STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY GRAY DAVIS, Governor

DEPARTMENT OF TRANSPORTATION
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R0225

April 16, 2003

Alameda County
APR 21 2003
Environmental Health

Mr. Amir Gholami
Alameda County Environmental Health Service
Environmental Protection
1131 Harbor Bay Pkwy; Suite 250
Alameda, California 94502-6577

SUBJECT: Report review for the first quarter 2003 groundwater monitoring report on Caltrans Former Maintenance station at 555 Hegenberger Road, Oakland, California

Dear Mr. Gholami:

Please find attached a copy of the first quarter 2003 groundwater monitoring report for the aforementioned address. Workplan and the Health and Safety Plan for this site have already been submitted with the previous monitoring report in December 2002. This document summarizes the results found at the site from samples taken from the Five monitoring wells.

If you have any questions or require additional information, please contact Bahram Sazegar at (510) 286-5643.

Ray Boyer

RAY BOYER
District Branch Chief
Office of Environmental Engineering

Attachments

Cc: Rboyer, File

FIRST QUARTER 2003 GROUNDWATER MONITORING REPORT

TASK ORDER NUMBER 04-987901-VV
CONTRACT NUMBER 43A0078
HEGENBERGER MAINTENANCE STATION
OAKLAND, CALIFORNIA

prepared for

California Department of Transportation
District 4
111 Grand Avenue
Oakland, California 94612

Professional Service Industries
4703 Tidewater Avenue, Suite B
Oakland, California 94601

April 10, 2003
575-2G020

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STATEMENT OF LIMITATIONS AND PROFESSIONAL CERTIFICATION

Information provided in Professional Services Industries, Inc., (PSI) report number 575-2G020 is intended exclusively for the California Department of Transportation (Caltrans) for the evaluation of groundwater contamination as it pertains to the subject site. PSI is responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official view or policies of the State of California or the Federal Highway Administration. This report does not constitute a standard, specification, or regulation. The professional services provided have been performed in accordance with practices generally accepted by other geologists, hydrologists, hydrogeologists, engineers, and environmental scientists practicing in this field. No other warranty, either expressed or implied, is made. As with all subsurface investigations, there is no guarantee that the work conducted will identify any and all sources or locations of contamination.

This report is issued with the understanding that Caltrans is responsible for ensuring that the information contained in this report is brought to the attention of the appropriate regulatory agency. This report has been reviewed by a geologist who is registered in the State of California and whose signature and license number appear below.

Frank R. Poss, R.E.A.
Senior Hydrogeologist

Brand Burfield, RG #6986
Project Geologist

1.0 INTRODUCTION

Professional Service Industries, Inc. (PSI) has been retained by the California Department of Transportation (Caltrans), under Task Order Number 04-987901-VV and Contract Number 43A0078, to perform semi-annual groundwater monitoring at 555 Hegenberger Road in the City of Oakland, California (subject site; Figure 1). The site is the former Hegenberger Maintenance Station.

The scope of work for this investigation includes:

- Collection of groundwater samples from five on-site monitoring wells for three episodes of semi-annual sampling,
- Chemical analysis of the groundwater samples, and
- Preparation of a technical report describing the investigation and interpretation of the data generated.

1.1 PROJECT OBJECTIVE

The objective of the project is to perform semi-annual groundwater monitoring according to established protocol to satisfy regulatory requirements.

1.2 SITE BACKGROUND

In September 1994, four underground storage tanks (USTs) and the associated product piping and pump island were removed. The USTs consisted of two 2,000-gallon diesel USTs and two 6,500-gallon gasoline tanks. Overexcavation was completed to the extent feasible, to remove residual petroleum hydrocarbons impacting the soil. Soil sampling was conducted following the completion of the excavation and indicated elevated concentrations of petroleum hydrocarbons in the remaining soil.

A soil and groundwater investigation was completed in 1995 by Geocon Consultants Inc. to characterize the vertical and lateral extent of petroleum hydrocarbons in soil and groundwater. The investigation included the installation of 5 monitoring wells. The results indicated petroleum hydrocarbons remained in the soil and groundwater.

Subsequent quarterly groundwater monitoring at the site indicated that Total Petroleum Hydrocarbons as Motor Oil (TPH-MO) and TPH as oil and grease (TPH-OG) were not detected and were discontinued. TPH as Gasoline (TPH-G) and TPH as Diesel (TPH-D) have been detected in all of the monitoring wells at some point in the history of the site. Benzene has been detected in all of the monitoring wells and methyl tert butyl ether (MTBE) has been detected in all of the wells with the exception of MW-2.

After six years of groundwater monitoring, no consistent attenuation of the contaminant concentrations could be established. As a result, as of the 3rd Quarter 2002, the Alameda County Department of Environmental Health Services (ADEHS) changed the monitoring frequency to semi-annual. The March 30, 2001 monitoring indicated that MTBE was no longer present above laboratory detection limits. As a result, the ADEHS stated that MTBE was no longer a contaminant of concern.

As a result of semi-annual groundwater monitoring, the ADEHS requested further site characterization to determine the extent of the groundwater plume. Additional soil and groundwater sampling and analyses were performed up gradient, down gradient, and within the former underground storage tank pit.

There are known Leaking Underground Storage Tank (LUST) sites in the vicinity of the subject site. However, based on the non detect to trace concentrations of petroleum hydrocarbons found in the hydraulically up-gradient monitoring wells, the impact of the off-site LUST sites appears to be minimal in the area of the former underground storage tanks at the Caltrans site

Data obtained from previous investigations are included in Appendix A.

2.0 GROUNDWATER MONITORING ACTIVITIES

2.1 GROUNDWATER ELEVATION AND HYDRAULIC GRADIENT

On February 20, 2003, static groundwater elevations were measured in monitoring wells MW-1 through MW-5 (Figure 2). The groundwater depths were measured in accordance with the field procedures outlined in Section 2.2, using a groundwater interface probe.

A summary of the depth-to-groundwater data collected during this monitoring event is presented in Table 1. The monitoring well top-of-casing elevations have been surveyed with reference to an arbitrary point on the ground surface with an assumed elevation of 100 feet. As such, groundwater level measurements are accurate relative to each other for gradient evaluation but are not reflective of mean seal level. The groundwater elevation data do not support a specific flow direction, as the highest water level is in the middle of the site. By eliminating the MW-1 data point, a generalized flow direction towards the north can be derived (Figure 2). PSI recommends that the site be re-surveyed with respect to mean sea level for submittal to the Geotracker Program as required by the State Water Resources Board.

2.2 GROUNDWATER SAMPLING

Groundwater samples were collected from monitoring wells MW-1 through MW-5. Prior to the collection of groundwater samples, each monitoring well was purged of a minimum of three well volumes of water and until pH, conductivity, and temperature stabilized. The well was allowed to recover to at least 80 percent of their original static groundwater levels prior to sampling, if purged dry.

The following procedures were implemented while performing well monitoring, well purging, and water sampling:

1. All non-dedicated equipment was washed prior to entering the well with an Alconox solution, followed by two tap water rinses and a deionized water rinse.

2. Prior to purging the wells, depth-to-water was measured using a Solinst groundwater interface probe to an accuracy of approximately 0.01 foot.

3. Monitoring wells at the site were prepared for sampling by purging the well of approximately 3 well volumes of water using a polyethylene bailer.

4. Water samples were collected with a single-use polyethylene bailer after the well had been purged. If the well was purged dry, a sample was collected after the water in the well had equilibrated to approximately 80 percent of the static water level or 2 hours after well purging, whichever occurred first. The containers were overfilled, capped, labeled, and placed in a chilled cooler prior to delivery to the laboratory for analysis.

5. Chain-of-custody procedures, including chain-of-custody forms, were used to document water sample handling and transport from collection to delivery to the laboratory for analyses.

6. Groundwater samples were delivered to the State-certified hazardous waste laboratory within approximately 48-hours of collection.

7. Purged water was contained in a DOT approved 55-gallon drum. The drum was labeled with the contents, date, well number, client name, and project number.

The groundwater monitoring purge logs are presented in Appendix B.

2.3 LABORATORY ANALYSIS AND RESULTS

Five groundwater samples were submitted for analyses to Basic Laboratory of Redding, California, a State of California certified hazardous waste analytical laboratory. The samples were analyzed for the following:

- EPA 8015 modified - Total Petroleum Hydrocarbons as Gasoline (TPH-G);
- EPA 8260 - Volatile Organic Compounds (VOCs) including MTBE.

The groundwater samples were not analyzed for TPH-D, per instructions in a letter dated December 19, 2002 from the Alameda County Department of Public Health.

A summary of the laboratory results for groundwater samples is presented in Table 1. A copy of the laboratory reports and chain of custody records are presented in Appendix C. The following are the results of the groundwater sampling:

- TPH-G was detected in all of the groundwater samples with the highest concentration being detected in MW-3 at 4,010 micrograms per liter (ug/l). TPH-G concentrations were generally higher than the previous monitoring event.

- VOC compounds were detected in all of the groundwater samples. The concentrations were compared to each of the compounds' State of California Primary Drinking Water Standard with only benzene found to be greater than its respective PDWS. Benzene concentrations in all of the monitoring wells with the exception of MW-5 were above the PDWS for benzene of 1 ug/L. The highest benzene concentration detected was in MW-3 at 1,120 ug/L. The distribution of benzene is shown in Figure 3. The benzene-impacted groundwater has not been defined to the northwest.

- None of the groundwater samples contained detectable concentrations of MTBE.

3.0 SUMMARY AND CONCLUSIONS

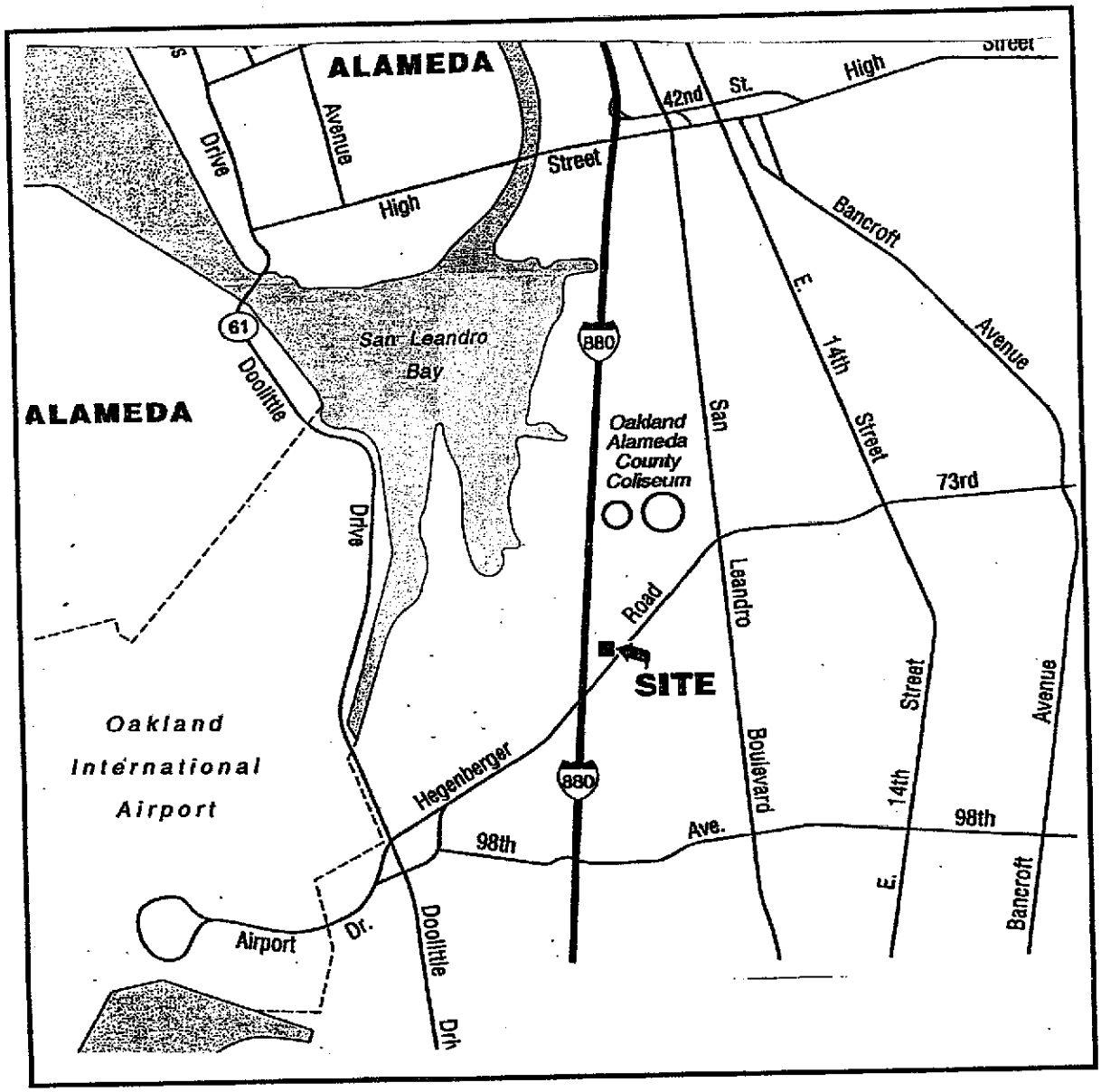
PSI performed groundwater-monitoring activities on February 20, 2003. The results of the monitoring event are summarized below.

- TPH-G was detected in all of the groundwater samples with the highest concentration being detected in MW-3 at 4,010 ug/l.

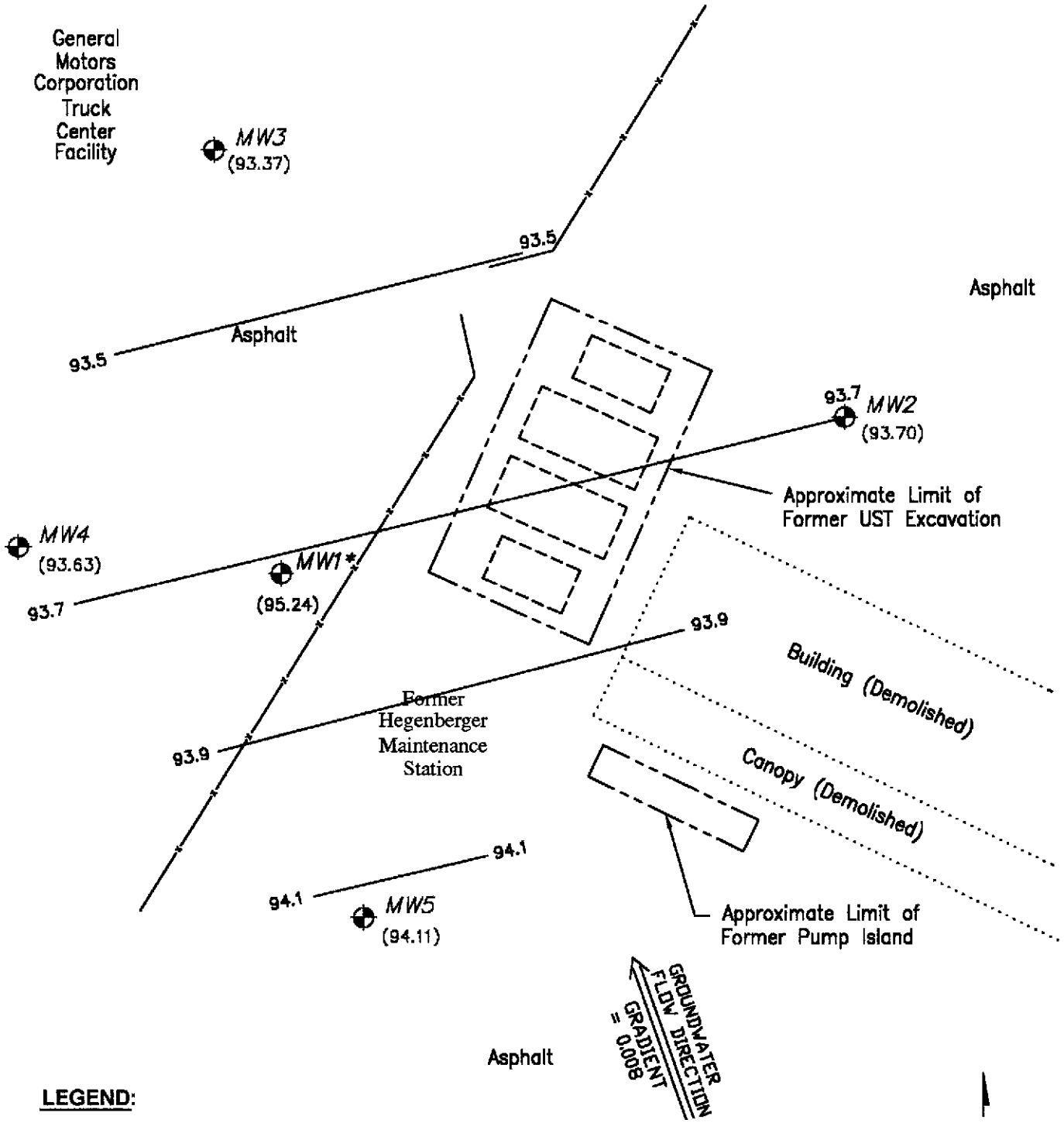
- Benzene is the primary contaminant of concern at the site. Benzene concentrations were detected above the PDWS in all of groundwater samples. The benzene-impacted groundwater has not been defined to the northwest.

4.0 RECOMMENDATIONS

Based on the presence of benzene in groundwater at concentrations above the PDWS, PSI recommends that semi-annual monitoring of groundwater at the site continue.



Information To Build On Engineering · Consulting · Testing	4703 Tidewater Avenue, Suite B Oakland, California 94601 (510) 434-9200			
Project Name: FORMER CALTRANS MAINTENANCE STATION 666 HEGENBERGER ROAD, OAKLAND, CA	Drawn By: B.S.	Date: 9/02	File No.: 2G020-01	Figure No.: 1
Title: SITE LOCATION MAP	Approved By: P.P.	Project No.: 575-2G020		



LEGEND:

MW5 (94.11) – GROUNDWATER MONITORING WELL LOCATION (GROUNDWATER ELEVATION GIVEN IN FEET)

93.7 INFERRED LINE OF EQUAL GROUNDWATER ELEVATION (INDICATED IN FEET)

LOCATION OF FORMER UST

* NOT USED FOR GRADIENT EVALUATION

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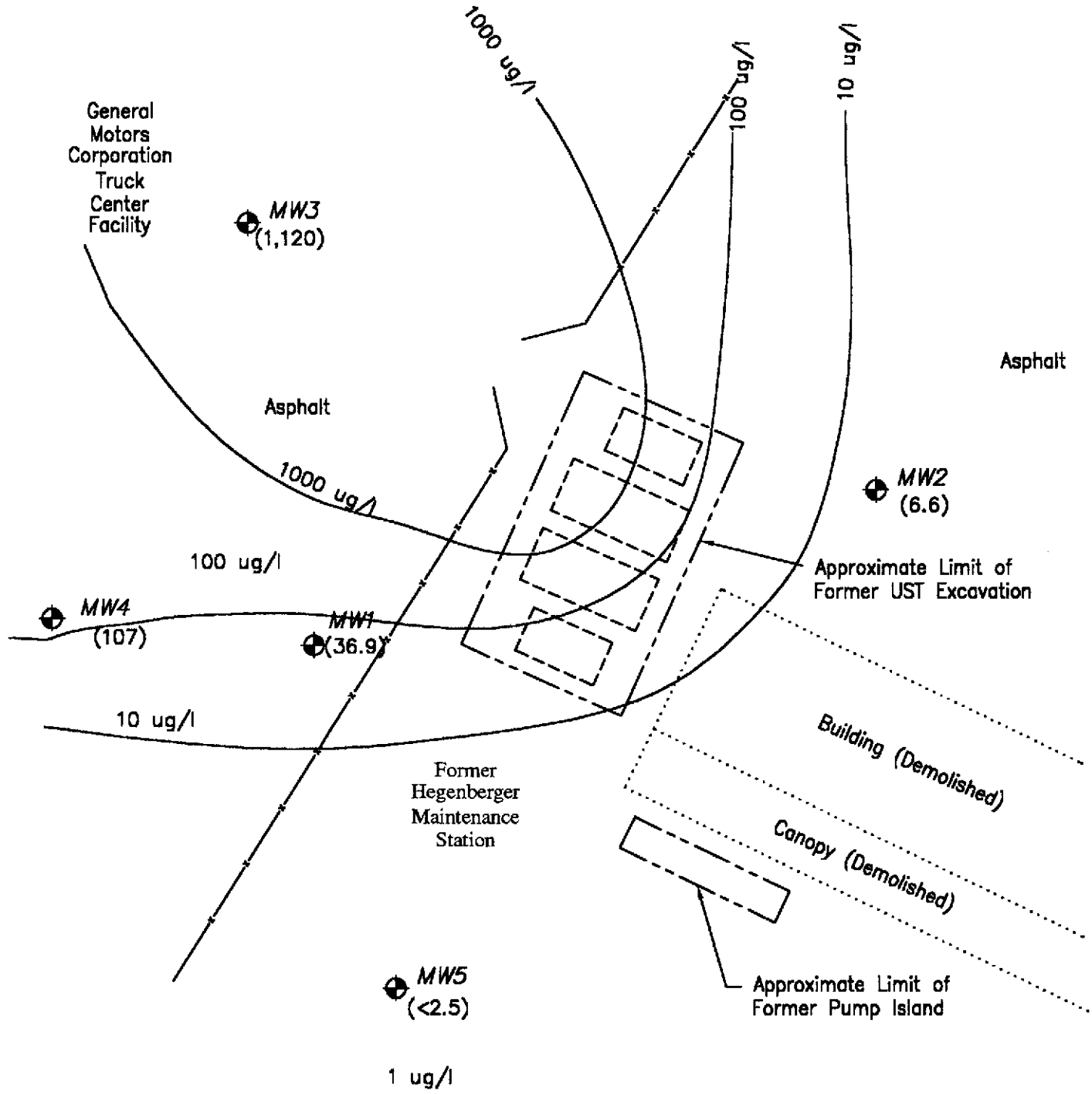
(510) 434-9200

Project Name:	Drawn By:	Date:	File No.:	Figure No.:
FORMER HEGENBERGER MAINTENANCE STATION *555 HEGENBERGER ROAD, OAKLAND, CALIFORNIA*	F.P.	3/03	2G020-002	2
Title: GROUNDWATER ELEVATION MAP (2/20/03)	Approved By: F.P.	Project No.: 575-2G020		



LEGEND:

INFERRED BENZENE CONCENTRATION CONTOUR (IN MICROGRAMS PER LITER (ug/l))

(36.9) – CONCENTRATION (ug/L) OF BENZENE DETECTED IN GROUNDWATER SAMPLES

GROUNDWATER MONITORING WELL LOCATION

LOCATION OF FORMER UST

NORTH

0 5' 10' 20.0'

Approx. Scale: 1"=20'

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Oakland, California 94601
(510) 434-9200

Project Name	Drawn By	Date	File No.	Figure No.
FORMER HEGENBERGER MAINTENANCE STATION *666 HEGENBERGER ROAD, OAKLAND, CALIFORNIA*	B.S.	3/03	2G020-002	3
Title: BENZENE CONCENTRATION MAP (2/20/03)	Approved By: F.P.	Project No.: 575-2G020		

TABLE 1

ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES
FORMER HEGENBERGER MAINTENANCE STATION
OAKLAND, CALIFORNIA

Sample I.D.	Date	TOC Elevation (feet)	Depth To Ground water (feet)	Ground water Elevation (feet)	TPH-G	TPH-D	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
MW-1	9/30/2002	99.73	5.79	93.94	**592**	<50	**12**	**2.7**	<0.5	**1.6**	<0.5
	2/20/2003	99.73	4.49	95.24	**2,650**	---	**36.9**	**10.6**	**7.0**	**18.1**	<5
MW-2	9/30/2002	99.68	6.48	93.20	<50	<50	<0.5	<0.5	<0.5	<1.5	<0.5
	2/20/2003	99.68	5.98	93.70	**107**	---	**6.6**	<0.5	<0.5	<1.0	<0.5
MW-3	9/30/2002	98.92	5.84	93.08	**2,020**	**568**	**775**	**17.2**	**1.0**	**9.4**	<0.5
	2/20/2003	98.92	5.55	93.37	**4,010**	---	**1120**	<50	<50	<100	<50
MW-4	9/30/2002	99.46	6.40	93.06	**67**	<50	<0.5	<0.5	<0.5	<1.5	<0.5
	2/20/2003	99.46	5.83	93.63	**573**	---	**107**	<10	<10	<20	<10
MW-5	9/30/2002	99.91	6.18	93.73	**562**	**426**	**1.8**	**5.2**	<0.5	**6.5**	<0.5
	2/20/2003	99.91	5.80	94.11	**1,040**	---	<2.5	**8.6**	<2.5	**11.3**	<2.5

Notes:

TOC = Top of casing elevation

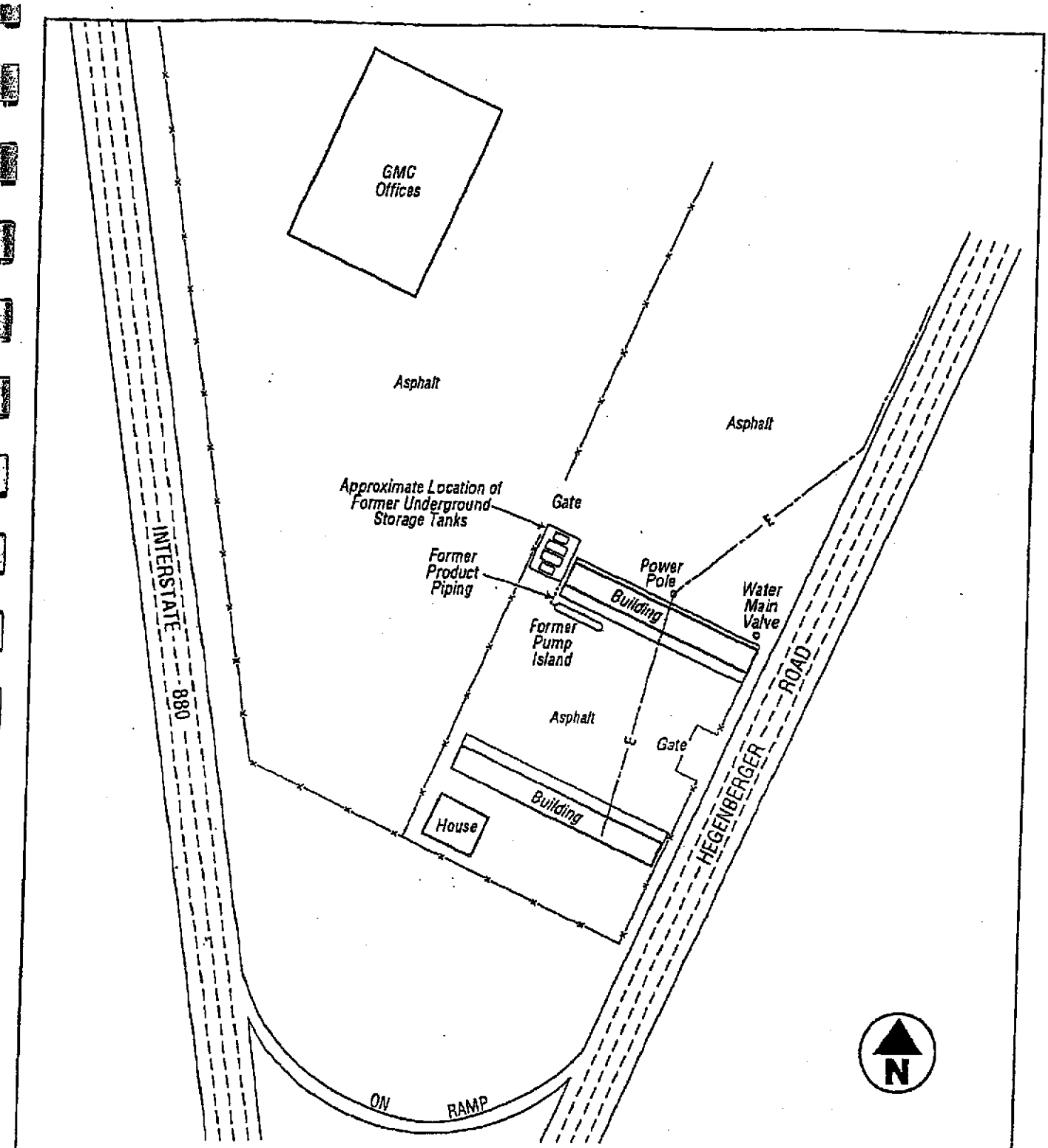
MTBE = Methyl tert-butyl ether

< = Not detected above laboratory detection limits indicated

TPH-G = Total petroleum hydrocarbons as gasoline

TPH-D = Total petroleum hydrocarbons as diesel

Al results are presented in micrograms per liter (ug/L)



NOT TO SCALE

GEOCON

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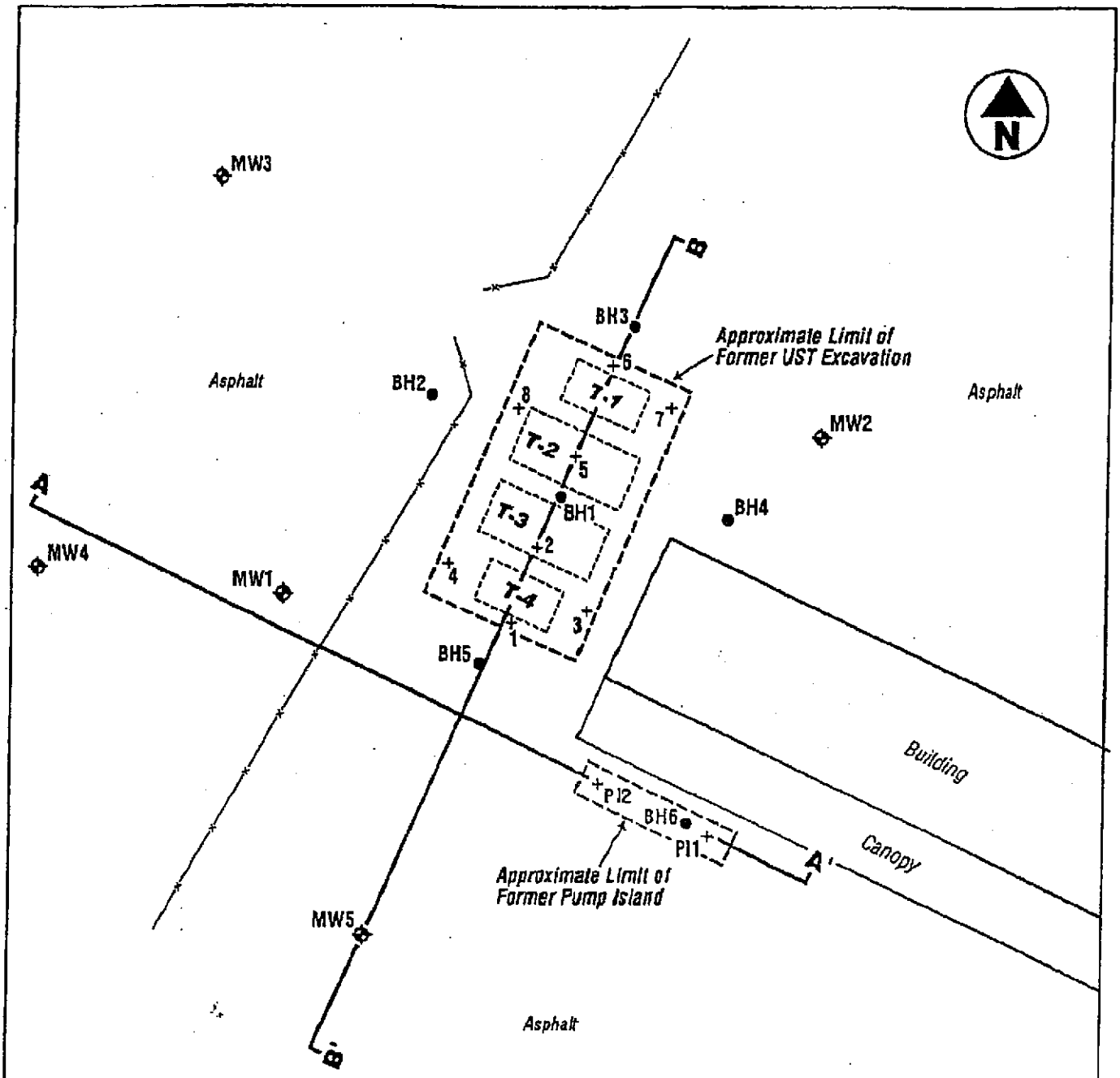
3235 SUNRISE BLVD. – SUITE G – RANCHO CORDOVA, CALIFORNIA 95742
PHONE 916 852-9118 – FAX 916 852-9132

Hegenberger Maintenance Station		
555 Hegenberger Road Oakland, California	**SITE PLAN**	
GEOCON Proj. No. S8100-06-34		
Task Order No. 04-5T9000-01	January 1996	Figure 2



LEGEND:

- Location of Former UST
- 1+ Approximate Location of UST & Product Line Removal Grab Soil Samples, GHH Engineering, Sept. 94
- BH1 ● Location of Soil Boring, GEOCON, Sept. 95
- MW1 ◈ Location of Groundwater Monitoring Well, GEOCON, Sept. 95
- A — A' Cross Section A - A'
- B — B' Cross Section B - B'

0 20
Scale in Feet

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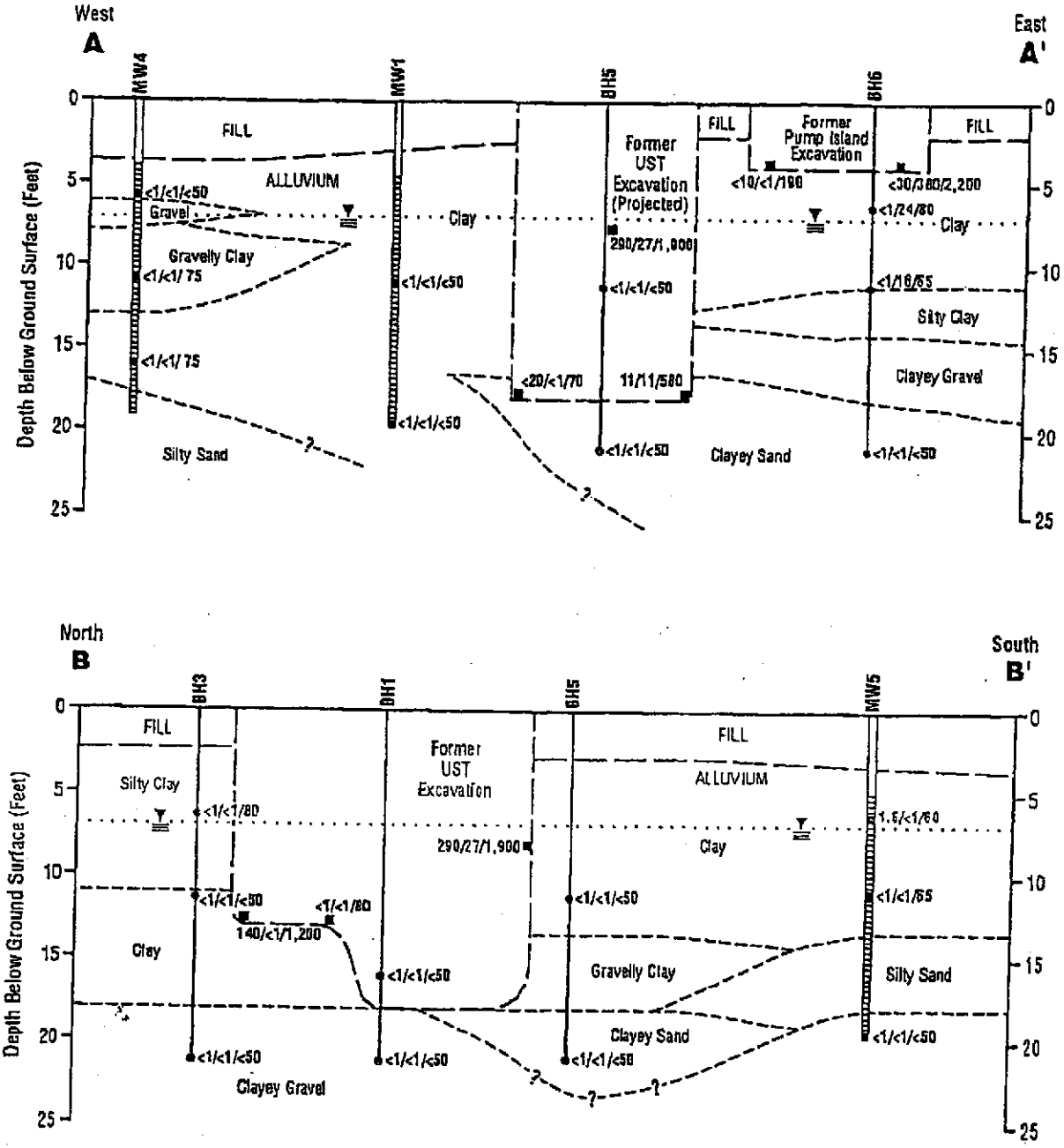
Hegenberger Maintenance Station

555 Hegenberger Road
Oakland, California

SOIL BORING AND WELL LOCATIONS

GEOCON Proj. No. S8100-06-34

Task Order No. 04-5T9000-01 | January 1996 | Figure 3



LEGEND:

- BH3 — Boring Location
- <1/<1/<50 — Concentration of TPHg/TPHd/O & G in Mg/Kg (ppm)
- ■ — Excavation Grab Soil Sample Location
- Approximate Depth to Groundwater
- Approximate Geologic Contact
- Approximate Stratigraphic Contact

TPHg = Total Petroleum Hydrocarbons as Gasoline
TPHd = Total Petroleum Hydrocarbons as Diesel
O & G = Oil & Grease

Scale: 1" = 20' (Horizontal)
1" = 10' (Vertical)

GEOCON
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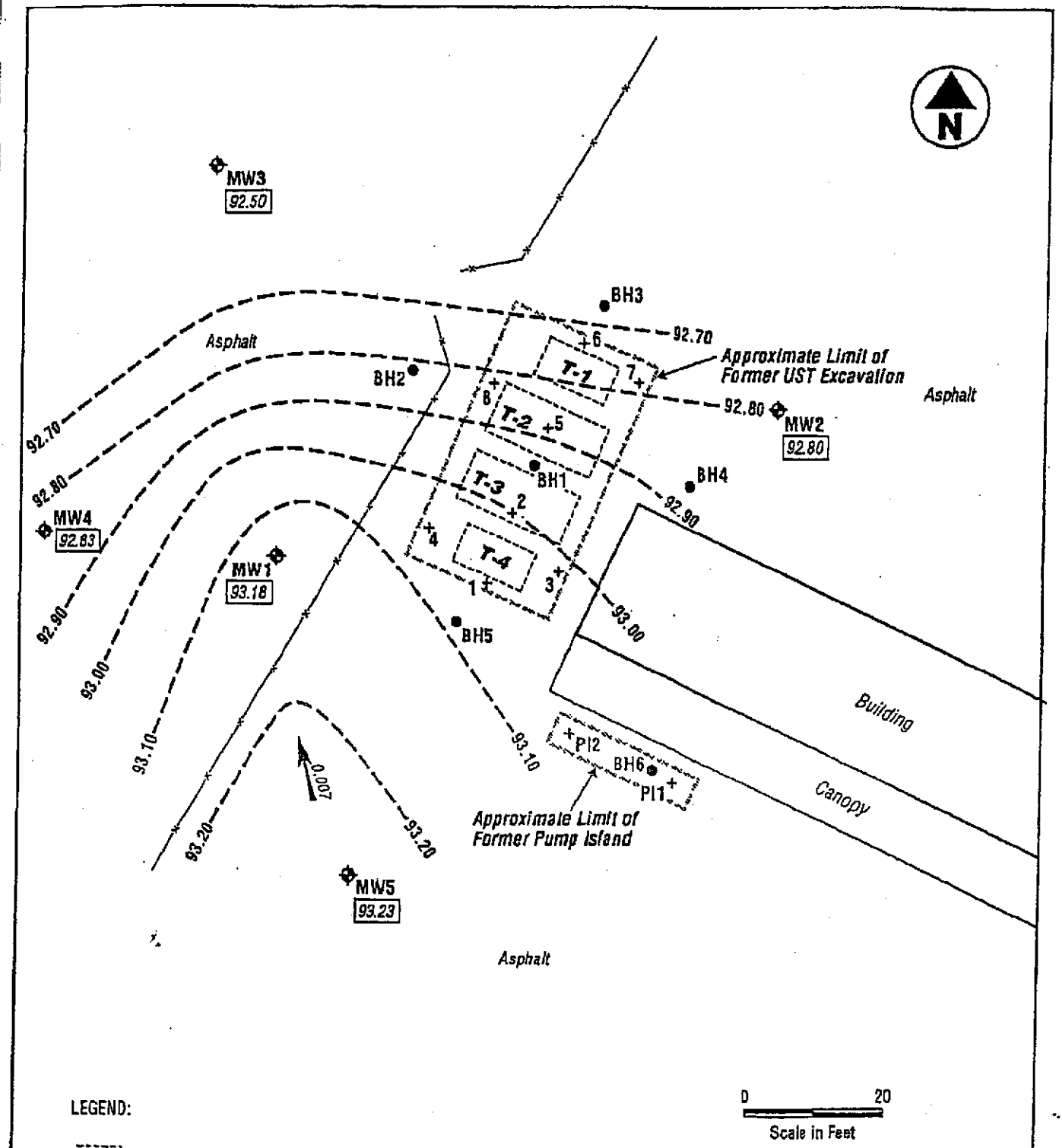
Hegenberger Maintenance Station

555 Hegenberger Road
Oakland, California

CROSS SECTIONS A–A' / B–B'

GEOCON Proj. No. S8100-06-34

Task Order No. 04-5T9000-01 | January 1996 | Figure 4



LEGEND:

- Location of Former UST
- 1_+ Approximate Location of UST & Product Line Removal Grab Soil Samples, GHH Engineering, Sept. 94
- BH1 ● Location of Soil Boring, GEOCON, Sept. 95
- MW1 ⊕ Location of Groundwater Monitoring Well, GEOCON, Sept. 95
- Groundwater Elevation Contour (Interval = 0.1 Ft.)
- 93.18 Relative Elevation of Groundwater Measured 10/11/95
- 0.007 Approximate Groundwater Gradient

0 20
Scale in Feet

GEOCON

ENVIRONMENTAL CONSULTANTS INCORPORATED
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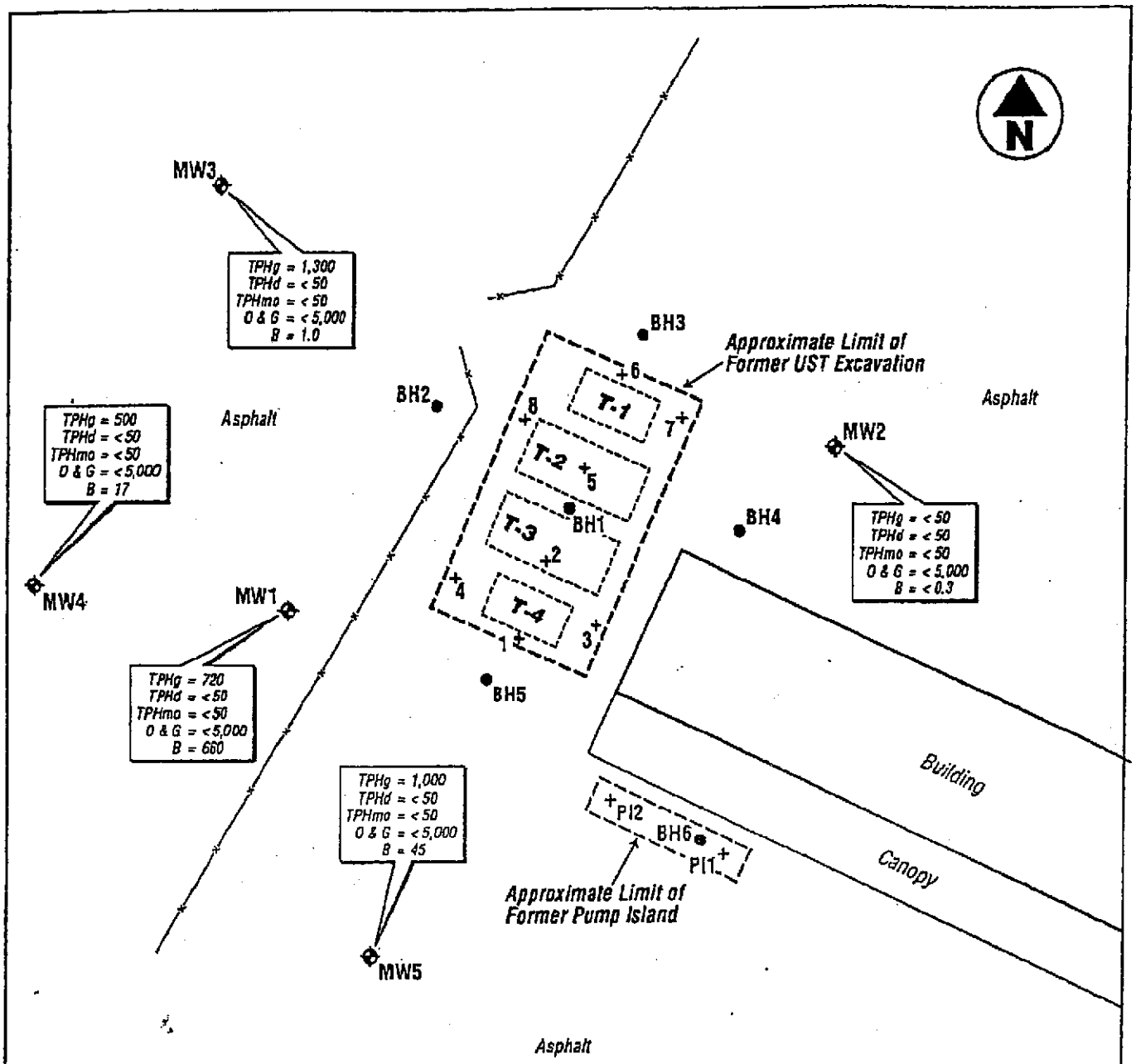
Hegenberger Maintenance Station

555 Hegenberger Road
Oakland, California

GROUNDWATER ELEVATION MAP - 10/11/95

GEOCON Proj. No. S8100-06-34

Task Order No. 04-5T9000-01 | January 1996 | Figure 5



LEGEND:

- Location of Former UST
- 1+ Approximate Location of UST & Product Line Removal Grab Soil Samples, GHH Engineering, Sept. 94
- BH1 ● Location of Soil Boring, GEOCON, Sept. 95
- MW1 ⊕ Location of Groundwater Monitoring Well, GEOCON, Sept. 95

TPHg = Total Petroleum Hydrocarbons as Gasoline
TPHd = Total Petroleum Hydrocarbons as Diesel
TPHmo = Total Petroleum Hydrocarbons as Motor Oil
O & G = Oil & Grease
B = Benzene
All Concentrations in Micrograms Per Liter (ppb)

0 20
Scale in Feet

GEOCON
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Hegenberger Maintenance Station

555 Hegenberger Road
Oakland, California

PETROLEUM HYDROCARBONS IN GROUNDWATER· 10/11/95

GEOCON Proj. No. S8100-06-34

Task Order No. 04-5T9000-01 | January 1996 | Figure 6

Project No. S8100-06-34
January 23, 1996

TABLE 1
SUMMARY OF SOIL ANALYTICAL LABORATORY RESULTS
HEGENBERGER MAINTENANCE STATION
OAKLAND, CALIFORNIA
TASK ORDER NO. 04-5T9000-01
PAGE 1 OF 2

SAMPLE ID	DATE	DEPTH (feet)	TPHg (mg/kg)	TPHd (mg/kg)	O&G (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	LEAD (mg/kg)	ORGANIC LEAD (mg/kg)	COMMENTS
PI-1	09/22/94	4.0	<20	380	2,200	<0.10	<0.10	0.18	<0.10	13	---	PI
PI-2	09/22/94	4.0	<10	<1.0	190	0.076	<0.05	<0.05	<0.05	13	---	PI
TE-1	09/22/94	8.0	290	27	1,900	2.0	<0.5	0.74	1.2	18	---	UST/GHH
TE-2	09/22/94	18.0	<1.0	<1.0	200	<0.005	<0.005	<0.005	<0.005	12	---	UST/GHH
TE-3	09/22/94	18.0	11	11	580	0.03	0.014	0.020	0.022	8.8	---	UST/GHH
TE-4	09/22/94	18.0	<20	<1.0	70	<0.10	<0.10	<0.10	<0.10	7.6	---	UST/GHH
TE-5	09/22/94	13.0	<1.0	<1.0	80	<0.005	<0.005	<0.005	<0.005	9.5	---	UST/GHH
TE-6	09/22/94	13.0	140	<1.0	1,200	0.13	<0.10	0.51	0.30	11	---	UST/GHH
TE-7	09/22/94	8.0	400	<1.0	530	0.83	<0.50	0.62	1.2	14	---	UST/GHH
TE-8	09/22/94	8.0	480	<1.0	100	1.8	0.51	7.6	8.7	8.9	---	UST/GHH
BH1-15	09/26/95	16.0	<1.0	<1.0	<50	<0.005	<0.005	0.006	0.021	---	<5.0	GEOCON
BH1-20	09/26/95	21.0	<1.0	<1.0	<50	<0.005	<0.005	<0.005	<0.005	---	<5.0	GEOCON
BH2-10	09/26/95	11.0	<1.0	<1.0	<50	<0.005	<0.005	<0.005	<0.005	---	<5.0	GEOCON
BH2-20	09/26/95	21.0	<1.0	<1.0	<50	<0.005	<0.005	<0.005	<0.005	---	<5.0	GEOCON
BH3-5	09/26/95	6.0	<1.0	<1.0[a]	80	<0.005	<0.005	<0.005	<0.005	---	---	GEOCON
BH3-10	09/26/95	11.0	<1.0	<1.0	<50	<0.005	<0.005	<0.005	<0.005	---	<5.0	GEOCON
BH3-20	09/26/95	21.0	<1.0	<1.0	<50	<0.005	<0.005	<0.005	<0.005	---	<5.0	GEOCON
BH4-10	09/26/95	11.0	<1.0	<1.0	55	<0.005	<0.005	<0.005	<0.005	---	<5.0	GEOCON
BH4-20	09/26/95	21.0	<1.0	<1.0	<50	<0.005	<0.005	<0.005	<0.005	---	<5.0	GEOCON
BH5-10	09/26/95	11.0	<1.0	<1.0	<50	<0.005	<0.005	<0.005	<0.005	---	<5.0	GEOCON
BH5-20	09/26/95	21.0	<1.0	<1.0	<50	<0.005	<0.005	<0.005	<0.005	---	<5.0	GEOCON
BH6-5	09/26/95	6.0	<1.0	24[b]	80	<0.005	<0.005	<0.005	<0.005	---	---	GEOCON
BH6-10	09/26/95	11.0	<1.0	16[b]	65	<0.005	<0.005	<0.005	<0.005	---	<5.0	GEOCON
BH6-20	09/26/95	21.0	<1.0	<1.0	<50	<0.005	<0.005	<0.005	<0.005	---	<5.0	GEOCON
MW1-10	09/27/95	11.0	<1.0	<1.0	<50	<0.005	<0.005	<0.005	<0.005	---	<5.0	GEOCON
MW1-20	09/27/95	19.5	<1.0	<1.0	<50	<0.005	<0.005	<0.005	<0.005	---	<5.0	GEOCON
MW2-5	09/27/95	6.0	<1.0	<1.0[c]	75	<0.005	<0.005	<0.005	<0.005	---	<5.0	GEOCON
MW2-20	09/27/95	21.0	<1.0	<1.0	<50	<0.005	<0.005	<0.005	<0.005	---	<5.0	GEOCON
MW3-8	09/27/95	7.5	<1.0	<1.0	<50	0.012	<0.005	<0.005	<0.005	---	---	GEOCON
MW3-10	09/27/95	11.0	<1.0	<1.0	<50	<0.005	<0.005	<0.005	<0.005	---	<5.0	GEOCON
MW3-20	09/27/95	21.0	<1.0	<1.0	<50	0.030	0.028	0.030	0.058	---	<5.0	GEOCON

Project No. SB100-06-34
January 23, 1996

TABLE I
SUMMARY OF SOIL ANALYTICAL LABORATORY RESULTS
HEGENBERGER MAINTENANCE STATION
OAKLAND, CALIFORNIA
TASK ORDER NO. 04-579000-01
PAGE 1 OF 2

SAMPLE ID	DATE	DEPTH (feet)	TPHg (mg/kg)	TPHd (mg/kg)	O&G (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	LEAD (mg/kg)	ORGANIC LEAD (mg/kg)	COMMENTS
MW4-5	09/27/95	5.5	<1.0	<1.0	<50	<0.005	<0.005	<0.005	<0.005	---	---	GEOCON
MW4-10	09/27/95	11.0	<1.0	<1.0[d]	75	<0.005	<0.005	<0.005	<0.005	---	<5.0	GEOCON
MW4-15	09/27/95	16.0	<1.0	<1.0	75	<0.005	<0.005	<0.005	<0.005	---	<5.0	GEOCON
MW5-5	09/27/95	6.0	1.6	<1.0[e]	60	<0.005	0.020	0.028	0.088	---	---	GEOCON
MW5-10	09/27/95	11.0	<1.0	<1.0	65	<0.005	<0.005	<0.005	<0.005	---	<5.0	GEOCON
MW5-20	09/27/95	19.5	<1.0	<1.0	<50	<0.005	<0.005	<0.005	<0.005	---	<5.0	GEOCON

Notes: mg/kg = milligrams per kilogram
TPHg = total petroleum hydrocarbons as gasoline
TPHd = total petroleum hydrocarbons as diesel
O&G = oil and grease
BTEX = benzene, toluene, ethylbenzene and total xylenes
< = less than laboratory method detection limit
--- = not tested
PI = pump island sample
UST/GHH = UST excavation sample collected by GHH Engineering
[a] = total petroleum hydrocarbons as motor oil (TPHmo) detected at a concentration of 58 mg/kg
[b] = weathered TPHd
[c] = TPHmo detected at a concentration of 41 mg/kg
[d] = TPHmo detected at a concentration of 7.5 mg/kg
[e] = TPHmo detected at a concentration of 20 mg/kg

Project No. S8100-06-34
January 23, 1996

TABLE II
SUMMARY OF GROUNDWATER ELEVATION AND ANALYTICAL LABORATORY RESULTS
HEGENBERGER MAINTENANCE STATION
OAKLAND, CALIFORNIA
TASK ORDER NO. 04-ST9000-01
PAGE 1 OF 1

SAMPLE ID	DATE	TOC ELEVATION	GROUNDWATER DEPTH	GROUNDWATER ELEVATION	TPHg (ug/l)	TPHd (ug/l)	TPHmo (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	O&G (ug/l)
MW-1	10/11/95	99.73	6.55	93.18	720	<50	<50	660	13	4.7	2.8	<5,000
MW-2	10/11/95	99.68	6.88	92.80	<50	<50	<50	<0.3	<0.3	<0.3	<0.3	<5,000
MW-3	10/11/95	98.92	6.42	92.50	1,300[1]	<50	<50	1.0	<0.3	<0.3	<0.3	<5,000
MW-4	10/11/95	99.46	6.63	92.83	500	<50	<50	17	1.1	<0.3	0.48	<5,000
MW-5	10/11/95	99.91	6.68	93.23	1,000	<50	<50	45	15	1.9	6.1	<5,000

Notes: TOC = top of casing elevation referenced to arbitrary onsite datum
depths measured in feet
ug/l = micrograms per liter
TPHg = total petroleum hydrocarbon as gasoline
TPHd = total petroleum hydrocarbon as diesel
TPHmo = total petroleum hydrocarbon as motor oil
BTEX = benzene, toluene, ethylbenzene and total xylenes
O&G = oil and grease
[1] = laboratory report notation "weathered gas detected"

TABLE 1
SUMMARY OF GROUNDWATER LEVEL MEASUREMENTS
FORMER HEGENBERGER MAINTENANCE STATION
OAKLAND, CALIFORNIA

Well	Date	TOC Elevation (Feet, REF)	Depth to Water (Feet, BTOC)	Water Elevation (Feet, REF)
MW1	10/11/1995	99.73	6.55	93.18
	1/17/1996	99.73	5.64	94.09
	4/16/1996	99.73	5.46	94.27
	8/26/1996	99.73	5.91	93.82
	11/14/1996	99.73	6.16	93.57
	2/18/1998	99.73	3.82	95.91
	3/30/2001	99.73	6.19	93.54
	12/26/2001	10.26*	4.08	6.18
MW2	10/11/1995	99.68	6.88	92.8
	1/17/1996	99.68	5.32	94.36
	4/16/1996	99.68	5.81	93.87
	8/26/1996	99.68	5.98	93.7
	11/14/1996	99.68	6.72	92.96
	2/18/1998	99.68	5.01	94.67
	3/30/2001	99.68	6.54	93.14
	12/26/2001	10.22*	5.53	4.69
MW3	10/11/1995	98.92	6.42	92.5
	1/17/1996	98.92	5.82	93.1
	4/16/1996	98.92	5.85	93.07
	8/26/1996	98.92	5.72	93.2
	11/14/1996	98.92	6.28	92.64
	2/18/1998	98.92	4.65	94.27
	3/30/2001	98.92	5.62	93.30
	12/26/2001	9.46*	4.66	4.80
MW4	10/11/1995	99.46	6.63	92.83
	1/17/1996	99.46	5.77	93.69
	4/16/1996	99.46	5.89	93.57
	8/26/1996	99.46	6.14	93.32
	11/14/1996	99.46	6.72	92.74
	2/18/1998	99.46	5.02	94.44
	3/30/2001	99.46	6.21	93.25
	12/26/2001	10.00*	5.37	4.63

TABLE 1
SUMMARY OF GROUNDWATER LEVEL MEASUREMENTS
FORMER HEGENBERGER MAINTENANCE STATION
OAKLAND, CALIFORNIA

Well	Date	TOC Elevation (Feet, REF)	Depth to Water (Feet, BTOC)	Water Elevation (Feet, REF)
MW5	10/11/1995	99.91	6.68	93.23
	1/17/1996	99.91	5.74	94.17
	4/16/1996	99.91	5.85	94.06
	8/26/1996	99.91	5.99	93.92
	11/14/1996	99.91	6.70	93.21
	11/14/1996	99.91	6.70	93.21
	2/18/1998	99.91	5.74	94.17
	3/30/2001	99.91	6.73	93.18
	12/26/2001	10.34*	5.23	5.11

Notes:

Feet, BTOC = Feet below top of well casing

TOC = Top of well casing

Feet, REF = Feet, with respect to an arbitrary datum reference

* = elevation data in feet above mean sea level and based on the California State Coordinate System, Zone III (NAD83), (NGVD29)

TABLE 2
SUMMARY OF SOIL ANALYTICAL RESULTS
FORMER HEGENBERGER MAINTENANCE STATION

Boring ID	Date	TPHg (mg/kg)	TPHd (mg/kg)	Benzene (ug/kg)	Toluene (ug/kg)	Ethylbenzene (ug/kg)	Xylenes (ug/kg)	MTBE (ug/kg)	Other VOCs (ug/kg)
BH6-11	12/26/01	<1.0	1.0*	<5.0 (<5.0)	<5.0 (<5.0)	<5.0 (<5.0)	<5.0 (<5.0)	<5.0	<5.0
BH9-6.5	12/26/01	<1.0	1.7*	<5.0 (<5.0)	<5.0 (<5.0)	<5.0 (<5.0)	<5.0 (<5.0)	<5.0	<5.0

Notes:

TPHg = Total Petroleum Hydrocarbons as gasoline following EPA Test Method 8015B
TPHd = Total Petroleum Hydrocarbons as diesel following EPA Test Method 8015B
BTEX = benzene, toluene, ethylbenzene, and total xylenes following EPA Test Method 8020 (8260)
MTBE = methyl tertiary butylether following EPA Test Method 8020
mg/kg = milligrams per kilogram
ug/kg = micrograms per kilogram
(xxx) = BTEX result by EPA Test Method 8260B
ND = Not detected at a concentration greater than the laboratory reporting limit.
< = less than indicated reporting limit
* = The sample contains hydrocarbons that fall within the diesel range but do not match the diesel pattern. Quantitation is based on the diesel standard.

TABLE 3
SUMMARY OF GRAB GROUNDWATER ANALYTICAL RESULTS
FORMER HEGENBERGER MAINTENANCE STATION

Boring ID	Date	TPHg (mg/l)	TPHd (mg/l)	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Xylenes (ug/l)	MTBE (ug/l)	Other VOCs (ug/l)
BH6	12/26/01	0.065	0.17*	<0.50 (<5.0)	<0.50 (<5.0)	<0.50 (<5.0)	<0.50 (<5.0)	<0.50	<5.0
BH7	12/26/01	0.078	0.098*	<0.50 (<5.0)	<0.50 (<5.0)	<0.50 (<5.0)	<0.50 (<5.0)	<0.50	1,1,2-Trichloroethane = 10 1,1-Dichloroethane = 99 1,1-Dichloroethene = 54
BH8	12/26/01	0.089	---	<0.50 (<5.0)	0.74 (<5.0)	<0.50 (<5.0)	1.5 (<5.0)	<0.50	<5.0
BH9	12/26/01	0.060	0.3*	<0.50 (<5.0)	<0.50 (<5.0)	<0.50(<5.0)	0.76 (<5.0)	<0.50	<5.0

Notes:

TPHg = Total Petroleum Hydrocarbons as gasoline following EPA Test Method 8015B
TPHd = Total Petroleum Hydrocarbons as diesel following EPA Test Method 8015B
BTEX = benzene, toluene, ethylbenzene, and total xylenes following EPA Test Method 8020 (8260)
MTBE = methyl tertiary butylether following EPA Test Method 8020/8260B
mg/l = milligrams per liter
ug/l = micrograms per liter
--- = Analysis not performed
(xxx) = BTEX result by EPA Test Method 8260B
ND = Not detected at a concentration greater than the laboratory reporting limit.
< = less than indicated reporting limit
* = The sample contains hydrocarbons that fall within the diesel range but do not match the diesel pattern. Quantitation is based on the diesel standard.

TABLE 4
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
FORMER HEGENBERGER MAINTENANCE STATION

Well	Date	TPHg (mg/l)	TPHd (mg/l)	TPHmo (mg/l)	Oil & Grease (mg/l)	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Xylenes (ug/l)	MTBE (ug/l)	Other VOCs (ug/l)
MW1	10/11/95	0.720	<0.050	<0.050	<5	660	13	4.7	2.8	---	---
	1/17/96	4.40	<0.050	<0.050	---	1,000	30	21	17	---	---
	4/16/96	6.05	7.45	---	---	914	34.7	34.4	15.8	---	---
	8/26/96	3.8	0.430	---	---	780	23	21	20	---	---
	11/14/96	2.6	0.270	---	---	500	18	14	8.9	---	---
	2/18/98	3.1	0.900	---	---	240	18	7.8	11	20	---
	3/30/01	3.6	0.48*	---	---	150	13	0.69	10.8	ND	< 5.0
	12/26/01	3.0	1.1*	---	---	86 (120)	11 (14)	3.4 (<5.0)	10.5 (11)	5.0	Isopropylbenzene = 7.9 n-butylbenzene = 5.1 n-propylbenzene = 5.3
MW2	10/11/95	< 0.050	< 0.050	< 0.050	< 5	<0.3	<0.3	<0.3	<0.5	---	---
	1/17/96	4.90	< 0.050	< 0.050	---	2,100	<15	<15	<15	---	---
	4/16/96	< 0.050	< 0.050	---	---	1.02	<0.5	<0.5	<0.5	---	---
	8/26/96	< 0.050	< 0.050	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	11/14/96	< 0.050	0.056	---	---	<0.5	<0.5	<0.5	<0.5	---	---
	2/18/98	< 0.050	0.260	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	---
	3/30/01	< 0.20	0.37*	---	---	2.7	0.82	< 0.50	0.84	ND	< 5.0
	12/26/01	0.085	0.14	---	---	<0.50 (<5.0)	<0.50 (<5.0)	<0.50 (<5.0)	<0.50 (<5.0)	<0.50	<5.0
MW3	10/11/95	1.30	< 0.050	< 0.050	< 5	1.0	<0.3	<0.3	<0.3	---	---
	1/17/96	0.171	< 0.050	< 0.050	---	64	<0.3	1.0	<0.3	---	---
	4/16/96	6.74	0.565	---	---	2,770	31	13.9	21.9	---	---
	8/26/96	0.700	0.700	---	---	180	4.2	1.0	4.6	---	---
	11/14/96	0.300	0.120	---	---	6.2	1.2	0.7	1.4	---	---
	2/18/98	11.0	2.50	---	---	3,070	50	54	19	25	---
	3/30/01	9.9	0.49*	---	---	2000 (2,800)	48 (71)	39 (52)	39 (49)	ND	Isopropylbenzene = 92 n-Butylbenzene = 36 n-Propylbenzene = 280 sec-Butylbenzene = 13
	12/26/01	9.4	1.7	---	---	1,500(2,200)	46 (52)	33 (37)	28 (<25)	12	Isopropylbenzene = 85 n-Butylbenzene = 39 n-Propylbenzene = 250

TABLE 4
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
FORMER HEGENBERGER MAINTENANCE STATION

Well	Date	TPHg (mg/l)	TPHd (mg/l)	TPHmo (mg/l)	Oil & Grense (mg/l)	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Xylenes (ug/l)	MTBE (ug/l)	Other VOCs (ug/l)
MW4	10/11/95	0.500	< 0.050	< 0.050	< 5	17	1.1	<0.3	0.48	---	---
	1/17/96	0.459	< 0.050	< 0.050	---	72	4.1	<0.3	1.7	---	---
	4/16/96	2.20	< 0.050	---	---	851	7.67	1.41	5.72	---	---
	8/26/96	0.300	0.110	---	---	55	4.9	1.2	<0.5	---	---
	11/14/96	0.200	0.200	---	---	3.4	<0.5	<0.5	<0.5	---	---
	2/18/98	1.60	0.280	---	---	320	9.1	1.0	0.59	1.7	---
	3/30/01	2.7	0.35*	---	---	320 (430)	16 (22)	5.3	13.6 (13)	ND	Isopropylbenzene = 6.4
	12/26/01	0.55	0.20	---	---	33 (36)	3.0 (<5.0)	<0.50(<5.0)	1.7 (<5.0)	0.76	<5.0
MW5	10/11/95	1.00	< 0.050	< 0.050	< 5	45	15	1.9	6.1	---	---
	1/17/96	< 0.050	< 0.050	< 0.050	---	2	<0.3	<0.3	<0.3	---	---
	4/16/96	1.74	0.855	---	---	157	20.1	3.92	22.4	---	---
	8/26/96	0.900	0.270	---	---	55	6.4	0.9	3.7	---	---
	11/14/96	0.700	0.320	---	---	31	5.7	0.7	3.6	---	---
	2/18/98	1.20	0.580	---	---	14	5.2	0.76	5.5	9.5	---
	3/30/01	1.5	0.48*	---	---	7.2 (9.5)	6.5 (9.6)	< 0.50	10.7 (11)	ND	n-Propylbenzene = 5.1
	12/26/01	1.4	0.76*	---	---	5.0 (5.1)	7.2 (8.1)	0.84 (<5.0)	10.5 (9.8)	3.6	isopropylbenzene = 6.0

Notes:
TPHg = Total Petroleum Hydrocarbons as gasoline following EPA Test Method 8015B
TPHd = Total Petroleum Hydrocarbons as diesel following EPA Test Method 8015B
TPHmo = Total Petroleum Hydrocarbons as motor oil following EPA Test Method 8015B
BTEX = benzene, toluene, ethylbenzene, and total xylenes following EPA Test Method 8020 (8260)
FOCs = Fuel Oxygenate Compounds (tert-butanol, methyl tertiary butylether [MTBE], di-isopropyl ether, ethyl tertiary butylether [ETBE], and tertiary amyl methylether[TAME]) following EPA Test Method 8020/8260B
mg/l = milligrams per liter
ug/l = micrograms per liter
--- = Analysis not performed
(xxx) = BTEX result by EPA Test Method 8260B
ND = Not detected at a concentration greater than the laboratory reporting limit
< = less than indicated reporting limit
* = The sample contains hydrocarbons that fall within the diesel range but do not match the diesel pattern. Quantitation is based on the diesel standard.

FLUID MEASUREMENT FIELD DATA

SHEET: 1 OF 1

DATE: 2/20/03 | PROJECT NAME: Hegenberger | PROJECT NO: 26020

WATER LEVEL MEASUREMENT INSTRUMENT: Solinst | SERIAL NO:

PRODUCT DETECTION INSTRUMENT: | SERIAL NO:

EQUIP. DECON: ☐ ALCONOX WASH ☐ DIST/DEION 1 RINSE ☐ ISOPROPANOL ☐ ANALYTE FREE FINAL RINSE ☐ TAP WATER FINAL RINSE

☐ TAP WATER WASH ☐ LIQUINOX WASH ☐ DIST/DEION 2 RINSE ☐ OTHER SOLVENT ☐ DIST/DEION FINAL RINSE ☐ AIR DRY

WELL NUMBER	GROUND SURFACE ELEVATION	TOP OF CASING ELEVATION	DEPTH TO PRODUCT BELOW TOC	DEPTH TO WATER BELOW TOC	WELL DEPTH BELOW TOC.	PRODUCT THICKNESS	WATER TABLE ELEVATION	ACTUAL TIME
MW1				4.49	19.48			9:00
MW2				5.98	19:15			9:06
MW3				5.55	19:50			9:03
MW4				5.83	16:65			8:55
MW5				5.80	19:35			9:14

REMEMBER TO CORRECT PRODUCT THICKNESS FOR DENSITY BEFORE CALCULATING WATER TABLE ELEVATION

PREPARED BY: BS

WELL PURGING AND SAMPLING DATA

WELL NO: MW-1

DATE: 2/20/03 | PROJECT NAME: Hegenberger | PROJECT NO: 26-020

WEATHER CONDITIONS: Sunny, cool

WELL DIAMETER (IN.) ☐ 1 ☐ 2 ☒ 4 ☐ 6 ☐ OTHER _____

SAMPLE TYPE: ☒ GROUNDWATER ☐ WASTEWATER ☐ SURFACE WATER ☐ OTHER

WELL DEPTH (TOC) 19.48 FT. | DEPTH TO WATER BEFORE PURGING (TOC) 4.49 FT.

LENGTH OF WATER 14.99 FT. | CALCULATED ONE WELL VOLUME[1]: 9.7 GAL.

PURGING DEVICE: ☒ DEDICATED ☐ DISPOSABLE ☒ DECONTAMINATED

SAMPLING DEVICE: ☒ DEDICATED ☐ DISPOSABLE ☒ DECONTAMINATED

EQUIP. DECON. ☐ TAP WATER WASH ☐ ISOPROPANOL ☐ ANALYTE FREE FINAL RINSE
☐ ALCONOX WASH ☐ DIST/DEION 1 RINSE ☐ OTHER SOLVENT ☐ DIST/DEION FINAL RINSE
☐ LIQUINOX WASH ☐ DIST/DEION 2 RINSE ☐ TAP WATER FINAL RINSE ☐ AIR DRY

CONTAINER PRESERVATION: ☒ LAB PRESERVED ☐ FIELD PRESERVED

WATER ANALYZER MODEL & SERIAL NO:

ACTUAL TIME (MIN)	CUMUL. VOLUME PURGED (GAL)	TEMP ☐ °F ☒ °C	SPECIFIC CONDUCT.	pH	DISS. OXYGEN	TURBIDITY (NTUs)	WATER APPEAR CL=CLEAR CO=CLOUDY TU=TURBID	REMARKS (EVIDENT ODOR, COLOR, PID)
11:37	INITIAL	19.0	885.1	7.47			CL	
11:39	9	18.3	8746	7.53			CL	
11:43	18	18.5	1031	7.60			CL	
11:46	29	19.4	1085	7.55			CL	

DEPTH TO WATER AFTER PURGING (TOC) FT. | SAMPLE FILTERED ☐ YES ☐ NO SIZE _____

NOTES:

SAMPLE TIME: 11:55 ID#

DUPLICATE ☐ TIME: ID#:

EQUIP. BLANK: ☐ TIME: ID#:

PREPARED BY:

[1]A 1 FOOT LENGTH OF WATER = 0.05 GAL IN 1" DIA. PIPE 0.17 GAL IN 2" DIA PIPE 0.65 GAL IN 4" DIA PIPE 1.5 GAL IN 6" DIA PIPE

WELL PURGING AND SAMPLING DATA

WELL NO: MW-2

DATE: 2/20/03 | PROJECT NAME: Hegenberger | PROJECT NO: 26-020

WEATHER CONDITIONS: Sunny, cool

WELL DIAMETER (IN.) ☐ 1 ☐ 2 ☒ 4 ☐ 6 ☐ OTHER _____

SAMPLE TYPE: ☒ GROUNDWATER ☐ WASTEWATER ☐ SURFACE WATER ☐ OTHER

WELL DEPTH (TOC) 19.15 FT. | DEPTH TO WATER BEFORE PURGING (TOC) 5.98 FT.

LENGTH OF WATER 13.17 FT. | CALCULATED ONE WELL VOLUME[1]: 8.6 GAL.

PURGING DEVICE: ☑ DEDICATED ☐ DISPOSABLE ☒ DECONTAMINATED

SAMPLING DEVICE: ☑ DEDICATED ☐ DISPOSABLE ☒ DECONTAMINATED

EQUIP. DECON. ☐ TAP WATER WASH ☐ ISOPROPANOL ☐ ANALYTE FREE FINAL RINSE
☐ ALCONOX WASH ☐ DIST/DEION 1 RINSE ☐ OTHER SOLVENT ☐ DIST/DEION FINAL RINSE
☐ LIQUINOX WASH ☐ DIST/DEION 2 RINSE ☐ TAP WATER FINAL RINSE ☐ AIR DRY

CONTAINER PRESERVATION: ☐ LAB PRESERVED ☐ FIELD PRESERVED

WATER ANALYZER MODEL & SERIAL NO:

ACTUAL TIME (MIN)	CUMUL. VOLUME PURGED (GAL)	TEMP ☐ °F ☒ °C	SPECIFIC CONDUCT.	pH	DISS. OXYGEN	TURBIDITY (NTUs)	WATER APPEAR CL=CLEAR CO=CLOUDY TU=TURBID	REMARKS (EVIDENT ODOR, COLOR, PID)
9:40	INITIAL	19.7	2171	7.42			Cl	
9:43	8.6	19.3	2180	7.43			Cl	
9:45	16	19.7	2276	7.42			Cl	
9:54	25.8	19.2	2367	7.43			Cl	

DEPTH TO WATER AFTER PURGING (TOC) FT. | SAMPLE FILTERED ☐ YES ☐ NO SIZE _____

NOTES:

SAMPLE TIME: 9:58 ID# MW-2

DUPLICATE ☐ TIME: ID#:

EQUIP. BLANK: ☐ TIME: ID#:

PREPARED BY: BS

[1] A 1 FOOT LENGTH OF WATER = 0.05 GAL IN 1" DIA. PIPE 0.17 GAL IN 2" DIA PIPE 0.65 GAL IN 4" DIA PIPE 1.5 GAL IN 6" DIA PIPE

WELL PURGING AND SAMPLING DATA

WELL NO: MW-3

DATE: 2/20/03 | PROJECT NAME: Hegenberger | PROJECT NO: 26020

WEATHER CONDITIONS: Sunny, Cool

WELL DIAMETER (IN.) ☐ 1 ☐ 2 ☒ 4 ☐ 6 ☐ OTHER _____

SAMPLE TYPE: ☒ GROUNDWATER ☐ WASTEWATER ☐ SURFACE WATER ☐ OTHER

WELL DEPTH (TOC)	19.50 FT.	DEPTH TO WATER BEFORE PURGING (TOC)	5.55 FT.
LENGTH OF WATER	13.95 FT.	CALCULATED ONE WELL VOLUME[1]:	9.07 GAL.

PURGING DEVICE: ☒ DEDICATED ☐ DISPOSABLE ☒ DECONTAMINATED

SAMPLING DEVICE: ☒ DEDICATED ☐ DISPOSABLE ☒ DECONTAMINATED

EQUIP. DECON. ☐ TAP WATER WASH ☐ ISOPROPANOL ☐ ANALYTE FREE FINAL RINSE
☐ ALCONOX WASH ☐ DIST/DEION 1 RINSE ☐ OTHER SOLVENT ☐ DIST/DEION FINAL RINSE
☐ LIQUINOX WASH ☐ DIST/DEION 2 RINSE ☐ TAP WATER FINAL RINSE ☐ AIR DRY

CONTAINER PRESERVATION: ☒ LAB PRESERVED ☐ FIELD PRESERVED

WATER ANALYZER MODEL & SERIAL NO:

ACTUAL TIME (MIN)	CUMUL. VOLUME PURGED (GAL)	TEMP ☐ °F ☒ °C	SPECIFIC CONDUCT.	pH	DISS. OXYGEN	TURBIDITY (NTUs)	WATER APPEAR CL=CLEAR CO=CLOUDY TU=TURBID	REMARKS (EVIDENT ODOR, COLOR, PID)
12:15	INITIAL	19.9	4613	7.44			CL	odor
12:18	9.07	18.5	2258	7.33			CL	
12:20	18	19.1	2364	8.55			CL	
12:25	27	19.0	2640	7.53			CL	

DEPTH TO WATER AFTER PURGING (TOC) _____ FT. SAMPLE FILTERED ☐ YES ☐ NO SIZE _____

NOTES:

SAMPLE TIME: 12:35 ID# MW-3

DUPLICATE ☐ TIME: ID#:

EQUIP. BLANK: ☐ TIME: ID#:

PREPARED BY: B.S.

[1] A 1 FOOT LENGTH OF WATER = 0.05 GAL IN 1" DIA. PIPE 0.17 GAL IN 2" DIA PIPE 0.65 GAL IN 4" DIA PIPE 1.5 GAL IN 6" DIA PIPE

WELL PURGING AND SAMPLING DATA

WELL NO: MW4

DATE: 2/20/03 | PROJECT NAME: Hegenberger | PROJECT NO: 26020

WEATHER CONDITIONS: Sunny, Cool

WELL DIAMETER (IN.) ☐ 1 ☐ 2 ☒ 4 ☐ 6 ☐ OTHER _____

SAMPLE TYPE: ☐ GROUNDWATER ☐ WASTEWATER ☐ SURFACE WATER ☐ OTHER

WELL DEPTH (TOC) 16.65 FT. | DEPTH TO WATER BEFORE PURGING (TOC) 5.83 FT.

LENGTH OF WATER 10.82 FT. | CALCULATED ONE WELL VOLUME[1]: 7.03 GAL.

PURGING DEVICE: ☒ DEDICATED ☐ DISPOSABLE ☒ DECONTAMINATED

SAMPLING DEVICE: ☒ DEDICATED ☐ DISPOSABLE ☒ DECONTAMINATED

EQUIP. DECON. ☐ TAP WATER WASH ☐ ISOPROPANOL ☐ ANALYTE FREE FINAL RINSE
☐ ALCONOX WASH ☐ DIST/DEION 1 RINSE ☐ OTHER SOLVENT ☐ DIST/DEION FINAL RINSE
☐ LIQUINOX WASH ☐ DIST/DEION 2 RINSE ☐ TAP WATER FINAL RINSE ☐ AIR DRY

CONTAINER PRESERVATION: ☒ LAB PRESERVED ☐ FIELD PRESERVED

WATER ANALYZER MODEL & SERIAL NO:

ACTUAL TIME (MIN)	CUMUL. VOLUME PURGED (GAL)	TEMP ☐ °F ☒ °C	SPECIFIC CONDUCT.	pH	DISS. OXYGEN	TURBIDITY (NTUs)	WATER APPEAR CL=CLEAR CO=CLOUDY TU=TURBID	REMARKS (EVIDENT ODOR, COLOR, PID)
10:18	INITIAL	16.8	3209	7.47			Cl	odor
10:20	7	17.9	3265	7.42			Cl	
10:24	14	17.7	3652	7.48			Cl	
10:30	21	17.9	5010	7.58			Cl	

DEPTH TO WATER AFTER PURGING (TOC) FT. | SAMPLE FILTERED ☐ YES ☐ NO SIZE _____

NOTES:

SAMPLE TIME: 10:35 ID# MW4

DUPLICATE ☐ TIME: ID#:

EQUIP. BLANK: ☐ TIME: ID#:

PREPARED BY: BS

[1] A 1 FOOT LENGTH OF WATER = 0.05 GAL IN 1" DIA. PIPE 0.17 GAL IN 2" DIA PIPE 0.65 GAL IN 4" DIA PIPE 1.5 GAL IN 6" DIA PIPE

WELL PURGING AND SAMPLING DATA

WELL NO: MW-5

DATE: 2/20/03 | PROJECT NAME: Heyer berger | PROJECT NO: 26020

WEATHER CONDITIONS: Sunny, Cool

WELL DIAMETER (IN.) ☐ 1 ☐ 2 ☒ 4 ☐ 6 ☐ OTHER _____

SAMPLE TYPE: ☒ GROUNDWATER ☐ WASTEWATER ☐ SURFACE WATER ☐ OTHER

WELL DEPTH (TOC) 19.35 FT. | DEPTH TO WATER BEFORE PURGING (TOC) 5.80 FT.

LENGTH OF WATER 13.55 FT. | CALCULATED ONE WELL VOLUME[1]: 8.81 GAL.

PURGING DEVICE: ☒ DEDICATED ☐ DISPOSABLE ☒ DECONTAMINATED

SAMPLING DEVICE: ☒ DEDICATED ☐ DISPOSABLE ☒ DECONTAMINATED

EQUIP. DECON. ☐ TAP WATER WASH ☐ ISOPROPANOL ☐ ANALYTE FREE FINAL RINSE
☐ ALCONOX WASH ☐ DIST/DEION 1 RINSE ☐ OTHER SOLVENT ☐ DIST/DEION FINAL RINSE
☐ LIQUINOX WASH ☐ DIST/DEION 2 RINSE ☐ TAP WATER FINAL RINSE ☐ AIR DRY

CONTAINER PRESERVATION: ☒ LAB PRESERVED ☐ FIELD PRESERVED

WATER ANALYZER MODEL & SERIAL NO:

ACTUAL TIME (MIN)	CUMUL. VOLUME PURGED (GAL)	TEMP ☐ °F ☒ °C	SPECIFIC CONDUCT.	pH	DISS. OXYGEN	TURBIDITY (NTUs)	WATER APPEAR CL=CLEAR CO=CLOUDY TU=TURBID	REMARKS (EVIDENT ODOR, COLOR, PID)
11:00	INITIAL	17.5	1207	7.57			CL	odor
11:02	8.8	18.10	1200	10.97			CL	
11:05	16	18.4	1338	10.6			CL	
11:07	26	18.5	1440	10.20			CL	

DEPTH TO WATER AFTER PURGING (TOC) _____ FT. | SAMPLE FILTERED ☐ YES ☐ NO SIZE _____

NOTES:

SAMPLE TIME: 11:15 ID# MW-5

DUPLICATE ☐ TIME: ID#:

EQUIP. BLANK: ☐ TIME: ID#:

PREPARED BY: B.S.

[1] A 1 FOOT LENGTH OF WATER = 0.05 GAL IN 1" DIA. PIPE 0.17 GAL IN 2" DIA PIPE 0.65 GAL IN 4" DIA PIPE 1.5 GAL IN 6" DIA PIPE

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fax 530.243.7494 Redding, California 96001

Report To: P.S.I.
4703 TIDEWATER AVE., STE.B
OAKLAND, CA 94601

Attention: FRANK POSS

Project Name: HEGENBERGER / 2G020

Sample Description: WATER TESTING

Lab No: 0302654
Date: 04/07/03
Phone: (510) 434-9200
Date Sampled: 02/20/03
Date Received: 02/21/03

Test:	TPH-Gas Range Organics	4-Bromofluorobenzene	Reporting Limit	Date Analyzed
Method:	8015	Surrogate		
Units:	ug/l	%	ug/l	4/04/03
Control Limit:		43-155		
Sample ID				
MW-1	2650	76.8	100*	03/05/03
MW-2	107	68.8	50	03/04/03
MW-3	4010	68.0	1000*	03/04/03
MW-4	573	65.8	200*	03/04/03
MW-5	1040	81.4	50	03/05/03

Comments: California D.O.H.S. Cert. #1677.
n - Not detected at the reporting limit.
* - Quantitation limit raised; dilution required.

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EPA METHOD 8260

Report To:	P.S.I.	***Lab Number:***	0302654-1
	4703 TIDEWATER AVE., STE.B	***Phone:***	510-434-9200
	OAKLAND, CA 94601		
		Date Sampled:	02/20/03
Attention:	FRANK POSS	***Date Received:***	02/21/03
		Date Analyzed:	03/05/03
Project Number:	HEGENBERGER / 2G020	***Date Reported:***	04/07/03
Sampling Location:			
Sample ID:	MW-1		
Sample Matrix:	WATER		
Sample Collected By:	BRIAN STOZEK		

COMPOUND	RESULT	REPORTING UNITS	QUANTITATION LIMIT*
Acetone	n	ug/l	50
Acrylonitrile	n	ug/l	50
Benzene	36.9	ug/l	5
Bromobenzene	n	ug/l	5
Bromochloromethane	n	ug/l	5
Bromodichloromethane	n	ug/l	5
Bromoform	n	ug/l	5
Bromomethane	n	ug/l	5
2-Butanone (MEK)	n	ug/l	50
n-Butylbenzene	n	ug/l	5
sec-Butylbenzene	11.7	ug/l	5
tert-Butylbenzene	n	ug/l	5
Carbon Disulfide	n	ug/l	5
Carbon tetrachloride	n	ug/l	5
Chlorobenzene	n	ug/l	5
Chloroethane	n	ug/l	5
2-Chloroethylvinylether	n	ug/l	5
Chloroform	n	ug/l	5
Chloromethane	n	ug/l	5
2-Chlorotoluene	n	ug/l	5
4-Chlorotoluene	n	ug/l	5
Dibromochloromethane	n	ug/l	5
1,2-Dibromo-3-Chloropropane	n	ug/l	5
1,2-Dibromoethane	n	ug/l	5
Dibromomethane	n	ug/l	5
1,2-Dichlorobenzene	n	ug/l	5
1,3-Dichlorobenzene	n	ug/l	5
1,4-Dichlorobenzene	n	ug/l	5
Dichlorodifluoromethane	n	ug/l	5
1,1-Dichloroethane	n	ug/l	5
1,2-Dichloroethane	n	ug/l	5
1,1-Dichloroethene	n	ug/l	5
cis-1,2-Dichloroethene	n	ug/l	5
trans-1,2-Dichloroethene	n	ug/l	5
1,2-Dichloropropane	n	ug/l	5

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Report To: P.S.I. ***Lab Number:*** 0302654-1

COMPOUND	RESULT	REPORTING UNITS	QUANTITATION LIMIT*
1,3-Dichloropropane	n	ug/l	5
2,2-Dichloropropane	n	ug/l	5
1,1-Dichloropropene	n	ug/l	5
cis-1,3-Dichloropropene	n	ug/l	5
trans-1,3-Dichloropropene	n	ug/l	5
1,4-Dioxane	n	ug/l	250
Ethyl Benzene	7.0	ug/l	5
Ethyl-Tert-Butyl Ether (ETBE)	n	ug/l	5
Hexachlorobutadiene	n	ug/l	5
2-Hexanone (MBK)	n	ug/l	50
Isopropylbenzene	36.7	ug/l	5
Di-Isopropyl Ether (DIPE)	n	ug/l	5
p-Isopropyltoluene	n	ug/l	5
4-Methyl-2-Pentanone (MIBK)	n	ug/l	50
Methylene Chloride	n	ug/l	10
Methyl Tert-Butyl Ether (MTBE)	n	ug/l	5
Napthalene	n	ug/l	5
n-Propylbenzene	44.4	ug/l	5
Styrene	n	ug/l	5
Tert-Amyl Methyl Ether (TAME)	n	ug/l	5
1,1,1,2-Tetrachloroethane	n	ug/l	5
1,1,2,2-Tetrachloroethane	n	ug/l	5
Tetrachloroethene	n	ug/l	5
Tetrahydrofuran	n	ug/l	50
tert - Butanol (TBA)	n	ug/l	500
Toluene	10.6	ug/l	5
1,2,3-Trichlorobenzene	n	ug/l	5
1,2,4-Trichlorobenzene	n	ug/l	5
1,1,1-Trichloroethane	n	ug/l	5
1,1,2-Trichloroethane	n	ug/l	5
Trichloroethene	n	ug/l	5
1,1,2-Trichlorotrifluoroethane	n	ug/l	5
Trichlorofluoromethane	n	ug/l	5
1,2,3-Trichloropropane	n	ug/l	5
1,2,4-Trimethylbenzene	n	ug/l	5
1,3,5-Trimethylbenzene	n	ug/l	5
Vinyl Acetate	n	ug/l	5
Vinyl Chloride	n	ug/l	5
Total Xylenes	18.1	ug/l	10
SURROGATES	**RECOVERY**	**%**	**CONTROL LIMITS (%)**
1,2-Dichloroethane-d4	87.6	%	28-145
Toluene-d8	98.8	%	52-150
4-Bromofluorobenzene	76.8	%	43-155

Comments:
California D.O.H.S Cert # 1677
n - Not detected at the quantitation limit.
* - QL raised due to required dilution

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EPA METHOD 8260

Report To:	P.S.I.	***Lab Number:***	0302654-2
	4703 TIDEWATER AVE., STE.B	***Phone:***	510-434-9200
	OAKLAND, CA 94601		
		Date Sampled:	02/20/03
Attention:	FRANK POSS	***Date Received:***	02/21/03
		Date Analyzed:	03/04/03
Project Number:	HEGENBERGER / 2G020	***Date Reported:***	04/07/03
Sampling Location:			
Sample ID:	MW-2		
Sample Matrix:	WATER		
Sample Collected By:	BRIAN STOZEK		

COMPOUND	RESULT	REPORTING UNITS	QUANTITATION LIMIT
Acetone	n	ug/l	5.0
Acrylonitrile	n	ug/l	5.0
Benzene	6.6	ug/l	0.5
Bromobenzene	n	ug/l	0.5
Bromochloromethane	n	ug/l	0.5
Bromodichloromethane	n	ug/l	0.5
Bromoform	n	ug/l	0.5
Bromomethane	n	ug/l	0.5
2-Butanone (MEK)	n	ug/l	5.0
n-Butylbenzene	n	ug/l	0.5
sec-Butylbenzene	n	ug/l	0.5
tert-Butylbenzene	n	ug/l	0.5
Carbon Disulfide	n	ug/l	0.5
Carbon tetrachloride	n	ug/l	0.5
Chlorobenzene	n	ug/l	0.5
Chloroethane	n	ug/l	0.5
2-Chloroethylvinylether	n	ug/l	0.5
Chloroform	n	ug/l	0.5
Chloromethane	n	ug/l	0.5
2-Chlorotoluene	n	ug/l	0.5
4-Chlorotoluene	n	ug/l	0.5
Dibromochloromethane	n	ug/l	0.5
1,2-Dibromo-3-Chloropropane	n	ug/l	0.5
1,2-Dibromoethane	n	ug/l	0.5
Dibromomethane	n	ug/l	0.5
1,2-Dichlorobenzene	n	ug/l	0.5
1,3-Dichlorobenzene	n	ug/l	0.5
1,4-Dichlorobenzene	n	ug/l	0.5
Dichlorodifluoromethane	n	ug/l	0.5
1,1-Dichloroethane	n	ug/l	0.5
1,2-Dichloroethane	n	ug/l	0.5
1,1-Dichloroethene	n	ug/l	0.5
cis-1,2-Dichloroethene	n	ug/l	0.5
trans-1,2-Dichloroethene	n	ug/l	0.5
1,2-Dichloropropane	n	ug/l	0.5

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EPA METHOD 8260

Report To: P.S.I. ***Lab Number:*** 0302654-2

COMPOUND	RESULT	REPORTING UNITS	QUANTITATION LIMIT
1,3-Dichloropropane	n	ug/l	0.5
2,2-Dichloropropane	n	ug/l	0.5
1,1-Dichloropropene	n	ug/l	0.5
cis-1,3-Dichloropropene	n	ug/l	0.5
trans-1,3-Dichloropropene	n	ug/l	0.5
1,4-Dioxane	n	ug/l	25
Ethyl Benzene	n	ug/l	0.5
Ethyl-Tert-Butyl Ether (ETBE)	n	ug/l	0.5
Hexachlorobutadiene	n	ug/l	0.5
2-Hexanone (MBK)	n	ug/l	5.0
Isopropylbenzene	1.3	ug/l	0.5
Di-Isopropyl Ether (DIPE)	n	ug/l	0.5
p-Isopropyltoluene	n	ug/l	0.5
4-Methyl-2-Pentanone (MIBK)	n	ug/l	5.0
Methylene Chloride	n	ug/l	1.0
Methyl Tert-Butyl Ether (MTBE)	n	ug/l	0.5
Napthalene	n	ug/l	0.5
n-Propylbenzene	n	ug/l	0.5
Styrene	n	ug/l	0.5
Tert-Amyl Methyl Ether (TAME)	n	ug/l	0.5
1,1,1,2-Tetrachloroethane	n	ug/l	0.5
1,1,2,2-Tetrachloroethane	n	ug/l	0.5
Tetrachloroethene	n	ug/l	0.5
Tetrahydrofuran	n	ug/l	5.0
tert - Butanol (TBA)	n	ug/l	50
Toluene	n	ug/l	0.5
1,2,3-Trichlorobenzene	n	ug/l	0.5
1,2,4-Trichlorobenzene	n	ug/l	0.5
1,1,1-Trichloroethane	n	ug/l	0.5
1,1,2-Trichloroethane	n	ug/l	0.5
Trichloroethene	n	ug/l	0.5
1,1,2-Trichlorotrifluoroethane	n	ug/l	0.5
Trichlorofluoromethane	n	ug/l	0.5
1,2,3-Trichloropropane	n	ug/l	0.5
1,2,4-Trimethylbenzene	n	ug/l	0.5
1,3,5-Trimethylbenzene	n	ug/l	0.5
Vinyl Acetate	n	ug/l	0.5
Vinyl Chloride	n	ug/l	0.5
Total Xylenes	n	ug/l	1.0
SURROGATES	**RECOVERY**	**%**	**CONTROL LIMITS (%)**
1,2-Dichloroethane-d4	62.0	%	28-145
Toluene-d8	83.2	%	52-150
4-Bromofluorobenzene	68.8	%	43-155

Comments:
California D.O.H.S Cert # 1677
n - Not detected at the quantitation limit.

Reported By

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EPA METHOD 8260

Report To:	P.S.I.	***Lab Number:***	0302654-3
	4703 TIDEWATER AVE., STE.B	***Phone:***	510-434-9200
	OAKLAND, CA 94601		
		Date Sampled:	02/20/03
Attention:	FRANK POSS	***Date Received:***	02/21/03
		Date Analyzed:	03/04/03
Project Number:	HEGENBERGER / 2G020	***Date Reported:***	04/07/03
Sampling Location:			
Sample ID:	MW-3		
Sample Matrix:	WATER		
Sample Collected By:	BRIAN STOZEK		

COMPOUND	RESULT	REPORTING UNITS	QUANTITATION LIMIT*
Acetone	n	ug/l	500
Acrylonitrile	n	ug/l	500
Benzene	1120	ug/l	50
Bromobenzene	n	ug/l	50
Bromochloromethane	n	ug/l	50
Bromodichloromethane	n	ug/l	50
Bromoform	n	ug/l	50
Bromomethane	n	ug/l	50
2-Butanone (MEK)	n	ug/l	500
n-Butylbenzene	n	ug/l	50
sec-Butylbenzene	n	ug/l	50
tert-Butylbenzene	n	ug/l	50
Carbon Disulfide	n	ug/l	50
Carbon tetrachloride	n	ug/l	50
Chlorobenzene	n	ug/l	50
Chloroethane	n	ug/l	50
2-Chloroethylvinylether	n	ug/l	50
Chloroform	n	ug/l	50
Chloromethane	n	ug/l	50
2-Chlorotoluene	n	ug/l	50
4-Chlorotoluene	n	ug/l	50
Dibromochloromethane	n	ug/l	50
1,2-Dibromo-3-Chloropropane	n	ug/l	50
1,2-Dibromoethane	n	ug/l	50
Dibromomethane	n	ug/l	50
1,2-Dichlorobenzene	n	ug/l	50
1,3-Dichlorobenzene	n	ug/l	50
1,4-Dichlorobenzene	n	ug/l	50
Dichlorodifluoromethane	n	ug/l	50
1,1-Dichloroethane	n	ug/l	50
1,2-Dichloroethane	n	ug/l	50
1,1-Dichloroethene	n	ug/l	50
cis-1,2-Dichloroethene	n	ug/l	50
trans-1,2-Dichloroethene	n	ug/l	50
1,2-Dichloropropane	n	ug/l	50

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EPA METHOD 8260

Report To: P.S.I. ***Lab Number:*** 0302654-3

COMPOUND	RESULT	REPORTING UNITS	QUANTITATION LIMIT*
1,3-Dichloropropane	n	ug/l	50
2,2-Dichloropropane	n	ug/l	50
1,1-Dichloropropene	n	ug/l	50
cis-1,3-Dichloropropene	n	ug/l	50
trans-1,3-Dichloropropene	n	ug/l	50
1,4-Dioxane	n	ug/l	2500
Ethyl Benzene	n	ug/l	50
Ethyl-Tert-Butyl Ether (ETBE)	n	ug/l	50
Hexachlorobutadiene	n	ug/l	50
2-Hexanone (MBK)	n	ug/l	500
Isopropylbenzene	183	ug/l	50
Di-Isopropyl Ether (DIPE)	n	ug/l	50
p-Isopropyltoluene	n	ug/l	50
4-Methyl-2-Pentanone (MIBK)	n	ug/l	500
Methylene Chloride	n	ug/l	100
Methyl Tert-Butyl Ether (MTBE)	n	ug/l	50
Napthalene	n	ug/l	50
n-Propylbenzene	493	ug/l	50
Styrene	n	ug/l	50
Tert-Amyl Methyl Ether (TAME)	n	ug/l	50
1,1,1,2-Tetrachloroethane	n	ug/l	50
1,1,2,2-Tetrachloroethane	n	ug/l	50
Tetrachloroethene	n	ug/l	50
Tetrahydrofuran	n	ug/l	500
tert - Butanol (TBA)	n	ug/l	5000
Toluene	n	ug/l	50
1,2,3-Trichlorobenzene	n	ug/l	50
1,2,4-Trichlorobenzene	n	ug/l	50
1,1,1-Trichloroethane	n	ug/l	50
1,1,2-Trichloroethane	n	ug/l	50
Trichloroethene	n	ug/l	50
1,1,2-Trichlorotrifluoroethane	n	ug/l	50
Trichlorofluoromethane	n	ug/l	50
1,2,3-Trichloropropane	n	ug/l	50
1,2,4-Trimethylbenzene	n	ug/l	50
1,3,5-Trimethylbenzene	n	ug/l	50
Vinyl Acetate	n	ug/l	50
Vinyl Chloride	n	ug/l	50
Total Xylenes	n	ug/l	100
SURROGATES	**RECOVERY**	**%**	**CONTROL LIMITS (%)**
1,2-Dichloroethane-d4	69.2	%	28-145
Toluene-d8	92.8	%	52-150
4-Bromofluorobenzene	68.0	%	43-155

Comments:
California D.O.H.S Cert # 1677
n - Not detected at the quantitation limit.
* - QL raised due to required dilution

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EPA METHOD 8260

Report To:	P.S.I.	***Lab Number:***	0302654-4
	4703 TIDEWATER AVE., STE.B	***Phone:***	510-434-9200
	OAKLAND, CA 94601		
		Date Sampled:	02/20/03
Attention:	FRANK POSS	***Date Received:***	02/21/03
		Date Analyzed:	03/04/03
Project Number:	HEGENBERGER / 2G020	***Date Reported:***	04/07/03
Sampling Location:			
Sample ID:	MW-4		
Sample Matrix:	WATER		
Sample Collected By:	BRIAN STOZEK		

COMPOUND	RESULT	REPORTING UNITS	QUANTITATION LIMIT*
Acetone	n	ug/l	100
Acrylonitrile	n	ug/l	100
Benzene	107	ug/l	10
Bromobenzene	n	ug/l	10
Bromochloromethane	n	ug/l	10
Bromodichloromethane	n	ug/l	10
Bromoform	n	ug/l	10
Bromomethane	n	ug/l	10
2-Butanone (MEK)	n	ug/l	100
n-Butylbenzene	n	ug/l	10
sec-Butylbenzene	n	ug/l	10
tert-Butylbenzene	n	ug/l	10
Carbon Disulfide	n	ug/l	10
Carbon tetrachloride	n	ug/l	10
Chlorobenzene	n	ug/l	10
Chloroethane	n	ug/l	10
2-Chloroethylvinylether	n	ug/l	10
Chloroform	n	ug/l	10
Chloromethane	n	ug/l	10
2-Chlorotoluene	n	ug/l	10
4-Chlorotoluene	n	ug/l	10
Dibromochloromethane	n	ug/l	10
1,2-Dibromo-3-Chloropropane	n	ug/l	10
1,2-Dibromoethane	n	ug/l	10
Dibromomethane	n	ug/l	10
1,2-Dichlorobenzene	n	ug/l	10
1,3-Dichlorobenzene	n	ug/l	10
1,4-Dichlorobenzene	n	ug/l	10
Dichlorodifluoromethane	n	ug/l	10
1,1-Dichloroethane	n	ug/l	10
1,2-Dichloroethane	n	ug/l	10
1,1-Dichloroethene	n	ug/l	10
cis-1,2-Dichloroethene	n	ug/l	10
trans-1,2-Dichloroethene	n	ug/l	10
1,2-Dichloropropane	n	ug/l	10

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EPA METHOD 8260

Report To: P.S.I. ***Lab Number:*** 0302654-4

COMPOUND	RESULT	REPORTING UNITS	QUANTITATION LIMIT*
1,3-Dichloropropane	n	ug/l	10
2,2-Dichloropropane	n	ug/l	10
1,1-Dichloropropene	n	ug/l	10
cis-1,3-Dichloropropene	n	ug/l	10
trans-1,3-Dichloropropene	n	ug/l	10
1,4-Dioxane	n	ug/l	500
Ethyl Benzene	n	ug/l	10
Ethyl-Tert-Butyl Ether (ETBE)	n	ug/l	10
Hexachlorobutadiene	n	ug/l	10
2-Hexanone (MBK)	n	ug/l	100
Isopropylbenzene	n	ug/l	10
Di-Isopropyl Ether (DIPE)	n	ug/l	10
p-Isopropyltoluene	n	ug/l	10
4-Methyl-2-Pentanone (MIBK)	n	ug/l	100
Methylene Chloride	n	ug/l	20
Methyl Tert-Butyl Ether (MTBE)	n	ug/l	10
Napthalene	n	ug/l	10
n-Propylbenzene	n	ug/l	10
Styrene	n	ug/l	10
Tert-Amyl Methyl Ether (TAME)	n	ug/l	10
1,1,1,2-Tetrachloroethane	n	ug/l	10
1,1,2,2-Tetrachloroethane	n	ug/l	10
Tetrachloroethene	n	ug/l	10
Tetrahydrofuran	n	ug/l	100
tert - Butanol (TBA)	n	ug/l	1000
Toluene	n	ug/l	10
1,2,3-Trichlorobenzene	n	ug/l	10
1,2,4-Trichlorobenzene	n	ug/l	10
1,1,1-Trichloroethane	n	ug/l	10
1,1,2-Trichloroethane	n	ug/l	10
Trichloroethene	n	ug/l	10
1,1,2-Trichlorotrifluoroethane	n	ug/l	10
Trichlorofluoromethane	n	ug/l	10
1,2,3-Trichloropropane	n	ug/l	10
1,2,4-Trimethylbenzene	n	ug/l	10
1,3,5-Trimethylbenzene	n	ug/l	10
Vinyl Acetate	n	ug/l	10
Vinyl Chloride	n	ug/l	10
Total Xylenes	n	ug/l	20
SURROGATES	**RECOVERY**	**%**	**CONTROL LIMITS (%)**
1,2-Dichloroethane-d4	60.6	%	28-145
Toluene-d8	89.4	%	52-150
4-Bromofluorobenzene	65.8	%	43-155

Comments:
California D.O.H.S Cert # 1677
n - Not detected at the quantitation limit.
* - QL raised due to required dilution

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EPA METHOD 8260

Report To:	P.S.I.	***Lab Number:***	0302654-5
	4703 TIDEWATER AVE., STE.B	***Phone:***	510-434-9200
	OAKLAND, CA 94601		
		Date Sampled:	02/20/03
Attention:	FRANK POSS	***Date Received:***	02/21/03
		Date Analyzed:	03/05/03
Project Number:	HEGENBERGER / 2G020	***Date Reported:***	04/07/03
Sampling Location:			
Sample ID:	MW-5		
Sample Matrix:	WATER		
Sample Collected By:	BRIAN STOZEK		

COMPOUND	RESULT	REPORTING UNITS	QUANTITATION LIMIT*
Acetone	n	ug/l	25
Acrylonitrile	n	ug/l	25
Benzene	n	ug/l	2.5
Bromobenzene	n	ug/l	2.5
Bromochloromethane	n	ug/l	2.5
Bromodichloromethane	n	ug/l	2.5
Bromoform	n	ug/l	2.5
Bromomethane	n	ug/l	2.5
2-Butanone (MEK)	n	ug/l	25
n-Butylbenzene	n	ug/l	2.5
sec-Butylbenzene	4.2	ug/l	2.5
tert-Butylbenzene	n	ug/l	2.5
Carbon Disulfide	n	ug/l	2.5
Carbon tetrachloride	n	ug/l	2.5
Chlorobenzene	n	ug/l	2.5
Chloroethane	n	ug/l	2.5
2-Chloroethylvinylether	n	ug/l	2.5
Chloroform	n	ug/l	2.5
Chloromethane	n	ug/l	2.5
2-Chlorotoluene	n	ug/l	2.5
4-Chlorotoluene	n	ug/l	2.5
Dibromochloromethane	n	ug/l	2.5
1,2-Dibromo-3-Chloropropane	n	ug/l	2.5
1,2-Dibromoethane	n	ug/l	2.5
Dibromomethane	n	ug/l	2.5
1,2-Dichlorobenzene	n	ug/l	2.5
1,3-Dichlorobenzene	n	ug/l	2.5
1,4-Dichlorobenzene	n	ug/l	2.5
Dichlorodifluoromethane	n	ug/l	2.5
1,1-Dichloroethane	n	ug/l	2.5
1,2-Dichloroethane	n	ug/l	2.5
1,1-Dichloroethene	n	ug/l	2.5
cis-1,2-Dichloroethene	n	ug/l	2.5
trans-1,2-Dichloroethene	n	ug/l	2.5
1,2-Dichloropropane	n	ug/l	2.5

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EPA METHOD 8260

Report To: P.S.I. ***Lab Number:*** 0302654-5

COMPOUND	RESULT	REPORTING UNITS	QUANTITATION LIMIT*
1,3-Dichloropropane	n	ug/l	2.5
2,2-Dichloropropane	n	ug/l	2.5
1,1-Dichloropropene	n	ug/l	2.5
cis-1,3-Dichloropropene	n	ug/l	2.5
trans-1,3-Dichloropropene	n	ug/l	2.5
1,4-Dioxane	n	ug/l	125
Ethyl Benzene	n	ug/l	2.5
Ethyl-Tert-Butyl Ether (ETBE)	n	ug/l	2.5
Hexachlorobutadiene	n	ug/l	2.5
2-Hexanone (MBK)	n	ug/l	25
Isopropylbenzene	15.5	ug/l	2.5
Di-Isopropyl Ether (DIPE)	n	ug/l	2.5
p-Isopropyltoluene	2.9	ug/l	2.5
4-Methyl-2-Pentanone (MIBK)	n	ug/l	25
Methylene Chloride	n	ug/l	5
Methyl Tert-Butyl Ether (MTBE)	n	ug/l	2.5
Napthalene	n	ug/l	2.5
n-Propylbenzene	20.5	ug/l	2.5
Styrene	n	ug/l	2.5
Tert-Amyl Methyl Ether (TAME)	n	ug/l	2.5
1,1,1,2-Tetrachloroethane	n	ug/l	2.5
1,1,2,2-Tetrachloroethane	n	ug/l	2.5
Tetrachloroethene	n	ug/l	2.5
Tetrahydrofuran	n	ug/l	25
tert - Butanol (TBA)	n	ug/l	250
Toluene	8.6	ug/l	2.5
1,2,3-Trichlorobenzene	n	ug/l	2.5
1,2,4-Trichlorobenzene	n	ug/l	2.5
1,1,1-Trichloroethane	n	ug/l	2.5
1,1,2-Trichloroethane	n	ug/l	2.5
Trichloroethene	n	ug/l	2.5
1,1,2-Trichlorotrifluoroethane	n	ug/l	2.5
Trichlorofluoromethane	n	ug/l	2.5
1,2,3-Trichloropropane	n	ug/l	2.5
1,2,4-Trimethylbenzene	n	ug/l	2.5
1,3,5-Trimethylbenzene	n	ug/l	2.5
Vinyl Acetate	n	ug/l	2.5
Vinyl Chloride	n	ug/l	2.5
Total Xylenes	11.3	ug/l	5
SURROGATES	**RECOVERY**	**%**	**CONTROL LIMITS (%)**
1,2-Dichloroethane-d4	75.0	%	28-145
Toluene-d8	101	%	52-150
4-Bromofluorobenzene	81.4	%	43-155

Comments:
California D.O.H.S Cert # 1677
n - Not detected at the quantitation limit.
* - QL raised due to required dilution

Reported By