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Scott Seery  
Alameda County Department  
of Environmental Health  
Hazardous Materials Division  
1131 Harbor Bay Parkway  
Suite 250  
Alameda, CA 94502-6577

Re: Subsurface Investigation  
Former Shell Service Station  
1784 150th Avenue  
San Leandro, California  
WIC # 204-6852-1404  
WA Job # 81-0422-10

Dear Mr. Seery:

This letter presents the results of Weiss Associates' (WA) subsurface investigation conducted around the Shell service station referenced above (Figure 1). As outlined in WA's December 6, 1993 workplan<sup>1</sup>, the investigation objective is to characterize the extent of hydrocarbons in ground water both up- and downgradient of the Shell site. To achieve this objective, WA drilled six small diameter soil borings in the site vicinity, and collected soil and ground water samples for analysis. WA's scope of work, a summary of previous investigations and the results of this investigation are presented below.

#### SCOPE OF WORK

WA's scope of work for this investigation was to:

- 1) Obtain the necessary drilling and encroachment permits, and access agreements to drill at the site and in the public right-of-ways adjacent to the site;

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<sup>1</sup> WA, December 6, 1993, Consultant's letter-workplan regarding the proposed drilling of soil borings and water sampling via hydropunch at the Shell service station at 1784 150th Avenue, San Leandro, California, 4 pages and one attachment.

- 2) Prepare a site safety plan and locate underground and overhead utility lines;
- 3) Collect soil and hydropunch ground water samples from up to two shallow onsite borings, and up to six shallow offsite borings to determine whether hydrocarbons are present in soil and ground water. Additional soil/hydropunch borings would be installed downgradient of borings exhibiting field indications of hydrocarbons. Soil samples were also collected for hydrogeologic description;
- 4) Analyze selected soil and water samples for total petroleum hydrocarbons as gasoline (TPH-G) and benzene, toluene, ethylbenzene, and xylene (BTEX). In addition, analyze one selected soil and one ground water sample each, for volatile organic compounds (VOCs);
- 5) Grout all borings with neat Portland cement using a tremie pipe and cap the borings with asphalt to match existing surface materials;
- 6) Arrange for the disposal of drill cuttings and steam cleaning rinseate; and
- 7) Report the results.

## SITE BACKGROUND

### Site Setting

- Location:** The site is an operating Shell service station located at the intersection of 150th Avenue and Freedom Avenue in San Leandro, California. The base of the San Leandro Hills is approximately 0.25 mile to the northeast. The site is about 50 ft above mean sea level and the local topography slopes westward toward San Francisco Bay, about 6 miles to the west.
- Surroundings:** Mixed commercial and residential.
- Site Geology:** Sediments beneath the site are Quaternary alluvial deposits derived from sedimentary and igneous rocks of the Diablo Range. The site is about 0.25 miles west of the Hayward Fault Zone.

### Previous Investigations

**1986 Waste Oil Tank Removal:** In November 1986, Petroleum Engineering of Santa Rosa, California, removed a 550-gallon waste oil tank from the site. Immediately following the tank removal, Blaine Tech Services (BTS) of San Jose, California collected soil samples beneath the former tank at 8 ft and 11 ft depth. The soil samples contained petroleum oil and grease (POG) at 196 and 167 parts per million (ppm), respectively. The tank pit was excavated to a total depth of 16 ft but soil samples were not collected. Ground water was not encountered in the tank excavation<sup>2</sup>. A new 550-gallon fiberglass waste oil tank was installed in the same location.

**1990 Well Installation:** In March 1990, WA installed ground water monitoring well MW-1 adjacent to the waste oil tank.<sup>3</sup> In a soil sample collected from 29 ft below ground surface (bgs), TPH-G and benzene were detected at 35 and 0.23 ppm, respectively. TPH-G and benzene were also detected in water samples at 510 and 1.5 parts per billion (ppb), respectively. Up to 12 ppb 1,2-DCA has been detected in ground water samples from MW-1.

**1992 Well Installation:** In February 1992, WA installed monitoring wells MW-2 and MW-3. Soil samples collected near the water table from the borings contained up to 79 ppm TPH-G. Although well MW-3 is located over 100 ft upgradient of the tanks, up to 68 ppm TPH-G were detected in a soil sample from the MW-3 boring. TPH-G and benzene were detected in ground water samples from MW-2 at 17,000 and 6,200 ppb, respectively. Ground water samples from MW-3 contained TPH-G and benzene at 4,500 and 97 ppb, respectively.

**Quarterly Ground Water Monitoring:** Quarterly ground water sampling has been conducted in monitoring well MW-1 since March 1990 and MW-2 and MW-3 since February 1992. ~~Ground water samples from MW-2 have historically contained the highest TPH-G and benzene; up to 160,000 and 36,000 ppb, respectively.~~ The ground water flow direction has a historical range from north-northwestward to eastward with a relatively flat gradient at about 0.003 ft/ft. On June 6, 1994 the ground water flow direction beneath the site was northward as shown on Figure 2.

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<sup>2</sup> BTS, November 21, 1986, Sampling Report 86315-M2, Shell Service Station, 1784 150th Avenue, San Leandro, California, Consultant's letter-report prepared for Shell Oil Company, 3 pages and 2 attachments.

<sup>3</sup> WA, July 31, 1990, Consultant's letter-report prepared for the Alameda County Department of Environmental Health (ACDEH) regarding second quarter 1990 activities at the Shell service station located at 1784 150th Avenue in San Leandro, California, 10 pages and 2 attachments.

## INVESTIGATION RESULTS

### Soil and Ground Water Investigation

- Drilling Dates:*** June 6 and 7, 1994.
- Drilling Geologist:*** WA Staff Geologist Jonathan Weingast under the supervision of Certified Engineering Geologist James W. Carmody.
- Drilling Method:*** Mobil Weld drill rig with 6-inch outside diameter hollow stem augers. WA's standard field procedures are presented in Attachment A.
- Number of Borings:*** Six (BH-1 through BH-6; Figure 3).
- Boring Depths:*** 24 to 34 ft.
- Sediments Encountered:***
- Sediments in boring BH-1 consist of moderate to high permeability silty sand and gravelly sand from ground surface to about 17.7 ft bgs. From 17.7 ft to 20.2 ft bgs, sediments consist of low to moderate permeability sandy silt. Moderate to high permeability gravelly silty sand is in the 20.2 ft to 27.5 ft bgs interval.
- Sediments in borings BH-2 through BH-5 consist of low to moderate permeability clayey silt and sandy silt from the ground surface to 34 ft bgs, the maximum depth explored.
- Sediments in boring BH-6 consist of low permeability clayey, sandy silt from the ground surface to about 14 ft bgs. Sediments consist of moderate to high permeability silty sand from 14 ft bgs to 25 ft bgs, the total depth explored. A geologic cross-section is presented in Figure 4 based on the cross-section location shown on Figure 3. Boring logs are included in Attachment B.
- Depth to Water:*** Ground water was encountered initially between 20 to 34 ft bgs. The depth to water during drilling does not reflect the static water level since the boreholes were only open

long enough to allow for the collection of a ground water sample.

***Soil Sampling Method:***

Soil samples were collected at five foot intervals with a clean split-barrel drive sampler lined with stainless steel or brass tubes. Because the borings were drilled to evaluate the extent of hydrocarbon in ground water, only soil samples collected from directly above the water table were selected for chemical analysis.

***Water Sampling Method:***

Ground water samples were collected with a clean stainless steel bailer from inside a temporary PVC casing pushed into the water-bearing zone by a steel outer protective casing. At BH-3, water was not encountered in two attempts using the method above. Therefore, the boring was drilled several additional feet until water was encountered and a grab water sample was then collected with a clean stainless steel bailer. Although elevated hydrocarbon concentrations were detected by chemical analysis in water samples from BH-2 and BH-3, no field indications suggested the presence of hydrocarbons in soil or ground water and no further investigation was conducted in those areas.

***Analytical Laboratory:***

Sequoia Analytical, Inc. of Redwood City, California.

***Soil and Water Analytical Methods***

All soil and ground water samples were analyzed for TPH-G by EPA Method 8015 and BTEX by EPA Method 8020. Additionally soil and ground water samples from BH-3 were analyzed for VOCs by EPA Method 8010. Analytic reports and chain-of-custody forms for all the samples are presented in Attachment C.

***Soil Analytic Results:***

No hydrocarbons were detected in any of the soil samples except for 13 ppb benzene in boring BH-3 at 16 ft bgs. No VOCs were detected in the same BH-3 soil sample. The analytic results for soil are included in Table 1.

***Water Analytic Results:***

No hydrocarbons were detected in hydropunch ground water samples collected from borings BH-1, BH-4, BH-5 or BH-6. However, TPH-G and benzene were detected in hydropunch samples from BH-2 at 5,200 and 8.8 ppb, respectively. TPH-G and benzene were also detected in the hydropunch sample from boring BH-3 at 120,000 and 25,000 ~~ppb~~ respectively. No VOCs were detected in the ground water sample from boring BH-3. Analytic results

for ground water are included in Table 2 and benzene concentrations in ground water are shown on Figure 5.

***Waste Disposal:***

Crosby and Overton, Inc. of Oakland, California transported the steam clean rinseate and well purge water to the Shell refinery in Martinez, California for recycling. Soil cuttings were stockpiled onsite and transported to BFI Landfill in Livermore, California. Non-hazardous waste manifests are included in Attachment D.

Conclusions

The results of this investigation indicate that:

- Of the six areas explored by the soil borings, hydrocarbons in soil are only detected in the vicinity of BH-3 at about 16 feet depth. No hydrocarbons or VOCs were detected in any of the other borings.
- Hydrocarbons in ground water are only detected in the vicinity of borings BH-2 and BH-3. No hydrocarbons were detected in ground water at the other areas explored.
- No hydrocarbons were detected in ground water in the areas explored by borings BH-4 and BH-5, located northwest of the site. Therefore, hydrocarbons do not extend to these downgradient areas (based on the June 6, 1994 ground water flow direction beneath the site).
- No hydrocarbons are in ground water in the areas explored by borings BH-1 and BH-6, located southeast and upgradient of the site.

Based on the results of this investigation, hydrocarbons in ground water are in the vicinity of BH-3. Prior to installing an additional monitoring well in this area, WA recommends conducting another hydropunch investigation west of BH-3 along 150th Avenue.

Scott Seery  
October 13, 1994

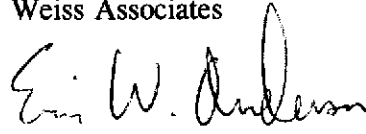
7

Weiss Associates 

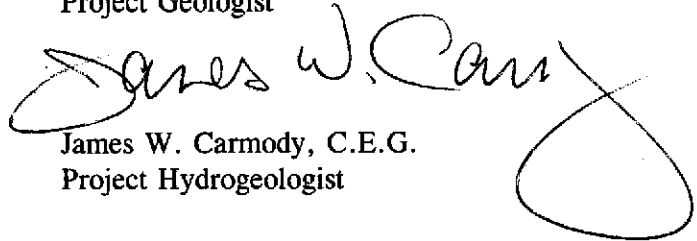
WA trust that this submittal meets your needs. Please call if you have any questions or comments regarding this investigation.



Sincerely,  
Weiss Associates



Eric W. Anderson  
Project Geologist



James W. Carmody, C.E.G.  
Project Hydrogeologist

FMD:ewa

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Attachments:    Figures  
                  Tables  
                  A - Standard Field Procedures  
                  B - Boring Logs  
                  C - Analytic Results and Chain-of-custody for Soil and Groundwater  
                  D - Non-hazardous Waste Manifests

cc: ~~Butter~~ Shell Oil Company, P.O. Box 4023, Concord, California, 94524  
R. Hiatt, California Regional Water Quality Control Board, San Francisco Bay Region, 2101  
Webster Street, Suite 500, Oakland, California, 94612  
G. Jensen, Alameda County District Attorney Office

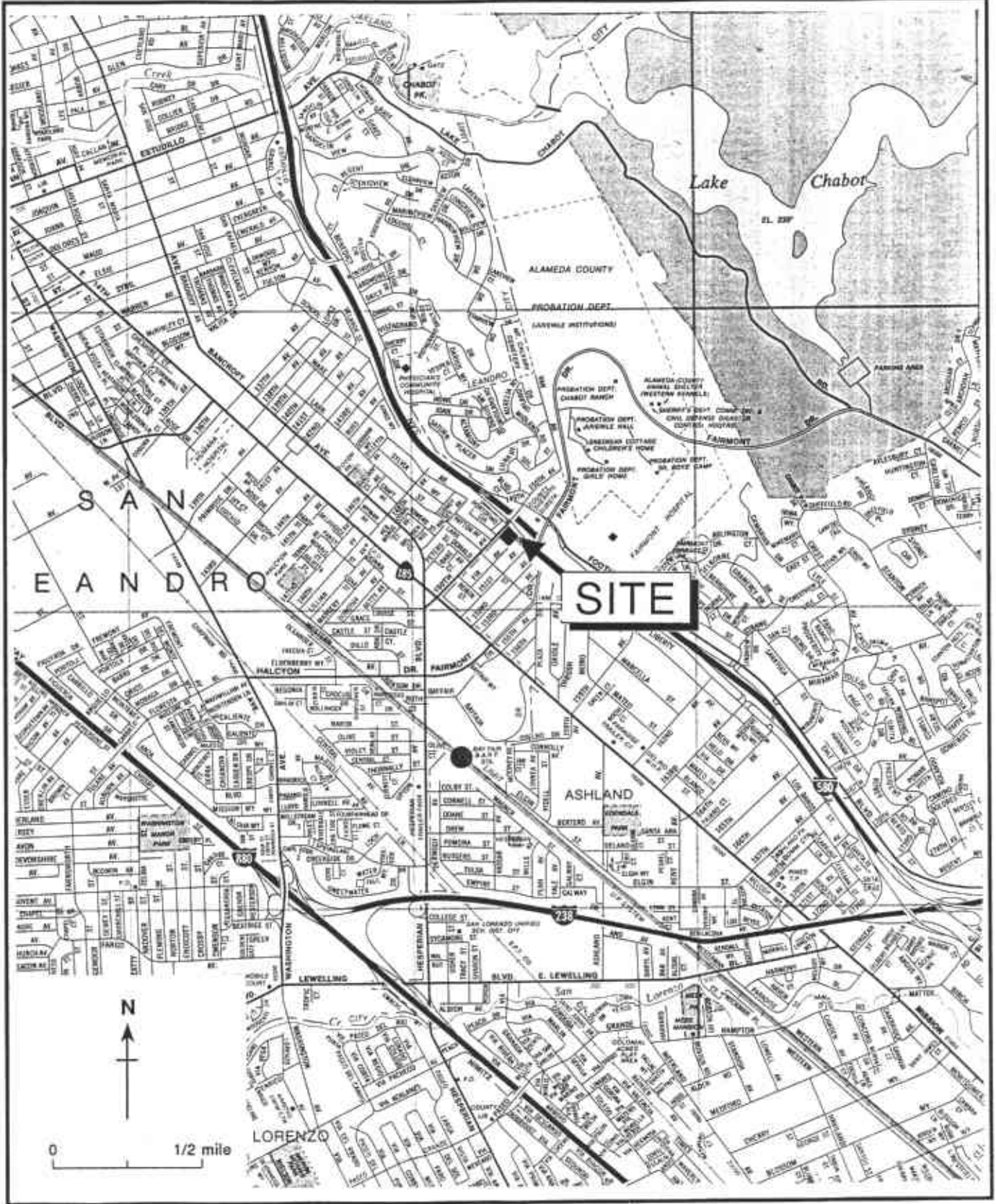
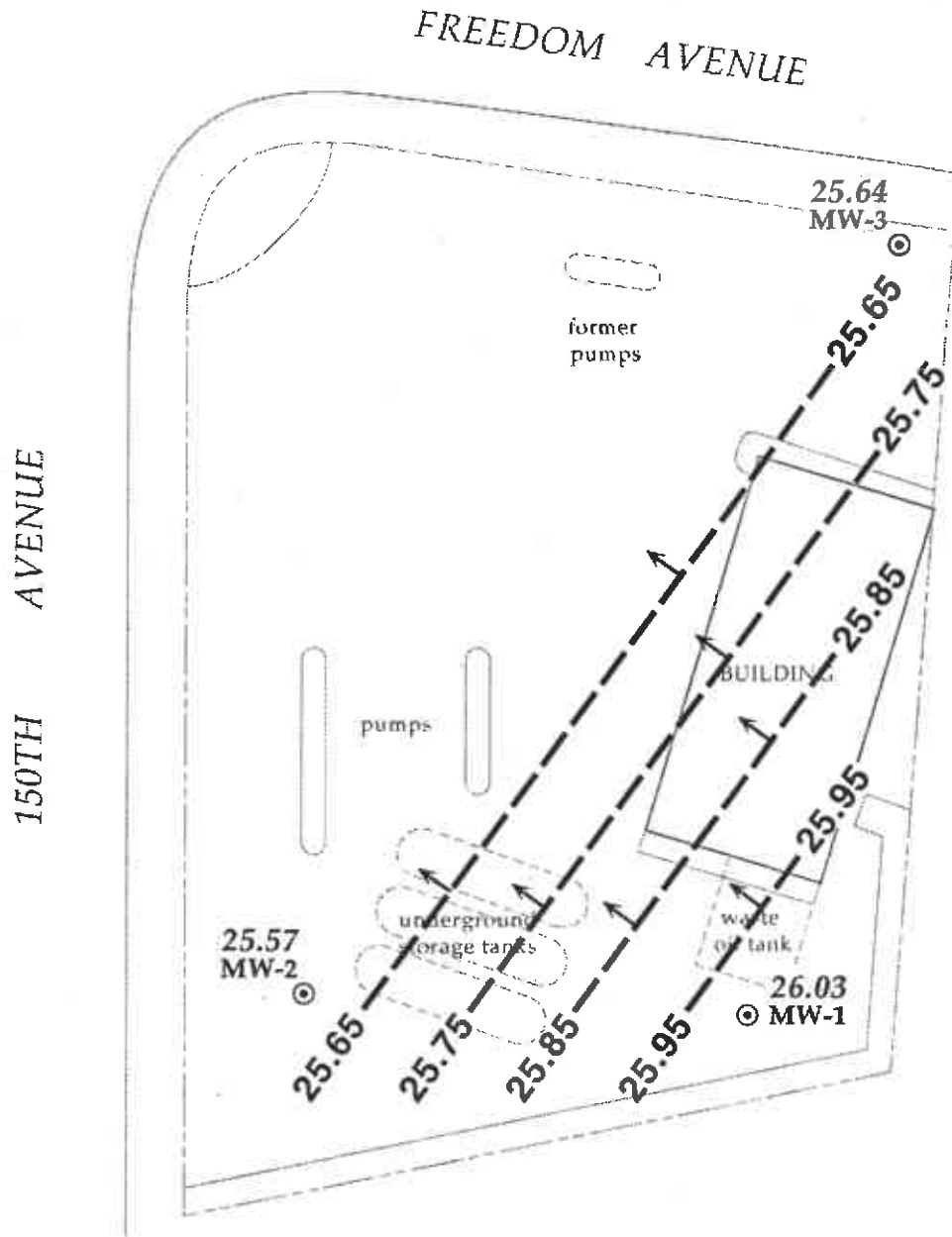


Figure 1. Site Location Map - Shell Service Station WIC #204-6852-1404, 1784 150th Avenue, San Leandro, California



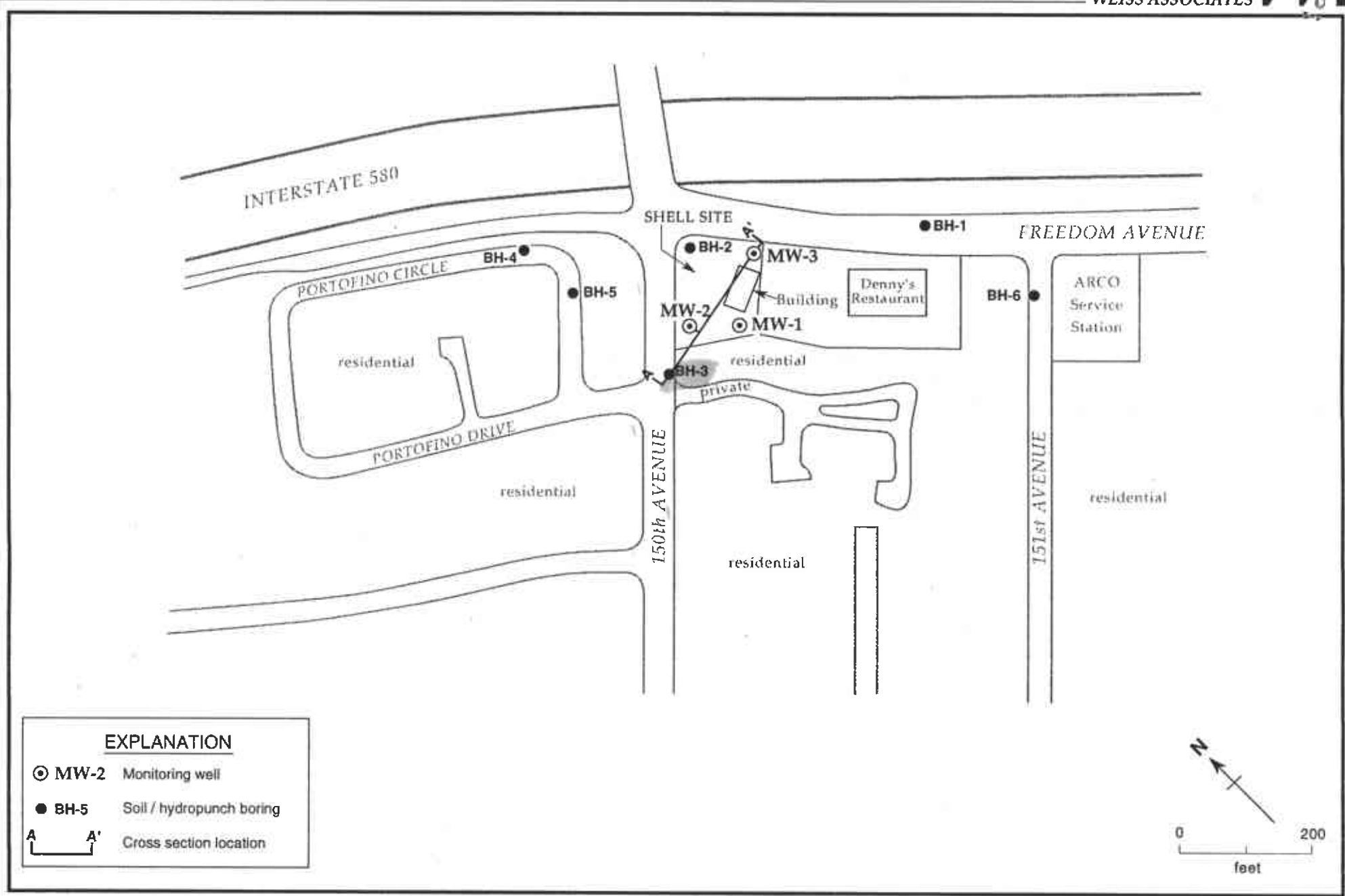


**EXPLANATION**

- ⊙ MW-1 Monitoring well
- 26.03 Ground water elevation, ft above mean sea level
- 25.75 Ground water elevation contour, ft above mean sea level, approximately located, dashed where inferred
- Inferred ground water flow direction



Figure 2. Monitoring Well Locations and Ground Water Elevations Contours, June 2, 1994, Shell Service Station WIC #204-6852-1404, 1784 150th Avenue, San Leandro, California



**EXPLANATION**

- ⊙ MW-2 Monitoring well
- BH-5 Soil / hydropunch boring
- A — A' Cross section location

N

0 ————— 200

feet

Figure 3. Monitoring Well and Boring Locations and Site Vicinity - Shell Service Station WIC #204-6852-1404, 1784 150th Avenue, San Leandro, California

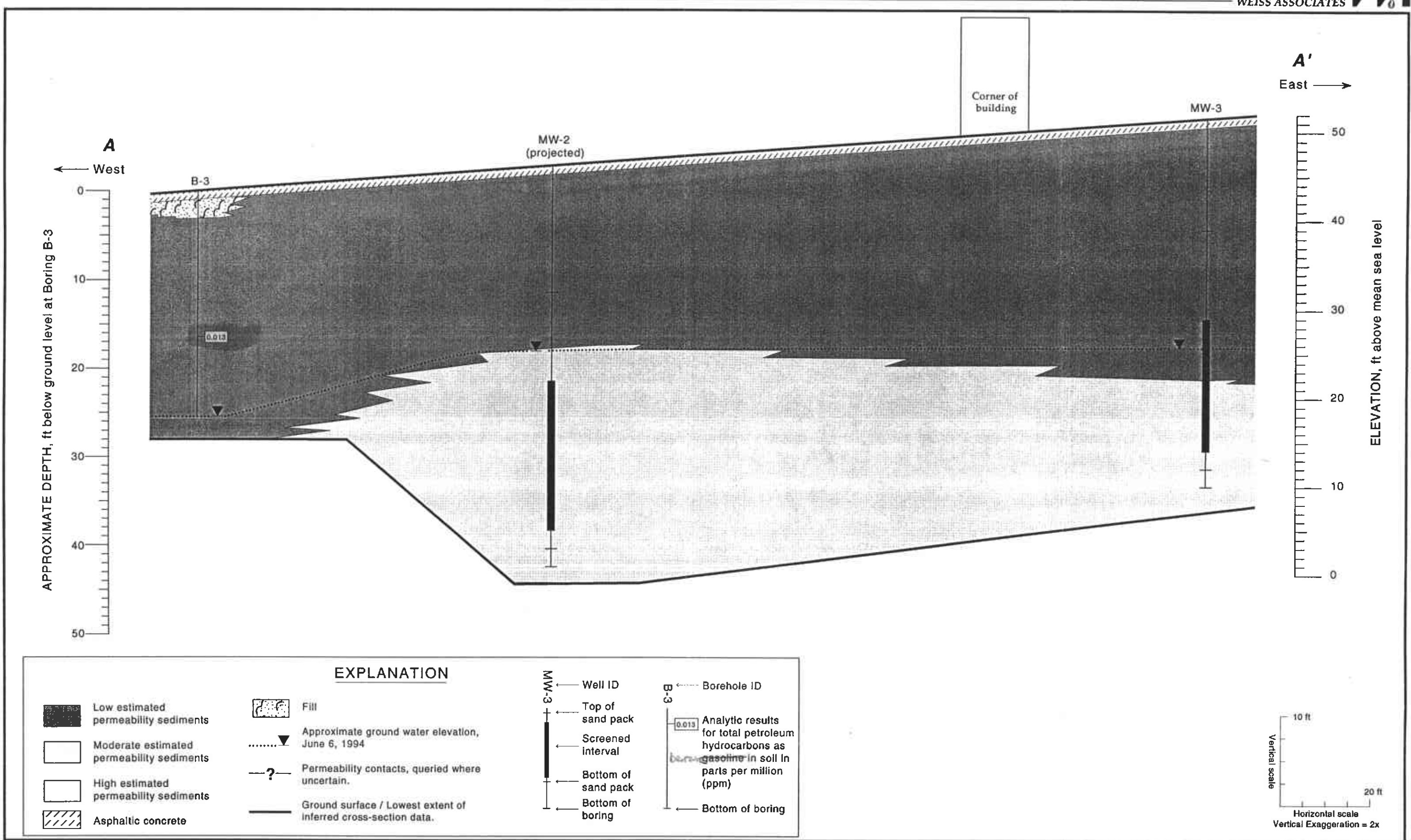


Figure 4. Geologic Cross Section A-A' - Shell Service Station, WIC #204-6852-1404, 1784 150th Avenue, San Leandro, California

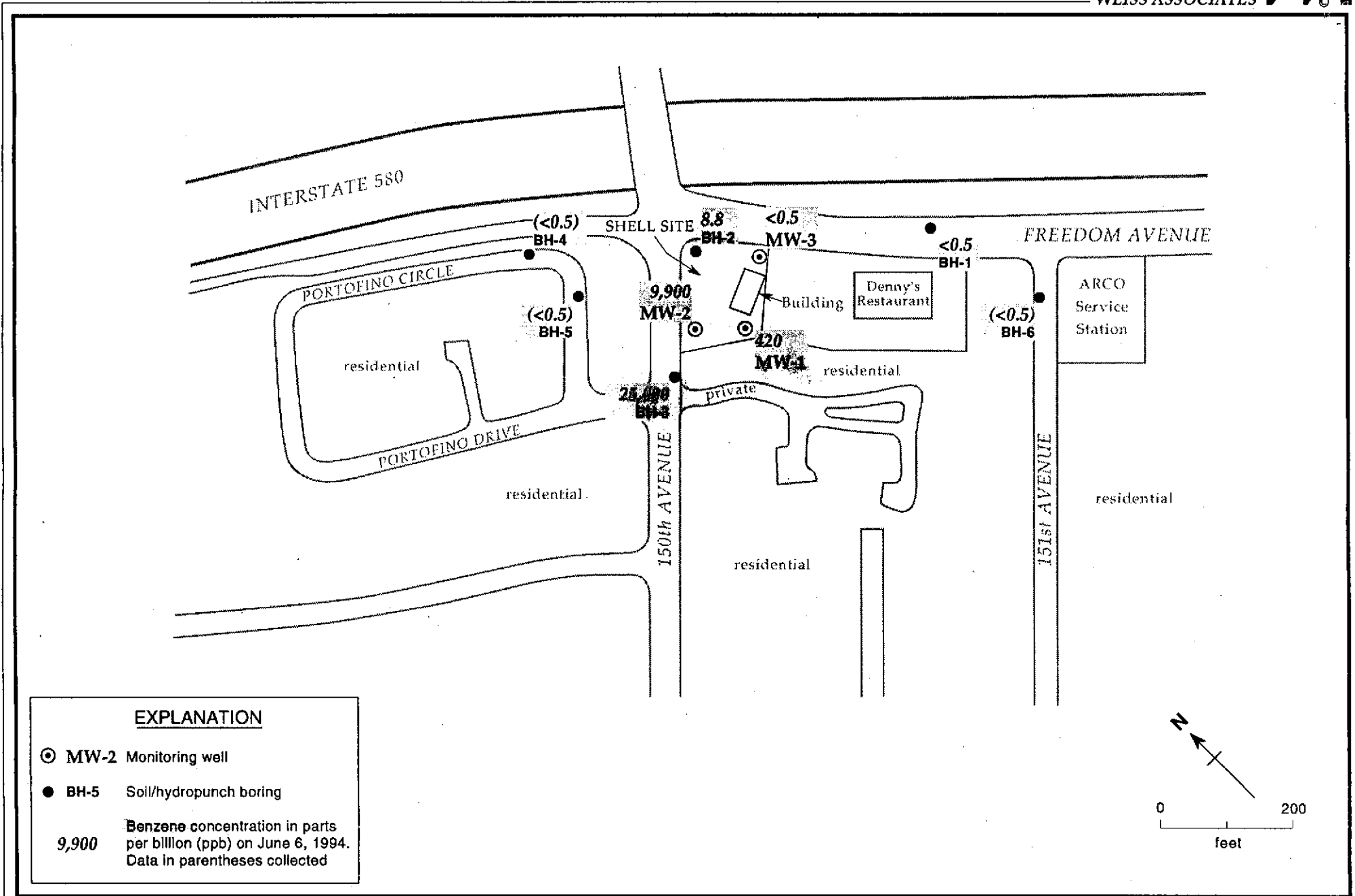


Figure 5. Benzene Concentrations in Ground Water - June 6 and 7, 1994 - Shell Service Station WIC #204-6852-1404, 1784 150th Avenue, San Leandro, California

Table 1. Hydrocarbons and Volatile Organic Compounds in Soil Analytic Results - Shell Service station WIC #204-6852-1404, 1784 150th Avenue, San Leandro, California

| Borehole/<br>Sample ID | Date Sampled | TPH-G                       | B       | T       | E       | X       | VOCs |
|------------------------|--------------|-----------------------------|---------|---------|---------|---------|------|
|                        |              | -----parts per million----- |         |         |         |         |      |
| BH-1-21                | 06/06/94     | <1.0                        | <0.0050 | <0.0050 | <0.0050 | <0.0050 | ---  |
| BH-2-20                | 06/06/94     | <1.0                        | <0.0050 | <0.0050 | <0.0050 | <0.0050 | ---  |
| BH-3-16                | 06/06/94     | <1.0                        | 0.013   | <0.0050 | <0.0050 | <0.0050 | ND   |
| BH-4-20.6              | 06/07/94     | <1.0                        | <0.0050 | <0.0050 | <0.0050 | <0.0050 | ---  |
| BH-5-15.6              | 06/07/94     | <1.0                        | <0.0050 | <0.0050 | <0.0050 | <0.0050 | ---  |
| BH-6-20.5              | 06/07/94     | <1.0                        | <0.0050 | <0.0050 | <0.0050 | <0.0050 | ---  |
| SP1-4                  | 06/07/94     | <1.0                        | <0.0050 | <0.0050 | <0.0050 | <0.0050 | ---  |

Abbreviations:

TPH-G = Total petroleum hydrocarbons as gasoline by Modified EPA Method 8015  
 B = Benzene by EPA Method 8020  
 T = Toluene by EPA Method 8020  
 E = Ethylbenzene by EPA Method 8020  
 X = Xylenes by EPA Method 8020  
 VOCs = Volatile organic compounds by EPA Method 8010  
 ND = Not detected between detection limits of 0.005 and 0.050 ppm  
 --- = Not analyzed

Analytical Laboratory:

Samples analyzed by Sequoia Analytical, Inc. of Redwood City, California

Table 2. Hydrocarbon and Volatile Organic Compounds in Hydropunch Water Samples Analytic Results - Shell service station WIC #204-6852-1404, 1784 150th Avenue, San Leandro, California

| Borehole/<br>Sample ID | Date Sampled | TPH-G                              | B      | T      | E     | X      | VOCs |
|------------------------|--------------|------------------------------------|--------|--------|-------|--------|------|
|                        |              | -----parts per billion (µg/L)----- |        |        |       |        |      |
| BH-1                   | 06/06/94     | <50                                | <0.50  | <0.50  | <0.50 | <0.50  | ---  |
| BH-2                   | 06/06/94     | 5,200 <sup>a</sup>                 | 8.8    | <0.50  | 9.1   | <0.50  | ---  |
| BH-3                   | 06/06/94     | 120,000 <sup>b</sup>               | 25,000 | 14,000 | 3,100 | 13,000 | ND   |
| BH-4                   | 06/07/94     | <50                                | <0.50  | <0.50  | <0.50 | <0.50  | ---  |
| BH-5                   | 06/07/94     | <50                                | <0.50  | <0.50  | <0.50 | <0.50  | ---  |
| BH-6                   | 06/07/94     | <50                                | <0.50  | <0.50  | <0.50 | <0.50  | ---  |

**Abbreviations:**

TPH-G = Total petroleum hydrocarbons as gasoline by Modified EPA Method 8015

B = Benzene by EPA Method 8020

T = Toluene by EPA Method 8020

E = Ethylbenzene by EPA Method 8020

X = Xylenes by EPA Method 8020

VOCs = Volatile organic compounds by EPA Method 8010

--- = Not analyzed

ND = Not detected between detection limits of 10 and 100 ppb.

**Analytical Laboratory:**

Samples analyzed by Sequoia Analytical, Inc. of Redwood City, California

**Notes:**

a = Chromatogram pattern as weathered gasoline.

b = Chromatogram pattern as gasoline.

**ATTACHMENT A**  
**STANDARD FIELD PROCEDURES**

## STANDARD FIELD PROCEDURES

WA has developed standard procedures for drilling and sampling soil borings and installing, developing and sampling ground water monitoring wells. These procedures comply with Federal, State and local regulatory guidelines. Specific procedures are summarized below.

### SOIL BORING AND SAMPLING

#### Objectives/Supervision

Soil sampling objectives include characterizing subsurface lithology, assessing whether the soils exhibit obvious hydrocarbon or other compound vapor or staining, and collecting samples for analysis at a State-certified laboratory. All borings are logged using the Unified Soil Classification System by a trained geologist working under the supervision of a California Registered Geologist (RG) or a Certified Engineering Geologist (CEG).

#### Soil Boring and Sampling

Deep soil borings or borings for well installation are typically drilled using hollow-stem augers. Split-barrel samplers lined with steam-cleaned brass or stainless steel tubes are driven through the hollow auger stem into undisturbed sediments at the bottom of the borehole using a 140 pound hammer dropped 30 inches. Soil samples can also be collected without using hollow-stem augers by progressively driving split-barrel soil samplers to depths of up to 30 ft.

Soil samples are collected at least every five ft to characterize the subsurface sediments and for possible chemical analysis. Near the water table and at lithologic changes, the sampling interval may be less than five ft.

Drilling and sampling equipment is steam-cleaned prior to drilling and between borings to prevent cross-contamination. Sampling equipment is washed between samples with trisodium phosphate or an equivalent EPA-approved detergent.

#### Sample Analysis

After noting the lithology at each end of the sampling tubes, the tube chosen for analysis is immediately trimmed of excess soil and capped with teflon tape and plastic end caps. The sample is labelled, stored in crushed ice at or below 4°C, and transported under chain-of-custody to a State-certified analytic laboratory.

#### Screening

One of the remaining tubes is partially emptied leaving about one-third of the soil in the tube. The tube is capped with plastic end caps and set aside to allow hydrocarbons to volatilize from the soil. After ten to fifteen minutes, a portable photoionization detector (PID) measures volatile hydrocarbon vapor concentrations in the tube headspace, extracting the vapor through a slit in the cap. PID measurements are used along with the stratigraphy and ground water depth to select soil samples for analysis.

#### Grouting



If the borings are not completed as wells, the borings are filled to the ground surface with cement grout poured or pumped through a tremie pipe. If wells are completed in the borings, the well installation, development and sampling procedures summarized below are followed.

## MONITORING WELL INSTALLATION, DEVELOPMENT AND SAMPLING

### Well Construction and Surveying

Wells are installed to monitor ground water quality and determine the ground water elevation, flow direction and gradient. Well depths and screen lengths are based on ground water depth, occurrence of hydrocarbons or other compounds in the borehole, stratigraphy and state and local regulatory guidelines. Well screens typically extend 15 ft below and 5 ft above the static water level at the time of drilling. However, the well screen will generally not extend into or through a clay layer that is at least three ft thick.

Well casing and screen are flush-threaded, Schedule 40 PVC. Screen slot size varies according to the sediments screened, but slots are generally 0.010 or 0.020 inches wide. A rinsed and graded sand occupies the annular space between the boring and the well screen to about one to two ft above the well screen. A two ft thick hydrated bentonite seal separates the sand from the overlying sanitary surface seal composed of cement with 3-5% bentonite.

Well-heads are secured by locking well-caps inside traffic-rated vaults finished flush with the ground surface. A stovepipe may be installed between the well-head and the vault cap for additional security.

The well top-of-casing elevation is surveyed with respect to mean sea level and the well is surveyed for horizontal location with respect to an onsite or nearby offsite landmark.

### Well Development

After 72 hours, the wells are developed using a combination of ground water surging and extraction. Surging agitates the ground water and dislodges fine sediments from the sand pack. After about ten minutes of surging, ground water is extracted from the well using bailing, pumping and/or reverse air-lifting through an eductor pipe to remove the sediments from the well. Surging and extraction continue until at least ten well-casing volumes of ground water are extracted and the sediment volume in the ground water is negligible. All equipment is steam-cleaned prior to use and air used for air-lifting is filtered to prevent oil entrained in the compressed air from entering the well. Wells that are developed using air-lift evacuation are not sampled until at least 72 hours after they are developed.

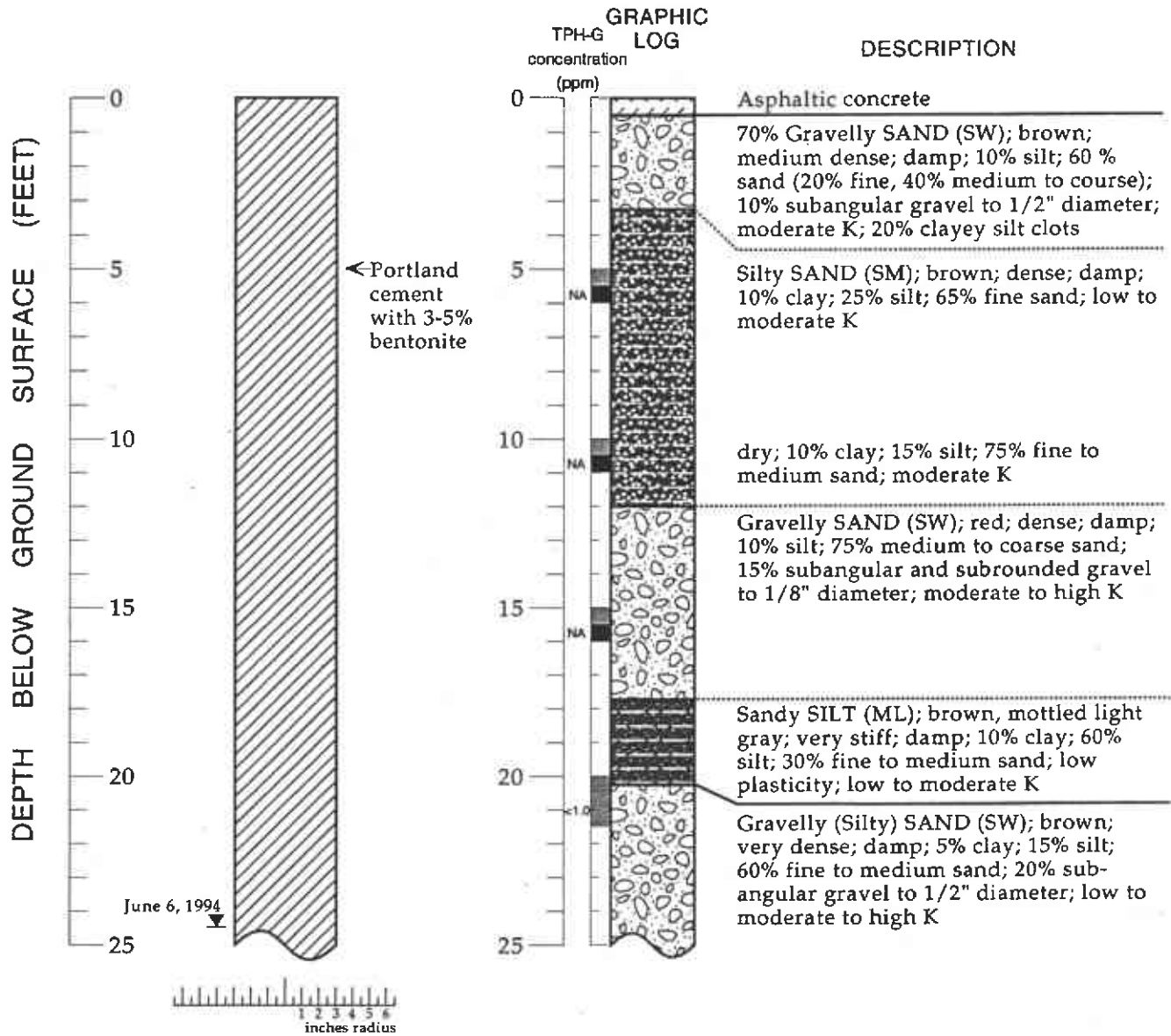
### Ground Water Sampling

Depending on local regulatory guidelines, three to four well-casing volumes of ground water are purged prior to sampling. Purging continues until ground water Ph, conductivity, and temperature have stabilized. Ground water samples are collected using bailers or pumps and are decanted into the appropriate containers supplied by the analytic laboratory. Samples are labelled, placed in protective



foam sleeves, stored at 4°C, and transported under chain-of-custody to the laboratory. Laboratory-supplied trip blanks accompany the samples and are analyzed to check for cross-contamination. An equipment blank may be analyzed if non-dedicated sampling equipment is used.

# SOIL BORING BH-1



## EXPLANATION

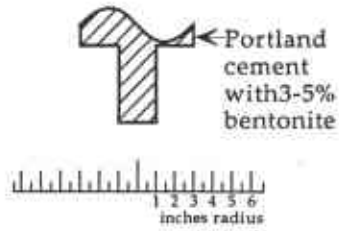
- ▼ Water level during drilling (date)
- ∇ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity
- NA = Not analyzed

Logged By: Jonathan Weingast  
 Supervisor: James W. Carmody; CEG 1576  
 Drilling Company: Gregg Drilling, Pacheco, CA  
 License Number: C57-485165  
 Driller: Mike Braman  
 Drilling Method: Hollow-stem auger 6"  
 Date Drilled: June 6, 1994  
 Well Head Completion: N/A  
 Type of Sampler: Split spoon (2" ID)  
 TPH-G: Total petroleum hydrocarbon as gasoline in soil by modified EPA Method 8015

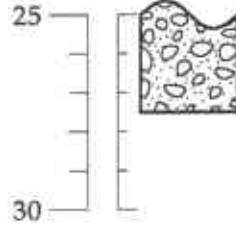
Boring Log Construction Details - BH-1 - Shell Service Station WIC# 204-6852-1404, 1784 150th Avenue, San Leandro, California

### SOIL BORING BH-1 (cont.)

DEPTH BELOW SURFACE (FEET)



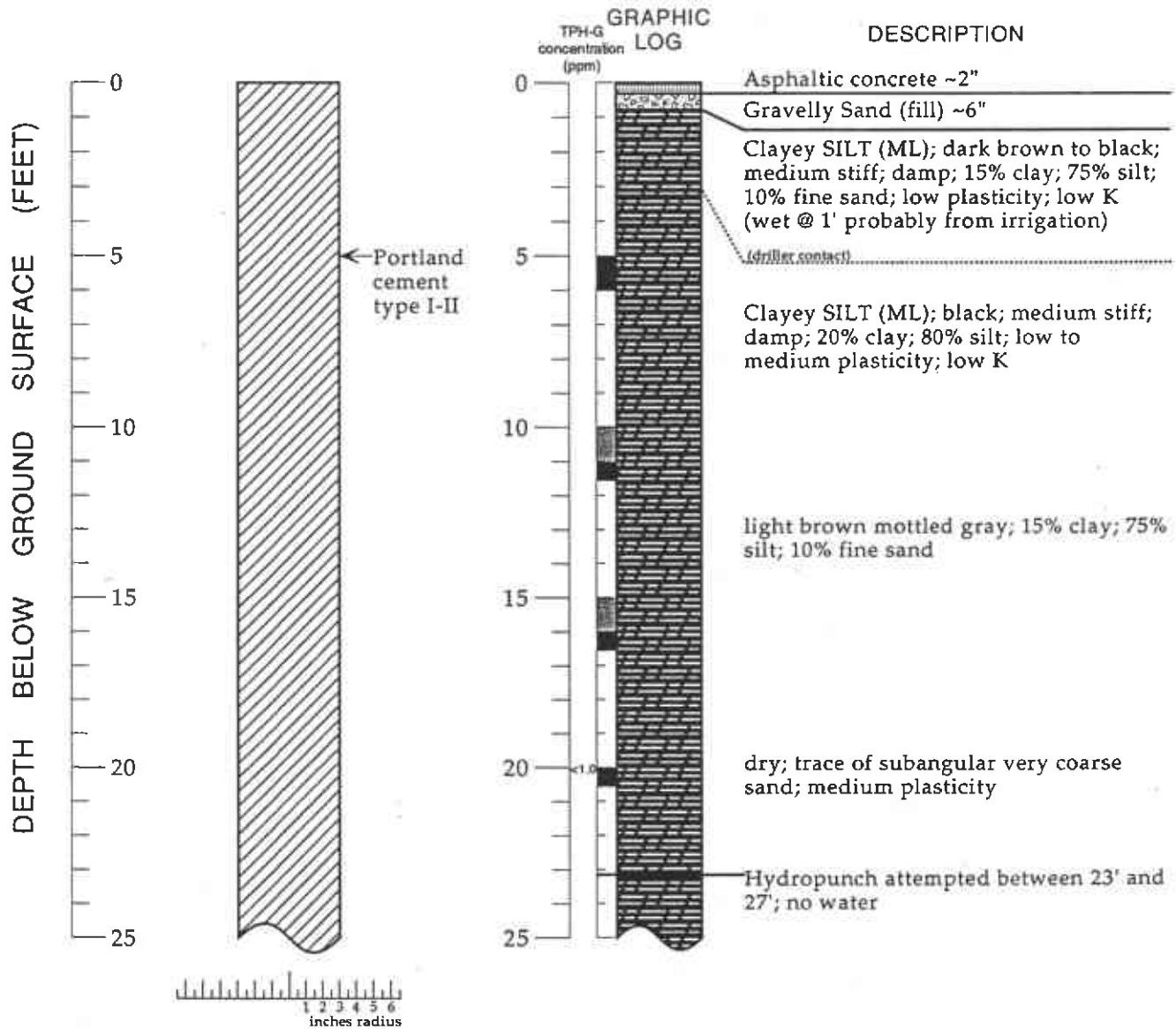
GRAPHIC LOG



DESCRIPTION

Hydropunch to 27.3'

# SOIL BORING BH-2



## EXPLANATION

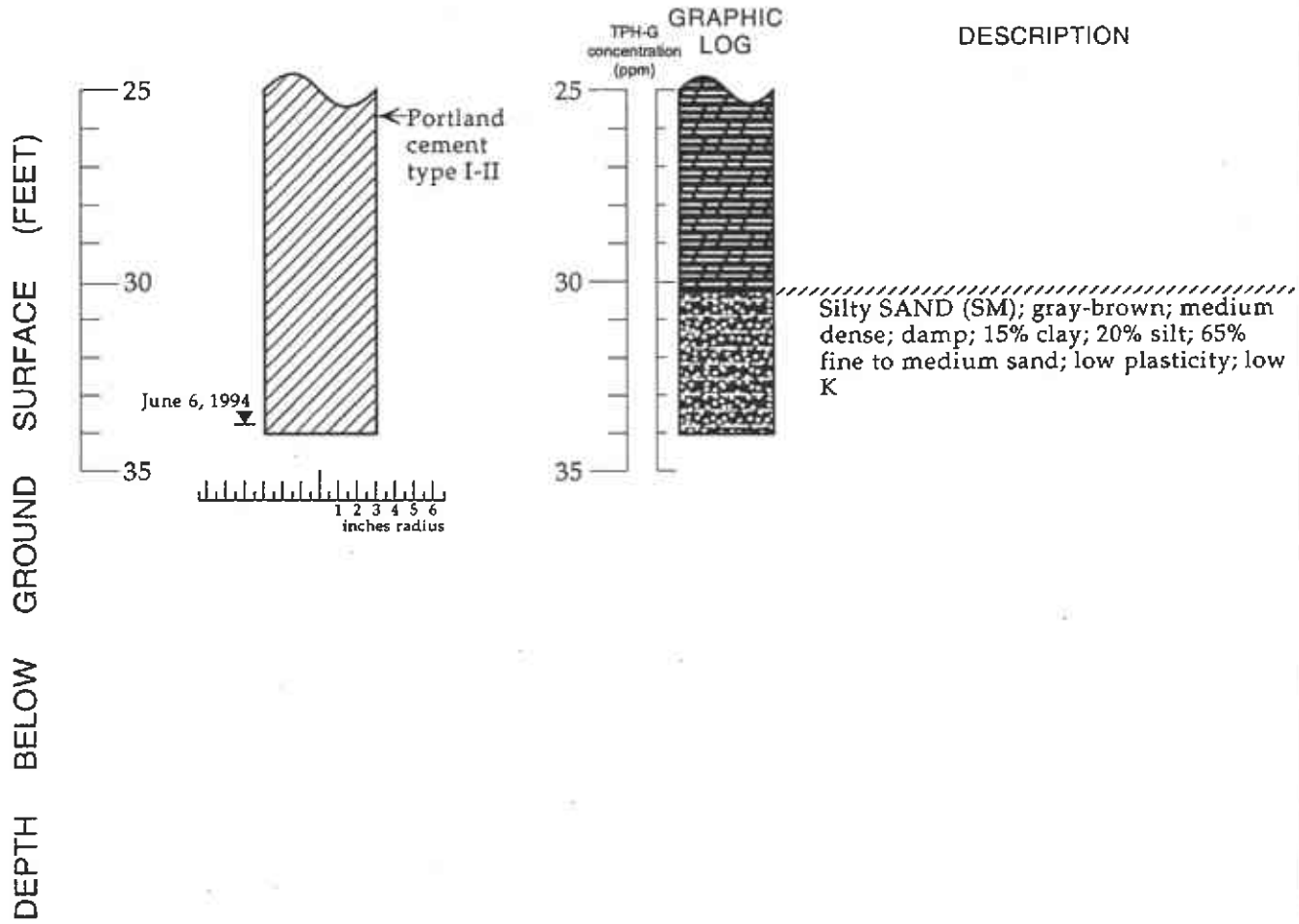
- ▼ Water level during drilling (date)
- ▽ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity

Logged By: Jonathan Weingast  
 Supervisor: James W. Carmody; CEG 1576  
 Drilling Company: Gregg Drilling, Pacheco, CA  
 License Number: C57-485165  
 Driller: Mike Braman, Rich Nessinger  
 Drilling Method: Hollow-stem auger 6"  
 Date Drilled: June 6, 1994  
 Well Head Completion: N/A  
 Type of Sampler: Split spoon (2" ID)  
 TPH-G: Total petroleum hydrocarbon as gasoline in soil by modified EPA Method 8015

Boring Log Construction Details - BH-2 - Shell Service Station WIC# 204-6852-1404, 1784 150th Avenue, San Leandro, California

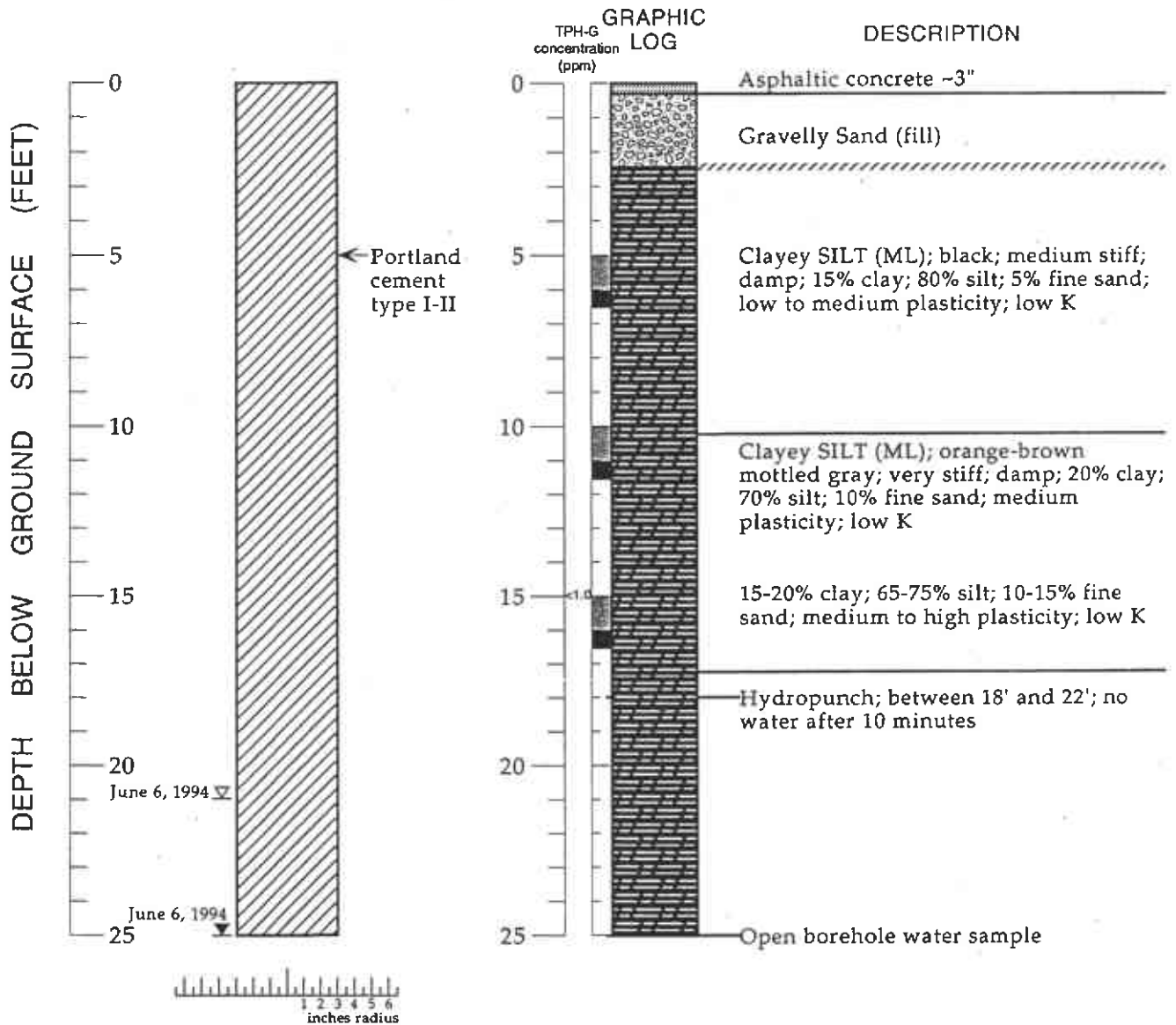


## SOIL BORING BH-2 (cont.)



Boring Log Construction Details - BH-2 - Shell Service Station WIC# 204-6852-1404, 1784 150th Avenue, San Leandro, California

# SOIL BORING BH-3



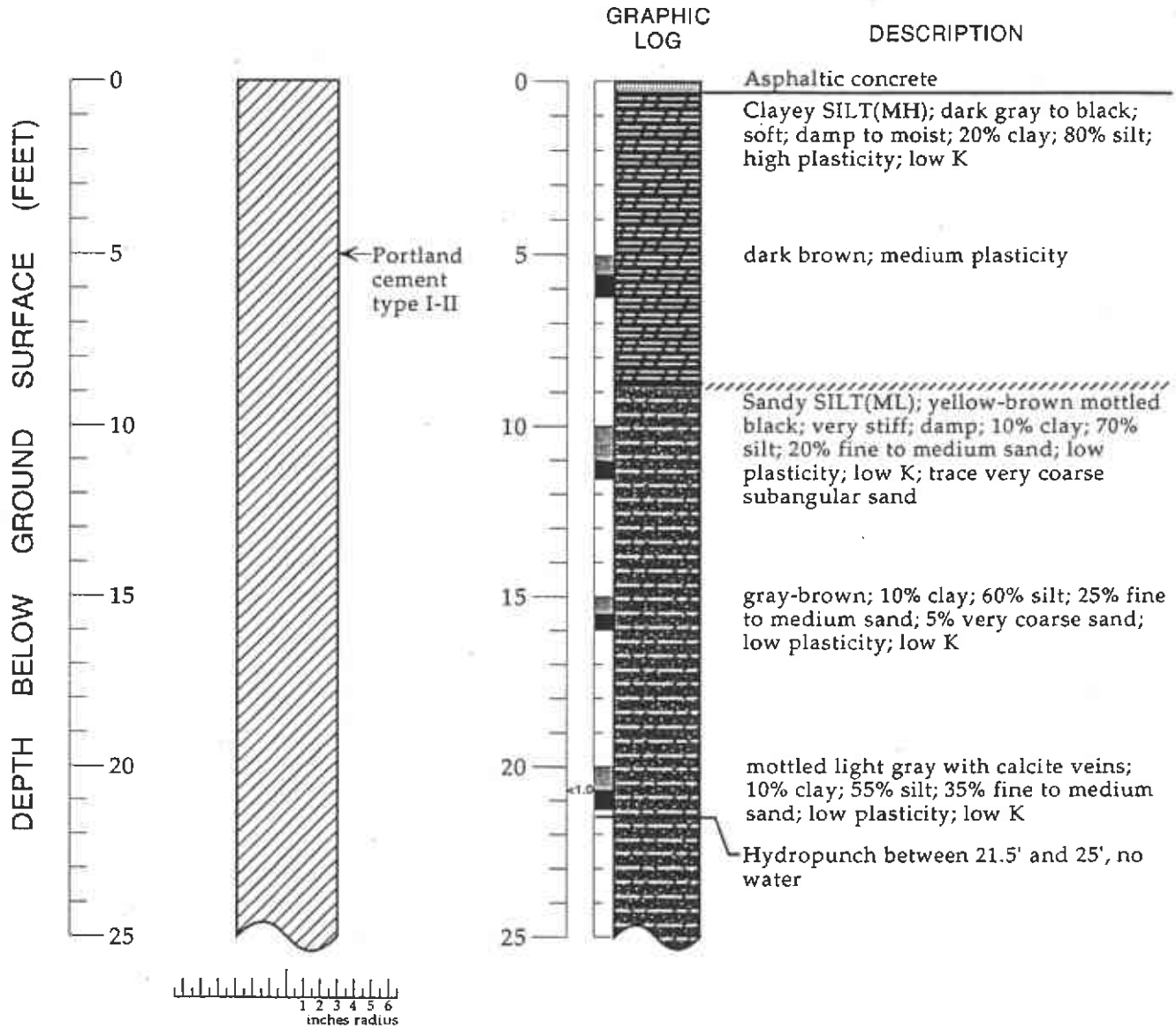
## EXPLANATION

- ▼ Water level during drilling (date)
- ▾ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- ////// Gradational contact
- ▨ Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- ▩ Cutting sample
- K = Estimated hydraulic conductivity

Logged By: Jonathan Weingast  
 Supervisor: James W. Carmody; CEG 1576  
 Drilling Company: Gregg Drilling, Pacheco, CA  
 License Number: C57-485165  
 Driller: Mike Braman, Rich Nessinger  
 Drilling Method: Hollow-stem auger 6"  
 Date Drilled: June 6, 1994  
 Well Head Completion: N/A  
 Type of Sampler: Split spoon (2" ID)  
 TPH-G: Total petroleum hydrocarbon as gasoline in soil by modified EPA Method 8015

Boring Log Construction Details - BH-3 - Shell Service Station WIC# 204-6852-1404, 1784 150th Avenue, San Leandro, California

# SOIL BORING BH-4



## EXPLANATION

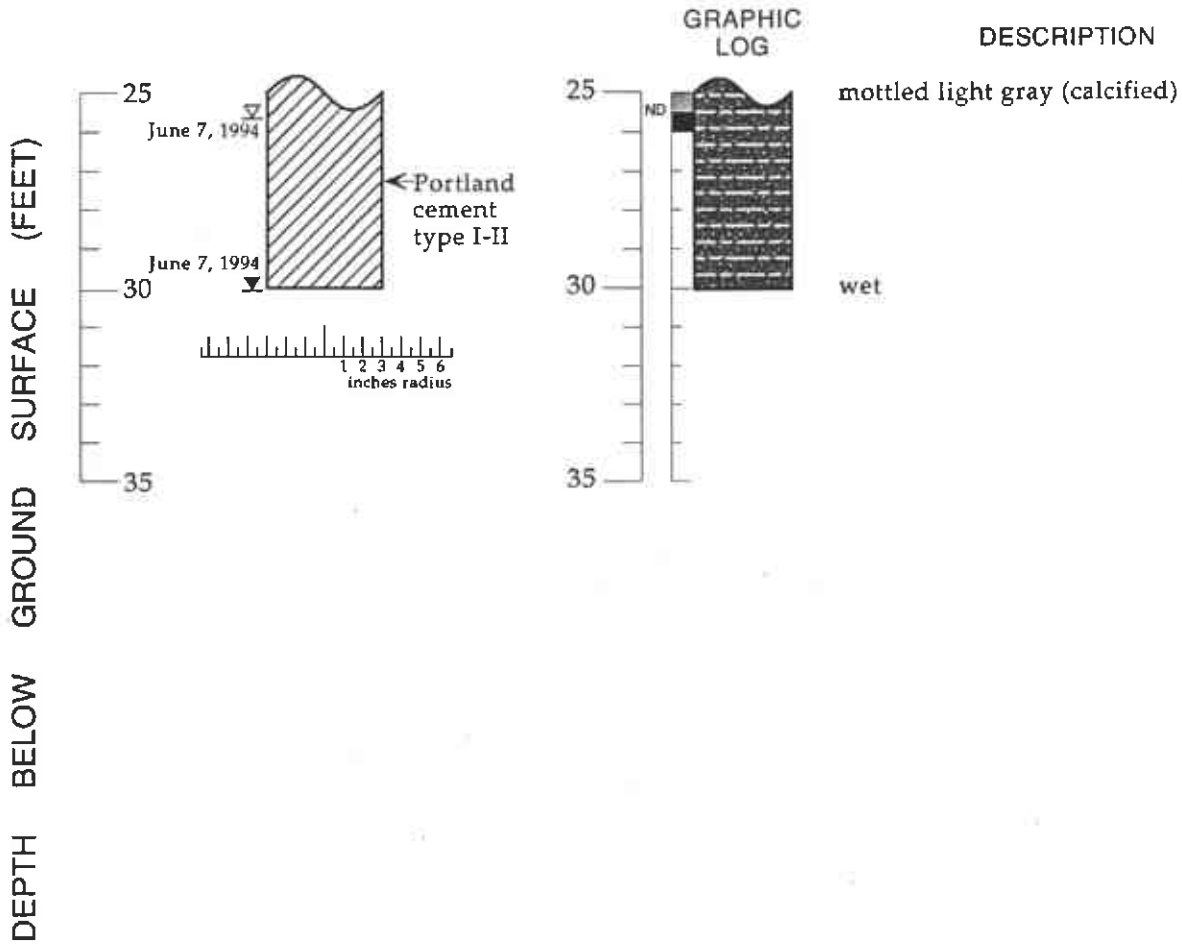
- ∇ Water level during drilling (date)
- ▽ Water level (date)
- ..... Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- ▨ Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- ▩ Cutting sample
- K = Estimated hydraulic conductivity

Logged By: Jonathan Weingast  
 Supervisor: James W. Carmody; CEG 1576  
 Drilling Company: Gregg Drilling, Pacheco, CA  
 License Number: C57-485165  
 Driller: Mike Braman, Rich Nessinger  
 Drilling Method: Hollow-stem auger  
 Date Drilled: June 7, 1994  
 Well Head Completion: N/A  
 Type of Sampler: Split spoon (2" ID)  
 TPH-G: Total petroleum hydrocarbon as gasoline in soil by modified EPA Method 8015

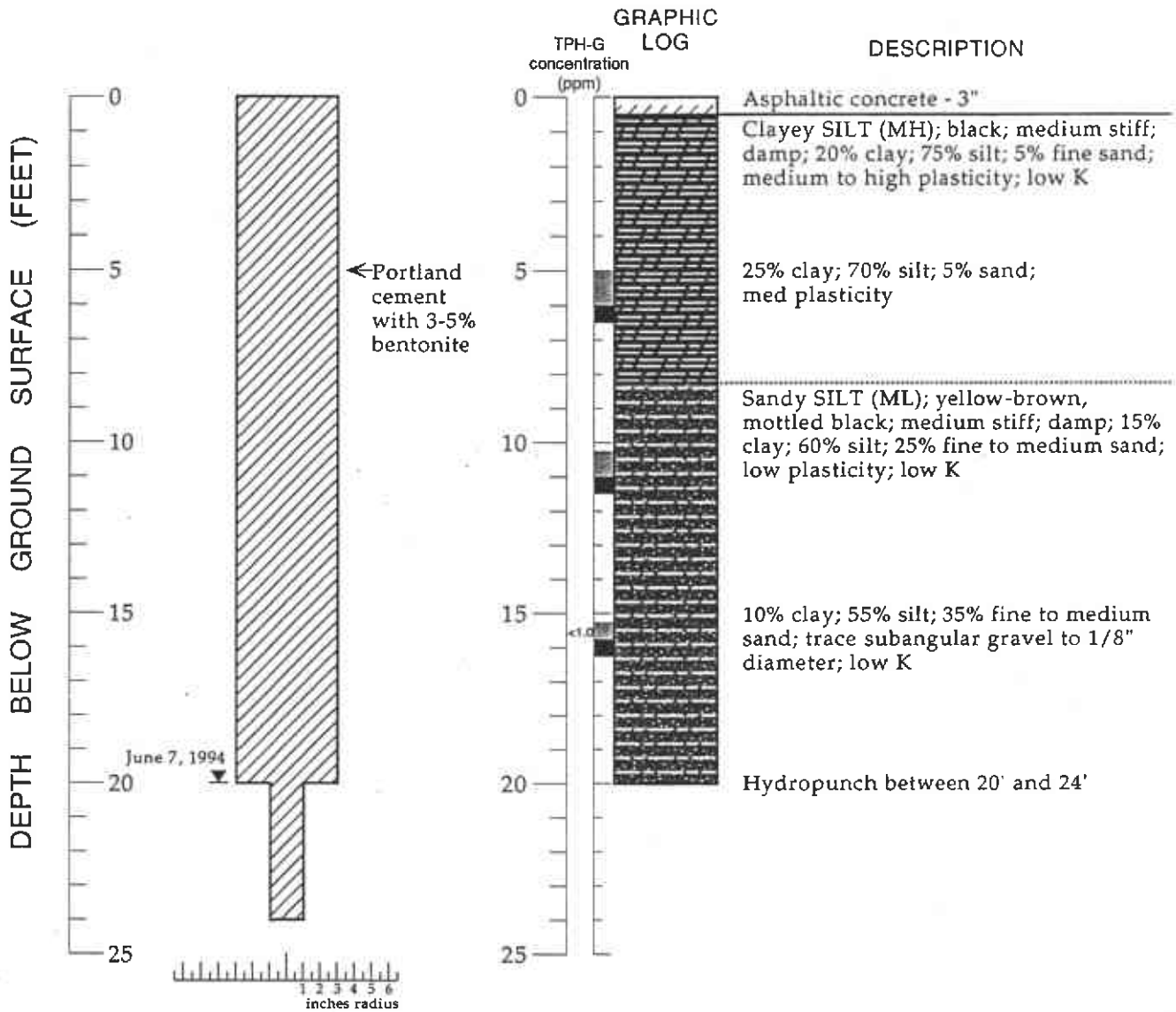
Boring Log Construction Details - BH-4 - Shell Service Station WIC# 204-6852-1404, 1784 150th Avenue, San Leandro, California



### SOIL BORING BH-4 (cont.)



# SOIL BORING BH-5



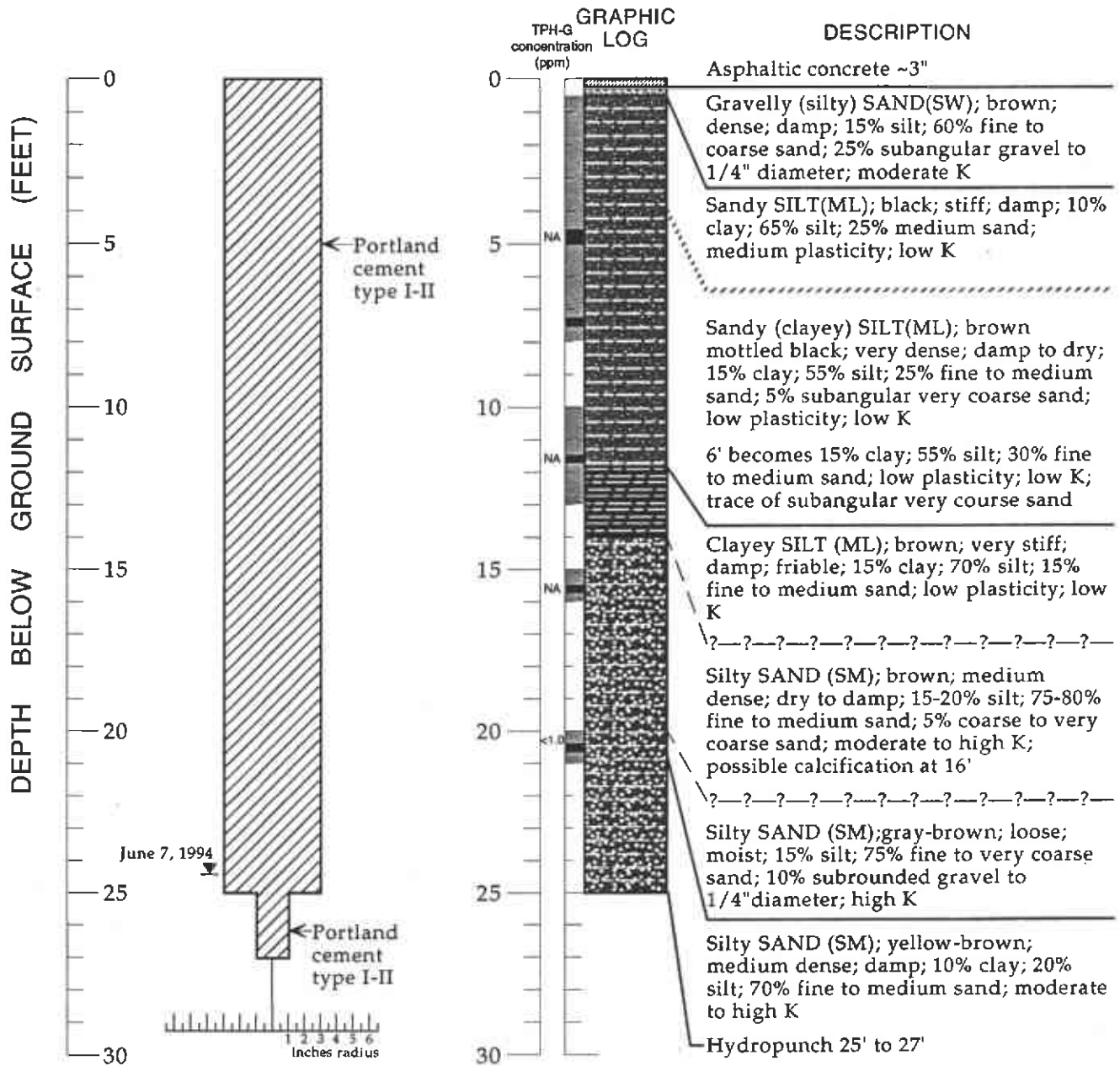
## EXPLANATION

- ▼ Water level during drilling (date)
- ▽ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity

Logged By: Jonathan Weingast  
 Supervisor: James W. Carmody; CEG 1576  
 Drilling Company: Gregg Drilling, Pacheco, CA  
 License Number: C57-485165  
 Driller: Mike Braman  
 Drilling Method: Hollow-stem auger 6"  
 Date Drilled: June 7, 1994  
 Well Head Completion: N/A  
 Type of Sampler: Split spoon (2" ID)  
 TPH-G: Total Petroleum Hydrocarbons as gasoline in soil by modified EPA Method 8015

Boring Log Construction Details - BH-5 - Shell Service Station WIC# 204-6852-1404, 1784 150th Avenue, San Leandro, California

# SOIL BORING BH-6



## EXPLANATION

- ▼ Water level during drilling (date)
- ⊘ Water level (date)
- Contact (dotted where approximate)
- ?-?-? Uncertain contact
- //// Gradational contact
- █ Location of recovered drive sample
- █ Location of drive sample sealed for chemical analysis
- █ Cutting sample
- K = Estimated hydraulic conductivity
- NA = Not analyzed

Logged By: Jonathan Weingast  
 Supervisor: James W. Carmody; CEG 1576  
 Drilling Company: Gregg Drilling, Pacheco, CA  
 License Number: C57-485165  
 Driller: Mike Braman, Rich Nessinger  
 Drilling Method: Hollow-stem auger 6"  
 Date Drilled: June 7, 1994  
 Well Head Completion: N/A  
 Type of Sampler: Continuous core  
 TPH-G: Total petroleum hydrocarbon as gasoline in soil by modified EPA Method 8015

Boring Log Construction Details - BH-6 - Shell Service Station WIC# 204-6852-1404, 1784 150th Avenue, San Leandro, California

**ATTACHMENT C**  
**ANALYTIC REPORTS FOR SOIL AND GROUND WATER**



# Sequoia Analytical

680 Chesapeake Drive  
1900 Bates Avenue, Suite L  
819 Striker Avenue, Suite 8

Redwood City, CA 94063  
Concord, CA 94520  
Sacramento, CA 95834

(415) 364-9600  
(510) 686-9600  
(916) 921-9600

FAX (415) 364-9233  
FAX (510) 686-9689  
FAX (916) 921-0100

Weiss & Associates  
5500 Shellmound  
Emeryville, CA 94608  
Attention: Eric Anderson

Project: Shell, 1784 150th Ave., San Leandro

Enclosed are the results from 7 soil samples received at Sequoia Analytical on June 9, 1994. The requested analyses are listed below:

| SAMPLE # | SAMPLE DESCRIPTION | DATE OF COLLECTION | TEST METHOD                              |
|----------|--------------------|--------------------|--|
| 4F77801  | Soil, BH1-21       | 6/6/94             | EPA 5030/8015 Mod./8020                  |
| 4F77802  | Soil, BH2-20       | 6/6/94             | EPA 5030/8015 Mod./8020                  |
| 4F77803  | Soil, BH3-16       | 6/6/94             | EPA 5030/8010<br>EPA 5030/8015 Mod./8020 |
| 4F77804  | Soil, BH4-20.6     | 6/7/94             | EPA 5030/8015 Mod., 8020                 |
| 4F77805  | Soil, BH5-15.6     | 6/7/94             | EPA 5030/8015 Mod./8020                  |
| 4F77806  | Soil, BH6-20.5     | 6/7/94             | EPA 5030/8015 Mod./8020                  |
| 4F77807  | Soil, SP1-4        | 6/7/94             | EPA 5030/8015 Mod./8020                  |

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

SEQUOIA ANALYTICAL

Todd Olive  
Project Manager





|                          |  |                        |
|--------------------------|--|------------------------|
| Weiss & Associates       | Client Project ID: Shell, 1784 150th Ave., San Leandro | Sampled: Jun 6, 1994   |
| 5500 Shellmound          | Sample Matrix: Soil                                    | Received: Jun 9, 1994  |
| Emeryville, CA 94608     | Analysis Method: EPA 5030/8015 Mod./8020               | Reported: Jun 20, 1994 |
| Attention: Eric Anderson | First Sample #: 4F77801                                |                        |

**TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION**

| Analyte                | Reporting Limit<br>mg/kg | Sample I.D.<br>4F77801<br>BH1-21 | Sample I.D.<br>4F77802<br>BH2-20 | Sample I.D.<br>4F77803<br>BH3-16 | Sample I.D. | Sample I.D. | Sample I.D. |
|------------------------|--------------------------|----------------------------------|----------------------------------|----------------------------------|-------------|-------------|-------------|
| Purgeable Hydrocarbons | 1.0                      | N.D.                             | N.D.                             | N.D.                             |             |             |             |
| Benzene                | 0.0050                   | N.D.                             | N.D.                             | 0.013                            |             |             |             |
| Toluene                | 0.0050                   | N.D.                             | N.D.                             | N.D.                             |             |             |             |
| Ethyl Benzene          | 0.0050                   | N.D.                             | N.D.                             | N.D.                             |             |             |             |
| Total Xylenes          | 0.0050                   | N.D.                             | N.D.                             | N.D.                             |             |             |             |
| Chromatogram Pattern:  |                          | --                               | --                               | C6-C7                            |             |             |             |

**Quality Control Data**

|   |         |         |         |
|---|---------|---------|---------|
| Report Limit                                    |         |         |         |
| Multiplication Factor:                          | 1.0     | 1.0     | 1.0     |
| Date Analyzed:                                  | 6/14/94 | 6/17/94 | 6/17/94 |
| Instrument Identification:                      | GCHP-6  | GCHP-6  | GCHP-6  |
| Surrogate Recovery, %:<br>(QC Limits = 70-130%) | 103     | 81      | 82      |

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.  
Analytes reported as N.D. were not detected above the stated reporting limit.

**SEQUOIA ANALYTICAL**

*T.O.*  
Todd Olive  
Project Manager





|                          |  |                        |
|--------------------------|--|------------------------|
| Weiss & Associates       | Client Project ID: Shell, 1784 150th Ave., San Leandro | Sampled: Jun 7, 1994   |
| 5500 Shellmound          | Sample Matrix: Soil                                    | Received: Jun 9, 1994  |
| Emeryville, CA 94608     | Analysis Method: EPA 5030/8015 Mod./8020               | Reported: Jun 20, 1994 |
| Attention: Eric Anderson | First Sample #: 4F77804                                |                        |

**TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION**

| Analyte                | Reporting Limit<br>mg/kg | Sample I.D.<br>4F77804<br>BH4-20.6 | Sample I.D.<br>4F77805<br>BH5-15.6 | Sample I.D.<br>4F77806<br>BH6-20.5 | Sample I.D.<br>4F77807<br>SP1-4 | Sample I.D. | Sample I.D. |
|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|---------------------------------|-------------|-------------|
| Purgeable Hydrocarbons | 1.0                      | N.D.                               | N.D.                               | N.D.                               | N.D.                            |             |             |
| Benzene                | 0.0050                   | N.D.                               | N.D.                               | N.D.                               | N.D.                            |             |             |
| Toluene                | 0.0050                   | N.D.                               | N.D.                               | N.D.                               | N.D.                            |             |             |
| Ethyl Benzene          | 0.0050                   | N.D.                               | N.D.                               | N.D.                               | N.D.                            |             |             |
| Total Xylenes          | 0.0050                   | N.D.                               | N.D.                               | N.D.                               | N.D.                            |             |             |
| Chromatogram Pattern:  |                          | --                                 | --                                 | --                                 | --                              |             |             |

(Comp. of 4)

**Quality Control Data**

|   |         |         |         |         |
|---|---------|---------|---------|---------|
| Report Limit                                    |         |         |         |         |
| Multiplication Factor:                          | 1.0     | 1.0     | 1.0     | 1.0     |
| Date Analyzed:                                  | 6/17/94 | 6/14/94 | 6/14/94 | 6/14/94 |
| Instrument Identification:                      | GCHP-6  | GCHP-6  | GCHP-6  | GCHP-6  |
| Surrogate Recovery, %:<br>(QC Limits = 70-130%) | 84      | 108     | 102     | 108     |

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.  
Analytes reported as N.D. were not detected above the stated reporting limit.

**SEQUOIA ANALYTICAL**

*T.O.*  
Todd Olive  
Project Manager





|   |  |   |
|---|--|---|
| Weiss & Associates<br>5500 Shellmound<br>Emeryville, CA 94608<br>Attention: Eric Anderson | Client Project ID: Shell, 1784 150th Ave., San Leandro<br>Sample Descript: Soil, BH3-16<br>Analysis Method: EPA 5030/8010<br>Lab Number: 4F77803 | Sampled: Jun 6, 1994<br>Received: Jun 9, 1994<br>Analyzed: Jun 16, 1994<br>Reported: Jun 20, 1994 |
|---|--|---|

**HALOGENATED VOLATILE ORGANICS (EPA 8010)**

| Analyte                        | Detection Limit<br>µg/kg | Sample Results<br>µg/kg |
|--------------------------------|--------------------------|-------------------------|
| Bromodichloromethane.....      | 5.0                      | N.D.                    |
| Bromoform.....                 | 5.0                      | N.D.                    |
| Bromomethane.....              | 10                       | N.D.                    |
| Carbon tetrachloride.....      | 5.0                      | N.D.                    |
| Chlorobenzene.....             | 5.0                      | N.D.                    |
| Chloroethane.....              | 10                       | N.D.                    |
| 2-Chloroethylvinyl ether.....  | 10                       | N.D.                    |
| Chloroform.....                | 5.0                      | N.D.                    |
| Chloromethane.....             | 10                       | N.D.                    |
| Dibromochloromethane.....      | 5.0                      | N.D.                    |
| 1,3-Dichlorobenzene.....       | 5.0                      | N.D.                    |
| 1,4-Dichlorobenzene.....       | 5.0                      | N.D.                    |
| 1,2-Dichlorobenzene.....       | 5.0                      | N.D.                    |
| 1,1-Dichloroethane.....        | 5.0                      | N.D.                    |
| 1,2-Dichloroethane.....        | 5.0                      | N.D.                    |
| 1,1-Dichloroethene.....        | 5.0                      | N.D.                    |
| cis-1,2-Dichloroethene.....    | 5.0                      | N.D.                    |
| trans-1,2-Dichloroethene.....  | 5.0                      | N.D.                    |
| 1,2-Dichloropropane.....       | 5.0                      | N.D.                    |
| cis-1,3-Dichloropropene.....   | 5.0                      | N.D.                    |
| trans-1,3-Dichloropropene..... | 5.0                      | N.D.                    |
| Methylene chloride.....        | 50                       | N.D.                    |
| 1,1,2,2-Tetrachloroethane..... | 5.0                      | N.D.                    |
| Tetrachloroethene.....         | 5.0                      | N.D.                    |
| 1,1,1-Trichloroethane.....     | 5.0                      | N.D.                    |
| 1,1,2-Trichloroethane.....     | 5.0                      | N.D.                    |
| Trichloroethene.....           | 5.0                      | N.D.                    |
| Trichlorofluoromethane.....    | 5.0                      | N.D.                    |
| Vinyl chloride.....            | 10                       | N.D.                    |

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL**

  
Todd Olive  
Project Manager







|   |   |                               |                        |
|---|---|-------------------------------|------------------------|
| Weiss & Associates<br>5500 Shellmound<br>Emeryville, CA 94608<br>Attention: Eric Anderson | Client Project ID: Shell, 1784 150th Ave., San Leandro<br>Matrix: Solid | QC Sample Group: 4F77801 - 07 | Reported: Jun 20, 1994 |
|---|---|-------------------------------|------------------------|

**QUALITY CONTROL DATA REPORT**

| ANALYTE         | Benzene    | Toluene    | Ethyl Benzene | Xylenes    |
|-----------------|------------|------------|---------------|------------|
| <b>Method:</b>  | EPA 8020   | EPA 8020   | EPA 8020      | EPA 8020   |
| <b>Analyst:</b> | C. Donohue | C. Donohue | C. Donohue    | C. Donohue |

|                                 |            |            |            |            |
|---------------------------------|------------|------------|------------|------------|
| <b>MS/MSD</b>                   |            |            |            |            |
| <b>Batch#:</b>                  | 4F68502    | 4F68502    | 4F68502    | 4F68502    |
| <b>Date Prepared:</b>           | 6/14/94    | 6/14/94    | 6/14/94    | 6/14/94    |
| <b>Date Analyzed:</b>           | 6/14/94    | 6/14/94    | 6/14/94    | 6/14/94    |
| <b>Instrument I.D.#:</b>        | GCHP-6     | GCHP-6     | GCHP-6     | GCHP-6     |
| <b>Conc. Spiked:</b>            | 0.20 mg/kg | 0.20 mg/kg | 0.20 mg/kg | 0.60 mg/kg |
| <b>Matrix Spike</b>             |            |            |            |            |
| <b>% Recovery:</b>              | 90         | 90         | 95         | 92         |
| <b>Matrix Spike Duplicate %</b> |            |            |            |            |
| <b>Recovery:</b>                | 85         | 85         | 90         | 88         |
| <b>Relative %</b>               |            |            |            |            |
| <b>Difference:</b>              | 5.7        | 5.7        | 5.4        | 4.4        |

LCS Batch#:

Date Prepared:  
Date Analyzed:  
Instrument I.D.#:

LCS %  
Recovery:

|                        |        |        |        |        |
|------------------------|--------|--------|--------|--------|
| <b>% Recovery</b>      |        |        |        |        |
| <b>Control Limits:</b> | 55-145 | 47-149 | 47-155 | 56-140 |

**Please Note:**

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

**SEQUOIA ANALYTICAL**

  
Todd Olive  
Project Manager





Weiss & Associates  
 5500 Shellmound  
 Emeryville, CA 94608  
 Attention: Eric Anderson

Client Project ID: Shell, 1784 150th Ave., San Leandro  
 Matrix: Solid

QC Sample Group: 4F77803

Reported: Jun 20, 1994

**QUALITY CONTROL DATA REPORT**

| ANALYTE  | 1,1-Dichloro-ethene | Trichloro-ethene | Chloro-benzene |
|----------|---------------------|------------------|----------------|
| Method:  | EPA 8010            | EPA 8010         | EPA 8010       |
| Analyst: | H. Porter           | H. Porter        | H. Porter      |

| MS/MSD Batch#:                     | V4F67801 | V4F67801 | V4F67801 |
|------------------------------------|----------|----------|----------|
| Date Prepared:                     | 6/13/94  | 6/13/94  | 6/13/94  |
| Date Analyzed:                     | 6/13/94  | 6/13/94  | 6/13/94  |
| Instrument I.D.#:                  | GCHP-9   | GCHP-9   | GCHP-9   |
| Conc. Spiked:                      | 25 µg/kg | 25 µg/kg | 25 µg/kg |
| Matrix Spike % Recovery:           | 60       | 92       | 68       |
| Matrix Spike Duplicate % Recovery: | 52       | 88       | 64       |
| Relative % Difference:             | 14       | 4.4      | 6.1      |

LCS Batch#:

Date Prepared:  
 Date Analyzed:  
 Instrument I.D.#:

LCS %  
 Recovery:

| % Recovery Control Limits: | 28-167 | 35-146 | 38-150 |
|----------------------------|--------|--------|--------|
|----------------------------|--------|--------|--------|

SEQUOIA ANALYTICAL

  
 Todd Olive  
 Project Manager

**Please Note:**  
 The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.







**SHELL OIL COMPANY**  
RETAIL ENVIRONMENTAL ENGINEERING - WEST

**CHAIN OF CUSTODY RECORD**

Serial No: \_\_\_\_\_

Date: \_\_\_\_\_  
Page 2 of 5

Site Address: 1784 150th Ave San Leandro

WIC#: 204-6852-1404

Shell Engineer: Don Kirk Phone No.: 570-675-6168  
Fax #: \_\_\_\_\_

Consultant Name & Address: WEISS ASSOCIATES  
5500 SHELLMOUND ST EMERYVILLE CA 94608

Consultant Contact: Eric Anderson Phone No.: (510) 547-5420  
WA JOB # 81-422-05 Fax #: 547-5043

Comments: \_\_\_\_\_

Sampled by: Jonathan Weisat  
Printed Name: Jonathan Weisat

**Analysis Required**

|                         |                            |                     |                              |                   |                                  |          |                |                  |               |
|-------------------------|----------------------------|---------------------|------------------------------|-------------------|----------------------------------|----------|----------------|------------------|---------------|
| TPH (EPA 8015 Mod. Gas) | TPH (EPA 8015 Mod. Diesel) | BTEX (EPA 8020/602) | Volatile Organics (EPA 8210) | Test for Disposal | Combination TPH 8015 & BTEX 8020 | Asbestos | Container Size | Preparation Used | Composite Y/N |
|                         |                            |                     | <u>8010</u>                  |                   | <u>HOLD</u>                      |          |                |                  |               |

LAB: Sequela

| CHECK ONE (1) BOX ONLY                                 | CI/DI | TURN AROUND TIME                                     |
|--|-------|--|
| G.W. Monitoring <input type="checkbox"/>               | 4461  | 24 hours <input type="checkbox"/>                    |
| Site Investigation <input checked="" type="checkbox"/> | 4441  | 48 hours <input type="checkbox"/>                    |
| Soil Classify/Disposal <input type="checkbox"/>        | 4442  | 15 days <input checked="" type="checkbox"/> (Normal) |
| Water Classify/Disposal <input type="checkbox"/>       | 4443  | Other <input type="checkbox"/>                       |
| Soil/Air Rem. or Sys. O & M <input type="checkbox"/>   | 4452  |  |
| Water Rem. or Sys. O & M <input type="checkbox"/>      | 4453  |  |
| Other <input type="checkbox"/>                         |       |  |

NOTE: Notify Lab as soon as Possible of 24/48 hrs. TAT.

UST AGENCY: ACDEX

| Sample ID | Date   | Sludge | Soil | Water | Air | No. of conls. | TPH (EPA 8015 Mod. Gas) | TPH (EPA 8015 Mod. Diesel) | BTEX (EPA 8020/602) | Volatile Organics (EPA 8210) | Test for Disposal | Combination TPH 8015 & BTEX 8020 | Asbestos | Container Size | Preparation Used | Composite Y/N | MATERIAL DESCRIPTION | SAMPLE CONDITION/ COMMENTS |
|-----------|--------|--------|------|-------|-----|---------------|-------------------------|----------------------------|---------------------|------------------------------|-------------------|----------------------------------|----------|----------------|------------------|---------------|----------------------|----------------------------|
| BH-2 20'  | 4/4/94 |        | X    |       |     | 1             |                         |                            |                     |                              |                   | X                                |          |                |                  |               | 9406600              |                            |
| BH-2 W    |        |        |      | X     |     | 3             |                         |                            | X                   |                              | X                 |                                  |          |                |                  |               |                      | -02                        |
| BH-3 6'   |        |        | X    |       |     | 1             |                         |                            |                     |                              |                   | X                                |          |                |                  |               |                      |                            |
| BH-3 11'  |        |        | X    |       |     | 1             |                         |                            |                     |                              |                   | X                                |          |                |                  |               |                      |                            |
| BH-3 16"  |        |        | X    |       |     | 1             |                         |                            |                     |                              |                   | X                                |          |                |                  |               |                      |                            |
| BH-3 W    |        |        |      | X     |     | 3             |                         |                            | X                   |                              | X                 |                                  |          |                |                  |               |                      | -03                        |
| BH-4 5.6' | 6/9/94 |        | X    |       |     | 1             |                         |                            |                     |                              |                   | X                                |          |                |                  |               |                      |                            |
| BH-4 11'  | 6/9/94 |        | X    |       |     | 1             |                         |                            |                     |                              |                   | X                                |          |                |                  |               |                      |                            |

|   |                                      |                     |                    |   |                                     |                      |                    |
|---|--------------------------------------|---------------------|--------------------|---|-------------------------------------|----------------------|--------------------|
| Relinquished By (signature): <u>Jonathan Weisat</u> | Printed Name: <u>Jonathan Weisat</u> | Date: <u>6/9/94</u> | Time: <u>16:55</u> | Received (signature): _____                 | Printed Name: _____                 | Date: _____          | Time: _____        |
| Relinquished By (signature): _____                  | Printed Name: _____                  | Date: _____         | Time: _____        | Received (signature): _____                 | Printed Name: _____                 | Date: _____          | Time: _____        |
| Relinquished By (signature): _____                  | Printed Name: _____                  | Date: _____         | Time: _____        | Received (signature): <u>Keith E. Cross</u> | Printed Name: <u>KEITH E. CROSS</u> | Date: <u>6/20/94</u> | Time: <u>16:55</u> |

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN-OF-CUSTODY WITH INVOICE AND RESULTS





**SHELL OIL COMPANY**  
RETAIL ENVIRONMENTAL ENGINEERING - WEST

**CHAIN OF CUSTODY RECORD**

Serial No: \_\_\_\_\_

Date: \_\_\_\_\_

Page 4 of 5

Site Address: 1784 150th Ave San Leandro

WIC#: 204-6852-1404

Shell Engineer: Don Rink Phone No.: 510-675-6169  
Fax #: \_\_\_\_\_

Consultant Name & Address: WEISS ASSOCIATES  
5500 SHELLMOUND ST EMERYVILLE CA 94608

Consultant Contact: Eric Anderson Phone No.: (510) 547-5420  
WA JOB # 81-402-05 Fax #: 547-5043

Comments: \_\_\_\_\_

Sampled by: Jonathan Wengert

Printed Name: Jonathan Wengert

**Analysis Required**

|                         |                            |                     |  |                   |                                  |             |          |                |                  |               |
|-------------------------|----------------------------|---------------------|--|-------------------|----------------------------------|-------------|----------|----------------|------------------|---------------|
| TPH (EPA 8015 Mod. Gas) | TPH (EPA 8015 Mod. Diesel) | BTEX (EPA 8020/602) | Volatile Organics (EPA 8210) <u>80/8</u> | Test for Disposal | Combination TPH 8015 & BTEX 8020 | <u>Hold</u> | Asbestos | Container Size | Preparation Used | Composite Y/N |
|-------------------------|----------------------------|---------------------|--|-------------------|----------------------------------|-------------|----------|----------------|------------------|---------------|

LAB: Sequerra

| CHECK ONE (1) BOX ONLY                                 | CI/DI | TURN AROUND TIME                                     |
|--|-------|--|
| G.W. Monitoring <input type="checkbox"/>               | 4461  | 24 hours <input type="checkbox"/>                    |
| Site Investigation <input checked="" type="checkbox"/> | 4441  | 48 hours <input type="checkbox"/>                    |
| Soil Classify/Disposal <input type="checkbox"/>        | 4442  | 15 days <input checked="" type="checkbox"/> (Normal) |
| Water Classify/Disposal <input type="checkbox"/>       | 4443  | Other <input type="checkbox"/>                       |
| Soil/Air Rem. or Sys. O & M <input type="checkbox"/>   | 4452  |  |
| Water Rem. or Sys. O & M <input type="checkbox"/>      | 4453  |  |
| Other <input type="checkbox"/>                         |       |  |

NOTE: Notify Lab as soon as possible of 24/48 hrs. TAT.

UST AGENCY: ACDEH

| Sample ID | Date  | Sludge | Soil | Water | Air | No. of conds. | TPH (EPA 8015 Mod. Gas) | TPH (EPA 8015 Mod. Diesel) | BTEX (EPA 8020/602) | Volatile Organics (EPA 8210) | Test for Disposal | Combination TPH 8015 & BTEX 8020 | Asbestos | Container Size | Preparation Used | Composite Y/N | MATERIAL DESCRIPTION | SAMPLE CONDITION/ COMMENTS |
|-----------|-------|--------|------|-------|-----|---------------|-------------------------|----------------------------|---------------------|------------------------------|-------------------|----------------------------------|----------|----------------|------------------|---------------|----------------------|----------------------------|
| BH-6      | 4.8'  |        | X    |       |     | 1             |                         |                            |                     |                              |                   |                                  |          |                |                  |               | 9406600              |                            |
| BH-6      | 7.5'  |        | X    |       |     | 1             |                         |                            |                     |                              |                   |                                  |          |                |                  |               |                      |                            |
| BH-6      | 11.5' |        | X    |       |     | 1             |                         |                            |                     |                              |                   |                                  |          |                |                  |               |                      |                            |
| BH-6      | 15.7' |        | X    |       |     | 1             |                         |                            |                     |                              |                   |                                  |          |                |                  |               |                      |                            |
| BH-6      | 20.5' |        | X    |       |     | 1             |                         |                            |                     |                              |                   |                                  |          |                |                  |               |                      |                            |
| BH-6      | W     |        |      | X     |     | 3             |                         |                            |                     | X                            |                   | X                                |          |                |                  |               |                      | -06                        |
| SP-1      |       |        | X    |       |     | 1             |                         |                            |                     |                              |                   |                                  |          |                |                  |               |                      |                            |
| SP-2      |       |        | X    |       |     | 1             |                         |                            |                     |                              |                   |                                  |          |                |                  |               |                      |                            |

|  |                                       |                     |   |                                       |                     |
|--|---------------------------------------|---------------------|---|---------------------------------------|---------------------|
| Relinquished By (signature): <u>Jonathan Wengert</u> | Printed Name: <u>Jonathan Wengert</u> | Date: <u>6/9/00</u> | Received (signature): _____                   | Printed Name: _____                   | Date: _____         |
| Relinquished By (signature): _____                   | Printed Name: _____                   | Date: <u>6-55</u>   | Received (signature): _____                   | Printed Name: _____                   | Date: _____         |
| Relinquished By (signature): _____                   | Printed Name: _____                   | Date: _____         | Received (signature): <u>Veronica E. G...</u> | Printed Name: <u>VERONICA E. G...</u> | Date: <u>060999</u> |

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN-OF-CUSTODY WITH INVOICE AND RESULTS



**SHELL OIL COMPANY**  
RETAIL ENVIRONMENTAL ENGINEERING - WEST

**CHAIN OF CUSTODY RECORD**

Serial No: \_\_\_\_\_

Date:

Page 5 of 5

Site Address: 1784 150th Ave San Leandro

WIC#: 204-6852-1704

Shell Engineer: Dan Kirk  
Phone No.: 510-678-6168  
Fax #: \_\_\_\_\_

Consultant Name & Address: WEISS ASSOCIATES  
5500 SHELLMOUND ST EMERYVILLE CA 94608

Consultant Contact: Eric Anderson  
WA JOB # 81-422-05  
Phone No.: (510) 547-5420  
Fax #: 547-5043

Comments:

Sampled by: Jonathan Weigert

Printed Name: Jonathan Weigert

**Analysis Required**

|                         |                            |                     |  |                   |                                  |             |          |                |                  |               |
|-------------------------|----------------------------|---------------------|--|-------------------|----------------------------------|-------------|----------|----------------|------------------|---------------|
| TPH (EPA 8015 Mod. Gas) | TPH (EPA 8015 Mod. Diesel) | BTEX (EPA 8020/602) | Volatile Organics (EPA 8240) <b>8010</b> | Test for Disposal | Combination TPH 8015 & BTEX 8020 | <b>HOLD</b> | Asbestos | Container Size | Preparation Used | Composite Y/N |
|-------------------------|----------------------------|---------------------|--|-------------------|----------------------------------|-------------|----------|----------------|------------------|---------------|

LAB: Sequoia

| CHECK ONE (1) BOX ONLY                                 | CT/DT | TURN AROUND TIME                                     |
|--|-------|--|
| G.W. Monitoring <input type="checkbox"/>               | 4461  | 24 hours <input type="checkbox"/>                    |
| Site Investigation <input checked="" type="checkbox"/> | 4441  | 48 hours <input type="checkbox"/>                    |
| Soil Classify/Disposal <input type="checkbox"/>        | 4442  | 15 days <input checked="" type="checkbox"/> (Normal) |
| Water Classify/Disposal <input type="checkbox"/>       | 4443  | Other <input type="checkbox"/>                       |
| Soil/Air Rem. or Sys. O & M <input type="checkbox"/>   | 4452  |  |
| Water Rem. or Sys. O & M <input type="checkbox"/>      | 4453  |  |
| Other <input type="checkbox"/>                         |       |  |

NOTE: Notify Lab as soon as possible of 24/48 hrs. TAT.

UST AGENCY: ACDEH

| Sample ID | Date   | Sludge | Soil | Water | Air | No. of conls. | TPH (EPA 8015 Mod. Gas) | TPH (EPA 8015 Mod. Diesel) | BTEX (EPA 8020/602) | Volatile Organics (EPA 8240) | Test for Disposal | Combination TPH 8015 & BTEX 8020 | Asbestos | Container Size | Preparation Used | Composite Y/N | MATERIAL DESCRIPTION | SAMPLE CONDITION/ COMMENTS |  |
|-----------|--------|--------|------|-------|-----|---------------|-------------------------|----------------------------|---------------------|------------------------------|-------------------|----------------------------------|----------|----------------|------------------|---------------|----------------------|----------------------------|--|
| SP-3      | 4/7/94 |        | X    |       |     | 1             |                         |                            |                     |                              |                   |                                  |          |                |                  |               |                      | 9406600                    |  |
| SP-4      | ↓      |        | X    |       |     | 1             |                         |                            |                     |                              |                   |                                  |          |                |                  |               |                      |                            |  |
|           |        |        |      |       |     |               |                         |                            |                     |                              |                   |                                  |          |                |                  |               |                      |                            |  |
|           |        |        |      |       |     |               |                         |                            |                     |                              |                   |                                  |          |                |                  |               |                      |                            |  |
|           |        |        |      |       |     |               |                         |                            |                     |                              |                   |                                  |          |                |                  |               |                      |                            |  |
|           |        |        |      |       |     |               |                         |                            |                     |                              |                   |                                  |          |                |                  |               |                      |                            |  |
|           |        |        |      |       |     |               |                         |                            |                     |                              |                   |                                  |          |                |                  |               |                      |                            |  |
|           |        |        |      |       |     |               |                         |                            |                     |                              |                   |                                  |          |                |                  |               |                      |                            |  |
|           |        |        |      |       |     |               |                         |                            |                     |                              |                   |                                  |          |                |                  |               |                      |                            |  |
|           |        |        |      |       |     |               |                         |                            |                     |                              |                   |                                  |          |                |                  |               |                      |                            |  |

|  |                                |              |   |                              |               |
|--|--------------------------------|--------------|---|------------------------------|---------------|
| Relinquished By (signature): <i>Jonathan Weigert</i> | Printed Name: Jonathan Weigert | Date: 6/5/94 | Received (signature): _____                 | Printed Name: _____          | Date: _____   |
| Relinquished By (signature): _____                   | Printed Name: _____            | Date: _____  | Received (signature): _____                 | Printed Name: _____          | Date: _____   |
| Relinquished By (signature): _____                   | Printed Name: _____            | Date: _____  | Received (signature): <i>Keith E. Weiss</i> | Printed Name: Keith E. Weiss | Date: 6/29/94 |
|  |                                | Time: 16:55  |   |                              | Time: 16:55   |

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN-OF-CUSTODY WITH INVOICE AND RESULTS



# Sequoia Analytical

680 Chesapeake Drive  
1900 Bates Avenue, Suite L  
819 Striker Avenue, Suite 8

Redwood City, CA 94063  
Concord, CA 94520  
Sacramento, CA 95834

(415) 364-9600  
(510) 686-9600  
(916) 921-9600

FAX (415) 364-9233  
FAX (510) 686-9689  
FAX (916) 921-0100

Weiss & Associates  
5500 Shellmound  
Emeryville, CA 94608  
Attention: Eric Anderson

Project: Shell, 1784 150th Ave, S.L.

Enclosed are the results from 6 water samples received at Sequoia Analytical on June 9, 1994. The requested analyses are listed below:

| SAMPLE # | SAMPLE DESCRIPTION | DATE OF COLLECTION | TEST METHOD                    |
|----------|--------------------|--------------------|--------------------------------|
| 4F60001  | Water, BH-1 W      | 6/6/94             | EPA 8015/8020 Mod.             |
| 4F60002  | Water, BH-2 W      | 6/6/94             | EPA 8015/8020 Mod.             |
| 4F60003  | Water, BH-3 W      | 6/6/94             | EPA 8010<br>EPA 8015/8020 Mod. |
| 4F60004  | Water, BH-4 W      | 6/6/94             | EPA 8015/8020 Mod.             |
| 4F60005  | Water, BH-5 W      | 6/6/94             | EPA 8015/8020 Mod.             |
| 4F60006  | Water, BH-6 W      | 6/6/94             | EPA 8015/8020 Mod.             |

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

SEQUOIA ANALYTICAL

Todd Olive  
Project Manager







|   |   |   |
|---|---|---|
| Weiss Associates<br>5500 Shellmound<br>Emeryville, CA 94608<br>Attention: Eric Anderson | Client Proj. ID: Shell, 1784 150th Ave, S.L.<br>Sample Descript: BH-1 W<br>Matrix: WATER<br>Analysis Method: EPA8015/8020<br>Lab Number: 9406600-01 | Sampled: 06/06/94<br>Received: 06/09/94<br>Extracted:<br>Analyzed: 06/12/94<br>Reported: 06/15/94 |
|---|---|---|

Purgeable TPH / BTEX

| Analyte                   | Detection Limit<br>ug/L | Sample Results<br>ug/L |
|---------------------------|-------------------------|------------------------|
| Low/Medium B.P. HC as Gas | 50                      | N.D.                   |
| Benzene                   | 0.50                    | N.D.                   |
| Toluene                   | 0.50                    | N.D.                   |
| Ethyl Benzene             | 0.50                    | N.D.                   |
| Xylenes                   | 0.50                    | N.D.                   |
| Chromatogram Pattern:     | .....                   | .....                  |

| Surrogates       | Control Limits % | % Recovery |
|------------------|------------------|------------|
| Trifluorotoluene | 70 130           | 90         |

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Todd Olive  
Project Manager





|   |   |   |
|---|---|---|
| Weiss Associates<br>5500 Shellmound<br>Emeryville, CA 94608<br>Attention: Eric Anderson | Client Proj. ID: Shell, 1784 150th Ave, S.L.<br>Sample Description: <del>OH-2 W</del><br>Matrix: WATER<br>Analysis Method: EPA8015/8020<br>Lab Number: 9406600-02 | Sampled: 06/06/94<br>Received: 06/09/94<br>Extracted:<br>Analyzed: 06/12/94<br>Reported: 06/15/94 |
|---|---|---|

Purgeable TPH / BTEX

| Analyte                                | Detection Limit<br>ug/L | Sample Results<br>ug/L |
|--|-------------------------|------------------------|
| Low/Medium B.P. HC as Gas              | 500                     | 5200                   |
| Benzene                                | 5.0                     | 8.8                    |
| Toluene                                | 5.0                     | N.D.                   |
| Ethyl Benzene                          | 5.0                     | 9.1                    |
| Xylenes                                | 5.0                     | N.D.                   |
| Chromatogram Pattern:<br>Weathered Gas |                         | + > C8                 |

| Surrogates       | Control Limits % | % Recovery |
|------------------|------------------|------------|
| Trifluorotoluene | 70 130           | 104        |

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Todd Olive  
Project Manager





|   |   |   |
|---|---|---|
| Weiss Associates<br>5500 Shellmound<br>Emeryville, CA 94608<br>Attention: Eric Anderson | Client Proj. ID: Shell, 1784 150th Ave, S.L.<br>Sample Descript: BH-3 W<br>Matrix: WATER<br>Analysis Method: EPA 8010<br>Lab Number: 9406600-03 | Sampled: 06/06/94<br>Received: 06/09/94<br>Extracted:<br>Analyzed: 06/14/94<br>Reported: 06/15/94 |
|---|---|---|

**Halogenated Volatile Organic Compounds (EPA 8010)**

| Analyte                   | Detection Limit<br>ug/L | Sample Results<br>ug/L |
|---------------------------|-------------------------|------------------------|
| Bromodichloromethane      | 10                      | N.D.                   |
| Bromoform                 | 10                      | N.D.                   |
| Bromomethane              | 20                      | N.D.                   |
| Carbon Tetrachloride      | 10                      | N.D.                   |
| Chlorobenzene             | 10                      | N.D.                   |
| Chloroethane              | 20                      | N.D.                   |
| 2-Chloroethylvinyl ether  | 20                      | N.D.                   |
| Chloroform                | 10                      | N.D.                   |
| Chloromethane             | 20                      | N.D.                   |
| Dibromochloromethane      | 10                      | N.D.                   |
| 1,3-Dichlorobenzene       | 10                      | N.D.                   |
| 1,4-Dichlorobenzene       | 10                      | N.D.                   |
| 1,2-Dichlorobenzene       | 10                      | N.D.                   |
| 1,1-Dichloroethane        | 10                      | N.D.                   |
| 1,2-Dichloroethane        | 10                      | N.D.                   |
| 1,1-Dichloroethene        | 10                      | N.D.                   |
| cis-1,2-Dichloroethene    | 10                      | N.D.                   |
| trans-1,2-Dichloroethene  | 10                      | N.D.                   |
| 1,2-Dichloropropane       | 10                      | N.D.                   |
| cis-1,3-Dichloropropene   | 10                      | N.D.                   |
| trans-1,3-Dichloropropene | 10                      | N.D.                   |
| Methylene chloride        | 100                     | N.D.                   |
| 1,1,2,2-Tetrachloroethane | 10                      | N.D.                   |
| Tetrachloroethene         | 10                      | N.D.                   |
| 1,1,1-Trichloroethane     | 10                      | N.D.                   |
| 1,1,2-Trichloroethane     | 10                      | N.D.                   |
| Trichloroethene           | 10                      | N.D.                   |
| Trichlorofluoromethane    | 10                      | N.D.                   |
| Vinyl chloride            | 20                      | N.D.                   |
| <b>Surrogates</b>         | <b>Control Limits %</b> | <b>% Recovery</b>      |
| 1-Chloro 2-fluorobenzene  | 70 130                  | 86                     |

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL**

Todd Olive  
Project Manager





|   |   |   |
|---|---|---|
| Weiss Associates<br>5500 Shellmound<br>Emeryville, CA 94608<br>Attention: Eric Anderson | Client Proj. ID: <b>Shell, 1784 150th Ave, S.L.</b><br>Sample Descript: <b>BH-3 W</b><br>Matrix: WATER<br>Analysis Method: EPA8015/8020<br>Lab Number: 9406600-03 | Sampled: 06/06/94<br>Received: 06/09/94<br>Extracted:<br>Analyzed: 06/13/94<br>Reported: 06/15/94 |
|---|---|---|

**Purgeable TPH / BTEX**

| Analyte                   | Detection Limit<br>ug/L | Sample Results<br>ug/L |
|---------------------------|-------------------------|------------------------|
| Low/Medium B.P. HC as Gas | 25000                   | 120000 -               |
| Benzene                   | 250                     | 25000 -                |
| Toluene                   | 250                     | 14000 -                |
| Ethyl Benzene             | 250                     | 3100 -                 |
| Xylenes                   | 250                     | 13000 -                |
| Chromatogram Pattern:     |                         | Gas                    |

| Surrogates       | Control Limits % | % Recovery |
|------------------|------------------|------------|
| Trifluorotoluene | 70 130           | 97         |

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL**

Todd Olive  
Project Manager





|   |   |   |
|---|---|---|
| Weiss Associates<br>5500 Shellmound<br>Emeryville, CA 94608<br>Attention: Eric Anderson | Client Proj. ID: Shell, 1784 150th Ave, S.L.<br>Sample Descript: BH-4 W<br>Matrix: WATER<br>Analysis Method: EPA8015/8020<br>Lab Number: 9406600-04 | Sampled: 06/07/94<br>Received: 06/09/94<br>Extracted:<br>Analyzed: 06/11/94<br>Reported: 06/15/94 |
|---|---|---|

**Purgeable TPH / BTEX**

| Analyte                   | Detection Limit<br>ug/L | Sample Results<br>ug/L |
|---------------------------|-------------------------|------------------------|
| Low/Medium B.P. HC as Gas | 50                      | N.D.                   |
| Benzene                   | 0.50                    | N.D.                   |
| Toluene                   | 0.50                    | N.D.                   |
| Ethyl Benzene             | 0.50                    | N.D.                   |
| Xylenes                   | 0.50                    | N.D.                   |
| Chromatogram Pattern:     | .....                   | .....                  |

| Surrogates       | Control Limits % | % Recovery |
|------------------|------------------|------------|
| Trifluorotoluene | 70 130           | 78         |

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL**

Todd Olive  
Project Manager





|   |   |   |
|---|---|---|
| Weiss Associates<br>5500 Shellmound<br>Emeryville, CA 94608 | Client Proj. ID: Shell, 1784 150th Ave, S.L.<br>Sample Descript: BH-5 W<br>Matrix: WATER<br>Analysis Method: EPA8015/8020<br>Lab Number: 9406600-05 | Sampled: 06/07/94<br>Received: 06/09/94<br>Extracted:<br>Analyzed: 06/12/94<br>Reported: 06/15/94 |
| Attention: Eric Anderson                                    |   |   |

Purgeable TPH / BTEX

| Analyte                   | Detection Limit<br>ug/L     | Sample Results<br>ug/L |
|---------------------------|-----------------------------|------------------------|
| Low/Medium B.P. HC as Gas | 50                          | N.D.                   |
| Benzene                   | 0.50                        | N.D.                   |
| Toluene                   | 0.50                        | N.D.                   |
| Ethyl Benzene             | 0.50                        | N.D.                   |
| Xylenes                   | 0.50                        | N.D.                   |
| Chromatogram Pattern:     | .....                       | .....                  |
| <b>Surrogates</b>         | <b>Control Limits %</b>     | <b>% Recovery</b>      |
| Trifluorotoluene          | 70                      130 | 86                     |

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Todd Olive  
Project Manager





|   |   |   |
|---|---|---|
| Weiss Associates<br>5500 Shellmound<br>Emeryville, CA 94608<br>Attention: Eric Anderson | Client Proj. ID: Shell, 1784 150th Ave, S.L.<br>Sample Descript: BH-6 W<br>Matrix: WATER<br>Analysis Method: EPA8015/8020<br>Lab Number: 9406600-06 | Sampled: 06/07/94<br>Received: 06/09/94<br>Extracted:<br>Analyzed: 06/12/94<br>Reported: 06/15/94 |
|---|---|---|

**Purgeable TPH / BTEX**

| Analyte                   | Detection Limit<br>ug/L | Sample Results<br>ug/L |
|---------------------------|-------------------------|------------------------|
| Low/Medium B.P. HC as Gas | 50                      | N.D.                   |
| Benzene                   | 0.50                    | N.D.                   |
| Toluene                   | 0.50                    | N.D.                   |
| Ethyl Benzene             | 0.50                    | N.D.                   |
| Xylenes                   | 0.50                    | N.D.                   |
| Chromatogram Pattern:     | .....                   | .....                  |

| Surrogates       | Control Limits %            | % Recovery |
|------------------|-----------------------------|------------|
| Trifluorotoluene | 70                      130 | 84         |

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL**

Todd Olive  
Project Manager





Weiss & Associates  
5500 Shellmound  
Emeryville, CA 94608  
Attention: Eric Anderson

Client Project ID: Shell, 1784 150th Ave, S.L.  
Matrix: Liquid

QC Sample Group: 4F60001 -02,05,06

Reported: Jun 15, 1994

**QUALITY CONTROL DATA REPORT**

| ANALYTE         | Benzene     | Toluene     | Ethyl Benzene | Xylenes     |
|-----------------|-------------|-------------|---------------|-------------|
| <b>Method:</b>  | EPA 8020    | EPA 8020    | EPA 8020      | EPA 8020    |
| <b>Analyst:</b> | A. Miraftab | A. Miraftab | A. Miraftab   | A. Miraftab |

|   |         |         |         |         |
|---|---------|---------|---------|---------|
| <b>MS/MSD Batch#:</b>                     | 4F58204 | 4F58204 | 4F58204 | 4F58204 |
| <b>Date Prepared:</b>                     | -       | -       | -       | -       |
| <b>Date Analyzed:</b>                     | 6/11/94 | 6/11/94 | 6/11/94 | 6/11/94 |
| <b>Instrument I.D.#:</b>                  | GCHP-17 | GCHP-17 | GCHP-17 | GCHP-17 |
| <b>Conc. Spiked:</b>                      | 10 µg/L | 10 µg/L | 10 µg/L | 30 µg/L |
| <b>Matrix Spike % Recovery:</b>           | 89      | 90      | 89      | 87      |
| <b>Matrix Spike Duplicate % Recovery:</b> | 99      | 100     | 100     | 100     |
| <b>Relative % Difference:</b>             | 11      | 11      | 12      | 14      |

LCS Batch#:

Date Prepared:  
Date Analyzed:  
Instrument I.D.#:

LCS %  
Recovery:

|                                   |        |        |        |        |
|-----------------------------------|--------|--------|--------|--------|
| <b>% Recovery Control Limits:</b> | 71-133 | 72-128 | 72-130 | 71-120 |
|-----------------------------------|--------|--------|--------|--------|

**Please Note:**

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

**SEQUOIA ANALYTICAL**

  
Todd Olive  
Project Manager







Weiss & Associates  
 5500 Shellmound  
 Emeryville, CA 94608  
 Attention: Eric Anderson

Client Project ID: Shell, 1784 150th Ave, S.L.  
 Matrix: Liquid

QC Sample Group: 4F60003

Reported: Jun 15, 1994

**QUALITY CONTROL DATA REPORT**

| <b>ANALYTE</b>  | Benzene   | Toluene   | Ethyl<br>Benzene | Xylenes   |
|-----------------|-----------|-----------|------------------|-----------|
| <b>Method:</b>  | EPA 8020  | EPA 8020  | EPA 8020         | EPA 8020  |
| <b>Analyst:</b> | J. Minkel | J. Minkel | J. Minkel        | J. Minkel |

**MS/MSD**

**Batch#:** 4F59703 4F59703 4F59703 4F59703

**Date Prepared:** N.A. N.A. N.A. N.A.

**Date Analyzed:** 6/13/94 6/13/94 6/13/94 6/13/94

**Instrument I.D.#:** GCHP-3 GCHP-3 GCHP-3 GCHP-3

**Conc. Spiked:** 10 µg/L 10 µg/L 10 µg/L 30 µg/L

**Matrix Spike**

**% Recovery:** 100 100 100 103

**Matrix Spike**

**Duplicate %  
Recovery:** 100 100 100 103

**Relative %**

**Difference:** 0.0 0.0 0.0 0.0

**LCS Batch#:**

**Date Prepared:**

**Date Analyzed:**

**Instrument I.D.#:**

**LCS %**

**Recovery:**

| <b>% Recovery<br/>Control Limits:</b> | 71-133 | 72-128 | 72-130 | 71-120 |
|---------------------------------------|--------|--------|--------|--------|
|---------------------------------------|--------|--------|--------|--------|

**Please Note:**

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

**SEQUOIA ANALYTICAL**

Todd Olive  
 Project Manager





Weiss & Associates  
5500 Shellmound  
Emeryville, CA 94608  
Attention: Eric Anderson

Client Project ID: Shell, 1784 150th Ave, S.L.  
Matrix: Liquid

QC Sample Group: 4F60004

Reported: Jun 15, 1994

**QUALITY CONTROL DATA REPORT**

| ANALYTE         | Benzene     | Toluene     | Ethyl<br>Benzene | Xylenes     |
|-----------------|-------------|-------------|------------------|-------------|
| <b>Method:</b>  | EPA 8020    | EPA 8020    | EPA 8020         | EPA 8020    |
| <b>Analyst:</b> | A. Miraftab | A. Miraftab | A. Miraftab      | A. Miraftab |

**MS/MSD**

**Batch#:** 4F58204      4F58204      4F58204      4F58204

**Date Prepared:** N.A.      N.A.      N.A.      N.A.

**Date Analyzed:** 6/11/94      6/11/94      6/11/94      6/11/94

**Instrument I.D.#:** GCHP-2      GCHP-2      GCHP-2      GCHP-2

**Conc. Spiked:** 10 µg/L      10 µg/L      10 µg/L      30 µg/L

**Matrix Spike**

**% Recovery:** 110      110      110      110

**Matrix Spike**

**Duplicate % Recovery:** 110      110      110      110

**Relative %**

**Difference:** 0.0      0.0      0.0      0.0

**LCS Batch#:**

**Date Prepared:**

**Date Analyzed:**

**Instrument I.D.#:**

**LCS %**

**Recovery:**

| % Recovery<br>Control Limits: | 71-133 | 72-128 | 72-130 | 71-120 |
|-------------------------------|--------|--------|--------|--------|
|-------------------------------|--------|--------|--------|--------|

**SEQUOIA ANALYTICAL**

*T.O.*  
Todd Olive  
Project Manager

**Please Note:**  
The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.





Weiss & Associates  
5500 Shellmound  
Emeryville, CA 94608  
Attention: Eric Anderson

Client Project ID: Shell, 1784 150th Ave, S.L.  
Matrix: Liquid

QC Sample Group: 4F60003

Reported: Jun 15, 1994

**QUALITY CONTROL DATA REPORT**

| ANALYTE  | 1,1-Dichloro-ethene | Trichloro-ethene | Chloro-benzene |
|----------|---------------------|------------------|----------------|
| Method:  | EPA 8010            | EPA 8010         | EPA 8010       |
| Analyst: | D. Nelson           | D. Nelson        | D. Nelson      |

**MS/MSD**

Batch#: 4F21809      4F21809      4F21809

Date Prepared: 5/11/94      5/11/94      5/11/94

Date Analyzed: 5/11/94      5/11/94      5/11/94

Instrument I.D.#: GCHP-8      GCHP-8      GCHP-8

Conc. Spiked: 25 µg/L      25 µg/L      25 µg/L

**Matrix Spike**

% Recovery: 96      92      88

**Matrix Spike**

Duplicate % Recovery: 104      100      100

**Relative %**

Difference: 8.0      8.3      13

**LCS Batch#:**

Date Prepared:

Date Analyzed:

Instrument I.D.#:

LCS %

Recovery:

| % Recovery Control Limits: | 28-167 | 35-146 | 38-150 |
|----------------------------|--------|--------|--------|
|----------------------------|--------|--------|--------|

SEQUOIA ANALYTICAL

*T. Olive*  
Todd Olive  
Project Manager

**Please Note:**

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.



**ATTACHMENT D**  
**NON-HAZARDOUS WASTE MANIFESTS**



# NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV.  
If waste is NOT asbestos waste, complete only Sections I, II and III

No. 394567

## Section I. GENERATOR (Generator completes all of Section I)

a. Generator Name: Shell Oil Co b. Generating Location: 1784 150th Avenue  
 c. Address: P.O. Box 5278 d. Address: San Leandro, CA  
Concord, CA (Service Station)  
 e. Phone No.: \_\_\_\_\_ f. Phone No.: \_\_\_\_\_

If owner of the generating facility differs from the generator, provide:

g. Owner's Name: \_\_\_\_\_ h. Owner's Phone No.: \_\_\_\_\_

i. BFI WASTE CODE 

|    |     |        |       |
|----|-----|--------|-------|
| CA | 405 | 071894 | 25829 |
|----|-----|--------|-------|

 Containers \_\_\_\_\_  
 j. Description of Waste: Cuttings from soil borings k. Quantity ~5 Units Y<sup>3</sup> No. 1 TYPE T

| TYPE           |                              |
|----------------|------------------------------|
| DM             | - METAL DRUM                 |
| DP             | - PLASTIC DRUM               |
| B              | - BAG                        |
| BA             | - 6 MIL. PLASTIC BAG or WRAP |
| UNITS          |                              |
| P              | - POUNDS                     |
| Y              | - YARDS                      |
| M <sup>3</sup> | - CUBIC METERS               |
| Y <sup>3</sup> | - CUBIC YARDS                |
| O              | - OTHER                      |

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Weiss Associates Jonathan Weiss for Shell 072794  
 Generator Authorized Agent Name Signature Shipment Date

## Section II. TRANSPORTER (Generator complete a-d; Transporter I complete e-g; Transporter II complete h-n)

**TRANSPORTER I**  
 a. Name: JERVICOM INC / SERNACH TRK  
 b. Address: 1565 EAST BETTERAVIA ROAD  
SANTA MARIA CA 93454  
 c. Driver Name/Title: JAMES SERNACH  
 d. Phone No.: 805-922-0771 e. Truck No.: J-22  
 f. Vehicle License No./State: SP 32570  
 Acknowledgement of Receipt of Materials:  
[Signature] 072794  
 Driver Signature Shipment Date

**TRANSPORTER II**  
 h. Name: \_\_\_\_\_  
 i. Address: \_\_\_\_\_  
 j. Driver Name/Title: \_\_\_\_\_  
 k. Phone No.: \_\_\_\_\_ l. Truck No.: \_\_\_\_\_  
 m. Vehicle License No./State: \_\_\_\_\_  
 Acknowledgement of Receipt of Materials:  
 \_\_\_\_\_  
 Driver Signature Shipment Date

## Section III. DESTINATION (Generator completes a-d, destination site completes e-f)

a. Site Name: BFI c. Phone No.: 447-0491  
 b. Physical Address: 4001 N Vasco rd d. Mailing Address: Same  
Livermore CA  
 e. Discrepancy Indication Space: \_\_\_\_\_

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

[Signature] 072794  
 Name of Authorized Agent Signature Receipt Date

## Section IV. ASBESTOS (Generator complete a-d, f, g; Operator\* completes e)

a. Operator's\* Name: \_\_\_\_\_ b. Operator's\* Phone No.: \_\_\_\_\_  
 c. Operator's\* Address: \_\_\_\_\_  
 d. Special Handling Instructions and additional information: \_\_\_\_\_

OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations.

e. Operator's\* Name & Title: \_\_\_\_\_ Operator's\* Signature \_\_\_\_\_ Date \_\_\_\_\_  
 f. Name and Address of Responsible Agency: \_\_\_\_\_  
 g.  Friable;  Non-friable;  Both \_\_\_\_\_ % friable \_\_\_\_\_ % nonfriable

\* Operator refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or renovation operation, or both.