HYDRO ANALYSIS, INC.
Environmental & Water Resources Engineering
Groundwater Consultants

August 22, 2000

Barney Chan
Alameda County Environmental Health Services
1131 Harbor Bay Parkway
Alameda, CA 94502-6577

Well Installation and Quarterly Groundwater Monitoring Report
Golden Gate Petroleum
421 23rd Avenue, Oakland, California
Fuel Leak Case No. 191

Dear Mr. Chan:

The enclosed report documents the following activities at the subject property:

- Preparation and permitting for borings and wells,
- Collection and analysis of soil samples from three borings,
- Installation of monitoring wells MW-5, MW-6, and MW-7, and
- Collection and analysis of groundwater samples from seven monitoring wells.

Please note that we have changed our name from Hageman-Aguiar to Hydro Analysis. If you have any questions, please call me at 510/620-0891.

Sincerely,

Hydro Analysis, Inc.

REGISTERED GEOLOGIST
KENNETH B. ALEXANDER
No. HG512
CERTIFIED HYDROGEOLOGIST
exp. 7/01
STATE OF CALIFORNIA

K. B. Alexander

Kenneth B. Alexander, RG, CH
Principal Hydrogeologist

cc: Dennis O'Keefe /Golden Gate Petroleum, Concord, California
City of Oakland Community & Economic Development Agency, Oakland, California

HYDRO ANALYSIS, INC.
Environmental & Water Resources Engineering
Groundwater Consultants

WELL INSTALLATION AND

QUARTERLY GROUNDWATER MONITORING REPORT

(Sampled August 7, 2000)

GOLDEN GATE PETROLEUM

421 23rd Avenue
Oakland, California

August 22, 2000

Hydro Analysis, Inc. Project No. 0277

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I. INTRODUCTION

The site location is the Golden Gate Petroleum Cardlock at 421 23rd Avenue in Oakland, California (Figure 1). The site is situated at the northwest corner of the intersection of Kennedy Street and 23rd Avenue.

This report describes monitoring well installation and groundwater monitoring activities completed in July and August 2000 at 421 23rd Avenue, Oakland, CA. The work was performed in accordance with our workplan, dated January 7, 2000. Barney Chan of Alameda County Environmental Health Services (ACEHS) approved the workplan in his January 12, 2000 letter (Attachment A).

Background

The site has operated as a service station sine 1976. In August 1998, five underground storage tanks (USTs) and associated piping were removed from the property. The USTs were used to store premium unleaded gasoline, regular unleaded gasoline, and diesel fuel. The USTs were replaced with two 20,000-gallon, double-walled, fiberglass underground storage tanks.

During the tank removal activities, approximately 1,300 cubic yards of petroleum-impacted soil was excavated and removed from the site. In addition, approximately 28,000 gallons of petroleum-impacted groundwater and floating product were removed.

On November 1999, Hageman-Aguiar, Inc. (now Hydro Analysis, Inc.) installed four monitoring wells in the vicinity of the former tank excavation (Figure 2). Monitoring well construction details are summarized in Table 1. These monitoring wells have been sampled on a quarterly basis since November 1999. Gasoline, MTBE, and diesel constituents have been detected in groundwater at the site.

Purpose and Scope

The purpose of this investigation was to evaluate the downgradient extent of residual groundwater contamination that may have emanated from the underground storage tanks removed in 1999. For this investigation, Hydro Analysis, Inc. drilled three borings, collected soil and groundwater samples, and installed three additional shallow groundwater monitoring wells downgradient of the site. In addition, we collected groundwater samples from the four existing monitoring wells and two recovery casings located in the backfill of the existing USTs.

Our scope of work included the following:

- We obtained encroachment and excavation permits from the City of Oakland to allow drilling within the Oakland right-of-way along Kennedy Street.
- We drilled three borings along the south side of Kennedy Street. Soil samples were collected during drilling and analyzed for petroleum constituents.
- We completed the three borings as 2-inch SCH 40 PVC monitoring wells MW-5, MW-6, and MW-7. We developed the new wells.
- We measured water levels in the three new wells and four existing monitoring wells. We surveyed the measuring point elevations on the new wells.
- We collected groundwater samples from the three new monitoring wells, four existing monitoring wells, and two recovery casings. Groundwater samples were analyzed for petroleum constituents.
- We evaluated the hydrogeologic and analytical data.

II. FIELD WORK: INSTALLATION OF MONITORING WELLS

On July 28, 2000, three borings (for installation of the wells) were drilled using 8-inch outside diameter hollow-stem augers to a depth of approximately 20 feet. Gregg Drilling & Testing, Inc. (Martinez, CA) provided drilling services. The borings were completed as monitoring wells MW-5, MW-6, and MW-7.

Prior to initiating the field work, we performed the following activities:

- A workplan, dated January 7, 2000, was prepared describing the proposed field work. The ACEHS approved the workplan.
- Encroachment and excavation permits were obtained from the City of Oakland (Attachment A).
- Monitoring well construction permits were obtained from the Alameda County Public Works Agency (Attachment A).
- A private utility locator was retained to identify subsurface utilities at the proposed boring locations.
- Underground Service Alert (USA) was notified to check for buried utilities at the proposed boring locations.

Equipment Decontamination

Prior to drilling, all drilling equipment, including augers, drill stem, and split barrel samplers, were steam cleaned. All steam cleaning was conducted by Gregg Drilling at their steam-cleaning facility in Martinez, CA. All split-barrel samplers, brass tubes, and other sampling equipment were decontaminated by washing in a water and TSP solution followed by a double water rinse.

Soil Sampling and Analysis

During drilling, soil samples were collected on approximate 5-foot centers by driving a 2-inch split-spoon sampler fitted with three 2-inch by 6-inch long brass liners (California Modified Sampler). Both ends of the liners selected for chemical analysis were sealed with Teflon film and plastic end caps. The end caps were sealed onto the brass liner with duct tape. All samples were immediately placed on crushed ice and transported under chain-of-custody to the laboratory upon completion of the field work.

Samples were classified in the field in accordance with ASTM D2488-93 (Standard Practice for Description and Identification of Soils, Visual-Manual Procedure). The soil was classified by Kenneth B. Alexander, California Certified Hydrogeologist #512. Soil was also examined for chemical odor and chemical staining. The samples were screened in the field with an organic vapor meter (Thermo Environmental Instruments, Model 580B, equipped with a 10.2 eV photoionization detector, and calibrated to 100-ppm v/v isobutylene). Boring logs are provided in Attachment B. Well locations are shown on Figure 2.

Subsurface Conditions

Subsurface conditions encountered in the borings typically consisted of:

- Poorly-Graded Sand, beginning at the ground surface and extending to a depth of approximately 5 feet.
- Fat Clay and Lean Clay, beginning at a depth of 5 feet and extending to a depth of approximately 14 feet.
- Silt or Sandy Lean Clay, beginning at a depth of 14 feet and extending to at least 20 feet (the maximum depth explored) except in boring MW-6.
- Well-Graded Sand or Clayey Sand with Gravel, beginning at a depth of 14 feet and extending to a depth of at least 20 feet (the maximum depth explored) in boring MW-6. It appears that a relatively coarse-grained channel deposit is present in the vicinity of well MW-6.

Groundwater was observed at approximately 14 feet below ground level during drilling. After well installation, the depth to groundwater was measured at a depth of approximately 8 to 10 feet.

Well Installation and Development

The three borings were completed as monitoring wells to a depth of approximately 20 feet using 2-inch SCH 40 PVC. Each well was screened between depths of 5 to 20 feet (0.010" slots). The annular space was packed with #2-/16 Monterey sand to about one foot above the top of the screened section. Approximately 1 foot of wetted bentonite pellets was placed upon the sand pack, followed by a neat cement grout seal to the ground surface. The top of the PVC casing was protected by a below-grade, traffic-rated well vault. Well completion data are summarized in Table 1. Copies of the Well Completion Reports (DWR-188) are included in Attachment B.

The wells were developed on August 2, 2000. During development of the wells, groundwater and silt were removed from each well casing using a PVC bailer. The well development logs are included in Attachment C.

Elevation Survey

On August 7, 2000, Hydro Analysis surveyed the measuring point elevations of the three new monitoring wells (Attachment D). Elevations were surveyed relative to a City of Oakland benchmark located at 333 23rd Avenue. The elevations are based on Mean Sea Level datum.

Waste Generation

During drilling, approximately 1 cubic yard of soil cuttings were generated and contained in four steel drums. Analytical results have been submitted to BFI. Upon final approval, the soil will be transported by North American Dirt Solutions (Campbell, CA).

All water removed from the wells during development was drummed and stored onsite. The wastewater is periodically picked up by a licensed waste hauler and transported under manifest to an appropriate recycling and disposal facility.

III. FIELD WORK: GROUNDWATER SAMPLING

Monitoring Well Sampling

On August 7, 2000, Hydro Analysis, Inc. sampled the seven groundwater monitoring wells and two backfill casings. The locations of the wells are shown in Figure 2. Prior to sampling, several casing volumes of water were removed from each well. Field conductivity, temperature, and pH were monitored during purging. Purging continued until these parameters stabilized. Groundwater samples were subsequently collected using new, disposable sampling bailers. The water samples were placed inside appropriate 40-ml VOA vials free of any headspace. The samples were immediately placed on crushed ice, then transported under chain-of-custody to the laboratory at the end of the workday.

At the time each monitoring well was sampled, the following information was recorded in the field: (1) depth-to-water prior to purging, using an electrical well sounding tape, (2) observation of any floating product, sheen, or odor prior to purging, using a clear Teflon bailer, (3) pH, (4) temperature, and (5) specific conductance. Copies of the well sampling logs are included in Attachment C.

Wastewater Generation

All water and other liquid waste removed from the wells during purging was drummed and stored onsite. The water and liquid waste is periodically picked up by a licensed waste hauler and transported under manifest to an appropriate recycling and disposal facility.

IV. RESULTS OF WATER LEVEL MEASUREMENTS

Groundwater Flow Direction and Hydraulic Gradient

On August 7, 2000, Hydro Analysis, Inc. measured water levels in the seven monitoring wells (Table 2). Figure 3 presents a contour map for the groundwater beneath the site. As shown in Figure 3, the water level data indicate that groundwater flow in August 2000 was toward the west-southwest direction.

The calculated hydraulic gradient for August 2000 was approximately 0.002 feet/feet (about 12 feet per mile).

Floating Product

Measurements of floating product were performed prior to water level measurements on August 7, 2000. No floating product was observed.

V. ANALYTICAL RESULTS

Laboratory Analysis

All analyses were performed by Entech Analytical Labs, Inc., of Sunnyvale, California, a California State Department of Health Services-certified laboratory. All samples were analyzed in accordance with U.S. EPA recommended procedures.

All soil and groundwater samples were analyzed for:

- Total Petroleum Hydrocarbons as Gasoline (modified EPA Method 8015)
- Benzene, Toluene, Ethylbenzene, and Total Xylenes (EPA Method 8020)
- Methyl Tertiary Buytl Ether (MTBE) (EPA Method 8020 or 8260B)
- Total Petroleum Hydrocarbons as Diesel (modified EPA Method 8015)

Analytical Results: Soil

Table 3 presents the analytical results for the soil samples collected on July 28, 2000. Copies of the laboratory reports and chain-of-custody records are provided in Attachment E.

In general, the soil analytical results are unremarkable. As shown in Table 3, petroleum constituents were not detected in most of the soil samples, except for relatively low concentration of diesel in 4 of the 6 samples (maximum concentration of 130 mg/kg).

Analytical Results: Groundwater

Table 4 presents the analytical results for all groundwater samples collected at the site. Copies of the laboratory reports and chain-of-custody records for the August 7, 2000 sampling event are provided in Attachment F.

As shown in Table 2, gasoline was detected at a maximum concentration of 4,500 µg/L (ppb) in the groundwater sample from well MW-2. MTBE was detected at a maximum concentration of 6,300 µg/L in the groundwater sample from well MW-2. Diesel was detected at a maximum concentration of 620 µg/L in the groundwater sample from well MW-2.

VI. DATA ANALYSIS AND RECOMMENDATIONS

The results of the soil sampling revealed relatively low concentrations of diesel in four of the six soil samples. Gasoline and BTEX were not detected in any of the soil samples. The detection of diesel in some of the soil samples is not indicative of a significant tank release, nor does the measured soil concentration represent a significant risk to human health or the environment.

The results of the August 2000 groundwater sampling revealed elevated concentrations of gasoline and MTBE in several monitoring wells, particularly MW-2, MW-3, and MW-6. Figures 4, 5, and 6 show lines of equal concentration for gasoline, MTBE, and diesel, respectively, using analytical data from the August 7, 2000 groundwater sampling event.

As shown on Figures 4 and 5, gasoline and MTBE plumes appear to have moved in the downgradient direction beneath Kennedy Street and the adjoining southern property. In well MW-6, located farthest downgradient, groundwater sampling revealed gasoline at a concentration of 460 µg/L and MTBE at a concentration of 1,900 µg/L. The relatively coarse-grained sand observed in the boring for well MW-6 may facilitate the movement of contaminated groundwater through an ancient stream channel deposit.

As shown on Figure 6, the diesel plume appears limited to a relatively small area on site. Diesel was not detected in 6 of the 9 groundwater samples. As a result, there is no evidence of significant off-site migration of diesel in the shallow groundwater.

Overall, the lateral extent of contamination is relatively well defined. Extensive remedial action in the vicinity of the former tanks has apparently eliminated the source of gasoline and MTBE. The three new monitoring wells (MW-5, MW-6, and MW-7) provide reasonable data for downgradient plume definition. We believe that contaminant migration is limited due to the very low permeability of the clay and silt encountered beneath the site with the notable exception of the sandy channel deposits in the vicinity of well MW-6.

Accordingly, we recommend the following actions for the site:

- Perform additional subsurface investigation (Geoprobe borings) downgradient of well MW-6. Geoprobe borings with grab groundwater sampling will provide data on (1) the presence and size of the sandy channel deposits and (2) the downgradient extent of gasoline and MTBE contamination in groundwater.
- Continue quarterly groundwater monitoring of the existing monitoring wells.
- Conduct a sensitive receptors survey (wells, surface water bodies, etc.)
- Conduct a conduit study to determine if any preferential pathways exist for groundwater migration such as the channel deposits in the vicinity of well MW-6.
- Prepare a risk assessment according to the Oakland Risk-Based Corrective Action (RBCA) program. Also, evaluate ecological risk due to the proximity of the Oakland-Alameda estuary.

As has been previously proposed, future groundwater extraction from the wells in the former excavation backfill (CASING-1 and CASING-2) will have minimal impact in remediating or limiting the extent of the gasoline and MTBE plumes.

TABLE 1.

Monitoring Well Completion Data
Golden Gate Petroleum, 421 23rd Avenue, Oakland, California

Well Number:	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7
Date of Installation	November 1, 1999	November 1, 1999	November 1, 1999	November 1, 1999	July 28, 2000	July 28, 2000	July 28, 2000
Installed By	Hageman-Aguiar, Inc.	Hageman-Aguiar, Inc.	Hageman-Aguiar, Inc.	Hageman-Aguiar, Inc.	Hydro Analysis, Inc.	Hydro Analysis, Inc.	Hydro Analysis, Inc.
Installation Method	HSA	HSA	HSA	HSA	HSA	HSA	HSA
Boring Diameter (inches)	8	10	10	8	8	8	8
Measuring Point Description	Top of PVC casing	Top of PVC casing	Top of PVC casing	Top of PVC casing	Top of PVC casing	Top of PVC casing	Top of PVC casing
Measuring Point Elev. (feet)	9.47	8.72	9.00	9.30	10.19	9.86	8.60
Approximate Seal Depth (feet)	4	4	4	4	4	4	4
Total Depth (feet)	20	20	20	20	20	20	20
Casing Diameter (inches)	2	4	4	2	2	2	2
Screened Interval (ft) - depth	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20
elevation	4.5 to -10.5	3.7 to -11.3	4.0 to -11.0	4.3 to -10.7	5.2 to -9.8	4.9 to -10.1	3.6 to -11.4
Sand Pack Interval (ft) - depth	4 to 20	4 to 20	4 to 20	4 to 20	4 to 20	4 to 20	4 to 20
elevation	5.5 to -10.5	4.7 to -11.3	5.0 to -11.0	5.3 to -10.7	6.2 to -9.8	5.9 to -10.1	4.6 to -11.4
Screen Specifications	SCH 40 PVC, 0.020-in slots	SCH 40 PVC, 0.020-in slots	SCH 40 PVC, 0.020-in slots	SCH 40 PVC, 0.020-in slots	SCH 40 PVC, 0.010-in slots	SCH 40 PVC, 0.010-in slots	SCH 40 PVC, 0.010-in slots

General Notes

(a) Elevations referenced to Mean Sea Level. Depths measured relative to ground surface.

(b) HSA = Hollow-stem augers.

TABLE 2.

Groundwater Elevation Measurements
Golden Gate Petroleum, 421 23rd Avenue, Oakland, California

	MW-1		MW-2		MW-3		MW-4		MW-5		MW-6		MW-7	
	MP Elev = 9.47 feet		MP Elev = 8.72 feet		MP Elev = 9.00 feet		MP Elev = 9.30 feet		MP Elev = 10.19 feet		MP Elev = 9.86 feet		MP Elev = 8.60 feet	
Date	DTW Depth	GW Elev	Depth	Elev	Depth	Elev	Depth	Elev	Depth	Elev	Depth	Elev	Depth	Elev
November 11, 1999	8.27	1.20	7.75	0.97	8.09	0.91	8.44	0.86	--	--	--	--	--	--
March 28, 2000	8.02	1.45	7.50	1.22	8.92	1.08	8.33	0.97	--	--	--	--	--	--
August 7, 2000	8.30	1.17	7.78	0.94	8.22	0.78	8.60	0.70	9.67	0.52	9.34	0.52	7.92	0.68

General Notes

(a) Depth measurements cited in units of feet below measuring point (MP). MP is top of PVC well casing.

(b) Elevation measurements cited in units of feet above Mean Sea Level and referenced to City of Oakland benchmark at 333 23rd Avenue. Benchmark elevation is 7.91 feet above Mean Sea Level.

TABLE 3.

Soil Analytical Results
Golden Gate Petroleum, 421 23rd Avenue, Oakland, California

Boring No.	Sample Depth (feet)	Sample Date	TPH as Diesel (mg/kg)	TPH as Gasoline (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)
MW-5	4.5 to 5	July 28, 2000	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.005
	9.5 to 10	July 28, 2000	130	<1	<0.005	<0.005	<0.005	<0.005	<0.005
MW-6	4.5 to 5	July 28, 2000	13	<1	<0.005	<0.005	<0.005	<0.005	<0.005
	9.5 to 10	July 28, 2000	5.6	<1	<0.005	<0.005	<0.005	<0.005	0.014
MW-7	4.5 to 5	July 28, 2000	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.005
	9.5 to 10	July 28, 2000	15	<1	<0.005	<0.005	<0.005	<0.005	<0.005
EPA Method No.			Modified 8015	Modified 8015	8020	8020	8020	8020	8260B

General Notes

(a) "<" = Parameter below laboratory method reporting limit.

(b) Depths measured relative to ground surface.

TABLE 4.

Groundwater Analytical Results
Golden Gate Petroleum, 421 23rd Avenue, Oakland, California

Well Number	Date	TPH as Diesel (µg/L)	TPH as Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)
MW-1	Nov 11, 1999	<50	<50	<0.5	<0.5	<0.5	<0.5	<5
	Mar 28, 2000	<50	<50	<0.5	<0.5	<0.5	<0.5	<5
	Aug 7, 2000	<50	<50	<0.5	<0.5	<0.5	<0.5	<5
MW-2	Nov 11, 1999	220	6,800	<50	<50	<50	<50	13,000*
	Mar 28, 2000	1,800	2,500	<25	<25	<25	<25	1,800
	Aug 7, 2000	620	4,500	<25	<25	<25	<25	6,300
MW-3	Nov 11, 1999	<50	1,600	<12.5	<12.5	<12.5	<12.5	2,500*
	Mar 28, 2000	<50	280	<2.5	<2.5	<2.5	<2.5	610
	Aug 7, 2000	<50	1,100	<5	<5	<5	<5	1,500
MW-4	Nov 11, 1999	<50	650	<5	<5	<5	<5	540*
	Mar 28, 2000	<50	430	<2.5	<2.5	<2.5	<2.5	800
	Aug 7, 2000	<50	600	<5	<5	<5	<5	500
MW-5	Aug 7, 2000	<50	110	<0.5	<0.5	<0.5	<0.5	470*
MW-6	Aug 7, 2000	<50	460	<0.5	<0.5	<0.5	<0.5	1,900*
MW-7	Aug 7, 2000	<50	<50	<0.5	<0.5	<0.5	<0.5	<5*
CASING-1	Oct 8, 1999	<50	<50	<0.5	<0.5	<0.5	<0.5	9.2
	Nov 11, 1999	<50	<250	<2.5	<2.5	<2.5	<2.5	350
	Mar 28, 2000	69	<500	<5	<5	<5	<5	760
	Aug 7, 2000	140	54	<0.5	<0.5	<0.5	<0.5	30
CASING-2	Oct 8, 1999	83	680	6.3	<2.5	5.4	72	1,200
	Nov 11, 1999	<50	150	<1	<1	<1	<1	320*
	Mar 28, 2000	<50	270	<2.5	<2.5	<2.5	<2.5	520
	Aug 7, 2000	110	82	<0.5	<0.5	<0.5	<0.5	190

TABLE 4 (Concluded).

Groundwater Analytical Results
Golden Gate Petroleum, 421 23rd Avenue, Oakland, California

	TPH as Diesel (µg/L)	TPH as Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)
Drinking Water Criteria	100 (T&O)	5 (T&O)	1 (MCL)	150 (MCL)	700 (MCL)	1,750 (MCL)	13 5 (MCL) T&O
EPA Method No.	Modified 8015	Modified 8015	8020	8020	8020	8020	8020

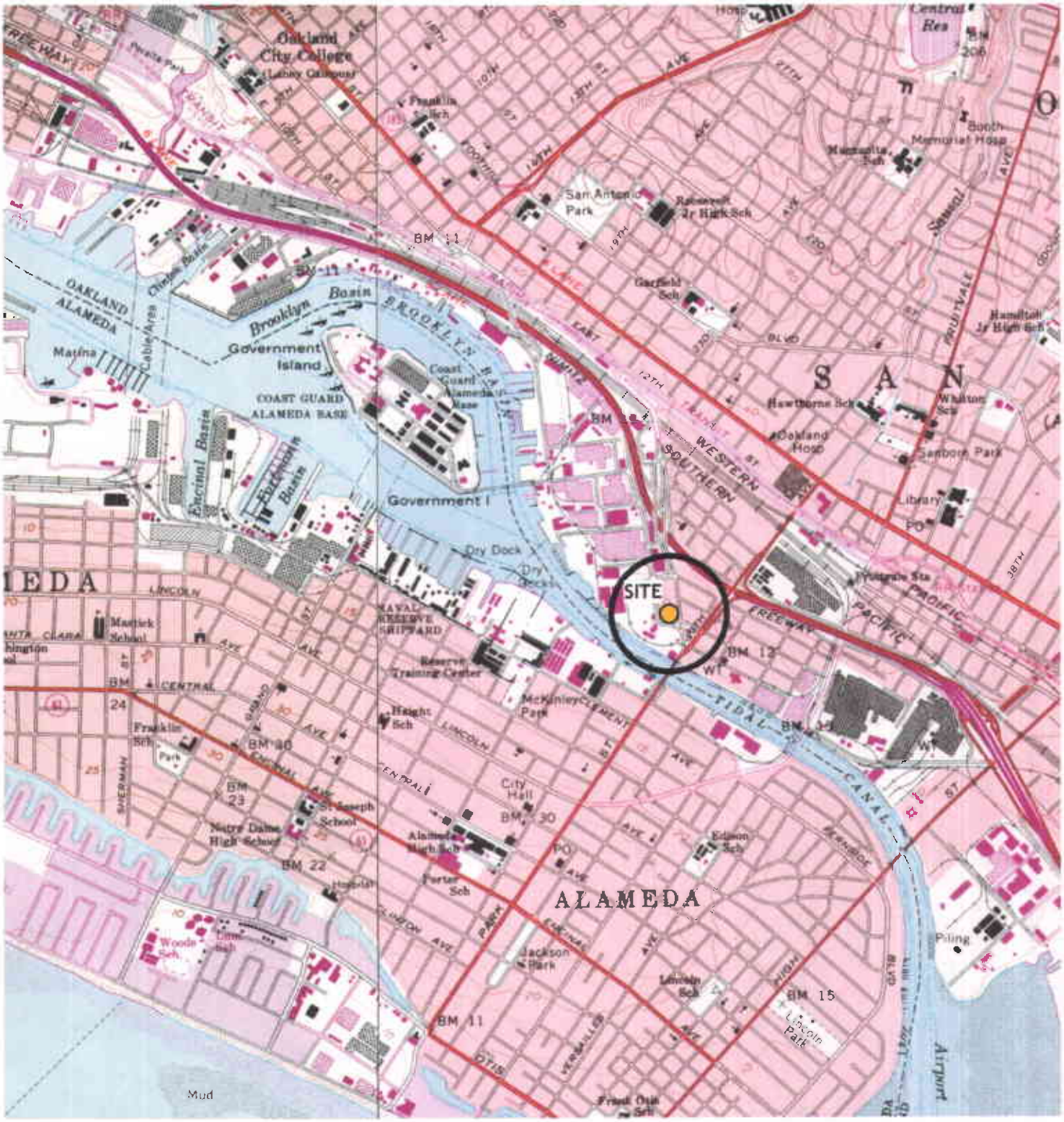
General Notes

(a) "<" = parameter below laboratory method reporting limit.

(b) * = MTBE confirmed by EPA Method 8260B.

(c) Drinking water criteria is for comparison purposes only. Source: Jon B. Marshack, *A Compilation of Water Quality Goals*, Central Valley Regional Water Quality Control Board, Sacramento, CA, March 1998. T&O = Taste and Odor Threshold. MCL = California Primary Maximum Contaminant Level.

(d) Concentrations exceeding the drinking water criteria in **bold**.



Basemap: USGS 7.5-minute topographic quadrangles,
Oakland West, Calif. and Oakland East, Calif., Photorevised 1980.

FIGURE 1.

Location Map

Golden Gate Petroleum
421 23rd Avenue
Oakland, California

Hydro Analysis, Inc.

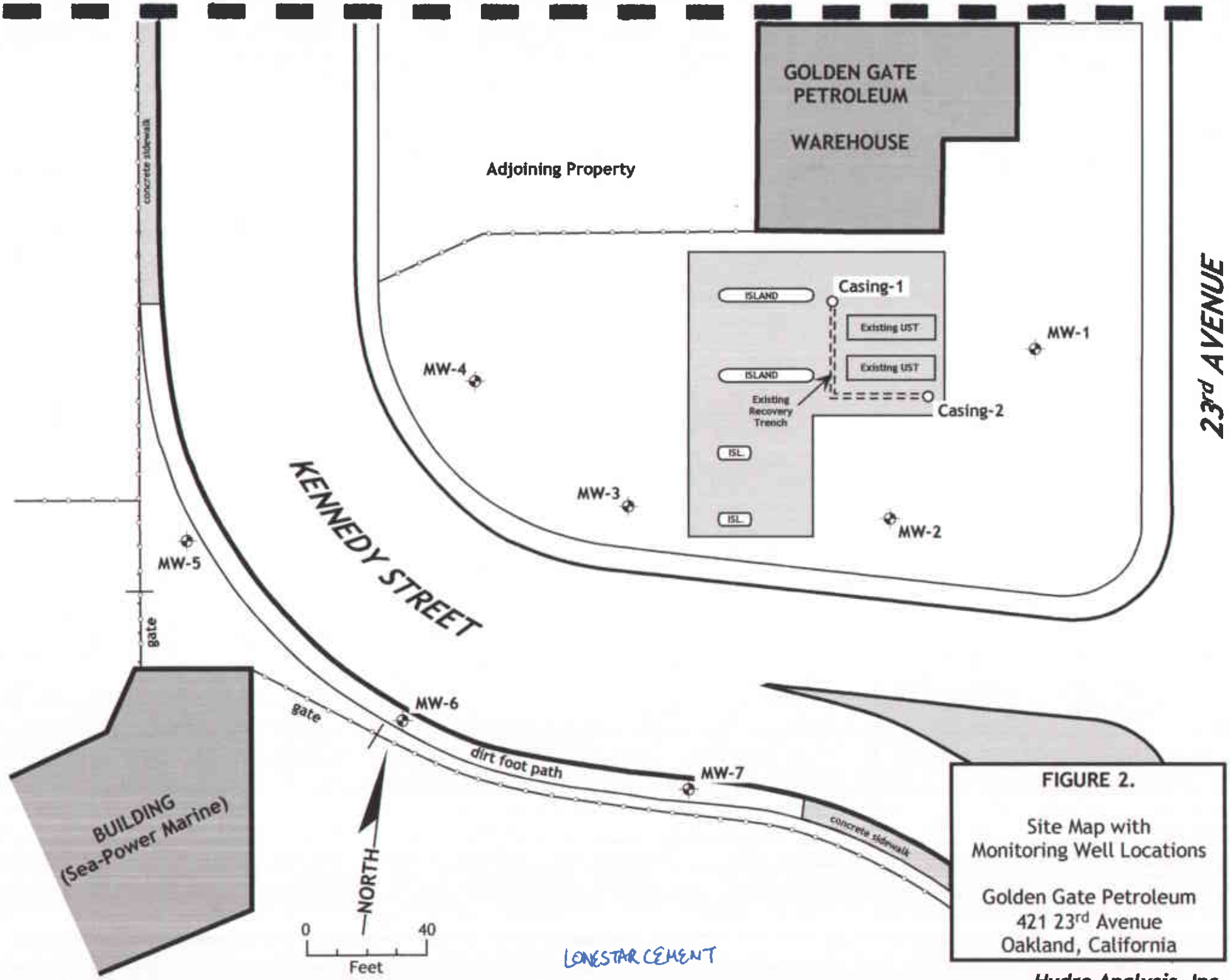
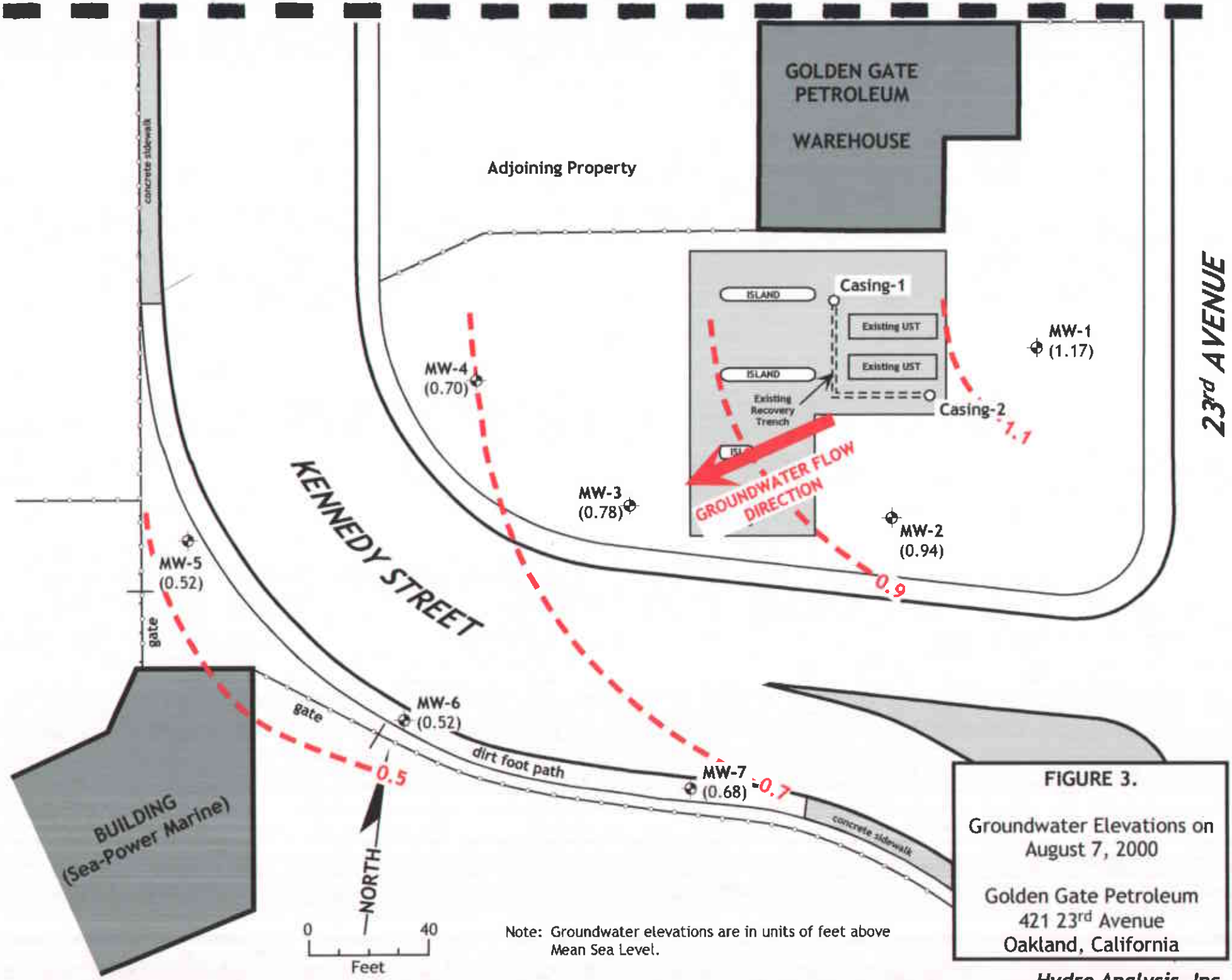


FIGURE 2.

Site Map with Monitoring Well Locations

Golden Gate Petroleum
421 23rd Avenue
Oakland, California

Hydro Analysis, Inc.



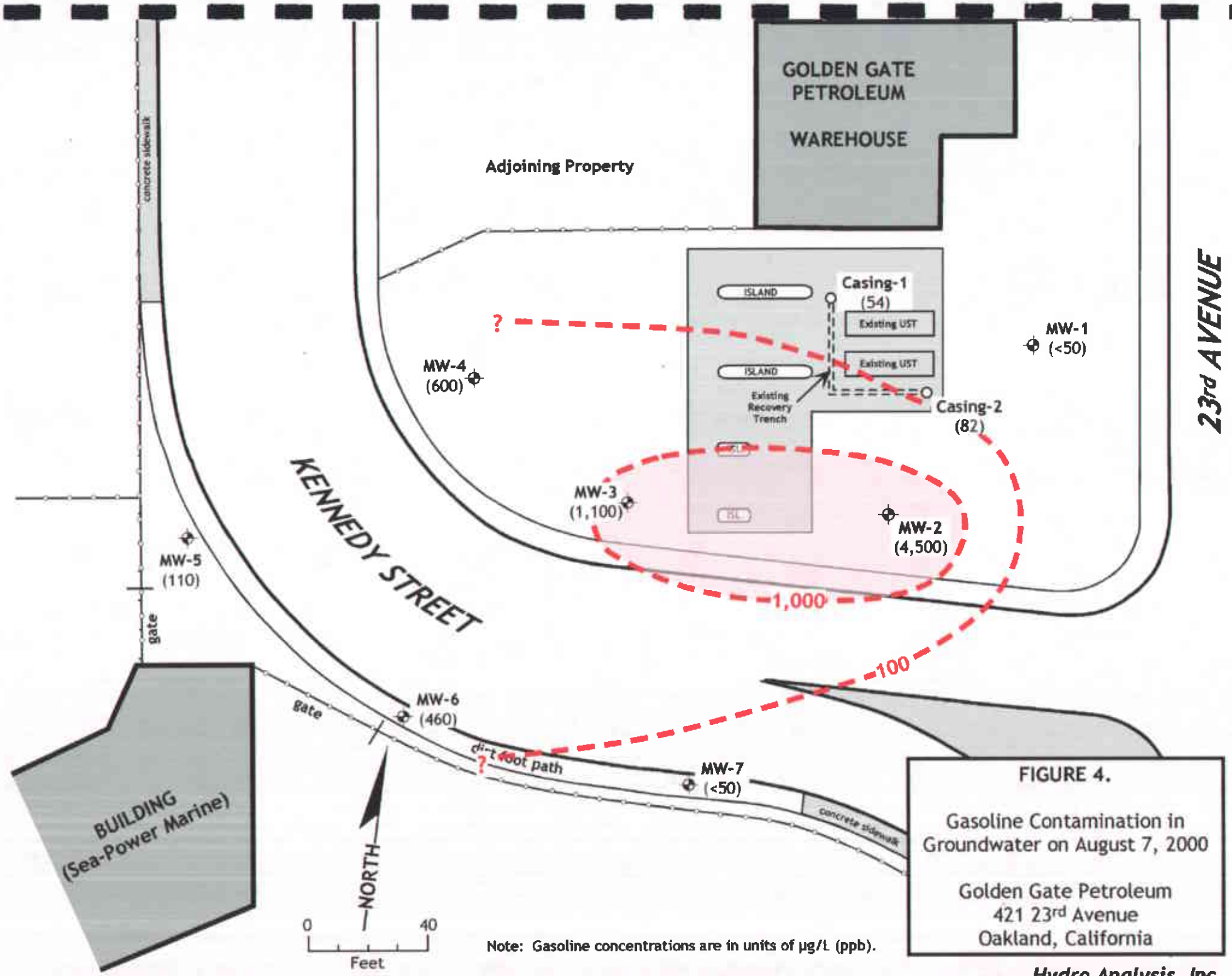
Note: Groundwater elevations are in units of feet above Mean Sea Level.

FIGURE 3.

Groundwater Elevations on August 7, 2000

Golden Gate Petroleum
421 23rd Avenue
Oakland, California

Hydro Analysis, Inc.



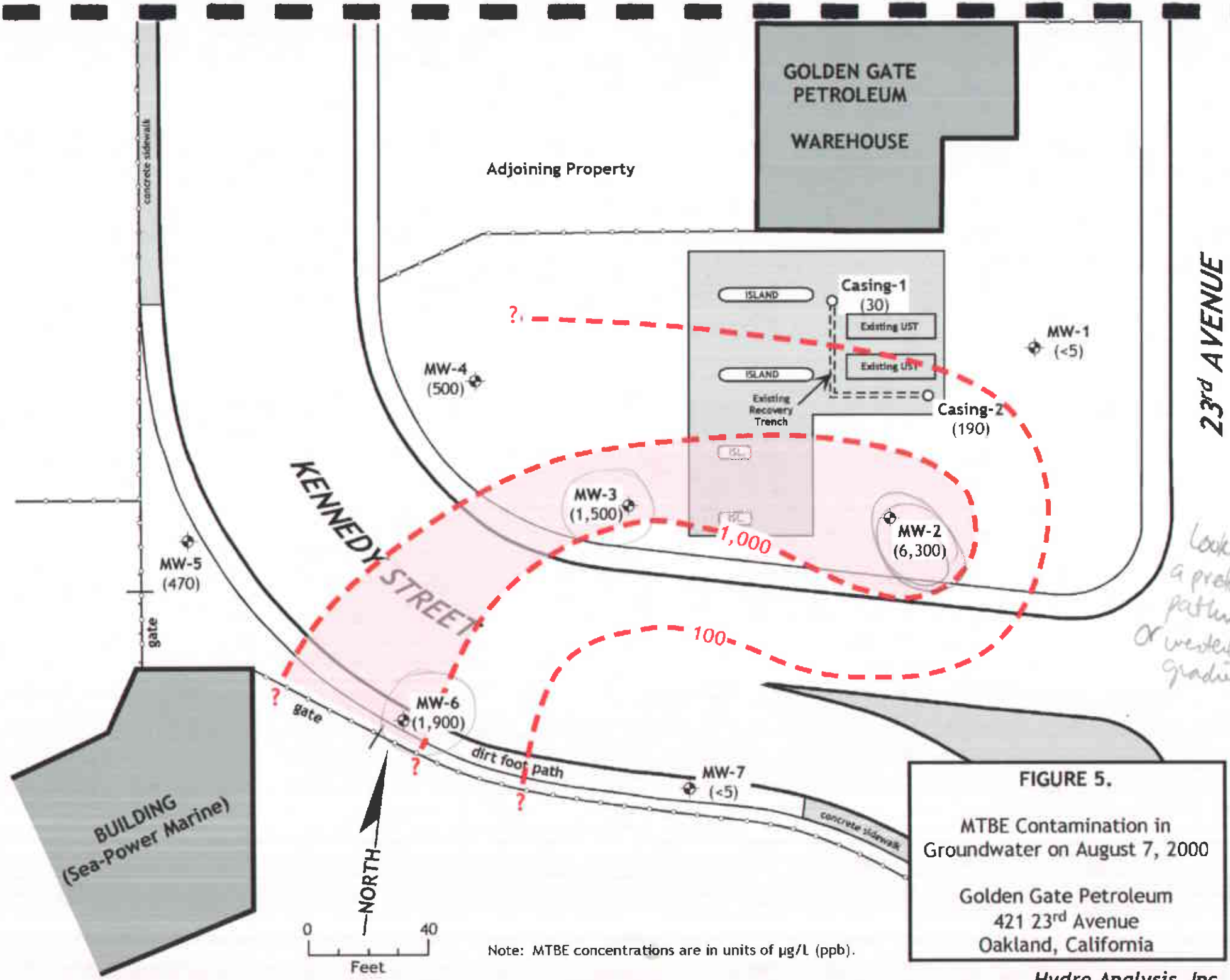
Note: Gasoline concentrations are in units of µg/L (ppb).

FIGURE 4.

Gasoline Contamination in Groundwater on August 7, 2000

Golden Gate Petroleum
421 23rd Avenue
Oakland, California

Hydro Analysis, Inc.



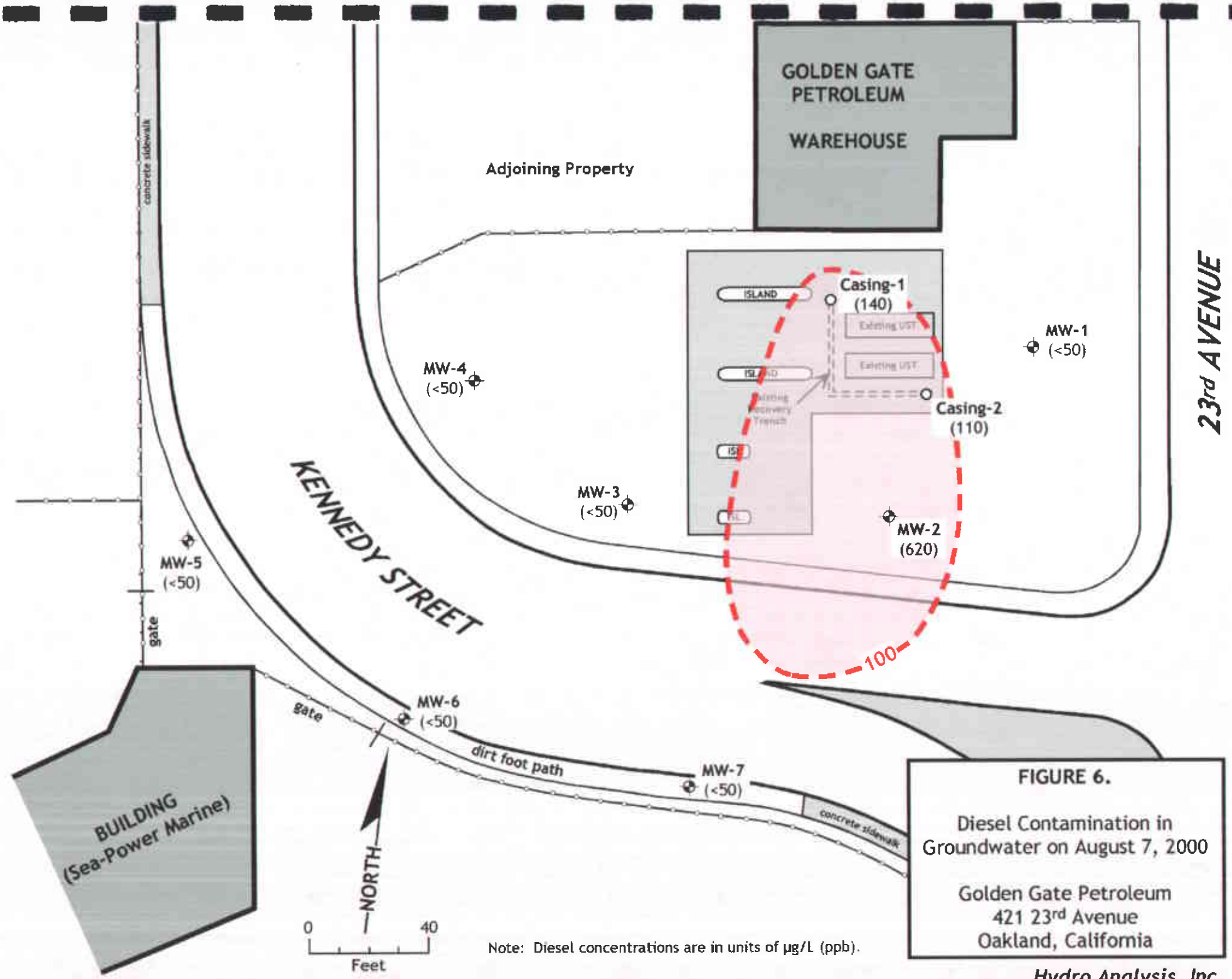
Note: MTBE concentrations are in units of µg/L (ppb).

FIGURE 5.

MTBE Contamination in Groundwater on August 7, 2000

Golden Gate Petroleum
421 23rd Avenue
Oakland, California

Hydro Analysis, Inc.



Note: Diesel concentrations are in units of µg/L (ppb).

FIGURE 6.

Diesel Contamination in Groundwater on August 7, 2000

Golden Gate Petroleum
421 23rd Avenue
Oakland, California

Hydro Analysis, Inc.

ATTACHMENT A

Correspondence and Permits

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway
Alameda, CA 94502-6577
(510) 567-6700
(510) 337-9432

January 12, 2000
StID #191

Mr. Harvey Brook
Golden Gate Petroleum
1001 Galaxy Way, Suite 308
Concord, CA 94520

Re: Work Plan for Subsurface Investigation, Golden Gate Petroleum, 421 23rd Ave., Oakland CA 94606

Dear Mr. Brook:

Our office has received and reviewed the January 7, 2000 work plan referenced above sent in response to my November 30,1999 letter. As you are aware, this work follows up the past investigation by Hageman-Aguiar (HA), which included the installation of four monitoring wells and eight geoprobe borings. Since the initial results indicated a potential for off-site migration of petroleum constituents, additional investigation was required.

The work plan proposes the installation of three off-site monitoring wells on the south side of Kennedy St. Soil and groundwater samples will be collected from each boring and these samples will be analyzed for TPH as gasoline, TPH as diesel, BTEX and MTBE.

Our office approves of this work plan with the following conditions:

- Please insure that a minimum of one soil sample is collected for analysis of the above mentioned parameters from each boring.
- Please confirm at a minimum the highest and lowest **detected** MTBE concentration in soil and in groundwater using EPA Method 8260.
- Prior to the installation of the three wells, please take additional groundwater elevation readings to confirm the on-site gradient direction. Should the gradient vary from the initial direction, please alter the location of the wells appropriately.
- Please contact our office prior to the installation of the wells and incorporate the new wells into the monitoring plan along with the existing wells.

You are also reminded that based upon the confirmation of elevated MTBE concentrations (like that originally detected) active groundwater remediation will b required.

You may contact me at (510) 567-6765 if you have any questions.

Sincerely,

Barney M. Chan
Hazardous Materials Specialist

C: B. Chan, files
Mr. G. Aguiar, Hageman-Aguiar, Inc., 11100 San Pablo Ave., Suite 200-A, El Cerrito, CA 94530
Mr. M. Owens, SWRCB Cleanup Fund, 2014 T St., Suite 130, Sacramento, CA 94244-2120
Mwwpap421 23rd

ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
399 ELMHURST STREET, HAYWARD, CA 94544
PHONE (510) 670-5554 FAX (510) 782-1939

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 421 23rd Avenue, Oakland, CA
(see attached map)

California Coordinates Source _____ ft Accuracy ± ____ ft.
CCN _____ ft. CCE _____ ft.
APN 0019-0073-003+01

CLIENT
Name Golden Gate Petroleum
Address 1001 Galaxy Way, Ste. 308 Phone 925/603-8870
City Concord, CA Zip 94520

APPLICANT
Name Kenneth B. Alexander, RG, CH
Hydro Analysis, Inc. Fax 510/620-0894
Address 11100 San Pablo Ave., #200A Phone 510/620-0891
City El Cerrito, CA Zip 94530

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	☐	General	☐
Water Supply	☐	Contamination	☐
Monitoring	☒	Well Destruction	☐

PROPOSED WATER SUPPLY WELL USE

New Domestic	☐	Replacement Domestic	☐
Municipal	☐	Irrigation	☐
Industrial	☐	Other _____	☐

DRILLING METHOD:

Mud Rotary	☐	Air Rotary	☐	Auger	☒
Cable	☐	Other	☐		

DRILLER'S LICENSE NO C57 #485185 (Gregg Drilling & Testing)

WELL PROJECTS
Drill Hole Diameter 8 in. Maximum
Casing Diameter 2 in Depth 20 ft.
Surface Seal Depth 4 ft. Number 3

GEOTECHNICAL PROJECTS
Number of Borings _____ Maximum
Hole Diameter _____ in Depth _____ ft.

ESTIMATED STARTING DATE July 28, 2000
ESTIMATED COMPLETION DATE July 28, 2000

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE K.B. Alex DATE July 11, 2000

FOR OFFICE USE

PERMIT NUMBER WO0-460
WELL NUMBER _____
APN _____

PERMIT CONDITIONS

Circled Permit Requirements Apply

A. GENERAL
1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
2. Submit to ACPWA within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects, or drilling logs and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

B. WATER SUPPLY WELLS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

D. GEOTECHNICAL
Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

E. CATHODIC
Fill hole above anode zone with concrete placed by tremie.

F. WELL DESTRUCTION
See attached.

G. SPECIAL CONDITIONS

APPROVED _____ DATE 7-24-00

CITY OF OAKLAND • Community and Economic Development Agency
250 Frank H. Ogawa Plaza, 2nd Floor, Oakland, CA 94612 • Phone (510) 238-3443 • FAX (510) 238-2263

PERMIT

To: Carl Sibley

EXCAVATION

Job Site 421 23RD AV Parcel #: Appl# X0001019

Descr install 3 monitoring wells on Embarcadero St Permit Issued 07/18/00

Work Type EXCAVATION-PRIVATE PR

USA # Util Co Job #: Account #:
Util Fund #:

		Applcnt	Phone#	Lic#	--License Classes--
Owner	HYDRO ANALYSIS INC	X	(510)620-0891		
Contractor					
Arch/Engr					
Agent	KENNETH ALEXANDER				

Applic Addr 11100 SAN PABLO STE 200A, EL CERRITO, CA, 94530

$246.00 TOTAL FEES PAID AT ISSUANCE

$41.00 Applic	$205.00 Permit
$.00 Process	$.00 Rec Mgmt
$.00 Gen Plan	$.00 Invstg
$.00 Other	

CITY OF OAKLAND

Date: 07/18/00 Amt Paid: $246.00
By: AHL Register R03 Receipt# 040188

CITY OF OAKLAND

Office of Planning and Building

EXCAVATION PERMIT

TO EXCAVATE IN STREETS OR OTHER SPECIFIED WORK

CIVIL ENGINEERING

DIRT AREA

PERMIT NUMBER	SITE ADDRESS/LOCATION
X 0001019	921 23RD AVE
APPROX. START DATE: July 28, 2000 / APPROX. END DATE:	24-HOUR EMERGENCY PHONE NUMBER (Permit not valid without 24-Hour number): 510/663-2115
CONTRACTOR'S LICENSE # AND CLASS	CITY BUSINESS TAX #: 2024152

ATTENTION:

State law requires that the contractor/owner call *Underground Service Alert (USA)* two working days before excavating. This permit is not valid unless applicant has secured an inquiry identification number issued by USA. The USA telephone number is 1 (800) 642-2444. UNDERGROUND SERVICE ALERT (USA) #: 201697

48 hours prior to starting work, YOU MUST CALL (510) 238-3651 TO SCHEDULE AN INSPECTION.

OWNER/BUILDER

I hereby affirm that I am exempt from the Contractor's License Law for the following reason (Sec. 7031.5 Business and Professions Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he is licensed pursuant to the provisions of the Contractor's License law Chapter 9 (commencing with Sec. 7000) of Division 3 of the Business and Professions Code, or that he is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than $500):

I, as an owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or through his own employees, provided that such improvements are not intended or offered for sale. If however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he did not build or improve for the purpose of sale).

☐ I, as owner of the property, am exempt from the sale requirements of the above due to: (1) I am improving my principal place of residence or appurtenances thereto, (2) the work will be performed prior to sale, (3) I have resided in the residence for the 12 months prior to completion of the work, and (4) I have not claimed exemption on this subdivision on more than two occasions more than once during any three-year period. (Sec. 7044 Business and Professions Code).

☐ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project, (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractor's License law).

☐ I am exempt under Sec. _____, B&PC for this reason _____.

WORKER'S COMPENSATION

I hereby affirm that I have a certificate of consent to self-insure, or a certificate of Worker's Compensation Insurance, or a certified copy thereof (Sec. 3700, Labor Code).

Policy # _____ Company Name _____

☐ I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Worker's Compensation Laws of California (not required for work valued at one hundred dollars ($100) or less).

NOTICE TO APPLICANT: If, after making this Certificate of Exemption, you should become subject to the Worker's Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked. This permit is issued pursuant to all provisions of Title 12 Chapter 12.12 of the Oakland Municipal Code. It is granted upon the express condition that the permittee shall be responsible for all claims and liabilities arising out of work performed under the permit or arising out of permittee's failure to perform the obligations with respect to street maintenance. The permittee shall, and by acceptance of the permit agrees to defend, indemnify, save and hold harmless the City, its officers and employees, from and against any and all suits, claims, or actions brought by any person for or on account of any bodily injuries, disease or illness or damage to persons and/or property sustained or arising in the construction of the work performed under the permit or in consequence of permittee's failure to perform the obligations with respect to street maintenance. This permit is void 90 days from the date of issuance unless an extension is granted by the Director of the Office of Planning and Building.

I hereby affirm that I am licensed under provisions of Chapter 9 of Division 3 of the Business and Professions Code and my license is in full force and effect (if contractor), that I have read this permit and agree to its requirements, and that the above information is true and correct under penalty of law.

K. B. Alexander Kenneth B. Alexander 7/18/00

Signature of Permittee ☒ Agent for ☐ Contractor ☐ Owner Date

DATE STREET LAST RESURFACED	SPECIAL PAVING DETAIL REQUIRED? ☐ YES ☒ NO	HOLIDAY RESTRICTION? (NOV 1 - JAN 1) ☐ YES ☒ NO	LIMITED OPERATION AREA? (7AM-9AM & 4PM-6PM) ☒ YES ☐ NO
ISSUED BY: N. Curtis		DATE ISSUED: 7-18-00	

Carl Sibley
fax 510/238-6693

Recording requested by:
City of Oakland

When Recorded Mail to:
.ty of Oakland
Community & Economic Develop. Agency
Building Services, Eng. info.
250 Frank Ogawa Plaza, 2nd Floor
Oakland, CA 94612

TAX ROLL PARCEL NUMBER
(ASSESSOR'S REFERENCE NUMBER)

MAP	BLOCK	PARCEL	SUB
0019	0073	003	02

Address: 421-23rd Avenue, Oakland ---------- Space Above For Recorder's Use Only----------

MINOR ENCROACHMENT PERMIT AND AGREEMENT

Bay Area/ Diablo Petroleum Co., a California Corporation, the owner of that certain property described in the Grant Deed recorded on September 8, 1999, Series Number 99-343737 in the Office of the Recorder, Alameda County, California and commonly known as 421-23rd Avenue, is hereby granted a Conditional Revocable Permit to encroach into the sidewalk area of 23rd Avenue with 2 monitoring wells. The location of said encroachment shall be as delineated in Exhibit 'A' attached hereto and made a part hereof.

The permittee agrees to comply with and be bound by the conditions for granting an Encroachment Permit attached hereto and made a part hereof.

This agreement shall be binding upon the present owner of the property described above and its successors in interest thereof.

In witness whereof, I have set my signature this 19th day of June 2000.

BAY AREA/DIABLO PETROLEUM CO

Name: DENNIS O'KEEFE
Title: CEO & PRES.

-- -- -- -- -- -- -- -- -- -- -- *Below for Official Use Only-* -- -- -- -- -- -- -- -- -- -- -- -- -- -- -

CITY OF OAKLAND

Dated_____ By: _____
CALVIN N. WONG
Director of Building Services
For:
WILLIAM E. CLAGGETT
Executive Director, Community &
Economic Development Agency

ALL-PURPOSE ACKNOWLEDGMENT

State of California
County of CONTRA COSTA } SS.

On 6-13-00 (DATE) before me, N.K. NELSON (NOTARY),
personally appeared DENNIS O'KEEFE (SIGNER(S))

☒ personally known to me - OR- ☐ ~~proved to me on the basis of satisfactory evidence~~ to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that he/~~she/they~~ executed the same in his/~~her/their~~ authorized capacity(~~ies~~), and that by his/~~her/their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

GBP 1 N.K. NELSON COMM. 1172428 NOTARY PUBLIC - CALIFORNIA CONTRA COSTA COUNTY My Comm. Expires Feb. 6, 2002 GBP 1

WITNESS my hand and official seal.

N. Nelson
NOTARY'S SIGNATURE

OPTIONAL INFORMATION

The information below is not required by law. However, it could prevent fraudulent attachment of this acknowledgment to an unauthorized document.

CAPACITY CLAIMED BY SIGNER (PRINCIPAL)

☐ INDIVIDUAL
☐ CORPORATE OFFICER
TITLE(S)
☐ PARTNER(S)
☐ ATTORNEY-IN-FACT
☐ TRUSTEE(S)
☐ GUARDIAN/CONSERVATOR
☐ OTHER: _____

DESCRIPTION OF ATTACHED DOCUMENT

TITLE OR TYPE OF DOCUMENT
NUMBER OF PAGES
DATE OF DOCUMENT
OTHER

SIGNER IS REPRESENTING:
NAME OF PERSON(S) OR ENTITY(IES)

RIGHT THUMBPRINT OF SIGNER

Top of thumbprint here

TO: Bay Area/Diablo Petroleum
c/o Golden Gate Petroleum
1001 Galaxy Way, Suite 308
Concord, CA 94520
(APN: 0019-0073-003-02)

RE: Minor Encroachment Permit located adjacent to 421-23rd Street, Oakland

CONDITIONS FOR GRANTING A MINOR ENCROACHMENT PERMIT

1. That this permit shall be revocable at the pleasure of the Director of Building Services.

2. That the permittee, by the acceptance, either expressed or implied, of the minor encroachment permit hereby disclaims any right, title, or interest in or to any portion of the public street area, and agrees that said temporary use of said area does not constitute an abandonment on the part of the City of Oakland of any of its rights for street purposes and otherwise.

3. The permittee shall maintain in force and effect at all times that said encroachment occupies said public area, good and sufficient public liability insurance in the amount of $300,000 for each occurrence, and property damage insurance in the amount of $50,000 for each occurrence, both including contractual liability against any and all claims arising out of the existence of said encroachment in said sidewalk area, as respects liabilities assumed under this permit,and that a certificate of such insurance and subsequent notices of the renewal thereof, shall be filed with the Director of Building Services Services of the City of Oakland, and that such certificate shall state that said insurance coverage shall not be canceled or be permitted to lapse without thirty (30) days written notice to said Director of Building Services . The Permittee also agrees that the City may review the type and amount of insurance required of the Permittee every five (5) years and may require the permittee to increase the amount of and/or change the type of insurance coverage required.

4. That the permittee, by the acceptance, either expressed or implied, of this revocable permit shall be solely and fully responsible for the repair or replacement of any portion or all of said improvements in the event that said improvements shall have failed or have been damaged to the extent of creating a menace or of becoming a hazard to the safety of the general public; and that the permittee shall be liable for the expenses connected therewith.

5. That upon the termination of the permission herein granted, permittee shall immediately remove said encroachment from the street area, and any damage resulting therefrom shall be repaired to the satisfaction of the Director of Building Services.

6. That the permittee shall file with the City of Oakland for recordation a Minor Encroachment Permit and Agreement, and shall be bound by and comply with all the terms and conditions of said permit.

7. That said permittee shall obtain an excavation permit prior to construction and a separate excavation permit prior to the removal of the ground water monitoring wells.

8. That said permittee shall provide to the City of Oakland an AS BUILT plan showing the actual location of the ground water monitoring wells and the results of all data collected from the monitoring wells.

9. That said permittee shall remove the monitoring well and repair any damage to the street area in accordance with City standards two (2) years after construction or as soon as monitoring is complete.

10. That said permittee shall notify the Office of Planning and Building after the monitoring well(s) is/are removed and the street area restored to initiate the procedure to rescind the minor encroachment permit.

11. That the monitoring well cover installed within the sidewalk area shall have a skidproof surface.

12. That the ground water monitoring well casting and cover shall be iron and shall meet H-20 load rating. The cover shall be secured with a minimum of two stainless steel bolts. Bolt and cover shall be mounted flush with the surrounding surface.

13. That the Permittee acknowledges that the City makes no representations or warranties as to the conditions beneath said encroachment. By accepting this revocable permit, Permittee agrees that it will use the encroachment area at its own risk, is responsible for the proper coordination of its activities with all other permittees, underground utilities, contractors, or workmen operating, within the encroachment area and for the safety of itself and any of its personnel in connection with its entry under this revocable permit.

14. The Permittee acknowledges that the City is unaware of the existence of any hazardous substances beneath the encroachment area, and Permittee hereby waives and fully releases and forever discharges the City and its officers, directors, employees, agents, servants, representatives, assigns and successors from any and all claims, demands, liabilities, damages, actions, causes of action, penalties, fines, liens, judgements, costs, or expenses whatsoever (including, without limitation, attorneys' fees and costs), whether direct or indirect, known or unknown, foreseen or unforeseen, that may arise out of or in any way connected with the physical condition or required remediation of the excavation area of any law or regulation applicable thereto, including, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended (42 U.S.C. Sections 9601 et seq.), the Resource Conservation and Recovery Act of 1976 (42 U.S.C. Section 466 et seq.), the Safe Drinking Water Act (14 U.S.C. Sections 1401, 1450), the Hazardous Waste Control Law (California Health and Safety Code Sections 25100 et seq.), the Porter-Cologne Water Quality Control Act (California Health and Safety Code Section 13000 et seq.), the Hazardous Substance Account Act (California Health and Safety Code Sections 253000 et seq.), and the Safe Drinking Water and Toxic Enforcement Act (California Health and Safety Code Section 25249.5 et seq.).

15. Permittee further acknowledges that it understands and agrees that it hereby expressly waives all rights and benefits which it now has or in the future may have, under and by virtue of the terms of California Civil Code Section 1542, which reads as follows: "A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS WHICH THE CREDITOR DOES NOT KNOW OR SUBJECT TO EXIST IN HIS FAVOR BY HIM MUST HAVE MATERIALLY AFFECTED HIS SETTLEMENT WITH THE DEBTOR."

16. Permittee recognizes that by waiving the provisions of this section, Permittee will not be able to make any claims for damages that may exist, and to which, if known, would materially affect its decision to agree to these encroachment terms and conditions, regardless of whether Permittee's lack of knowledge is the result of ignorance, oversight, error, negligence, or any other cause.

17. (a) That the permittee, by the acceptance of this revocable permit, agrees and promises to indemnify, defend, and hold harmless the City of Oakland, its officers, agents, and employees, to the maximum extent permitted by law, from any and all claims, demands, liabilities damages, actions, causes of action, penalties, fines, liens, judgments, costs, or expenses whatsoever (including, without limitation, attorneys' fees and costs; collectively referred to as "claims", whether direct or indirect, known or unknown, foreseen or unforeseen, to the extent that such claims were either (1) caused by the permittee, its agents, employees, contractors or representatives, or, (2) in the case of environmental contamination, the claim is a result of environmental contamination that emanates or emanated from the **421-23rd Street**, Oakland, California site, or was otherwise caused by the permittee, its agents, employees, contractors or representatives.

(b) That, if any contamination is discovered below or in the immediate vicinity of the encroachment, and the contaminants found are of the type used, housed, stored, processed or sold on or from the **421-23rd Street**, Oakland, California site, such shall amount to a rebuttable presumption that the contamination below, or in the immediate vicinity of, the encroachment was caused by the permittee, its agents, employees, contractors or representatives.

(c) That the permittee shall comply with all applicable federal, state, county and local laws, rules, and regulations governing the installation, maintenance, operation and abatement of the encroachment.

18. That the herein above conditions shall be binding upon the Permittee and the successive owners and assigns thereof.

19. That said Minor Encroachment Permit and Agreement shall take effect when all the conditions hereinabove set forth shall have been complied with to the satisfaction of the Director of Building Services, and shall become null and void upon the failure of the permittee to comply with all conditions hereinabove set forth.

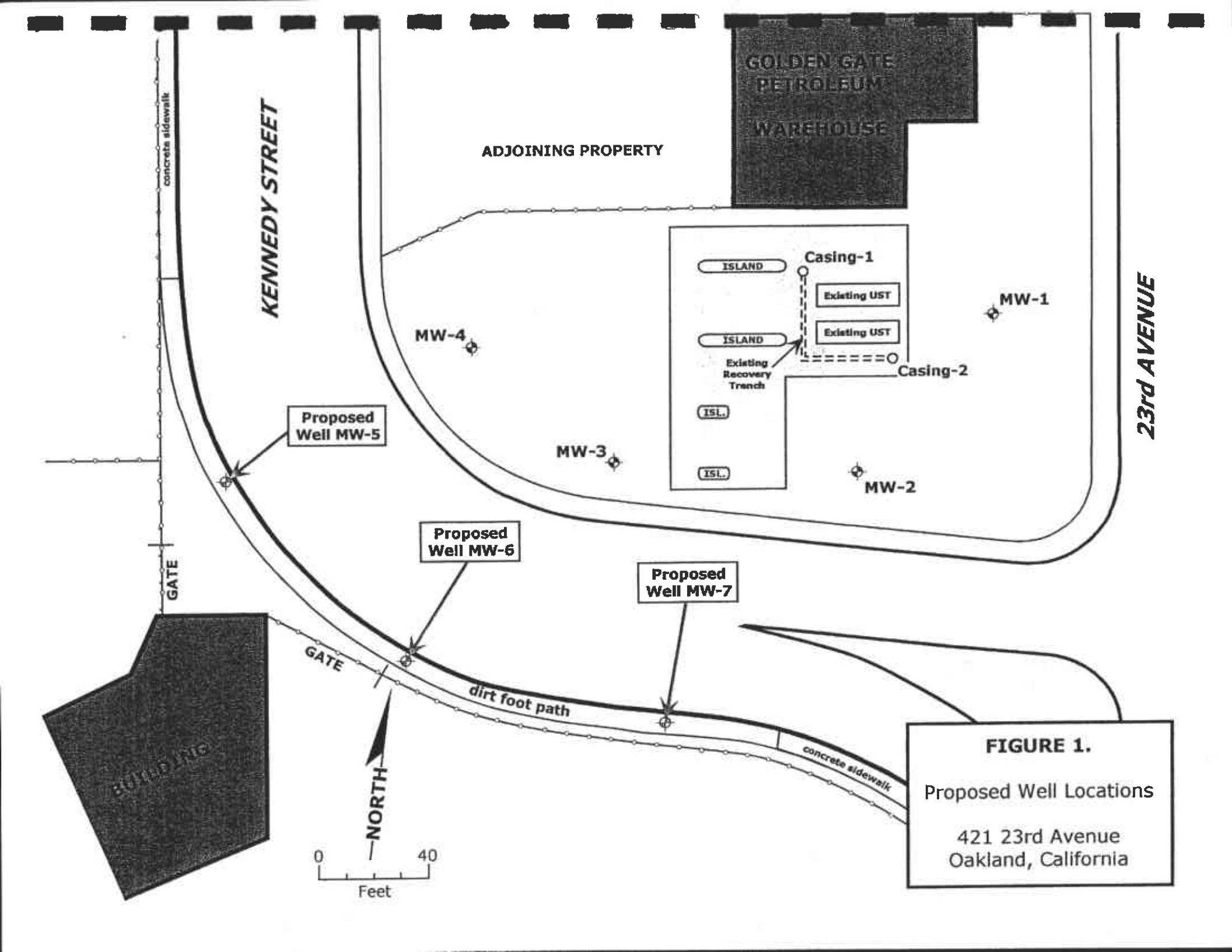


FIGURE 1.

Proposed Well Locations

421 23rd Avenue
Oakland, California

ATTACHMENT B

Boring Logs and DWR 188 Well Completion Reports

HYDRO ANALYSIS, INC.

11100 San Pablo Ave, Suite 200-A
El Cerrito, CA 94530
(510)620-0891 (510)620-0894 (fax)

FIELD BOREHOLE LOG

BOREHOLE NO.: **MW-5**

TOTAL DEPTH: **20'**

PROJECT INFORMATION

PROJECT:	**Golden Gate Petroleum**
JOB NO.:	**0277**
SITE LOCATION:	**421 23rd Avenue**
	Oakland, CA
LOGGED BY:	**Kenneth B. Alexander, RG, CH**
DATE DRILLED:	**July 28, 2000**

DRILLING INFORMATION

DRILLING CO.:	**Gregg Drilling & Testing**
	Martinez, CA
RIG TYPE:	**Rhino M-11**
METHOD OF DRILLING:	**8" Hollow Stem Augers**
SAMPLING METHODS:	**2" split barrel sampler**
HAMMER WT./DROP:	**140 lb., 30 in.**

NOTES:
Sunny, mild

▽ Water level during drilling
▼ Water level in completed well

Page 1 of 1

DEPTH (feet)	sample	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMPLE NUMBER	Blows (per 6")	PID (ppm)	WELL COMPLETION
0				ASPHALT: Paved area.				Locking Traffic Lid
				FILL: Brown fine to coarse sand (baserock)				Neat Cement Grout
			SP	POORLY-GRADED SAND: Dark greenish gray (5GY 3/1), fine sand, trace gravel to 3/4", medium dense, dry. (NO ODOR)			<5	2" PVC Blank Casing
-5			CH	FAT CLAY: Very dark gray (N 3/0), trace rootlets, high plasticity, medium stiff to soft, damp. (NO ODOR)	MW5 (4.5'-5')	3 3 4	<5 <5	Bentonite Chips
-10	▼		CL	LEAN CLAY: Variegated brown and gray, trace subangular coarse sand, trace rootlets, low plasticity, very stiff, damp. (NO ODOR)	MW5 (9.5'-10')	7 12 15	<5	#2-/16 Monterey Sand
-15	▽		ML	SILT: Olive brown (2.5Y 4/3), some clay, trace coarse sand, medium stiff to soft, wet. (NO ODOR)		3 2 3	<5	2" PVC Slotted Screen (0.01" slots)
-20			CL	SANDY LEAN CLAY: Olive brown (2.5Y 4/3), fine sand, trace black mottling, medium plasticity, medium stiff to stiff, wet. (NO ODOR)		2 3 5	<5	

HYDRO ANALYSIS, INC.

11100 San Pablo Ave, Suite 200-A
El Cerrito, CA 94530

(510)620-0891 (510)620-0894 (fax)

FIELD BOREHOLE LOG

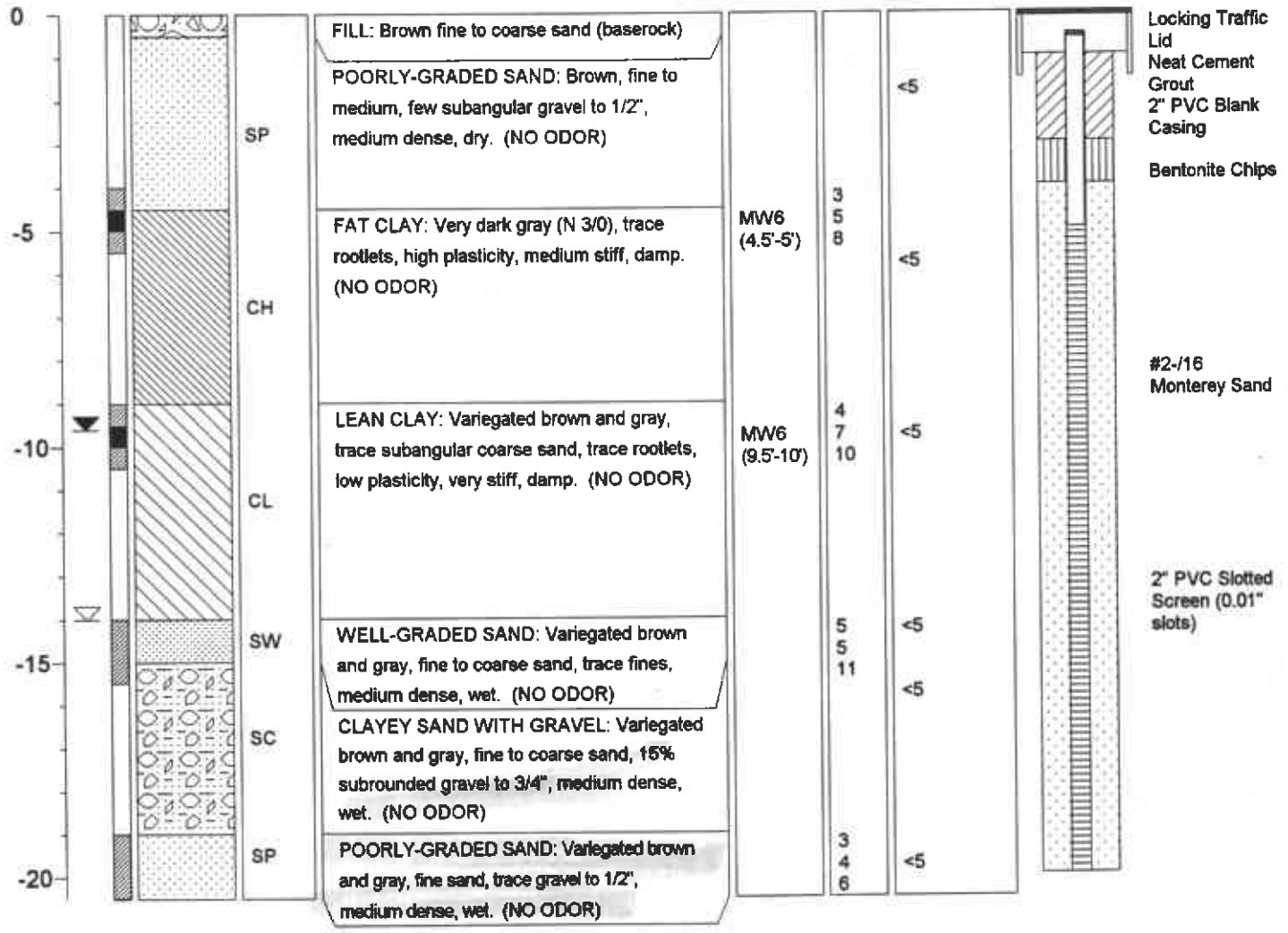
BOREHOLE NO.: **MW-6**

TOTAL DEPTH: **20'**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Golden Gate Petroleum**	DRILLING CO.:	**Gregg Drilling & Testing**
JOB NO.:	**0277**		**Martinez, CA**
SITE LOCATION:	**421 23rd Avenue**	RIG TYPE:	**Rhino M-11**
	Oakland, CA	METHOD OF DRILLING:	**8" Hollow Stem Augers**
LOGGED BY:	**Kenneth B. Alexander, RG, CH**	SAMPLING METHODS:	**2" split barrel sampler**
DATE DRILLED:	**July 28, 2000**	HAMMER WT./DROP:	**140 lb., 30 in.**

NOTES:
Sunny, mild

▽ Water level during drilling
▼ Water level in completed well



HYDRO ANALYSIS, INC.

11100 San Pablo Ave, Suite 200-A
El Cerrito, CA 94530

(510)620-0891 (510)620-0894 (fax)

FIELD BOREHOLE LOG

BOREHOLE NO.: **MW-7**

TOTAL DEPTH: **20'**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Golden Gate Petroleum**	DRILLING CO.:	**Gregg Drilling & Testing**
JOB NO.:	**0277**		**Martinez, CA**
SITE LOCATION:	**421 23rd Avenue**	RIG TYPE:	**Rhino M-11**
	Oakland, CA	METHOD OF DRILLING:	**8" Hollow Stem Augers**
LOGGED BY:	**Kenneth B. Alexander, RG, CH**	SAMPLING METHODS:	**2" split barrel sampler**
DATE DRILLED:	**July 28, 2000**	HAMMER WT./DROP:	**140 lb., 30 in.**

NOTES:
Sunny, mild

▽ Water level during drilling
▼ Water level in completed well

DEPTH (feet)	sample	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMPLE NUMBER	Blows (per 6")	PID (ppm)	WELL COMPLETION
0			SP	FILL: Brown fine to coarse sand (baserock)				Locking Traffic Lid
				POORLY-GRADED SAND: Brown, fine to medium, few subangular gravel to 1/2", medium dense, dry. (NO ODOR)			<5	Neat Cement Grout
-5			CH	FAT CLAY: Very dark gray (N 3/0), trace rootlets, high plasticity, medium stiff, damp. (NO ODOR)	MW7 (4.5'-5')	3 5 8	<5	2" PVC Blank Casing Bentonite Chips
-10			CL	LEAN CLAY: Variegated brown and gray, trace coarse sand, trace rootlets, low plasticity, very stiff, damp. (NO ODOR)	MW7 (9.5'-10')	3 3 4	<5	#2-/16 Monterey Sand
-15			CL	SANDY LEAN CLAY WITH GRAVEL: Variegated brown and gray, 30% fine to coarse sand, 15% subangular gravel to 3/4", trace fines, medium plasticity, very stiff, damp. (NO ODOR)		4 4 6	<5	2" PVC Slotted Screen (0.01" slots)
-20			CL	SANDY LEAN CLAY: Olive brown (2.5Y 4/3), fine sand, low plasticity, medium stiff, wet. (NO ODOR)		3 3 5	<5	

HYDRO ANALYSIS, INC.
Environmental & Water Resources Engineering
Groundwater Consultants

August 8, 2000

Marlon Magallanes
Alameda County Public Works Agency
399 Elmhurst Street
Hayward, CA 94544

Submittal of DWR 188 Reports
ACPWA Permit Number W00-460
Golden Gate Petroleum
421 23rd Avenue, Oakland, California

Dear Mr. Magallanes:

Attached are the completed Water Well Driller Reports (DWR 188) for new monitoring wells MW-5, MW-6, and MW-7 at the subject property.

I understand that the County will forward copies of the attached reports to the California Department of Water Resources in Sacramento, CA.

If you have any questions, please call me at 510/620-0891.

Sincerely,

Hydro Analysis, Inc.

K. B. Alex

Kenneth B. Alexander, RG, CH
Principal Hydrogeologist

11100 SAN PABLO AVE., SUITE 200-A, EL CERRITO, CALIFORNIA 94530 • TEL 510-620-0891 • FAX 510-620-0894
www.HydroAnalysis.com

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

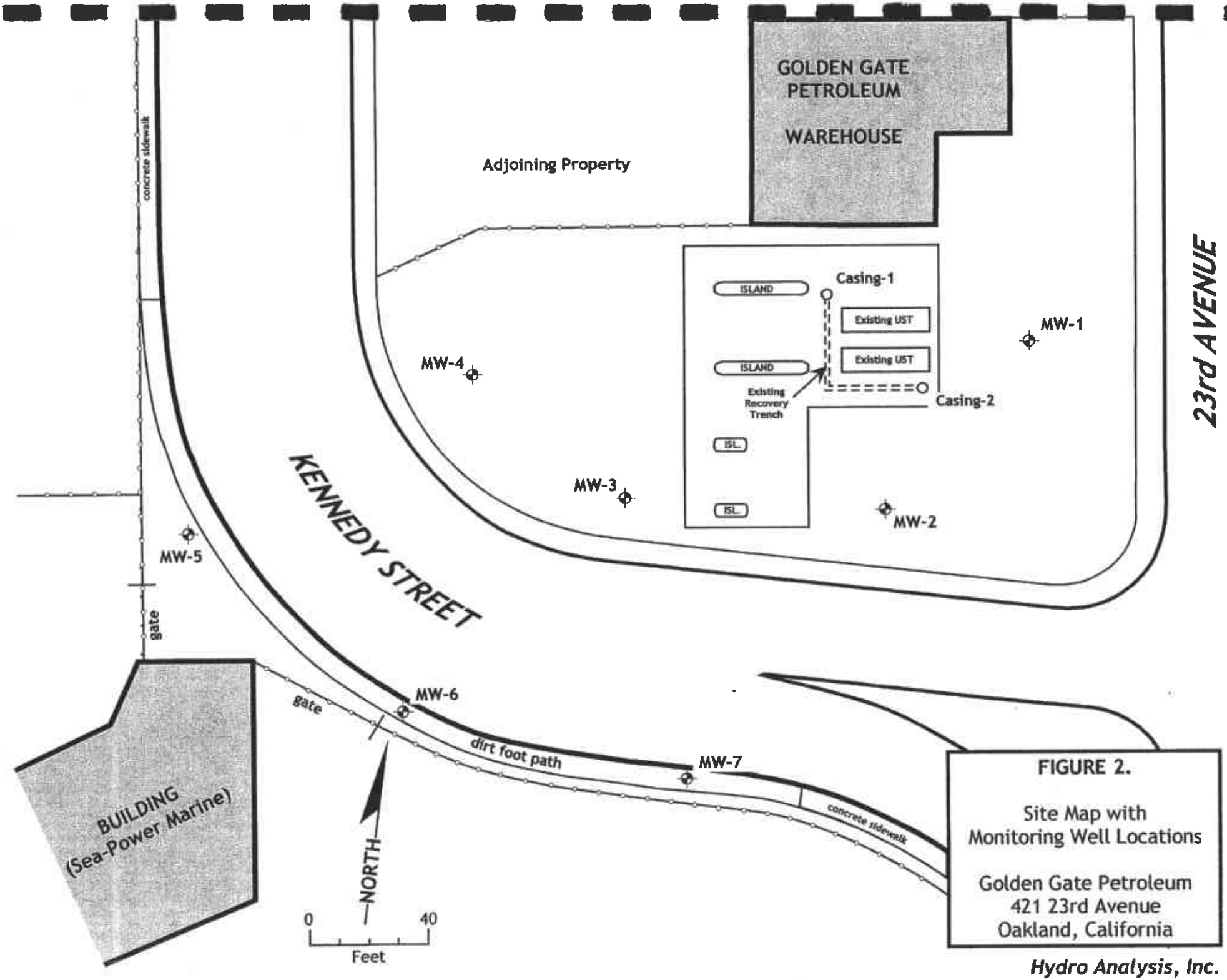


FIGURE 2.

Site Map with
Monitoring Well Locations

Golden Gate Petroleum
421 23rd Avenue
Oakland, California

Hydro Analysis, Inc.

ATTACHMENT C

Well Development and Sampling Logs

WELL DEVELOPMENT LOG

Project/No. 0277 Page 1 of 3

Site Location Golden Gate Petroleum
23rd Avenue Date 08/02/2000

Well No. MW-5

Weather Sunny, 75°-85° Time Began 09:22
Completed 09:53

EVACUATION DATA

Description of Measuring Point (MP) T.O.C.

Total Sounded Depth of Well Below MP 19.40'+0.27'

- Depth to Water Below MP 9.94' Diameter of Casing 2"

= Water Column in Well 9.73'

Gallons in Casing 1.64 + Annular Space _____ (30% porosity) = Total Gallons _____

Gallons Pumped During Development 18

Evacuation Method PVC Bailer

DEVELOPMENT / FIELD PARAMETERS

Color Tan Odor Muddy water

Appearance Muddy Water

	Time	Gallons	Temperature	Conductivity	pH	Clarity / Silt Content
surge						
5 minutes	09:31	3	21.2	1160	7.21	Tan Very High
2 minutes	09:37	6	20.6	1190	7.14	Tan Very High
	09:41	9	20.4	1114	7.05	Tan Very High
	09:45	12	20.4	1045	7.01	Tan Very High
	09:49	15	20.5	1075	6.94	Tan High
	09:53	18	20.4	1033	6.97	Tan High

Field Personnel _____

WELL DEVELOPMENT LOG

Project/No. 0277 Page 2 of 3

Site Location Golden Gate Petroleum
23rd Avenue Date 08/02/2000

Well No. MW-6

Weather Sunny, 75°-85° Time Began 10:23
Completed 10:54

EVACUATION DATA

Description of Measuring Point (MP) T.O.C.

Total Sounded Depth of Well Below MP 19.42'+0.27'

- Depth to Water Below MP 9.34' Diameter of Casing 2"

= Water Column in Well 10.35

Gallons in Casing 1.75 + Annular Space _____ = Total Gallons _____
(30% porosity)

Gallons Pumped During Development 18

Evacuation Method PVC Bailer

DEVELOPMENT / FIELD PARAMETERS

Color Tan Odor Muddy Water

Appearance Muddy Water

	Time	Gallons	Temperature	Conductivity	pH	Clarity / Silt Content
Surge						
5 minutes	10:32	3	20.2	4614 µS	6.72	Tan Very High
2 minutes	10:38	6	19.8	5.26 mS	6.84	Tan Very High
	10:42	9	19.6	6.34 mS	6.83	Tan Very High
	10:46	12	19.6	6.49 mS	6.80	Tan Very High
	10:50	15	19.6	6.81 mS	6.79	Tan High
	10:54	18	19.6	6.73 mS	6.81	Tan High

Field Personnel _____

WELL DEVELOPMENT LOG

Project/No. 0277 Page 3 of 3

Site Location Golden Gate Petroleum
23rd Avenue

Date 08/02/2000

Well No. MW-7

Time Began 11:10
Completed 11:43

Weather Sunny, 75°-85°

EVACUATION DATA

Description of Measuring Point (MP) T.O.C.

Total Sounded Depth of Well Below MP 19.33'+0.27'

Diameter of Casing

- Depth to Water Below MP 7.78'

= Water Column in Well 11.82'

Gallons in Casing 2.00 + Annular Space (30% porosity) = Total Gallons

Gallons Pumped During Development 20

Evacuation Method PVC Bailer

DEVELOPMENT / FIELD PARAMETERS

Color Tan Odor Muddy Water

Appearance Muddy Water

	Time	Gallons	Temperature	Conductivity	pH	Clarity / Silt Content
Surge						
5 minutes	11:20	4	21.2	10.92 mS	6.33	Tan Very High
2 minutes	11:27	8	20.7	11.75 mS	6.83	Tan Very High
	11:33	12	20.3	13.34 mS	6.77	Tan Very High
	11:38	16	20.9	11.05 mS	6.75	Tan High
	11:43	20	21.0	10.58 mS	6.80	Tan High

Field Personnel

Hageman-Aguiar, Inc.

11100 San Pablo Ave. Suite 200A
El Cerrito, CA 94530
(510) 620-0891 Fax (510) 620-0894

Project: Golden Gate Petroleum - 23rd Ave. **Date:** 08/07/2000

WELL #	DEPTH TO WATER	PRODUCT	WELL DEPTH	PRODUCT REMOVED	WATER REMOVED	COMMENTS
MW-1	8.30'	none	18.94'	-	9 gal	
MW-2	7.78'	none	19.85'	-	21 gal	
MW-3	8.22'	none	20.11'	-	16 gal	
MW-4	8.60'	none	19.01'	-	6 gal	
MW-5	9.67'	none	19.65'	-	7.5 gal	
MW-6	9.34'	none	19.64'	-	7.5 gal	
MW-7	7.92'	none	19.53'	-	6 gal	
CASING 1	9.68'	none	13.57'	-	8 gal	
CASING 2	8.91'	none	14.89'	-	12 gal	

WELL SAMPLING LOG

Site Location: GGP - 23rd Ave.
Page: 1 of 9

Well Number: MW-5
Date: 08/07/2000

Weather: Overcast, 50°-60°
Time Began: 10:27

Sampling Personnel: R Wilson
Completed: 10:42

EVACUATION DATA

Description of Measuring Point (MP): T.O.C.

Total Sounded Depth of Well Below MP	19.38' ± 0.27'	Sample Collected	
- Depth to Water Below MP	9.67'	Volatile Organics (VOA's)	6
= Water Column in Well	9.98'	1 Liter Amber Glass	2
x Casing Diameter Multiplier	0.169 2"	Polyethylene (plastic)	
= Gallons in Casing		Other	
Gallons Pumped Prior to Sampling	7.5	Samples Filtered	no

Evacuation Method:		Sample Method:	
PVC Bailer	X	Evacuation Bailer	X
Acrillyc Bailer		Disposable Bailer	
Pump		Pump	
Other		Direct	

SAMPLING DATA / FIELD PARAMETERS

Inspection for Free Product: None, Clear
(thickness to 0.01 foot, if any)

Time	10:30	10:33	10:36	10:39	10:42
Gals Removed	1.5	3	4.5	6	7.5
Temperature	20.3	20.3	20.2	20.3	20.2
Conductivity	1335	1293	1232	1288	1214
pH	7.24	7.15	7.07	7.01	7.05
Color / Odor	Tan	Tan	Tan	Tan	Tan
Turbidity	high	high	high	high	high
Other					

Comments:

WELL SAMPLING LOG

Site Location: GGP - 23rd Ave.
Page: 2 of 9
Well Number: MW-6
Date: 08/07/2000
Weather: Overcast, 50°-60°
Time Began: 11:11
Sampling Personnel: R Wilson
Completed: 11:23

EVACUATION DATA

Description of Measuring Point (MP): T.O.C.

Total Sounded Depth of Well Below MP	19.37' + 0.27'	Sample Collected	
- Depth to Water Below MP	9.34'	Volatile Organics (VOA's)	6
= Water Column in Well	10.30'	1 Liter Amber Glass	2
x Casing Diameter Multiplier	0.169	Polyethylene (plastic)	
= Gallons in Casing	1.74	Other	
Gallons Pumped Prior to Sampling	7.5	Samples Filtered	no

Evacuation Method:		Sample Method:	
PVC Bailer	X	Evacuation Bailer	X
Acrillyc Bailer		Disposable Bailer	
Pump		Pump	
Other		Direct	

SAMPLING DATA / FIELD PARAMETERS

Inspection for Free Product: None, clear
(thickness to 0.01 foot, if any)

Time	11:14	11:16	11:19	11:21	11:23
Gals Removed	1.5	3	4.5	6	7.5
Temperature	19.3	19.3	19.3	19.2	19.3
Conductivity	6.30mS	6.28mS	7.18mS	7.39mS	7.28mS
pH	6.54	6.71	6.72	6.73	6.75
Color / Odor	Tan	Tan	Tan	Tan	Tan
Turbidity	med	med	med	med	med
Other					

Comments:

WELL SAMPLING LOG

Site Location: GGP - 23rd Ave
Page: 3 of 9
Well Number: MW-7
Date: 08/07/2000
Weather: overcast, 55°-65°
Time Began: 11:37
Sampling Personnel: R Wilson
Completed: 11:49

EVACUATION DATA

Description of Measuring Point (MP): T.O.C.

Total Sounded Depth of Well Below MP	19.26'+0.27'		Sample Collected
- Depth to Water Below MP	7.92'	Volatile Organics (VOA's)	6
= Water Column in Well	11.61'	1 Liter Amber Glass	2
x Casing Diameter Multiplier	0.169 2"	Polyethylene (plastic)	
= Gallons in Casing	1.96	Other	
Gallons Pumped Prior to Sampling	6	Samples Filtered	no

Evacuation Method:		Sample Method:	
PVC Bailer	x	Evacuation Bailer	x
Acrillyc Bailer		Disposable Bailer	
Pump		Pump	
Other		Direct	

SAMPLING DATA / FIELD PARAMETERS

Inspection for Free Product: None, Clear
(thickness to 0.01 foot, if any)

Time	11:40	11:43	11:46	11:49	
Gals Removed	1.5	3	4.5	6	
Temperature	20.4	20.5	20.7	20.8	
Conductivity	11.28 mS	11.51 mS	10.99 mS	10.84 mS	
pH	6.79	6.86	6.90	6.89	
Color / Odor	Tan	Tan	Tan	Tan	
Turbidity	high	high	high	high	
Other					

Comments:

WELL SAMPLING LOG

Site Location: GGP - 23rd Ave.
Page: 4 of 9
Well Number: MW-1
Date: 08/07/2000
Weather: overcast 55°
Time Began: 14:11
Sampling Personnel: B Wilson
Completed: 14:22

EVACUATION DATA

Description of Measuring Point (MP): T.O.C.

Total Sounded Depth of Well Below MP	18.67' + 0.27'	Sample Collected	
- Depth to Water Below MP	8.30'	Volatile Organics (VOA's)	3
= Water Column in Well	10.64'	1 Liter Amber Glass	2
x Casing Diameter Multiplier	0.169 (2")	Polyethylene (plastic)	
= Gallons in Casing	1.80	Other	
Gallons Pumped Prior to Sampling	9	Samples Filtered	no

Evacuation Method:		Sample Method:	
PVC Bailer	X	Evacuation Bailer	X
Acrillyc Bailer		Disposable Bailer	
Pump		Pump	
Other		Direct	

SAMPLING DATA / FIELD PARAMETERS

Inspection for Free Product: None, clear
(thickness to 0.01 foot, if any)

Time	14:14	14:16	14:18	14:20	14:22	14:24
Gals Removed	1.5	3	4.5	6	7.5	9
Temperature	23.3	23.0	22.7	22.6	22.6	22.7
Conductivity	1026	1032	1028	1012	984	956
pH	7.97	7.54	7.42	7.31	7.27	7.29
Color / Odor	Tan	Tan	Tan	Tan	Tan	Tan
Turbidity	high	high	high	high	high	high
Other						

Comments:

WELL SAMPLING LOG

Site Location: GGP - 23rd Ave.
Page: 5 of 9

Well Number: MW-4
Date: 08/07/2000

Weather: Overcast, 55°-65°
Time Began: 15:14

Sampling Personnel: R Wilson
Completed: 15:23

EVACUATION DATA

Description of Measuring Point (MP): T.O.C.

Total Sounded Depth of Well Below MP	18.74' ± 0.27'		Sample Collected
- Depth to Water Below MP	8.60'	Volatile Organics (VOA's)	3
= Water Column in Well	10.41'	1 Liter Amber Glass	3
x Casing Diameter Multiplier	0.169 (2")	Polyethylene (plastic)	
= Gallons in Casing	1.76	Other	
Gallons Pumped Prior to Sampling	6	Samples Filtered	no

Evacuation Method:		Sample Method:	
PVC Bailer	x	Evacuation Bailer	X
Acrillyc Bailer		Disposable Bailer	
Pump		Pump	
Other		Direct	

SAMPLING DATA / FIELD PARAMETERS

Inspection for Free Product: None, clear
(thickness to 0.01 foot, if any)

Time	15:17	15:19	15:21	15:23	
Gals Removed	1.5	3	4.5	6	
Temperature	22.9	22.7	22.9	22.7	
Conductivity	1025	1035	1048	1041	
pH	6.98	6.85	6.78	6.76	
Color / Odor	Tan	Tan	Tan	Tan	
Turbidity	high	high	high	high	
Other					

Comments:

WELL SAMPLING LOG

Site Location: GGP - 23rd Ave.
Page: 6 of 9

Well Number: MW-2
Date: 08/07/2000

Weather: Overcast, 55° - 65°
Time Began: 15:50

Sampling Personnel: R Wilson
Completed: 16:10

EVACUATION DATA

Description of Measuring Point (MP): T.O.C.

Total Sounded Depth of Well Below MP: 19.58' ± 0.27'

- Depth to Water Below MP: 7.78'

= Water Column in Well: 12.07'

x Casing Diameter Multiplier: 0.653 (4")

= Gallons in Casing: 7.88

Gallons Pumped Prior to Sampling: 21

Sample Collected

Volatile Organics (VOA's)	3
1 Liter Amber Glass	2
Polyethylene (plastic)	
Other	
Samples Filtered	no

Evacuation Method:

PVC Bailer	x
Acrillyc Bailer	
Pump	
Other	

Sample Method:

Evacuation Bailer	x
Disposable Bailer	
Pump	
Direct	

SAMPLING DATA / FIELD PARAMETERS

Inspection for Free Product: (thickness to 0.01 foot, if any) None, Clear

					sample
Time	15:53	15:56	15:58	16:00	16:10
Gals Removed	6	12	18	21	21
Temperature	23.4	22.3	21.7	21.5	23.7
Conductivity	1214	1254	1278	1267	1112
pH	6.75	6.90	6.98	7.02	6.93
Color / Odor	Tan	Tan	Tan	Tan	clear
Turbidity	med	med	med	high	low
Other				dewatered	

Comments:

WELL SAMPLING LOG

Site Location: GGP - 23rd Ave
Well Number: MW-3
Weather: Overcast, 55°-65°
Sampling Personnel: R Wilson

Page: 7 of 9
Date: 08/07/2000
Time Began: 16:34
Completed: 16:50

EVACUATION DATA

Description of Measuring Point (MP): T.O.C.

Total Sounded Depth of Well Below MP	19.84'+0.27'		Sample Collected
- Depth to Water Below MP	8.22'	Volatile Organics (VOA's)	3
= Water Column in Well	11.89'	1 Liter Amber Glass	2
x Casing Diameter Multiplier	0.653 (4")	Polyethylene (plastic)	
= Gallons in Casing	7.76	Other	
Gallons Pumped Prior to Sampling	16	Samples Filtered	no

Evacuation Method:		Sample Method:	
PVC Bailer	X	Evacuation Bailer	X
Acrillyc Bailer		Disposable Bailer	
Pump		Pump	
Other		Direct	

SAMPLING DATA / FIELD PARAMETERS

Inspection for Free Product: None, clear
(thickness to 0.01 foot, if any)

Time	16:37	16:39	16:40	Sample 16:50	
Gals Removed	6	12	16	16	
Temperature	22.7	21.5	21.1	21.0	
Conductivity	1203	1144	1119	1123	
pH	6.83	7.01	7.09	7.22	
Color / Odor	Tan	Tan	Tan	Tan	
Turbidity	med	med	med	med	
Other					

Comments:

WELL SAMPLING LOG

Site Location: GGP - 23rd Ave.
Well Number: Casing 1
Weather: Overcast 55°-65°
Sampling Personnel: R Wilson

Page: 8 of 9
Date: 08/07/2000
Time Began: 17:25
Completed: 17:40

EVACUATION DATA

Description of Measuring Point (MP): WB@G

Total Sounded Depth of Well Below MP: 13.30' ± 0.27'
- Depth to Water Below MP: 9.68'
= Water Column in Well: 3.89'
x Casing Diameter Multiplier: 0.653 (4")
= Gallons in Casing: 2.54
Gallons Pumped Prior to Sampling: 8

Sample Collected
Volatile Organics (VOA's): 3
1 Liter Amber Glass: 2
Polyethylene (plastic):
Other:
Samples Filtered: no

Evacuation Method:
PVC Bailer: X
Acrillyc Bailer:
Pump:
Other:

Sample Method:
Evacuation Bailer: X
Disposable Bailer:
Pump:
Direct:

SAMPLING DATA / FIELD PARAMETERS

Inspection for Free Product (thickness to 0.01 foot, if any): clear, None

Time	17:30	17:34	17:37	17:40	
Gals Removed	2	4	6	8	
Temperature	22.2	22.4	22.6	22.5	
Conductivity	941	934	939	937	
pH	7.17	7.09	7.10	7.09	
Color / Odor	Tan	Tan	Tan	Tan	
Turbidity	low	low	low	low	
Other					

Comments:

WELL SAMPLING LOG

Site Location: GGP - 23rd Ave. | Page: 9 of 9

Well Number: Casing 2 | Date: 08/07/2000

Weather: Overcast, 55°-65° | Time Began: 17:54

Sampling Personnel: B Wilson | Completed: 18:07

EVACUATION DATA

Description of Measuring Point (MP): WB @ G

Total Sounded Depth of Well Below MP	14.62' +0.27'		Sample Collected
- Depth to Water Below MP	8.91'	Volatile Organics (VOA's)	3
= Water Column in Well	5.98'	1 Liter Amber Glass	2
x Casing Diameter Multiplier	0.653 4"	Polyethylene (plastic)	
= Gallons in Casing	3.90	Other	
Gallons Pumped Prior to Sampling	12	Samples Filtered	no

Evacuation Method:		Sample Method:	
PVC Bailer	X	Evacuation Bailer	X
Acrillyc Bailer		Disposable Bailer	
Pump		Pump	
Other		Direct	

SAMPLING DATA / FIELD PARAMETERS

Inspection for Free Product: (thickness to 0.01 foot, if any) None, Clear

Time	17:57	18:01	18:04	18:07	
Gals Removed	3	6	9	12	
Temperature	22.7	22.8	22.3	22.3	
Conductivity	913	943	959	954	
pH	7.10	7.12	7.16	7.13	
Color / Odor	Tan	Tan	Tan	Tan	
Turbidity	low	low	low	low	
Other					

Comments:

ATTACHMENT D

Survey Data

AUGUST 7, 2000
GARY AGUIAR
RANDAL WILSON

SOKKIA C3, AUTO LEVEL
TOPO ROD

GOLDEN GATE PETROLEUM
421 - 23RD AVENUE
OAKLAND, CA

MONITORING WELL ELEVATIONS

STA	BS	HI	FS	ELEV
MW-2				9.22
	5.30	14.52		
MW-2			5.80	8.72
MW-1			4.70	9.82
MW-1			5.05	9.47
CASING-1			3.75	10.77
CASING-2			4.54	9.98
MW-7			5.26	9.26
MW-7			5.92	8.60
MW-3			5.14	9.38
MW-3			5.52	9.00
	5.55	14.55		
MW-4			4.83	9.72
MW-4			5.25	9.30
MW-5			3.83	10.72
MW-5			4.36	10.19
MW-6			4.26	10.29
MW-6			4.69	9.86
MW-2			5.32	9.23

(*) BENCHMARK AT CHEVRON/RMC LONESTAR FACILITY, ON NORTHEASTERLY SIDE OF 23RD AVE., THE (RR TRACKS RUNNING THROUGH SITE), ELEV. SET

BENCHMARK: METAL RIM @ GRADE, WELL MW-2
SET FROM 11-19-99 SURVEY (*)
TOC, PLASTIC CASING, WELL MW-2
METAL RIM @ GRADE, WELL MW-1
TOC, PLASTIC CASING, WELL MW-1
METAL RIM @ GRADE, RECOVERY CASING #1
METAL RIM @ GRADE, RECOVERY CASING #2
METAL RIM @ GRADE, WELL MW-7
TOC, PLASTIC CASING, WELL MW-7
METAL RIM @ GRADE, WELL MW-3
TOC, PLASTIC CASING, WELL MW-3

METAL RIM @ GRADE, WELL MW-4
TOC, PLASTIC CASING, WELL MW-4
METAL RIM @ GRADE, WELL MW-5
TOC, PLASTIC CASING, WELL MW-5
METAL RIM @ GRADE, WELL MW-6
TOC, PLASTIC CASING, WELL MW-6
BENCHMARK

333 - 23RD AVE.,
NORTHEASTERLY TOP OF RAIL @ CURB
AT 7.91 FEET MSL.

ATTACHMENT E

Soil Analytical Results

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94085 • (408) 735-1550 • Fax (408) 735-1554

August 08, 2000

Keg Alexander
Hydro Analysis, Inc.
11100 San Pablo Avenue, Suite 200-A
El Cerrito, CA 94530

Order: 21575
Project Name: Golden Gate Petroleum
Project Number:
Project Notes:

Date Collected: 7/28/00
Date Received: 7/28/00
P.O. Number:

On July 28, 2000, samples were received under documentented chain of custody. Results for the following analyses are attached:

Matrix	Test	Method
Solid	Gas/BTEX	EPA 8015 MOD. (Purgeable)
		EPA 8020
	MTBE by EPA 8260B	EPA 8260B
	TPH as Diesel	EPA 8015 MOD. (Extractable)

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#2346). If you have any questions regarding procedures or results, please call me at 408-735-1550.

Sincerely,

Michelle L. Anderson
Lab Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94085 • (408) 735-1550 • Fax (408) 735-1554

Hydro Analysis, Inc.
11100 San Pablo Avenue, Suite 200-A
El Cerrito, CA 94530
Attn: Keg Alexander

Date: 8/8/00
Date Received: 7/28/00
Project Name: Golden Gate Petroleum
Project Number:
P.O. Number:
Sampled By: Keg Alexander

Certified Analytical Report

Order ID: 21575 **Lab Sample ID:** 21575-001 **Client Sample ID:** MW5 (4.5-5)
Sample Time: 8:25 AM **Sample Date:** 7/28/00 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	1	1	mg/Kg	7/31/00	8/2/00	DS000710	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	106	65 - 135

Order ID: 21575 **Lab Sample ID:** 21575-002 **Client Sample ID:** MW5 (9.5-10)
Sample Time: 8:30 AM **Sample Date:** 7/28/00 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	130	x	5	1	5	mg/Kg	7/31/00	8/3/00	DS000710	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	105	65 - 135

Order ID: 21575 **Lab Sample ID:** 21575-003 **Client Sample ID:** MW6 (4.5-5)
Sample Time: 9:50 AM **Sample Date:** 7/28/00 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	13	x	2	1	2	mg/Kg	7/31/00	8/3/00	DS000710	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	102	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94085 • (408) 735-1550 • Fax (408) 735-1554

Hydro Analysis, Inc.
11100 San Pablo Avenue, Suite 200-A
El Cerrito, CA 94530
Attn: Keg Alexander

Date: 8/8/00
Date Received: 7/28/00
Project Name: Golden Gate Petroleum
Project Number:
P.O. Number:
Sampled By: Keg Alexander

Certified Analytical Report

Order ID: 21575 **Lab Sample ID:** 21575-004 **Client Sample ID:** MW6 (9.5-10)
Sample Time: 9:55 AM **Sample Date:** 7/28/00 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	5.6	x	1	1	1	mg/Kg	7/31/00	8/3/00	DS000710	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	97	65 - 135

Order ID: 21575 **Lab Sample ID:** 21575-005 **Client Sample ID:** MW7 (4.5-5)
Sample Time: 11:15 AM **Sample Date:** 7/28/00 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	1	1	mg/Kg	7/31/00	8/3/00	DS000710	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	111	65 - 135

Order ID: 21575 **Lab Sample ID:** 21575-006 **Client Sample ID:** MW-7 (9.5-10)
Sample Time: 11:20 AM **Sample Date:** 7/28/00 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	15	x	1	1	1	mg/Kg	7/31/00	8/3/00	DS000710	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	103	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

CA ELAP# 2346

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Hydro Analysis, Inc.
11100 San Pablo Avenue, Suite 200-A
El Cerrito, CA 94530
Attn: Keg Alexander

Date: 8/8/00
Date Received: 7/28/00
Project Name: Golden Gate Petroleum
Project Number:
P.O. Number:
Sampled By: Keg Alexander

Certified Analytical Report

Order ID: 21575 **Lab Sample ID:** 21575-001 **Client Sample ID:** MW5 (4.5-5)

Sample Time: 8:25 AM **Sample Date:** 7/28/00 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	ND		1	0.005	0.005	mg/Kg	N/A	7/31/00	SGC1000731	EPA 8020
Toluene	ND		1	0.005	0.005	mg/Kg	N/A	7/31/00	SGC1000731	EPA 8020
Ethyl Benzene	ND		1	0.005	0.005	mg/Kg	N/A	7/31/00	SGC1000731	EPA 8020
Xylenes, Total	ND		1	0.005	0.005	mg/Kg	N/A	7/31/00	SGC1000731	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	102	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	ND		1	1	1	mg/Kg	N/A	7/31/00	SGC1000731	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	107	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Project Name: Golden Gate Petroleum
Project Number:
P.O. Number:
Sampled By: Keg Alexander

Certified Analytical Report

Order ID: 21575 **Lab Sample ID:** 21575-002 **Client Sample ID:** MW5 (9.5-10)

Sample Time: 8:30 AM **Sample Date:** 7/28/00 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	ND		1	0.005	0.005	mg/Kg	N/A	7/31/00	SGC1000731	EPA 8020
Toluene	ND		1	0.005	0.005	mg/Kg	N/A	7/31/00	SGC1000731	EPA 8020
Ethyl Benzene	ND		1	0.005	0.005	mg/Kg	N/A	7/31/00	SGC1000731	EPA 8020
Xylenes, Total	ND		1	0.005	0.005	mg/Kg	N/A	7/31/00	SGC1000731	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	89	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	ND		1	1	1	mg/Kg	N/A	7/31/00	SGC1000731	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	76	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Date Received: 7/28/00
Project Name: Golden Gate Petroleum
Project Number:
P.O. Number:
Sampled By: Keg Alexander

Certified Analytical Report

Order ID: 21575 **Lab Sample ID:** 21575-003 **Client Sample ID:** MW6 (4.5-5)

Sample Time: 9:50 AM **Sample Date:** 7/28/00 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	ND		1	0.005	0.005	mg/Kg	N/A	7/31/00	SGC1000731	EPA 8020
Toluene	ND		1	0.005	0.005	mg/Kg	N/A	7/31/00	SGC1000731	EPA 8020
Ethyl Benzene	ND		1	0.005	0.005	mg/Kg	N/A	7/31/00	SGC1000731	EPA 8020
Xylenes, Total	ND		1	0.005	0.005	mg/Kg	N/A	7/31/00	SGC1000731	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	179	65 - 135

Comment: Surrogate recovery out of control limits due to matrix interference

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	ND		1	1	1	mg/Kg	N/A	7/31/00	SGC1000731	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	174	65 - 135

Comment: Surrogate recovery out of control limits due to matrix interference

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Date: 8/8/00
Date Received: 7/28/00
Project Name: Golden Gate Petroleum
Project Number:
P.O. Number:
Sampled By: Keg Alexander

Certified Analytical Report

Order ID: 21575 **Lab Sample ID:** 21575-004 **Client Sample ID:** MW6 (9.5-10)

Sample Time: 9:55 AM **Sample Date:** 7/28/00 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	ND		1	0.005	0.005	mg/Kg	N/A	7/31/00	SGC1000731	EPA 8020
Toluene	ND		1	0.005	0.005	mg/Kg	N/A	7/31/00	SGC1000731	EPA 8020
Ethyl Benzene	ND		1	0.005	0.005	mg/Kg	N/A	7/31/00	SGC1000731	EPA 8020
Xylenes, Total	ND		1	0.005	0.005	mg/Kg	N/A	7/31/00	SGC1000731	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	106	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	ND		1	1	1	mg/Kg	N/A	7/31/00	SGC1000731	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	110	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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P.O. Number:
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Certified Analytical Report

Order ID: 21575 **Lab Sample ID:** 21575-005 **Client Sample ID:** MW7 (4.5-5)

Sample Time: 11:15 AM **Sample Date:** 7/28/00 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	ND		1	0.005	0.005	mg/Kg	N/A	7/31/00	SGC1000731	EPA 8020
Toluene	ND		1	0.005	0.005	mg/Kg	N/A	7/31/00	SGC1000731	EPA 8020
Ethyl Benzene	ND		1	0.005	0.005	mg/Kg	N/A	7/31/00	SGC1000731	EPA 8020
Xylenes, Total	ND		1	0.005	0.005	mg/Kg	N/A	7/31/00	SGC1000731	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	114	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	ND		1	1	1	mg/Kg	N/A	7/31/00	SGC1000731	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	119	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Date: 8/8/00
Date Received: 7/28/00
Project Name: Golden Gate Petroleum
Project Number:
P.O. Number:
Sampled By: Keg Alexander

Certified Analytical Report

Order ID: 21575 **Lab Sample ID:** 21575-006 **Client Sample ID:** MW-7 (9.5-10)

Sample Time: 11:20 AM **Sample Date:** 7/28/00 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	ND		1	0.005	0.005	mg/Kg	N/A	7/31/00	SGC1000731	EPA 8020
Toluene	ND		1	0.005	0.005	mg/Kg	N/A	7/31/00	SGC1000731	EPA 8020
Ethyl Benzene	ND		1	0.005	0.005	mg/Kg	N/A	7/31/00	SGC1000731	EPA 8020
Xylenes, Total	ND		1	0.005	0.005	mg/Kg	N/A	7/31/00	SGC1000731	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	112	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	ND		1	1	1	mg/Kg	N/A	7/31/00	SGC1000731	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	115	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Project Number:
P.O. Number:
Sampled By: Keg Alexander

Certified Analytical Report

Order ID: 21575 **Lab Sample ID:** 21575-001 **Client Sample ID:** MW5 (4.5-5)

Sample Time: 8:25 AM **Sample Date:** 7/28/00 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		1	5	5	µg/Kg	8/2/00	SMS1000731	EPA 8260B

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	90	65 - 135
Dibromofluoromethane	105	65 - 135
Toluene-d8	125	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Project Name: Golden Gate Petroleum
Project Number:
P.O. Number:
Sampled By: Keg Alexander

Certified Analytical Report

Order ID: 21575 **Lab Sample ID:** 21575-002 **Client Sample ID:** MW5 (9.5-10)

Sample Time: 8:30 AM **Sample Date:** 7/28/00 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		1	5	5	µg/Kg	8/8/00	SMS2000808	EPA 8260B

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	93	65 - 135
Dibromofluoromethane	112	65 - 135
Toluene-d8	98	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Attn: Keg Alexander

Date: 8/8/00
Date Received: 7/28/00
Project Name: Golden Gate Petroleum
Project Number:
P.O. Number:
Sampled By: Keg Alexander

Certified Analytical Report

Order ID: 21575 **Lab Sample ID:** 21575-003 **Client Sample ID:** MW6 (4.5-5)

Sample Time: 9:50 AM **Sample Date:** 7/28/00 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		1	5	5	µg/Kg	8/2/00	SMS1000731	EPA 8260B

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	95	65 - 135
Dibromofluoromethane	101	65 - 135
Toluene-d8	101	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Project Number:
P.O. Number:
Sampled By: Keg Alexander

Certified Analytical Report

Order ID: 21575 **Lab Sample ID:** 21575-004 **Client Sample ID:** MW6 (9.5-10)

Sample Time: 9:55 AM **Sample Date:** 7/28/00 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	14		1	5	5	µg/Kg	8/2/00	SMS1000731	EPA 8260B

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	93	65 - 135
Dibromofluoromethane	109	65 - 135
Toluene-d8	101	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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P.O. Number:
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Certified Analytical Report

Order ID: 21575 **Lab Sample ID:** 21575-005 **Client Sample ID:** MW7 (4.5-5)

Sample Time: 11:15 AM **Sample Date:** 7/28/00 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		1	5	5	µg/Kg	8/2/00	SMS1000731	EPA 8260B

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	85	65 - 135
Dibromofluoromethane	118	65 - 135
Toluene-d8	116	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Project Number:
P.O. Number:
Sampled By: Keg Alexander

Certified Analytical Report

Order ID: 21575 **Lab Sample ID:** 21575-006 **Client Sample ID:** MW-7 (9.5-10)

Sample Time: 11:20 AM **Sample Date:** 7/28/00 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		1	5	5	µg/Kg	8/2/00	SMS1000731	EPA 8260B

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	90	65 - 135
Dibromofluoromethane	101	65 - 135
Toluene-d8	101	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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STANDARD LAB QUALIFIERS (FLAGS)

All Entech lab reports now reference standard lab qualifiers. These qualifiers are noted in the adjacent column to the analytical result and are adapted from the U.S. EPA CLP program. The current qualifier list is as follows:

Qualifier (Flag)	Description
U	Compound was analyzed for but not detected
J	Estimated value for tentatively identified compounds or if result is below PQL but above MDL
N	Presumptive evidence of a compound (for Tentatively Identified Compounds)
B	Analyte is found in the associated Method Blank
E	Compounds whose concentrations exceed the upper level of the calibration range
D	Multiple dilutions reported for analysis; discrepancies between analytes may be due to dilution
X	Results within quantitation range; chromatographic pattern not typical of fuel

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY
Laboratory Control Spikes

QC Batch #: DS000710
Matrix: Solid
Units: mg/Kg

Date analyzed: 08/02/00
Date extracted: 07/31/00
Quality Control Sample: Blank Spike

PARAMETER	Method #	MB mg/Kg	SA mg/Kg	SR mg/Kg	SP mg/Kg	**SP %R**	SPD mg/Kg	**SPD %R**	RPD	QC LIMITS RPD	QC LIMITS %R
Diesel	8015M	<1.0	25	ND	24	**95**	24	**98**	3.0	30	50-150
Hexocosane				109%	109%		106%				65-135

Calculated Recovery Outside of Control Limits:

Definition of Terms:

MB: Method Blank
na: Not Analyzed in QC batch
SA: Spike Added
SR: Sample Result
RPD(%): Duplicate Analysis - Relative Percent Difference
SP: Spike Result
SP (%R): Spike % Recovery
SPD: Spike Duplicate Result
SPD (%R): Spike Duplicate % Recovery
NC: Not Calculated

Entech Analytical Labs, Inc.

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Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography
Laboratory Control Sample

QC Batch #: SGC1000731
Matrix: Soil
Units: µg/kg

Date Analyzed: 07/28/00
Quality Control Sample: Blank Spike

PARAMETER	Method #	MB µg/kg	SA µg/kg	SR µg/kg	SP	**SP % R**	SPD µg/kg	**SPD %R**	RPD	QC LIMITS RPD	QC LIMITS %R
Benzene	8020	<5.0	5.5	ND	4.8	**87**	5.2	**94**	7.2	25	70-130
Toluene	8020	<5.0	27.0	ND	31	**115**	34	**126**	9.2	25	70-130
Ethyl Benzene	8020	<5.0	5.5	ND	5.9	**107**	6.8	**123**	14.6	25	70-130
Xylenes	8020	<5.0	33.0	ND	33	**100**	38	**114**	13.3	25	70-130
Gasoline	8015	<1000	471	ND	496	**105**	511	**108**	3.0	25	75-125
aaa-TFT(S.S.)-PID	8020			111%	93%		93%				65-135
aaa-TFT(S.S.)-FID	8015			114%	111%		122%				65-135

Definition of Terms:

na: Not Analyzed in QC batch
MB: Method Blank
SA: Spike Added
SR: Sample Result
RPD(%): Duplicate Analysis - Relative Percent Difference
SP: Spike Result
SP (%R): Spike % Recovery
SPD: Spike Duplicate Result
SPD (%R): Spike % Recovery
NC: Not Calculated

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QUALITY CONTROL RESULTS SUMMARY

Volatile Organic Compounds
Laboratory Control Sample

QC Batch #: SMS000731
Matrix: Solid
Units: µg/kg

Date analyzed: 07/31/00
Spiked Sample: Blank Spike

PARAMETER	Method #	SA µg/kg	SR µg/kg	SP µg/kg	SP %R	SPD µg/kg	SPD %R	RPD	QC LIMITS RPD	QC LIMITS
1,1-Dichloroethene	8240/8260	25	ND	25.5	**102**	25.5	**102**	0.0	25	65-135
Benzene	8240/8260	25	ND	25.3	**101**	24.1	**96**	4.9	25	65-135
Trichloroethene	8240/8260	25	ND	25.0	**100**	24.9	**100**	0.4	25	65-135
Toluene	8240/8260	25	ND	25.4	**102**	24.9	**100**	2.0	25	65-135
Chlorobenzene	8240/8260	25	ND	25.2	**101**	24.5	**98**	2.8	25	65-135
Surrogates										
Toluene -d8	8240/8260		99%	98%		99%				65-135
Dibromofluoromethane	8240/8260		96%	100%		101%				65-135
4-Bromofluorobenzene	8240/8260		92%	95%		96%				65-135
MTBE-d3	8240/8260		82%	87%		91%				65-135

Definition of Terms:

- na: Not Analyzed in QC batch
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike Duplicate % Recovery
- NC: Not Calculated

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

Volatile Organic Compounds
Laboratory Control Sample

QC Batch #: SMS2000808
Matrix: Solid
Units: µg/kg

Date analyzed: 08/08/00
Spiked Sample: Blank Spike

PARAMETER	Method #	SA µg/kg	SR µg/kg	SP µg/kg	SP %R	SPD µg/kg	SPD %R	RPD	QC LIMITS RPD	QC LIMITS
1,1-Dichloroethene	8240/8260	25	ND	24.4	**98**	25.2	**101**	3.2	25	65-135
Benzene	8240/8260	25	ND	24.9	**100**	25.9	**104**	3.9	25	65-135
Trichloroethene	8240/8260	25	ND	24.6	**98**	25.9	**104**	5.1	25	65-135
Toluene	8240/8260	25	ND	22.8	**91**	23.8	**95**	4.3	25	65-135
Chlorobenzene	8240/8260	25	ND	24.5	**98**	25.7	**103**	4.8	25	65-135
Surrogates										
Toluene -d8	8240/8260		96%	94%		95%				65-135
Dibromofluoromethane	8240/8260		106%	109%		109%				65-135
4-Bromofluorobenzene	8240/8260		100%	103%		103%				65-135
1,2 - Dichloroethane-d4	8240/8260		108%	115%		114%				65-135

Definition of Terms:

na: Not Analyzed in QC batch
SA: Spike Added
SR: Sample Result
RPD(%): Duplicate Analysis - Relative Percent Difference
SP: Spike Result
SP (%R): Spike % Recovery
SPD: Spike Duplicate Result
SPD (%R): Spike Duplicate % Recovery
NC: Not Calculated

CHAIN OF CUSTODY RECORD

report to: Keg Alexander → HYDRO ANALYSIS, INC.

PROJECT NAME AND ADDRESS:
Golden Gate Petroleum
421 23rd Ave
Oakland, CA

SAMPLER: (Signature)
K. B. Alexander

~~HAGEMAN-AGUIAR, INC.~~
11100 San Pablo Ave., Suite 200-A
El Cerrito, CA 94530
(510)620-0891 (510)620-0894 (FAX)

CROSS REFERENCE NUMBER	DATE	TIME	SOIL	WATER	SAMPLE LOCATION	TPH-diesel	TPH-gasoline	BTEX (EPA Method 8020)	MTBE (EPA Method 8260)			REMARKS
MW5(4.5-5)	7/28/00	825	X		boring for well MW-5 @ depth 4.5'	X	X	X	X			21575-001
MW5(9.5-10)		830	X		boring for well MW-5 @ depth 9.5'	X	X	X	X			-002
MW6(4.5-5)		950	X		boring for well MW-6 @ depth 4.5'	X	X	X	X			-003
MW6(9.5-10)		955	X		boring for well MW6 @ depth 9.5'	X	X	X	X			-004
MW7(4.5-5)		1115	X		boring for well MW-7 @ depth 4.5'	X	X	X	X			-005
MW7(9.5-10)	7/28/00	1120	X		boring for well MW-7 @ depth 9.5'	X	X	X	X			-006

00 JUL 28 13:01

RELINQUISHED BY: (Signature) K B Alexander	DATE 7/28 TIME 3pm	RECEIVED BY: (Signature) H Lee #486	DATE 7/28 TIME 15:00
RELINQUISHED BY: (Signature) H. Lee	DATE 7/28 TIME 13:01	RECEIVED BY: (Signature) Cynthia Patino	DATE 7-28 TIME 1:01
RELINQUISHED BY: (Signature)	DATE TIME	RECEIVED BY: (Signature)	DATE TIME
RELINQUISHED BY: (Signature)	DATE TIME	RECEIVED FOR LABORATORY BY: (Signature)	DATE TIME

ATTACHMENT F

Groundwater Analytical Results

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

August 15, 2000

Randal Wilson
Hageman-Aguiar, Inc.
11100 San Pablo Avenue, Suite 200-A
El Cerrito, CA 94530

Order: 21704
Project Name: Golden Gate Pet.
Project Number: 23rd Ave.
Project Notes:

Date Collected: 8/7/00
Date Received: 8/8/00
P.O. Number:

On August 08, 2000, samples were received under documentented chain of custody. Results for the following analyses are attached:

Matrix	Test	Method
Liquid	Gas/BTEX	EPA 8015 MOD. (Purgeable)
		EPA 8020
	Gas/BTEX/MTBE/Diesel	EPA 8015 MOD. (Extractable)
		EPA 8015 MOD. (Purgeable)
		EPA 8020
	MTBE by EPA 8260B	EPA 8260B
	TPH as Diesel	EPA 8015 MOD. (Extractable)

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#2346). If you have any questions regarding procedures or results, please call me at 408-735-1550.

Sincerely,

Michelle L. Anderson
Lab Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94085 • (408) 735-1550 • Fax (408) 735-1554

Hageman-Aguiar, Inc.
11100 San Pablo Avenue, Suite 200-A
El Cerrito, CA 94530
Attn: Randal Wilson

Date: 8/15/00
Date Received: 8/8/00
Project Name: Golden Gate Pet.
Project Number: 23rd Ave.
P.O. Number:
Sampled By: Client

Certified Analytical Report

Order ID: 21704 **Lab Sample ID:** 21704-001 **Client Sample ID:** MW-1

Sample Time: 2:24 PM **Sample Date:** 8/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	ND		1	0.5	0.5	µg/L	N/A	8/9/00	WGC4000809	EPA 8020
Toluene	ND		1	0.5	0.5	µg/L	N/A	8/9/00	WGC4000809	EPA 8020
Ethyl Benzene	ND		1	0.5	0.5	µg/L	N/A	8/9/00	WGC4000809	EPA 8020
Xylenes, Total	ND		1	0.5	0.5	µg/L	N/A	8/9/00	WGC4000809	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	103	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		1	5	5	µg/L	N/A	8/9/00	WGC4000809	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	103	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	ND		1	50	50	µg/L	N/A	8/9/00	WGC4000809	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	115	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

CA ELAP# 2346

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Hageman-Aguiar, Inc.
11100 San Pablo Avenue, Suite 200-A
El Cerrito, CA 94530
Attn: Randal Wilson

Date: 8/15/00
Date Received: 8/8/00
Project Name: Golden Gate Pet.
Project Number: 23rd Ave.
P.O. Number:
Sampled By: Client

Certified Analytical Report

Order ID: 21704 **Lab Sample ID:** 21704-002 **Client Sample ID:** MW-2

Sample Time: 4:10 PM **Sample Date:** 8/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	ND		50	0.5	25	µg/L	N/A	8/9/00	WGC4000808	EPA 8020
Toluene	ND		50	0.5	25	µg/L	N/A	8/9/00	WGC4000808	EPA 8020
Ethyl Benzene	ND		50	0.5	25	µg/L	N/A	8/9/00	WGC4000808	EPA 8020
Xylenes, Total	ND		50	0.5	25	µg/L	N/A	8/9/00	WGC4000808	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	98	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	6300		50	5	250	µg/L	N/A	8/9/00	WGC4000808	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	98	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	4500	x	50	50	2500	µg/L	N/A	8/9/00	WGC4000808	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	109	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

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Hageman-Aguiar, Inc.
11100 San Pablo Avenue, Suite 200-A
El Cerrito, CA 94530
Attn: Randal Wilson

Date: 8/15/00
Date Received: 8/8/00
Project Name: Golden Gate Pet.
Project Number: 23rd Ave.
P.O. Number:
Sampled By: Client

Certified Analytical Report

Order ID: 21704 **Lab Sample ID:** 21704-003 **Client Sample ID:** MW-3

Sample Time: 4:50 PM **Sample Date:** 8/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	ND		10	0.5	5	µg/L	N/A	8/9/00	WGC4000808	EPA 8020
Toluene	ND		10	0.5	5	µg/L	N/A	8/9/00	WGC4000808	EPA 8020
Ethyl Benzene	ND		10	0.5	5	µg/L	N/A	8/9/00	WGC4000808	EPA 8020
Xylenes, Total	ND		10	0.5	5	µg/L	N/A	8/9/00	WGC4000808	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	89	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	1500		10	5	50	µg/L	N/A	8/9/00	WGC4000808	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	89	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	1100	x	10	50	500	µg/L	N/A	8/9/00	WGC4000808	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	97	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

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CA ELAP# 2346

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Hageman-Aguiar, Inc.
11100 San Pablo Avenue, Suite 200-A
El Cerrito, CA 94530
Attn: Randal Wilson

Date: 8/15/00
Date Received: 8/8/00
Project Name: Golden Gate Pet.
Project Number: 23rd Ave.
P.O. Number:
Sampled By: Client

Certified Analytical Report

Order ID: 21704 **Lab Sample ID:** 21704-004 **Client Sample ID:** MW-4

Sample Time: 3:23 PM **Sample Date:** 8/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	ND		10	0.5	5	µg/L	N/A	8/9/00	WGC4000808	EPA 8020
Toluene	ND		10	0.5	5	µg/L	N/A	8/9/00	WGC4000808	EPA 8020
Ethyl Benzene	ND		10	0.5	5	µg/L	N/A	8/9/00	WGC4000808	EPA 8020
Xylenes, Total	ND		10	0.5	5	µg/L	N/A	8/9/00	WGC4000808	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	98	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	500		10	5	50	µg/L	N/A	8/9/00	WGC4000808	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	98	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	600	x	10	50	500	µg/L	N/A	8/9/00	WGC4000808	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	108	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

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11100 San Pablo Avenue, Suite 200-A
El Cerrito, CA 94530
Attn: Randal Wilson

Date: 8/15/00
Date Received: 8/8/00
Project Name: Golden Gate Pet.
Project Number: 23rd Ave.
P.O. Number:
Sampled By: Client

Certified Analytical Report

Order ID: 21704 **Lab Sample ID:** 21704-005 **Client Sample ID:** MW-5

Sample Time: 10:42 AM **Sample Date:** 8/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	ND		1	0.5	0.5	µg/L	N/A	8/9/00	WGC4000808	EPA 8020
Toluene	ND		1	0.5	0.5	µg/L	N/A	8/9/00	WGC4000808	EPA 8020
Ethyl Benzene	ND		1	0.5	0.5	µg/L	N/A	8/9/00	WGC4000808	EPA 8020
Xylenes, Total	ND		1	0.5	0.5	µg/L	N/A	8/9/00	WGC4000808	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	101	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	110	x	1	50	50	µg/L	N/A	8/9/00	WGC4000808	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	111	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

CA ELAP# 2346

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Hageman-Aguiar, Inc.
11100 San Pablo Avenue, Suite 200-A
El Cerrito, CA 94530
Attn: Randal Wilson

Date: 8/15/00
Date Received: 8/8/00
Project Name: Golden Gate Pet.
Project Number: 23rd Ave.
P.O. Number:
Sampled By: Client

Certified Analytical Report

Order ID: 21704 **Lab Sample ID:** 21704-006 **Client Sample ID:** MW-6

Sample Time: 11:23 AM **Sample Date:** 8/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	ND		1	0.5	0.5	µg/L	N/A	8/9/00	WGC4000808	EPA 8020
Toluene	ND		1	0.5	0.5	µg/L	N/A	8/9/00	WGC4000808	EPA 8020
Ethyl Benzene	ND		1	0.5	0.5	µg/L	N/A	8/9/00	WGC4000808	EPA 8020
Xylenes, Total	ND		1	0.5	0.5	µg/L	N/A	8/9/00	WGC4000808	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	103	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	460	x	1	50	50	µg/L	N/A	8/9/00	WGC4000808	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	112	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

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Hageman-Aguiar, Inc.
11100 San Pablo Avenue, Suite 200-A
El Cerrito, CA 94530
Attn: Randal Wilson

Date: 8/15/00
Date Received: 8/8/00
Project Name: Golden Gate Pet.
Project Number: 23rd Ave.
P.O. Number:
Sampled By: Client

Certified Analytical Report

Order ID: 21704 **Lab Sample ID:** 21704-007 **Client Sample ID:** MW-7

Sample Time: 11:49 AM **Sample Date:** 8/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	ND		1	0.5	0.5	µg/L	N/A	8/9/00	WGC4000808	EPA 8020
Toluene	ND		1	0.5	0.5	µg/L	N/A	8/9/00	WGC4000808	EPA 8020
Ethyl Benzene	ND		1	0.5	0.5	µg/L	N/A	8/9/00	WGC4000808	EPA 8020
Xylenes, Total	ND		1	0.5	0.5	µg/L	N/A	8/9/00	WGC4000808	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	98	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	ND		1	50	50	µg/L	N/A	8/9/00	WGC4000808	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	110	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

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Hageman-Aguiar, Inc.
11100 San Pablo Avenue, Suite 200-A
El Cerrito, CA 94530
Attn: Randal Wilson

Date: 8/15/00
Date Received: 8/8/00
Project Name: Golden Gate Pet.
Project Number: 23rd Ave.
P.O. Number:
Sampled By: Client

Certified Analytical Report

Order ID: 21704 **Lab Sample ID:** 21704-008 **Client Sample ID:** Casing-1

Sample Time: 5:40 PM **Sample Date:** 8/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	ND		1	0.5	0.5	µg/L	N/A	8/9/00	WGC4000808	EPA 8020
Toluene	ND		1	0.5	0.5	µg/L	N/A	8/9/00	WGC4000808	EPA 8020
Ethyl Benzene	ND		1	0.5	0.5	µg/L	N/A	8/9/00	WGC4000808	EPA 8020
Xylenes, Total	ND		1	0.5	0.5	µg/L	N/A	8/9/00	WGC4000808	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	100	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	30		1	5	5	µg/L	N/A	8/9/00	WGC4000808	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	100	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	54	x	1	50	50	µg/L	N/A	8/9/00	WGC4000808	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	110	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

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Hageman-Aguiar, Inc.
11100 San Pablo Avenue, Suite 200-A
El Cerrito, CA 94530
Attn: Randal Wilson

Date: 8/15/00
Date Received: 8/8/00
Project Name: Golden Gate Pet.
Project Number: 23rd Ave.
P.O. Number:
Sampled By: Client

Certified Analytical Report

Order ID: 21704 **Lab Sample ID:** 21704-009 **Client Sample ID:** Casing-2

Sample Time: 6:07 PM **Sample Date:** 8/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	ND		1	0.5	0.5	µg/L	N/A	8/9/00	WGC4000808	EPA 8020
Toluene	ND		1	0.5	0.5	µg/L	N/A	8/9/00	WGC4000808	EPA 8020
Ethyl Benzene	ND		1	0.5	0.5	µg/L	N/A	8/9/00	WGC4000808	EPA 8020
Xylenes, Total	ND		1	0.5	0.5	µg/L	N/A	8/9/00	WGC4000808	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	102	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	190		1	5	5	µg/L	N/A	8/9/00	WGC4000808	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	102	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	82	x	1	50	50	µg/L	N/A	8/9/00	WGC4000808	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	111	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

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Environmental Analysis Since 1983

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Hageman-Aguiar, Inc.
11100 San Pablo Avenue, Suite 200-A
El Cerrito, CA 94530
Attn: Randal Wilson

Date: 8/15/00
Date Received: 8/8/00
Project Name: Golden Gate Pet.
Project Number: 23rd Ave.
P.O. Number:
Sampled By: Client

Certified Analytical Report

Order ID: 21704 **Lab Sample ID:** 21704-001 **Client Sample ID:** MW-1
Sample Time: 2:24 PM **Sample Date:** 8/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	50	50	µg/L	8/10/00	8/11/00	DW000803	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	105	65 - 135

Order ID: 21704 **Lab Sample ID:** 21704-002 **Client Sample ID:** MW-2
Sample Time: 4:10 PM **Sample Date:** 8/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	620	x	1	50	50	µg/L	8/10/00	8/11/00	DW000803	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	101	65 - 135

Order ID: 21704 **Lab Sample ID:** 21704-003 **Client Sample ID:** MW-3
Sample Time: 4:50 PM **Sample Date:** 8/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	50	50	µg/L	8/10/00	8/11/00	DW000803	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	104	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94085 • (408) 735-1550 • Fax (408) 735-1554

Hageman-Aguiar, Inc.
11100 San Pablo Avenue, Suite 200-A
El Cerrito, CA 94530
Attn: Randal Wilson

Date: 8/15/00
Date Received: 8/8/00
Project Name: Golden Gate Pet.
Project Number: 23rd Ave.
P.O. Number:
Sampled By: Client

Certified Analytical Report

Order ID: 21704 **Lab Sample ID:** 21704-004 **Client Sample ID:** MW-4
Sample Time: 3:23 PM **Sample Date:** 8/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	50	50	µg/L	8/10/00	8/11/00	DW000803	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	104	65 - 135

Order ID: 21704 **Lab Sample ID:** 21704-005 **Client Sample ID:** MW-5
Sample Time: 10:42 AM **Sample Date:** 8/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	50	50	µg/L	8/10/00	8/11/00	DW000803	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	102	65 - 135

Order ID: 21704 **Lab Sample ID:** 21704-006 **Client Sample ID:** MW-6
Sample Time: 11:23 AM **Sample Date:** 8/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	50	50	µg/L	8/10/00	8/11/00	DW000803	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	103	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

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Hageman-Aguiar, Inc.
11100 San Pablo Avenue, Suite 200-A
El Cerrito, CA 94530
Attn: Randal Wilson

Date: 8/15/00
Date Received: 8/8/00
Project Name: Golden Gate Pet.
Project Number: 23rd Ave.
P.O. Number:
Sampled By: Client

Certified Analytical Report

Order ID: 21704 **Lab Sample ID:** 21704-007 **Client Sample ID:** MW-7
Sample Time: 11:49 AM **Sample Date:** 8/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	50	50	µg/L	8/10/00	8/12/00	DW000803	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	113	65 - 135

Order ID: 21704 **Lab Sample ID:** 21704-008 **Client Sample ID:** Casing-1
Sample Time: 5:40 PM **Sample Date:** 8/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	140	x	1	50	50	µg/L	8/10/00	8/12/00	DW000803	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	106	65 - 135

Order ID: 21704 **Lab Sample ID:** 21704-009 **Client Sample ID:** Casing-2
Sample Time: 6:07 PM **Sample Date:** 8/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	110	x	1	50	50	µg/L	8/10/00	8/12/00	DW000803	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	99	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

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CA ELAP# 2346

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Hageman-Aguiar, Inc.
11100 San Pablo Avenue, Suite 200-A
El Cerrito, CA 94530
Attn: Randal Wilson

Date: 8/15/00
Date Received: 8/8/00
Project Name: Golden Gate Pet.
Project Number: 23rd Ave.
P.O. Number:
Sampled By: Client

Certified Analytical Report

Order ID: 21704 **Lab Sample ID:** 21704-005 **Client Sample ID:** MW-5

Sample Time: 10:42 AM **Sample Date:** 8/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	470		10	5	50	µg/L	8/11/00	WMS2000811	EPA 8260B

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	99	65 - 135
Dibromofluoromethane	116	65 - 135
Toluene-d8	91	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

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Hageman-Aguiar, Inc.
11100 San Pablo Avenue, Suite 200-A
El Cerrito, CA 94530
Attn: Randal Wilson

Date: 8/15/00
Date Received: 8/8/00
Project Name: Golden Gate Pet.
Project Number: 23rd Ave.
P.O. Number:
Sampled By: Client

Certified Analytical Report

Order ID: 21704 **Lab Sample ID:** 21704-006 **Client Sample ID:** MW-6

Sample Time: 11:23 AM **Sample Date:** 8/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	1900		50	5	250	µg/L	8/11/00	WMS2000811	EPA 8260B

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	98	65 - 135
Dibromofluoromethane	110	65 - 135
Toluene-d8	93	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

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Attn: Randal Wilson

Date: 8/15/00
Date Received: 8/8/00
Project Name: Golden Gate Pet.
Project Number: 23rd Ave.
P.O. Number:
Sampled By: Client

Certified Analytical Report

Order ID: 21704 **Lab Sample ID:** 21704-007 **Client Sample ID:** MW-7

Sample Time: 11:49 AM **Sample Date:** 8/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		1	5	5	µg/L	8/11/00	WMS2000811	EPA 8260B

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	98	65 - 135
Dibromofluoromethane	106	65 - 135
Toluene-d8	95	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

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Environmental Analysis Since 1983

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STANDARD LAB QUALIFIERS (FLAGS)

All Entech lab reports now reference standard lab qualifiers. These qualifiers are noted in the adjacent column to the analytical result and are adapted from the U.S. EPA CLP program. The current qualifier list is as follows:

Qualifier (Flag)	Description
U	Compound was analyzed for but not detected
J	Estimated value for tentatively identified compounds or if result is below PQL but above MDL
N	Presumptive evidence of a compound (for Tentatively Identified Compounds)
B	Analyte is found in the associated Method Blank
E	Compounds whose concentrations exceed the upper level of the calibration range
D	Multiple dilutions reported for analysis; discrepancies between analytes may be due to dilution
X	Results within quantitation range; chromatographic pattern not typical of fuel

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography
Laboratory Control Sample

QC Batch #: WGC4000809
Matrix: Liquid
Units: µg/Liter

Date Analyzed: 08/09/00
Quality Control Sample: Blank Spike

PARAMETER	Method #	MB µg/Liter	SA µg/Liter	SR µg/Liter	SP µg/Liter	**SP % R**	SPD µg/Liter	**SPD %R**	% RPD	QC LIMITS RPD	QC LIMITS %R
Benzene	8020	<0.50	5.2	ND	5.2	**101**	5.3	**102**	1.6	25	70-130
Toluene	8020	<0.50	29	ND	30	**103**	31	**106**	2.5	25	70-130
Ethyl Benzene	8020	<0.50	5.6	ND	5.6	**100**	5.8	**103**	3.2	25	70-130
Xylenes	8020	<0.50	32	ND	30	**93**	31	**94**	1.8	25	70-130
Gasoline	8015	<50.0	469	ND	492	**105**	453	**97**	8.1	25	70-130
aaa-TFT(S.S.)-FID	8020			114%	107%		105%				65-135
aaa-TFT(S.S.)-PID	8015			103%	101%		102%				65-135

Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike % Recovery
- nc: Not Calculated

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography
Laboratory Control Sample

QC Batch #: WGC4000808
Matrix: Liquid
Units: µg/Liter

Date Analyzed: 08/08/00
Quality Control Sample: Blank Spike

PARAMETER	Method #	MB µg/Liter	SA µg/Liter	SR µg/Liter	SP µg/Liter	**SP % R**	SPD µg/Liter	**SPD %R**	% RPD	QC LIMITS RPD	QC LIMITS %R
Benzene	8020	<0.50	5.2	ND	5.3	**101**	5.4	**104**	2.5	25	70-130
Toluene	8020	<0.50	29	ND	30	**104**	31	**106**	2.2	25	70-130
Ethyl Benzene	8020	<0.50	5.6	ND	5.7	**101**	5.8	**103**	1.6	25	70-130
Xylenes	8020	<0.50	32	ND	30	**94**	31	**96**	2.1	25	70-130
Gasoline	8015	<50.0	469	ND	494	**105**	454	**97**	8.4	25	70-130
aaa-TFT(S.S.)-FID	8020			113%	107%		109%				65-135
aaa-TFT(S.S.)-PID	8015			102%	106%		109%				65-135

Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike % Recovery
- nc: Not Calculated

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography
Laboratory Control Spikes

QC Batch #: DW000803
Matrix: Liquid
Units: µg/L

Date analyzed: 08/09/00
Date extracted: 08/07/00
Quality Control Sample: Blank Spike

PARAMETER	Method #	MB µg/L	SA µg/L	SR µg/L	SP µg/L	**SP %R**	SPD µg/L	**SPD %R**	RPD	QC LIMITS RPD	QC LIMITS %R
Diesel	8015M	<50.0	1000	ND	960	**96**	1034	**103**	7.4	25	62-120
Hexocosane(S.S.)				129%	112%		116%				65-135

Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R) Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R) Spike Duplicate % Recovery
- NC: Not Calculated

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

Volatile Organic Compounds
Laboratory Control Sample

QC Batch #: WMS2000811
Matrix: Liquid
Units: µg/L

Date analyzed: 08/11/00
Spiked Sample: Blank Spike

PARAMETER	Method #	SA µg/L	SR µg/L	SP µg/L	SP %R	SPD µg/L	SPD %R	RPD	QC LIMITS RPD	QC LIMITS %R
1,1- Dichloroethene	8240/8260	40	ND	41.6	**104**	47.1	**118**	12.4	25	50-150
Methyl-tert-butyl ether	8240/8260	40	ND	42.1	**105**	48.5	**121**	14.1	25	50-150
Benzene	8240/8260	40	ND	41.7	**104**	47.5	**119**	13.0	25	50-150
Trichloroethene	8240/8260	40	ND	41.4	**104**	46.8	**117**	12.2	25	50-150
Toluene	8240/8260	40	ND	36.8	**92**	41.6	**104**	12.2	25	50-150
Chlorobenzene	8240/8260	40	ND	38.3	**96**	42.8	**107**	11.1	25	50-150
Surrogates										
MTBE-d3	8240/8260		91%	100%		107%				65-135
Dibromofluoromethane	8240/8260		104%	110%		114%				65-135
Toluene-d8	8240/8260		97%	93%		91%				65-135
4-Bromofluorobenzene	8240/8260		99%	101%		101%				65-135

Definition of Terms:

- na: Not Analyzed in QC batch
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike Duplicate % Recovery

CHAIN OF CUSTODY RECORD

PROJECT NAME AND ADDRESS:

Golden Gate Pet. - 23rd
421 23rd Ave
Oakland

SAMPLER: (Signature) Randal Wilson

HAGEMAN - AGUIAR, INC.
11100 San Pablo Ave., Suite 200-A
El Cerrito, CA 94530
(510)620-0891 (510)620-0894 (FAX)

CROSS REFERENCE NUMBER	DATE	TIME	SOIL	WATER	SAMPLE LOCATION	TPH-Gas, BTEX	TPH-Diesel	MTBE by 8020/8015	MTBE by 8260				REMARKS
MW-1	08/07/00	14:24		X	Monitor Well # MW-1	X	X	X					21704-001
MW-2	08/07/00	16:10		X	" " # MW-2	X	X	X					-002
MW-3	08/07/00	16:50		X	" " # MW-3	X	X	X					-003
MW-4	08/07/00	15:23		X	" " # MW-4	X	X	X					-004
MW-5	08/07/00	10:42		X	" " # MW-5	X	X		X				-005
MW-6	08/07/00	11:23		X	" " # MW-6	X	X		X				-006
MW-7	08/07/00	11:49		X	" " # MW-7	X	X		X				-007
Casing-1	08/07/00	17:40		X	Backfill Casing # 1	X	X	X					-008
Casing-2	08/07/00	18:07		X	" " # 2	X	X	X					-009

08 AUG 8 13:45

13:45

RELINQUISHED BY: (Signature) Randal Wilson	DATE ~~08/07/00~~ TIME 08/08/00	RECEIVED BY: (Signature)	DATE 8/8/00 TIME 1345
RELINQUISHED BY: (Signature)	DATE TIME	RECEIVED BY: (Signature)	DATE TIME
RELINQUISHED BY: (Signature)	DATE TIME	RECEIVED BY: (Signature)	DATE TIME
RELINQUISHED BY: (Signature)	DATE TIME	RECEIVED FOR LABORATORY BY: (Signature)	DATE TIME