.8	1.4	--	--	--	--	--	--	--	--
	5/12/05	13.31	4.45	8.86	-0.04	1,200	--	20	<5	<5	<5	--	--	--	--	--	--	--	--
	9/29/11	13.31	5.57	7.74	-1.12	950	530	14	6.5	0.36 ^J	6.9	<0.14	<0.20	<0.16	<0.19	<0.19	<0.14	<10.00	
	3/30/12	13.31	3.50	9.81	2.07	630	280	14	4.4	0.36 ^J	4.9	<0.14	<0.20	<0.16	<0.19	<0.26	<0.14	<10.00	
	9/11/12	13.31	6.15	7.16	-2.65	600	470	5.5	4.7	0.30 ^J	6.0	<0.14	<0.20	<0.16	<0.19	<0.26	<0.14	<10.00	
	3/20/13	13.31	5.48	7.83	0.67	1,200	130	7.2	4.0	0.35 ^J	4.8	<0.14	<0.20	<0.16	<0.19	<0.26	<0.14	<10.00	
	8/28/13	13.31	6.13	7.18	-0.65	700	580	5.8	4.6	0.31 ^J	6.0	0.17 ^J	<0.20	<0.16	<0.19	<0.26	<0.14	<10.00	
	3/31/14	13.31	4.10	9.21	2.03	620	570	5.7	2.3	<0.50	2.91	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<10

TABLE 2
Depth to Water and Groundwater Sample Results
Former Hegenberger Maintenance Station
555 Hegenberger Road
Oakland, California

Monitoring Well	Sample Date	TOC	Elevation (ft)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	Change in Elevation (ft)	TPHg (ug/l)	TPHd (ug/l)	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Xylenes (ug/l)	1,2-DCA (ug/l)	EDB (ug/l)	DIPE (ug/l)	ETBE (ug/l)	MTBE (ug/l)	TAME (ug/l)	TBA (ug/l)
MW-2	10/11/95	13.10	6.88	6.22	--	<50	<50	<0.3	<0.3	<0.3	<0.5	--	--	--	--	--	--	--	--
	1/17/96	13.10	5.32	7.78	1.56	-0.49	4,900	<50	2,100	<1.5	<15	<15	--	--	--	--	--	--	--
	4/16/96	13.10	5.81	7.29	--	<50	<50	1.0	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--
	8/26/96	13.10	5.98	7.12	--	-0.17	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--
	11/14/96	13.10	6.72	6.38	--	-0.74	<50	56	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--
	2/18/98	13.10	5.01	8.09	--	1.71	<50	260	<0.5	<0.5	<0.5	<0.5	--	--	--	<0.5	--	--	--
	3/30/01	13.10	6.54	6.56	--	-1.53	<200	370	2.7	0.8	<0.5	0.8	--	--	--	<0.5	--	--	--
	12/26/01	13.10	5.53	7.57	--	1.01	86	140	<0.5	<0.5	<0.5	<0.5	--	--	--	<0.5	--	--	--
	9/30/02	13.10	6.48	6.62	--	-0.95	<50	<50	<0.5	<5	<0.5	<1.5	--	--	--	<0.5	--	--	--
	2/20/03	13.10	5.98	7.12	--	0.5	110	--	6.6	<0.5	<0.5	<1	--	--	--	<0.5	--	--	--
	1/12/04	13.10	5.69	7.41	--	0.29	67	--	<0.5	<0.5	<0.5	<1	--	--	--	--	--	--	--
	5/12/05	13.10	5.55	7.55	--	0.14	330	--	<1	<1	<1	<1	--	--	--	--	--	--	--
	9/29/11	13.10	6.21	6.89	--	-0.66	130	<40.40	<0.16	<0.17	<0.23	<0.19	<0.14	<0.20	<0.16	<0.19	<0.19	<0.14	<10.00
	3/30/12	13.10	5.00	8.10	--	1.21	120	<40.40	0.32 ^J	0.24 ^J	<0.23	0.44 ^J	<0.14	<0.20	<0.16	<0.19	<0.26	<0.14	<10.00
	9/11/12	13.10	6.29	6.81	--	-1.29	13 ^J	<40.40	<0.16	<0.17	<0.23	<0.19	<0.14	<0.20	<0.16	<0.19	<0.26	<0.14	<10.00
	3/20/13	13.10	6.20	6.90	--	0.09	110	<40.40	1.2	0.59 ^J	<0.23	0.77	<0.14	<0.20	<0.16	<0.19	<0.26	<0.14	<10.00
	8/28/13	13.10	6.32	6.78	--	-0.12	14 ^J	<40.40	<0.16	<0.17	<0.23	<0.19	<0.14	<0.20	<0.16	<0.19	<0.26	<0.14	<10.00
	3/31/14	13.10	--	--	--		Not Sampled - Inaccessible												

TABLE 2
Depth to Water and Groundwater Sample Results
Former Hegenberger Maintenance Station
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Monitoring Well	Sample Date	TOC Elevation (ft)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	Change in Elevation (ft)	TPHg (ug/l)	TPHd (ug/l)	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Xylenes (ug/l)	1,2-DCA (ug/l)	EDB (ug/l)	DIPE (ug/l)	ETBE (ug/l)	MTBE (ug/l)	TAME (ug/l)	TBA (ug/l)
MW-3	10/11/95	12.34	6.42	5.92	--	1,300	<50	1.0	<0.3	<0.3	<0.3	--	--	--	--	--	--	--
	1/17/96	12.34	5.82	6.52	0.6	171	<50	64	<0.3	1	<0.3	--	--	--	--	--	--	--
	4/16/96	12.34	5.85	6.49	-0.03	6,740	565	2,770	31	13.9	21.9	--	--	--	--	--	--	--
	8/26/96	12.34	5.72	6.62	0.13	700	700	180	4.2	1	4.6	--	--	--	--	--	--	--
	11/14/96	12.34	6.28	6.06	-0.56	300	120	6.2	1.2	0.7	1.4	--	--	--	--	--	--	--
	2/18/98	12.34	4.65	7.69	1.63	11,000	2,500	3,070	50	54	19	--	--	--	--	25	--	--
	3/30/01	12.34	5.62	6.72	-0.97	9,900	490	2,000	48	39	39	--	--	--	<0.5	--	--	--
	12/26/01	12.34	4.66	7.68	0.96	9,400	1,700	1,500	45	33	28	--	--	--	--	12	--	--
	9/30/02	12.34	5.84	6.50	-1.18	2,020	570	775	17.2	1	8.4	--	--	--	<0.5	--	--	--
	2/20/03	12.34	5.55	6.79	0.29	4,010	--	1,120	<50	<50	<100	--	--	--	--	<50	--	--
	1/12/04	12.34	4.77	7.57	0.78	3,520	--	632	26.9	<25	<50	--	--	--	--	--	--	--
	5/12/05	12.34	4.63	7.71	0.14	5,200	--	1,000	30	20	10	--	--	--	--	--	--	--
	9/29/11	12.34	5.50	6.84	-0.87	3,800	900	390	16	1.1	14	<0.14	<0.20	<0.16	<0.19	<0.14	<0.14	<10.00
	3/30/12	12.34	2.75	9.59	2.75	5,400	780	640	29	10	24	<0.14	<0.20	<0.16	<0.19	<0.26	<0.14	<10.00
	9/11/12	12.34	5.55	6.79	-2.8	2,000	210	22	7.4	<0.23	5.8	<0.14	<0.20	0.27 ^J	<0.19	<0.26	<0.14	<10.00
	3/20/13	12.34	4.20	8.14	1.35	4,900	1,000	930	32	5.9	19	<0.14	<0.20	<0.16	<0.19	<0.26	<0.14	<10.00
	8/28/13	12.34	5.54	6.80	-1.34	920	660	39	9.5	0.53 ^J	8.9	<0.14	<0.20	<0.16	<0.19	<0.26	<0.14	<10.00
	3/31/14	12.34	3.48	8.86	2.06	3,600	1,400	660	18	6.1	11.7	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<20

TABLE 2
Depth to Water and Groundwater Sample Results
Former Hegenberger Maintenance Station
555 Hegenberger Road
Oakland, California

Monitoring Well	Sample Date	TOC Elevation (ft)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	Change in Elevation (ft)	TPHg (ug/l)	TPHd (ug/l)	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Xylenes (ug/l)	1,2-DCA (ug/l)	EDB (ug/l)	DIPE (ug/l)	ETBE (ug/l)	MTBE (ug/l)	TAME (ug/l)	TBA (ug/l)
MW-4	10/11/95	12.85	6.63	6.22	--	500	<50	17	1.1	<0.3	0.5	--	--	--	--	--	--	--
	1/17/96	12.85	5.77	7.08	0.86	460	<50	72	4.1	<0.3	1.7	--	--	--	--	--	--	--
	4/16/96	12.85	5.89	6.96	-0.12	2,200	<50	851	7.7	1.4	5.7	--	--	--	--	--	--	--
	8/26/96	12.85	6.14	6.71	-0.25	300	110	55	4.9	1.2	<0.5	--	--	--	--	--	--	--
	11/14/96	12.85	6.72	6.13	-0.58	200	200	3.4	<0.5	--	<0.5	--	--	--	--	--	--	--
	2/18/98	12.85	5.02	7.83	1.7	1,500	260	320	9.1	1	0.6	--	--	--	--	1.7	--	--
	3/30/01	12.85	6.21	6.64	-1.19	2,700	350	320	16	5.3	13.6	--	--	--	<0.5	--	--	--
	12/26/01	12.85	5.37	7.48	0.84	600	200	33	3	<0.5	1.7	--	--	--	0.8	--	--	--
	9/30/02	12.85	6.40	6.45	-1.03	67	<50	<0.5	<0.5	<0.5	<1.5	--	--	--	<0.5	--	--	--
	2/20/03	12.85	5.83	7.02	0.57	570	--	107	<10	<10	<2.0	--	--	--	<10	--	--	--
	1/12/04	12.85	5.41	7.44	0.42	700	--	122	13.5	0.6	8.8	--	--	--	--	--	--	--
	5/12/05	12.85	5.59	7.26	-0.18	760	--	14	5.7	<5	<5	--	--	--	--	--	--	--
	9/29/11	12.85	6.23	6.62	-0.64	14 ^J	<40.40	<0.16	<0.17	<0.23	<0.19	<0.20	<0.14	<0.16	<0.19	<0.19	<0.14	<10.00
	3/30/12	12.85	3.30	9.55	2.93	2,200	340	340	23	2.8	19	<0.20	<0.14	<0.16	<0.19	<0.26	<0.14	<10.00
	9/11/12	12.85	5.86	6.99	-2.56	2,500	310	92	16	1.3	16	<0.40	<0.28	<0.32	<0.38	<0.52	<0.28	<20.00
	3/20/13	12.85	5.23	7.62	0.63	4,800	680	200	21	3.7	21	<0.20	<0.14	<0.16	<0.19	<0.26	<0.14	<10.00
	8/28/13	12.85	5.86	6.99	-0.63	2,300	500	60	17	1.7	18	<0.20	<0.14	<0.16	<0.19	<0.26	<0.14	<10.00
3/31/14	12.85	3.85	9.00	2.01	6,100	1,000	250	21	3.6	21.1	<0.50	<10						

TABLE 2
Depth to Water and Groundwater Sample Results
Former Hegenberger Maintenance Station
555 Hegenberger Road
Oakland, California

Monitoring Well	Sample Date	TOC Elevation (ft)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	Change in Elevation (ft)	TPHg (ug/l)	TPHd (ug/l)	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Xylenes (ug/l)	1,2-DCA (ug/l)	EDB (ug/l)	DIPE (ug/l)	ETBE (ug/l)	MTBE (ug/l)	TAME (ug/l)	TBA (ug/l)
MW-5	10/11/95	13.33	6.68	6.65	--	1,000	<50	45	15	1.9	6.1	--	--	--	--	--	--	--
	1/17/96	13.33	5.74	7.59	0.94	<50	<50	2	<0.3	<0.3	<0.3	--	--	--	--	--	--	--
	4/16/96	13.33	5.85	7.48	-0.11	1,740	855	157	20.1	3.9	22.4	--	--	--	--	--	--	--
	8/26/96	13.33	5.99	7.34	-0.14	900	270	55	6.4	0.9	3.7	--	--	--	--	--	--	--
	11/14/96	13.33	6.70	6.63	-0.71	700	320	31	5.7	0.7	0.38	--	--	--	--	--	--	--
	2/18/98	13.33	5.74	7.59	0.96	1,200	580	14	5.2	0.8	5.5	--	--	--	--	9.5	--	--
	3/30/01	13.33	6.73	6.60	-0.99	1,500	480	7.2	6.5	<0.5	10.7	--	--	--	<0.5	--	--	--
	12/26/01	13.33	5.23	8.10	1.5	5,000	7,200	0.8	10.5	3.8	10.5	--	--	--	3.6	--	--	--
	9/30/02	13.33	6.18	7.15	-0.95	560	430	1.8	5.2	<0.5	6.5	--	--	--	<0.5	--	--	--
	2/20/03	13.33	5.80	7.53	0.38	1,040	--	<2.5	8.6	<2.5	11.3	--	--	--	<2.5	--	--	--
	1/12/04	13.33	5.60	7.73	0.2	1,820	--	4.2	8	0.6	12.8	--	--	--	--	--	--	--
	5/12/05	13.33	6.18	7.15	-0.58	1,300	--	<5	<5	<5	<5	--	--	--	--	--	--	--
	9/29/11	13.33	6.37	6.96	-0.19	960	440	0.34 ^J	0.52 ^J	<0.23	1.8	<0.20	<0.14	<0.16	<0.19	<0.19	<0.14	<10.00
	3/30/12	13.33	4.61	8.72	1.76	200	270	1.5	2.4	<0.23	5.2	<0.20	<0.14	<0.16	<0.19	<0.26	<0.14	<10.00
	9/11/12	13.33	6.40	6.93	-1.79	550	200	1.0	1.6	<0.23	3.2	<0.20	<0.14	<0.16	<0.19	<0.26	<0.14	<10.00
	3/20/13	13.33	5.73	7.60	0.67	900	230	0.86	1.3	<0.23	3.3	<0.20	<0.14	<0.16	<0.19	<0.26	<0.14	<10.00
	8/28/13	13.33	6.17	7.16	-0.44	760	250	0.27 ^J	0.26 ^J	<0.23	1.4	<0.20	<0.14	<0.16	<0.19	<0.26	<0.14	<10.00
	3/31/14	13.33	--	--	--	Not Sampled - Inaccessible												

Notes:

TOC = top of casing

TPHg = total petroleum hydrocarbons as gasoline

TPHd = total petroleum hydrocarbons as diesel

J = Concentration is above the detection limit and below the practical quantitation limit

EDB = ethylene dibromide or 1,2-dibromethane

1,2-DCA = 1,2-dichloroethane

DIPE = Di-isopropyl ether

ETBE = Ethyl tert-butyl ether

MTBE = methy tertiary butyl ether

TAME = tert-Amyl methyl ether

TBA = tert-Butanol

APPENDIX

A

MONITORING WELL SAMPLING DATA

Project Name: Hegenberger Maint. Station	Project Number: E8722-02-01B
Well No.: MW-1	Date: 3/31/2014
Well Diameter: 4 in.	Field Personnel: C. Merritt
Casing Length: 19.5 ft	Screened Casing Length: 15 ft.
Well Elevation: 13.31 ft MSL measured from TOC	

PURGE CHARACTERISTICS	
Water Depth Before Purging: 4.10 ft	2 in. = .1632 Gal/ft. 4 in. = .6528 Gal/ft.
Calculated Water Column Volume: 10.05Gal.	Volumes Purged: 3
Start Purging Time: 11:25	End Purging Time: 11:50
Total Time: 25 min.	Flow Gauge: to
Total Volume Purged: 33 Gal	Avg. Flow Rate: 1.32gpm
Water Depth After Purging:	Time: 11:50
Dissolved Oxygen:	Free Product: No

SAMPLING CHARACTERISTICS				
Purging Method: Submersible		Sampling Method: Disposable bailer		
Laboratory Analysis: TPHd , TPHg, BTEX, FOCs, 1,2-DCA, EDB				
TIME	TEMPERATURE (°C)	CONDUCTIVITY (umhos/cm)	pH	Gallons Purged
1130	19	1027	7.59	0
1137	18.2	677	7.56	11
1142	18.2	903	7.54	22
1148	18.6	1038	7.58	33
comments: Slight turbidity, strong odor.				

MONITORING WELL SAMPLING DATA

Project Name: Hegenberger Maint. Station	Project Number: E8722-02-01B
Well No.: MW-3	Date: 3/31/2014
Well Diameter: 4 in.	Field Personnel: C. Merritt
Casing Length: 20 ft	Screened Casing Length: 15 ft
Well Elevation: 12.34 ft MSL measured from TOC	

PURGE CHARACTERISTICS	
Water Depth Before Purging: 3.48 ft	2 in. = .1632 Gal/ft. 4 in. = .6528 Gal/ft.
Calculated Water Column Volume: 10.45 Gal.	Volumes Purged: 3
Start Purging Time: 12:50	End Purging Time: 13:00
Total Time: 20 min.	Flow Gauge:
Total Volume Purged: ~26 Gal	Avg. Flow Rate: 1.3gpm
Water Depth After Purging:	Time: 13:15
Dissolved Oxygen:	Free Product: No

SAMPLING CHARACTERISTICS				
Purging Method: Submersible		Sampling Method: Disposable bailer		
Laboratory Analysis: TPHd , TPHg, BTEX, FOCs, 1,2-DCA, EDB				
TIME	TEMPERATURE (°C)	CONDUCTIVITY (umhos/cm)	pH	Gallons Purged
1250	19.9	4.98	7.24	0
1255	19.6	3.55	7.15	11
1300	19.7	5.15	7.13	22
1303				DRY ~26
1307	18.28'			
1310	18.05'			
comments: Purged Dry at ~1303, measured recovery at 1307 and 1310 which indicated 80% recovery would be achieved at approximately 3 hours. Sampled at 1315 as weather (pouring rain) and time restricted 80% recovery option. Water was near clear, strong odor.				

MONITORING WELL SAMPLING DATA

Project Name: Hegenberger Maint. Station		Project Number: E8722-02-01B
Well No.: MW-4		Date: 3/31/2014
Well Diameter: 4 in.		Field Personnel: C. Merritt
Casing Length: 19 ft		Screened Casing Length: 15 ft
Well Elevation: 12.85 ft MSL measured from TOC		

PURGE CHARACTERISTICS	
Water Depth Before Purging: 3.85 ft.	2 in. = .1632 Gal/ft. 4 in. = .6528 Gal/ft.
Calculated Water Column Volume: 10.21 Gal	Volumes Purged: 3
Start Purging Time: 12:05	End Purging Time 12:23
Total Time: 18 min.	Flow Gauge:
Total Volume Purged: 33 Gal	Avg. Flow Rate: 1.83 gpm
Water Depth After Purging:	Time: 12:30
Dissolved Oxygen:	Free Product: No

SAMPLING CHARACTERISTICS				
Purging Method: Submersible		Sampling Method: Disposable bailer		
Laboratory Analysis: TPHd , TPHg, BTEX, FOCs, 1,2-DCA, EDB				
TIME	TEMPERATURE (°C)	CONDUCTIVITY (umhos/cm)	pH	Gallons Purged
1205	17.9	1738	7.41	0
1212	19.0	1867	7.32	11
1217	18.9	1919	7.30	22
1223	18.9	1966	7.38	33
comments: Slight turbidity, strong odor.				

APPENDIX

B



April 08, 2014

John Love
Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550
Tel: (925) 525-4142
Fax:(925) 371-5915

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003
TCEQ No. : T104704502

Re: ATL Work Order Number : 1400972

Client Reference : CALTRANS HEGENBERGER, E8722-02-01B

Enclosed are the results for sample(s) received on April 01, 2014 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

A handwritten signature in black ink, appearing to read 'Eddie Rodriguez'.

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore , CA 94550

Project Number : CALTRANS HEGENBERGER, E8722-0
Report To : John Love
Reported : 04/08/2014

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	1400972-01	Water	3/31/14 11:50	4/01/14 8:10
MW-3	1400972-02	Water	3/31/14 13:15	4/01/14 8:10
MW-4	1400972-03	Water	3/31/14 12:30	4/01/14 8:10



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Geocon Consultants, Inc.
6671 Brisa Street
Livermore , CA 94550

Project Number : CALTRANS HEGENBERGER, E8722-0
Report To : John Love
Reported : 04/08/2014

Client Sample ID MW-1 Lab ID: 1400972-01

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	0.62	0.05	NA	1	B4D0003	04/01/2014	04/01/14 09:55	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>118 %</i>		<i>70 - 130</i>		B4D0003	04/01/2014	<i>04/01/14 09:55</i>	

Diesel Range Organics by EPA 8015B

Analyst: CR

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	0.57	0.05	NA	1	B4D0020	04/01/2014	04/01/14 16:58	
<i>Surrogate: p-Terphenyl</i>	<i>69.7 %</i>		<i>30 - 142</i>		B4D0020	04/01/2014	<i>04/01/14 16:58</i>	

Volatile Organic Compounds by EPA 8260B

Analyst: DP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2-Dibromoethane	ND	0.50	NA	1	B4D0019	04/02/2014	04/02/14 16:59	
1,2-Dichloroethane	ND	0.50	NA	1	B4D0019	04/02/2014	04/02/14 16:59	
Benzene	5.7	0.50	NA	1	B4D0019	04/02/2014	04/02/14 16:59	
Di-isopropyl ether	ND	0.50	NA	1	B4D0019	04/02/2014	04/02/14 16:59	
Ethyl tert-butyl ether	ND	0.50	NA	1	B4D0019	04/02/2014	04/02/14 16:59	
Ethylbenzene	ND	0.50	NA	1	B4D0019	04/02/2014	04/02/14 16:59	
m,p-Xylene	2.4	1.0	NA	1	B4D0019	04/02/2014	04/02/14 16:59	
MTBE	ND	0.50	NA	1	B4D0019	04/02/2014	04/02/14 16:59	
o-Xylene	0.51	0.50	NA	1	B4D0019	04/02/2014	04/02/14 16:59	
tert-Amyl methyl ether	ND	0.50	NA	1	B4D0019	04/02/2014	04/02/14 16:59	
tert-Butanol	ND	10	NA	1	B4D0019	04/02/2014	04/02/14 16:59	
Toluene	2.3	0.50	NA	1	B4D0019	04/02/2014	04/02/14 16:59	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>114 %</i>		<i>64 - 146</i>		B4D0019	04/02/2014	<i>04/02/14 16:59</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>116 %</i>		<i>60 - 128</i>		B4D0019	04/02/2014	<i>04/02/14 16:59</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>109 %</i>		<i>72 - 141</i>		B4D0019	04/02/2014	<i>04/02/14 16:59</i>	
<i>Surrogate: Toluene-d8</i>	<i>96.1 %</i>		<i>61 - 124</i>		B4D0019	04/02/2014	<i>04/02/14 16:59</i>	



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore , CA 94550

Project Number : CALTRANS HEGENBERGER, E8722-0
Report To : John Love
Reported : 04/08/2014

Client Sample ID MW-3

Lab ID: 1400972-02

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	3.6	0.05	NA	1	B4D0003	04/01/2014	04/01/14 10:34	
Surrogate: 4-Bromofluorobenzene	198 %		70 - 130		B4D0003	04/01/2014	04/01/14 10:34	S7

Diesel Range Organics by EPA 8015B

Analyst: CR

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	1.4	0.05	NA	1	B4D0020	04/01/2014	04/01/14 17:31	
Surrogate: p-Terphenyl	75.4 %		30 - 142		B4D0020	04/01/2014	04/01/14 17:31	

Volatile Organic Compounds by EPA 8260B

Analyst: DP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2-Dibromoethane	ND	1.0	NA	2	B4D0019	04/02/2014	04/02/14 17:22	
1,2-Dichloroethane	ND	1.0	NA	2	B4D0019	04/02/2014	04/02/14 17:22	
Benzene	660	25	NA	50	B4D0019	04/02/2014	04/02/14 13:07	
Di-isopropyl ether	ND	1.0	NA	2	B4D0019	04/02/2014	04/02/14 17:22	
Ethyl tert-butyl ether	ND	1.0	NA	2	B4D0019	04/02/2014	04/02/14 17:22	
Ethylbenzene	6.1	1.0	NA	2	B4D0019	04/02/2014	04/02/14 17:22	
m,p-Xylene	8.0	2.0	NA	2	B4D0019	04/02/2014	04/02/14 17:22	
MTBE	ND	1.0	NA	2	B4D0019	04/02/2014	04/02/14 17:22	
o-Xylene	3.7	1.0	NA	2	B4D0019	04/02/2014	04/02/14 17:22	
tert-Amyl methyl ether	ND	1.0	NA	2	B4D0019	04/02/2014	04/02/14 17:22	
tert-Butanol	ND	20	NA	2	B4D0019	04/02/2014	04/02/14 17:22	
Toluene	18	1.0	NA	2	B4D0019	04/02/2014	04/02/14 17:22	
Surrogate: 1,2-Dichloroethane-d4	93.8 %	64 - 146			B4D0019	04/02/2014	04/02/14 13:07	
Surrogate: 1,2-Dichloroethane-d4	102 %	64 - 146			B4D0019	04/02/2014	04/02/14 17:22	
Surrogate: 4-Bromofluorobenzene	90.6 %	60 - 128			B4D0019	04/02/2014	04/02/14 13:07	
Surrogate: 4-Bromofluorobenzene	105 %	60 - 128			B4D0019	04/02/2014	04/02/14 17:22	
Surrogate: Dibromofluoromethane	87.4 %	72 - 141			B4D0019	04/02/2014	04/02/14 13:07	
Surrogate: Dibromofluoromethane	95.4 %	72 - 141			B4D0019	04/02/2014	04/02/14 17:22	
Surrogate: Toluene-d8	72.8 %	61 - 124			B4D0019	04/02/2014	04/02/14 13:07	
Surrogate: Toluene-d8	85.8 %	61 - 124			B4D0019	04/02/2014	04/02/14 17:22	



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore , CA 94550

Project Number : CALTRANS HEGENBERGER, E8722-0
Report To : John Love
Reported : 04/08/2014

Client Sample ID MW-4 Lab ID: 1400972-03

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	6.1	0.05	NA	1	B4D0003	04/01/2014	04/01/14 10:54	
Surrogate: 4-Bromofluorobenzene	201 %		70 - 130		B4D0003	04/01/2014	04/01/14 10:54	S7

Diesel Range Organics by EPA 8015B

Analyst: CR

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	1.0	0.05	NA	1	B4D0020	04/01/2014	04/01/14 17:15	
Surrogate: p-Terphenyl	61.8 %		30 - 142		B4D0020	04/01/2014	04/01/14 17:15	

Volatile Organic Compounds by EPA 8260B

Analyst: DP

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2-Dibromoethane	ND	0.50	NA	1	B4D0019	04/02/2014	04/02/14 16:12	
1,2-Dichloroethane	ND	0.50	NA	1	B4D0019	04/02/2014	04/02/14 16:12	
Benzene	250	2.5	NA	5	B4D0055	04/03/2014	04/03/14 14:01	
Di-isopropyl ether	ND	0.50	NA	1	B4D0019	04/02/2014	04/02/14 16:12	
Ethyl tert-butyl ether	ND	0.50	NA	1	B4D0019	04/02/2014	04/02/14 16:12	
Ethylbenzene	3.6	0.50	NA	1	B4D0019	04/02/2014	04/02/14 16:12	
m,p-Xylene	17	1.0	NA	1	B4D0019	04/02/2014	04/02/14 16:12	
MTBE	ND	0.50	NA	1	B4D0019	04/02/2014	04/02/14 16:12	
o-Xylene	4.1	0.50	NA	1	B4D0019	04/02/2014	04/02/14 16:12	
tert-Amyl methyl ether	ND	0.50	NA	1	B4D0019	04/02/2014	04/02/14 16:12	
tert-Butanol	ND	10	NA	1	B4D0019	04/02/2014	04/02/14 16:12	
Toluene	21	0.50	NA	1	B4D0019	04/02/2014	04/02/14 16:12	
Surrogate: 1,2-Dichloroethane-d4	110 %		64 - 146		B4D0019	04/02/2014	04/02/14 16:12	
Surrogate: 1,2-Dichloroethane-d4	124 %		64 - 146		B4D0055	04/03/2014	04/03/14 14:01	
Surrogate: 4-Bromofluorobenzene	123 %		60 - 128		B4D0055	04/03/2014	04/03/14 14:01	
Surrogate: 4-Bromofluorobenzene	98.7 %		60 - 128		B4D0019	04/02/2014	04/02/14 16:12	
Surrogate: Dibromofluoromethane	116 %		72 - 141		B4D0055	04/03/2014	04/03/14 14:01	
Surrogate: Dibromofluoromethane	94.3 %		72 - 141		B4D0019	04/02/2014	04/02/14 16:12	
Surrogate: Toluene-d8	85.5 %		61 - 124		B4D0019	04/02/2014	04/02/14 16:12	
Surrogate: Toluene-d8	99.5 %		61 - 124		B4D0055	04/03/2014	04/03/14 14:01	



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore , CA 94550

Project Number : CALTRANS HEGENBERGER, E8722-0
Report To : John Love
Reported : 04/08/2014

QUALITY CONTROL SECTION

Gasoline Range Organics by EPA 8015B (Modified) - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B4D0003 - GCVOAW

Blank (B4D0003-BLK1)

Prepared: 4/1/2014 Analyzed: 4/1/2014

Gasoline Range Organics	ND	0.05			NR				
Surrogate: 4-Bromofluorobenzene	0.09652		0.100000		96.5	70 - 130			

LCS (B4D0003-BS1)

Prepared: 4/1/2014 Analyzed: 4/1/2014

Gasoline Range Organics	0.939000	0.05	1.00000		93.9	70 - 130			
Surrogate: 4-Bromofluorobenzene	0.09952		0.100000		99.5	70 - 130			

LCS Dup (B4D0003-BSD1)

Prepared: 4/1/2014 Analyzed: 4/1/2014

Gasoline Range Organics	1.02800	0.05	1.00000		103	70 - 130	9.05	20	
Surrogate: 4-Bromofluorobenzene	0.1047		0.100000		105	70 - 130			

Duplicate (B4D0003-DUP1)

Source: 1400972-02 Prepared: 4/1/2014 Analyzed: 4/1/2014

Gasoline Range Organics	3.53300	0.05		3.57900	NR		1.29	20	
Surrogate: 4-Bromofluorobenzene	0.1947		0.100000		195	70 - 130			S7



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore , CA 94550

Project Number : CALTRANS HEGENBERGER, E8722-0
Report To : John Love
Reported : 04/08/2014

Diesel Range Organics by EPA 8015B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B4D0020 - GCSEMI_DRO

Blank (B4D0020-BLK1)

Prepared: 4/1/2014 Analyzed: 4/1/2014

DRO	ND	0.05		NR					
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Surrogate: *p-Terphenyl*

0.04519 8.00000E-2 56.5 30 - 142

LCS (B4D0020-BS1)

Prepared: 4/1/2014 Analyzed: 4/1/2014

DRO	0.735620	0.05	1.00000	73.6	38 - 129				
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Surrogate: *p-Terphenyl*

0.05473 8.00000E-2 68.4 30 - 142

LCS Dup (B4D0020-BSD1)

Prepared: 4/1/2014 Analyzed: 4/1/2014

DRO	0.669790	0.05	1.00000	67.0	38 - 129	9.37	20		
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Surrogate: *p-Terphenyl*

0.05385 8.00000E-2 67.3 30 - 142



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore , CA 94550

Project Number : CALTRANS HEGENBERGER, E8722-0
Report To : John Love
Reported : 04/08/2014

Volatile Organic Compounds by EPA 8260B - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B4D0019 - MSVOAW_LL
Blank (B4D0019-BLK1)

Prepared: 4/2/2014 Analyzed: 4/2/2014

1,2-Dibromoethane	ND	0.50			NR				
1,2-Dichloroethane	ND	0.50			NR				
Benzene	ND	0.50			NR				
Di-isopropyl ether	ND	0.50			NR				
Ethyl tert-butyl ether	ND	0.50			NR				
Ethylbenzene	ND	0.50			NR				
m,p-Xylene	ND	1.0			NR				
MTBE	ND	0.50			NR				
o-Xylene	ND	0.50			NR				
tert-Amyl methyl ether	ND	0.50			NR				
tert-Butanol	ND	10			NR				
Toluene	ND	0.50			NR				

Surrogate: 1,2-Dichloroethane-d4

49.89 50.0000 99.8 64 - 146

Surrogate: 4-Bromofluorobenzene

50.40 50.0000 101 60 - 128

Surrogate: Dibromofluoromethane

47.31 50.0000 94.6 72 - 141

Surrogate: Toluene-d8

40.34 50.0000 80.7 61 - 124

LCS (B4D0019-BS1)

Prepared: 4/2/2014 Analyzed: 4/2/2014

1,1-Dichloroethene	18.1500	0.50	20.0000	90.8	56 - 131		
Benzene	22.0100	0.50	20.0000	110	69 - 139		
Chlorobenzene	23.4700	0.50	20.0000	117	73 - 127		
MTBE	24.0100	0.50	20.0000	120	68 - 133		
Toluene	18.9000	0.50	20.0000	94.5	62 - 133		
Trichloroethene	24.5100	0.50	20.0000	123	72 - 139		

Surrogate: 1,2-Dichloroethane-d4

60.11 50.0000 120 64 - 146

Surrogate: 4-Bromofluorobenzene

55.07 50.0000 110 60 - 128

Surrogate: Dibromofluoromethane

54.04 50.0000 108 72 - 141

Surrogate: Toluene-d8

43.82 50.0000 87.6 61 - 124

LCS Dup (B4D0019-BSD1)

Prepared: 4/2/2014 Analyzed: 4/2/2014

1,1-Dichloroethene	16.4700	0.50	20.0000	82.4	56 - 131	9.71	20
Benzene	20.4600	0.50	20.0000	102	69 - 139	7.30	20
Chlorobenzene	21.4100	0.50	20.0000	107	73 - 127	9.18	20
MTBE	22.1100	0.50	20.0000	111	68 - 133	8.24	20
Toluene	18.7100	0.50	20.0000	93.6	62 - 133	1.01	20
Trichloroethene	23.5600	0.50	20.0000	118	72 - 139	3.95	20

Surrogate: 1,2-Dichloroethane-d4

48.81 50.0000 97.6 64 - 146

Surrogate: 4-Bromofluorobenzene

44.61 50.0000 89.2 60 - 128

Surrogate: Dibromofluoromethane

44.16 50.0000 88.3 72 - 141

Surrogate: Toluene-d8

38.83 50.0000 77.7 61 - 124



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore , CA 94550

Project Number : CALTRANS HEGENBERGER, E8722-0
Report To : John Love
Reported : 04/08/2014

Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
Batch B4D0019 - MSVOAW_LL (continued)									
Duplicate (B4D0019-DUP1)									
				Source: 1400972-03		Prepared: 4/2/2014 Analyzed: 4/2/2014			
1,1-Dichloroethene	ND	0.50		ND	NR			20	
Benzene	195.170	0.50		200.350	NR		2.62	20	
Chlorobenzene	ND	0.50		ND	NR			20	
MTBE	ND	0.50		ND	NR			20	
Toluene	20.1500	0.50		20.9500	NR		3.89	20	
Trichloroethene	ND	0.50		ND	NR			20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	61.76		50.0000		124	64 - 146			
<i>Surrogate: 4-Bromofluorobenzene</i>	49.42		50.0000		98.8	60 - 128			
<i>Surrogate: Dibromofluoromethane</i>	46.92		50.0000		93.8	72 - 141			
<i>Surrogate: Toluene-d8</i>	42.23		50.0000		84.5	61 - 124			
Batch B4D0055 - MSVOAW_LL									
Blank (B4D0055-BLK1)									
						Prepared: 4/3/2014 Analyzed: 4/3/2014			
1,2-Dibromoethane	ND	0.50			NR				
1,2-Dichloroethane	ND	0.50			NR				
Benzene	ND	0.50			NR				
Di-isopropyl ether	ND	0.50			NR				
Ethyl tert-butyl ether	ND	0.50			NR				
Ethylbenzene	ND	0.50			NR				
m,p-Xylene	ND	1.0			NR				
MTBE	ND	0.50			NR				
o-Xylene	ND	0.50			NR				
tert-Amyl methyl ether	ND	0.50			NR				
tert-Butanol	ND	10			NR				
Toluene	ND	0.50			NR				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	56.56		50.0000		113	64 - 146			
<i>Surrogate: 4-Bromofluorobenzene</i>	53.84		50.0000		108	60 - 128			
<i>Surrogate: Dibromofluoromethane</i>	53.13		50.0000		106	72 - 141			
<i>Surrogate: Toluene-d8</i>	43.85		50.0000		87.7	61 - 124			
LCS (B4D0055-BS1)									
						Prepared: 4/3/2014 Analyzed: 4/3/2014			
1,1-Dichloroethene	15.3000	0.50	20.0000		76.5	56 - 131			
Benzene	18.6400	0.50	20.0000		93.2	69 - 139			
Chlorobenzene	19.8400	0.50	20.0000		99.2	73 - 127			
MTBE	18.4900	0.50	20.0000		92.4	68 - 133			
Toluene	17.1800	0.50	20.0000		85.9	62 - 133			
Trichloroethene	18.6700	0.50	20.0000		93.4	72 - 139			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	58.40		50.0000		117	64 - 146			
<i>Surrogate: 4-Bromofluorobenzene</i>	54.10		50.0000		108	60 - 128			
<i>Surrogate: Dibromofluoromethane</i>	54.19		50.0000		108	72 - 141			



Certificate of Analysis

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Livermore , CA 94550

Project Number : CALTRANS HEGENBERGER, E8722-0
Report To : John Love
Reported : 04/08/2014

Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B4D0055 - MSVOAW_LL (continued)
LCS (B4D0055-BS1) - Continued

Prepared: 4/3/2014 Analyzed: 4/3/2014

Surrogate: Toluene-d8

47.21 50.0000 94.4 61 - 124

LCS Dup (B4D0055-BSD1)

Prepared: 4/3/2014 Analyzed: 4/3/2014

1,1-Dichloroethene

15.1900 0.50 20.0000 76.0 56 - 131 0.722 20

Benzene

18.8000 0.50 20.0000 94.0 69 - 139 0.855 20

Chlorobenzene

20.0200 0.50 20.0000 100 73 - 127 0.903 20

MTBE

18.4900 0.50 20.0000 92.4 68 - 133 0.00 20

Toluene

16.6300 0.50 20.0000 83.2 62 - 133 3.25 20

Trichloroethene

19.0000 0.50 20.0000 95.0 72 - 139 1.75 20

Surrogate: 1,2-Dichloroethane-d4

50.88 50.0000 102 64 - 146

Surrogate: 4-Bromofluorobenzene

46.74 50.0000 93.5 60 - 128

Surrogate: Dibromofluoromethane

46.81 50.0000 93.6 72 - 141

Surrogate: Toluene-d8

39.38 50.0000 78.8 61 - 124

Duplicate (B4D0055-DUP1)
Source: 1400972-03RE1 Prepared: 4/3/2014 Analyzed: 4/3/2014

1,1-Dichloroethene

ND 2.5 ND NR 20

Benzene

210.250 2.5 247.000 NR 16.1 20

Chlorobenzene

ND 2.5 ND NR 20

MTBE

ND 2.5 ND NR 20

Toluene

12.6000 2.5 14.5000 NR 14.0 20

Trichloroethene

ND 2.5 ND NR 20

Surrogate: 1,2-Dichloroethane-d4

53.87 50.0000 108 64 - 146

Surrogate: 4-Bromofluorobenzene

53.16 50.0000 106 60 - 128

Surrogate: Dibromofluoromethane

51.27 50.0000 103 72 - 141

Surrogate: Toluene-d8

43.34 50.0000 86.7 61 - 124



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore , CA 94550

Project Number : CALTRANS HEGENBERGER, E8722-0
Report To : John Love
Reported : 04/08/2014

Notes and Definitions

S7	Surrogate recovery was outside of laboratory acceptance limit. Chromatogram shows high concentration of heavy hydrocarbons.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:

- (1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
- (2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
- (3) Results are wet unless otherwise specified.

CHAIN OF CUSTODY RECORD

Diane Galvan

From: Chris Merritt [merritt@geoconinc.com]
Sent: Tuesday, April 01, 2014 12:23 PM
To: Fernando Diwa; Diane Galvan
Subject: Emailing: E8722-02-01B COC 3.31.2014.pdf
Attachments: E8722-02-01B COC 3.31.2014.pdf

Copy of COC from yesterday with date/time.

CHAIN OF CUSTODY RECORD

Pg

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Diane Galvan

From: Chris Merritt [merritt@geoconinc.com]
Sent: Tuesday, April 01, 2014 1:19 PM
To: Fernando Diwa; Diane Galvan
Subject: BTW, E8722-02-01B

The times are transposed on MW3 and MW4, should be 1315 and 1230 respectively.

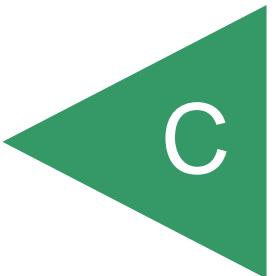
Chris Merritt

Project Geologist

Please visit our website at <http://www.geoconinc.com>

GEOCON Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550
925-371-5900 (office)
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Merritt@geoconinc.com

APPENDIX



**DEPARTMENT OF TRANSPORTATION**

DISTRICT 4

Office of Environmental Engineering
P.O. BOX 23660, MS 8C
OAKLAND, CA 94623-0660
PHONE (510) 286-5668
FAX (510) 286-5639
TTY 711
www.dot.ca.gov

*Flex your power!
Be energy efficient!*

Date: July 16, 2014

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

Reference: First Quarter 2014 Groundwater Monitoring Report
Former Hegenberger Maintenance Station
555 Hegenberger Road
Oakland, California

Dear Mr. Nowell:

Attached for your review is the First Quarter 2014 Groundwater Monitoring Report for the Former Hegenberger Maintenance Station located at 555 Hegenberger Road in Oakland, California. This report was prepared for the Alameda County Health Care Services Environmental Protection Division by Geocon Consultants, Inc.

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

If you have any questions, please don't hesitate to contact me or Geocon project manager John Love at (925) 371-5900 extension 407.

Sincerely,

A handwritten signature in black ink, appearing to read "Ray Boyer".

For

Ray Boyer, P.E.
District Branch Chief
California Department of Transportation - District 04
Division of Environmental Planning & Engineering
Office of Environmental Engineering
(510) 286-5668