File No. 10-91-483-MW

ADDITIONAL INVESTIGATION FOR WEYERHAEUSER PAPER COMPANY PROPERTY LOCATED AT 1801 HIBBARD STREET ALAMEDA, CALIFORNIA

JANUARY 28, 1993

PREPARED FOR:
WEYERHAEUSER PAPER COMPANY
1801 HIBBARD STREET
P.O. BOX DRAWER X
ALAMEDA, CALIFORNIA 94501

BY:
SOIL TECH ENGINEERING, INC.
298 BROKAW ROAD
SANTA CLARA, CALIFORNIA 95050

SOIL TECH ENGINEERING, INC.

File No. 10-91-484-MW

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SOIL TECH ENGINEERING
Soil, Foundation and Geological Engineers
298 BROKAW ROAD, SANTA CLARA, CA 95050 ■ (408) 496-0265 OR (408) 496-0266

January 28, 1993

File No. 10-91-483-MW

Weyerhaeuser Paper Company
1801 Hibbard Street
P.O. Box Drawer X
Alameda, California 94501

ATTENTION: MR. ERNESTO JACINTO

SUBJECT: ADDITIONAL SUBSURFACE INVESTIGATION FOR WEYERHAEUSER PAPER COMPANY PROPERTY Located at 1801 Hibbard Street, in Alameda, California

Dear Mr. Jacinto:

Enclosed is our report summarizing the results of additional investigation in the vicinity of underground diesel tank at the subject site as requested by Alameda County Health Department.

During current phase of investigation at the site, one monitoring well was installed. Soil and water analytical results from the newly installed well indicated non-detectable levels of analyzed chemicals. We recommend the continuation of quarterly monitoring and sampling program at least for one year.

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If you have any questions or require additional information, please feel free to contact our office at your convenience.

Sincerely,

SOIL TECH ENGINEERING, INC.

NOORODDIN AMELI
PROJECT ENGINEER

LAWRENCE KOO, P. E.
C. E. #34928

FRANK HAMEDI-FARD
GENERAL MANAGER

File No. 10-91-483-MW

ADDITIONAL SUBSURFACE INVESTIGATION
FOR WEYERHAEUSER PAPER COMPANY PROPERTY
1801 HIBBARD STREET
ALAMEDA, CALIFORNIA
JANUARY 28, 193

INTRODUCTION:

This report presents the supplemental subsurface investigation completed by Soil Tech engineering, Inc. (STE) at the Weyerhaeuser Paper Company facility, located at 1801 Hibbard Street, in Alameda, California (Figure 1). This additional investigation was done at the request of the Alameda County Health Care Services Agency--Hazardous Material Division (ACHCSA--HMD) in a letter, dated August 31, 1992. This additional investigation followed their suggestions for soil/groundwater sampling and chemical analyses in the vicinity of diesel tank.

This report contains the chemical and subsurface information generated from installation of additional one monitoring well near the former underground diesel fuel storage tank. Figure 1 shows the vicinity of the site, and Figure 2 shows the location of the former underground fuel tanks excavated areas and existing on-site wells.

OBJECTIVE:

The objective of this investigation was to satisfy the request for additional information set forth in the ACHCSA--HMD's letter, dated August 31, 1992. The tasks were to install one additional on-site well, down-gradient of former diesel tank to evaluate sub-surface contamination near the tank, and to resample on-site monitoring wells STMW-1 to STMW-6.

PURPOSE AND SCOPE:

The purpose of this additional investigation was to assess the presence of diesel contamination in the vicinity of the former diesel tank. The scope of work was intending to meet the purpose and objectives outlines above. the work included installing one additional monitoring well (STMW-7), soil sampling, sequential purging and sampling of the on-site monitoring wells, chemical analyses of soil from well STMW-7 and groundwater samples.

BACKGROUND:

The subject site is located at 1801 Hibbard Street, in Alameda, California (Figure 1). The area in the vicinity of the site consists of mainly light commercial.

On February 7, 1991, four underground tanks (one 10,000 gallon diesel and three 1,000 gallon gasoline) were removed from the

property by Minter and Fahy Construction (MFC). The tanks were located near the warehouse building and shed (Figure 2). Following the tanks removal, MFC collected soil samples. Initial soil analytical results showed high levels of Total Petroleum Hydrocarbons as gasoline (TPHg) ranging from 220 to 3,000 milligrams per kilogram (mg/Kg). Low to moderate levels of Benzene, Toluene, Ethylbenzene and Total Xylenes (BTEX) were also detected.

A water sample, taken by MFC from the diesel tank excavation on February 28, 1991, showed TPH as diesel at 3.6 milligrams per liter (mg/L).

Due to presence of elevated TPH as gasoline at the former gasoline tanks area, additional excavation was conducted by MFC on February 27 and 28, 1991. Soil sampling of the sidewalls showed TPHg ranging from 43 to 2,600 mg/Kg. BTEX levels ranged from 0.006 to 25 mg/Kg. In addition, moderate levels of Total Oil and Grease (TOG) and some metals were also detected. The water sample was also taken from the excavation which detected moderate levels of TPHg (22 mg/L) and TPHd (0.19 mg/L).

On April 13, 1991, MFC excavated additional three feet of soil from the excavation because of the elevated hydrocarbons detected in the sidewall of the fuel tank excavation. Additional soil and water samples were collected from the excavation. Soil analytical results showed low levels of all dissolved hydrocarbons constituents analyzed. Water samples taken from the excavation continued to show elevated levels of TPHg and Benzene.

In October 1991, STE was retained to perform a preliminary subsurface investigation in the vicinity of the former underground tank complex. Soil Tech Engineering, Inc. (STE), conducted the field work on December 3 and 4, 1991, by installing three monitoring wells in the vicinity of the former underground tank area. The approximate location of the wells (STMW-1 to STMW-3) and the former tanks are shown in Figure 2.

Two of the three monitoring wells (STMW-2 and STMW-3) did detect low to moderate levels of hydrocarbons in the water sample. Detail of STE's preliminary subsurface investigation is described in a report, dated January 20, 1992. Due to presence of dissolved hydrocarbons detected in the shallow groundwater, STE recommended additional investigation to define the extent of dissolved hydrocarbons plume per ACEHD and CRWQCB requirements.

Three additional wells (STMW-4 to STMW-6) were installed on-site as shown in Figure 2. Four of the wells (STMW-1 to STMW-4) did detect low to moderate levels of dissolved hydrocarbons. Detail of STE's additional subsurface investigation is described in a report, dated May 18, 1992.

The first quarterly monitoring and sampling of the six on-site wells was conducted in July 1992. the detail of the first quarterly monitoring and sampling is described in the STE's report dated August 10, 1992. No floating product or petroleum odors were noted in any of the on-site wells except a mild petroleum odor

detected in well STMW-3. Well STMW-5 and STMW-6 showed no dissolved hydrocarbons. The wells STMW-1 to STMW-4 located in the vicinity of the former underground tank area continued to show a low levels of dissolved petroleum hydrocarbons.

ACHCSA-HMD requested additional investigation adjacent to former diesel tank in a letter, dated August 31, 1992. ACHCSA--HMD requested installation of one additional well down-gradient of the former diesel tank area to assess presence of any contamination in the shallow groundwater.

FIELD ACTIVITIES:

Prior to installation of additional on-site monitoring well (STMW-7), a permit was obtained from the Alameda County Zone 1 Water Agency, and the permit is included in Appendix "F".

On December 22, 1992, STE installed one additional monitoring well (STMW-7) down-gradient of the former diesel tank area (Figure 2). The drilling, soil sampling, installation and the well development were conducted in accordance with the existing local/ state regulations and our Standard Operating Procedures (SOP) (see Appendix "C").

As shown on the well log, the soil encountered at well STMW-7 consisted of mainly silty clay interbedded with some sand. The groundwater was encountered at approximately 9 feet below surface

grade, and the total depth of the well is 20 feet. The well construction details along with the soil boring log are included in Appendix "D".

SOIL SAMPLING:

Two soil samples were collected at depths of 3 feet and 5 feet below grade. Soil samples were analyzed for Total Petroleum Hydrocarbons as diesel (TPHd), Benzene, Toluene, Ethylbenzene and Total Xylenes (BTEX) per EPA Methods 3550, 8015 and 8020. The chemical results for the two soil samples are summarized in Table 2. No TPHd or BTEX were detected in both soil samples.

WATER SAMPLING:

Well STMW-7 was developed a week after it was installed. On January 8, 1993, all seven on-site wells (STMW-1 to STMW-7) were sampled. The water samples from wells STMW-1 to STMW-6 were analyzed for TPHg, BTEX and TOG, where as water samples from well STMW-7 were analyzed for TPHd and BTEX only. The analytical results summarized in Table 3. A copy of laboratory analyses are included in Appendix "E".

During monitoring of the wells prior to sampling, no odor or floating petroleum product were detected in any of the on-site wells. The shallow water table ranged from 2.12 feet to a maximum of 6.78 feet below grade.

New well STMW-7 detected neither TPH as diesel nor BTEX. Wells STMW-1 through STMW-6 detected no TPH as diesel. Wells STMW-5 and STMW-6 continued to show no TPHd, TPHg, BTEX and TOG.

Low levels of TPHg, BTEX and TOG were detected in wells STMW-1 to STMW-4. Well STMW-3 continued to show an elevated level of TPH as gasoline.

GROUNDWATER FLOW:

On January 8, 1993, all wells were surveyed by the STE's staff and measured the depths-to-groundwater. The results of water elevations and observation are summarized in Table 1. The groundwater elevations from the wells were used to conduct the groundwater contour map in Figure 2. The contour orientation shows a westerly local shallow groundwater flow direction as of January 8, 1993.

DISCUSSION:

Well STMW-3 continued to show an elevated level of TPH as gasoline since last quarter (i.e. April 1992) sampling events. The four on-site wells STMW-1 to STMW-4 continued to detect a low levels of BTEX and low to moderate levels of TPH as gasoline.

The well STMW-7 located down-gradient of the former diesel tank indicated non-detectable levels of the analyzed chemicals.

RECOMMENDATION:

STE recommends continual of quarterly monitoring and sampling program for three more quarters (i.e. for at least a year). The longevity of the proposed quarterly program will be re-evaluated at the end of the year.

Next quarterly monitoring and sampling are schedule in April 1993.

A copy of this report should be sent to Alameda County Health Care Services Agency (ACHCSA) and Regional Water Quality Control Board (RWQCB).

LIMITATIONS AND UNIFORMITY OF CONDITIONS:

The monitoring well installation services or soil and water sampling or pollution on this project was a direct request by Soil Tech Engineering, Inc.'s client. These installations were performed to meet the existing requirements for near-surface groundwater monitoring.

This service does not make Soil Tech Engineering, Inc., liable for future maintenance, repairs, damages, injury to a third party or any other elements causing future problems.

The locations of these monitoring wells are approximate and should not be used for reference point, surveying, or any other uses except studying groundwater.

Any recommendations that were made in this report are based upon the assumption that the soil conditions do not deviate from those disclosed in the borings.

This report is issued with the understanding that it is the responsibility of the owner or his representative to ensure that the information and recommendations contained herein are called to the attention of the Local Environmental Agency.

The findings of this report are based on the results of an independent laboratory and are valid as of the present date. However, changes in the conditions of a property can occur with the passage of time, whether they are due to natural processes or the works of man on this property or adjacent properties.

File No. 10-91-483-MW

A P P E N D I X "A"

SOIL TECH ENGINEERING, INC.

File No. 10-91-483-MW

TABLE 1
GROUNDWATER MONITORING DATA
(Measured in Feet)

Date	Well No.	Casing Elevation	Water Level	Groundwater Elevation	Floating Product	Odor
12/23/91	STMW-1	99.96	6.77	93.19	None	None
	STMW-2	99.65	6.60	93.05	None	None
	STMW-3	100.35	7.38	92.97	None	None
4/27/92	STMW-1	98.46	5.72	92.74	None	None
	STMW-2	98.08	5.52	92.56	None	None
	STMW-3	99.83	6.20	93.63	None	None
	STMW-4	97.84	5.66	92.18	None	None
	STMW-5	98.98	6.84	92.14	None	None
	STMW-6	99.30	7.84	91.46	None	None
7/31/92	STMW-1	98.46	6.02	92.44	None	None
	STMW-2	98.08	5.79	92.29	None	None
	STMW-3	99.83	6.54	93.29	None	None
	STMW-4	97.84	5.96	91.88	None	None
	STMW-5	98.98	7.21	91.77	None	None
	STMW-6	99.30	8.14	91.13	None	None

TABLE 1 CONT'D
GROUNDWATER MONITORING DATA
(Measured in Feet)

Date	Well No.	Casing Elevation	Water Level	Groundwater Elevation	Floating Product	Odor
1/08/93	STMW-1	98.46	5.27	93.19	None	None
	STMW-2	98.08	5.05	93.03	None	None
	STMW-3	99.83	5.40	94.43	None	None
	STMW-4	97.84	4.99	92.85	None	None
	STMW-5	98.98	5.60	93.38	None	None
	STMW-6	99.30	6.78	92.52	None	None
	STMW-7*	97.68	2.12	95.56	None	None

* - Additional Monitoring Well Installed on 12/22/92

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TABLE 2
SOIL ANALYTICAL RESULTS
IN
MILLIGRAMS PER KILOGRAM (mg/Kg)

Date	Sample #	Depth feet	TPHd	TPHg	B	T	E	X	TOG
12/3/91	STMW-1-3	3	ND	ND	ND	ND	ND	ND	ND
	STMW-1-7	7	ND	ND	ND	ND	ND	ND	ND
	STMW-2-3	3	ND	ND	ND	ND	ND	ND	ND
	STMW-2-7	7	ND	370	0.56	1.0	1.5	6.7	ND
12/4/91	STMW-3-3	3	ND	74	0.16	0.006	0.24	0.79	1,000
	STMW-3-7	7	ND	550	0.44	1.0	1.3	8.5	ND
4/18/92	STMW-4-5	5	ND	ND	ND	ND	ND	ND	ND
	STMW-5-5	5	ND	ND	ND	ND	ND	ND	ND
	STMW-6-5	5	ND	ND	ND	ND	ND	ND	ND
12/22/92	STMW-7-3*	3	ND	NA	ND	ND	ND	ND	NA
	STMW-7-5*	5	ND	NA	ND	ND	ND	ND	NA

TPHd - Total Petroleum Hydrocarbons as diesel
TPHg - Total Petroleum Hydrocarbons as gasoline
BTEX - Benzene, Toluene, Ethylbenzene, Total Xylenes
ND - Not Detected (Below Laboratory Detection Limit)
NA - Not Analyzed
* - Additional Monitoring Well Installed on 12/22/92

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TABLE 3
GROUNDWATER ANALYTICAL RESULTS
IN
MILLIGRAMS PER LITER (mg/L)

Date	Well #	TPHd	TPHg	B	T	E	X	TOG
12/23/91	STMW-1	ND	ND	ND	ND	ND	ND	NA
	STMW-2	0.08	2.3	0.72	0.066	0.0015	0.24	NA
	STMW-3	1.7*	14	3.0	0.54	0.37	1.2	NA
4/27/92	STMW-1	ND	0.15	0.0015	0.0012	0.0018	0.002	ND
	STMW-2	ND	1.1	0.0094	0.0053	0.002	0.024	ND
	STMW-3	2.0	9.4	0.057	0.05	0.0046	0.22	ND
	STMW-4	ND	0.79	0.0077	0.0026	0.002	0.011	ND
	STMW-5	ND	ND	ND	ND	ND	ND	ND
	STMW-6	ND	ND	ND	ND	ND	ND	ND
7/31/92	STMW-1	ND	0.31	0.002	0.0018	0.0012	0.0045	0.6
	STMW-2	ND	1.5	0.0033	0.0053	0.01	0.026	4.4
	STMW-3	ND	1.4	0.0019	0.0051	0.0083	0.023	0.6
	STMW-4	ND	1.3	0.0061	0.0043	0.0073	0.021	ND
	STMW-5	ND	ND	ND	ND	ND	ND	0.7
	STMW-6	ND	ND	ND	ND	ND	ND	ND

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TABLE 3 CONT'D
GROUNDWATER ANALYTICAL RESULTS
IN
MILLIGRAMS PER LITER (mg/L)

Date	Well #	TPHd	TPHg	B	T	E	X	TOG
1/08/93	STMW-1	ND	0.14	0.0006	0.0012	0.0006	0.0022	0.0008
	STMW-2	ND	0.07	ND	ND	0.0005	0.0014	0.0009
	STMW-3	ND	15	0.038	0.04	0.064	0.14	0.019
	STMW-4	ND	0.86	0.0015	0.0045	0.0096	0.017	0.0014
	STMW-5	ND	ND	ND	ND	ND	ND	ND
	STMW-6	ND	ND	ND	ND	ND	ND	ND
	STMW-7*	ND	NA	ND	ND	ND	ND	NA

TPHd - Total Petroleum Hydrocarbons as diesel
TPHg - Total Petroleum Hydrocarbons as gasoline
BTEX - Benzene, Toluene, Ethylbenzene, Total Xylenes
TOG - Total Oil and Grease
NA - Not Analyzed
ND - Not Detected (Below Laboratory Detection Limit)
* - Additional Monitoring Well Installed on 12/22/92

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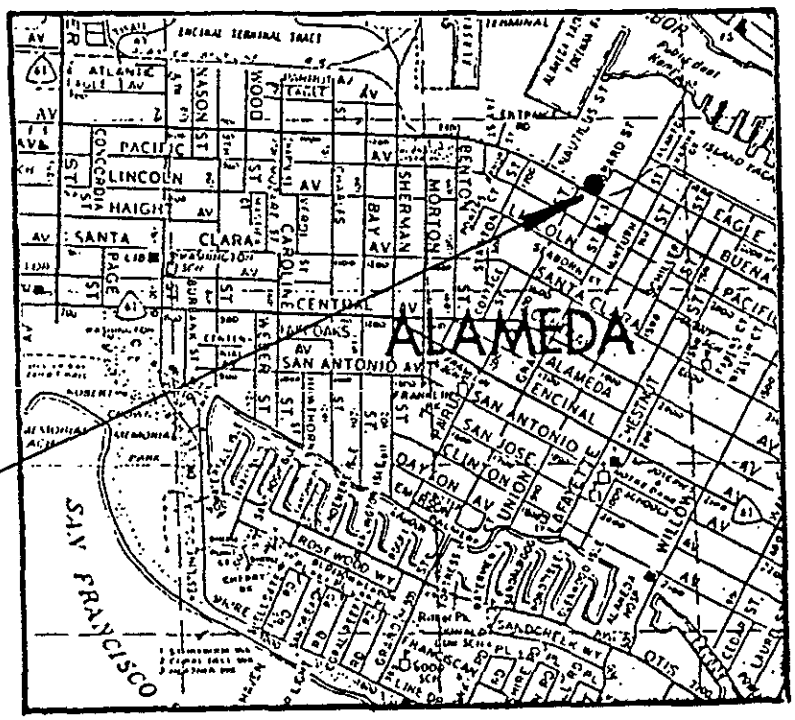
A P P E N D I X "B"

SOIL TECH ENGINEERING, INC.



Site Location

Thomas Brothers Map 1982 Edition
Alameda - Contra Costa Counties

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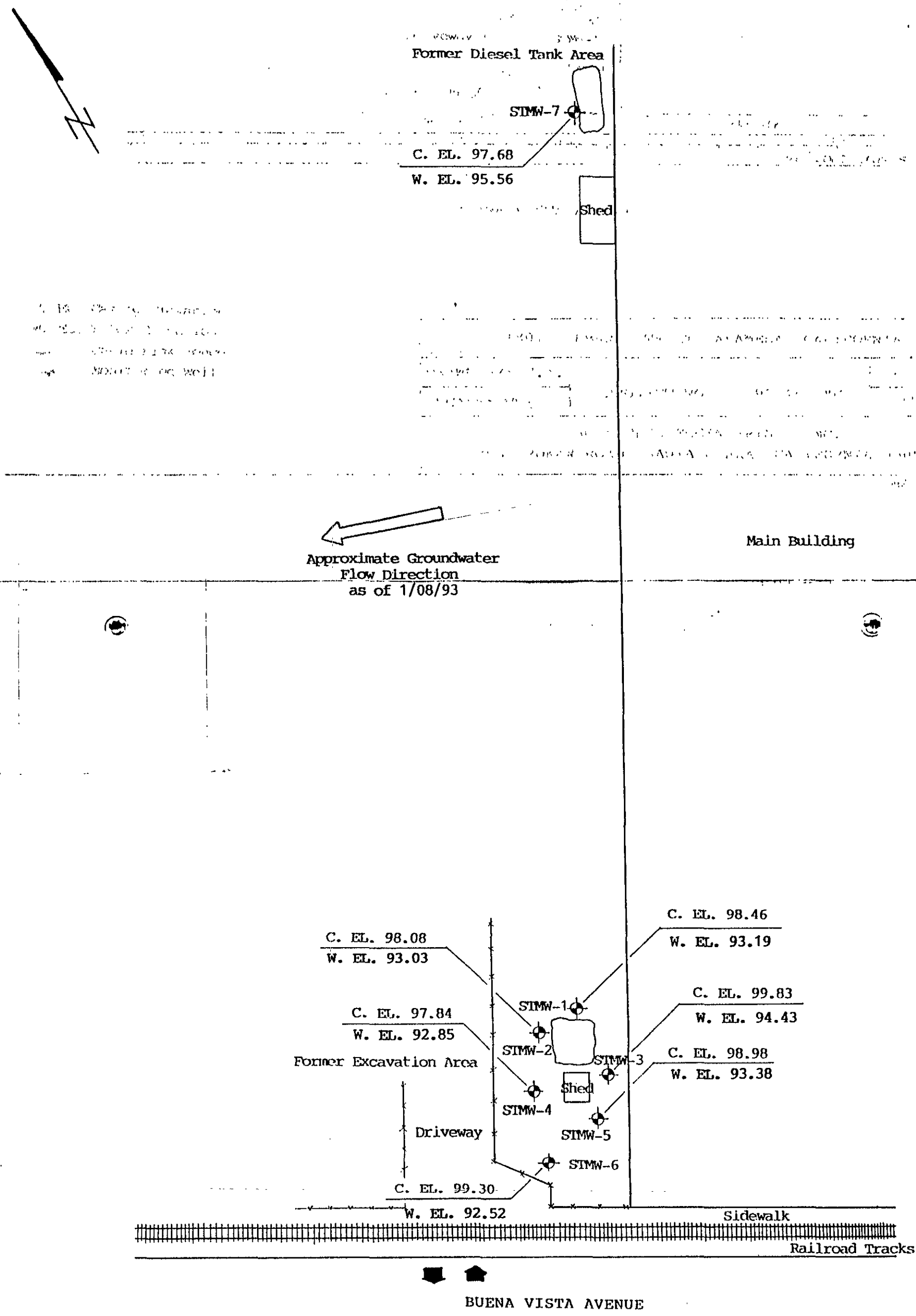
Figure 1



C. EL. Casing Elevation
W. EL. Water Elevation
-x—x- Chain Link Fence
Monitoring Well

1801 HIBBARD STREET, ALAMEDA, CALIFORNIA		
DRAWN BY: N.A.	PROJECT NO. 10-91-483-MW	FIGURE 2
SCALE: 1"=50'		1/08/93
SOIL TECH ENGINEERING, INC. 298 BROKAW ROAD, SANTA CLARA, CALIFORNIA 95050		

M2

File No. 10-91-483-MW

A P P E N D I X "C"

SOIL TECH ENGINEERING, INC.

File No. 10-91-483-MW

DRILLING AND SOIL SAMPLING PROCEDURE

A truck-mounted drill rig, using a continuous, solid-flight, hollow stem auger will be used in drilling the soil borings to the desired depths.

Prior to drilling, all drilling equipment (auger, pin, drilling head) will be thoroughly steam-cleaned to minimize the possibility of cross-contamination and/or vertical migration of possible contaminants.

In addition, prior to obtaining each individual soil sample, all sampling tools, including the split-spoon sampler and brass liners will be thoroughly washed in a Trisodium Phosphate (TSP) solution followed by a rinse in distilled water.

During the drilling operation, relatively undisturbed soil samples will be taken from the required depth by forcing a 2-inch I.D. split-spoon sampler insert with a brass liner into the ground at various depths by means of a 140-lb. hammer falling 30-inches or by hydraulic forces.

The samplers will contain relatively undisturbed soil. In general, the first section of soil from the sampler (shoe) will be used in the field for lithologic inspection and evidence of contamination. The selected brass liner will be immediately trimmed, the ends of the brass liner will be covered tightly with

aluminum foil and plastic caps, sealed with tape, labelled, placed in a plastic bag and stored in a cold ice chest in order to minimize the escape of any volatiles present in the samples. Soil samples for analysis will then be sent to a state-certified hazardous waste laboratory accompanied by a chain-of-custody record.

Soil samples collected at each sampling interval will be inspected for possible contamination (odor or peculiar colors). Soil vapor concentrations will be measured in the field by using a Photoionization Detector (PID), PhotoVac Tip Air Analyzer. The soil sample will be sealed in a Zip-Loc plastic bag and placed in the sun to enhance volatilization of the hydrocarbons from the sample. The purpose of this field analysis is to qualitatively determine the presence or absence of hydrocarbons and to establish which soil samples will be analyzed at the laboratory. The data will be recorded on the drilling log at the depth corresponding to the sampling point.

Other soil samples may be collected to document the stratigraphy and estimate relative permeability of the subsurface materials.

Soil tailings that are obtained during drilling will be stored at the site, pending the analytical test results to determine proper disposal.

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MONITORING WELL INSTALLATION

The boreholes for the monitoring wells were hand augered with a diameter of at least two inches larger than the casing outside diameter (O.D.).

The monitoring wells were cased with threaded, factory-perforated and blank, schedule 40 P.V.C. The perforated interval consisted of slotted casing, generally 0.010 to 0.040 inch wide by 1.5 inch long slot size, with 42 slots per foot (slots which match formation grain size as determined by field grain-size distribution analysis). A P.V.C. cap was fastened to the bottom of the casing (no solvents, adhesive, or cements were used), the well casing was thoroughly washed and steam-cleaned.

After setting the casing inside the borehole, kiln-dried sand or gravel-filter material was poured into the annular space to fill from the bottom of the boring to two feet above the perforated interval. A one to two feet thick bentonite plug was placed above this filter material to prevent grout from infiltrating down into the filter material. Approximately one to two gallons of distilled water were added to hydrate the bentonite pellets. Then the well was sealed from the top of the bentonite seal to the surface with concrete or neat cement containing about 5% bentonite (see Well Construction Detail).

To protect the well from vandalism and surface water contamination, Christy boxes with a special type of Allen screw were installed around the well head, (for wells in parking lots, driveways and building areas). Steel stove pipes with padlocks were usually set over well-heads in landscaped areas.

In general, groundwater monitoring wells extend to the base of the upper aquifer, as defined by the consistent (less than 5 feet thick) clay layer below the upper aquifer, or at least 10 to 15 feet below the top of the upper aquifer, whichever is shallower. The wells do not extend through the laterally extensive clay layer below the upper aquifer. The wells are terminated one to two feet into such a clay layer.

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WELL DEVELOPMENT

For all newly installed groundwater monitoring wells, the well casing, filter pack and adjacent formations were cleared of disturbed sediment and water.

Well development techniques included pumping, bailing, surging, swabbing, jetting, flushing or air lifting by using a stainless steel or Teflon bailer, a submersible stainless steel pump, or air lift pump. The well development continued until the discharged water appeared to be relatively free of all turbidity.

All water and sediment generated by well development were collected in 55-gallon steel drums (Department of Transportation approved), closed-head (17-H) for temporarily storage, and were then disposed of properly, depending on analytical results.

To assure that cross-contamination did not occur between wells, all well development tools were steam-cleaned or thoroughly washed in a Trisodium Phosphate (TSP) solution followed by a rinse in distilled water before each well development.

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GROUNDWATER SAMPLING

Prior to collection of groundwater samples, all of the sampling equipment (i.e. bailer, cables, bladder pump, discharge lines and etc...) was cleaned by pumping TSP water solution followed by distilled water.

Prior to purging, the well "Water Sampling Field Survey Forms" were filled out (depth to water and total depth of water column were measured and recorded). The well was then bailed or pumped to remove four to ten well volumes or until the discharged water temperature, conductivity and pH stabilized. "Stabilized" is defined as three consecutive readings within 15% of one another.

The groundwater sample was collected when the water level in the well recovered to 80% of its static level.

Forty milliliter (ml.), glass volatile organic analysis (VOA) vials with Teflon septa were used as sample containers. The groundwater sample was decanted into each VOA vial in such a manner that there was a meniscus at the top. The cap was quickly placed over the top of the vial and securely tightened. The VOA vial was then inverted and tapped to see if air bubbles were present. If none were present, the sample was labeled and refrigerated for delivery under chain-of-custody to the laboratory. The label information would include a sample identification number, job identification number, date, time, type of analysis requested, and the sampler's name.

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A P P E N D I X "D"

SOIL TECH ENGINEERING, INC.

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Logged By: Noori Ameli	Exploratory Boring Log	Boring No. STMW-7
Date Drilled: 12/22/92	Approx. Elevation	Boring Diameter 8-inch
Drilling Method: Mobile drill rig B-40L	Sampling Method	

Depth, Ft.	Sample No.	Field Test for Total Ionization	Penetration Resistance Blows/Ft.	Unified Soil Classification	DESCRIPTION
1					4-inch asphalt, 6-inch dark yellowish-brown baserock. Munsell Color: HUE 10YR 4/6
2					
3	STMW-7-3			CL	Olive-grey sandy clay, damp. Munsell Color: HUE 5Y 4/2
4					
5	STMW-7-5			CL	Color changes to dark olive-grey silty clay, damp, stiff. Munsell Color: HUE 5Y 3/2
6				CL	Dark olive-grey silty clay, damp, stiff. Munsell Color: HUE 5Y 3/2
7					
8					
9					▽ First groundwater encountered at 9 feet.
10				CL	Color changes to very dark grey silty fine sandy clay, moist, stiff. Munsell Color: HUE 5Y 3/1
11					
12					
13					
14					
15				CL	Color changes to olive fine sandy silty clay, very moist, stiff.
16					Munsell Color: HUE 5Y 4/4

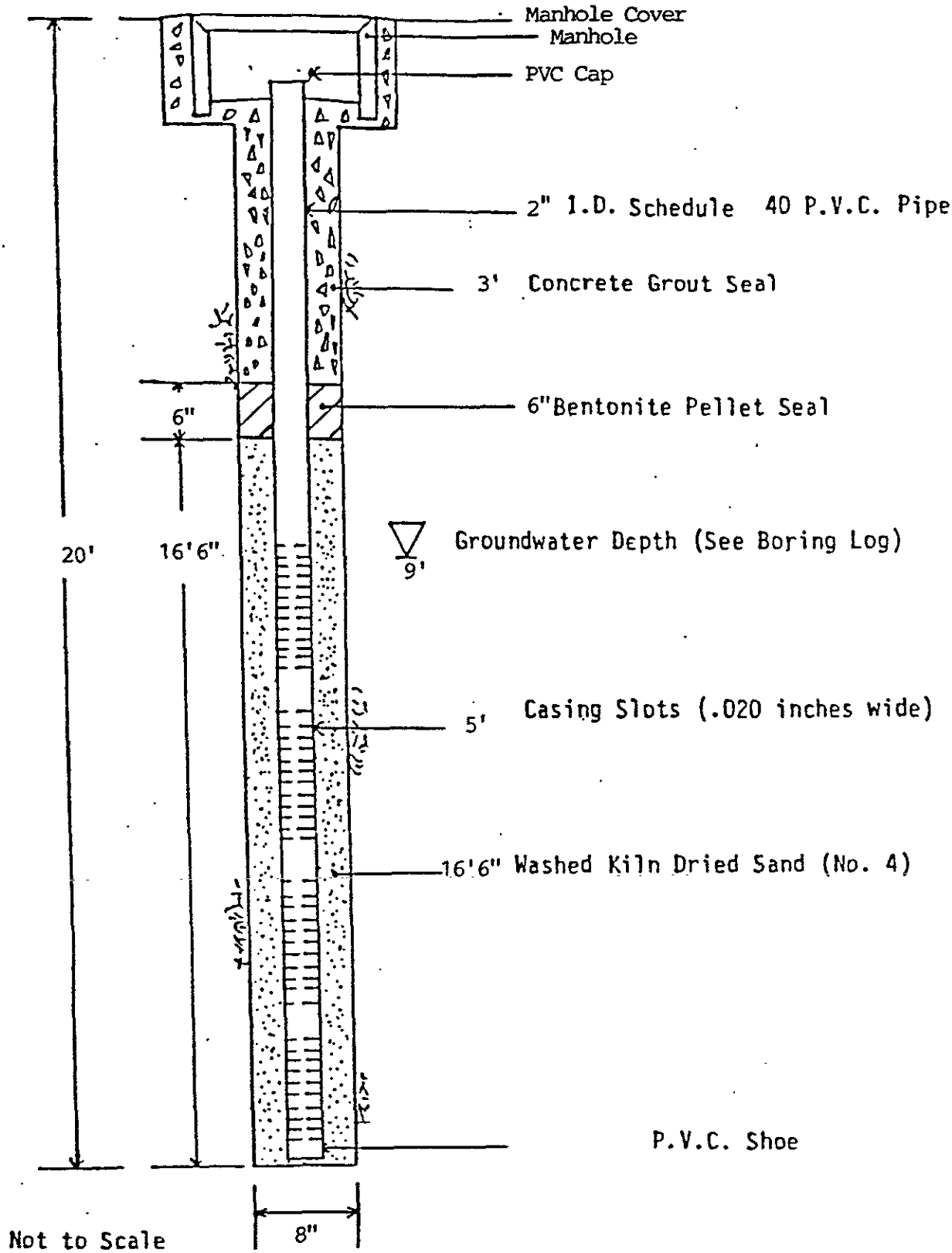
Remarks

File No 10-91-483-MW

Logged By: Noori Ameli	Exploratory Boring Log	Boring No STMW-7
Date Drilled: 12/22/92	Approx. Elevation	Boring Diameter 8-inch
Drilling Method: Mobile drill rig B-40L		Sampling Method

Depth, Ft.	Sample No.	Field Test for Total Ionization	Penetration Resistance Blows/Ft.	Unified Soil Classification	DESCRIPTION
17				CL	Color changes to olive fine sandy silty clay, very moist, stiff. Munsell Color: HUE 5Y 4/4
18					
19					
20					Boring terminated at 20 feet.
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					

Remarks



STMW-7

Piezometer Schematic

File No. 10-91-483-MW

A P P E N D I X "E"

PRIORITY ENVIRONMENTAL LABS

December 28, 1992 PEL # 9212050

SOIL TECH ENGINEERING

Attn: Noori Ameli
Re: Two soil samples for BTEX and Diesel analyses.

Project name: 1801 Hibbard St.-Alameda
Project number: 10-91-483-MW

Date sampled: Dec 22, 1992 Date submitted: Dec 23, 1992
Date extracted: Dec 24, 1992 Date analyzed: Dec 24, 1992

RESULTS:

SAMPLE I.D.	Diesel (mg/Kg)	Benzene (ug/Kg)	Toluene (ug/Kg)	Ethyl Benzene (ug/Kg)	Total Xylenes (ug/Kg)
STMW-7-3	N.D.	N.D.	N.D.	N.D.	N.D.
STMW-7-5	N.D.	N.D.	N.D.	N.D.	N.D.
Blank	N.D.	N.D.	N.D.	N.D.	N.D.
Spiked Recovery	96.8%	83.1%	90.2%	88.6%	81.0%
Detection limit	1.0	5.0	5.0	5.0	5.0
Method of Analysis	3550 / 8015	8020	8020	8020	8020

David Duong
Laboratory Director

1764 Houret Court Milpitas, CA. 95035 Tel: 408-946-9636 Fax: 408-946-9663

CHAIN OF CUSTODY RECORD

PROJ. NO.	NAME
10-91-483-MW	1801 Hibbard St. ALAMEDA

SAMPLERS: (Signature) N. Antic

PEL # 9212050
23286
INV #

NO.	DATE	TIME	SOIL	WATER	LOCATION	CONTAINER	Analyses Requested (2) TPHD/BTEX
1	12/22/92	11:05	✓		STMW-7-3	1	✓
2	12/22/92	11:15	✓		STMW-7-5	1	✓

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Receive by: (Signature)
N. Antic	12/23/92 16:30				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
		THANH LAM			
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	
	12/23/92 16:30	PEL			

SOIL TECH ENGINEERING
Soil, Foundation and Geological Engineers
298 BROKAW ROAD, SANTA CLARA, CA 95050 ■ (408) 496-0265 OR (408) 496-0266

CHAIN OF CUSTODY RECORD

PROJ. NO.	NAME
10-91-483-MW	1801 Hibbard St. ALAMEDA

SAMPLERS: *(Signature)* N. Amini

NO.	DATE	TIME	SOIL	WATER	LOCATION	CONTAINER	Analyses Requested: TPHD/BTEX	REMARKS
1	12/22/92	11:05	✓		STMW-7-3	1	✓	
2	12/22/92	11:15	✓		STMW-7-5	1	✓	

Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
N. Amini	12/23/92 16:30	THANH LAM			
Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
		THANH LAM			
Relinquished by: *(Signature)*	Date / Time	Received for Laboratory by: *(Signature)*	Date / Time	Remarks	
	12/23/92 16:30	PEL			

SOIL TECH ENGINEERING
Soil, Foundation and Geological Engineers
298 BROKAW ROAD, SANTA CLARA, CA 95050 ■ (408) 496-0265 OR (408) 496-0266

PRIORITY ENVIRONMENTAL LABS

January 13, 1993 PEL # 9301014

SOIL TECH ENGINEERING

Attn: Noori Ameli
Re: Seven water samples for Gasoline/BTEX, Diesel, and Oil & Grease analyses.

Project name: 1801 Hibbard St., -Alameda
Project number: 10-91-483-MW

Date sampled: Jan 08 1993 Date submitted: Jan 11, 1993
Date extracted: Jan 11-13, 1993 Date analyzed: Jan 11-13, 1993

RESULTS:

SAMPLE I.D.	Gasoline (ug/L)	Diesel (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylenes (ug/L)	Oil & Grease (mg/L)
STMW-1	140	N.D.	0.6	1.2	0.6	2.2	0.8
STMW-2	70	N.D.	N.D.	N.D.	0.5	1.4	0.9
STMW-3	15000	N.D.	38	40	64	140	19
STMW-4	860	N.D.	1.5	4.5	9.6	17	1.4
STMW-5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
STMW-6	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
STMW-7	---	N.D.	N.D.	N.D.	N.D.	N.D.	---
Blank	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Spiked Recovery	102.1%	87.8%	101.3%	104.2%	98.2%	105.4%	---
Duplicate Spiked Recovery	94.5%	93.0%	83.9%	92.1%	90.7%	96.4%	---
Detection limit	50	50	0.5	0.5	0.5	0.5	0.5
Method of Analysis	5030 / 8015	3510 / 8015	602	602	602	602	5520 C & F

David Duong
Laboratory Director

1764 Houret Court Milpitas, CA. 95035 Tel: 408-946-9636 Fax: 408-946-9663

CHAIN OF CUSTODY RECORD

PEL # 9301014

INV # 23310

PROJ. NO.	NAME
10-91-483-MW	1801 Hibbard st. ALAMEDA

SAMPLERS: (Signature) N. A...

NO.	DATE	TIME	SOIL	WATER	LOCATION	CONTAINER	Analyses Requested: TPHG/BTEX	TPHD	TO&G	TPHD/BTEX			REMARKS
1	1/8/93	12:25		✓	STMW-1	3	✓	✓	✓				
2	1/8/93	11:50		✓	STMW-2	3	✓	✓	✓				
3	1/8/93	13:00		✓	STMW-3	3	✓	✓	✓				
4	1/8/93	11:30		✓	STMW-4	3	✓	✓	✓				
5	1/8/93	10:44		✓	STMW-5	3	✓	✓	✓				
6	1/8/93	10:15		✓	STMW-6	3	✓	✓	✓				
7	1/8/93	9:40		✓	STMW-7	1				✓			

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Receive by: (Signature)
N. A...	1/11/93 9:08				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for laboratory by: (Signature)	Date / Time	Remarks	
			01/11/93 9 AM		

SOIL TECH ENGINEERING

Soil, Foundation and Geological Engineers

298 BROKAW ROAD, SANTA CLARA, CA 95050 ■ (408) 496-0265 OR (408) 496-0266

CHAIN OF CUSTODY RECORD

PROJ. NO.	NAME
10-91-483-MW	1801 Hibbard st. ALAMEDA

SAMPLERS: (Signature)

NO.	DATE	TIME	SOIL	WATER	LOCATION	CONTAINER	Analyses Requested: TPHG/BTEX	TPHD	TO&G	TPHD/BTEX			REMARKS
1	1/8/93	12:25		✓	STMW-1	3	✓	✓	✓				
2	1/8/93	11:52		✓	STMW-2	3	✓	✓	✓				
3	1/8/93	13:--		✓	STMW-3	3	✓	✓	✓				
4	1/8/93	11:20		✓	STMW-4	3	✓	✓	✓				
5	1/8/93	10:44		✓	STMW-5	3	✓	✓	✓				
6	1/8/93	10:15		✓	STMW-6	3	✓	✓	✓				
7	1/8/93	9:40		✓	STMW-7	1				✓			

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Receive by: (Signature)
N. A...	1/11/93 9:08				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	
		...	01/11/93 9 AM		

SOIL TECH ENGINEERING
Soil, Foundation and Geological Engineers
298 BROKAW ROAD, SANTA CLARA, CA 95050 ■ (408) 496-0265 OR (408) 496-0266

File No. 10-91-483-MW

A P P E N D I X "F"

SOIL TECH ENGINEERING, INC.

ZONE 7 WATER AGENCY

5997 PARKSIDE DRIVE PLEASANTON, CALIFORNIA 94588

VOICE (510) 484-2600
FAX (510) 462-3914

RECEIVED
DEC 07 1992
ZONE 7, ACFC&WCD

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 1801 Hibbard Street
Alameda, CA 94501

CLIENT
Name Weyerhaeuser Paper Company
Address 1801 Hibbard Street Phone 510-523-6121
City Alameda, CA Zip 94501

APPLICANT
Name Alpha Geo Services
Address 298 Brokaw Road Phone 408-988-1032
City Santa Clara, CA Zip 95050

TYPE OF PROJECT

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

PROPOSED WATER SUPPLY WELL USE
Domestic ___ Industrial ___ Other ___
Municipal ___ Irrigation ___

DRILLING METHOD:
Mud Rotary ___ Air Rotary ___ Auger X
Cable ___ Other ___

DRILLER'S LICENSE NO. C57 507520

WELL PROJECTS

Drill Hole Diameter	8	in.	Maximum		
Casing Diameter	2	in.	Depth	20	ft.
Surface Seal Depth		ft.	Number	1	

GEOTECHNICAL PROJECTS

Number of Borings			Maximum		
Hole Diameter		in.	Depth		ft

ESTIMATED STARTING DATE 12/09/92
ESTIMATED COMPLETION DATE 12/09/92

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

APPLICANT'S SIGNATURE [signature] Date 11/25/92

FOR OFFICE USE

PERMIT NUMBER 92633
LOCATION NUMBER

PERMIT CONDITIONS

Circled Permit Requirements Apply

(A.) GENERAL
1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well Projects, or drilling logs and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

(B.) WATER WELLS, INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

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

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

E. WELL DESTRUCTION. See attached.

Approved [signature] Date 7 Dec 92
Wyman Hong

31992

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED