

ALAMEDA COUNTY
HEALTH CARE SERVICES



AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

May 17, 2006

Mr. Michael Nolte
Durham School Services
1431 Opus Place, Suite 200
Downers Grove, IL 60515

Mr. Jerry Harbert
46765 Mountain Cove Drive
Indian Wells, CA 92210

Subject: Fuel Leak Case No. RO0000047, Durham Transportation, 19984 Meekland Avenue, Hayward, CA 94541

Dear Mr. Nolte and Mr. Harbert:

This letter transmits the enclosed underground storage tank (UST) case closure letter in accordance with Chapter 6.75 (Article 4, Section 25299.37[h]). The State Water Resources Control Board adopted this letter on February 20, 1997. As of March 1, 1997, the Alameda County Environmental Health (ACEH) is required to use this case closure letter for all UST leak sites. We are also transmitting to you the enclosed case closure summary. These documents confirm the completion of the investigation and cleanup of the reported release at the subject site. The subject fuel leak case is closed.

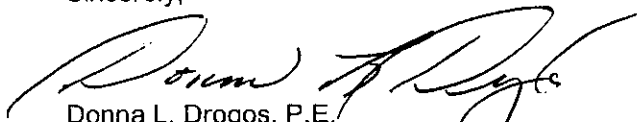
SITE INVESTIGATION AND CLEANUP SUMMARY

Please be advised that the following conditions exist at the site:

- Residual concentrations of up to 34 milligrams per kilogram (mg/kg) of total petroleum hydrocarbons as gasoline remain in soil at the site.
- Residual concentrations of up to 1,100 micrograms per liter ($\mu\text{g/L}$) of total petroleum hydrocarbons as gasoline remain in groundwater at the site.

If you have any questions, please call Jerry Wickham at (510) 567-6791. Thank you.

Sincerely,



Donna L. Drogos, P.E.
LOP and Toxics Program Manager

Enclosures:

1. Remedial Action Completion Certificate
2. Case Closure Summary

cc:

Ms. Cherie McCaulou (w/enc)
SF- Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

Mr. Toru Okamoto (w/enc)
State Water Resources Control Board
UST Cleanup Fund
P.O. Box 944212
Sacramento, CA 94244-2120

Mr. Hugh Murphy (w/enc)
Hayward Fire Department
777 B Street
Hayward, CA 94541

Mr. Patrick Hoban
Weber, Hayes & Associates
120 Westgate Drive
Watsonville, CA 95076

Mr. Jeff Lawson
Silicon Valley Law Group
25 Metro Drive, Suite 600
San Jose, CA 95110

Jerry Wickham (w/orig enc), D. Drogos (w/enc), R. Garcia (w/enc)

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May 17, 2006

Mr. Michael Nolte
Durham School Services
1431 Opus Place, Suite 200
Downers Grove, IL 60515

Mr. Jerry Harbert
46765 Mountain Cove Drive
Indian Wells, CA 92210

REMEDIAL ACTION COMPLETION CERTIFICATE

Dear Mr. Nolte and Mr. Harbert:

Subject: Fuel Leak Case No. RO0000047, Durham Transportation, 19984 Meekland Avenue, Hayward, CA 94541

This letter confirms the completion of a site investigation and remedial action for the underground storage tanks formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tank(s) are greatly appreciated.

Based on information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of site conditions, this agency finds that the site investigation and corrective action carried out at your underground storage tank(s) site is in compliance with the requirements of subdivisions (a) and (b) of Section 25299.37 of the Health and Safety Code and with corrective action regulations adopted pursuant to Section 25299.77 of the Health and Safety Code and that no further action related to the petroleum release(s) at the site is required.

This notice is issued pursuant to subdivision (h) of Section 25299.37 of the Health and Safety Code.

Please contact our office if you have any questions regarding this matter.

Sincerely,

William w. Pitcher
William Pitcher
Interim Director
Alameda County Environmental Health

**CASE CLOSURE SUMMARY
LEAKING UNDERGROUND FUEL STORAGE TANK - LOCAL OVERSIGHT PROGRAM**

I. AGENCY INFORMATION

Date: May 16, 2006

Agency Name: Alameda County Environmental Health	Address: 1131 Harbor Bay Parkway
City/State/Zip: Alameda, CA 94502-6577	Phone: (510) 567-6791
Responsible Staff Person: Jerry Wickham	Title: Hazardous Materials Specialist

II. CASE INFORMATION

Site Facility Name: Durham Transportation		
Site Facility Address: 19984 Meekland Avenue, Hayward, CA 94541		
RB Case No.: 01-0521	Local Case No.: STID#1879	LOP Case No.: RO0000047
URF Filing Date: 11/09/1989	SWEEPS No.: ---	APN: 429-0010-059-02
Responsible Parties	Addresses	Phone Numbers
Jerry Harbert	46765 Mountain Cove Drive, Indian Wells, CA 92210	---
Michael Nolte, Durham School Services	Executive Towers 1, 1431 Opus Place, Suite 200, Downers Grove, IL 60515	---

Tank I.D. No	Size in Gallons	Contents	Closed In Place/Removed?	Date
1	4,000	Gasoline	Removed	August 11, 1989
2	6,000	Gasoline	Removed	August 11, 1989
3	5,000	Gasoline	Removed	August 11, 1989
4	500	Waste oil	Removed	August 11, 1989
Piping			Removed	August 15, 1989

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and Type of Release: Holes observed in Tanks#1 and 4 during removal. Staining and odor observed beneath product line and dispensers during removal.		
Site characterization complete? Yes	Date Approved By Oversight Agency: -----	
Monitoring wells installed? Yes	Number: 10	Proper screened interval? Yes
Highest GW Depth Below Ground Surface: 20	Lowest Depth: 25	Flow Direction: Southwest to West Northwest
Most Sensitive Current Use: Potential drinking water source.		

Summary of Production Wells in Vicinity:

A 4-inch PVC water well was located in the northern portion of the site. The well was reported to be 67.9 feet deep with static groundwater at 29.9 feet bgs. A permit was obtained from the Zone 7 Water Agency and the water well was destroyed by tremie grouting on December 12, 1989. The well was reported to be sampled prior to being destroyed. The groundwater sample from this well (depth of sample unknown) contained 1,800 µg/L TPHg, 200 µg/L benzene, 24 µg/L ethylbenzene, 18 µg/L toluene, 34 µg/L xylene, 0.15 µg/L 1,2-dichloroethane, and 2,100 µg/L lead. TCE and PCE were not detected. In order to confirm that this well did not act as a vertical conduit for downward migration of fuel constituents, a cone penetrometer and direct push boring was completed adjacent to the location of the abandoned well on April 28, 2005. The cone penetrometer boring logged soils continuously to 90 feet bgs. Clays and silts, interpreted to be the Newark Aquiclude were encountered in the boring at depths of 62.5 – 64.5 and 68.5 – 82 feet bgs. The top of the sandy zone interpreted to be the Newark Aquifer was encountered at a depth of 83 feet bgs. A core sample was obtained using a direct push boring from 86-88 feet bgs to confirm the sand and gravel soil type within the Newark Aquifer. A groundwater sample was obtained from the Newark Aquifer at a depth of 86-88 feet bgs. Lab results for the groundwater sample indicated that TPHg, BTEX, MTBE, and 1,2-DCA were not detected. Dissolved lead was detected at 19 µg/L, which is interpreted to be within the range of naturally-occurring lead. Based on these data, Weber, Hayes & Associates (WHA), consultant for the investigation, concluded that, "impact to groundwater was limited to the Shallow Zone, where extensive groundwater monitoring demonstrates no significant hydrocarbons remain."

One irrigation well is approximately 320 feet northwest of the site and appears to be in a cross gradient location. The well was drilled in 1931 to a total depth of 91 feet. Two additional irrigation wells are located approximately 500 to 600 feet north northwest of the site in cross gradient locations. No wells appear to be within 1,000 feet of the site to the west or west northwest, which appear to be the predominant directions of the hydraulic gradient at the site. One irrigation well is located approximately 700 feet southwest of the site. This well was drilled in 1952 to a total depth of 55 feet. Based on a well conduit study and field observations from the site, WHA concluded that, "there are no private or public wells near the subject site that appear to have the potential to be a vertical conduit for transporting petroleum hydrocarbon contamination to deeper water-bearing zones."

Are drinking water wells affected? No	Aquifer Name: Site overlies the Newark Aquifer
Is surface water affected? No	Nearest SW Name: San Lorenzo Creek is about 2,500 feet north (cross gradient) of the site.
Off-Site Beneficial Use Impacts (Addresses/Locations): None	
Reports on file? Yes	Where are reports filed? Alameda County Environmental Health (and local CUPA where applicable)

TREATMENT AND DISPOSAL OF AFFECTED MATERIAL			
Material	Amount (Include Units)	Action (Treatment or Disposal w/Destination)	Date
Tank	4 USTs	Disposed off-site at H&H Shipping Service, 220 China Basin Rd., San Francisco, CA 94107	08/11/1989
Piping	Not reported	Disposed off-site at H&H Shipping Service, 220 China Basin Rd., San Francisco, CA 94107	08/11/1989
Free Product	Not Observed	---	--
Soil	---	Excavated soil was backfilled within plastic-lined excavations.	08/11/1989
Groundwater	Not encountered	--	--

MAXIMUM DOCUMENTED CONTAMINANT CONCENTRATIONS BEFORE AND AFTER CLEANUP
 (Please see Attachments 1 through 7 for additional information on contaminant locations and concentrations)

Contaminant	Soil (ppm)		Water (ppb)	
	Before	After	Before	After
TPH (Gas)	8,700 (1)	34 (1)	27,000 (MW-5, 07/1992)	1,100 (MW-9, 03/23/2005)
TPH (Diesel)	1,300 (2)	--	7,500 (MW-10, 05/1992)	--
Oil & Grease	--	--	--	--
Benzene	18	0.041	9,600 (MW-5, 06/1993)	3.5 (MW-5, 03/23/1005)
Toluene	83	0.014	3,700 (MW-1, 07/1991)	0.67 (MW-5, 03/23/2005)
Ethylbenzene	67	0.012	1,300 (MW-5, 06/1993)	48 (MW-9, 03/23/2005)
Xylenes	420	0.6	6,100 (MW-1, 07/1986)	31 (MW-9, 03/23/2005)
Heavy Metals	13(3)	--	2,100(4)	19(4)
MTBE	<0.05	<0.05	<1.0(5)	<1.0(5)
1,2 Dichloroethane	0.061	--	125 (MW-5, 04/1992)	<10 (MW-5, 03/23/2005)
Other (8240/8270)	TCE = 0.2 PCE = <0.005 PCBs = <0.5	---	TCE = <0.5 PCE = 3.5 1,1-DCA = 26	--

- (1) A concentration of 8,700 ppm TPHg was detected at a depth of 18.5 feet bgs in soil boring DP-2a located near the former dispensers. The maximum concentration detected in 12 confirmation soil samples following auger excavation was 34 mg/kg after auger excavation.
- (2) Appeared to be lighter than diesel hydrocarbons.
- (3) Lead = 13 ppm, no other metals analyzed in soil.
- (4) Total lead detected at 2,100 µg/L in water sample collected in 1989 from the on-site well. The well was properly decommissioned on 12/12/1989. Dissolved lead was detected at 19 µg/L in a grab groundwater sample collected in 2005 from a direct push boring immediately adjacent to the abandoned well.
- (5) <1.0 ppb MTBE, <5 ppb TAME, <5 ppb ETBE, <5 ppb DIPE, <10ppb TBA, <0.5 ppb EDB in groundwater

Site History and Description of Corrective Actions:

The flat-lying site is in a mixed light commercial and residential area in Hayward, CA. Anticipated future uses for the site are reported to be residential (WHA 2003). The site was a family run service station in the 1940's. Harbert Transportation then utilized the site as a fueling station and vehicle yard until Durham Transportation purchased the property in 1986. Durham Transportation utilized the site as a fueling station and yard for buses until 1989. The site is currently fenced off and no business has operated at the site since 1989. In August 1989, four USTs were removed. Tanks#1,2, and 4 were installed in 1954; Tank#3 was installed in 1972. Tank#1 (4,000-gallon gasoline) had holes and visible staining was observed in the tank pit. Tank#2 (6,000 gallon gasoline) was corroded and deeply pitted when removed but no holes were observed. Tank#3(5,000 gallon gasoline) was in good condition with minor corrosion and no staining was observed adjacent to tank. Tank#4 (500 gallon waste oil) had an approximately ¼ inch hole near the bottom of the tank. The tank was empty when excavated and no staining was observed in the excavation. During piping removal, stained soil and odor was observed where the product line entered the tank pit and at the union of each dispenser. The soils excavated during the UST and piping removals in 1989 were backfilled into the plastic-lined excavation.

Two older USTs, that were located near the dispensers, were reported to be removed in the early 1950s. Trenching at the site (Test pit#1) confirmed that no tanks were present at the location of the former USTs removed in the early 1950s.

Three sumps were located on the site. The oldest sump in the southeast portion of the site was a two stage sump thought to be have been at the location of a lube garage. This sump was located by trenching in June 1990 (Test pits#2 and 3) and consisted of a concrete basin that was filled with soil. No staining or odor were observed when the sump was excavated. The sump was apparently cleaned and filled with soil when the lube garage was demolished prior to 1954. A sewer pipe apparently drained the former sump. The second wash rack sump, located in the northern portion of the site, was investigated in 1990. A trench (Test Pit#4) was excavated along the west side of the sump in June 1990 to look for lines leading from the sump; no lines were found. A second test pit (Test pit#9) was excavated along the east side of the wash rack sump in September 1990. No staining or odor was observed and a soil sample collected from 7 feet bgs in the trench had not detectable results for TPHg, TPHd, Stoddard solvent, and benzene. Toluene was detected at a concentration of 24 ppb. Samples were collected from sludge in the bottom of the sump to characterize the material for disposal. The sludge contained high concentrations of heavy oil and "white spirits." The sludge was disposed of as hazardous waste.

The third sump, a waste oil sump that drained to the waste oil tank, was investigated by trenching in September 1990. Test pit#8 was excavated through the former waste oil sump. A slight odor was observed at a depth of 8 feet. A soil sample collected at 2.5 feet bgs contained 20 ppm of TPH as motor oil and had not detectable results for TPHg, TPHd, Stoddard solvent, and benzene. A soil sample collected at 8 feet bgs had not detectable results for TPHg, TPHd, TPHm, Stoddard solvent, and benzene.

Soil gas sampling was conducted at the site from April 30, 1990 through May 3, 1990. Petroleum hydrocarbons were detected throughout the site with the highest concentrations within the central portion of the site. Elevated concentrations of petroleum hydrocarbons were not detected in the vicinity of the sumps. Results for halogenated hydrocarbons were not detectable for all soil gas samples.

Groundwater extraction was conducted using wells MW-5, MW-6, and MW-7 from approximately December 1, 1992 through December 31, 1993. Groundwater was pumped through three carbon canisters to a holding tank and then discharged to the sanitary sewer.

In January 2002, six foot diameter augers were used to excavate soil within the footprints of the former fuel tanks and adjacent to the former dispensers. The excavation extended to a depth of 40 feet bgs and removed approximately 600 cubic yards of soil from the vadose zone, soil/groundwater interface, and saturated zone. Approximately 400 pounds of Oxygen Release Compound[®] was added to the saturated zone of the excavations to enhance aerobic degradation. The auger excavations were backfilled with cement slurry and compacted fill. Approximately 3,000 gallons of water was removed during dewatering and disposed off-site under non-hazardous waste manifests.

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? Yes No		
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? Yes No		
Does corrective action protect public health for current land use? Alameda County Environmental Health staff does not make specific determinations concerning public health risk. However, based upon the information available in our files to date, it does not appear that the release would present a risk to human health based upon current land use and conditions.		
Site Management Requirements: None		
Should corrective action be reviewed if land use changes? No		
Was a deed restriction or deed notification filed? No		Date Recorded: --
Monitoring Wells Decommissioned: No	Number Decommissioned: 1	Number Retained: 10
List Enforcement Actions Taken: None		
List Enforcement Actions Rescinded: --		

V. ADDITIONAL COMMENTS, DATA, ETC.

Considerations and/or Variances:

The concentrations of TPHg in groundwater exceeded the Environmental Screening Level (ESL) for current of potential drinking water sources established in "Screening for Environmental Concerns with Sites with Contaminated Soil and Groundwater," (February 2005) of 100 µg/L in groundwater samples collected from four on-site wells during the most recent groundwater monitoring event on March 23, 2005. TPHg was detected at a concentration of 1,100 µg/L in well MW-9, which is located near the western boundary of the site. However, benzene and MTBE were not detected in the sample from well MW-9. TPHg was also detected in three other on-site wells at concentrations of 120, 160, and 540 µg/L, respectively. The maximum concentration of benzene detected during the March 23, 2005 groundwater monitoring event was 3.5 µg/L in on-site well MW-5. No petroleum constituents were detected in off-site downgradient well, MW-10 during the most recent groundwater monitoring event. Long-term trends in groundwater concentrations and dissolved oxygen and redox potential data indicate that biodegradation is occurring at the site. Based on the historic monitoring data and natural attenuation parameters, migration of petroleum hydrocarbons is expected to be limited in extent. No water supply wells, surface water, or other receptors are expected to be affected by the groundwater contamination. Water quality goals and objectives are expected to be achieved within a reasonable time period.

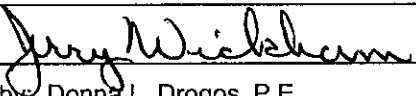
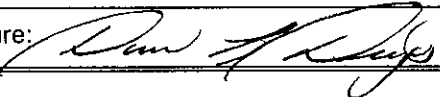
Soils excavated during tank and piping removals in 1989 were backfilled into the plastic-lined tank and product line excavations. These soils were excavated using six-foot diameter augers and disposed off-site in January 2002. Results from samples collected subsequent to the soil excavation and removal do not exceed ESLs for soils where groundwater is a current or potential drinking water source.

Residual petroleum hydrocarbons have not been detected in soil at concentrations exceeding applicable screening criteria (ESLs for residential use) in soil samples collected subsequent to soil excavation conducted at the site. Therefore, the residual petroleum hydrocarbons in soil do not require cleanup.

Conclusion:

Alameda County Environmental Health staff believe that the levels of residual contamination do not pose a significant threat to water resources, public health and safety, and the environment based upon the information available in our files to date. No further investigation or cleanup is necessary. ACEH staff recommend case closure for this site.

VI. LOCAL AGENCY REPRESENTATIVE DATA

Prepared by: Jerry Wickham	Title: Hazardous Materials Specialist
Signature: 	Date: 2/3/06
Approved by: Donna L. Drogos, P.E.	Title: Supervising Hazardous Materials Specialist
Signature: 	Date: 02/03/06

This closure approval is based upon the available information and with the provision that the information provided to this agency was accurate and representative of site conditions.

VII. REGIONAL BOARD NOTIFICATION

Regional Board Staff Name: Cherie McCaulou	Title: Engineering Geologist
RB Response: Concur, based solely upon information contained in this case closure summary.	Date Submitted to RB: 2/3/06
Signature: <i>Ch McCaulou</i>	Date: 4/11/06

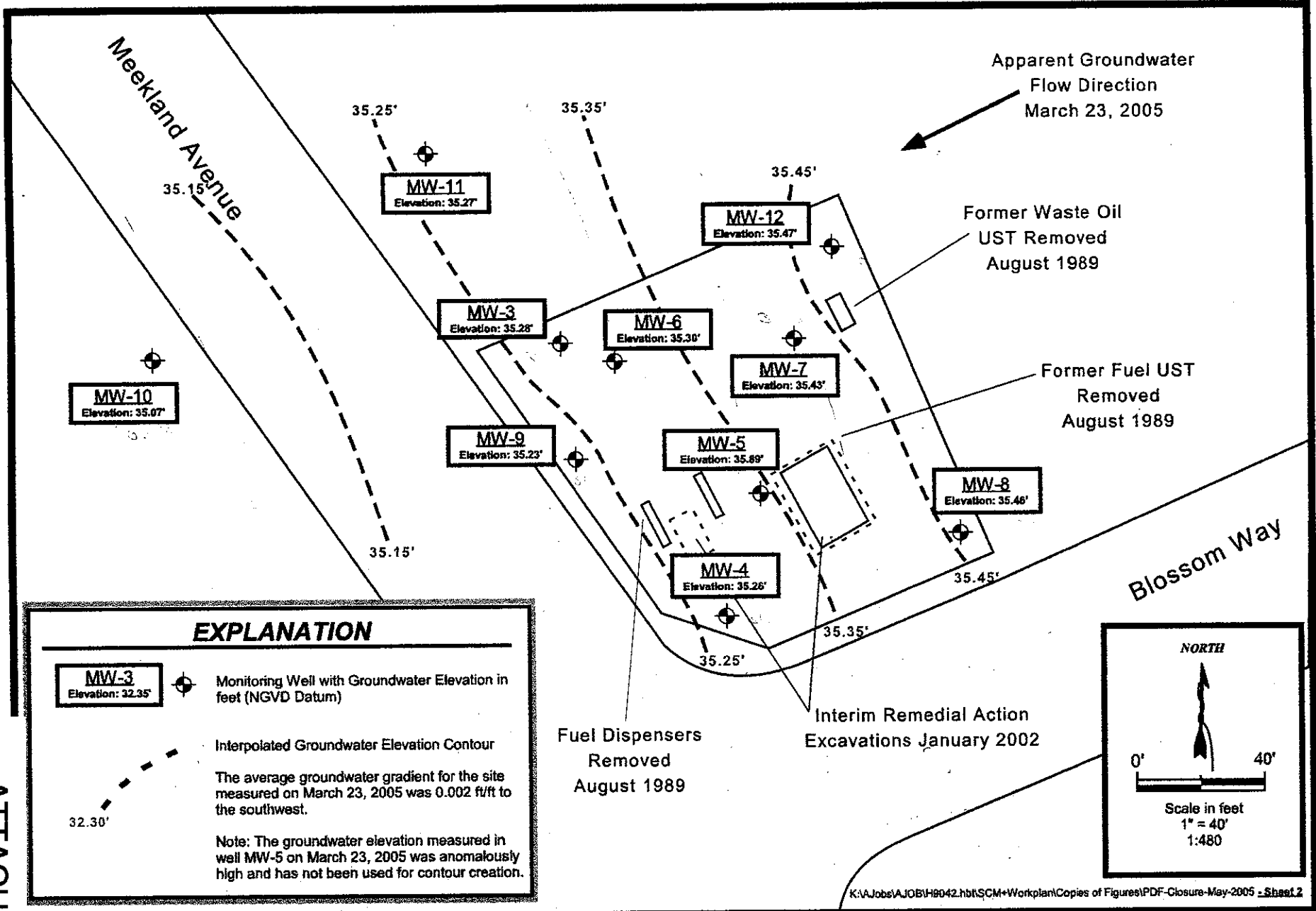
VIII. Monitoring Well Decommissioning

Date Requested by ACEH: 4/11/06	Date of Well Decommissioning Report: 5/15/06	
All Monitoring Wells Decommissioned: <input checked="" type="radio"/> Yes <input type="radio"/> No	Number Decommissioned: 10	Number Retained: 0
Reason Wells Retained: NA		
Additional requirements for submittal of groundwater data from retained wells: NA		
ACEH Concurrence - Signature: <i>Jerry W. Williams</i>	Date: 5/17/06	

Attachments:

1. Location Map
2. Site Map and Facility
3. Groundwater Elevation Contours March 23, 2005; Geologic Cross Sections; Petroleum Hydrocarbon Concentrations in Groundwater, March 23, 2005; Dissolved Oxygen Contours, March 23, 2005
4. Groundwater Concentration Graphs
5. Soil Analytical Data
6. Groundwater Analytical Data
7. Boring Logs

This document and the related CASE CLOSURE LETTER & REMEDIAL ACTION COMPLETION CERTIFICATE shall be retained by the lead agency as part of the official site file.



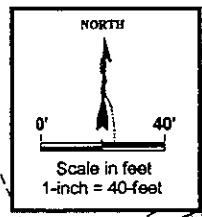
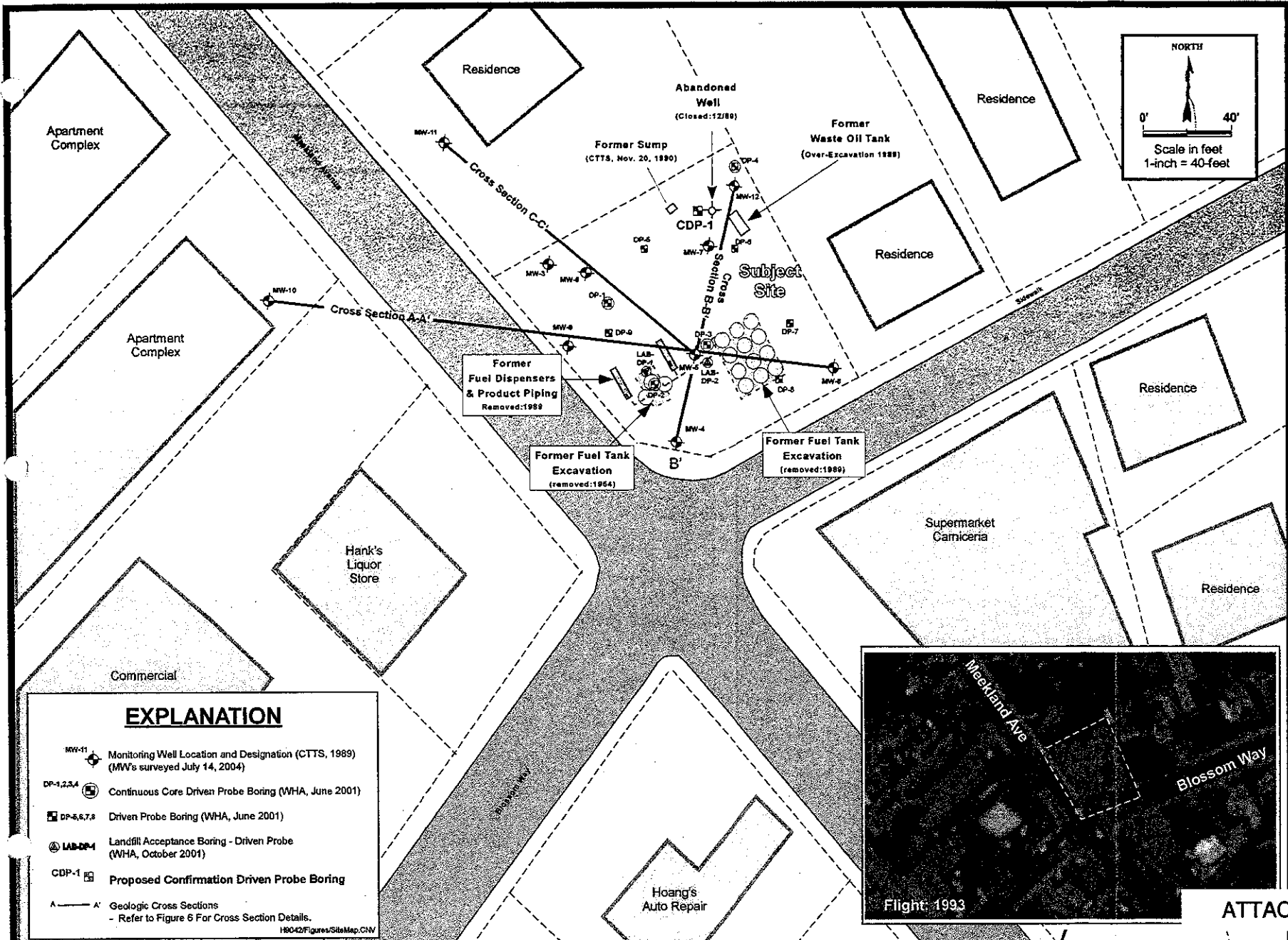
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Weber, Hayes & Associates
 Hydrogeology and Environmental Engineering
 120 Westgate Drive, Watsonville, Ca. 95076
 (831) 722 - 3580 (831) 662 - 3100

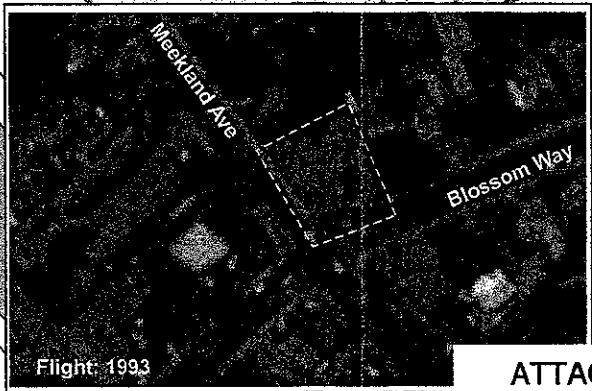
Groundwater Elevations
 March 23, 2005
 Former Harbert Transportation Facility
 19984 Meekland Avenue, Hayward, California

Figure
 4
Project
 H9042



EXPLANATION	
	Monitoring Well Location and Designation (CTTS, 1989) (MW's surveyed July 14, 2004)
	Continuous Core Driven Probe Boring (WHA, June 2001)
	Driven Probe Boring (WHA, June 2001)
	Landfill Acceptance Boring - Driven Probe (WHA, October 2001)
	Proposed Confirmation Driven Probe Boring
	Geologic Cross Sections - Refer to Figure 6 For Cross Section Details.

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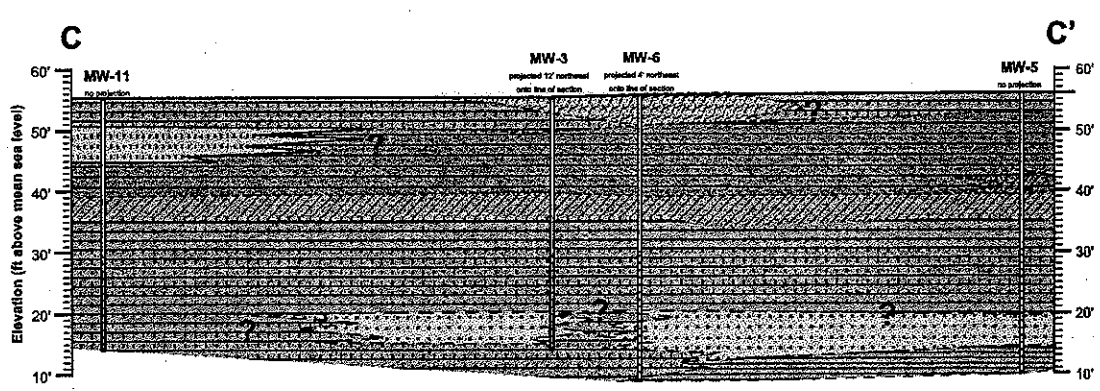
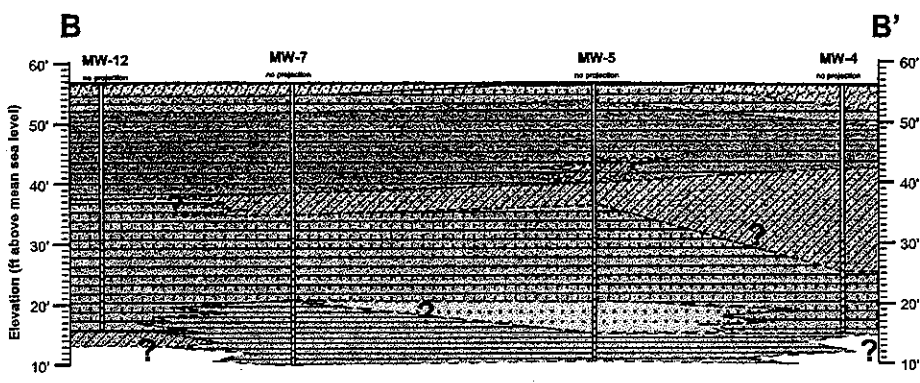
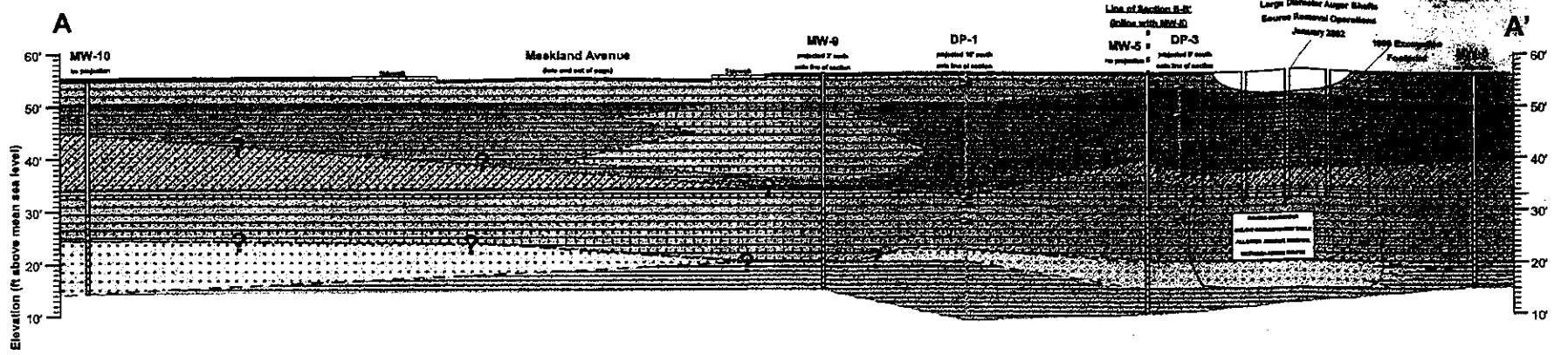


ATTACHMENT 3

FIGURE 2
Job # H8042

Site Map & Vicinity
Former Harbert Transportation Facility
19984 Meekland Avenue
Hayward, California

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Drive, Watsonville, Ca. 95076
(831) 722 - 3580 (831) 662 - 3100

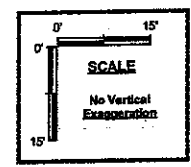


EXPLANATION:

- Asphalt.
- ▨ Lithologic Unit #1 - Sand/Gravel Fill
- ▨ Lithologic Unit #2 - Fat & Lean CLAY to Clayey SILT; Dominantly clay with some sand that is moist. Appears to be laterally continuous with discontinuous interbeds of clayey sand and/or gradational into clayey sand.
- ▨ Lithologic Unit #3 - Sandy CLAY to SILTY CLAY; Dominantly clay with some sand and silt. Appears to be laterally continuous with discontinuous interbeds of clayey sand and/or gradational into clayey sand.
- ▨ Lithologic Unit #4 - Clayey SILTY SAND; Dominantly sand with silt and clay binder, with occasional basal gravel.
- ▨ Lithologic Unit #5 - Fat CLAY; Dominantly clay with some sand that is moist with discontinuous interbeds of sand lens.
- ▨ Lithologic Unit #6 - Poorly Graded SAND and/or SILTY SAND; Dominantly sand with little or no fines - groundwater bearing unit.
- ▨ Lithologic Unit #7 - Lean CLAY; Dominantly clay with some sand that is very stiff, and low moisture content - aquifer unit.
- ▨ Cement: Used in sealing driven probe borings.
- ▣ Soil sample analyzed at this depth.
- Monitoring well location, designation, completion depth and screened interval.
- Groundwater elevation in monitoring wells from March 29, 2001 groundwater monitoring event.

NOTES:

See Figure 2 for plan view of geologic cross-sections A-A', B-B', and C-C'.
 Lithology compiled from monitoring well geologic logs (completed by others), and driven probe boring geologic logs (WHA).
 All elevations are referenced to National Geodetic Vertical Datum of 1929 Mean Sea Level (MSL).
 No well construction information was contained on MW-3, or 4 geologic logs. Well construction inferred based on total depth and other well construction data from other onsite wells.

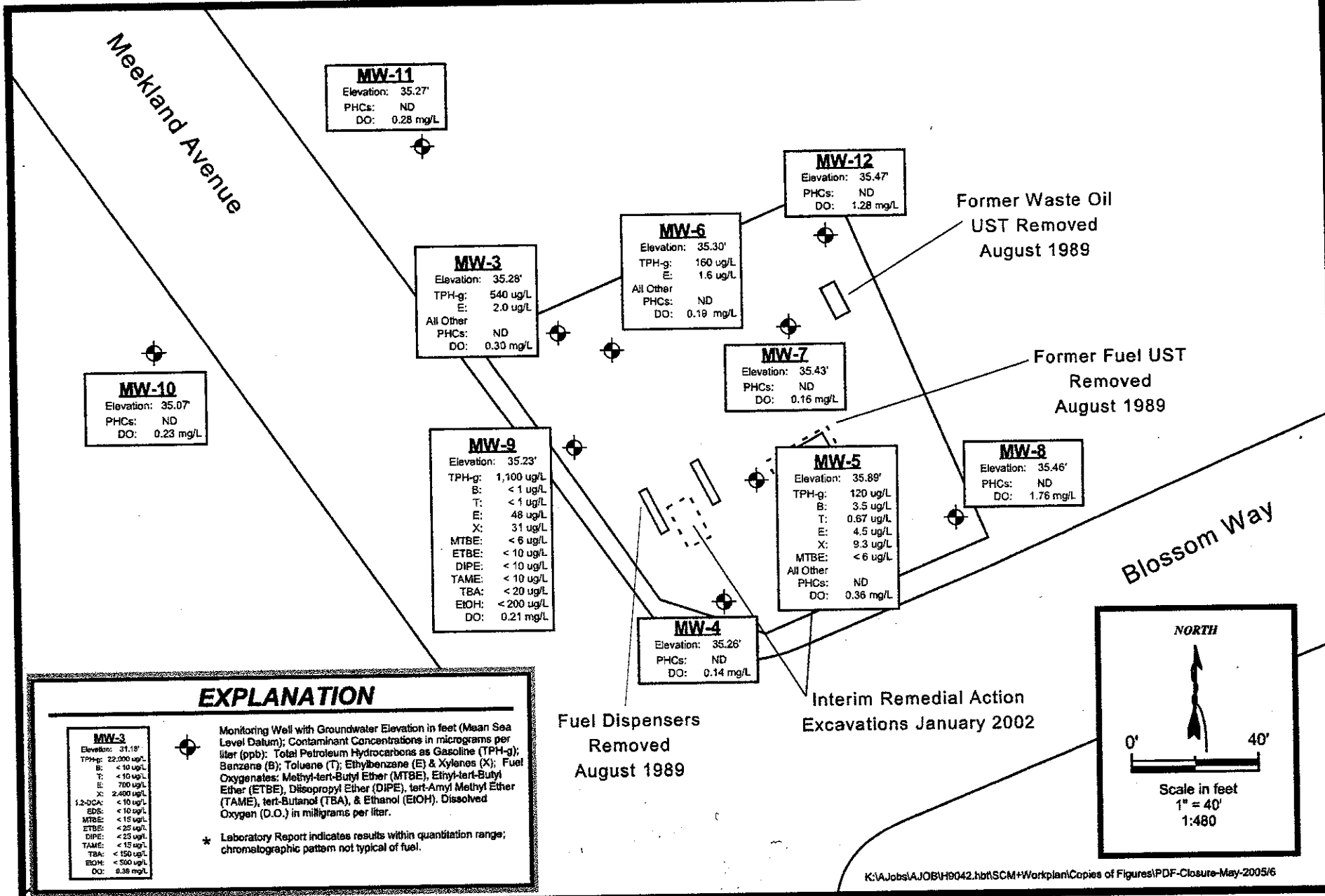


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FIGURE
 3
 Job #
 23022

Site Geologic Cross Sections A-A', B-B' & C-C'
 Former Harbert Transportation
 984 Meekland Avenue
 Hayward, California

WA
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 1200 Lakeside Drive, Watsonville, Ca. 95076
 22-3560 (831) 662-3100



Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Drive, Watsonville, Ca. 95076
(831) 722 - 3580 (831) 662 - 3100

Petroleum Hydrocarbon Concentrations in Groundwater
March 23, 2005
Former Harbert Transportation Facility
19984 Meekland Avenue, Hayward, California

Figure 5
Project H9042

Figure 13
MW-10: TPH-Gasoline Concentrations from 1992-2005
 (MW-10, Off-site, downgradient monitoring well)

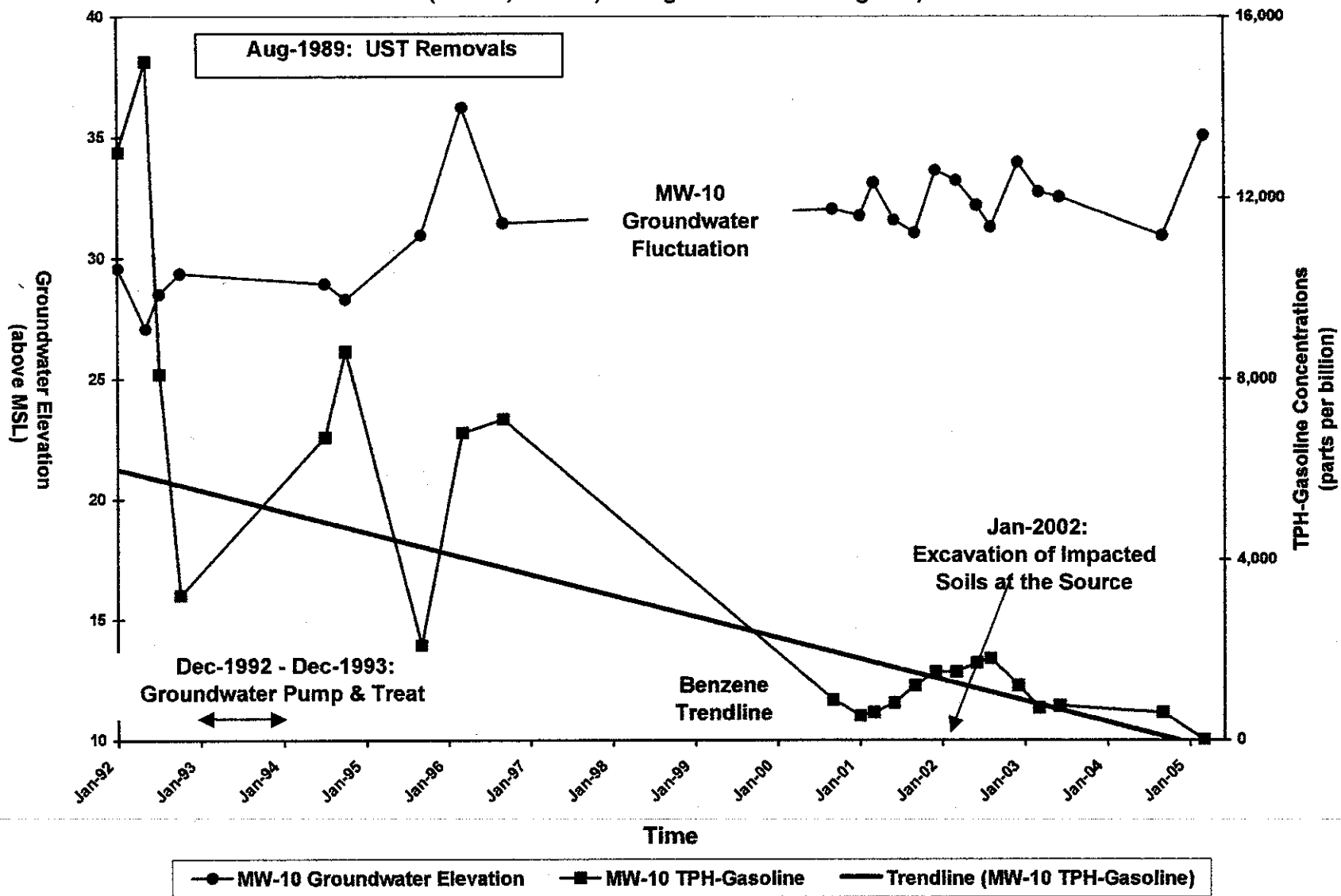


Figure 12
MW-10: BENZENE Concentrations from 1992-2005
 (MW-10, Off-site, downgradient monitoring well)

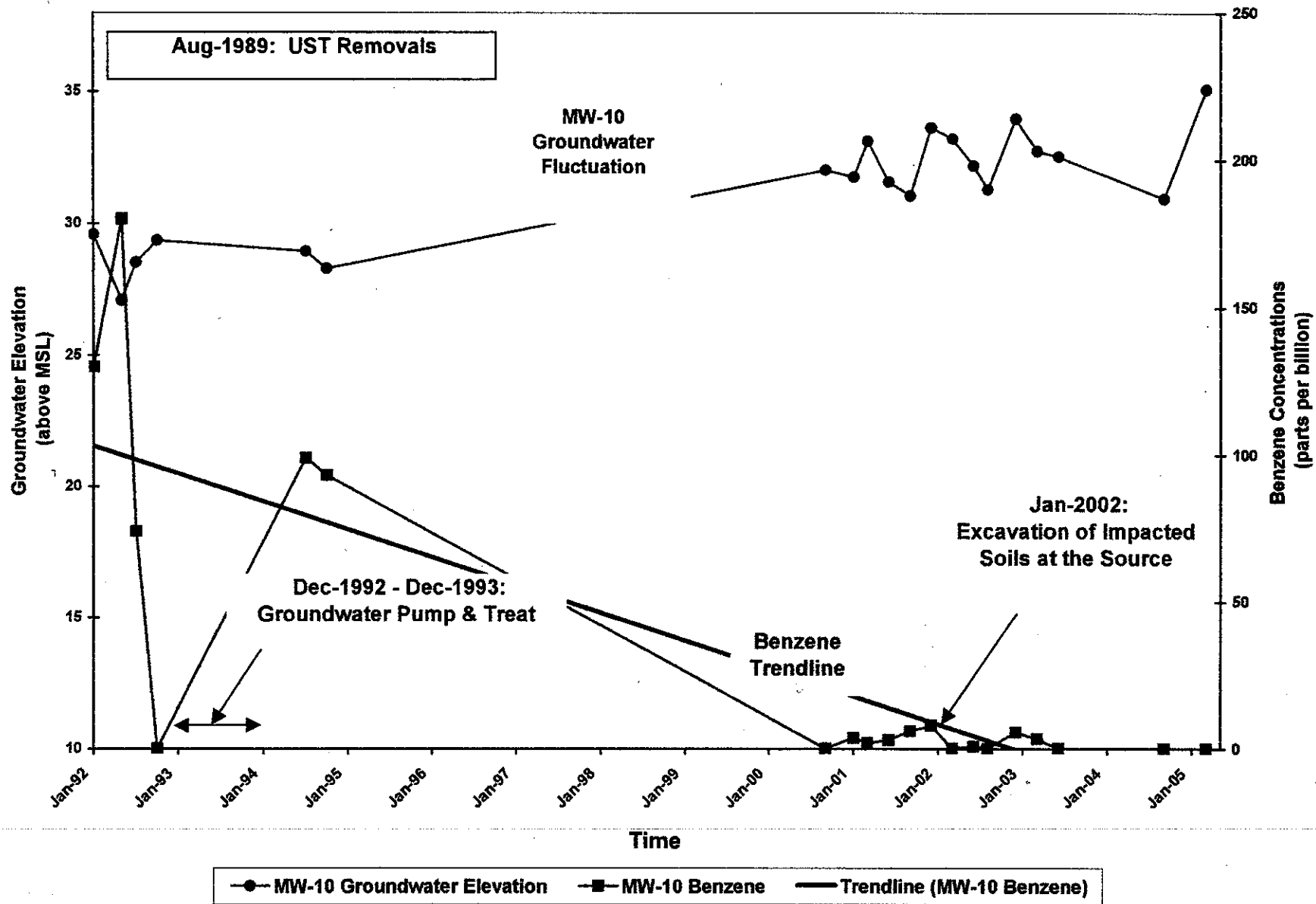


Figure 11
MW-9: TPH-Gasoline Concentrations from 1991-2005
 (MW-9, On-site near downgradient property line)

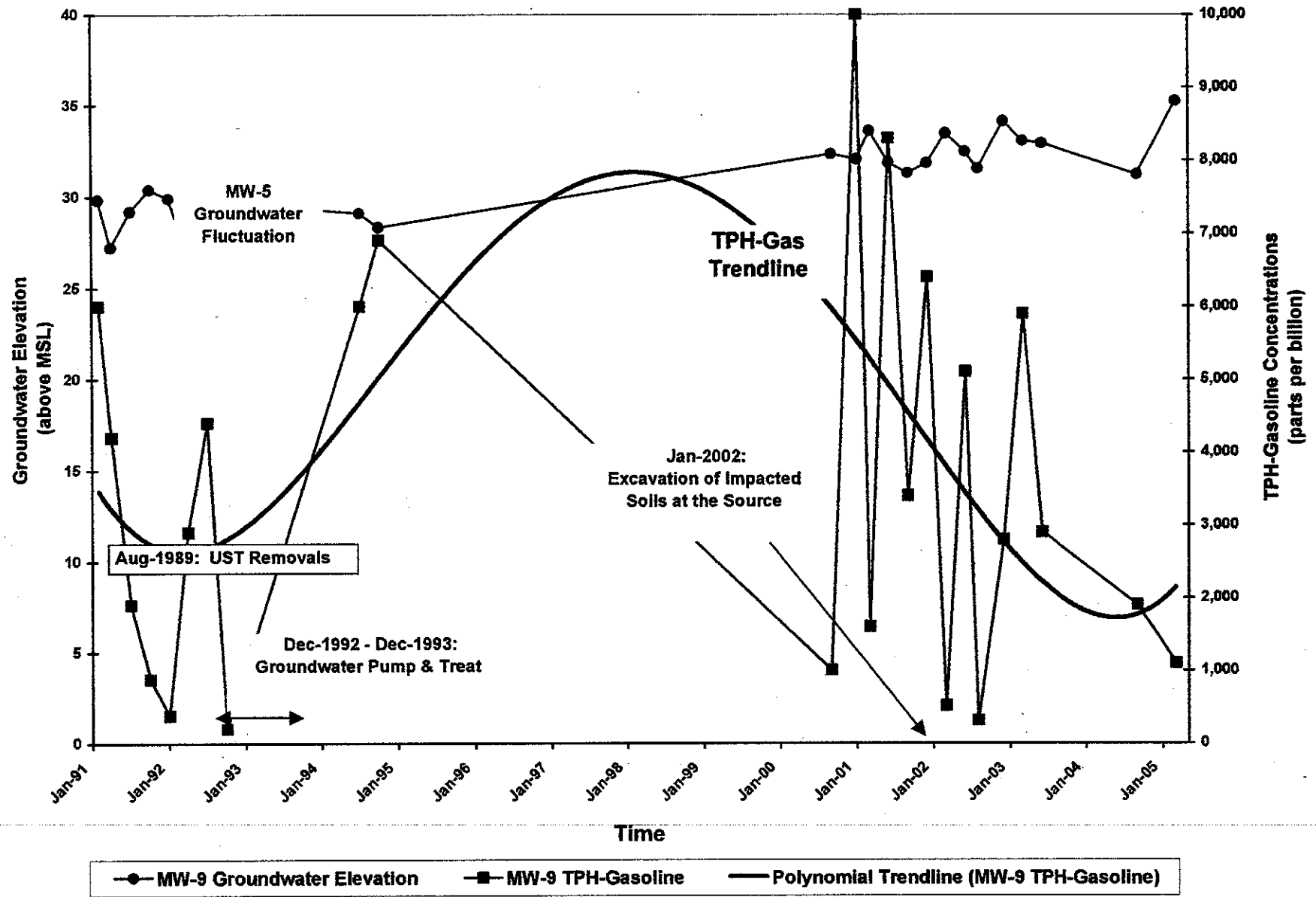


Figure 10
MW-9: BENZENE Concentrations from 1991-2005
 (MW-9, On-site near downgradient property line)

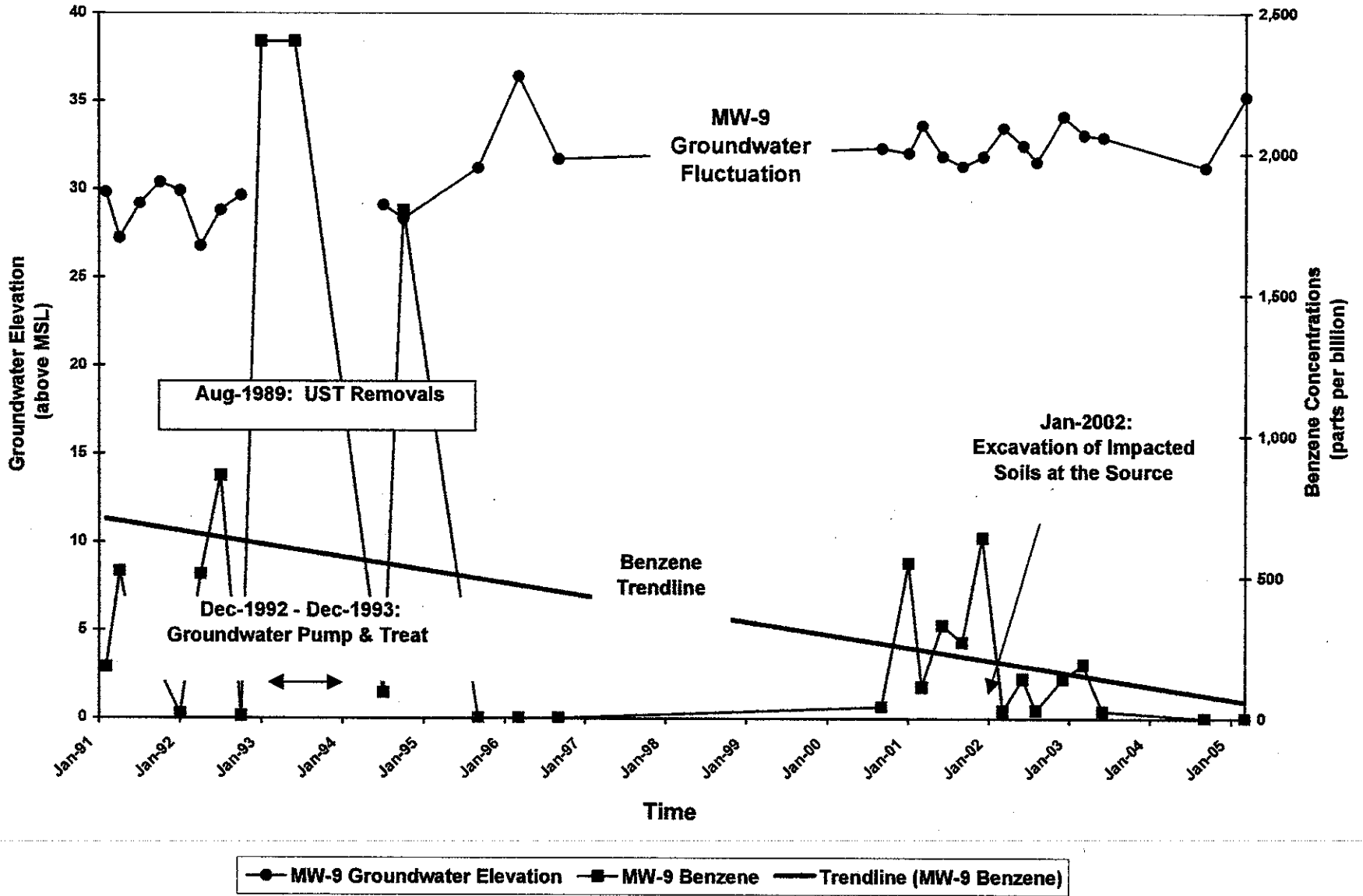


Figure 9
MW-5: TPH-Gasoline Concentrations from 1990-2005
 (MW-5, On-site, immediately adjacent to source -- former UST excavation)

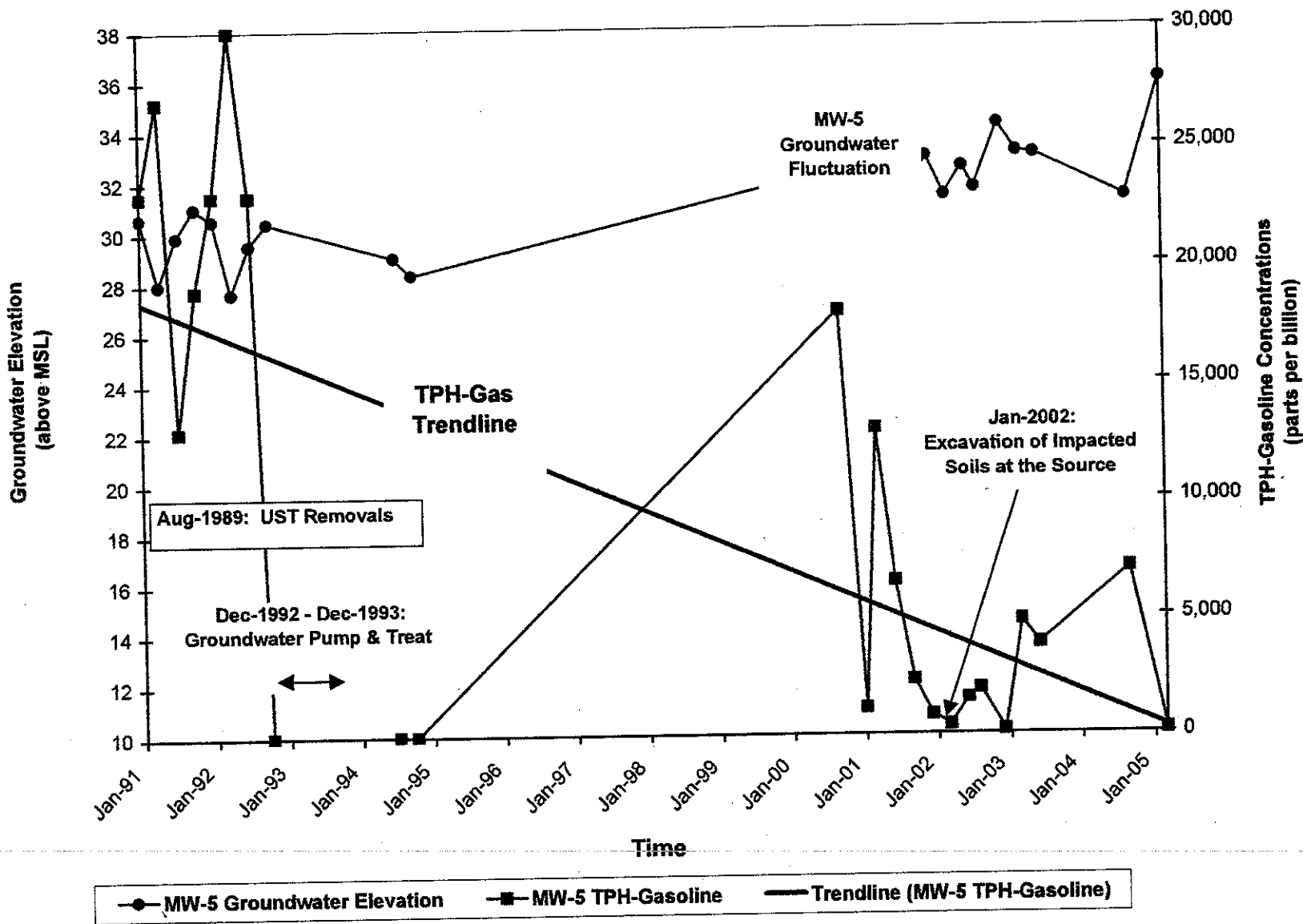


Figure 8
MW-5: BENZENE Concentrations from 1990-2005
 (MW-5, On-site, immediately adjacent to source -- former UST excavation)

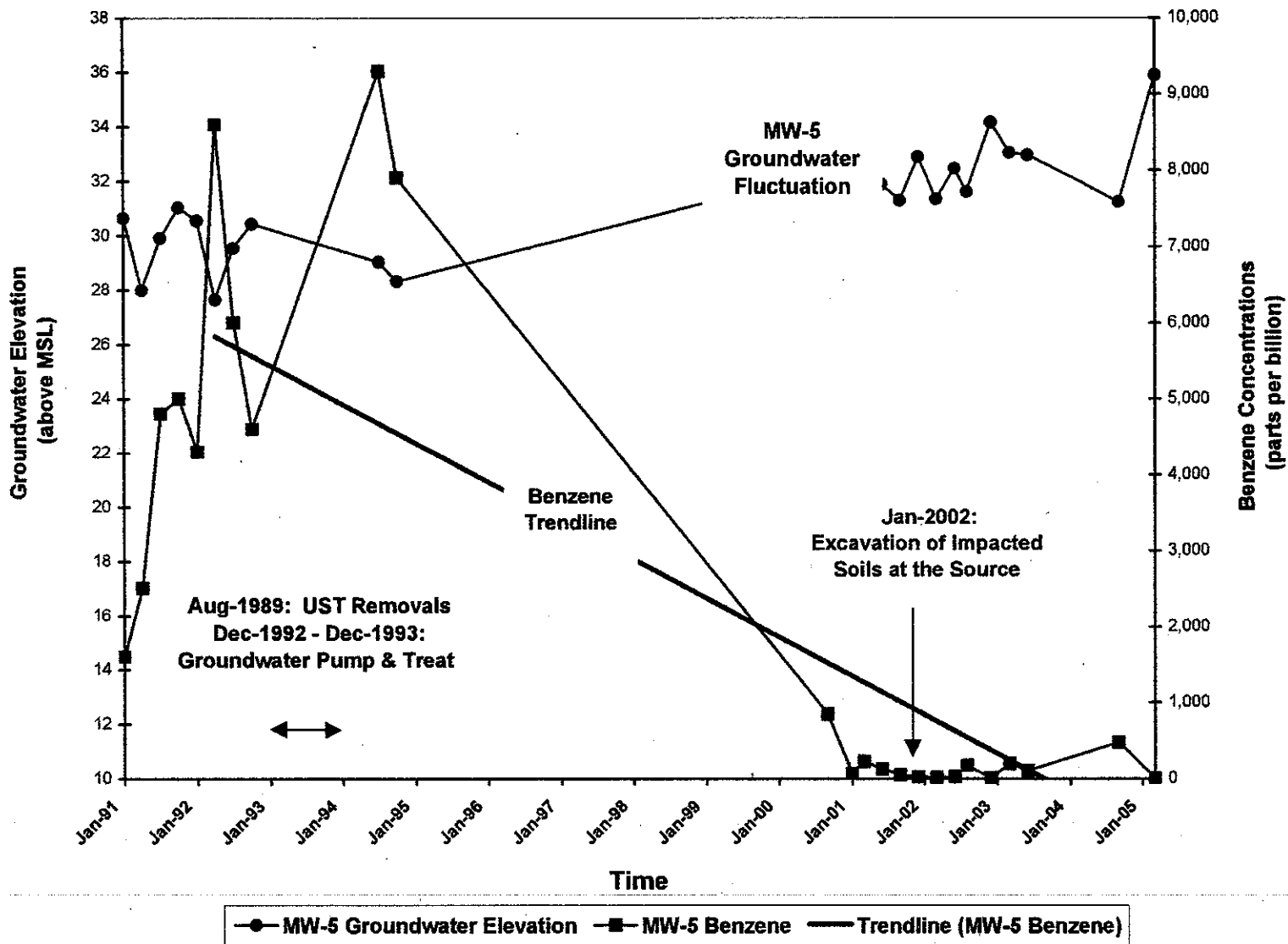


Table 2

Summary of Historical Groundwater Analytical Data (-1986 through 1996)
 Herbert Transportation/Meekland Avenue
 Hayward, California



Well	Date Sampled	EPA Test Methods										
		8015 Modified			8020				8010			Other
		TPH-G	TPH-D	TPH-MD	Benzene	Ethylbenzene	Toluene	Total Xylenes	TCE	PCE	1,2-DCA	
µg/L			µg/L				µg/L			µg/L		
MW1	07/86	42,000	NA	NA	5,500	NA	4,900	6,100	NA	NA	NA	
	03/90	27,000	NA	NA	2,700	491	840	800	ND	NA	NA	
	07/90	27,000	11,000	ND	4,000	ND	1,500	4,400	ND	ND	ND	
	10/90	43,000	8,500	ND	3,400	1,200	2,700	5,300	0.4	ND	62	
	01/91	22,000	2,700	ND	3,000	990	1,800	2,800	ND	ND	28	
	04/91	42,000	3,100 *	NA	5,100	1,200	3,700	3,200	ND	ND	27	
	07/91	46,000	4,300 *	NA	6,500	830	2,900	3,700	ND	ND	120	
	10/91	27,000	4,300 *	NA	4,400	1,100	1,400	3,200	ND	ND	64	
	01/92	27,000	14,000 *	NA	3,300	1,200	1,600	3,800	ND	ND	25	
	04/92	33,000	11,000 *	NA	8,900	1,200	3,500	3,700	ND	ND	24	
	07/92	41,000	19,000 *	NA	5,600	1,300	2,600	4,000	ND	ND	120	
	10/92	33,000	3,500 *	NA	4,400	1,200	2,100	4,000	ND	ND	49	
MW3	11/89	29,000	NA	NA	4,600	680	1,100	1,100	ND	ND	36	Lead 40
	11/89	NA	NA	NA	NA	NA	NA	NA	ND	ND	36	Lead 40
	03/90	12,000	NA	NA	2,300	59	300	490	ND	ND	ND	
	07/90	7,300	990	ND	5,200	ND	440	480	ND	ND	67	
	10/90	6,200	970	ND	75	7.5	150	250	ND	ND	48	
	10/90	NA	NA	NA	NA	NA	NA	NA	ND	ND	22	Lead 3
	01/91	4,600	680	ND	2,200	220	110	89	ND	ND	40	
	04/91	8,300	640 *	NA	2,800	370	490	760	ND	ND	43	
	07/91	6,600	890 *	NA	2,000	250	230	380	ND	ND	29	
	10/91	6,300	1,700 *	NA	2,000	410	330	550	ND	ND	27	
	01/92	4,000	790 *	NA	1,200	250	60	200	ND	ND	22	
	04/92	7,400	1,800 *	NA	730	370	180	640	ND	ND	19	
	07/92	3,000	2,400 *	NA	180	ND	2.8	410	ND	ND	30	
	10/92	5,000	970 *	NA	1,300	320	.45	340	ND	ND	26	
	01/93	2,300	680 *	NA (2)	630	180	31	330	ND	ND	13	
06/93	5,000	1,100 *	ND	730	240	43	380	ND	ND	13		

ATTACHMENT 5

Table 2
Summary of Historical Groundwater Analytical Data
 Harbert Transportation/Meekland Avenue
 Hayward, California



Well	Date Sampled	EPA Test Methods										
		8016 Modified			8020				8010			Other
		TPH-G	TPH-D	TPH-MO	Benzene	Ethylbenzene	Toluene	Total Xylenes	TCE	PCE	1,2-DCA	
µg/L			µg/L				µg/L			µg/L		
MW4	11/89	ND	NA	NA	33	1.3	1	5.2	NA	NA	NA	Lead 12
	03/90	ND	NA	NA	7.4	2	2	1.1	ND	ND	ND	
	07/90	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.9	
	10/90	ND	ND	ND	ND	ND	ND	ND	0.7	ND	0.5	
	01/91	80	ND	ND	9.2	2.4	1.7	0.7	ND	ND	ND	
	04/91	1,400	130 ^a	NA	2,200	72	ND	17	ND	ND	ND	
	07/91	130	ND	NA	14	3.3	9.7	ND	ND	ND	0.81	
	10/91	ND	ND	NA	5.3	1	ND	0.8	ND	ND	ND	
	01/92	ND	ND	NA	6.8	1.3	ND	ND	ND	ND	ND	
	04/92	780	130 ^a	NA	ND	51	ND	4.8	ND	ND	ND	
	07/92	ND	ND	NA	ND	ND	ND	ND	ND	ND	1.6	
	10/92	100	ND	NA	9.5	ND	ND	2.6	ND	ND	1.3	
	01/93	960	240 ^a	NA	200	41	4.6	9.4	ND	ND	ND	
	06/93	850	140 ^a	ND	150	21	ND	ND	ND	ND	1	
MW5	10/90	9,600	1,900	ND	1,200	70	160	520	ND	ND	3.7	Lead 3
	01/91	10,000	1,200	ND	1,600	720	200	510	ND	ND	22	
	04/91	18,000	860 ^a	NA	2,500	550	580	500	ND	ND	33	
	07/91	15,000	2,200 ^a	NA	4,800	610	1,100	760	ND	ND	61	
	10/91	14,000	3,300 ^a	NA	5,000	530	820	800	ND	ND	62	
	01/92	12,000	1,900 ^a	NA	4,300	390	380	590	ND	ND	49	
	04/92	23,000	6,400 ^a	NA	8,600	ND	2,600	1,900	ND	ND	56	
	07/92	27,000	5,900 ^a	NA	6,000	ND	1,500	1,600	ND	ND	125	
	10/92	13,000	2,100 ^a	NA	4,600	140	470	550	ND	ND	93	
	01/93	18,000	1,900 ^a	NA	5,800	560	1,900	1,600	ND	ND	59	
	01/93	19,000	2,100 ^a	NA	4,600	370	1,600	1,400	ND	ND	110	
	06/93	22,000	2,900 ^a	ND	8,300	740	2,500	1,900	ND	ND	120	
	06/93	23,000	2,300 ^a	ND	9,600	730	3,000	1,900	ND	ND	110	

Table 2
Summary of Historical Groundwater Analytical Data
 Harbert Transportation/Meekland Avenue
 Hayward, California



Well	Date Sampled	EPA Test Methods										Other µg/L
		8016 Modified			8020				8010			
		TPH-G	TPH-D	TPH-MO	Benzene	Ethylbenzene	Toluene	Total Xylenes	TCE	PCE	1,2-DCA	
µg/L			µg/L				µg/L			µg/L		
MW6	10/90	27,000	4,700	ND	2,700	450	2,800	3,300	ND	ND	40	Lead 9
	01/91	7,200	1,600	ND	1,400	ND	200	830	ND	ND	23	
	04/91	17,000	800 ^a	NA	2,800	610	1,200	1,600	ND	ND	53	
	07/91	11,000	1,400 ^a	NA	1,200	ND	380	750	ND	ND	29	
	10/91	4,800	1,600 ^a	NA	380	69	340	730	ND	ND	22	
	01/92	6,100	1,200 ^a	NA	460	180	200	590	ND	ND	26	
	04/92	7,200	1,800 ^a	NA	340	350	460	920	ND	ND	30	
	07/92	8,600	1,700 ^a	NA	1,300	380	280	1,100	ND	ND	35	
	10/92	1,600	110 ^a	NA	230	70	20	88	ND	ND	24	
	01/93	13,000	2,100 ^a	NA	2,500	370	540	2,400	ND	ND	36	
06/93	7,400	1,800 ^a	ND	1,500	480	120	1,400	ND	ND	29		
MW7	10/90	14,000	2,700	ND	380	ND	18	1,200	ND	1.3	14	Lead 11
	01/91	4,500	1,400	ND	320	42	48	350	ND	ND	10	
	04/91	2,400	NA	NA	320	77	62	130	ND	0.6	11	
	07/91	2,000	910 ^a	NA	470	ND	24	88	ND	ND	9.7	
	10/91	ND	370 ^a	NA	ND	ND	ND	ND	ND	0.68	4.5	
	01/92	1,100	290 ^a	NA	230	45	7	88	ND	3.5	6.4	
	04/92	1,700	520 ^a	NA	310	78	28	170	ND	0.5	3.2	
	07/92	1,900	590 ^a	NA	410	78	21	170	ND	2.1	8.7	
	07/92 (dup)	1,200	700 ^a	NA	21	1	2.6	90	ND	2	8.2	
	10/92	1,800	320 ^a	NA	410	31	11	75	ND	1	7.4	
	01/93	2,100	660 ^a	NA	390	100	21	270	ND	0.6	3.7	
	08/93	4,400	1,100 ^a	ND	830	330	49	620	ND	ND	8.8	

Table 2
Summary of Historical Groundwater Analytical Data
 Harbert Transportation/Meekland Avenue
 Hayward, California



Well	Date Sampled	EPA Test Methods											
		6015 Modified			6020				6010			Other	
		TPH-G	TPH-D	TPH-MO	Benzene	Ethylbenzene	Toluene	Total Xylenes	TCE	PCE	1,2-DCA		
µg/L			µg/L				µg/L			µg/L			
MW8	02/91	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	
	04/91	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	
	07/91	ND	ND	NA	ND	ND	ND	ND	ND	0.5	ND	ND	
	10/91	ND	ND	NA	ND	ND	2	ND	ND	1.2	ND	ND	
	01/92	ND	ND	NA	ND	ND	0.6	ND	ND	0.4	ND	ND	
	04/92	ND	ND	NA	ND	ND	ND	ND	ND	0.88	ND	ND	
	07/92	ND	ND	NA	ND	ND	ND	ND	ND	0.8	ND	ND	
	10/92	ND	ND	NA	ND	ND	3.3	ND	ND	1.6	ND	ND	
	01/93	ND	ND	NA	ND	ND	ND	ND	ND	1.4	ND	ND	
	06/93	ND	ND	ND	ND	ND	ND	ND	ND	0.8	ND	ND	
					ND	ND	ND	ND	ND	1.4	ND	ND	
MW9	02/91	6,000	1,600	NA	180	19	170	200	ND	ND	13		
	04/91	4,200	410	NA	520	130	410	580	ND	ND	26		
	07/91	1,900	180	NA	190	12	52	77	ND	6.5	12		
	10/91	880	300	NA	160	31	44	83	ND	ND	10		
	01/92	380	120	NA	14	7.6	2.2	14	ND	ND	9.6		
	04/92	2,900	700	NA	510	80	260	260	ND	ND	11		
	07/92	4,400	1,300	NA	860	210	340	640	ND	ND	22		
	10/92	200	290	NA	6.8	1.4	2.1	7.8	ND	ND	12		
	01/93	8,500	740	NA	2,400	390	620	1,500	ND	ND	29		
	06/93	8,200	1,300	ND	2,400	380	480	1,500	ND	ND	29		
MW10	01/92	13,000	3,700	NA	130	580	110	3,000	ND	ND	33		
	05/92	15,000	5,000	NA	180	ND	18	2,700	ND	ND	20		
	05/92 (dup)	13,000	7,500	NA	240	490	65	2,500	ND	ND	22		
	07/92	8,100	4,400	NA	74	360	ND	1,100	ND	ND	29		
	10/92	3,200	1,500	NA	ND	ND	ND	320	ND	ND	25		
	01/93	7,500	2,200	NA	130	170	20	710	ND	ND	18		
	06/93	8,000	2,100	ND	69	7.9	ND	490	ND	ND	16		

Table 2
Summary of Historical Groundwater Analytical Data
 Harbert Transportation/Meekland Avenue
 Hayward, California



Well	Date Sampled	EPA Test Methods										
		8018 Modified			8020				8010			Other
		TPH-G	TPH-D	TPH-MO	Benzene	Ethylbenzene	Toluene	Total Xylenes	TCE	PCE	1,2-DCA	
µg/L			µg/L				µg/L			µg/L		
MW11	01/92	8,200	3,200 ^a	NA	23	250	ND	1,100	ND	ND	ND	
	04/92	160	1,200 ^a	NA	ND	ND	ND	ND	ND	ND	ND	
	07/92	2,100	710 ^a	NA	39	100	2.3	53	ND	ND	ND	
	10/92	660	220 ^a	NA	2.9	19	ND	3.8	ND	ND	ND	
	10/92	770	230 ^a	NA	3.2	26	ND	5.7	ND	ND	ND	
	01/93	780	370 ^a	NA	10	2.1	ND	39	ND	ND	ND	
	06/93	2,500	160 ^a	ND	27	99	ND	34	ND	ND	ND	
MW12	12/92	2,800	1,700 ^a	NA	14	ND	ND	ND	ND	ND	ND	
	06/93	1,100	750 ^a	ND	19	21	ND	57	ND	ND	ND	
B1	01/93	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	
	06/93	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
F3	02/93	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Well Abandoned	12/89	1,800	NA	NA	200	24	18	34	ND	ND	0.15	Lead 2,100
Average ^b		8,665	1,883	250	1,562	235	517	871	0.21	0.41	24.8	
Laboratory Detection Limit		50	50	500	0.5	0.5	0.5	0.5	0.4	0.4	0.4	

Notes:

a) The detection for petroleum hydrocarbons as diesel appears to be due to the presence of lighter hydrocarbons rather than diesel.

b) Average of sampled data, ND equals 1/2 detection limit.

µg/L - Micrograms per liter is approximately equivalent to parts per billion, depending on density of water.

NA - Not analyzed.

ND - Not detected.

TPH-G - Total petroleum hydrocarbons quantified as gasoline.

TPH-D - Total petroleum hydrocarbons quantified as diesel.

TPH-MO - Total petroleum hydrocarbons quantified as motor oil.

TCE - Trichloroethylene.

PCE - Tetrachloroethylene.

1,2-DCA - 1,2-Dichloroethane.

Table 2
Summary of Groundwater Chemical Analyses
Harbert Transportation/Mackland Avenue
Hayward, California

Well	Date Sampled	EPA Test Methods								
		8015 M		BETX 5030/8020				8010		
		TPH Gasoline	TPH Diesel	Benzene	Ethylbenzene	Toluene	Xylenes	1,2-DCA	PCE	TCE
		µg/L	µg/L	µg/L				µg/L	µg/L	µg/L
MW3	07/28/94	7,700	970 ^a	1,800	810	ND	600	22	ND	ND
	10/21/94	7,400	810	1,900	900	37	780	25	ND	ND
	09/15/95	NS	NS	NS	NS	NS	NS	NS	NS	NS
	03/14/96	NS	NS	NS	NS	NS	NS	NS	NS	NS
	09/26/96	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW4	07/28/94	120	ND	7.9	0.7	1.1	ND	ND	ND	ND
	10/21/94	69	ND	3.4	ND	ND	ND	ND	ND	ND
	09/15/95	110	ND	2.5	ND	0.85	ND	2.3	ND	ND
	03/14/96	300	69 ^b	3.3	0.74	ND	ND	1.6	ND	ND
	09/26/96	ND	ND	ND	ND	ND	ND	1.2	ND	ND
MW5	07/29/94	30,000	2,200 ^a	9,300	1,100	1,800	2,300	110	ND	ND
	10/21/94	23,000	1,500	7,900	780	1,500	2,900	85	ND	ND
	09/15/95	NS	NS	NS	NS	NS	NS	NS	NS	NS
	03/14/96	NS	NS	NS	NS	NS	NS	NS	NS	NS
	09/26/96	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW6	07/29/94	15,000	2,100 ^b	3,100	1,100	71	2,000	37	ND	ND
	10/21/94	18,000	1,600	3,900	1,200	170	3,200	35	ND	ND
	09/15/95	NS	NS	NS	NS	NS	NS	NS	NS	NS
	03/14/96	NS	NS	NS	NS	NS	NS	NS	NS	NS
	09/26/96	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW7	07/29/94	2,600	530 ^c	470	220	ND	310	2.7	6	ND
	10/21/94	1,700	280	280	140	4.5	240	1.8	0.74	ND
	09/15/95	NS	NS	NS	NS	NS	NS	NS	NS	NS
	03/14/96	NS	NS	NS	NS	NS	NS	NS	NS	NS
	09/26/96	NS	NS	NS	NS	NS	NS	NS	NS	NS

Table 2
Summary of Groundwater Chemical Analyses
 Harbert Transportation/Meehland Avenue
 Hayward, California

Well	Date Sampled	EPA Test Methods								
		8015 M		8015/8020				8010		
		TPH Gasoline µg/L	TPH Diesel µg/L	Benzene	Ethylbenzene	Toluene	Xylenes	1,2-DCA µg/L	PCE µg/L	TCE µg/L
MW8	07/28/94	ND	78 ^a	ND	ND	ND	ND	ND	ND	ND
	10/21/94	ND	ND	ND	ND	ND	ND	ND	0.72	ND
	09/15/95	ND	ND	ND	ND	ND	ND	ND	0.74	ND
	03/14/96	ND	ND	ND	ND	ND	ND	ND	0.63	ND
	09/26/96	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW9	07/28/94	6,000	1,300 ^c	90	170	27	370	26	ND	ND
	10/21/94	6,900	600	1,800	280	220	1,500	31	ND	ND
	09/15/95	NS	NS	NS	NS	NS	NS	NS	NS	NS
	03/14/96	NS	NS	NS	NS	NS	NS	NS	NS	NS
	09/26/96	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW10	07/28/94	6,700	2,000 ^c	99	180	57	430	13	ND	ND
	10/21/94	8,600	2,000	93	200	ND	680	12	ND	ND
	09/15/95	2,100	1,900	9.9	49	ND	4.9	ND	ND	ND
	03/14/96	6,800	2,000 ^b	64	98	ND	33	6.5	ND	ND
	09/26/96	7,100	420	140	210	ND	32	9.1	ND	5.9
MW11	07/28/94	450	150 ^a	6.2	20	1.1	6.6	ND	ND	ND
	10/21/94	460	190	4.9	14	ND	12	ND	ND	ND
	09/15/95	9,600	550	130	180	ND	130	8.8	ND	5.6
	03/15/96	780	310 ^b	0.74	25	ND	1.8	ND	ND	ND
	09/26/96	480	710	ND	50	ND	ND	ND	ND	ND

Table 2
Summary of Groundwater Chemical Analyses
 Harbert Transportation/Meeekland Avenue
 Hayward, California

Well	Date Sampled	EPA Test Methods								
		8015 M		BETX 5030/5020				8010		
		TPH Gasoline µg/L	TPH Diesel µg/L	Benzene	Ethylbenzene	Toluene	Xylenes	1,2-DCA µg/L	PCE µg/L	TCE µg/L
MW12	07/28/94	240	160	1.9	12	ND	5.8	ND	ND	ND
	10/21/94	260	190	1.9	4.5	ND	6.8	ND	ND	ND
	09/15/95	NS	NS	NS	NS	NS	NS	NS	NS	NS
	03/14/96	NS	NS	NS	NS	NS	NS	NS	NS	NS
	09/28/96	NS	NS	NS	NS	NS	NS	NS	NS	NS
Method Detection Limit		50	50	0.5	0.5	0.5	0.5	0.5	0.5	0.5

Notes:

- a) Hydrocarbons quantified as diesel are primarily due to discrete peaks not indicative of diesel fuel.
- b) Hydrocarbons quantified as diesel are primarily due to the presence of a lighter petroleum product (C₆-C₁₂), possibly gasoline.
- c) Hydrocarbons quantified as diesel are due to the presence of a lighter petroleum product (C₆-C₁₂) and discrete peaks not indicative of diesel fuel.

1,2-DCE - 1,2-dichloroethane.

PCE - Tetrachloroethene.

TCE - Trichloroethene.

ND - Not detected at or above method detection limit.

NS - Not sampled.

TPH-Gasoline - Total petroleum hydrocarbons quantified as gasoline.

TPH-Diesel - Total petroleum hydrocarbons quantified as diesel.

µg/L - Micrograms per liter, equivalent to parts per billion.

Table 3
Summary of Historical Soil Analytical Data
 Harbert Transportation/Meekland Avenue
 Hayward, California



Sample Number	Date Sampled	Depth (ft)	EPA Test Method									
			8015 Modified			8020				8010		
			TPH-G	TPH-O	TPH-MO	Benzene	thylbenzene	Toluene	Total Xylenes	TCE	PCE	1,2-DCA
			mg/kg			mg/kg				mg/kg		
B-1	06/30/86	20.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B-2	06/30/86	20.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW1	06/30/86	20.0	240 ^d	NA	NA	NA	NA	NA	NA	NA	NA	NA
T1-E	08/11/89	13.0	2.208	NA	NA	ND	33	59	180	NA	NA	NA
T1-W	08/11/89	11.0	5.203	NA	NA	12	67	83	420	NA	NA	NA
T2-E	08/11/89	13.0	6.178	NA	NA	ND	56	68	360	NA	NA	NA
T2-W	08/11/89	13.0	0.0124	NA	NA	ND	ND	ND	ND	NA	NA	NA
T3-E	08/11/89	13.0	2.857	NA	NA	1.9	36 ^o	17	220 ^c	NA	NA	NA
T3-W	08/11/89	13.0	ND	NA	NA	ND	0.013	0.026	0.11	NA	NA	NA
T4	08/11/89	7.5	ND	ND	NA	ND	0.012	0.03	0.14	NA	NA	NA
B-3	11/28/89	20.5	ND	NA	NA	0.13	ND	0.022	ND	0.2	ND	ND
B-3	11/28/89	25.5	52	NA	NA	0.44	0.2	0.48	0.93	ND	ND	ND
B-3	11/28/89	30.5	23	NA	NA	0.54	0.21	0.188	0.4	ND	ND	ND
B-4	11/28/89	15.5	ND	NA	NA	0.02	0.013	0.019	ND	NA	NA	NA
B-4	11/28/89	20.5	ND	NA	NA	0.075	0.026	0.02	0.015	NA	NA	NA
B-4	11/28/89	35.5	ND	NA	NA	ND	ND	0.013	ND	NA	NA	NA
MW3	11/28/89	20.5	NA	NA	NA	0.13	ND	0.022	ND	0.2	ND	ND
MW3	11/28/89	25.5	52	NA	NA	0.44	0.2	0.48	0.93	NA	NA	NA
MW3	11/28/89	30.5	23	NA	NA	0.54	0.21	0.188	0.4	NA	NA	NA
MW4	11/28/89	15.5	NA	NA	NA	0.02	0.013	0.019	NA	NA	NA	NA
MW4	11/28/89	20.5	NA	NA	NA	0.075	0.026	0.02	0.015	NA	NA	NA
ABW-12-12	12/12/89	12.0	1.8	NA	NA	0.2	0.024	0.018	0.034	NA	NA	NA
Test Pit #10	06/20/90	7.5	NA	NA	NA	ND	ND	0.005	NA	NA	NA	NA
Test Pit #11	06/20/90	7.5	NA	NA	NA	ND	ND	0.034	NA	NA	NA	NA
Test Pit #7	06/20/90	9.0	NA	NA	16	ND	ND	NA	NA	NA	NA	NA
Test Pit #8	06/20/90	2.5	NA	NA	20	ND	ND	0.069	NA	NA	NA	NA
Test Pit #8	06/20/90	8.0						0.017	NA	NA	NA	NA
Test Pit #9	06/20/90	7.0	NA	NA	NA	ND	ND	0.024	NA	NA	NA	NA

Table 3
Summary of Historical Soil Analytical Data
 Harbert Transportation/Meekland Avenue
 Hayward, California



Sample Number	Date Sampled	Depth (ft)	EPA Test Method									
			8015 Modified			8020				8010		
			TPH-G	TPH-D	TPH-MO	Benzene	ethylbenzene	Toluene	Total Xylenes	TCE	PCE	1,2-DCA
			mg/kg			mg/kg				mg/kg		
MW6	08/30/90	20.5	ND	ND	ND	0.046	ND	ND	ND	ND	ND	ND
MW6	08/30/90	30.5	23	5.3	ND	0.07	0.06	0.096	0.059	ND	ND	0.0057
MW6	08/30/90	45.5	1.2	ND	ND	0.02	0.015	0.035	0.056	ND	ND	ND
MW5	08/31/90	5.5	ND	ND	ND	ND	ND	0.0039	ND	ND	ND	ND
MW5	08/31/90	10.5	ND	ND	ND	0.037	0.0035	0.016	0.019	ND	ND	0.0024
MW5	08/31/90	20.5	560	6.4	ND	9.6	7.4	22	45	ND	ND	0.061
MW5	08/31/90	45.5	ND	ND	ND	0.014	0.0073	0.021	0.034	ND	ND	ND
TP1	09/04/90	8.5	NA	ND	ND	NA	NA	NA	NA	NA	NA	NA
TP2	09/04/90	9.0	NA	ND	ND	NA	NA	NA	NA	NA	NA	NA
TP3	09/04/90	9.0	NA	ND	16	NA	NA	NA	NA	NA	NA	NA
TP4	09/04/90	2.5	ND	ND	20	ND	ND	0.069	ND	ND	ND	ND
TP4	09/04/90	8.0	ND	ND	ND	ND	ND	0.017	ND	ND	ND	ND
TP5	09/04/90	7.0	ND	ND	ND	ND	ND	0.024	ND	NA	NA	NA
TP6	09/04/90	7.5	ND	ND	ND	ND	ND	0.005	ND	ND	ND	ND
TP8	09/04/90	7.5	ND	ND	ND	ND	ND	0.034	NA	ND	ND	ND
B1	10/01/90	5.5	ND	ND	13 ^b	ND	ND	0.036	ND	ND	ND	ND
B1	10/01/90	15.5	ND	ND	ND	0.04	0.0058	0.034	0.025	ND	ND	0.014
B1	10/01/90	25.5	150	3.7	ND	1.2	2.1	2.4	8.4	ND	ND	0.041
MW7	10/01/90	15.5	ND	ND	ND	ND	ND	0.015	ND	ND	ND	ND
MW7	10/01/90	25.5	ND	ND	ND	0.043	0.0034	0.0044	0.01	ND	ND	ND
MW7	10/01/90	35.5	ND	ND	ND	ND	ND	0.027	0.0057	ND	ND	ND
MW7	10/01/90	45.5	1.1	ND	ND	0.0071	0.012	0.036	0.056	ND	ND	ND
MW7	10/01/90	Auger	120	23	ND	0.31	1.7	1.4	6.9	ND	ND	0.0059
MW8	02/13/91	25.0	NA	NA	NA	ND	ND	0.0033	ND	NA	NA	NA
MW8	02/13/91	35.0	NA	NA	NA	ND	ND	0.028	ND	NA	NA	NA
MW9	02/13/91	20.0	2.2	NA	NA	0.15	0.029	0.066	0.067	ND	ND	0.0079
MW9	02/13/91	30.0	39	6	NA	0.18	0.23	0.34	1	NA	ND	0.011
MW9	02/13/91	40.0				ND	ND	0.011	ND	NA	NA	NA

Table 3
Summary of Historical Soil Analytical Data
 Harbert Transportation/Meekland Avenue
 Hayward, California

Sample Number	Date Sampled	Depth (ft)	EPA Test Method									
			8016 Modified			8020				8010		
			TPH-G	TPH-D	TPH-MO	Benzene	ethylbenzene	Toluene	Total Xylenes	TCE	PCE	1,2-DCA
			mg/kg			mg/kg				mg/kg		
MW10	01/21/92	21.0	ND	ND	NA	0.0044	0.0036	0.014	0.018	ND	ND	ND
MW10	01/21/92	26.0	52	11 ^b	NA	ND	0.33	ND	1.5	ND	ND	ND
MW10	01/21/92	31.0	ND	ND	NA	ND	ND	0.0025	0.0034	ND	ND	ND
MW11	01/24/92	21.0	ND	ND	NA	0.0043	ND	0.008	ND	ND	ND	ND
MW11	01/24/92	30.0	ND	ND	NA	ND	0.0039	0.0041	ND	ND	ND	ND
MW11	01/24/92	35.0	ND	ND	NA	ND	ND	0.0045	ND	ND	ND	ND
MW-12-20-4	12/14/92	20.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
F-1	02/05/93	8.0	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
F-3 ^e	02/05/93	8.0	2,000	1,300 ^a	ND	ND	2.5	1.6	120	ND	ND	ND
F-6	02/05/93	12.0	3,800	1,300 ^a	ND	ND	ND	ND	20	NA	NA	NA
F-8	02/05/93	12.0	1.1	110 ^a	67	ND	ND	ND	ND	NA	NA	NA
MW-12-30-6		30.0	29	11 ^a	ND	0.078	0.1	ND	0.16	ND	ND	ND
MW-12-40-8		40.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average ^f			138.5	73.4	8.8	0.46	3.35	4.15	25.2	0.013	0.001	0.005
Detection Limit			1.0	1.0	10	0.0025	0.0025	0.0025	0.0025	0.002	0.002	0.002

Notes:

- a) The positive result for petroleum hydrocarbons quantified as Diesel appears to be due to the presence of lighter hydrocarbons rather than diesel.
- b) The positive result for the motor oil analysis on this sample appears to be a lighter hydrocarbon than diesel.
- c) Xylenes and ethylbenzene are over range.
- d) Reported as total hydrocarbons by EPA Method 8020.
- e) Lead = 52 mg/kg.
- f) Average of concentrations, ND equal to 1/2 detection limit.

NA - Not analyzed.

ND - Not detected at indicated detection limit.

TPH-G - Total petroleum hydrocarbons quantified as gasoline.

TPH-D - Total petroleum hydrocarbons quantified as diesel.

TPH-MO - Total petroleum hydrocarbons quantified as motor oil.

TCE - Trichloroethylene.

PCE - Tetrachloroethylene.

1,2-DCA - 1,2-Dichloroethane.

1,1-DCA - 1,1-Dichloroethane.

Table 3
Summary of Soil Sample Analytical Results
 former Harbert Transportation Facility, 19784 Meekland Avenue, Hayward, CA
 All soil analysis results in parts per million (mg/kg)

Investigation & Date	Sample ID	Sample Depth (feet bgs)	TPH-g	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	
Soil Sampling Additional Site Assessment (February 14, 2001)			100	0.045	2.6	2.5	1.0	NA	
	DP-1a	2	ND	ND	0.010	ND	0.025	ND	
	f	23	ND	ND	ND	ND	ND	ND	
	g @ 24'	24	ND	ND	ND	ND	0.007	ND	
	g@27'	27	ND	ND	ND	0.007	0.015	ND	
	DP-2a	2	ND	ND	0.019	0.020	0.13	ND	
	d	13.5	1,800	< 0.5	4.5	19	270	ND*	
	e	18.5	8,700	18	720	230	1,600	< 0.5*	
	g	24	1,800	3.5	52	39.0	250	ND*	
	DP-3a	2	ND	ND	0.017	0.006	0.054	ND	
	b	7.5	ND	ND	0.063	0.020	0.12	ND	
	e	18.5	ND	ND	ND	ND	ND	ND	
	g	27.5	18	0.036	0.067	0.070	0.060	ND*	
	DP-4a	2	ND	ND	0.014	0.008	0.058	ND	
	e	19.5	ND	ND	ND	ND	ND	ND	
	g @ 25'	25	ND	ND	ND	ND	ND	ND	
	g @ 27'	27	ND	ND	ND	ND	ND	ND	
	DP-5a	2	ND	ND	ND	ND	ND	ND	
	d	12	ND	ND	ND	ND	ND	ND	
	f	20	ND	ND	ND	ND	ND	ND	
	g	24	ND	ND	ND	ND	ND	ND	
	DP-6a	2	ND	ND	ND	ND	ND	ND	
	d	14	ND	ND	ND	ND	ND	ND	
	e	18	ND	ND	ND	ND	ND	ND	
	g	24	ND	ND	ND	0.009	ND	ND	
	DP-7a	2	ND	ND	ND	ND	ND	ND	
	d	14	ND	ND	ND	ND	ND	ND	
	e	18	ND	ND	ND	ND	ND	ND	
	g	24	ND	ND	ND	ND	ND	ND	
	DP-8a	2	ND	ND	ND	ND	ND	ND	
	d	13	ND	ND	ND	ND	ND	ND	
	e	18	ND	ND	ND	ND	ND	ND	
	g	24	ND	ND	ND	ND	ND	ND	
	DP-9a	2	ND	ND	ND	ND	ND	ND	
	d	13	ND	ND	ND	ND	ND	ND	
	e	18	ND	ND	ND	ND	ND	ND	
	g	24	18	0.020	0.020	0.19	0.30	ND*	
	<i>Laboratory's Practical Quantitation Limits:</i>			1	0.005	0.005	0.005	0.005	0.05

NOTES:

Proposed Cleanup Levels: RBLS for Surface and Subsurface Soils from Application of Risk Based Screening Levels and Decision Making to Sites with Impacted Soil and Groundwater, SFBay RWQCB, December 2001

TPH-g: Total Petroleum Hydrocarbons as gasoline

BTEX: B: Benzene, T: Toluene, E: Ethylbenzene; and X: Total Xylenes.

MTBE: Methyl-tert-Butyl Ether.

bg: below ground surface

ND: Not detected at or above the lab's practical quantitation limit.

<X: Not detected at the elevated PQL, X: PQL elevated due to laboratory dilution.

*: MTBE Analysis confirmed by EPA Method 8260.

Table 3
Summary of Soil Sample Analytical Results
 Former Harbert Transportation Facility, 19984 Meekland Avenue, Hayward, CA
 All soil analysis results in parts per million (mg/kg)

<i>Investigation & Date</i>	<i>Sample ID</i>	<i>Sample Depth (feet, bgs)</i>	<i>TPH-g</i>	<i>Benzene</i>	<i>Toluene</i>	<i>Ethylbenzene</i>	<i>Xylenes</i>	<i>MTBE</i>
Proposed Remedial Action			100	0.045	2.6	2.5		NA
Interim Remedial Action Large Diameter Auger Drilling & Source Removal (January 7, 8, 9, 10, 2002)	Soil Reuse #1a,b,c,d	4-point composite (0-10')	ND	ND	ND	ND	ND	ND
	Soil Reuse #2a,b,c,d	4-point composite (0-20')	ND	ND	ND	ND	ND	ND
	Soil Reuse #3a,b,c,d	4-point composite (0-20')	ND	ND	ND	ND	ND	ND
	LD#1 SW-E	35'	ND	ND	ND	0.005	0.011	ND
	LD#2 SW-W	35'	ND	ND	ND	ND	ND	ND
	LD#3 BC-N	40'	ND	ND	ND	ND	ND	ND
	LD#4 SW-N	40'	1.2	ND	0.012	0.005	0.006	ND
	LD#5 SW-N	40'	ND	ND	ND	ND	ND	ND
	LD#8 SW-S	40'	ND	ND	ND	ND	ND	ND
	LD#9 SW-E	40'	ND	ND	ND	ND	ND	ND
	LD#10 SW-E	40'	ND	ND	ND	ND	ND	ND
	LD#11 SW-W	40'	ND	ND	0.014	0.013	0.062	ND
	LD#12 SW-E	18'	ND	ND	ND	ND	ND	ND
	LD#13 SW-E	18'	ND	ND	ND	ND	ND	ND
	LD#13 SW-E	40'	ND	ND	0.006	ND	0.022	ND
	LD#14 SW-W	40'	ND	ND	ND	ND	ND	ND
	LD#15 BC-S	40'	ND	ND	ND	ND	ND	ND
LD#16 SW-W	18'	ND	ND	ND	ND	ND	ND	
LD#16 SW-W	40'	34	0.041	ND	0.12	0.62	ND	
Landfill Acceptance Borings (October 18, 2001)	DP-1c,d,e,f	4-point composite (15-30')	ND	ND	ND	ND	ND	ND
	DP-2c,d,e,f	4-point composite (15-30')	130	ND	0.13	0.37	1.2	ND

Table 1
 Summary of Groundwater Elevation and PHC Analytical Data
 Former Harbert Transportation Facility, 19984 Meekland Avenue, Hayward, Ca.

Monitoring Point Information			Date Sampled	Depth to Groundwater (feet, TOC)	Groundwater Elevation (feet, NGVD)	Laboratory Analytical Results										Field Measurements						
Well I.D.	TOC Elevation (feet, NGVD)	Screen Interval (feet, bgs)				Total Petroleum Hydrocarbons		Volatile Organic Compounds							Lead Scavengers		Dissolved Oxygen (mg/L)	Redox Potential (ORP) (mV)				
						Gasoline (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE (ug/L)	TBA (ug/L)	Ethanol (ug/L)	Fuel Oxygenates (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)						
MW-3	55.44	20 - 40?	03/23/05	20.16	35.28	540	ND	ND	2.0	ND	ND	ND	ND	ND	ND	ND	ND	0.30	153			
			09/23/04	24.26	31.18	160	ND	ND	2.9	ND	ND	ND	ND	ND	ND	ND	ND	0.39	112			
			06/24/03	22.53	32.91	260	ND	ND	5.6	2.8	ND*	ND	ND	ND	ND	ND	ND	0.16	-2			
			03/21/03	22.41	33.03	460	3.3	1.4	5.6	< 2.5	ND*	ND	ND	ND	ND	ND	ND	0.15	-34			
			12/30/02	21.32	34.12	70	ND	ND	2.1	< 1	ND*	ND	ND	ND	ND	ND	ND	0.14	536			
			08/27/02	23.87	31.57	350	0.56	1.1	14	3.4	ND	ND	ND	ND	ND	ND	ND	0.13	216			
			06/13/02	22.92	32.52	300	1.1	1.4	4	1.8	ND	ND	ND	ND	ND	ND	ND	0.14	194			
			03/21/02	21.96	33.48	240	0.94	2.5	12	11.7	ND	ND	ND	ND	ND	ND	ND	0.1	--			
			12/18/01	23.59	31.85	270	1.6	1.7	13	5.4	ND	ND	ND	ND	ND	ND	ND	--	--			
			09/20/01	24.16	31.28	380	1.7	2.6	32	8.9	ND	ND	ND	ND	ND	ND	ND	0.4	--			
			06/20/01	23.55	31.89	760	4.4	2.4	62	23	ND*	ND	ND	ND	ND	ND	ND	--	--			
			03/29/01	22.02	33.42	170	1.1	ND	10	1.6	ND	ND	ND	ND	ND	ND	ND	0.6	--			
			01/12/01	23.41	32.03	310	2.4	2.2	4.4	10	ND	ND	ND	ND	ND	ND	ND	0.7	--			
			09/27/00	23.09	32.35	430	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	--			
			MW-4	55.71	20 - 40?	03/23/05	20.45	35.25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.14	341
						09/23/04	24.47	31.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.01	287
						06/24/03	22.74	32.97	--	--	--	--	--	--	--	--	--	--	--	--	1.01	32
03/21/03	22.49	33.22				--	--	--	--	--	--	--	--	--	--	--	--	1.03	18			
12/30/02	21.50	34.21				ND	ND	ND	ND	< 1	ND	ND	ND	ND	ND	ND	ND	0.41	358			
08/27/02	24.07	31.64				--	--	--	--	--	--	--	--	--	--	--	--	0.21	167			
06/13/02	23.15	32.56				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.20	392			
03/21/02	22.15	33.56				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.2	--			
12/18/01	23.80	31.81				ND	ND	0.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--			
09/20/01	24.32	31.39				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.4	--			
06/20/01	23.74	31.97				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--			
03/29/01	22.22	33.49				ND	ND	4.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.5	--			
01/12/01	23.50	32.11				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.7	--			
09/27/00	23.25	32.46				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.5	--			
MW-5	56.03	25 - 45				03/23/05	20.14	35.89	120	3.5	0.67	4.5	9.3	ND	ND	ND	ND	ND	ND	0.38	196	
						09/23/04	24.79	31.24	7,000	470	86	1,000	2,200	< 5	< 200	< 2,000	< 100	< 10	< 10	0.20	64	
						06/24/03	23.06	32.95	3,800	100	58	310	670	< 1.5*	--	--	--	--	--	0.05	-67	
			03/21/03	22.99	33.04	4,800	190	82	370	700	< 5*	--	--	--	--	--	0.07	-72				
			12/30/02	21.88	34.15	130	5.8	1.0	9.8	5.9	ND*	ND	ND	ND	ND	ND	ND	0.14	251			
			08/27/02	24.42	31.61	1,900	170	14	210	93	ND*	ND	ND	ND	ND	ND	ND	0.43	207			
			06/13/02	23.57	32.46	1,500	24	16	120	110	ND*	ND	ND	ND	ND	ND	ND	0.06	144			
			03/21/02	24.69	31.34	360	11	9.4	26	62	ND	ND	ND	ND	ND	ND	ND	0.1	--			
			12/18/01	23.15	32.88	780	21	12	88	94	ND*	ND	ND	ND	ND	ND	ND	--	--			
			09/20/01	24.75	31.28	2,300	46	41	280	330	ND*	ND	ND	ND	ND	ND	ND	0.3	--			
			06/20/01	24.15	31.88	6,500	120	130	740	940	ND*	ND	ND	ND	ND	ND	ND	--	--			
			03/29/01	22.69	33.34	13,000	220	510	1000	2700	ND*	ND	ND	ND	ND	ND	ND	0.4	--			
			01/12/01	23.97	32.06	1,100	62	40	150	290	ND*	ND	ND	ND	ND	ND	ND	0.3	--			
			09/27/00	23.69	32.34	16,000	840	2.9	1200	3500	< 30	--	--	--	ND	--	--	0.4	--			
			MW-6	56.01	25 - 45	03/23/05	20.71	35.30	160	ND	ND	1.6	ND	ND	ND	ND	ND	ND	ND	0.19	166	
						09/23/04	24.81	31.20	4,400	< 2.5	< 2.5	350	79	< 1.5	< 50	< 500	< 25	< 2.5	< 2.5	0.16	34	
						06/24/03	23.06	32.95	1,500	< 5	< 5	35	15	< 0.6*	--	--	--	--	--	0.09	-23	
03/21/03	22.95	33.05				1,200	5.3	< 5	54	< 10	ND*	ND	ND	ND	ND	ND	ND	0.09	-45			
12/30/02	21.91	34.10				670	2.5	< 1.25	29	2.7	ND*	ND	ND	ND	ND	ND	ND	0.15	321			
08/27/02	24.44	31.67				1,300	< 2.5	4.7	67	55	ND*	ND	ND	ND	ND	ND	ND	0.14	231			
06/13/02	23.53	32.48				1,600	< 1.25	4.7	67	53	< 1.5*	ND	ND	ND	ND	ND	ND	0.53	233			
03/21/02	23.11	32.90				750	0.77	1.2	39	3.2	ND*	ND	ND	ND	ND	ND	ND	0.1	--			
12/18/01	24.16	31.85				3,700	33	8.7	320	110	< 1.5*	ND	ND	ND	ND	ND	ND	--	--			
09/20/01	24.72	31.29				2,500	11	8.6	240	94	ND*	ND	ND	ND	ND	ND	ND	0.3	--			
06/20/01	24.13	31.88				1,800	14	4.6	160	79	ND*	ND	ND	ND	ND	ND	ND	--	--			
03/29/01	22.56	33.45				610	2.2	ND	37	4.6	ND*	ND	ND	ND	ND	ND	ND	0.5	--			
01/12/01	23.97	32.04				2,300	16	3.5	290	83	ND*	ND	ND	ND	ND	ND	ND	0.5	--			
09/27/00	23.56	32.45				1,300	ND	4.3	200	17	ND	ND	ND	ND	ND	ND	ND	0.5	--			
Practical Quantitation Limit:						* 25 / 50	0.5	0.5	0.5	1	1	10	100	5	0.5	0.5	--	--				
Maximum Contaminant Levels (MCLs) / Action Levels (ALs)						1,000	1	150	700	1,750	---	---	---	---	---	0.5	0.5	--	--			
RWQCB-SFBR Final ESLs (basis):						100 (T&O)	1 (DWT)	40 (T&O)	30 (T&O)	13 (AHG)	5 (T&O)	---	---	---	---	---	---	---				
Proposed Cleanup Levels (10 times the ESLs):						1,000	10	400	300	130	50	---	---	---	---	---	---	---				

Table 1

Summary of Groundwater Elevation and PHC Analytical Data
Former Harbert Transportation Facility, 19984 Meekland Avenue, Hayward, Ca.

Monitoring Point Information			Date Sampled	Depth to Groundwater (feet, TOC)	Groundwater Elevation (feet, NGVD)	Laboratory Analytical Results											Field Measurements					
Well I.D.	TOC Elevation (feet, NGVD)	Screen Interval (feet, bgs)				Total Petroleum Hydrocarbons		Volatile Organic Compounds								Lead Scavengers		Dissolved Oxygen (mg/L)	Redox Potential (ORP) (mV)			
						Gasoline (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE (ug/L)	TBA (ug/L)	Ethanol (ug/L)	Fuel Oxygenates (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)						
MW-7	56.66	25 - 45	03/23/05	21.23	35.43	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.16	279				
			09/23/04	25.38	31.28	ND	ND	ND	0.73	ND	ND	ND	ND	ND	ND	ND	ND	0.90	301			
			06/24/03	23.62	33.04	--	--	--	--	--	--	--	--	--	--	--	--	0.58	32			
			03/21/03	23.50	33.16	--	--	--	--	--	--	--	--	--	--	--	--	0.51	20			
			12/30/02	22.34	34.32	ND	ND	ND	ND	< 1	ND*	--	--	--	--	--	--	0.17	370			
			08/27/02	24.96	31.68	--	--	--	--	--	--	--	--	--	--	--	--	0.22	368			
			06/13/02	24.07	32.59	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.26	370			
			03/21/02	23.05	33.61	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0	--			
			12/18/01	24.70	31.96	290	ND	ND	119	4.6	ND	ND	ND	ND	ND	ND	ND	--	--			
			09/20/01	25.27	31.39	290	0.98	ND	12	4.5	ND*	--	--	--	--	--	--	0.4	--			
			06/20/01	24.68	31.98	430	2.4	0.96	36	9.7	ND*	--	--	--	--	--	--	--	--			
			03/29/01	23.10	33.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.5	--			
			01/12/01	24.49	32.17	1,600	13	0.86	150	35	ND*	--	--	--	--	--	--	0.5	--			
			09/27/00	24.18	32.48	270	13	6.6	11	ND	ND	--	--	--	--	--	--	0.5	--			
			MW-8	56.16	20 - 40	03/23/05	20.70	35.46	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.76	339	
						09/23/04	24.81	31.35	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.92	301
						06/24/03	23.03	33.13	--	--	--	--	--	--	--	--	--	--	--	--	1.71	12
03/21/03	22.91	33.25				--	--	--	--	--	--	--	--	--	--	--	--	1.62	15			
12/30/02	21.79	34.37				ND	ND	ND	ND	< 1	ND*	--	--	--	--	--	--	1.36	365			
08/27/02	24.43	31.73				--	--	--	--	--	--	--	--	--	--	--	--	1.98	402			
06/13/02	23.54	32.62				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.96	394			
03/21/02	22.61	33.85				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.4	--			
12/18/01	24.16	32.90				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--			
09/20/01	24.68	31.48				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.6	--			
06/20/01	24.09	32.07				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--			
03/29/01	22.56	33.60				ND	ND	0.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.9	--			
01/12/01	23.93	32.23				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.1	--			
09/27/00	23.59	32.57				ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	1.9	--			
MW-9	55.21	20 - 40				03/23/05	19.98	35.23	1,100	< 1	< 1	48	31	< 6	< 20	< 200	< 10	--	--	0.21	237	
						09/23/04	24.00	31.21	1,900	< 2.5	< 2.5	230	180	< 1.5	< 50	< 500	< 25	< 2.5	< 2.5	--	0.26	190
						06/24/03	22.30	32.91	2,900	25	9.1	230	270	< 1.5*	--	--	--	--	--	--	0.08	-66
			03/21/03	22.17	33.04	5,900	190	24	470	630	< 5*	--	--	--	--	--	--	0.10	-84			
			12/30/02	21.09	34.12	2,800	140	26	200	370	ND*	--	--	--	--	--	--	0.15	276			
			08/27/02	23.69	31.62	310	27	2.5	20	20	ND*	--	--	--	--	--	--	0.18	154			
			06/13/02	22.76	32.45	5,100	140	21	490	300	< 1.5*	--	--	--	--	--	--	0.14	135			
			03/21/02	21.76	33.45	510	26	4.6	50	62	ND	--	--	--	--	--	--	0.1	--			
			12/18/01	23.38	31.83	6,400	340	120	630	1,000	< 1.5*	--	--	--	--	--	--	--	--			
			09/20/01	23.04	31.27	3,400	270	38	360	430	ND*	--	--	--	--	--	--	--	0.3	--		
			06/20/01	23.26	31.85	8,300	330	88	850	1,700	< 0.8*	--	--	--	--	--	--	--	--			
			03/29/01	21.61	33.60	1,800	110	14	240	150	ND*	--	--	--	--	--	--	--	0.4	--		
			01/12/01	23.17	32.04	10,000	550	110	3,200	2,200	ND*	--	--	--	--	--	--	--	0.5	--		
			09/27/00	22.90	32.31	1,000	40	6.7	110	55	ND	--	--	--	--	--	--	--	0.5	--		
			MW-10	54.74	26 - 40	03/23/05	19.87	35.07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.23	167	
						09/23/04	23.81	30.93	600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.63	160
						06/24/03	22.21	32.53	750	< 2.6	< 2.5	< 2.6	< 6	< 1.5*	--	--	--	--	--	--	0.09	-22
03/21/03	22.00	32.74				700	3.4	1.4	0.71	1	ND*	--	--	--	--	--	--	0.06	-62			
12/30/02	20.78	33.96				1,200	5.6	< 5	< 6	< 10	ND*	--	--	--	--	--	--	0.18	267			
08/27/02	23.46	31.28				1,800	< 2.5	15	3.9	5	ND*	--	--	--	--	--	--	0.14	183			
06/13/02	22.56	32.18				1,700	0.77	6.2	3.3	2.9	< 0.3*	--	--	--	--	--	--	0.28	201			
03/21/02	21.53	33.21				1,500	ND	11	3.1	ND	ND*	--	--	--	--	--	--	0.1	--			
12/18/01	21.11	33.63				1,500	7.9	2.9	ND	ND	< 0.5*	--	--	--	--	--	--	--	--			
09/20/01	23.70	31.04				1,200	3.9	9.9	1.2	3.9	ND*	--	--	--	--	--	--	0.4	--			
06/20/01	23.17	31.57				810***	3	1.6	5.1	18	ND*	--	--	--	--	--	--	--	--			
03/29/01	21.63	33.11				600***	2	0.65	ND	0.72	ND*	--	--	--	--	--	--	--	0.5	--		
01/12/01	22.99	31.75				530	3.7	1.9	2.1	4.5	ND	--	--	--	--	--	--	0.6	--			
09/27/00	22.72	32.02				890	ND	ND	ND	ND	ND	--	--	--	--	--	--	0.4	--			
Practical Quantitation Limit:						25 / 50	0.5	0.5	0.5	1	1	10	5	0.5	0.5	--	--					
Maximum Contaminant Levels (MCLs) / Action Levels (ALs)						1,000	1	150	700	1,750	***5	**12	--	0.5	0.5	--	--					
RWQCB-SFBR Final ESLs (basis):						100 (T&O)	1 (DWT)	40 (T&O)	30 (T&O)	13 (AHG)	5 (T&O)	--	--	--	--	--	--					
Proposed Cleanup Levels (10 times the ESLs):						1,000	10	400	300	130	50	--	--	--	--	--	--	--				

Table 1
Summary of Groundwater Elevation and PHC Analytical Data
 Former Harbert Transportation Facility, 19984 Meekland Avenue, Hayward, Ca.

Monitoring Point Information			Laboratory Analytical Results														Field Measurements			
Well I.D.	TOC Elevation (feet, NGVD)	Screen Interval (feet, bgs)	Date Sampled	Depth to Groundwater (feet, TOC)	Groundwater Elevation (feet, NGVD)	Total Petroleum Hydrocarbons										Lead Scavengers		Dissolved Oxygen (mg/L)	Redox Potential (ORP) (mV)	
						Volatile Organic Compounds										1,2-DCA (ug/L)	EDB (ug/L)			
						Gasoline (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE (ug/L)	TBA (ug/L)	Ethanol (ug/L)	Fuel Oxygenates (ug/L)						
MW-11	55.20	25 - 40 ▲	03/23/05	19.93	35.27	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.28	347	
			09/23/04	24.04	31.16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.50	301
			06/24/03	22.37	32.83	--	--	--	--	--	--	--	--	--	--	--	--	--	0.43	21
			03/21/03	22.24	32.96	--	--	--	--	--	--	--	--	--	--	--	--	--	0.32	24
			12/30/02	21.11	34.09	ND	ND	ND	ND	< 1	ND	--	--	--	--	--	--	--	0.16	374
			08/27/02	23.68	31.52	--	--	--	--	--	--	--	--	--	--	--	--	--	0.13	369
			06/13/02	22.78	32.42	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	0.15	380
			03/21/02	21.76	33.44	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	0.1	--
			12/18/01	23.39	31.81	ND	ND	0.56	ND	ND	ND	ND	--	--	--	--	--	--	--	--
			09/20/01	23.87	31.33	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	0.4	--
			06/20/01	23.39	31.81	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
			03/28/01	21.84	33.36	ND	ND	4.5	ND	ND	ND	ND	--	--	--	--	--	--	0.6	--
			01/12/01	23.21	31.99	ND	ND	2.1	ND	ND	ND	ND	--	--	--	--	--	--	0.6	--
			09/27/00	22.43	32.77	53	ND	ND	ND	ND	ND	ND	--	--	--	ND	--	--	0.6	--
			MW-12	56.49	25 - 40 ▲	03/23/05	21.02	35.47	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
09/23/04	25.16	31.33				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.92	298	
06/24/03	23.41	33.08				--	--	--	--	--	--	--	--	--	--	--	--	--	1.25	29
03/21/03	23.28	33.21				--	--	--	--	--	--	--	--	--	--	--	--	--	1.23	22
12/30/02	22.16	34.33				ND	ND	ND	ND	< 1	ND	--	--	--	--	--	--	--	0.77	372
08/27/02	24.68	31.81				--	--	--	--	--	--	--	--	--	--	--	--	--	0.60	410
06/13/02	23.86	32.63				ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	0.51	400
03/21/02	22.86	33.63				ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	0.7	--
12/18/01	24.49	32.00				ND	ND	0.86	ND	ND	ND	ND	--	--	--	--	--	--	--	--
09/20/01	24.95	31.54				ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	0.7	--
06/20/01	24.47	32.02				ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
03/29/01	22.91	33.58				ND	ND	5	ND	ND	ND	ND	--	--	--	--	--	--	1	--
01/12/01	24.28	32.21				ND	ND	1.1	ND	ND	ND	ND	--	--	--	--	--	--	1	--
09/27/00	23.98	32.51				ND	ND	ND	ND	ND	ND	ND	--	--	--	ND	--	--	1.2	--
DP-9 ▲▲	hydromunch sample	02/23/01				24			25,000	680	160	3900	5,650	<1000						
Practical Quantitation Limit:						▲ 25 / 50	0.5	0.5	0.5	1	1	10	100	5	0.5	0.5				
Maximum Contaminant Levels (MCLs) / Action Levels (ALs)						1,000	1	150	700	1,750	***5	**12				0.5	0.5			
RWQCB-SFBR Final ESLs (basis):						100 (T&O)	1 (DWT)	40 (T&O)	30 (T&O)	13 (AHG)	5 (T&O)									
Proposed Cleanup Levels (10 times the ESLs):						1,000	10	400	300	130	50									

NOTES:
 T.O.C. = Top of Casing Elevation. Calculated groundwater elevation = TOC - Depth to Groundwater. Referenced to NGVD.
 TPH-g = Total Petroleum Hydrocarbons as gasoline. MTBE = Methyl-tert-Butyl Ether
 F.O.'s = Fuel Oxygenates = Di-Isopropyl ether (DIPE), tertiary Butyl Alcohol (TBA), Ethyl tertiary Butyl Ether (ETBE), tertiary amyl Methyl Ether (TAME)
 1,2-DCA = 1,2-Dichloroethane
 EDB = 1,2-Dibromoethane
 VOC's = Volatile Organic Compounds. D.O. = Dissolved Oxygen
 ug/L = micrograms per liter, parts per billion; mg/L = milligrams per liter, parts per million
 ND = Not Detected at the Practical Quantitation Limit (PQL); <X = Not Detected at the elevated PQL. X. PQL elevated because of sample dilution.
 -- = Data not collected or measured, or analysis not conducted
 MCL = Maximum Contaminant Level for drinking water in California (Department of Health Services).
 RWQCB-SFBR = California Regional Water Quality Control Board, San Francisco Bay Region
 Final ESLs = "Final" Environmental Screening Levels, based on the lowest (most conservative) screening level (T&O, DWT, or AHG) established by RWQCB-SFBR for the protection of groundwater quality.
 T&O = Taste & Odor DWT = Drinking Water Toxicity AHG = Aquatic Habitat Goal
 Proposed Cleanup Levels = based on shallow groundwater being a potential groundwater resource.
 * Confirmed by GC/MS method 8260
 ** = Action Level
 *** = Secondary MCL / water quality goal
 **** = Laboratory Report indicates results within quantitation range; chromatographic pattern not typical of fuel.
 ▲ = Groundwater samples collected on September 23, 2004 have all been analyzed by EPA Method GC - MS / 8260B. This analytical method is more accurate and as a result the laboratory's Practical Quantitation Limit for TPH-g is 25 ppb. All groundwater samples collected from this date forward will be analyzed by these EPA Methods.
 All groundwater samples collected from this date forward will be analyzed by these EPA Methods.
 ▲▲ = DP-9 was a grab sample obtained during driven probe soil characterization (WHA report: June 2001)

APPENDIX B

Geologic Logs of On-Site Investigation Drilling
including
Monitoring Wells
Driven Probe Borings
and
Landfill Acceptance Borings

Blows/ Fl.	Sample No.	USCS	DESCRIPTION	WELL CONST.
0			6" asphalt	
2		ML	Silty clay, red-brown to black, slightly damp, very stiff, slight plasticity, no product odor.	
4				
6	17	S-5		
8				
10				
12				
14	32	S-13	Green-brown to dark brown, slight odor.	
16	25	S-15	Light green-brown to red-brown, dry, slight to moderate product odor.	
18				
20	15	S-20	CH Clay, dark brown, moist, stiff, high plasticity, moderate to strong product odor.	
22				
24				
26	39	S-25	Light green-brown, wet, hard, moderate product odor.	
28				
30			Clay continues downward, continued on next plate.	



Applied GeoSystems
4125 Alameda Street, Suite 400, Oakland, CA 94612-1101

LOG OF BORING B1/MW-1

Harbert Transportation
 Hayward, California

PLATE

P-4

PROJECT NO. 8660-1

Blows/ Ft.	Sample No.	USCS	DESCRIPTION	WELL CONST.
30				
32	18	S-30	CH Clay, light green-brown, wet, hard, high plasticity, moderate product odor. Dark green-brown, very stiff.	
34				
36	38	S-35	Red-brown, hard, slight product odor.	
38				CAVED
40				
42			Total depth = 41.5 feet.	



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LOG OF BORING B-1/MW-1

Harbert Transportation
Hayward, California

PLATE

P-5

PROJECT NO. 8660-1

BORING LOCATION	Meekland and Bloom Ave	ELEVATION AND D	
DRILLING CONTRACTOR	HEW Drilling	DRILLER	Jeff
DRILLING EQUIPMENT	CME 55	DATE STARTED	11-28-89
DIAMETER OF BORING		COMPLETION DEPTH (FT)	40
PURPOSE OF BORING	Monitoring Well	NO. OF UNDIST. SAMPLES	7
SAMPLING EQUIPMENT		WATER FIRST DEPTH (FT)	34
COMMENTS		LOGGED BY:	J. Alt
		CHECKED BY:	

DEPTH (FEET)	DESCRIPTION	GRAPHIC LOG LITHOLOGY	SAMPLES				REMARKS
			NO.	TYPE	BLOOM COUNT	DRILLING RATE/LITER	
0	Fill						
0	dark brown clay, dry, adobe				6		
5	reddish brown fine sandy silt with some clay, dry				8		
5					10		
10	Tan sandy silt to silty sand. Thin lens of coarse sand at 11 ft.; dry, becoming moist at 15 ft.				3		
10					5		
10					8		
15					2		
15					4		
15					6		
20	Gray clay, moist, mottled brown, moderately plastic				2		
20					4		
20					5		
25					4		
25					7		
25					10		
30							

Project	Durham Site	LOG OF BORING	B-3 / MW3
Project No.			

DEPTH (FEET)	DESCRIPTION	GRAPHIC LOG LITHOLOGY	SAMPLES				REMARKS
			NO.	TYPE	BLOW COUNT	DRILLING RATE/ TIME	
30	Gray clay mottled brown, moist, moderately plastic.				4 4 5		
35	Brown clayey sand and gravel, grades downward to brown clayey silt.				5 7 11		
40	Bottom of boring No sample						
45							
50							
55							
60							
65							
70							
Project		CONT. LOG OF BORING B-3					
Project No.							

BORING LOCATION	Meekland and Blossom Ave		ELEVATION AND DATUM	
DRILLING CONTRACTOR	HEW Drilling	DRILLER	Jeff	DATE STARTED 11-28-89
DRILLING EQUIPMENT	CME 55			DATE FINISHED 11-28-89
DIAMETER OF BORING				COMPLETION DEPTH (FT) 40
PURPOSE OF BORING	Monitoring Well			ROCK DEPTH (FT) -
SAMPLING EQUIPMENT				NO. OF UNDIST. CORE SAMPLES 7
COMMENTS				WATER FIRST DEPTH (FT)
				LOGGED BY: J. Alt
				CHECKED BY:

DEPTH (FEET)	DESCRIPTION	GRAPHIC LOG	LITHOLOGY	SAMPLES			REMARKS
				NO.	TYPE	BLOM COUNT DRILLING RATE/ LINE	
	Fill - Sand and Gravel						
5	Dark brown clay, dry					8 6 4	
	Tan silty clay, dry						
10	brown sandy gravel					5 6 9	
15	Gray clayey silt to silty clay, locally sandy					2 4 4	
20	Same as above moist					1 4 4	
25	Same as above with brown mottlings					4 5 6	
30							

Project	Durham Site	LOG OF BORING B-4 /mw4
Project No.		

DEPTH (FEET)	DESCRIPTION	GRAPHIC LOG LITHOLOGY	SAMPLES			REMARKS
			NO.	TYPE	BLOW COUNT	
30	Gray clay, moist, mottled brown				4	
					7	
					13	
35	Brown silty clay, wet				6	
					7	
					9	
40	bottom of boring					
45						
50						
55						
60						
65						
70						

Project
Project No.

CONT. LOG OF BORING

B-4

BORING LOG

Project <u>Durham Transportation</u>	Hole/Well # <u>MW-5</u>
Location <u>see location map</u>	Diameter of Drill Hole <u>8"</u>
Job # <u>90-4</u>	Total Depth of Hole <u>45 ft.</u>
Geologist/Engineer <u>J. Alt</u>	Date Started <u>Aug. 31, 1990</u>
Drill Agency <u>HEW Drilling</u>	Date Completed <u>Aug. 31, 1990</u>

DEPTH IN FEET	WELL CONSTRUCTION DETAIL	N-VALUE	SAMPLE	GRAPHIC SYMBOL	DESCRIPTION
0	<p style="text-align: center;">4" solid PVC pipe</p> <p style="text-align: center;">grout</p>				gravelly sand-fill, dry dark brown clay-soil horizon
5		14	1		medium brown sandy clay, moist
10		7	2		blue gray sandy clay grading to a clayey sand, moist
15		12	3		grayish brown sandy clay, moist, scattered small gravel
20		4	4		grayish brown fine to medium grained sand, moist

BORING LOG

PROJECT: Durham Transportation
 JOB NUMBER: 90-4

HOLE / WELL #: MW-5
 PAGE: 2 OF 2

DEPTH (FEET)	COMPLETION DETAIL	SAMPLE #	BLOW COUNTS / FOOT	USCS SYMBOL	DESCRIPTION
25		5	18		gray mottled brown clay, moist to damp, plastic gray clay; mottled brown, moist, plastic
30		6	6		
35		7	16		
40		8	15		brown clay, moist, silty, moderately plastic
45		9	8		tight brown, fine to medium grained sand, wet, dark brown

BORING LOG

Project <u>Durham Transportation</u>	Hole/Well # <u>MW-6</u>
Location <u>see location map</u>	Diameter of Drill Hole <u>8 inches</u>
Job # <u>90-4</u>	Total Depth of Hole <u>45 ft.</u>
Geologist/Engineer <u>J. Alt</u>	Date Started <u>Aug. 30, 1990</u>
Drill Agency <u>HEW Drilling</u>	Date Completed <u>Aug. 30, 1990</u>

DEPTH IN FEET	WELL CONSTRUCTION DETAIL	N-VALUE	SAMPLE	GRAPHIC SYMBOL	DESCRIPTION
0					3" asphalt
5		11	1		sand and gravel
10		12	2		medium brown silty to sandy clay, moist, locally scattered gravel up to 1/2" in size medium brown clay to clayey silt
15		7	3		brown fine-grained sand, loose, moist
20		NA	4		gray mottled brown clay, moist to damp, plastic

BORING LOG

PROJECT: Durham Transportation
 JOB NUMBER: 90-4

HOLE / WELL #: MW-6
 PAGE: 2 OF 2

DEPTH (FEET)	COMPLETION DETAIL	SAMPLE #	BLOW COUNTS / FOOT	USCS SYMBOL	DESCRIPTION	
25		5	20		light brown clay, moist plastic, reddish brown mottling same as above, except grading to gray in color	
30		6	11		gray clay, wet, plastic, locally sandy	
35		7	17			
40		8	7		light brown clay, wet plastic light brown clay, wet plastic, locally silty to sandy light brown sandy clay, wet plastic	
45		9	15			

BORING LOG

Project <u>Durham Transportation</u>	Hole/Well # <u>M W - 7</u>
Location <u>see location map</u>	Diameter of Drill Hole <u>8"</u>
Job # <u>90-4</u>	Total Depth of Hole <u>45 ft.</u>
Geologist/Engineer <u>J. Alt</u>	Date Started <u>Oct. 1, 1990</u>
Drill Agency <u>HEW Drilling</u>	Date Completed <u>Oct. 1, 1990</u>

DEPTH IN FEET	WELL CONSTRUCTION DETAIL	N-VALUE	SAMPLE	GRAPHIC SYMBOL	DESCRIPTION	
0					4" concrete	
					fill - sand and gravel	
						dark brown clay, damp grading to medium brown silty clay
5			17	1		
						medium brown clayey silt, damp
10		8	2			
					gray sand, medium grained, damp	
15		9	3			
					gray clay, moist with brown mottering	
20		4	4			

BORING LOG

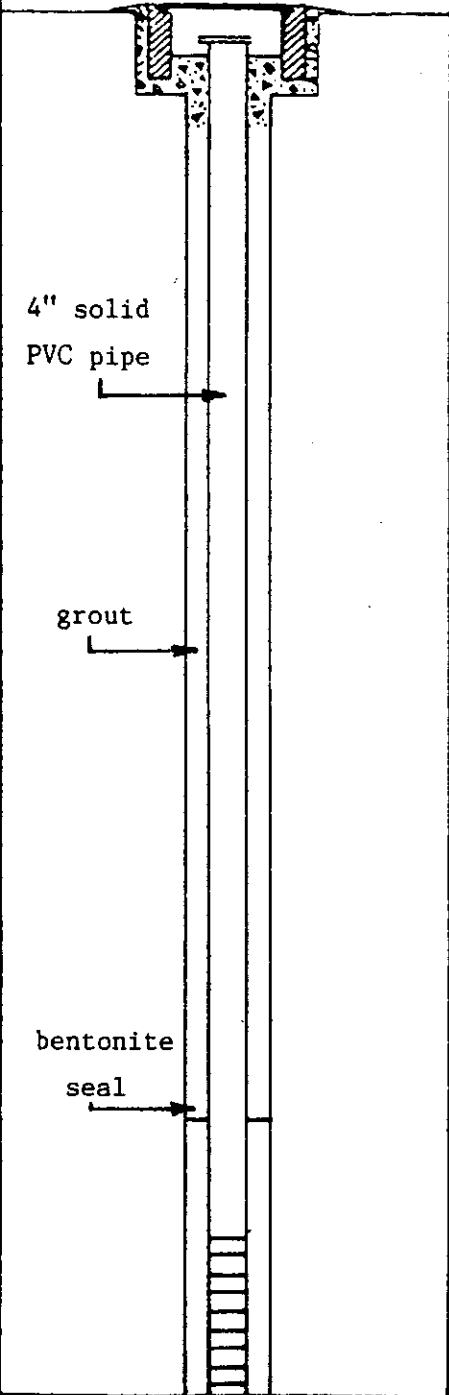
PROJECT: Durham Transportation
 JOB NUMBER: 90-4

HOLE / WELL #: MW-7
 PAGE: 2 OF 2

DEPTH (FEET)	COMPLETION DETAIL	SAMPLE #	BLOW COUNTS / FOOT	USCS SYMBOL	DESCRIPTION
25	bentonite seal				gray clay, moist with brown mottering
		5	13		
30	sand pack	6	12		tan mottled gray silty clay, locally sandy
35	4" slotted PVC casing	7	16		tan clay; very plastic
40		8	10		tan clay-mottled brown; very plastic, some silt
45		9	11		fine grain tan-mottled brown silty sand; very wet, some plasticity

BORING LOG

Project <u>Durham Transportation</u>	Hole/Well # <u>MW-8</u>
Location <u>see location map</u>	Diameter of Drill Hole <u>10"</u>
Job # <u>91-6</u>	Total Depth of Hole <u>40'</u>
Geologist/Engineer <u>J. Alt</u>	Date Started <u>Feb. 13, 1991</u>
Drill Agency <u>HEW Drilling</u>	Date Completed <u>Feb. 13, 1991</u>

DEPTH IN FEET	WELL CONSTRUCTION DETAIL	N-VALUE	SAMPLE	GRAPHIC SYMBOL	DESCRIPTION
0	 <p style="font-size: small;">4" solid PVC pipe</p> <p style="font-size: small;">grout</p> <p style="font-size: small;">bentonite seal</p>				
5		15	1		Brown clay, somewhat plastic, dry
10		15	2		Brownish gray sandy clay
15		18	3		Brownish clay, somewhat plastic; clay lead to medium coarse sandy clay-had pebbles in it and was quite dry. This leads to brown sand
20		5	4		Brown clayey sand grading to gray clay, mottled brown, very plastic

BORING LOG

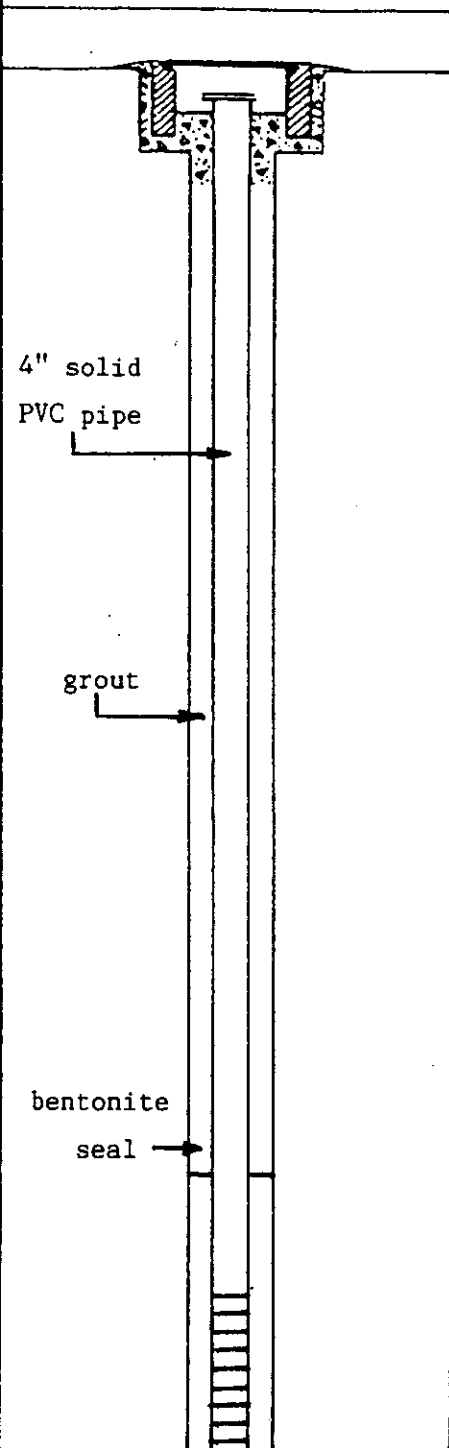
PROJECT: Durham Transportation
 JOB NUMBER: 91-6

HOLE / WELL #: MW-8
 PAGE: 2 OF 2

DEPTH (FEET)	COMPLETION DETAIL	SAMPLE #	BLOW COUNTS / FOOT	USCS SYMBOL	DESCRIPTION	
25	<p>sand pack</p> <p>4" slotted PVC casing</p>	5	11		<p>Top: mottled brown mud with some sandy clay</p> <p>Bottom: brown mud with gray mottling</p>	
30		6	5		Brown silty clay with gray mottling, becoming moist	
35		7	11		Tight brown clay, very plastic	
40		8	7		Brown clay with dark brown mottling, moist, plastic	

BORING LOG

Project <u>Durham Transportation</u>	Hole/Well # <u>MW-9</u>
Location <u>see location map</u>	Diameter of Drill Hole <u>10"</u>
Job # <u>91-6</u>	Total Depth of Hole <u>40'</u>
Geologist/Engineer <u>J. Alt</u>	Date Started <u>Feb. 13, 1991</u>
Drill Agency <u>HEW Drilling</u>	Date Completed <u>Feb. 13, 1991</u>

DEPTH IN FEET	WELL CONSTRUCTION DETAIL	N-VALUE	SAMPLE	GRAPHIC SYMBOL	DESCRIPTION
0	 <p style="font-size: small;">4" solid PVC pipe</p> <p style="font-size: small;">grout</p> <p style="font-size: small;">bentonite seal</p>				
5		15	1		Medium brown clayey silt, somewhat plastic, some small angular rock fragments, dry
10		8	2		Same as above
15		12	3		Brown clayey silt, locally sandy, moderated to low plasticity, grading to fine grain sand, loose, moist
20		6	4		Brown sandy clay, gray mottling

BORING LOG

PROJECT: Durham Transportation
 JOB NUMBER: 91-6

HOLE/WELL #: MW-9
 PAGE: 2 OF 2

DEPTH (FEET)	COMPLETION DETAIL	SAMPLE #	BLOW COUNTS / FOOT	USCS SYMBOL	DESCRIPTION
25	<p>sand pack</p> <p>4" slotted PVC casing</p>	5	9		Greenish-gray clay
30		6	10		Brown clay with some silt greenish gray mottling
35		7	15		Medium brown clay, gray mottling, moist
40		8	7		Medium brown clay, very plastic, moist

BORING LOG AND RECORD OF MONITORING WELL INSTALLATION

Figure 1
MW-10

DEPTH (feet)	WELL CONSTRUCTION DETAIL	N-VALUE	SAMPLE #	DESCRIPTION
0				4" Asphalt over 1" Gravel Base, Sandy
0-5				Dark brown clay, Organic Plastic, Moist
5		4/4/10		Reddish brown clay, Moist, Moderately plastic
5-10				Light brown clayey silt, Moist, No odor Grades to silty clay
10		4/4/8		Light brown clayey sand, Scattered coarse sand to pebbles, Moist
10-15				Grading to sandy gravel
15		3/3/5		Light brown sandy to silty clay Plastic, Moist
15-20				Thin (~2" thick) lenses of coarse sand No hydrocarbon odor
20		4/5/7	1	Gray clay with brown mottling Moist, moderately plastic Abundant root holes No hydrocarbon odor
20-25				Gray clay, brown mottling Moist, Plastic
25		4/8/9	2	Light brown clayey fine sand, Grey mottling, Faint hydrocarbon odor (locally moderate), Scattered pebbles
25-30				Light brown clayey fine sand to fine sandy clay, Moist (not saturated), Very faint hydrocarbon odor, Grey mottling, Oxidized roots
30		3/7/9	3	
30-40				
40				End of Boring



CTTs, Inc.

toxic technology services

P.O. Box 515 • Rodeo, California 94572

(916) 799-1140

Project	Durham Transportation	Height	10
Location	Apartment, 19875 Meekland Ave	Diameter of Drill Hole	10"
Job #	91-15	Total Depth of Hole	40'
Contractor/Engineer	J. N. Alt	Date Started	1/21/92
Order	HEW	Date Completed	1/21/92

BORING LOG AND RECORD OF MONITORING WELL INSTALLATION

Figure 2
MW-11

DEPTH (feet)	WELL CONSTRUCTION DETAIL	N-VALUE	SAMPLE #	DESCRIPTION
0	4" Concrete over 6" Base			4" Concrete over 6" Base
0-5	Dark brown clay, Moist, Plastic			Dark brown clay, Moist, Plastic
5	Light brown silty fine sand, Moist	10/10/11		Light brown silty fine sand, Moist
10	Light brown clayey silt with some fine sand, Moist, No hydrocarbon odor	8/10/10		Light brown clayey silt with some fine sand, Moist, No hydrocarbon odor
15	Medium brown silty clay, Moderately plastic, Moist, No hydrocarbon odor, Grades into clayey to silty sand	4/6/8		Medium brown silty clay, Moderately plastic, Moist, No hydrocarbon odor, Grades into clayey to silty sand
20	Gray clay, Moist, Plastic, No hydrocarbon odor	3/5/5	1	Gray clay, Moist, Plastic, No hydrocarbon odor
25	Lost most of sample-- Tan sandy clay with gray mottling, Very faint hydrocarbon odor	8/12/15		Lost most of sample-- Tan sandy clay with gray mottling, Very faint hydrocarbon odor
30	Tan sandy clay, Wet, Grey mottling, Moderate hydrocarbon odor	4/6/7	2	Tan sandy clay, Wet, Grey mottling, Moderate hydrocarbon odor
35	Medium brown silty to fine sandy clay, Grey mottling, Moist to wet, No hydrocarbon odor	8/9/10	3	Medium brown silty to fine sandy clay, Grey mottling, Moist to wet, No hydrocarbon odor
40	End of Boring			End of Boring



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(916) 799-1140

Project	Durham Transportation	Wellbore #	11
Location	Residence, 19870 Meekland Ave.	Diameter of Drill Hole	8"
Job #	91-15	Total Depth of Hole	40'
Geologist/Engineer	J. N. Alt	Drawn	1/24/92
Order	HEW	Date Completed	1/24/92

BORING LOG



Project <u>Durham Transportation</u>	Hole/Well # <u>B-1</u>
Location <u>see location map</u>	Diameter of Drill Hole <u>8 inches</u>
Job # <u>90-4</u>	Total Depth of Hole <u>25 ft.</u>
Geologist/Engineer <u>J. Alt</u>	Date Started <u>Oct. 1, 1990</u>
Drill Agency <u>HEW Drilling</u>	Date Completed <u>Oct. 1, 1990</u>

DEPTH IN FEET	WELL CONSTRUCTION DETAIL	N-VALUE	SAMPLE	GRAPHIC SYMBOL	DESCRIPTION
0					backfill gravel, etc.
5		15	1		
10	boring log only; no well was installed	13	2		fine grain sand green with hydrocarbons; slightly silty the first foot, brown clay with black streaks
15		10	3		gravel fill in first foot, next comes green soil (silty, sandy clay), odor of old petroleum, last foot sandy clay gray (slight green tinge), some plasticity
20		8	4		dark gray silty clay; very plastic mottled brown down to approximately 21'; has greenish tint.

BORING LOG

PROJECT: Durham Transportation
 JOB NUMBER: 90-4

HOLE / WELL #: B-1
 PAGE : 2 OF 2

DEPTH (FEET)	COMPLETION DETAIL	SAMPLE #	BLOW COUNTS / FOOT	USCS SYMBOL	DESCRIPTION
25 		5	15		gray with slight green tinge first 10". brown clay, mottled green and orange; very plastic soil, still pretty dry.



GEOLOGIC LOG

Exploratory Borehole

JOB NO.: H9042.B DATE: February 14, 2001
 CLIENT: Harbert Transportation
 LOCATION: 19984 Meekland Avenue, Hayward, California
 LOGGED BY: C. Taylor SAMPLED BY: C. Taylor
 DRILLER: En Probe (Dennis)
 DRILL METHOD: Hydraulic Driven Large Bore and Macro-Core Probes

BORING #
DP-1
 Sheet
 1 of 2

Depth (feet)	Sampling Interval	Sample Analyzed	Sample Identification & OVA Data (ppmv)	Groundwater Depth	Lithologic Pattern	USCS	SOIL DESCRIPTION & CLASSIFICATION (Lithologic name, color, moisture, density/consistency, grain size%, other descriptors, HC odor.)
0						--	ASPHALT
1						CH	Fat CLAY , very dark grayish brown (10 YR 3/2), moist to wet, firm, moderate to high plasticity, no dilatency, low toughness, dominantly clay with few fine grained sands, subrounded grains, no odor, no discoloration.
2			DP-1a				
3							
4							- Coarsening downward, gradational contact.
5							
6			DP-1b			CL	Sandy CLAY , brown (10 YR 4/3), damp, moderate plasticity, no dilatency, contains some subrounded sands, no odor, no discoloration.
7							
8							
9							
10			DP-1c				
11							
12							
13							- Thin lenses of fine grained sands with some clays.
14			DP-1d				
15							
16							
17							
18			DP-1e				- Thin lenses of fat clays with trace sands.
19							
20							
21							
22			DP-1f				- Color change to gray (10 YR 4/1) associated with hydrocarbon contamination, moderate hydrocarbon odor.
23							
24			DP-1g			CH	Fat CLAY , dark -gray (10 YR 4/1), damp to moist, soft, very high plasticity, no dilatency, low toughness, trace sands, discolored due to hydrocarbons, moderate to high odor.
25							
26							
27			DP-1g				- Moisture increase to wet, groundwater encountered.
28							
29							
30			DP-1h				



GEOLOGIC LOG

Exploratory Borehole

JOB NO.: H9042.B DATE: February 14, 2001
 CLIENT: Harbert Transportation
 LOCATION: 19984 Meekland Avenue, Hayward, California
 LOGGED BY: C. Taylor SAMPLED BY: C. Taylor
 DRILLER: En Probe (Dennis)
 DRILL METHOD: Hydraulic Driven Large Bore and Macro-Core Probes

BORING #

DP-1

Sheet
2

Depth (feet)	Sampling Interval Sample Analyzed	Sample Identification & OVA Data (ppmv)	Groundwater Depth	Lithologic Pattern	USCS	SOIL DESCRIPTION & CLASSIFICATION (Lithologic name, color, moisture, density/consistency, grain size%, other descriptors, HC odor.)
30						
31						
32		DP-1h			CH	Fat CLAY , dark-gray (10 YR 4/1), damp to moist, soft, very high plasticity, no dilatancy low toughness, trace sands, discolored due to hydrocarbons, moderate to high odor.
33						
34					SC	Poorly Graded Clayey SANDS , gray (10 YR 5/1), wet, medium dense, slight plasticity, fine grained sands, sub rounded, 30% clays, discoloration, moderate to high odor.
35						
36		DP-1i			CH	Fat CLAY , brown (10YR 5/4), damp, moderate plasticity, no dilatancy, contains few to some sands, no odor, no discoloration.
37						
38						
39						
40		DP-1j				
41						
42						
43						
44		DP-1k				
45						
46						Boring terminated at 46 feet bgs. Backfill with Portland Cement Slurry to ground surface.
47						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						



GEOLOGIC LOG

Exploratory Borehole

JOB NO.: H9042.B DA February 14, 2001
 CLIENT: Harbert Transportation
 LOCATION: 19984 Meekland Avenue, Hayward, California
 LOGGED BY: C. Taylor SAMPLED BY: C. Taylor
 DRILLER: En Probe (Dennis)
 DRILL METHOD: Hydraulic Driven Large Bore and Macro-Core Probes

BORING #

DP-2

Sheet
1 of 1

Depth (feet)	Sampling Interval Sample Analyzed	Sample Identification & OVA Data (ppmv)	Groundwater Depth	Lithologic Pattern	USCS	SOIL DESCRIPTION & CLASSIFICATION (Lithologic name, color, moisture, density/consistency, grain size%, other descriptors, HC odor.)
0					CL	Sandy CLAY , very dark grayish brown (10YR 3/2), dry, lean, very stiff, no plasticity, no dilatancy, high toughness, little sands, subangular grains, no odor, no discoloration.
2	DP-2a					- Coarsening downward,
6	DP-2b					- Color change to dark yellowish brown (10 YR 4/4)
10	DP-2c					- Gradational contact.
13					CH	Fat CLAY , gray brown (10YR 5/2), moist, firm, moderate to high plasticity, no dilatancy, low toughness, trace sands, high hydrocarbon odor, blue-gray discoloration (Gley 2 5/5B).
14	DP-2d					
15					CL	Sandy CLAY , gray brown (10 YR 5/2), damp, soft and loose, low plasticity, no dilatancy, low toughness, some sands, sands subangular and poorly graded, high hydrocarbon odor, blue gray discoloration (Gley 2 5/5B).
17					CH	Fat CLAY , gray brown (10YR 5/2), moist, firm, moderate to high plasticity, no dilatancy, low toughness, trace sands, high hydrocarbon odor, blue-gray discoloration (Gley 2 5/5B).
18	DP-2e					
24	DP-2g					- Moisture increases to wet, groundwater first encountered.
25						
27	DP-2g					
29						
30						



GEOLOGIC LOG

Exploratory Borehole

JOB NO.: H9042.B DATE: February 14, 2001
 CLIENT: Harbert Transportation
 LOCATION: 19984 Meekland Avenue, Hayward, California
 LOGGED BY: C. Taylor SAMPLED BY: C. Taylor
 DRILLER: En Probe (Dennis)
 DRILL METHOD: Hydraulic Driven Large Bore and Macro-Core Probes

BORING #
DP-3
 Sheet
 1 of 1

Depth (feet)	Sampling Interval Sample Analyzed	Sample Identification & OVA Data (ppmv)	Groundwater Depth	Lithologic Pattern	USCS	SOIL DESCRIPTION & CLASSIFICATION (Lithologic name, color, moisture, density/consistency, grain size%, other descriptors, HC odor.)
0					---	ASPHALT
1					CH	Fat CLAY , very dark gray brown (10YR 3/2), damp, firm, moderate plasticity, no dilatency, low toughness, trace sands, no odor no discoloration, roots, high organic content.
2	DP-3a					
3						
4					CL	Sandy CLAY , very dark grayish brown (10YR 3/2), dry, lean, very stiff, no plasticity, no dilatency, high toughness, little sands, subangular grains, no odor, no discoloration.
5						
6	DP-3b					
7						
8						- Low-moderate Hydrocarbon odor detected.
9						
10	DP-3c					
11						
12						
13					SC	Clayey SAND with Gravels , very dark grayish brown (10YR 3/2), dry, loose, mostly medium sized sand grains, subangular, 10 % fine subangular gravels 20 % clay, no plasticity, no dilatency, moderate odor, no discoloration.
14	DP-3d					
15					CL	Sandy CLAY , very dark grayish brown (10 YR 3/2), dry, lean, low plasticity, no dilatency, mostly clays, 30-35 % medium grained sands, subangular grains, moderate hydrocarbon odor, slight blue-gray discoloration (Gley 2 5/5B).
16						
17						
18	DP-3e					
19						
20					SC	Clayey SAND , dark yellowish brown (10 YR 3/6), wet to saturated, loose to medium dense, mostly medium to fine grained sands, subangular, 25 % clays, no plasticity, 15 % silts, moderate hydrocarbon odor, no discoloration.
21						- Perched Groundwater
22	DP-3f				CH	Fat CLAY , gray brown (10 YR 5/2), moist, firm, moderate to high plasticity, no dilatency, low toughness, trace sands, high hydrocarbon odor, blue-gray discoloration (Gley 2 5/5B).
23						
24						
25						
26	DP-3g					
27						- Moisture increases to saturated, groundwater encountered.
28						
29						
30						



GEOLOGIC LOG

Exploratory Borehole

JOB NO.: H9042,B DATE: February 14, 2001
 CLIENT: Harbert Transportation
 LOCATION: 19984 Meekland Avenue, Hayward, California
 LOGGED BY: C. Taylor SAMPLED BY: C. Taylor
 DRILLER: En Probe (Dennis)
 DRILL METHOD: Hydraulice Driven Large Bore and Macro-Core Probes

BORING #
DP-4
 Sheet
 1 of 1

Depth (feet)	Sampling Interval Sample Analyzed	Sample Identification & OVA Data (ppmv)	Groundwater Depth	Lithologic Pattern	USCS	SOIL DESCRIPTION & CLASSIFICATION (Lithologic name, color, moisture, density/consistency, grain size%, other descriptors, HC odor.)
0						
1					CH	Fat CLAY , very dark gray brown (10YR 3/2), damp, firm, moderate plasticity, no dilatency, low toughness, trace sands, no odor no discoloration, roots, organic content.
2	DP-4a					
3						
4						
5					CL	Sandy CLAY , grayish brown (10YR 5/2), dry, lean, very stiff, no plasticity, no dilatency, high toughness, little fine to medium sands, subangular grains, no odor, no discoloration.
6	DP-4b					
7						
8						
9						
10	DP-4c					- Coarsening downward sequence. - Sands increase to some. - Few subrounded to rounded gravels and pebbles present.
11						
12						
13						
14	DP-4d					
15						
16						
17						
18	DP-4e				SC	Clayey SAND , very dark grayish brown (10YR 3/2), dry, very dense, mostly sands, fine to medium subangular grains, 35-40% clays, no plasticity, no odor, no discoloration.
19						
20					CH	Fat CLAY , gray brown (10 YR 5/2), moist, firm, moderate to high plasticity, no dilatency, low toughness, trace sands, lno hydrocarbon odor, no discoloration.
21	DP-4f					
22						
23						
24						
25						- Moisture increases to saturated, groundwater encountered.
26	DP-4g					
27						
28						
29						
30						



GEOLOGIC LOG

Exploratory Borehole

JOB NO.: H9042.B DATE: February 14, 2001
 CLIENT: Herbert Transportation
 LOCATION: 19984 Meekland Avenue, Hayward, California
 LOGGED BY: C. Taylor SAMPLED BY: C. Taylor
 DRILLER: En Probe (Dennis)
 DRILL METHOD: Hydraulic Driven Large Bore and Macro-Core Probes

BORING #

DP-5

Sheet
1

Depth (feet)	Sampling Interval	Sample Analyzed	Sample Identification & OVA Data (ppmv)	Groundwater Depth	Lithologic Pattern	USCS	SOIL DESCRIPTION & CLASSIFICATION (Lithologic name, color, moisture, density/consistency, grain size%, other descriptors, HC odor.)
0						CH	ASPHALT Fat CLAY , very dark gray brown (10YR 3/2), damp, firm, moderate plasticity, no dilatency, low toughness, trace sands, no odor, no discoloration, roots, high organic content.
1							
2			DP-5a				
3							
4							
5						CL	Sandy CLAY , very dark grayish brown (10YR 3/2), dry, lean, very stiff, no plasticity, no dilatency, high toughness, little sands, subangular grains, no odor, no discoloration.
6			DP-5b				
7							
8							
9							
10			DP-5c				
11							
12							
13							
14			DP-5d				
15							
16							
17						SC	Clayey SAND , very dark grayish brown (10YR 3/2), dry, loose, mostly medium sized sand grains, subangular, trace fine subangular gravels 20 % clay, no plasticity, no dilatency, no odor, no discoloration.
18			DP-5e				
19							
20						CH	Fat CLAY , gray brown (10 YR 5/2), moist, firm, moderate to high plasticity, no dilatency, low toughness, trace sands, no hydrocarbon odor, no discoloration.
21							
22			DP-5f				
23							
24							
25							- Moisture increases to saturated, groundwater encountered.
26			DP-5g				
27							
28							
29							
30							



GEOLOGIC LOG

Exploratory Borehole

JOB NO.: H9042.B DA February 14, 2001
 CLIENT: Harbert Transportation
 LOCATION: 19984 Meekland Avenue, Hayward, California
 LOGGED BY: C. Taylor SAMPLED BY: C. Taylor
 DRILLER: En Probe (Dennis)
 DRILL METHOD: Hydraulic Driven Large Bore and Macro-Core Probes

BORING #
DP-6
 Sheet
 1 of 1

Depth (feet)	Sampling Interval	Sample Analyzed	Sample Identification & OVA Data (ppmv)	Groundwater Depth	Lithologic Pattern	USCS	SOIL DESCRIPTION & CLASSIFICATION (Lithologic name, color, moisture, density/consistency, grain size%, other descriptors, HC odor.)
0						--	ASPHALT
1						CH	Fat CLAY , very dark gray brown (10YR 3/2), damp, firm, moderate plasticity, no dilatency, low toughness, trace sands, no odor no discoloration, roots, high organic content.
2			DP-6a				
3							
4							
5						CL	Sandy CLAY , very dark grayish brown (10YR 3/2), dry, lean, very stiff, no plasticity, no dilatency, high toughness, little sands, subangular grains, no odor, no discoloration.
6			DP-6b				
7							
8							
9							
10			DP-6c				
11							
12							
13							
14			DP-6d				
15							
16							
17							
18			DP-6e				
19							
20							
21						CH	Fat CLAY , gray brown (10 YR 5/2), moist, firm, moderate to high plasticity, no dilatency, low toughness, trace sands, no hydrocarbon odor, no discoloration.
22			DP-6f				
23							
24							
25			DP-6g				- Moisture increases to saturated, groundwater encountered.
26							
27							
28							
29							
30							



GEOLOGIC LOG

Exploratory Borehole

JOB NO.: H9042.B DATE: February 14, 2001
 CLIENT: Harbert Transportation
 LOCATION: 19984 Meekland Avenue, Hayward, California
 LOGGED BY: C. Taylor SAMPLED BY: C. Taylor
 DRILLER: En Probe (Dennis)
 DRILL METHOD: Hydraulic Driven Large Bore and Macro-Core Probes

BORING #

DP-7

Sheet
1 of 1

Depth (feet)	Sampling Interval Sample Analyzed	Sample Identification & OVA Data (ppmv)	Groundwater Depth	Lithologic Pattern	USCS	SOIL DESCRIPTION & CLASSIFICATION (Lithologic name, color, moisture, density/consistency, grain size%, other descriptors, HC odor.)
0					--	ASPHALT
1					CH	Fat CLAY , very dark gray brown (10YR 3/2), damp, firm, moderate plasticity, no dilatancy, low toughness, trace sands, no odor no discoloration, roots, high organic content.
2	DP-7a					
3						
4						
5						
6	DP-7b					
7						Sandy CLAY , very dark grayish brown (10YR 3/2), dry, lean, very stiff, no plasticity, no dilatancy, high toughness, little sands, subangular grains, no odor, no discoloration.
8					CL	
9						
10	DP-7c					
11						
12					SC	Clayey SAND , very dark grayish brown (10YR 3/2), dry, loose, mostly medium sized sand grains, subangular, trace fine subangular gravels 20 % clay, no plasticity, no dilatancy, no odor, no discoloration.
13						
14	DP-7d				CH	Fat CLAY , gray brown (10 YR 5/2), moist, firm, moderate to high plasticity, no dilatancy, low toughness, trace sands, no hydrocarbon odor, no discoloration.
15						
16						
17						
18	DP-7e					
19						
20						
21						
22	DP-7f					
23						
24						
25	DP-7g		▽			- Moisture increases to saturated, groundwater encountered.
26						
27						
28						
29						
30						



GEOLOGIC LOG

Exploratory Borehole

JOB NO.: H9042.B Date: February 14, 2001
 CLIENT: Harbert Transportation
 LOCATION: 19984 Meekland Avenue, Hayward, California
 LOGGED BY: C. Taylor SAMPLED BY: C. Taylor
 DRILLER: En Probe (Dennis)
 DRILL METHOD: Hydraulic Driven Large Bore and Macro-Core Probes

BORING #
DP-8
 Sheet
 1 of 1

Depth (feet)	Sampling Interval Sample Analyzed	Sample Identification & OVA Data (ppmv)	Groundwater Depth	Lithologic Pattern	USCS	SOIL DESCRIPTION & CLASSIFICATION (Lithologic name, color, moisture, density/consistency, grain size%, other descriptors, HC odor.)
0					--	ASPHALT
1					CH	Fat CLAY , very dark gray brown (10YR 3/2), damp, firm, moderate plasticity, no dilatancy, low toughness, trace sands, no odor no discoloration, roots, high organic content.
2		DP-8a				
3						
4						
5						
6		DP-8b				
7						
8					CL	Sandy CLAY , very dark grayish brown (10YR 3/2), dry, lean, very stiff, no plasticity, no dilatancy, high toughness, little sands, subangular grains, no odor, no discoloration.
9						
10		DP-8c				
11						
12						
13		DP-8d			SC	Clayey SAND , very dark grayish brown (10YR 3/2), dry, loose, mostly medium sized sand grains, subangular, trace fine subangular gravels 20 % clay, no plasticity, no dilatancy, no odor, no discoloration.
14						
15					CH	Fat CLAY , gray brown (10 YR 5/2), moist, firm, moderate to high plasticity, no dilatancy, low toughness, trace sands, no hydrocarbon odor, no discoloration.
16						
17						
18		DP-8e				
19						
20						
21						
22		DP-8f				
23						
24						
25		DP-8g				- Moisture increases to saturated, groundwater encountered.
26						
27						
28						
29						
30						



GEOLOGIC LOG

Exploratory Borehole

JOB NO.: H9042.B DATE: February 14, 2001
 CLIENT: Harbert Transportation
 LOCATION: 19984 Meekland Avenue, Hayward, California
 LOGGED BY: C. Taylor SAMPLED BY: C. Taylor
 DRILLER: En Probe (Dennis)
 DRILL METHOD: Hydraulic Driven Large Bore and Macro-Core Probes

BORING #

DP-9

Sheet 1

Depth (feet)	Sampling Interval Sample Analyzed	Sample Identification & OVA Data (ppmv)	Groundwater Depth	Lithologic Pattern	USCS	SOIL DESCRIPTION & CLASSIFICATION (Lithologic name, color, moisture, density/consistency, grain size%, other descriptors, HC odor.)
0					CH	ASPHALT
1					CH	Fat CLAY , very dark grayish brown (10 YR 3/2), moist to wet, firm, moderate to high plasticity, no dilatency, low toughness, dominantly clay with few fine grained sands, subrounded grains, no odor, no discoloration.
2		DP-9a				
3						
4						
5						
6		DP-9b			CL	Sandy CLAY , brown (10 YR 4/3), damp, moderate plasticity, no dilatency, contains some subrounded sands, no odor, no discoloration.
7						
8						
9						
10		DP-9c				
11						
12						
13						- Thin lenses of fine grained sands with some clays.
14		DP-9d				
15						
16						
17						
18		DP-9e				
19						- Thin lenses of fat clays with trace sands.
20						
21						
22		DP-9f				
23						
24		DP-9 Groundwater DP-9g			CH	Fat CLAY , dark -gray (10 YR 4/1), damp to moist, soft, very high plasticity, no dilatency, low toughness, trace sands, discolored due to hydrocarbons, moderate to high odor.
25						
26						
27						
28						
29						
30						

Geologic Logs of Landfill Acceptance Borings



GEOLOGIC LOG

Driven Probe Boring

JOB NO.: H9042.C DATE: October 18, 2001
 CLIENT: Harbert Transportat
 LOCATION: 19984 Meekland Avenue, Hayward, California
 LOGGED BY: A. Bierman SAMPLED BY: A. Bierman
 DRILLER: EnProbe (Dennis Ott)
 DRILL METHOD: Hydraulic Driven Large Bore and Macro-Core Probes

BORING #
LAB
DP-1
 Sheet
 1 of 2

Depth (feet)	Sampling Interval Sample Analyzed	Sample Identification & OVA Data (ppmv)	Groundwater Depth	Lithologic Pattern	USCS	SOIL DESCRIPTION & CLASSIFICATION (Lithologic name, color, moisture, density/consistency, grain size%, other descriptors, HC odor.)
0					CH	Former Excavation Footprint: Clayey SAND , very dark grayish brown (10YR 3/2), damp to dry, medium stiff to stiff, slightly friable, 30% fines 60% fine sands, 10% trace fine angular gravels, low plasticity, no odor, no discoloration.
4		DP-1a			SM/SC	-Gradational contact
6		DP-1b			SC	SANDY CLAY , brown (10YR 5/3) with dark gray (10YR 3/1) mottling, damp, moderate plasticity, 70% fines, 30% fine sands, no odor, no discoloration. -Coarsening downward to 40% fine sands, 60% fines, moist -Color changes to olive gray (5Y 4/2), moderate to strong odor. -Moderate to strong odor and discolored olive gray (5Y 4/2).
15		DP-1c			SC-SM	-clay fines diminish, gradational contact.
20		DP-1d			SM	SILTY SAND , olive gray (5Y 4/2), damp to moist, soft to very soft, 70% fine sands 30% silts, moderate odor.
24		DP-1e			SM-CH	-Formation becomes medium stiff, gradational contact.
26		DP-1f			CL	Lean CLAY , olive gray (5Y 4/2), with yellowish brown mottling (10YR 5/4), stiff to very stiff, moderate to low odor. -Groundwater stabilizes at 27.55 feet bgs, rising from 32 feet bgs.
30					CL	-Geologic log continued next page.

4-point composite





GEOLOGIC LOG

Driven Probe Boring

JOB NO.: H9042.C DATE: October 18, 2001
 CLIENT: Harbert Transportation
 LOCATION: 19984 Meekland Avenue, Hayward, California
 LOGGED BY: A. Bierman SAMPLED BY: A. Bierman
 DRILLER: EnProbe (Dennis Ott)
 DRILL METHOD: Hydraulic Driven Large Bore and Macro-Core Probes

BORING #
DP-1
 Sheet
 2 of 2

Depth (feet)	Sampling Interval	Sample Analyzed	Sample Identification & OVA Data (ppmv)	Groundwater Depth	Lithologic Pattern	USCS	SOIL DESCRIPTION & CLASSIFICATION (Lithologic name, color, moisture, density/consistency, grain size%, other descriptors, HC odor.)
30			DP-1f			CL	Lean CLAY , olive gray (5Y 4/2) with yellowish brown mottling (10YR 5/4), damp, stiff to very stiff, moderate to low odor.
31							
32							
33							-Color changes to yellowish brown (10YR 5/4), with olive gray mottling (5Y 4/2), very stiff, low to no odor.
34							
35			DP-1g	▼		CL-SM	-Gradational contact. First encountered groundwater at 35' bgs, rising to 27.5 feet bgs.
36						SM	SILTY SAND to Poorly Graded SAND , greenish gray (5GY 5/1), wet, soft, 70% fine sands, 30% silts, moderate odor, coarsening downward to 90% medium to fine sands, 5% fines, moderate odor.
37							
38						SM	-Abrupt contact.
39							
40			DP-1h			CL	Lean CLAY , brown (10YR 4/3), dry, stiff to very stiff, no odor, no discoloration.
41							-Boring terminated at 40 feet bgs.
42							-Seal boring with portland cement to groundsurface.
43							
44							
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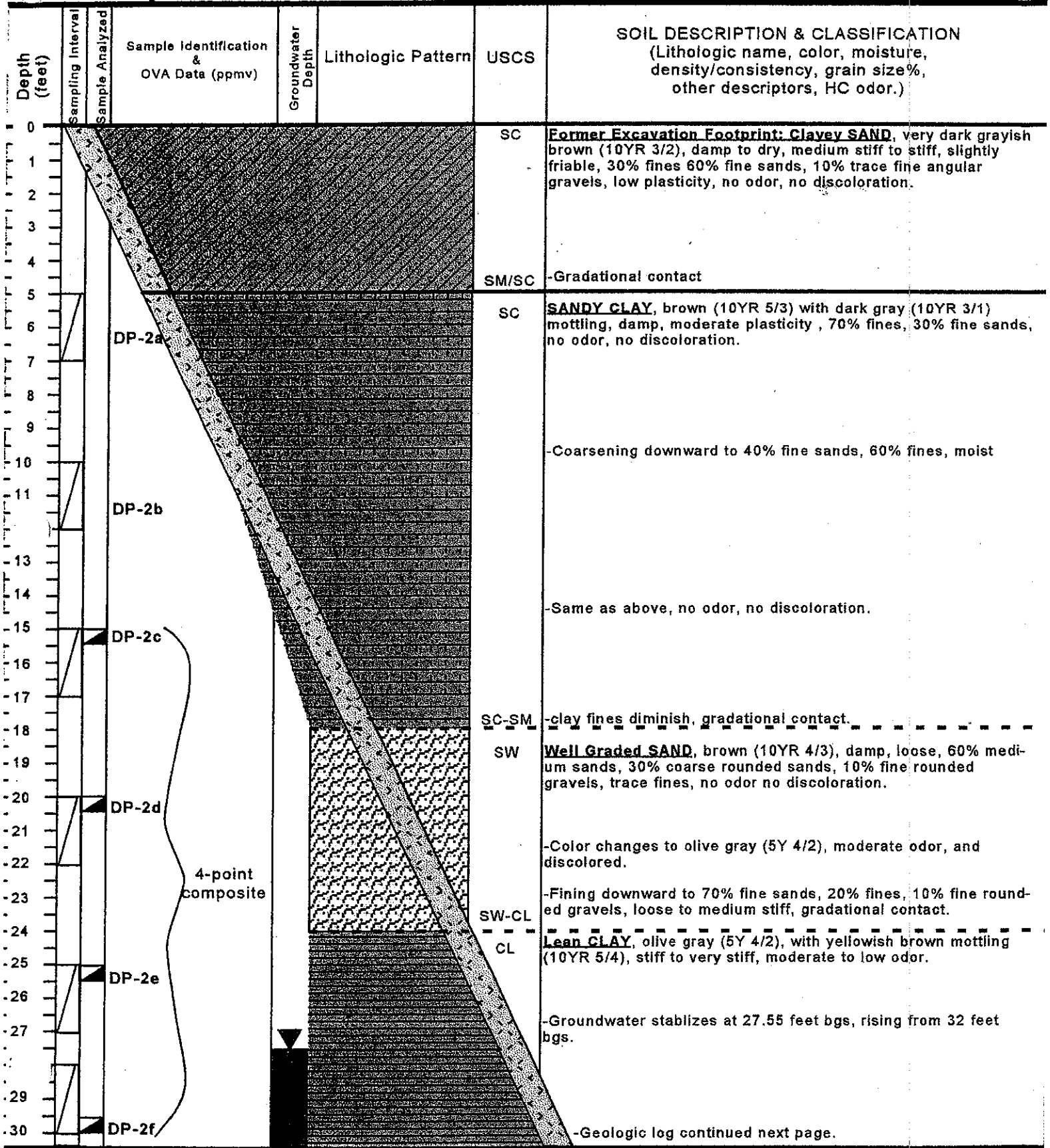
GEOLOGIC LOG

Driven Probe Angle Boring

JOB NO.: H9042.C DATE: October 18, 2001
 CLIENT: Harbert Transportat
 LOCATION: 19984 Meekland Avenue, Hayward, California
 LOGGED BY: A. Bierman SAMPLED BY: A. Bierman
 DRILLER: EnProbe (Dennis Ott)
 DRILL METHOD: Hydraulic Driven Large Bore and Macro-Core Probes

BORING #
LAB
DP-2

Sheet
 1 of 2



-Geologic log continued next page.



GEOLOGIC LOG

Driven Probe Angle Boring

JOB NO.: H9042.C DATE: October 18, 2001
 CLIENT: Harbert Transportation
 LOCATION: 19984 Meekland Avenue, Hayward, California
 LOGGED BY: A. Bierman SAMPLED BY: A. Bierman
 DRILLER: EnProbe (Dennis Ott)
 DRILL METHOD: Hydraulic Driven Large Bore and Macro-Core Probes

BORING #
DP-2
 Sheet
 1 of 2

Depth (feet)	Sampling Interval	Sample Analyzed	Sample Identification & OVA Data (ppmv)	Lithologic Pattern	USCS	SOIL DESCRIPTION & CLASSIFICATION (Lithologic name, color, moisture, density/consistency, grain size%, other descriptors, HC odor.)
30					CL	Lean CLAY , olive gray (5Y 4/2), with yellowish brown mottling (10YR 5/4), stiff to very stiff, moderate to low odor.
31						
32						
33						-color changes to yellowish brown (10YR 5/4), odor decreases to very low to no odor.
34						
35					CL-SC	-Formation increases in moisture, fine sands increase, gradational contact.
36					SC	CLAYEY SAND , yellowish brown (10YR 5/4), very moist to wet, rises to 28 feet bgs, soft to slightly loose, 80% fine sands, 20% fines, no odor, no discoloration.
37			DP-2g			
38						
39						-Boring terminated at 38 feet bgs.
40						-Seal boring with portland cement to ground surface.
41						
42						
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