

**Phase I/II/III Compilation Report
Del Monte Plant No. 35
West and East Parcel
Emeryville, California
Volume 2 of 2**

**Prepared for
Del Monte, USA**

by

**CH2M HILL
March 1992**

Appendix A
Neighboring Properties and
Potential Offsite Sources

Appendix
WINDSHIELD SURVEY

A windshield survey was conducted in the vicinity of Del Monte's Plant No. 35, in Emeryville, California. The addresses of industrial facilities within a one-quarter mile radius of Plant No. 35 were recorded and are presented in Table E-1.

SFR53/074

Table E-1
WINDSHIELD SURVEY
DEL MONTE EMERYVILLE PLANT NO. 35

Name	Map I.D. Number*	Address	Notes
Mac Pherson's	1	1327 Park Avenue	Large warehouse
Integrated Automation	2	1255 Park Avenue Also 4095 Harlan	Large warehouse
Apartments--Besler Building	3	4053 Harlan Street	
Emeryville Industrial Court	4		
a. Automotive Service Co.	4a	4020 Harlan Street	
b. Sea Bright	4b	4026 Harlan Street	
c. Index Records Management	4c	4040 Harlan Street	
Mazda Service	5		
Easy-European Auto Salvage Yard (653-EASY)	6	No number	
Esmar Distributing	7	1215 Park Street	
For Lease	8	1201 Park Avenue	Offices
Brooks Beco	9	4051 Watts Street	Warehouse
Tractor Trailer, Heavy Machinery, etc.	10		
For Lease	11	4058-4066 Watts Street 4053-4065 Emery	Large warehouse
Empty lot	12		Rubble, old drum, garbage

*See Figure E-1 for location.

Table E-1
(Continued)

Name	Map I.D. Number*	Address	Notes
Dunlop Tires	13	4062 Emery Street	
For Lease	14	1145 Park Avenue	Empty
Pepsi-Cola Bottling Company	15	1150 Park Avenue	
Texaco Gas Station	16	4000 San Pablo	
Post Office	17		
Commercial Store	18		
AC Transit	19	From San Pablo to Doyle	Bus service, parking, gas pumps, tank leak--not determined during W.S.
Berkeley Farms	20	San Pablo	Tank leak--not determined during W.S.
a. Mitsubishi Engines	21a	1250 45th and Doyle	Closed
b. Equipment Associates Co., Inc.	21b		For lease
	22	1266-1290 45th St.	Industrial offices
a. PG&E Central Warehouse	23a	4525 Hollis Street	Shipping
b. Open storage yard	23b		Pallets, drums, equipment
PG&E General Construction	24	45th and Hollis	
a. Custom Woodcraft & Plastics F. Halaby, Inc.	25a	4514 Hollis	Cabinet making
b. Beck Electrical Supply	25b	4512 Hollis Street	Drums outside

*See Figure E-1 for location.

Table E-1
(Continued)

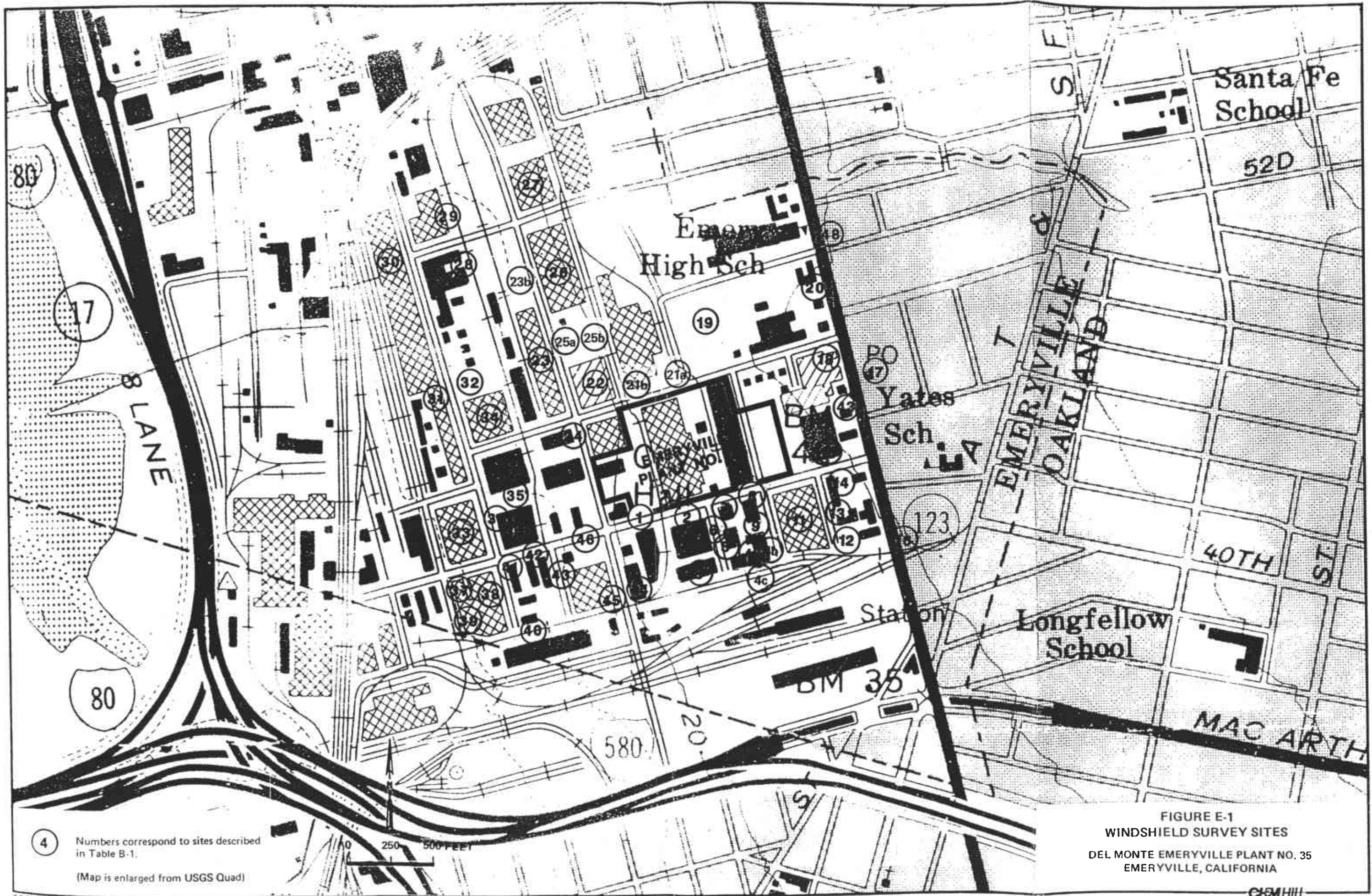
Name	Map I.D. Number*	Address	Notes
Westvaco Distribution Company	26	5000 Hollis	
General Electric Supply Company	27	Corner of Hollis and 53rd	
Emeryville Research & Development Center	28	4560 Horton Street	Chiron, Cetus, Aquanautics, Espresso
Cetus	29	1400 53rd	
	30		Old and new converted ware- house and offices
P.T. Hutchison Company, Ltd.	31	4525 Horton Street	Started 1960, chemicals, process equipment, coating, formulating
Tulloch Construction (could be name of company)	32	Horton Street	Constructing new building
Sherwin Williams Coatings	33	1450 Sherwin Avenue	Drums, vertical tanks, processing
	34 & 35		Unmarked warehouse type buildings
Charles Lowe Company/Chromex	36	1400 Park Avenue	
Available	37		Large warehouse
Western Brake	38	1461 Park Avenue	

*See Figure E-1 for location.

Table E-1
(Continued)

Name	Map I.D. Number*	Address	Notes
Bon Motif Company	39	No number Hubbard	
	40		Old warehouse
Puls Plywood & Lumber Sales	41	4050 Horton	
Electro-Coatings, Inc. Plant 22	42	1421 Park Avenue	Chromium, Hexavalent compounds on public notice on sign
WDCO	43	4064 Holden	
Ransome Comp. Construction Engineers	44	4030 Hollis Street	
Industrial Safety Supply	45	4041 Hollis Street	
Lindco Associates	46	1350 Park Avenue	
Fire Department	47	4431 San Pablo Avenue	Gas pumps
Accurate Manufacturing Company	48	4770 San Pablo	

*See Figure E-1 for location.



Section 4
POTENTIAL OFFSITE SOURCES

To determine whether potential offsite sources of organic chemicals exist in the vicinity of Plant No. 35, a windshield survey was conducted. The names of industrial facilities that were located within a one-quarter mile radius of Plant No. 35 were recorded and are presented in Appendix E. Regulatory agency files for these facilities were reviewed to determine whether chemicals from these facilities have been released. The agencies contacted are included in Appendix F. If the agency files contained data on chemicals released from facilities outside of the one-quarter mile radius, the information was also collected and reviewed.

This section presents a summary of the information collected from the SFRWQCB on leaking underground storage tanks, the DHS on hazardous waste sites, and the U.S. EPA Region IX on hazardous waste generators and treatment, storage, and disposal (TSD) facilities.

LEAKING UNDERGROUND STORAGE TANKS

The SFRWQCB was contacted for information regarding leaking underground storage tanks at the facilities identified during the windshield survey. This information is summarized in Table 7.

Of the sites listed in Table 7, three--AC Transit, Berkeley Farms, and Kaiser Engineers--are located upgradient of the site. AC Transit and Berkeley Farms are located about one-half mile upgradient of Plant No. 35. There was no TPH detected in groundwater at the AC Transit site and there was no groundwater impact at the Berkeley Farms site due to the fuel leak. No information was available about the fuel leak at Kaiser Engineers.

HAZARDOUS WASTE SITES

The known hazardous waste sites in Alameda County, California, listed by the DHS as State or Federal Superfund Sites, which are within 3 miles of the Plant No. 35 are presented in Table 8. None of the sites listed in Table 8 are upgradient of Plant No. 35. Therefore, impact to soil or groundwater at Plant No. 35 from these sites would not be likely.

Table 7
SAN FRANCISCO RWQCB FILE REVIEW SUMMARY

Site	Address	Position Relative To Plant No. 35	Contamination	Cause of Contamination	Degree of Contamination
Electro-Coating	1421 Park Avenue	900 ft. southwest	Soil: Total Chromium (40 - 2030 ppm) Water: Hexavalent Chromium (ND - 892 ppm) TCE (ND - 580 ppm) PCE (21 - 42 ppm)	Chromium Waste Storage Pit	Chromium contamination at concentrations greater than 0.05 ppm in shallow groundwater extend 1300 feet downgradient to Hubbard Street. TCE and PCE sampling conducted in 1985.
PG&E	4525 Hollis Street	2200 ft. northwest	Soil: PCB (ND - 170 ppm) Pyrene 19.2 ppm Fluoranthene (ND - 17.1 ppm) Toluene (ND - 0.107 ppm) Methylene Chloride (ND - 1.61 ppm) Heavy Metals (As, Cd, Cr, Cu, Pb, Hg, Ni, Ti, Zn) Water: As (0.113 ppm) Pb (0.051 ppm) Cd (0.011 ppm) Cr (0.06 - 0.08 ppm)	Multiple Sources	Soil and groundwater contamination known
Berkeley Farms	1313 53rd Avenue	1750 ft. northeast	Soil: TPH (ND - 2.8 ppm)	Fuel Leak	No water quality impact or threat
A.C. Transit	47th and San Pablo 45th and San Pablo	1750 ft. northeast 1300 ft. northeast	Soil: TPH (240 - 300 ppm) Water: TPH (<1 ppm) Benzene (0.06 ppm)	Fuel Leak	Identified groundwater and soil impact in an area of limited groundwater use
Kaiser Engineers	1140 45th Street	500 ft. northeast	No Information	Fuel Leak	Identified soil impact in an area of limited groundwater use
Ransome Co.	4030 Hollis Street	800 ft. south	Soil: Contaminated with unknown compound	Fuel Leak	Identified soil impact in an area of limited groundwater use
Shell	4250 Horton Street	1300 ft. west	Tank and soil removed No contamination information	Fuel Leak	Identified soil impact in an area of limited groundwater use
City of Emeryville	1420 45th Street	900 ft. northwest	Water: TPH (190 ppm) Benzene (160 ppb)	Fuel Leak	Groundwater contamination in an area of limited groundwater use
Del Monte	1250 Park Avenue	Adjacent, west	Soil: TCE (ND-0.63 ppm) DCE (ND-0.07 ppm) Phenol (0.2 ppm) Chloroform (0.15 ppm) Water: TCE (1.4 ppm) DCE (0.29 ppm) PCE (0.02 ppm) VC (0.078 ppm)	Tank Leak	Groundwater contamination in an area of limited groundwater use

Notes:

TPH = Total Petroleum Hydrocarbons	PCB = Polychlorinated Biphenyls	Pb = Lead
TCE = Trichloroethylene	As = Arsenic	Hg = Mercury
PCE = Perchloroethylene	Cd = Cadmium	Ni = Nickel
DCE = 1,2-Dichloroethylene	Cr = Chromium	Ti = Titanium
VC = Vinyl Chloride	Cu = Copper	Zn = Zinc

Table 8
STATE AND FEDERAL SUPERFUND SITES
WITHIN 3 MILES OF PLANT NO. 35

<u>Site Location</u>	<u>Position Relative to Plant No. 35</u>
Pacific Gas & Electric 4525 Hollis Street Emeryville, California 94608	2,200 ft northwest
Electro-Coatings 1421 Park Avenue Emeryville, California 94617	900 ft southwest
Westinghouse Electric Company 5899 Peladeau Street Emeryville, California 94608	1 mile northwest
Wareham Properties 2900 Fifth Street and 700 Heinz Avenue Berkeley, California 94710	3 miles northwest

The soil at the Pacific Gas and Electric site contains polychlorinated biphenyls (PCBs) and lead, and the groundwater contains heavy metals which may have originated at the site. The degree and extent of offsite contamination is unknown.

The Electro-Coating site is an inactive plating facility which previously disposed of chromium waste in an onsite disposal pit. The soil and groundwater in the vicinity of the site contains hexavalent chromium, and groundwater contamination extends west to Hubbard Street. The groundwater also contains chlorinated solvents including up to 580 ppm of TCE.

The Westinghouse Electric Company site is a 2-acre, undeveloped, vacant area. Operations at this facility included maintenance and repair of electrical apparatus, including transformers containing PCB fluids. Some of these fluids leaked onto or were discharged on the site.

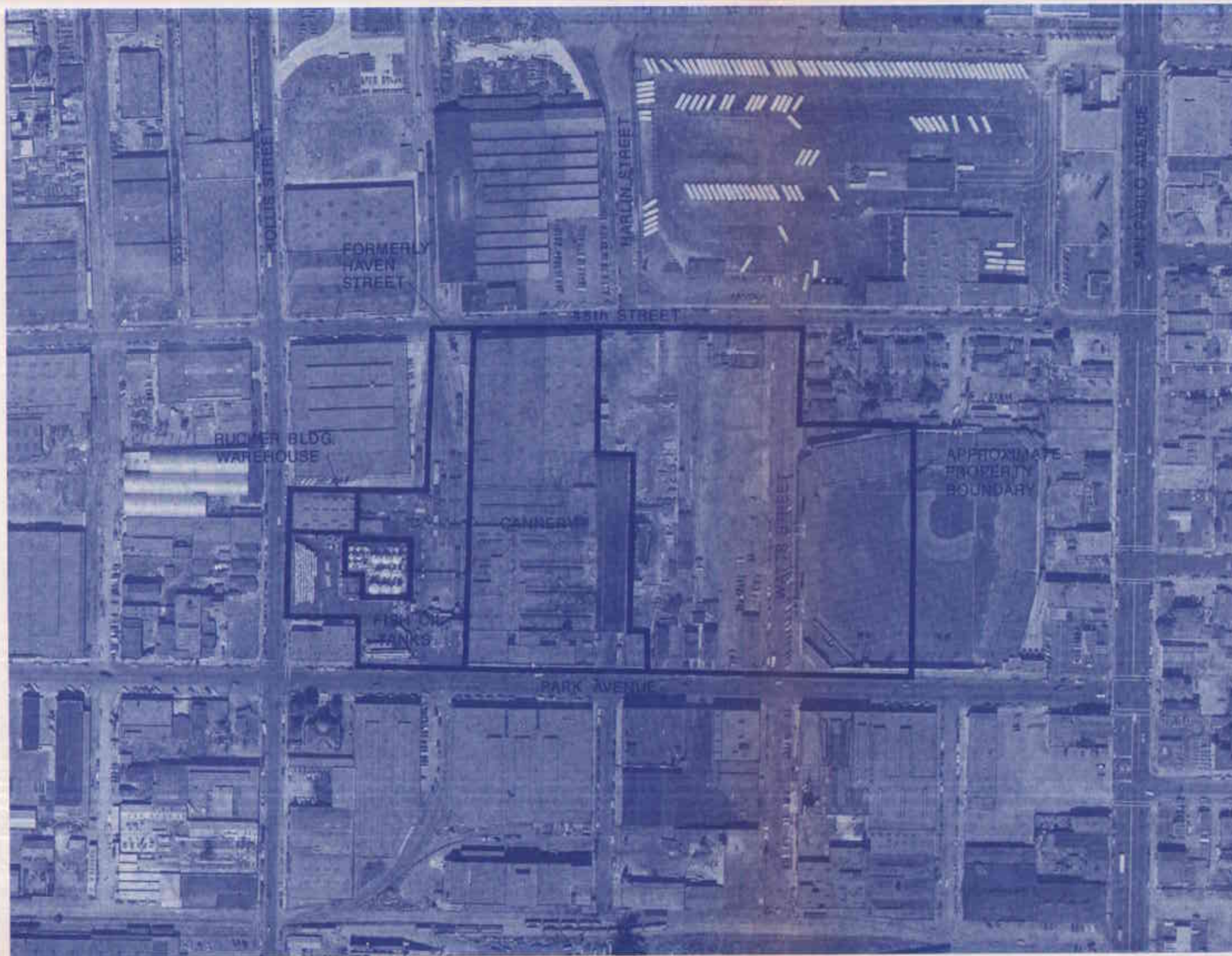
The Wareham Properties site was formerly used for the production of vegetable and food oils. Numerous drums of nickel catalyst and some acids and bases were contained on the site.

HAZARDOUS WASTE GENERATORS AND TSD FACILITIES

EPA Region IX was contacted for information on hazardous waste generators and TSD facilities in the vicinity of Plant No. 35. Only one TSD facility was identified within 3 miles of the plant: Pfizer, Inc. at 4650 Shellmound Street, Emeryville. This site is located about 3/8 to 1/2 mile northwest of Plant No. 35.

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Appendix B
Aerial Photographs



SOURCE: PACIFIC AERIAL SURVEYS
OAKLAND, CALIFORNIA

9-16-49 AERIAL PHOTOGRAPH
DEL MONTE EMERYVILLE PLANT NO. 35
EMERYVILLE, CALIFORNIA

1" = 220'

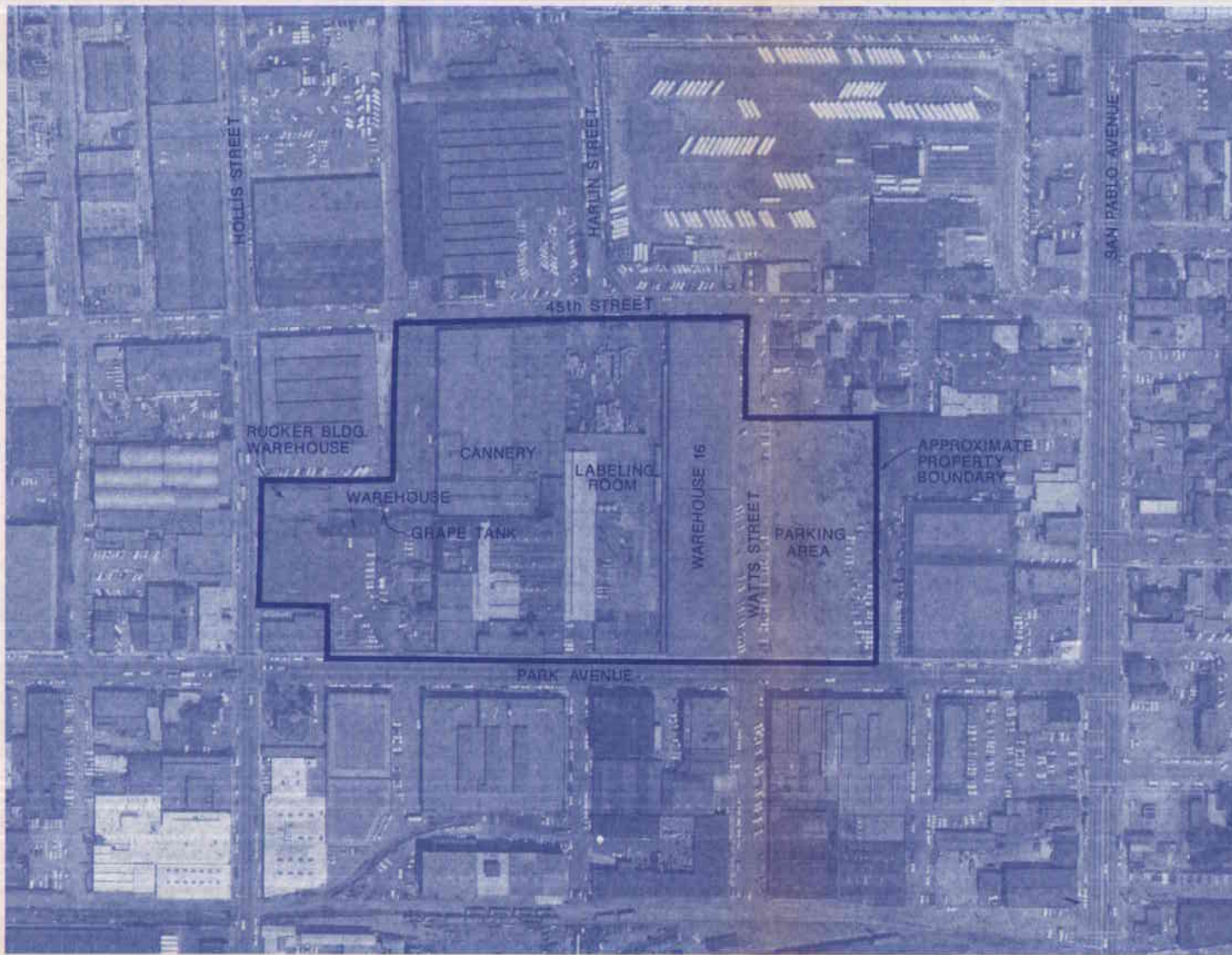




SOURCE: PACIFIC AERIAL SURVEYS
OAKLAND, CALIFORNIA

FIGURE 4
5-3-57 AERIAL PHOTOGRAPH
DEL MONTE EMERYVILLE PLANT NO. 35
EMERYVILLE, CALIFORNIA

1" ≈ 220'

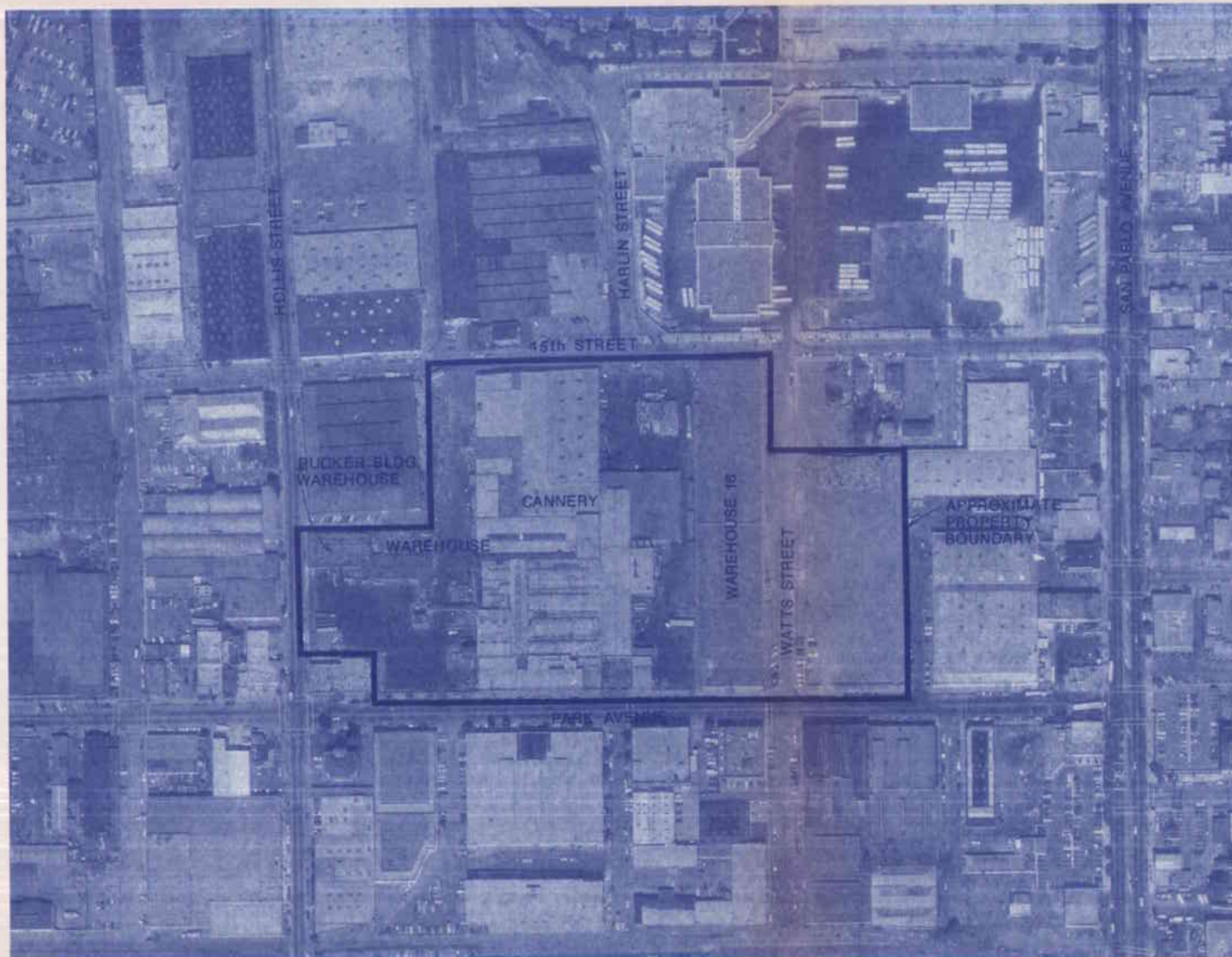


SOURCE: PACIFIC AERIAL SURVEYS
OAKLAND, CALIFORNIA

5-2-69 AERIAL PHOTOGRAPH
DEL MONTE EMERYVILLE PLANT NO. 35
EMERYVILLE, CALIFORNIA

1" ≈ 220'





SOURCE: PACIFIC AERIAL SURVEYS
OAKLAND, CALIFORNIA

3-30-88 AERIAL PHOTOGRAPH
DEL MONTE EMERYVILLE PLANT NO. 35
EMERYVILLE, CALIFORNIA

1" ≈ 220'

Appendix C
State of California Health and
Safety Code, Chapter 6.8 Hazardous Substance
Account, Section 25359.7

Appendix
STATE OF CALIFORNIA HEALTH AND SAFETY CODE
CHAPTER 6.8 HAZARDOUS SUBSTANCE ACCOUNT
SECTION 25359.7

<25359.7. (Operative until July 1, 1991) Notice to buyer of real property of hazardous substance located on or beneath property; Notice to owner by lessee or renter

(a) Any owner of nonresidential real property who knows, or has reasonable cause to believe, that any release of hazardous substance has come to be located on or beneath that real property shall, prior to the sale of the real property, give written notice of that condition to each buyer of the real property. Failure of the owner to provide written notice when required by this subdivision to each buyer shall subject the owner to actual damages and any other remedies provided by law. In addition, where the owner has actual knowledge of the presence of any hazardous substance and knowingly and willfully fails to provide written notice to the buyer, the owner is liable for a civil penalty not to exceed five thousand dollars (\$5,000) for each separate violation.

(b) Any lessee or renter of real property who knows, or has reasonable cause to believe, that any hazardous substance has come to be located on or beneath that real property shall, upon discovery by the lessee or renter of the presence or suspected presence of the hazardous substance, give written notice of that condition to the owner of the real property.

(1) Failure of the lessee or renter to provide written notice when required by this subdivision to the owner shall make the leasehold or rental agreement voidable at the discretion of the owner, except that this paragraph shall not apply to lessees and renters of property used exclusively for residential purposes.

(2) If the lessee or renter has actual knowledge of the presence of any hazardous substance and knowingly and willfully fails to provide written notice when required by subdivision to the owner, the lessee or renter is liable for a civil penalty not to exceed five thousand dollars (\$5,000) for each separate violation.

SFR53/068

Appendix D
Geophysical Report

December 16, 1988

CH2M-Hill
6425 Christie Ave., Suite 500
Emeryville, California 94608

Attention: Ms. Susan Coleman

Gentlemen:

This letter presents the results of a geophysical investigation performed by NORCAL Geophysical Consultants, Inc. at the Del Monte Corporation Plant No. 35, in Emeryville, California. The field survey was performed on December 1, 2, and 6, 1988 by William E. Black and Martin Miele, NORCAL Geophysicists. The work was authorized under CH2M-Hill Purchase Order Number SF027035.A0.FW.

SITE DESCRIPTION

The subject facility is located on the north side of Park Avenue, between Hollis and Watts Streets. The geophysical surveys were performed in the open spaces around and between the buildings as allowed by access. These areas consist of storage yards, receiving yards, and parking areas that are frequently trafficked by loaders, fork-lifts, and large tractor trailer trucks. The survey areas are typically concrete, asphalt, or gravel paved. Portions of these areas are occupied by machinery, vehicles, debris, etc. The area of investigation is divided into 11 separate sites. The location of each site is shown on the Location Map, Plate 1.

PURPOSE

The geophysical investigation has two main objectives. The first objective is to determine the orientation of known underground storage tanks located in Sites 1 and 2 (Plate 1). The second objective is to scan sites 2 through 11 for possible unknown UST's.

SCOPE OF WORK

We used the electromagnetic (EM) method to explore the relatively large sites (3, 6 - 11) for anomalous variations in the electrical conductivity of the subsurface. We used ground penetrating radar (GPR) to determine if any of the EM anomalies defined on these sites are caused by UST's. We also used GPR to determine the orientation of four known UST's at Site 1 and one suspected UST at Site 2. At Site 4 we explored for UST's using GPR alone.



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METHODOLOGY

Ground Penetrating Radar

GPR is a geophysical method used to obtain a continuous reflection profile (cross-section) of shallow subsurface features or conditions. Electromagnetic pulses are radiated into the ground from a transducer (antenna) as it is moved along a traverse. Portions of the radar signal are reflected back to the surface from interfaces of different materials. The reflected signals are received by the same transducer and are printed-out on a graphical recorder. Typically, GPR is most sensitive to buried metal objects. However, non-metallic objects can also be detected as well as changes in material types such as the interface between native material and backfill.

The resolution and depth of penetration of the radar system depends on the operating frequency of the antenna and the electrical resistivity of the ground. The higher the antenna frequency, the better the resolution but the depth of penetration is reduced. The depth of penetration of any antenna is greatly effected by the site resistivity. As the resistivity decreases so does the depth of penetration. Therefore, site conditions such as saturated clays or shallow groundwater can severely limit the performance of the GPR system. For this survey we used a Geophysical Survey Systems, Inc. SIR-3 ground penetrating radar system with a 500 Megahertz antenna.

Terrain Conductivity

We measured the electrical conductivity of the subsurface using the electromagnetic induction method (EM). The EM method utilizes a system with two coils and a fixed coil separation. One of these coils transmits a time-varying electromagnetic signal (primary magnetic field) which in turn creates a secondary magnetic field in the subsurface materials. This secondary signal is complex and has both quadrature and in-phase components which are detected by the receiver coil. The quadrature component has an amplitude that is proportional to the conductivity of the subsurface materials. The instrumentation analyzes the received signal and provides a direct read-out of conductivity in millimhos/meter (mmhos/m). Since the measured values represent the conductivities of a volume of earth rather than specific layers, they are referred to as terrain conductivities.



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The instrumentation used in this investigation consists of a Geonics EM31-DL ground conductivity meter. The EM31 has a fixed coil separation of 12 feet. This results in a depth of investigation of approximately 15 to 20 feet. However, the actual investigation depth is dependent upon local site conditions.

DATA ACQUISITION

The locations of the 11 sites we surveyed are shown on Plate 1. Because of obstacles such as vehicles, machinery, drums, pallets, etc., it was not possible to survey the entire extent of each site. The portions of each site that were accessible to EM surveying without interference are denoted by shading. Where GPR was used alone, the locations of the GPR profiles are shown. This is with the exception of Sites 1 and 2 which are too small at the scale of the Location Map to display the profiles.

Our typical procedure in exploring a site for UST's, was to scan the accessible portion of the site with EM traverses spaced at 10 ft. intervals. On each traverse, we would observe the analog read-out of the EM-31 as the instrument was carried at hip level. Wherever anomalous conditions were encountered, a mark was placed on the ground surface. Any anomalies that did not appear to be part of a pipeline or utility alignment were then investigated in more detail using GPR.

At Sites 1 and 2 we performed GPR profiles over the known (or suspected) location of the UST's to define their boundaries. The interpreted boundaries were then marked on the pavement providing an indication of the UST's orientation.

At Site 4, the close proximity of metal objects stored on the site precluded the use of EM. Therefore, GPR profiles were used to explore for UST's.

DATA ANALYSIS

Our GPR data analysis consisted of an on-site examination of the graphical records for reflection patterns indicative of UST's. The locations of GPR anomalies interpreted as possible UST's were marked on the ground surface using indelible paint.

The EM31 system displays terrain conductivity directly in units of millimhos/meter. No data reduction is required. The locations where anomalous variations in the displayed value were observed were marked immediately on the ground surface.



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RESULTS

Known, suspected, and/or interpreted UST's were delineated only at Sites 1 - 5. The only EM and GPR anomalies detected at Sites 6 - 11 appear to be related to buried pipelines and utilities. Our findings at Sites 1 - 5 are described in the following paragraphs.

Site 1

Four known UST's are indicated by fill pipes and metal covers. The GPR data indicates that these tanks are about 2 ft. wide, 5 to 6 ft. long, and are oriented north-south. The interpreted perimeters of the four UST's were marked on the ground surface.

Site 2

A single UST is reportedly located at this site. Although there is no visible fill pipe or inspection covers, there is a vent pipe. The GPR data indicate a buried object with a signature similar to a UST. This object is 4 ft. wide, 9 ft. long, and is oriented east-west. The interpreted perimeter of the suspected UST was marked on the ground surface.

Site 3

The EM profiles delineated numerous anomalies. Most of these occur along linear alignments, suggesting that they are caused by pipelines or utilities. This was confirmed by several GPR scans. However, an isolated buried object delineated by the EM and GPR data near the south central portion of the site, may indicate a UST. The perimeter of this object, which is 5 ft. square in plan view, was marked on the ground surface and labeled "A". The approximate location of this feature is shown on Plate 1.

Site 4

The GPR data resolved two anomalous areas at this site. One of these appears to be a buried object that is 5 ft. wide, 10 ft. long, and is oriented in an east-west direction. The approximate location of this anomaly, also labeled "A", is shown on Plate 1. The other anomaly has a GPR signature similar to a backfilled excavation and may indicate an area where a UST has been removed. It is 6 ft. wide and 20 ft. long but has an irregular shape in plan view. The approximate location of this anomaly, labeled "B", is shown on Plate 1. The interpreted perimeters of both areas were marked on the ground surface.



CH2M-Hill
December 16, 1988
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Site 5

The EM traverses resolved numerous conductivity anomalies at this site. However, most of these occur along linear trends and probably represent pipeline or utility alignments. GPR scans performed over some of these anomalies did indicate buried pipelines. However, the GPR data also resolved a rather large area, approximately 25 ft. square, where the asphalt is underlain by closely spaced rebar. Since concrete slabs overlying UST's are commonly heavily reinforced, this may indicate the presence of a UST beneath the reinforced area. The interpreted perimeter of this area, labeled "rebar", was marked on the ground surface. This feature is not shown on Plate 1.

STANDARD CARE AND WARRANTY

The scope of NORCAL's services for this project consisted of using geophysical techniques to explore for underground storage tanks. The accuracy of our findings are subject to specific site conditions and limitations inherent to the technique used. We performed our services in a manner consistent with the level of skill ordinarily exercised by members of the profession currently employing similar methods. No other warranty with respect to the performance of services expressed or implied is made by NORCAL.

We appreciate the opportunity to provide our services to CH2M-Hill on this project. Please call us if there are any questions.

Yours very truly,

NORCAL Geophysical Consultants, Inc.

William E. Black
Geophysicist GP-843

WEB/jh

Enclosures: Plate 1

Appendix E
Soil Boring Logs

WELL COMPLETION DETAIL

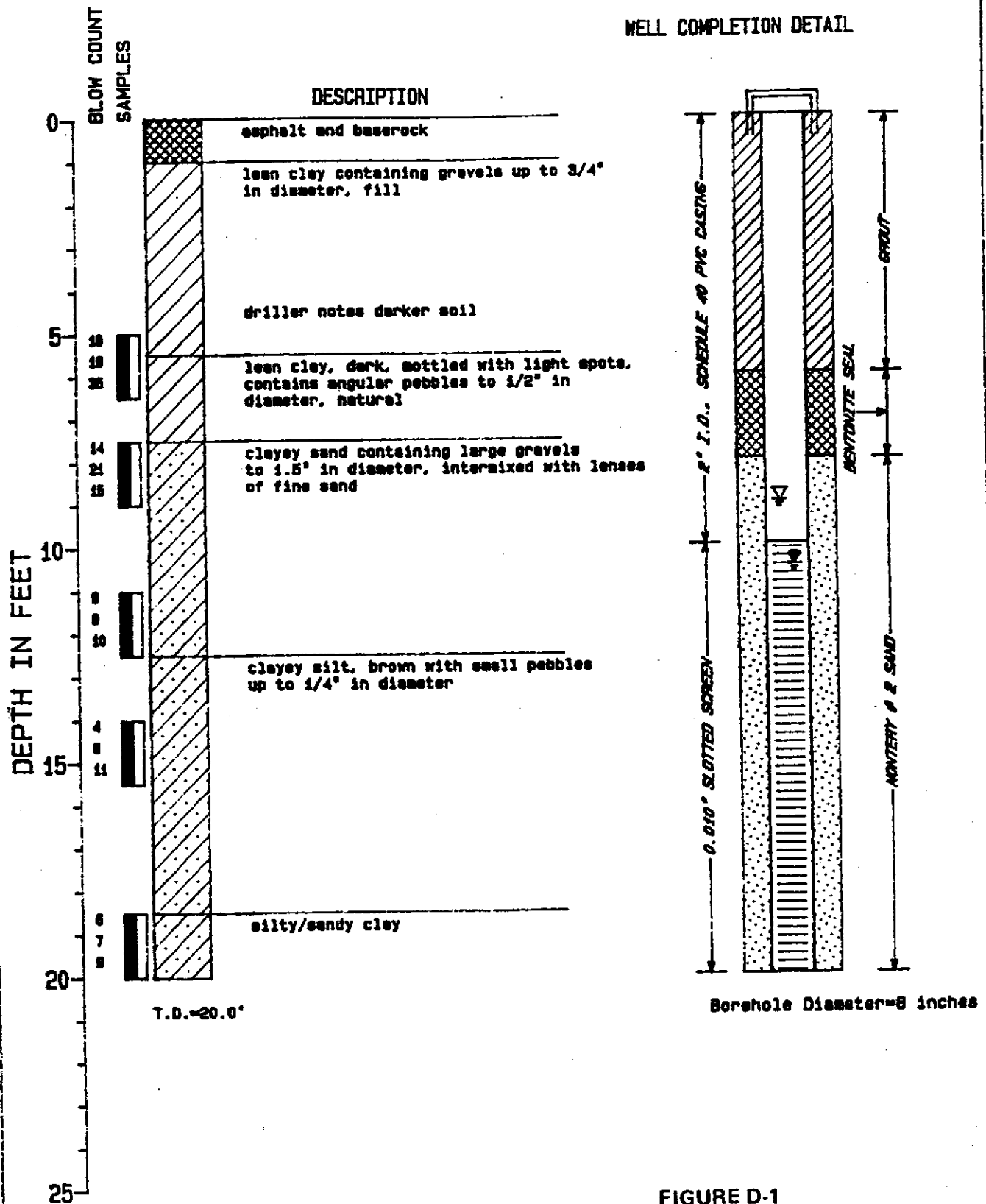


FIGURE D-1

▽ = Water level first encountered

⊖ = Water level after development

MW1

DEL MONTE EMERYVILLE PLANT NO. 35

Date Completed: 12/7/88

Top of casing elevation (MSL) = 20.79 FT

SF027036.A0.FW

WELL COMPLETION DETAIL

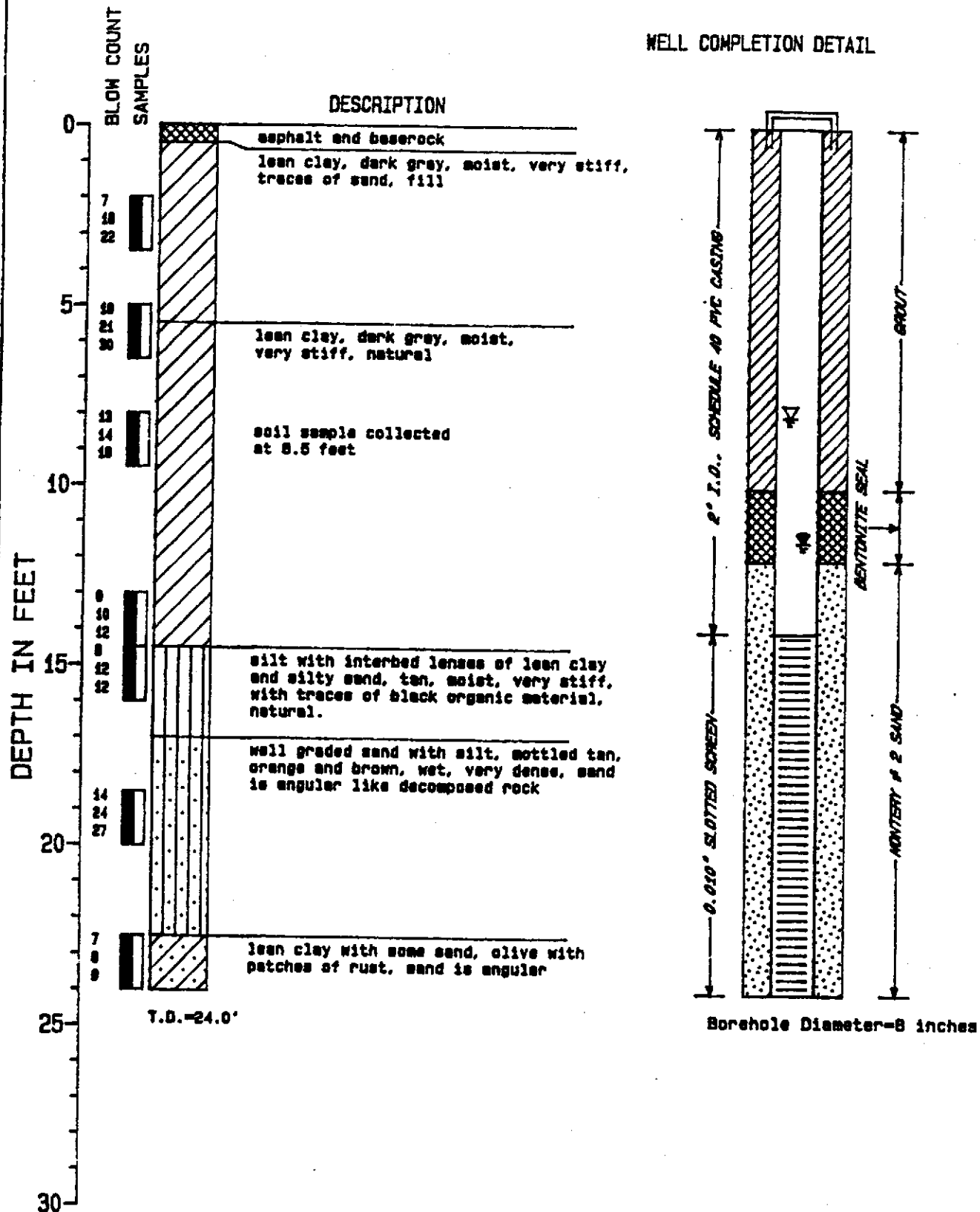


FIGURE D-2

▽ = Water level first encountered
 ● = Water level after development

MW2
 DEL MONTE EMERYVILLE PLANT NO. 35
 Date Completed: 12/5/88
 Top of casing elevation (MSL) = 24.47 FT
 SF027035.A0.FW

WELL COMPLETION DETAIL

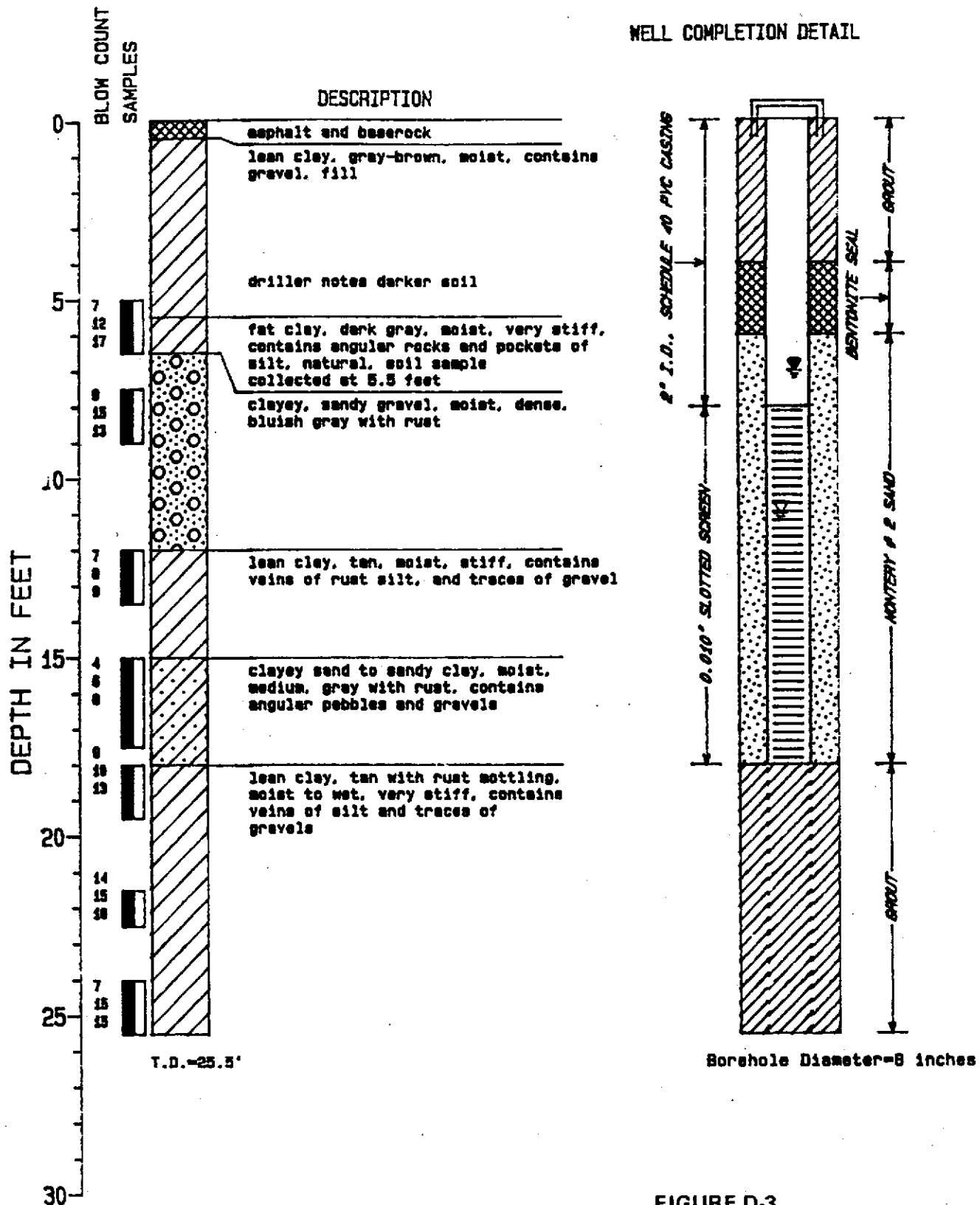


FIGURE D-3

▽ = Water level first encountered
 ◊ = Water level after development

MW3
 DEL MONTE EMERYVILLE PLANT NO. 35
 Date Completed: 12/6/88
 Top of casing elevation (MSL) = 23.17 FT
 SF027035.A0.FW

WELL COMPLETION DETAIL

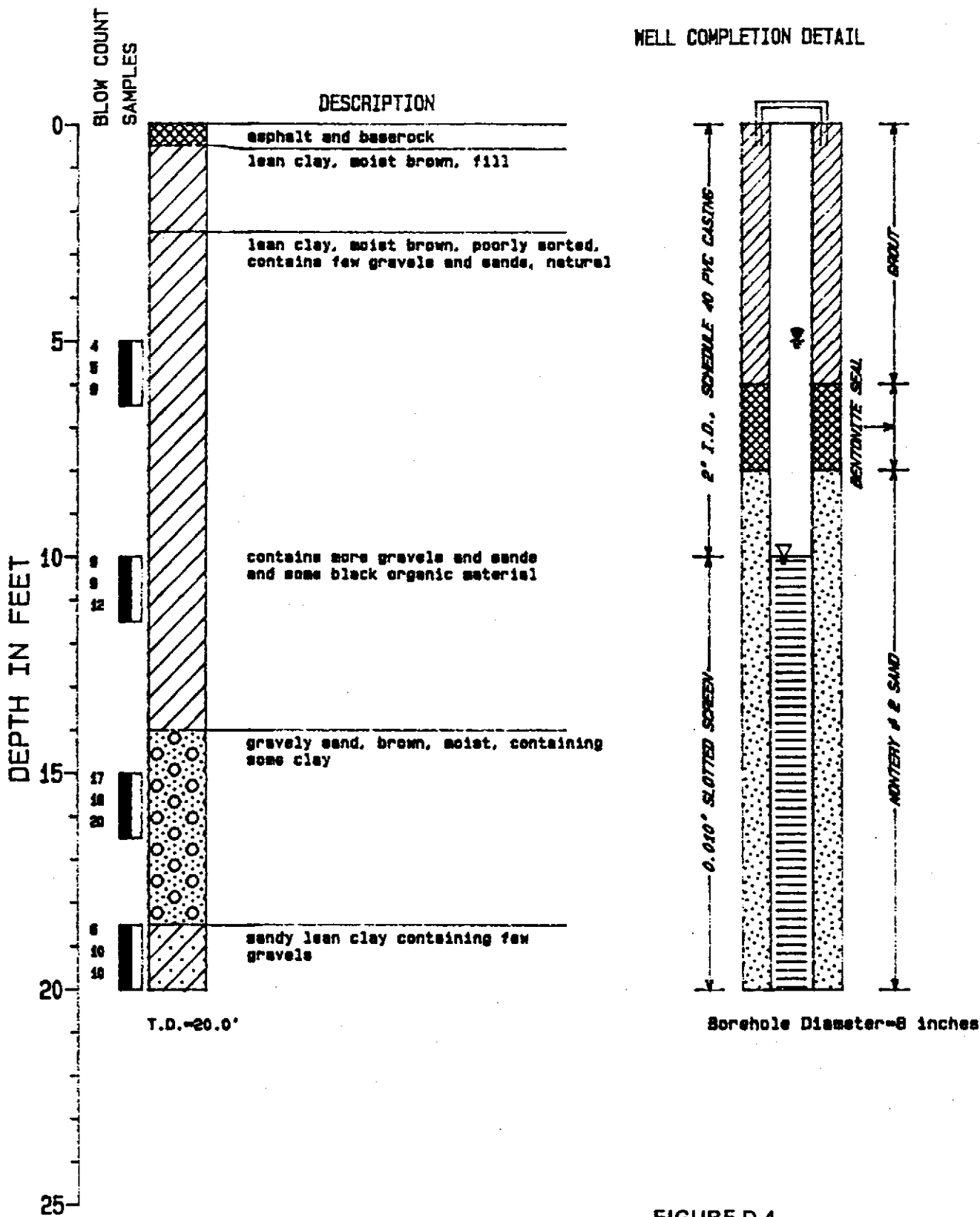


FIGURE D-4

▽ = Water level first encountered

◻ = Water level after development

MW4

DEL MONTE EMERYVILLE PLANT NO. 35

Date Completed: 12/8/88

Top of casing elevation (MSL) = 28.81 FT

SF027035.A0.FW

WELL COMPLETION DETAIL

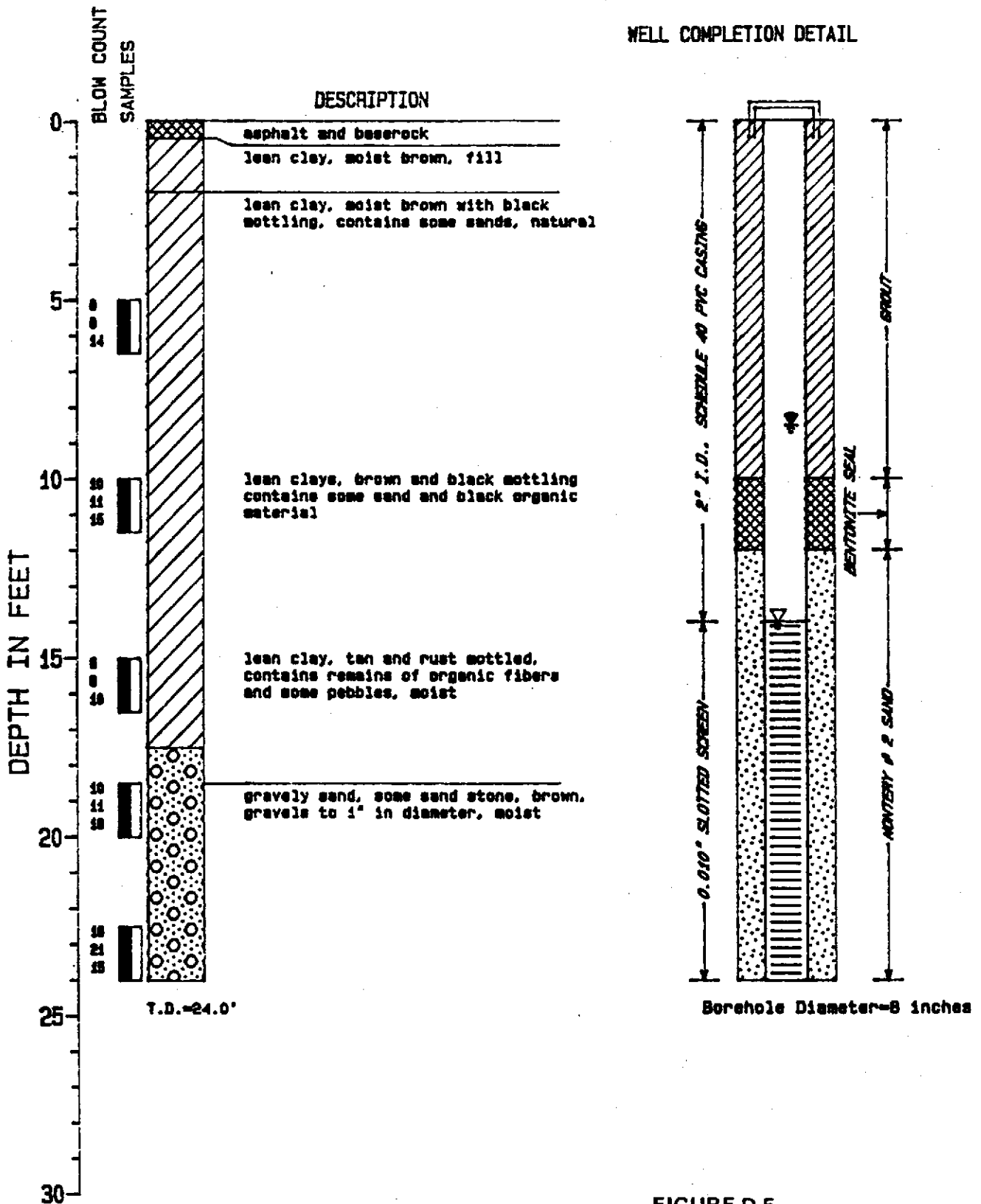


FIGURE D-5

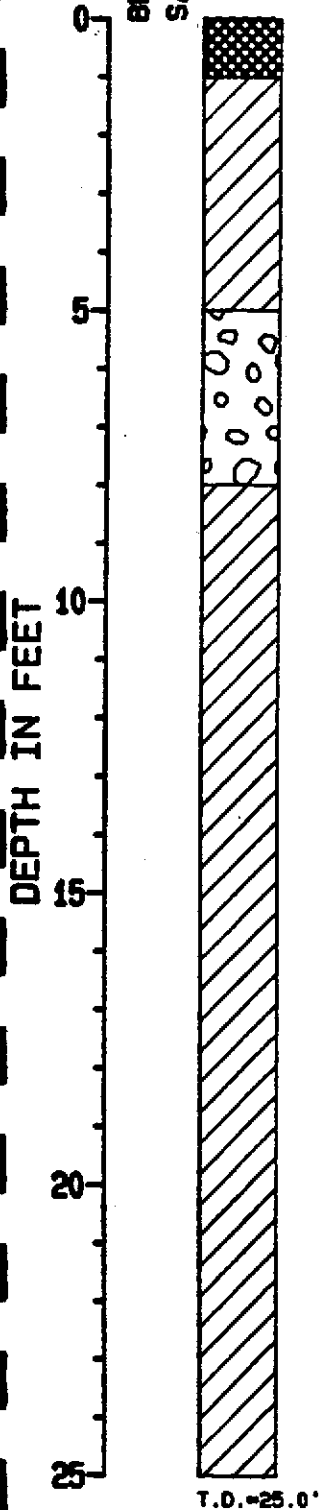
▽ - Water level first encountered
 ▽ - Water level after development

MW5
 DEL MONTE EMERYVILLE PLANT NO. 35
 Date Completed: 12/7/88
 Top of casing elevation (MSL) = 36.97 FT
 SF027035.A0.FW

BLOW COUNT
SAMPLES

DESCRIPTION

WELL COMPLETION DETAIL



ASPHALT

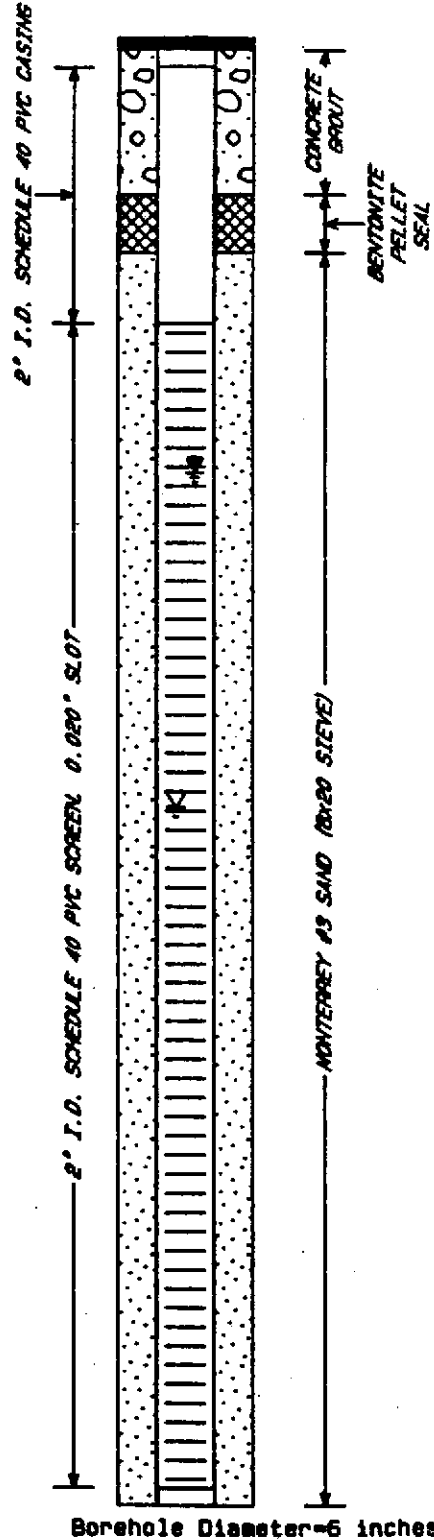
LEAN CLAY, black, soft, possibly silty (day mud) (CL)

WELL-GRADED GRAVEL WITH CLAY, 5-10 mm diameter, gray to brown, "pee gravel" backfill (GW-SC)

SILTY CLAY, green-gray, color may be from gasoline, gasoline odor evident (CL-ML)

Change to brown, moist

LEAN CLAY, brown and gray mottled, firm to stiff (CL)



▽ - Water level first encountered

▽ - Water level after development

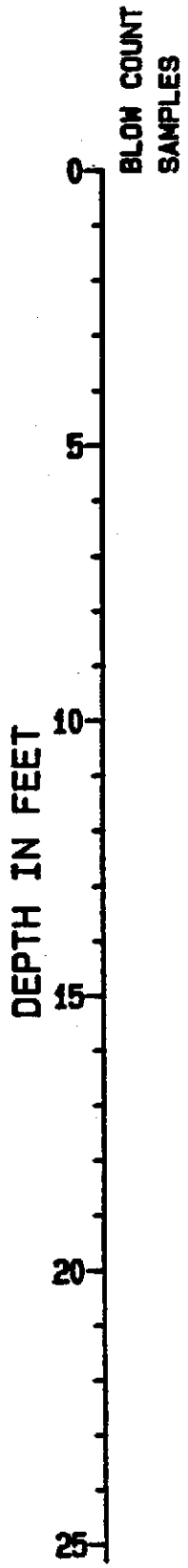
MW7

Del Monte Emeryville Plant No. 35

Date Completed: 05/03/89

Top of casing elevation (MSL) = -22.38

8F027269.A0.6W



DESCRIPTION

WELL COMPLETION DETAIL

CONCRETE

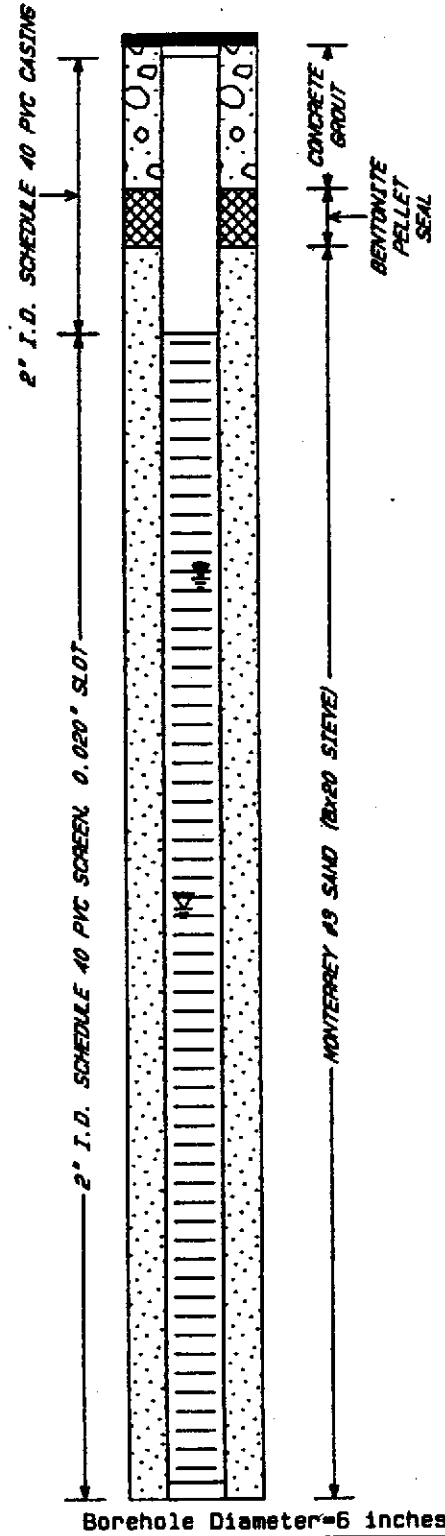
LEAN CLAY, black, soft, possibly silty (bay mud) (CL)

Change to light brown, with some fine gravel to 6 mm diameter.

SILT, tan to brown, soft, saturated (ML)

LEAN CLAY, tan, firm to soft, with small amount of silt (CL)

Change firm to stiff clay with some very coarse sand (to 3 mm diameter)



▽ = Water level first encountered

⊖ = Water level after development

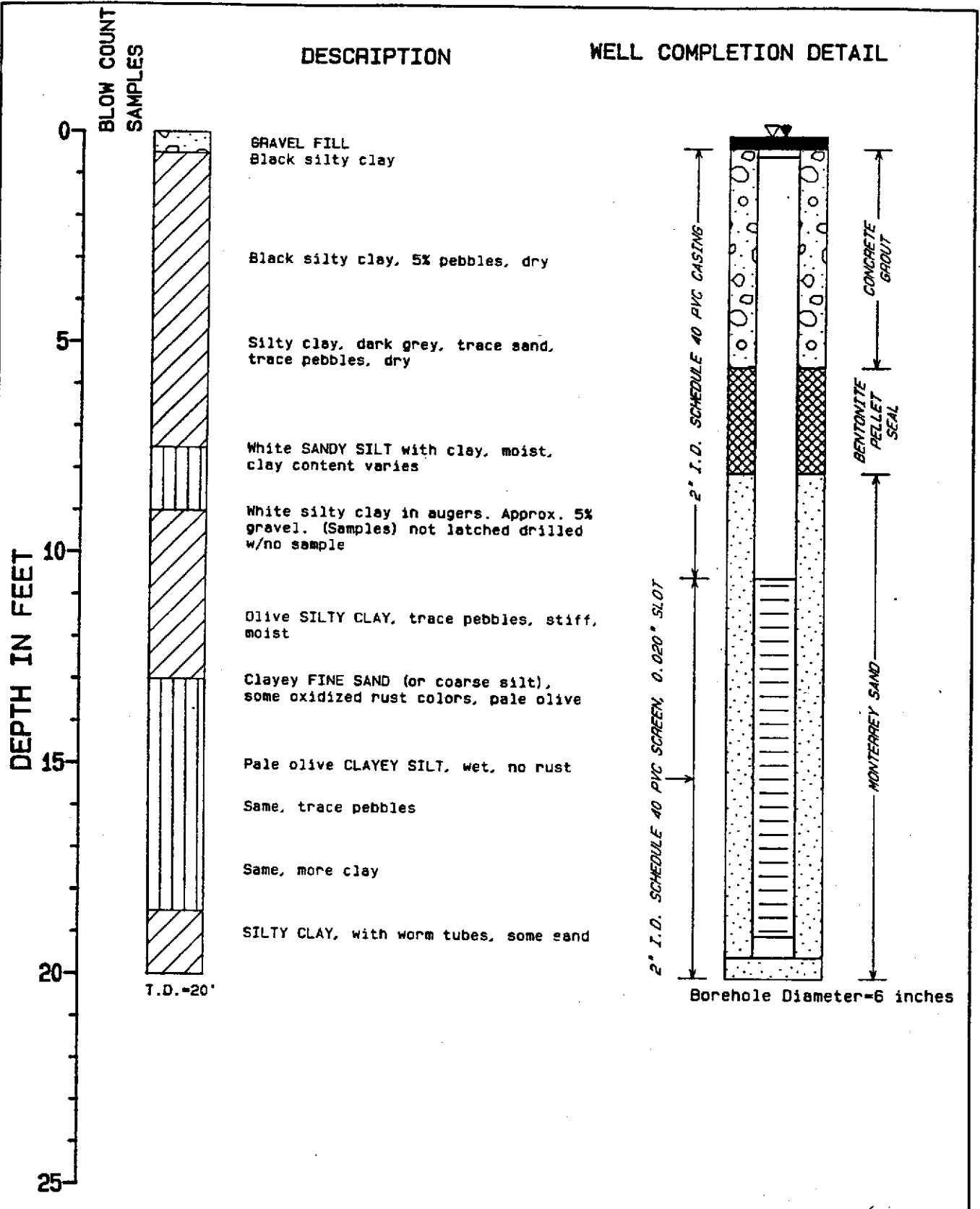
MWB

Del Monte Emeryville Plant No. 35

Date Completed: 05/03/89

Top of casing elevation (MSL) = -21.72

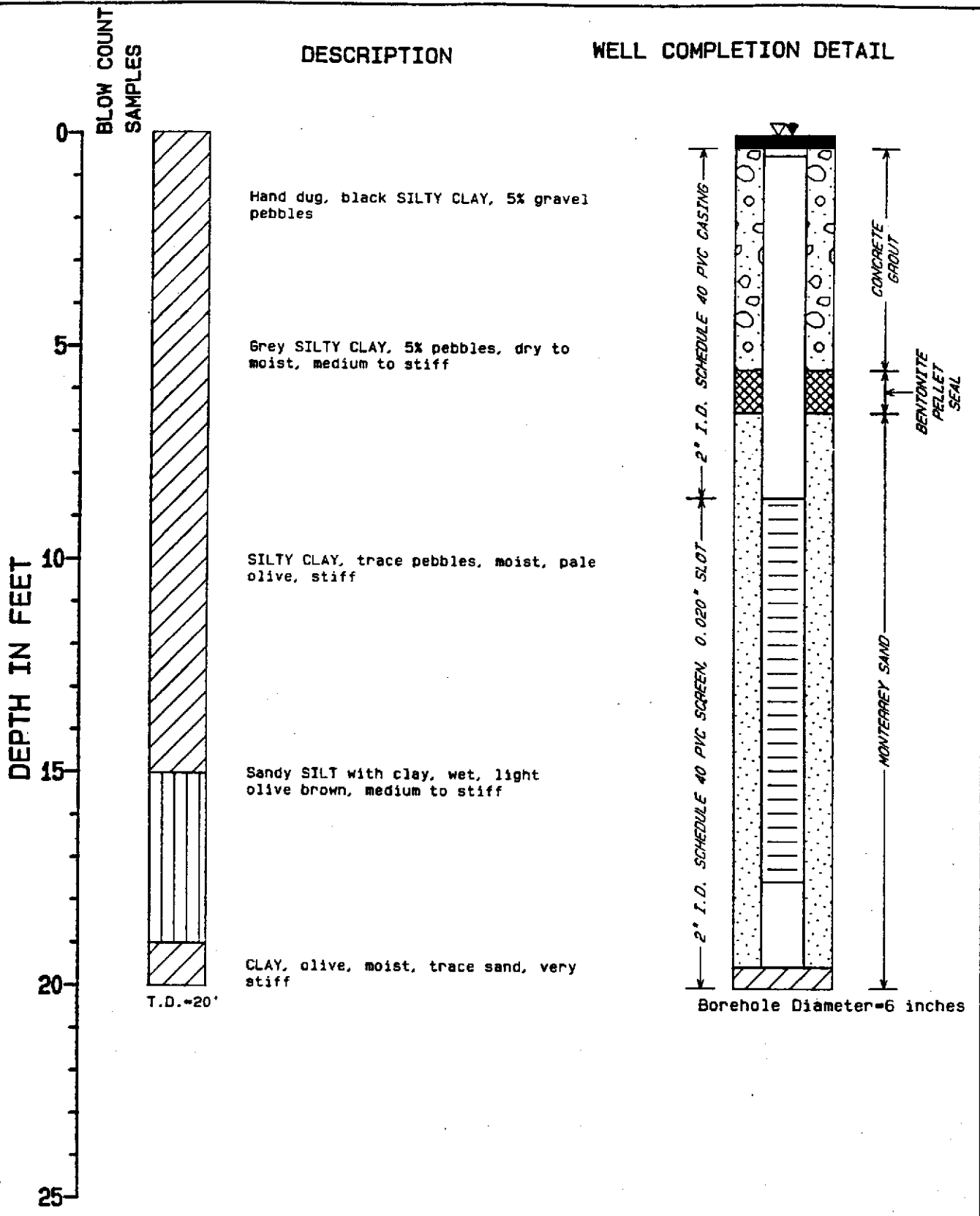
SF027289.A0.6W



T.D.=20'

▽ = Water level first encountered
 ▽ = Water level after development

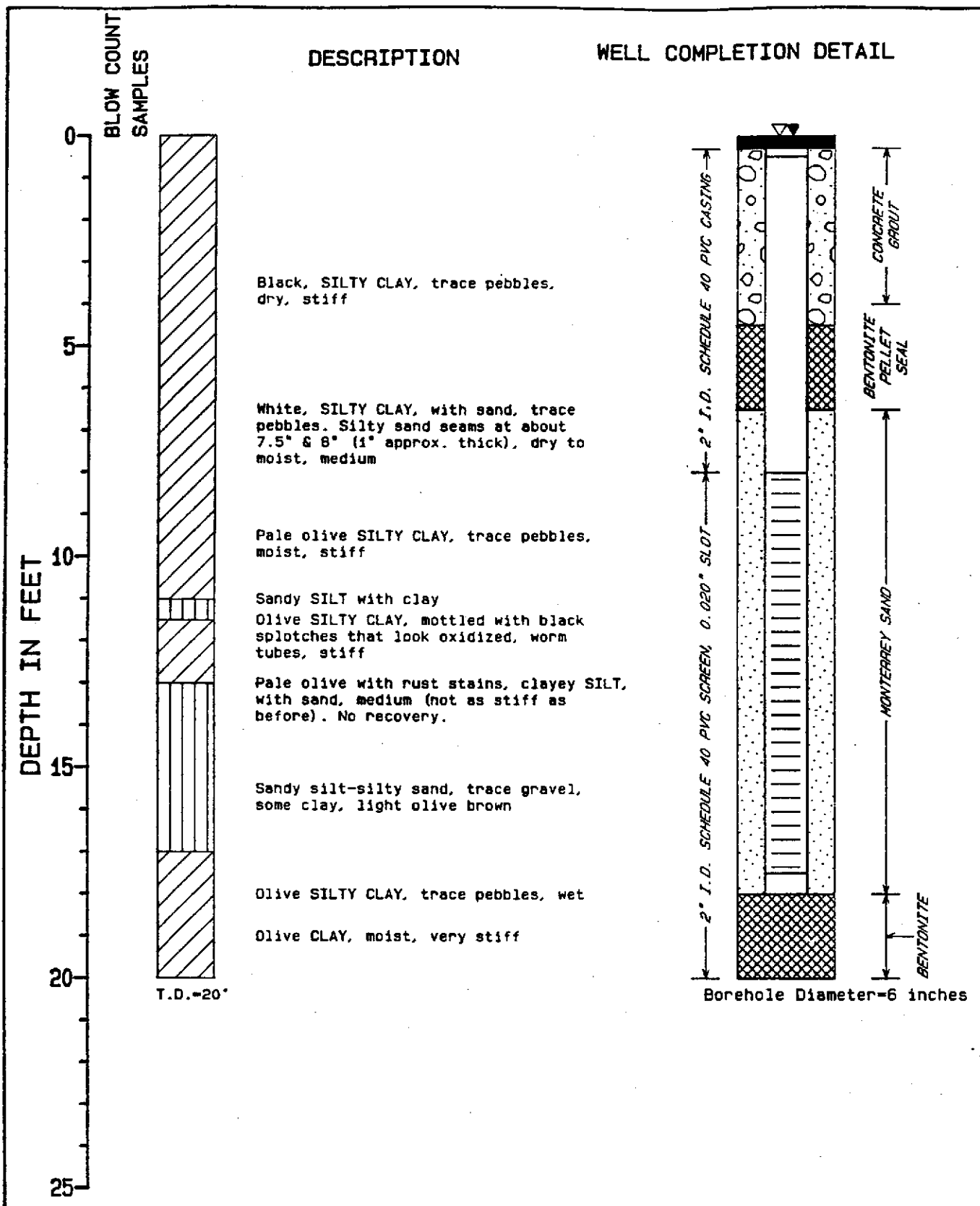
MW-9
 Del Monte Emeryville Plant No. 35
 Date Completed: 07/05/89
 Top of casing elevation (MSL) = 0
 SF027289.A0.9W



▽ = Water level first encountered

▽ = Water level after development

MW-10
 Del Monte Emeryville Plant No. 35
 Date Completed: 07/06/89
 Top of casing elevation (MSL) = 0
 SF027289.A0.6W



▽ = Water level first encountered

◊ = Water level after development

MW-11
 Del Monte Emeryville Plant No. 35
 Date Completed: 07/06/89
 Top of casing elevation (MSL) = 0
 SF0272B9.A0.6W

Appendix F Laboratory Data Sheets

This appendix contains the following:

- Laboratory Data and Chain of Custody Sheets for the Sampling of SB2, SB3, SB7, and MW1 through MW6
- Laboratory Data and Chain of Custody Sheets for the Fuel Oil Tanks (West Parcel)
 - Tank Contents
 - Soil
 - Groundwater
- Laboratory Data and Chain of Custody Sheets for the Gasoline Tank Removal (West Parcel)
 - Soil
 - Groundwater
- Laboratory Data and Chain of Custody Sheets for the Haven Street Investigation
 - Soil

**Laboratory Data Sheets
Sampling of SB2, SB3, SB7, and
MW1 through MW6**



Engineers
 Planners
 Economists
 Scientists

January 23, 1989

SFO27035.A0.FW

CH2M HILL
 6425 Christie Ave., Suite 500
 Emeryville, CA 94608

Attention: Susan Colman

Sear Susan,

Attached are the results of the analysis of your samples from the Emeryville 35 Plant.

WATER

<u>Lab ID</u>	<u>Client ID</u>
21759	DMEMRGW-6
21905-1	DMEMRGW-1
21905-2	DMEMRGW-2
21905-3	DMEMRGW-3
21905-4	DMEMRGW-8
21925-1	DMEMRGW-4
21925-2	DMEMRGW-5

SOIL

21766-1	DMEMS-2
21766-2	DMEMS-3 (MC-1)
21766-3	DMEMS-7

The Method Detection Limit Spike for Total Fuel Hydrocarbons (diesel) [TFH(diesel)] analysis showed zero recovery. The matrix spike and matrix spike duplicate results for TFH(diesel) were low (26% and 43%) respectively.

Sincerely,

James E. Hawley
 Operations Manager

JEH/bh
 Encl.



CH2M HILL ENVIRONMENTAL LABORATORY
 2218 RAILROAD AVENUE
 REDDING, CA 96001 916-243-5831

REPORT TO: DEL MONTE-EMERYVILLE
 CH2M HILL/SFO
 SFO27035.AD.FW
 ATTENTION: SUSAN COLEMAN
 SAMPLE DESCRIPTION: WATER
 DATE OF SAMPLE: 12-6-88

REFERENCE NUMBER: 21759
 PAGE 1 OF 4
 DATE: 1-17-89
 PHONE:
 SAMPLED BY: SANDI MADSON
 DATE RECEIVED: 12-7-88

TEST	DMEMRGW-6	UNITS	DETECT LIMIT	DATE ANALYZED	METHOD NUMBER
TOTAL FUEL HYDROCARBONS(GAS)	<1	PPM	1	12-20-88	DHSLUFT
TOTAL FUEL HYDROCARBONS(DIESEL)	<200	ug/l	200	12-28-88	CALUFT
CHLORINE	<0.1	mg/l	0.1	12-8-88	330.5
CHLORIDE	20.6	mg/l	1	12-15-88	325.3
pH	7.04	units	-	12-8-88	150.1
ELECTRICAL CONDUCTIVITY	683	umhos/cm	10	12-19-88	120.1
TOTAL DISSOLVED SOLIDS	453	mg/l	3	12-9-88	160.1

COMMENTS: ug/l = micrograms per liter
 mg/l = milligrams per liter

The information shown on this sheet is test data only and no analysis or interpretation is intended or implied.

ANALYST: RW

APPROVED BY: [Signature]



CH2M HILL ENVIRONMENTAL LABORATORY
 2218 RAILROAD AVENUE
 REDDING, CA 96001 916-243-5831

REPORT TO: DEL MONTE-EMERYVILLE
 CH2M HILL/SFO
 SFO27035.AD.FW
 ATTENTION: SUSAN COLEMAN
 SAMPLE DESCRIPTION: WATER-DMEMRGW-6
 DATE OF SAMPLE: 12-6-88

REFERENCE NUMBER: 21759
 PAGE 2 OF 4
 DATE: 1-17-89
 PHONE:
 SAMPLED BY: SANDI MADSON
 DATE RECEIVED: 12-7-88
 DATE ANALYZED: 12-16-88

VOLATILE TOXIC
 ORGANIC POLLUTANTS
 EPA METHOD: 624

CONSTITUENT	RESULT	DETECT LIMIT	CONSTITUENT	RESULT	DETECT LIMIT
Chloromethane	ND	5.0	Hexane	10	5
Bromomethane	ND	5.0	Methyl-pentene	35	5
Vinyl chloride	ND	5.0	Cyclohexane	15	5
Chloroethane	ND	5.0	Methyl-cyclohexane	30	5
Methylene chloride	ND	2.0	2-Butanone	6.1	5
Trichlorofluoromethane	ND	2.0	2-Hexanone	5.3	5
1,1-Dichloroethene	ND	2.0			
1,1-Dichloroethane	ND	2.0			
1,2-Dichloroethene (total)	ND	1.0			
Chloroform	ND	1.0			
1,2-Dichloroethane	8.8	1.0			
1,1,1-Trichloroethane	ND	1.0			
Carbon tetrachloride	ND	1.0			
Bromodichloromethane	ND	1.0			
1,2-Dichloropropane	ND	2.0			
trans-1,3-Dichloropropene	ND	2.0			
Trichloroethene	1.6	1.0			
Dibromochloromethane	ND	1.0			
1,1,2-Trichloroethane	ND	1.0			
Benzene	ND	1.0			
cis-1,3-Dichloropropene	ND	2.0			
2-Chloroethylvinyl ether	ND	5.0			
Bromoform	ND	2.0			
Tetrachloroethene	ND	1.0			
1,1,2,2-Tetrachloroethane	ND	2.0			
Toluene	*	2.0			
Chlorobenzene	ND	1.0			
Ethyl benzene	ND	1.0			
Styrene	ND	1.0			
Xylenes(Total)	ND	3.0			
1,2-Dichlorobenzene	ND	1.0			
1,3-Dichlorobenzene	ND	1.0			
1,4-Dichlorobenzene	ND	1.0			

COMMENTS: Results are in micrograms per kilogram. ND = none detected.

The information shown on this sheet is test data only and no analysis or interpretation is intended or implied.

APPROVED BY: *Samuel J. Tyson*



CH2M HILL ENVIRONMENTAL LABORATORY
2218 RAILROAD AVENUE
REDDING, CA 96001 916-243-5831

REPORT TO: DEL MONTE-EMERYVILLE
CH2M HILL/SFO
SFO27035.BO.FW
ATTENTION: SUSAN COLMAN
SAMPLE DESCRIPTION: WATER
DATE OF SAMPLE: 12-6-88

REFERENCE NUMBER: 21759
PAGE 3 OF 4
DATE: 1-20-89
PHONE:
SAMPLED BY: SANDI MADSON
DATE RECEIVED: 12-7-88
DATE EXTRACTED: 12-13-88

TEST METHODS: EPA-625/8270

	BLANK		DETECT
	RB-12-13	D MEMRGW-6	LIMIT

ACID COMPOUNDS			
Phenol	ND	ND	1
2-chlorophenol	ND	ND	1
2-methyl phenol	ND	ND	1
4-methyl phenol	ND	ND	1
2-nitrophenol	ND	ND	1
2,4-dimethylphenol	ND	ND	1
2,4-dichlorophenol	ND	ND	1
4-chloro-3-methylphenol	ND	ND	1
2,4,5-trichlorophenol	ND	ND	1
2,4,6-trichlorophenol	ND	ND	1
2,4-dinitrophenol	ND	ND	5
4-nitrophenol	ND	ND	5
2-methyl-4,6-dinitrophenol	ND	ND	1
pentachlorophenol	ND	ND	1
BASE/NEUTRAL COMPOUNDS			
N-Nitrosodimethylamine	ND	ND	5
bis(2-Chloroethyl)ether	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
bis(2-Chloroisopropyl)ether	ND	ND	1
N-Nitroso-di-n-propylamine	ND	ND	1
Hexachloroethane	ND	ND	1
Nitrobenzene	ND	ND	1
Isophorone	ND	ND	1
bis(2-Chloroethoxy)methane	ND	ND	1
1,2,4-Trichlorobenzene	ND	ND	1
Naphthalene	ND	ND	1
Hexachlorobutadiene	ND	ND	1
2-Chloronaphthalene	ND	ND	1
2-Methyl Naphthalene	ND	ND	1

COMMENTS: Results are in micrograms per liter.

ND=Not detected at or above limit of detection.

The information shown on this sheet is test data only and no analysis or interpretation is intended or implied.

APPROVED BY: *Bernard J. Tyson*



CH2M HILL ENVIRONMENTAL LABORATORY
 2218 RAILROAD AVENUE
 REDDING, CA 96001 916-243-5831

REPORT TO: DEL MONTE-EMERYVILLE
 CH2M HILL/SFO
 SFO27035.AD.FW
 ATTENTION: SUSAN COLMAN
 SAMPLE DESCRIPTION: WATER
 DATE OF SAMPLE: 12-6-88

REFERENCE NUMBER: 21759
 PAGE 4 OF 4
 DATE: 1-20-89
 PHONE:
 SAMPLED BY: SANDI MADSON
 DATE RECEIVED: 12-7-88
 DATE EXTRACTED: 12-13-88

TEST METHODS: EPA-625/8270

BASE-NEUTRAL EXTRACTABLES CONT.	BLANK RB-12-13	DMEMR GW-6	DETECT LIMIT
4-chloroaniline	ND	ND	5
2-nitroaniline	ND	ND	5
3-nitroaniline	ND	ND	5
4-nitroaniline	ND	ND	5
hexachlorocyclopentadiene	ND	ND	1
dimethyl phthalate	ND	ND	10
acenaphthylene	ND	ND	1
acenaphthene	ND	ND	1
2,4-dinitrotoluene	ND	ND	1
2,6-dinitrotoluene	ND	ND	1
diethyl phthalate	ND	ND	1
4-chlorophenylphenylether	ND	ND	1
fluorene	ND	ND	1
N-nitrosodiphenylamine	ND	ND	1
4-bromophenylphenylether	ND	ND	1
hexachlorobenzene	ND	ND	1
Phenanthrene	ND	ND	1
Anthracene	ND	ND	1
Di-N-Butyl phthalate	ND	ND	1
Fluorethene	ND	ND	1
Benzidene	ND	ND	30
pyrene	ND	ND	1
benzylbutylphthalate	ND	ND	1
3,3-Dichlorobenzidine	ND	ND	40
Benz(a)anthracene	ND	ND	1
bis(2-Ethylhexyl)phthalate	ND	ND	10
chrysene	ND	ND	2
Di-n-octyl phthalate	ND	ND	1
Benzo(b)fluoranthene	ND	ND	2
Benzo(k)fluoranthene	ND	ND	1
Benzo(a)pyrene	ND	ND	1
Indeno(1,2,3-cd)pyrene	ND	ND	1
Dibenz(a,h)anthracene	ND	ND	1
Benzo(g,h,i)perylene	ND	ND	1
Dibenzofuran	ND	ND	1
Benzoic Acid	ND	ND	50
Benzyl Alcohol	ND	ND	1

DATE ANALYZED: 1-18-89 1-19-89

COMMENTS: Results are in micrograms per liter.
 ND = Not detected at or above limit of detection.
 The information shown on this sheet is test data only and
 no analysis or interpretation is intended or implied.

APPROVED BY: *Sandi Madson*

REPORT TO: DEL MONTE-EMERYVILLE
 CH2M HILL/SFO
 SFO27035.BO.FW
 ATTENTION: SUSAN COLMAN
 SAMPLE DESCRIPTION: WATER
 DATE OF SAMPLE: 12-6-88

REFERENCE NUMBER: 21759
 PAGE 3A OF 4
 DATE: 1-20-89
 PHONE:
 SAMPLED BY: SANDI MADSON
 DATE RECEIVED: 12-7-88
 DATE EXTRACTED: 12-13-88

TEST METHODS: EPA-625/8270

A M E N D E D R E P O R T

CONCENTRATION*

	DMEMRGW-6 (ug/l)	SPIKE* ADDED (ug/l)	ug/l SPIKE RECOVERED	% RECOVERY
ACID COMPOUNDS				
Phenol	ND	20	17	85
Chlorophenol	ND	20	17	85
2-methyl phenol	ND	20	7	35
4-methyl phenol	ND	20	6	30
2-nitrophenol	ND	20	21	105
2,4-dimethylphenol	ND	20	3	15
2,4-dichlorophenol	ND	20	15	75
4-chloro-3-methylphenol	ND	20	11	55
2,4,5-trichlorophenol	ND	20	15	75
2,4,6-trichlorophenol	ND	20	16	80
2,4-dinitrophenol	ND	20	3	15
4-nitrophenol	ND	20	6	30
2-methyl-4,6-dinitrophenol	ND	20	10	50
pentachlorophenol	ND	20	8	40
BASE/NEUTRAL COMPOUNDS				
N-Nitrosodimethylamine	ND	20	14	70
bis(2-Chloroethyl)ether	ND	20	11	55
1,3-Dichlorobenzene	ND	20	18	90
1,4-Dichlorobenzene	ND	20	18	90
1,2-Dichlorobenzene	ND	20	19	95
bis(2-Chloroisopropyl)ether	ND	20	21	105
N-Nitroso-di-n-propylamine	ND	20	18	90
Hexachloroethane	ND	20	17	85
Nitrobenzene	ND	20	23	115
Isophorone	ND	20	26	130
bis(2-Chloroethoxy)methane	ND	20	26	130
1,2,4-Trichlorobenzene	ND	20	20	100
Naphthalene	ND	20	22	110
Hexachlorobutadiene	ND	20	20	100
2-Chloronaphthalene	ND	20	22	110
2-Methyl Naphthalene	ND	20	22	110

COMMENTS: Results are in micrograms per liter.
 ND = Not detected

* Incorrect headings on original report 1-24-89.
 The information shown on this sheet is test data only and
 no analysis or interpretation is intended or implied.

APPROVED BY: Bernard J. Tyson



CH2M HILL ENVIRONMENTAL LABORATORY
 2218 RAILROAD AVENUE
 REDDING, CA 96001 916-243-5831

REPORT TO: DEL MONTE-EMERYVILLE
 CH2M HILL/SFO
 SFO27035.AO.FW

ATTENTION: SUSAN COLMAN
 SAMPLE DESCRIPTION: WATER
 DATE OF SAMPLE: 12-6-88
 TEST METHODS: EPA-625/8270

REFERENCE NUMBER: 21759
 PAGE 4A OF 4
 DATE: 1-20-89
 PHONE:
 SAMPLED BY: SANDI MADSON
 DATE RECEIVED: 12-7-88
 DATE EXTRACTED: 12-13-88

A M E N D E D R E P O R T

CONCENTRATION*

BASE-NEUTRAL EXTRACTABLES CONT.	DMEMRGW-6 (ug/l)	SPIKE* ADDED (ug/l)	CONCENTRATION*	
			ug/l SPIKE RECOVERED	% RECOVERY
4-chloroaniline	ND	20	12	60
2-nitroaniline	ND	20	16	80
3-nitroaniline	ND	20	10	50
4-nitroaniline	ND	20	6	30
hexachlorocyclopentadiene	ND	20	7	35
dimethyl phthalate	ND	20	6	30
acenaphthylene	ND	20	23	115
acenaphthene	ND	20	22	110
2,4-dinitrotoluene	ND	20	14	70
2,6-dinitrotoluene	ND	20	18	90
diethyl phthalate	ND	20	15	75
4-chlorophenylphenylether	ND	20	20	100
fluorene	ND	20	21	105
N-nitrosodiphenylamine	ND	20	18	90
4-bromophenylphenylether	ND	20	21	105
hexachlorobenzene	ND	20	24	120
Phenanthrene	ND	20	24	120
Anthracene	ND	20	22	110
Di-N-Butyl phthalate	ND	20	26	130
Fluorene	ND	20	22	110
Benzidene	ND	20	40	-
pyrene	ND	20	25	125
benzylbutylphthalate	ND	20	23	115
3,3-Dichlorobenzidine	ND	20	10	50
Benz(a)anthracene	ND	20	22	110
bis(2-Ethylhexyl)phthalate	ND	20	30	150
chrysene	ND	20	22	110
Di-n-octyl phthalate	ND	20	15	75
Benzo(b)fluoranthene	ND	20	13	65
Benzo(k)fluoranthene	ND	20	17	85
Benzo(a)pyrene	ND	20	13	65
Indeno(1,2,3-cd)pyrene	ND	20	12	60
Dibenz(a,h)anthracene	ND	20	10	50
Benzo(g,h,i)perylene	ND	20	12	60
Dibenzofuran	ND	20	20	100
Benzoic Acid	ND	20	6	30
Benzyl Alcohol	ND	20	27	135

COMMENTS: Results are in micrograms per liter

ND = Not detected *Incorrect headings on original report 1/24/89.

The information shown on this sheet is test data only and no analysis or interpretation is intended or implied.

APPROVED BY: Bernice J. Tyson



CH2M HILL ENVIRONMENTAL LABORATORY
2218 RAILROAD AVENUE
REDDING, CA 96001 916-243-5831

REPORT TO: DEL MONTE-EMERYVILLE
CH2M HILL/SFO
SFO27035.AO.FW
ATTENTION: SUSAN COLMAN
SAMPLE DESCRIPTION: WATER-DMEMR
DATE OF SAMPLE: 12-20-88

REFERENCE NUMBER: 21905
PAGE 1 OF 9
DATE: 1-20-89
PHONE:
SAMPLED BY: SANDI MADSON
DATE RECEIVED: 12-21-88

TEST	GW-1	GW-2	GW-3	GW-8	UNITS	DETECT LIMIT	DATE ANALYZED	METHOD NUMBER
CHLORINE	<0.1	<0.1	<0.1	<0.1	mg/l	0.1	12-21-88	330.5
CHLORIDE	24.8	30.3	29.5	27.6	mg/l	1	12-23-88	325.3
ELECTRICAL								
CONDUCTIVITY	1010	886	972	1010	umhos/cm	10	1-3-89	120.1
pH	6.79	6.76	6.88	6.92	units	-	12-21-88	150.1
TOTAL DISSOLVED SOLIDS	532	516	610	647	mg/l	3	12-22-88	160.1

COMMENTS: mg/l = milligrams per liter

The information shown on this sheet is test data only and no analysis or interpretation is intended or implied.

ANALYST: RCW APPROVED BY: LJ Farley



Engineers
Planners
Economists
Scientists

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: CH2M HILL/MGM
Lab Sample ID: X12308B1
Client Sample ID: QC BLANK

Concentration: LOW
Sample Matrix: WATER
Percent Moisture: _____

Date Extracted: _____
Date Analyzed: 12/30/88
Dilution Factor: 1.0

VOLATILE COMPOUNDS

AS Number	ug/L	CAS Number	ug/L	
74-87-3	Chloromethane	10 U	79-00-5 1,1,2-Trichloroethane	5 U
74-83-9	Bromomethane	10 U	71-43-2 Benzene	5 U
75-01-4	Vinyl Chloride	10 U	10061-02-6 trans-1,3-Dichloropropene	5 U
75-00-3	Chloroethane	10 U	110-75-8 2-Chloroethylvinylether	10 U
75-09-2	Methylene Chloride	10 U	75-25-2 Bromoform	5 U
77-64-1	Acetone	10 U	591-78-6 2-Hexanone	10 U
75-15-0	Carbon Disulfide	5 U	108-10-1 4-Methyl-2-Pentanone	10 U
75-69-4	Trichlorofluoromethane	5 U	127-18-4 Tetrachloroethene	5 U
75-35-4	1,1-Dichloroethene	5 U	79-34-5 1,1,2,2-Tetrachloroethane	10 U
75-34-3	1,1-Dichloroethane	5 U	108-88-3 Toluene	5 U
740-59-0	1,2-Dichloroethene (total)	5 U	108-90-7 Chlorobenzene	5 U
67-66-3	Chloroform	5 U	100-41-4 Ethylbenzene	5 U
77-06-2	1,2-Dichloroethane	5 U	100-42-5 Styrene	5 U
73-93-3	2-Butanone	10 U	1330-20-7 Xylenes (total)	5 U
71-55-6	1,1,1-Trichloroethane	5 U	541-73-1 1,3-Dichlorobenzene	5 U
75-23-5	Carbon Tetrachloride	5 U	106-46-7 1,4-Dichlorobenzene	5 U
75-05-4	Vinyl Acetate	10 U	95-50-1 1,2-Dichlorobenzene	5 U
	Bromodichloromethane	5 U	-----	
	1,2-Dichloropropane	5 U	Toluene-d8 - SS	100
75061-01-5	cis-1,3-Dichloropropene	5 U	1,4-Bromofluorobenzene - SS	99
75-01-6	Trichloroethene	5 U	1,2-Dichloroethane-d4 - SS	97
75-24-8-1	Dibromochloromethane	5 U		

- U - Compound analyzed for but not detected.
- B - Compound was detected in QC blank.
- J - Reported value less than quantitation limit.
- SS - Surrogate Standard reported as percent recovery.

Form I

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: CH2M HILL/MGM
 Lab Sample ID: 12521001
 Client Sample ID: DMEMRGW-1

Concentration: LOW
 Sample Matrix: WATER
 Percent Moisture: _____

Date Extracted: _____
 Date Analyzed: 12/30/88
 Dilution Factor: 1.0

VOLATILE COMPOUNDS

CAS Number		ug/L	CAS Number		ug/L
74-87-3	Chloromethane	10 U	79-00-5	1,1,2-Trichloroethane . .	5 U
74-83-9	Bromomethane	10 U	71-43-2	Benzene	5 U
75-01-4	Vinyl Chloride	10 U	10061-02-6	trans-1,3-Dichloropropene	5 U
75-00-3	Chloroethane	10 U	110-75-8	2-Chloroethylvinylether .	10 U
75-09-2	Methylene Chloride	10 U	75-25-2	Bromoform	5 U
67-64-1	Acetone	21	591-78-6	2-Hexanone	10 U
75-15-0	Carbon Disulfide	5 U	108-10-1	4-Methyl-2-Pentanone . . .	10 U
75-69-4	Trichlorofluoromethane . .	5 U	127-18-4	Tetrachloroethene	5 U
75-35-4	1,1-Dichloroethene	5 U	79-34-5	1,1,2,2-Tetrachloroethane	10 U
75-34-3	1,1-Dichloroethane	5 U	108-88-3	Toluene	5 U
59-59-0	1,2-Dichloroethene (total)	5 U	108-90-7	Chlorobenzene	5 U
66-3	Chloroform	5 U	100-41-4	Ethylbenzene	5 U
107-06-2	1,2-Dichloroethane	8	100-42-5	Styrene	5 U
78-93-3	2-Butanone	10 U	1330-20-7	Xylenes (total)	5 U
71-55-6	1,1,1-Trichloroethane . . .	5 U	541-73-1	1,3-Dichlorobenzene	5 U
56-23-5	Carbon Tetrachloride	5 U	106-46-7	1,4-Dichlorobenzene	5 U
108-05-4	Vinyl Acetate	10 U	95-50-1	1,2-Dichlorobenzene	5 U
75-27-4	Bromodichloromethane	5 U			
78-87-5	1,2-Dichloropropane	5 U		Toluene-d8 - SS	100
10061-01-5	cis-1,3-Dichloropropene . . .	5 U		1,4-Bromofluorobenzene - SS	97
79-01-6	Trichloroethene	5 U		1,2-Dichloroethane-d4 - SS	110
124-48-1	Dibromochloromethane	5 U			

- U - Compound analyzed for but not detected.
- B - Compound was detected in QC blank.
- J - Reported value less than quantitation limit.
- SS - Surrogate Standard reported as percent recovery.

Form I

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: CH2M HILL/MGM
Lab Sample ID: 12521002
Client Sample ID: DMEMRGW-2

Concentration: LOW
Sample Matrix: WATER
Percent Moisture: _____

Date Extracted: _____
Date Analyzed: 12/30/88
Dilution Factor: 1.0

VOLATILE COMPOUNDS

CAS Number		ug/L		CAS Number		ug/L	
74-87-3	Chloromethane	10	U	79-00-5	1,1,2-Trichloroethane . .	5	U
74-83-9	Bromomethane	10	U	71-43-2	Benzene	5	U
75-01-4	Vinyl Chloride	10	U	10061-02-6	trans-1,3-Dichloropropene	5	U
75-00-3	Chloroethane	10	U	110-75-8	2-Chloroethylvinylether .	10	U
75-09-2	Methylene Chloride	10	U	75-25-2	Bromoform	5	U
67-64-1	Acetone	52		591-78-6	2-Hexanone	10	U
75-15-0	Carbon Disulfide	5	U	108-10-1	4-Methyl-2-Pentanone . . .	10	U
75-69-4	Trichlorofluoromethane . .	5	U	127-18-4	Tetrachloroethene	8	
75-35-4	1,1-Dichloroethene	5	U	79-34-5	1,1,2,2-Tetrachloroethane	10	U
75-34-3	1,1-Dichloroethane	5	U	108-88-3	Toluene	5	U
540-59-0	1,2-Dichloroethene (total)	5	U	108-90-7	Chlorobenzene	5	U
66-3	Chloroform	5	U	100-41-4	Ethylbenzene	5	U
107-06-2	1,2-Dichloroethane	7		100-42-5	Styrene	5	U
78-93-3	2-Butanone	10	U	1330-20-7	Xylenes (total)	5	U
71-55-6	1,1,1-Trichloroethane . . .	5	U	541-73-1	1,3-Dichlorobenzene	5	U
56-23-5	Carbon Tetrachloride	5	U	106-46-7	1,4-Dichlorobenzene	5	U
108-05-4	Vinyl Acetate	10	U	95-50-1	1,2-Dichlorobenzene	5	U
75-27-4	Bromodichloromethane	5	U				
78-87-5	1,2-Dichloropropane	5	U		Toluene-d8 - SS	100	
10061-01-5	cis-1,3-Dichloropropene . . .	5	U		1,4-Bromofluorobenzene - SS	97	
79-01-6	Trichloroethene	5	U		1,2-Dichloroethane-d4 - SS	110	
124-48-1	Dibromochloromethane	5	U				

U - Compound analyzed for but not detected.
B - Compound was detected in QC blank.
J - Reported value less than quantitation limit.
SS - Surrogate Standard reported as percent recovery.

Form I



Engineers
Planners
Economists
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ORGANICS ANALYSIS DATA SHEET

Laboratory Name: CH2M HILL/MGM
Lab Sample ID: 12521003
Client Sample ID: DMEMRGW-3

Concentration: LOW
Sample Matrix: WATER
Percent Moisture: _____

Date Extracted: _____
Date Analyzed: 12/30/88
Dilution Factor: 1.0

VOLATILE COMPOUNDS

CAS Number	ug/L	CAS Number	ug/L
74-87-3	Chloromethane 10 U	79-00-5	1,1,2-Trichloroethane . . . 5 U
74-83-9	Bromomethane 10 U	71-43-2	Benzene 5 U
75-01-4	Vinyl Chloride 10 U	10061-02-6	trans-1,3-Dichloropropene . . 5 U
75-00-3	Chloroethane 10 U	110-75-8	2-Chloroethylvinylether . . 10 U
75-09-2	Methylene Chloride 10 U	75-25-2	Bromoform 5 U
67-64-1	Acetone 10 U	591-78-6	2-Hexanone 10 U
75-15-0	Carbon Disulfide 5 U	108-10-1	4-Methyl-2-Pentanone . . . 10 U
75-69-4	Trichlorofluoromethane . . . 5 U	127-18-4	Tetrachloroethene 5 U
75-35-4	1,1-Dichloroethene 5 U	79-34-5	1,1,2,2-Tetrachloroethane . . 10 U
75-34-3	1,1-Dichloroethane 5 U	108-88-3	Toluene 5 U
540-59-0	1,2-Dichloroethene (total) . . 5 U	108-90-7	Chlorobenzene 5 U
57-66-3	Chloroform 5 U	100-41-4	Ethylbenzene 5 U
107-06-2	1,2-Dichloroethane 7	100-42-5	Styrene 5 U
78-93-3	2-Butanone 17	1330-20-7	Xylenes (total) 5 U
71-55-6	1,1,1-Trichloroethane 5 U	541-73-1	1,3-Dichlorobenzene 5 U
56-23-5	Carbon Tetrachloride 5 U	106-46-7	1,4-Dichlorobenzene 5 U
108-05-4	Vinyl Acetate 10 U	95-50-1	1,2-Dichlorobenzene 5 U
75-27-4	Bromodichloromethane 5 U		
78-87-5	1,2-Dichloropropane 5 U		Toluene-d8 - SS 100
10061-01-5	cis-1,3-Dichloropropene 5 U		1,4-Bromofluorobenzene - SS . 97
79-01-6	Trichloroethene 5 U		1,2-Dichloroethane-d4 - SS . 110
124-48-1	Dibromochloromethane 5 U		

- U - Compound analyzed for but not detected.
- B - Compound was detected in QC blank.
- J - Reported value less than quantitation limit.
- SS - Surrogate Standard reported as percent recovery.

Form I

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: CH2M HILL/MGM
 Lab Sample ID: 12521004
 Client Sample ID: DMEMRGW-8

Concentration: LOW
 Sample Matrix: WATER
 Percent Moisture: _____

Date Extracted: _____
 Date Analyzed: 12/30/88
 Dilution Factor: 1.0

VOLATILE COMPOUNDS

CAS Number		ug/L	CAS Number		ug/L
74-87-3	Chloromethane	10 U	79-00-5	1,1,2-Trichloroethane	5 U
74-83-9	Bromomethane	10 U	71-43-2	Benzene	5 U
75-01-4	Vinyl Chloride	10 U	10061-02-6	trans-1,3-Dichloropropene	5 U
75-00-3	Chloroethane	10 U	110-75-8	2-Chloroethylvinylether	10 U
75-09-2	Methylene Chloride	10 U	75-25-2	Bromoform	5 U
67-64-1	Acetone	10 U	591-78-6	2-Hexanone	10 U
75-15-0	Carbon Disulfide	5 U	108-10-1	4-Methyl-2-Pentanone	10 U
75-69-4	Trichlorofluoromethane	5 U	127-18-4	Tetrachloroethene	5 U
75-35-4	1,1-Dichloroethene	5 U	79-34-5	1,1,2,2-Tetrachloroethane	10 U
75-34-3	1,1-Dichloroethane	5 U	108-88-3	Toluene	5 U
540-59-0	1,2-Dichloroethene (total)	5 U	108-90-7	Chlorobenzene	5 U
67-66-3	Chloroform	5 U	100-41-4	Ethylbenzene	5 U
107-06-2	1,2-Dichloroethane	5 U	100-42-5	Styrene	5 U
78-93-3	2-Butanone	31	1330-20-7	Xylenes (total)	5 U
71-55-6	1,1,1-Trichloroethane	5 U	541-73-1	1,3-Dichlorobenzene	5 U
56-23-5	Carbon Tetrachloride	5 U	106-46-7	1,4-Dichlorobenzene	5 U
108-05-4	Vinyl Acetate	10 U	95-50-1	1,2-Dichlorobenzene	5 U
75-27-4	Bromodichloromethane	5 U			
78-87-5	1,2-Dichloropropane	5 U		Toluene-d8 - SS	110
10061-01-5	cis-1,3-Dichloropropene	5 U		1,4-Bromofluorobenzene - SS	98
79-01-6	Trichloroethene	5 U		1,2-Dichloroethane-d4 - SS	110
124-48-1	Dibromochloromethane	5 U			

- U - Compound analyzed for but not detected.
- B - Compound was detected in QC blank.
- J - Reported value less than quantitation limit.
- SS - Surrogate Standard reported as percent recovery.

Form I

REPORT TO: DEL MONTE-EMERYVILLE
 CH2M HILL/SFO
 SFO27035.AD.FW
 ATTENTION: SUSAN COLMAN
 SAMPLE DESCRIPTION: WATER-DMEMR
 DATE OF SAMPLE: 12-20-88
 TEST METHODS: EPA-625/8270

REFERENCE NUMBER: 21905
 PAGE 8 OF 9
 DATE: 1-20-89
 PHONE:
 SAMPLED BY: SANDI MADSON
 DATE RECEIVED: 12-21-88
 DATE EXTRACTED: 12-21-88

	BLANK RB-12-21	DMEMR GW-1	DMEMR GW-2	DMEMR GW-3	DMEMR GW-8	DETECT LIMIT
ACID COMPOUNDS						
Phenol	ND	ND	ND	ND	ND	1
Chlorophenol	ND	ND	ND	ND	ND	1
2-methyl phenol	ND	ND	ND	ND	ND	1
4-methyl phenol	ND	ND	ND	2	5	1
2-nitrophenol	ND	ND	ND	ND	ND	1
2,4-dimethylphenol	ND	ND	ND	ND	ND	1
2,4-dichlorophenol	ND	ND	ND	ND	ND	1
4-chloro-3-methylphenol	ND	ND	ND	ND	ND	1
2,4,5-trichlorophenol	ND	ND	ND	ND	ND	1
2,4,6-trichlorophenol	ND	ND	ND	ND	ND	1
2,4-dinitrophenol	ND	ND	ND	ND	ND	5
4-nitrophenol	ND	ND	ND	ND	ND	5
2-methyl-4,6-dinitrophenol	ND	ND	ND	ND	ND	1
pentachlorophenol	ND	ND	ND	ND	ND	1
BASE/NEUTRAL COMPOUNDS						
N-Nitrosodimethylamine	ND	ND	ND	ND	ND	5
bis(2-Chloroethyl)ether	ND	ND	ND	ND	ND	1
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	1
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	1
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	1
bis(2-Chloroisopropyl)ether	ND	ND	ND	ND	ND	1
N-Nitroso-di-n-propylamine	ND	ND	ND	ND	ND	1
Hexachloroethane	ND	ND	ND	ND	ND	1
Nitrobenzene	ND	ND	ND	ND	ND	1
Isophorone	ND	ND	ND	ND	ND	1
bis(2-Chloroethoxy)methane	ND	ND	ND	ND	ND	1
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	1
Naphthalene	ND	ND	ND	ND	ND	1
Hexachlorobutadiene	ND	ND	ND	ND	ND	1
2-Chloronaphthalene	ND	ND	ND	ND	ND	1
2-methyl naphthalene	ND	ND	ND	ND	ND	1

COMMENTS: Results are in micrograms per liter.
 ND=Not detected at or above limit of detection.
 The information shown on this sheet is test data only and
 no analysis or interpretation is intended or implied.

APPROVED BY: Bennett J. Tyson



CH2M HILL ENVIRONMENTAL LABORATORY
 2218 RAILROAD AVENUE
 REDDING, CA 96001 916-243-5831

REPORT TO: DEL MONTE-EMERYVILLE
 CH2M HILL/SFO
 SFD27035.AQ.FW
 ATTENTION: SUSAN COLMAN
 SAMPLE DESCRIPTION: WATER-DMEMR
 DATE OF SAMPLE: 12-20-88

REFERENCE NUMBER: 21905
 PAGE 9 OF 9
 DATE: 1-20-89
 PHONE:
 SAMPLED BY: SANDI MADSON
 DATE RECEIVED: 12-21-88
 DATE EXTRACTED: 12-21-88

A M E N D E D R E P O R T

TEST METHODS: EPA-625/8270

BASE-NEUTRAL EXTRACTABLES CONT.	BLANK RE-12-21	DMEMR GW-1	DMEMR GW-2	DMEMR GW-3	DMEMR GW-8	DETECT LIMIT
4-chloroaniline	ND	ND	ND	ND	ND	5
2-nitroaniline	ND	ND	ND	ND	ND	5
3-nitroaniline	ND	ND	ND	ND	ND	5
4-nitroaniline	ND	ND	ND	ND	ND	5
hexachlorocyclopentadiene	ND	ND	ND	ND	ND	1
dimethyl phthalate	ND	ND	ND	ND	ND	10
acenaphthylene	ND	ND	ND	ND	ND	1
acenaphthene	ND	ND	ND	ND	ND	1
2,4-dinitrotoluene	ND	ND	ND	ND	ND	1
2,6-dinitrotoluene	ND	ND	ND	ND	ND	1
diethyl phthalate	ND	ND	ND	ND	ND	1
4-chlorophenylphenylether	ND	ND	ND	ND	ND	1
fluorene	ND	ND	ND	ND	ND	1
N-nitrosodiphenylamine	ND	ND	ND	ND	ND	1
4-bromophenylphenylether	ND	ND	ND	ND	ND	1
hexachlorobenzene	ND	ND	ND	ND	ND	1
Phenanthrene	ND	ND	ND	ND	ND	1
Anthracene	ND	ND	ND	ND	ND	1
Di-N-Butyl phthalate	2	ND	4	3	4	1
Fluorenone	ND	ND	ND	ND	ND	1
Benzidene	ND	ND	ND	ND	ND	30
pyrene	ND	ND	ND	ND	ND	1
benzylbutylphthalate	ND	ND	ND	ND	ND	1
3,3-Dichlorobenzidine	ND	ND	ND	ND	ND	40
Benzo(a)anthracene	ND	ND	ND	ND	ND	1
bis(2-Ethylhexyl)phthalate	ND	*ND	ND	ND	ND	10
chrysene	ND	ND	ND	ND	ND	2
Di-n-octyl phthalate	ND	ND	ND	ND	ND	1
Benzo(b)fluoranthene	ND	ND	ND	ND	ND	2
Benzo(k)fluoranthene	ND	ND	ND	ND	ND	1
Benzo(a)pyrene	ND	ND	ND	ND	ND	1
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND	ND	1
Dibenz(a,h)anthracene	ND	ND	ND	ND	ND	1
Benzo(g,h,i)perylene	ND	ND	ND	ND	ND	1
Dibenzofuran	ND	ND	ND	ND	ND	1
Benzoic Acid	ND	ND	ND	ND	ND	50
Benzyl Alcohol	ND	ND	ND	ND	ND	1

DATE ANALYZED: 1-18-89 1-19-89 1-19-89 1-19-89 1-19-89

COMMENTS: Results are in micrograms per liter. ND=Not detected at or above limit of detection. *1/30/89 Corrected value supersedes previous data. The information shown on this sheet is test data only and no analysis or interpretation is intended or implied.

APPROVED BY: Bernard J. Fran

REPORT TO: DEL MONTE-EMERYVILLE
 CH2M HILL/SFO
 SFO27035.AO.FW
 ATTENTION: SUSAN COLMAN
 SAMPLE DESCRIPTION: WATER
 DATE OF SAMPLE: 12-21-88

REFERENCE NUMBER: 21925
 PAGE 1 OF 7
 DATE: 1-17-89
 PHONE:
 SAMPLED BY: ALEX COATE
 DATE RECEIVED: 12-21-88

TEST	DMEMR GW-4	DMEMR GW-5	UNITS	DETECT LIMIT	DATE ANALYZED	METHOD NUMBER
CHLORIDE	34.5	27.7	mg/l	1	12-23-88	325.3
PH	6.91	7.1	units	-	12-22-88	150.1
TOTAL DISSOLVED SOLIDS	570	668	mg/l	3	12-28-88	160.1
ELECTRICAL CONDUCTIVITY	849	1100	umhos/cm	10	1-3-89	120.1
CHLORINE	<0.1	<0.1	mg/l	0.1	12-22-88	330.5

COMMENTS: mg/l = milligrams per liter
 cc: A. Coate/sfo
 S. Coleman/SFO

The information shown on this sheet is test data only and
 no analysis or interpretation is intended or implied.

ANALYST: RLW

APPROVED BY: L. J. Jacoby



Engineers
Planners
Economists
Scientists

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: CH2M HILL/MGM
 Sample ID: X12308B1
 Reference Sample ID: QC BLANK

Concentration: LOW
 Sample Matrix: WATER
 Percent Moisture: _____

Date Extracted: _____
 Date Analyzed: 12/30/88
 Dilution Factor: 1.0

VOLATILE COMPOUNDS

Number	Compound	ug/L	CAS Number	ug/L
4-87-3	Chloromethane	10 U	79-00-5	1,1,2-Trichloroethane 5 U
4-93-9	Bromomethane	10 U	71-43-2	Benzene 5 U
1-1-4	Vinyl Chloride	10 U	10061-02-6	trans-1,3-Dichloropropene 5 U
1-10-3	Chloroethane	10 U	110-75-8	2-Chloroethylvinylether 10 U
5-09-2	Methylene Chloride	10 U	75-25-2	Bromoform 5 U
1-4-1	Acetone	10 U	591-78-6	2-Hexanone 10 U
1-5-0	Carbon Disulfide	5 U	108-10-1	4-Methyl-2-Pentanone 10 U
1-69-4	Trichlorofluoromethane	5 U	127-18-4	Tetrachloroethene 5 U
1-5-4	1,1-Dichloroethene	5 U	79-34-5	1,1,2,2-Tetrachloroethane 10 U
1-4-3	1,1-Dichloroethane	5 U	108-88-3	Toluene 5 U
1-0-59-0	1,2-Dichloroethene (total)	5 U	108-90-7	Chlorobenzene 5 U
7-66-3	Chloroform	5 U	100-41-4	Ethylbenzene 5 U
1-06-2	1,2-Dichloroethane	5 U	100-42-5	Styrene 5 U
1-03-3	2-Butanone	10 U	1330-20-7	Xylenes (total) 5 U
1-55-6	1,1,1-Trichloroethane	5 U	541-73-1	1,3-Dichlorobenzene 5 U
1-6-3-5	Carbon Tetrachloride	5 U	106-46-7	1,4-Dichlorobenzene 5 U
1-05-4	Vinyl Acetate	10 U	95-50-1	1,2-Dichlorobenzene 5 U
1-5-27-4	Bromodichloromethane	5 U		
1-8-07-5	1,2-Dichloropropane	5 U		Toluene-d8 - SS 100
1-1-01-5	cis-1,3-Dichloropropene	5 U		1,4-Bromofluorobenzene - SS 99
1-01-6	Trichloroethene	5 U		1,2-Dichloroethane-d4 - SS 97
24-48-1	Dibromochloromethane	5 U		

- Compound analyzed for but not detected.
- Compound was detected in QC blank.
- J - Reported value less than quantitation limit.
- SS - Surrogate Standard reported as percent recovery.

Form I

RS

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: CH2M HILL/MGM
 Lab Sample ID: 12521005
 Client Sample ID: DMEMRGW-4

Concentration: LOW
 Sample Matrix: WATER
 Percent Moisture: _____

Date Extracted: _____
 Date Analyzed: 12/30/88
 Dilution Factor: 1.0

VOLATILE COMPOUNDS

CAS Number		ug/L	CAS Number		ug/L
74-87-3	Chloromethane	10 U	79-00-5	1,1,2-Trichloroethane . . .	5 U
74-83-9	Bromomethane	10 U	71-43-2	Benzene	5 U
75-01-4	Vinyl Chloride	10 U	10061-02-6	trans-1,3-Dichloropropene	5 U
75-00-3	Chloroethane	10 U	110-75-8	2-Chloroethylvinylether . .	10 U
75-09-2	Methylene Chloride	10 U	75-25-2	Bromoform	5 U
67-64-1	Acetone	10 U	591-78-6	2-Hexanone	10 U
75-15-0	Carbon Disulfide	5 U	108-10-1	4-Methyl-2-Pentanone . . .	10 U
75-69-4	Trichlorofluoromethane . . .	5 U	127-18-4	Tetrachloroethene	5 U
75-35-4	1,1-Dichloroethene	5 U	79-34-5	1,1,2,2-Tetrachloroethane	10 U
75-34-3	1,1-Dichloroethane	5 U	108-88-3	Toluene	5 U
540-59-0	1,2-Dichloroethene (total)	5 U	108-90-7	Chlorobenzene	5 U
67-66-3	Chloroform	5 U	100-41-4	Ethylbenzene	5 U
107-06-2	1,2-Dichloroethane	5 U	100-42-5	Styrene	5 U
78-93-3	2-Butanone	10 U	1330-20-7	Xylenes (total)	5 U
71-55-6	1,1,1-Trichloroethane	5 U	541-73-1	1,3-Dichlorobenzene	5 U
56-23-5	Carbon Tetrachloride	5 U	106-46-7	1,4-Dichlorobenzene	5 U
108-05-4	Vinyl Acetate	10 U	95-50-1	1,2-Dichlorobenzene	5 U
75-27-4	Bromodichloromethane	5 U		-----	
78-87-5	1,2-Dichloropropane	5 U		Toluene-d8 - SS	100
10061-01-5	cis-1,3-Dichloropropene . . .	5 U		1,4-Bromofluorobenzene - SS	100
79-01-6	Trichloroethene	13		1,2-Dichloroethane-d4 - SS	110
124-48-1	Dibromochloromethane	5 U			

U - Compound analyzed for but not detected.
 B - Compound was detected in QC blank.
 J - Reported value less than quantitation limit.
 SS - Surrogate Standard reported as percent recovery.

Form I

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: CH2M HILL/MGM
 Lab Sample ID: 12521006
 Client Sample ID: DMEMRGW-5

Concentration: LOW
 Sample Matrix: WATER
 Percent Moisture: _____

Date Extracted: _____
 Date Analyzed: 12/30/88
 Dilution Factor: 1.0

VOLATILE COMPOUNDS

CAS Number		ug/L	CAS Number		ug/L
74-87-3	Chloromethane	10 U	79-00-5	1,1,2-Trichloroethane . .	5 U
74-83-9	Bromomethane	10 U	71-43-2	Benzene	5 U
75-01-4	Vinyl Chloride	10 U	10061-02-6	trans-1,3-Dichloropropene	5 U
75-00-3	Chloroethane	10 U	110-75-8	2-Chloroethylvinylether .	10 U
75-09-2	Methylene Chloride	10 U	75-25-2	Bromoform	5 U
67-64-1	Acetone	17	591-78-6	2-Hexanone	10 U
75-15-0	Carbon Disulfide	5 U	108-10-1	4-Methyl-2-Pentanone . . .	10 U
75-69-4	Trichlorofluoromethane . .	5 U	127-18-4	Tetrachloroethene	5 U
75-35-4	1,1-Dichloroethene	5 U	79-34-5	1,1,2,2-Tetrachloroethane	10 U
75-34-3	1,1-Dichloroethane	5 U	108-88-3	Toluene	5 U
540-59-0	1,2-Dichloroethene (total)	5 U	108-90-7	Chlorobenzene	5 U
67-66-3	Chloroform	5 U	100-41-4	Ethylbenzene	5 U
107-06-2	1,2-Dichloroethane	8	100-42-5	Styrene	5 U
78-93-3	2-Butanone	10 U	1330-20-7	Xylenes (total)	5 U
71-55-6	1,1,1-Trichloroethane . . .	5 U	541-73-1	1,3-Dichlorobenzene	5 U
56-23-5	Carbon Tetrachloride	5 U	106-46-7	1,4-Dichlorobenzene	5 U
108-05-4	Vinyl Acetate	10 U	95-50-1	1,2-Dichlorobenzene	5 U
75-27-4	Bromodichloromethane	5 U			
78-87-5	1,2-Dichloropropane	5 U		Toluene-d8 - SS	110
10061-01-5	cis-1,3-Dichloropropene . .	5 U		1,4-Bromofluorobenzene - SS	92
79-01-6	Trichloroethene	5 U		1,2-Dichloroethane-d4 - SS	110
74-48-1	Dibromochloromethane	5 U			

U - Compound analyzed for but not detected.
 B - Compound was detected in QC blank.
 J - Reported value less than quantitation limit.
 SS - Surrogate Standard reported as percent recovery.

Form I



CH2M HILL ENVIRONMENTAL LABORATORY
 221B RAILROAD AVENUE
 REDDING, CA 96001 916-243-5831

REPORT TO: DEL MONTE-EMERYVILLE
 CH2M HILL/SFO
 SFO27035.AO.FW
 ATTENTION: SUSAN COLMAN
 SAMPLE DESCRIPTION: WATER
 DATE OF SAMPLE: 12-21-88

REFERENCE NUMBER: 21925
 PAGE 6 OF 7
 DATE: 1-20-89
 PHONE:
 SAMPLED BY: A. COATE
 DATE RECEIVED: 12-21-88
 DATE EXTRACTED: 12-28-88

TEST METHODS: EPA-625/8270

	BLANK RB-12-28	DMEMR GW-4	DMEMR GW-5	DETECT LIMIT
ACID COMPOUNDS				
Phenol	ND	ND	ND	1
2-chlorophenol	ND	ND	ND	1
2-methyl phenol	ND	ND	ND	1
4-methyl phenol	ND	ND	ND	1
2-nitrophenol	ND	ND	ND	1
2,4-dimethylphenol	ND	ND	ND	1
2,4-dichlorophenol	ND	ND	ND	1
4-chloro-3-methylphenol	ND	ND	ND	1
2,4,5-trichlorophenol	ND	ND	ND	1
2,4,6-trichlorophenol	ND	ND	ND	1
2,4-dinitrophenol	ND	ND	ND	5
4-nitrophenol	ND	ND	ND	5
2-methyl-4,6-dinitrophenol	ND	ND	ND	1
pentachlorophenol	ND	ND	ND	1
BASE/NEUTRAL COMPOUNDS				
N-Nitrosodimethylamine	ND	ND	ND	5
bis(2-Chloroethyl)ether	ND	ND	ND	1
1,3-Dichlorobenzene	ND	ND	ND	1
1,4-Dichlorobenzene	ND	ND	ND	1
1,2-Dichlorobenzene	ND	ND	ND	1
bis(2-Chloroisopropyl)ether	ND	ND	ND	1
N-Nitroso-di-n-propylamine	ND	ND	ND	1
Hexachloroethane	ND	ND	ND	1
Nitrobenzene	ND	ND	ND	1
Isophorone	ND	ND	ND	1
bis(2-Chloroethoxy)methane	ND	ND	ND	1
1,2,4-Trichlorobenzene	ND	ND	ND	1
Naphthalene	ND	ND	ND	1
Hexachlorobutadiene	ND	ND	ND	1
2-chloronaphthalene	ND	ND	ND	1
2-Methyl Naphthalene	ND	ND	ND	1

COMMENTS: Results are in micrograms per liter.
 ND=Not detected at or above limit of detection.
 The information shown on this sheet is test data only and
 no analysis or interpretation is intended or implied.

APPROVED BY: Bernard J. Tyson



CH2M HILL ENVIRONMENTAL LABORATORY
 2218 RAILROAD AVENUE
 REDDING, CA 96001 916-243-5831

REPORT TO: DEL MONTE-EMERYVILLE
 CH2M HILL/SFO
 SFO27035.AO.FW
 ATTENTION: SUSAN COLMAN
 SAMPLE DESCRIPTION: WATER
 DATE OF SAMPLE: 12-21-88

REFERENCE NUMBER: 21925
 PAGE 7 OF 7
 DATE: 1-20-89
 PHONE:
 SAMPLED BY: A. COATE
 DATE RECEIVED: 12-21-88
 DATE EXTRACTED: 12-28-8

TEST METHODS: EPA-625/8270

BASE-NEUTRAL EXTRACTABLES CONT.	BLANK RB-12-28	DMEMR GW-4	DMEMR GW-5	DETECT LIMIT
4-chloroaniline	ND	ND	ND	5
2-nitroaniline	ND	ND	ND	5
3-nitroaniline	ND	ND	ND	5
4-nitroaniline	ND	ND	ND	5
hexachlorocyclopentadiene	ND	ND	ND	1
dimethyl phthalate	ND	ND	ND	10
acenaphthylene	ND	ND	ND	1
acenaphthene	ND	ND	ND	1
2,4-dinitrotoluene	ND	ND	ND	1
2,6-dinitrotoluene	ND	ND	ND	1
diethyl phthalate	ND	ND	ND	1
4-chlorophenylphenylether	ND	ND	ND	1
fluorene	ND	ND	ND	1
N-nitrosodiphenylamine	ND	ND	ND	1
4-bromophenylphenylether	ND	ND	ND	1
hexachlorobenzene	ND	ND	ND	1
Phenanthrene	ND	ND	ND	1
Anthracene	ND	ND	ND	1
Di-N-Butyl phthalate	ND	ND	ND	1
Fluorethene	ND	ND	ND	1
Benzidene	ND	ND	ND	30
pyrene	ND	ND	ND	1
benzylbutylphthalate	ND	ND	ND	1
3,3-Dichlorobenzidine	ND	ND	ND	40
Benz(a)anthracene	ND	ND	ND	1
bis(2-Ethylhexyl)phthalate	10	ND	90	10
chrysene	ND	ND	ND	2
Di-n-octyl phthalate	ND	ND	ND	1
Benzo(b)fluoranthene	ND	ND	ND	2
Benzo(k)fluoranthene	ND	ND	ND	1
Benzo(a)pyrene	ND	ND	ND	1
Indeno(1,2,3-cd)pyrene	ND	ND	ND	1
Dibenz(a,h)anthracene	ND	ND	ND	1
Benzo(g,h,i)perylene	ND	ND	ND	1
Dibenzofuran	ND	ND	ND	1
Benzoic Acid	ND	ND	ND	50
Benzyl Alcohol	ND	ND	ND	1

DATE ANALYZED: 1-18-89 1-19-89 1-19-89

COMMENTS: Results are in micrograms per liter.

ND = Not detected at or above limit of detection.

The information shown on this sheet is test data only and no analysis or interpretation is intended or implied.

APPROVED BY: Bernard J. Tyson



CH2M HILL ENVIRONMENTAL LABORATORY
2218 RAILROAD AVENUE
REDDING, CA 96001 916-243-5831

REPORT TO: DEL MONTE-EMERYVILLE
CH2M HILL/SFO
SFO27035.AO.FW
ATTENTION: SUSAN COLEMAN
SAMPLE DESCRIPTION: SOIL-DMEMS-2
DATE OF SAMPLE: 12-6-88

REFERENCE NUMBER: 21766
PAGE 2 OF 7
DATE: 1-20-89
PHONE:
SAMPLED BY: SANDI MADSON
DATE RECEIVED: 12-7-88
DATE ANALYZED: 12-16-88

VOLATILE TOXIC
ORGANIC POLLUTANTS
EPA METHOD: 8240

CONSTITUENT	RESULT	DETECT LIMIT
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	10
Trichlorofluoromethane	ND	10
1,1-Dichloroethene	ND	10
1,1-Dichloroethane	ND	10
1,2-Dichloroethene (total)	ND	5
Chloroform	ND	5
1,2-Dichloroethane	ND	5
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	10
trans-1,3-Dichloropropene	ND	10
Trichloroethene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
cis-1,3-Dichloropropene	ND	10
2-Chloroethylvinyl ether	ND	25
Bromoform	ND	10
Tetrachloroethene	ND	5
1,1,2,2-Tetrachloroethane	ND	10
Toluene	*	10
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Xylenes(Total)	ND	15
1,2-Dichlorobenzene	ND	5
1,3-Dichlorobenzene	ND	5
1,4-Dichlorobenzene	ND	5

COMMENTS: Results are in micrograms per kilogram. ND = none detected.

*Found below detection limit.

The information shown on this sheet is test data only and
no analysis or interpretation is intended or implied.

APPROVED BY: Bennett J. Tyson

CH2M HILL ENVIRONMENTAL LABORATORY
 2218 RAILROAD AVENUE
 REDDING, CA 96001 916-243-5831

REPORT TO: DEL MONTE-EMERYVILLE
 CH2M HILL/SFO
 SFO27035.AD.FW
 ATTENTION: SUSAN COLEMAN
 SAMPLE DESCRIPTION: SOIL-DMEMS-3(MC-1)
 DATE OF SAMPLE: 12-6-88

REFERENCE NUMBER: 21766
 PAGE 3 OF 7
 DATE: 1-17-89
 PHONE:
 SAMPLED BY: SANDI MADSON
 DATE RECEIVED: 12-7-88
 DATE ANALYZED: 12-16-88

VOLATILE TOXIC
 ORGANIC POLLUTANTS
 EPA METHOD: 8240

CONSTITUENT	RESULT	DETECT LIMIT
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	10
Trichlorofluoromethane	ND	10
1,1-Dichloroethene	ND	10
1,1-Dichloroethane	ND	10
1,2-Dichloroethene (total)	ND	5
Chloroform	ND	5
1,2-Dichloroethane	ND	5
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	10
trans-1,3-Dichloropropene	ND	10
Trichloroethene	*	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
cis-1,3-Dichloropropene	ND	10
2-Chloroethylvinyl ether	ND	25
Bromoform	ND	10
Tetrachloroethene	ND	5
1,1,2,2-Tetrachloroethane	ND	10
Toluene	*	10
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Xylenes(Total)	ND	15
1,2-Dichlorobenzene	ND	5
1,3-Dichlorobenzene	ND	5
1,4-Dichlorobenzene	ND	5

COMMENTS: Results are in micrograms per kilogram. ND = none detected.
 *Found below detection limit.

The information shown on this sheet is test data only and
 no analysis or interpretation is intended or implied.

APPROVED BY: *Deanna J. Tyson*

REPORT TO: DEL MONTE-EMERYVILLE
 CH2M HILL/SFO
 SFO27035.AO.FW
 ATTENTION: SUSAN COLEMAN
 SAMPLE DESCRIPTION: SOIL-DMEMS-7
 DATE OF SAMPLE: 12-6-88

REFERENCE NUMBER: 21766
 PAGE 4 OF 7
 DATE: 1-17-89
 PHONE:
 SAMPLED BY: SANDI MADSON
 DATE RECEIVED: 12-7-88
 DATE ANALYZED: 12-16-88

VOLATILE TOXIC
 ORGANIC POLLUTANTS
 EPA METHOD: 8240

CONSTITUENT	RESULT	DETECT LIMIT
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	10
Trichlorofluoromethane	ND	10
1,1-Dichloroethene	ND	10
1,1-Dichloroethane	ND	10
1,2-Dichloroethene (total)	ND	5
Chloroform	ND	5
1,2-Dichloroethane	ND	5
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	10
trans-1,3-Dichloropropene	ND	10
Trichloroethene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
cis-1,3-Dichloropropene	ND	10
2-Chloroethylvinyl ether	ND	25
Bromoform	ND	10
Tetrachloroethene	ND	5
1,1,2,2-Tetrachloroethane	ND	10
Toluene	*	10
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Xylenes(Total)	ND	15
1,2-Dichlorobenzene	ND	5
1,3-Dichlorobenzene	ND	5
1,4-Dichlorobenzene	ND	5
Methyl Pentenoic Acid	35	5

COMMENTS: Results are in micrograms per kilogram. ND = none detected.
 *Found below detection limit.

The information shown on this sheet is test data only and no analysis or interpretation is intended or implied.

APPROVED BY: *Bernett J. Tyson*



CH2M HILL ENVIRONMENTAL LABORAT
 2218 RAILROAD AVENUE
 REDDING, CA 96001 916-243-5831

REPORT TO: DEL MONTE-EMERYVILLE
 CH2M HILL/SFO
 SFO27035.AO.FW
 ATTENTION: SUSAN COLMAN
 SAMPLE DESCRIPTION: SOIL-DMEMS-3/SPIKE
 DATE OF SAMPLE: 12-6-88

REFERENCE NUMBER: 21766
 PAGE 5 OF 7
 DATE: 1-17-89
 PHONE:
 SAMPLED BY: SANDI MADSON
 DATE RECEIVED: 12-7-88
 DATE ANALYZED: 12-16-88

VOLATILE TOXIC
 ORGANIC POLLUTANTS
 EPA METHOD: 8240
 A M E N D E D R E P O R T

CONSTITUENT	SPIKE AMOUNT (PPB) *	RESULT (PPB) *	REPORTING LIMIT (PPB) *	% REC
Chloromethane	5	<10 *	10	0
Bromomethane	5	1.3	10	26
Vinyl chloride	5	<10 *	10	0
Chloroethane	5	<10 *	10	0
Methylene chloride	5	4.5	10	90 *
Trichlorofluoromethane	5	0.90	10	18
1,1-Dichloroethene	5	3.8	10	76
1,1-Dichloroethane	5	3.7	10	74
1,2-Dichloroethene (total)	5	3.3	5	66
Chloroform	5	3.8	5	76
1,2-Dichloroethane	5	4.7	5	94
1,1,1-Trichloroethane	5	4.2	5	84
Carbon tetrachloride	5	4.1	5	82
Bromodichloromethane	5	5.4	5	108 *
1,2-Dichloropropane	5	6.3	10	126
trans-1,3-Dichloropropene	5	4.8	10	96
Trichloroethene	5	5.5	5	110 *
Dibromochloromethane	5	6.6	5	132 *
1,1,2-Trichloroethane	5	8.3	5	166
Benzene	5	6.0	5	120
cis-1,3-Dichloropropene	5	4.8	10	96
2-Chloroethylvinyl ether	5	9.8	25	196
Bromoform	5	7.2	10	144
Tetrachloroethene	5	5.0	5	100
1,1,2,2-Tetrachloroethane	5	11	10	220
Toluene	5	13	10	260 *
Chlorobenzene	5	5.9	5	118 *
Ethyl benzene	5	4.7	5	94
Styrene	5	3.8	5	76
Xylenes(Total)	5	4.0	15	80
1,2-Dichlorobenzene	-	-	5	-
1,3-Dichlorobenzene	5	3.4	5	68
1,4-Dichlorobenzene	-	-	5	-

COMMENTS: * 2/9/89 Corrected value supersedes previous data.

The information shown on this sheet is test data only and no analysis or interpretation is intended or implied.

APPROVED BY: *Cornelia J. Tapan*

REPORT TO: DEL MONTE-EMERYVILLE
 CH2M HILL/SFO
 SFO27035.A0.FW

REFERENCE NUMBER: 21766

PAGE 6 OF 7

DATE: 1-20-89

ATTENTION: SUSAN COLMAN
 SAMPLE DESCRIPTION: SOIL
 DATE OF SAMPLE: 12-6-88

PHONE:

SAMPLED BY: SANDI MADSON

DATE RECEIVED: 12-7-88

DATE EXTRACTED: 12-19-88

TEST METHODS: EPA-625/8270

A M E N D E D R E P O R T

	BLANK RB-12-19	DMEMS-2	DMEMS-3 (MC-1)	DETECT LIMIT
ACID COMPOUNDS				
Phenol	ND	ND	ND	30
2-chlorophenol	ND	ND	ND	30
2-methyl phenol	ND	ND	ND	30
4-methyl phenol	ND	ND	ND	30
2-nitrophenol	ND	ND	ND	30
2,4-dimethylphenol	ND	ND	ND	30
2,4-dichlorophenol	ND	ND	ND	30
4-chloro-3-methylphenol	ND	ND	ND	30
2,4,5-trichlorophenol	ND	ND	ND	30
2,4,6-trichlorophenol	ND	ND	ND	30
2,4-dinitrophenol	ND	ND	ND	200
4-nitrophenol	ND	ND	ND	200
2-methyl-4,6-dinitrophenol	ND	ND	ND	30
pentachlorophenol	ND	ND	ND	30
BASE/NEUTRAL COMPOUNDS				
N-Nitrosodimethylamine	ND	ND	ND	200
bis(2-Chloroethyl)ether	ND	ND	ND	30
1,3-Dichlorobenzene	ND	ND	ND	30
1,4-Dichlorobenzene	ND	ND	ND	30
1,2-Dichlorobenzene	ND	ND	ND	30
bis(2-Chloroisopropyl) ether	ND	ND	ND	30
N-Nitroso-di-n-propylamine	ND	ND	ND	30
Hexachloroethane	ND	ND	ND	30
Nitrobenzene	ND	ND	ND	30
Isophorone	ND	ND	ND	30
bis(2-Chloroethoxy)methane	ND	ND	ND	30
1,2,4-Trichlorobenzene	ND	ND	ND	30
Naphthalene	ND	ND	ND	30
Hexachlorobutadiene	ND	ND	ND	30
2-Chloronaphthalene	ND	ND	ND	30
2-Methyl Napthalene	ND	ND	ND	30

COMMENTS: Results are in micrograms per kilogram.
 ND=Not detected at or above limit of detection.

The information shown on this sheet is test data only and
 no analysis or interpretation is intended or implied.

APPROVED BY: *Susan J. Tyson*



CH2M HILL ENVIRONMENTAL LABORATORY
 2218 RAILROAD AVENUE
 REDDING, CA 96001 916-243-5831

REPORT TO: DEL MONTE-EMERYVILLE
 CH2M HILL/SFO
 SFO27035.AO.FW
 ATTENTION: SUSAN COLMAN
 SAMPLE DESCRIPTION: SOIL
 DATE OF SAMPLE: 12-6-88

REFERENCE NUMBER: 21766
 PAGE 7 OF 7
 DATE: 1-20-89
 PHONE:
 SAMPLED BY: SANDI MADSON
 DATE RECEIVED: 12-7-88
 DATE EXTRACTED: 12-19-88

A M E N D E D R E P O R T

TEST METHODS: EPA-625/8270

BASE-NEUTRAL EXTRACTABLES CONT.	BLANK RB-12-19	DMEMS-2	DMEMS-3 (MC-1)	DETECT LIMIT
2-chloroaniline	ND	ND	ND	200
3-nitroaniline	ND	ND	ND	200
4-nitroaniline	ND	ND	ND	200
2,4-dinitroaniline	ND	ND	ND	200
1,2,3,4-tetrachlorocyclopentadiene	ND	ND	ND	30
1,2,3-trichlorophthalate	ND	ND	ND	300
1,2-dichlorophthalate	ND	ND	ND	30
1,2,3-trichlorobenzene	ND	ND	ND	30
1,4-dinitrotoluene	ND	ND	ND	30
2,6-dinitrotoluene	ND	ND	ND	30
diethyl phthalate	ND	ND	ND	30
1-chlorophenylphenylether	ND	ND	ND	30
fluorene	ND	ND	ND	30
N-nitrosodiphenylamine	ND	ND	ND	30
1-bromophenylphenylether	ND	ND	ND	30
hexachlorobenzene	ND	ND	ND	30
phenanthrene	ND	ND	ND	30
anthracene	ND	ND	ND	30
1,2,3-trichlorobutyl phthalate	ND	150	*50	30
fluorenone	ND	ND	ND	30
benzidine	ND	ND	ND	1000
pyrene	ND	ND	ND	30
benzylbutylphthalate	ND	ND	ND	30
3,3-Dichlorobenzidine	ND	ND	ND	1000
benz(a)anthracene	ND	ND	ND	30
bis(2-Ethylhexyl)phthalate	ND	ND	ND	30
chrysene	ND	ND	ND	300
Di-n-octyl phthalate	ND	ND	ND	70
benzo(b)fluoranthene	ND	ND	ND	30
benzo(k)fluoranthene	ND	ND	ND	70
Benzo(a)pyrene	ND	ND	ND	30
Indeno(1,2,3-cd)pyrene	ND	ND	ND	30
tribenz(a,h)anthracene	ND	ND	ND	30
Benzo(g,h,i)perylene	ND	ND	ND	30
tribenzofuran	ND	ND	ND	30
benzoic Acid	ND	ND	ND	2000
Benzyl Alcohol	ND	ND	ND	30

DATE ANALYZED: 1-18-89 1-18-89 1-19-89

COMMENTS: Results are in micrograms per liter. *1/31/89 Corrected value supercedes previous data. ND = Not detected at or above limit of detection. The information shown on this sheet is test data only and no analysis or interpretation is intended or implied.

APPROVED BY: Burnett J. Tyson



CH2M HILL ENVIRONMENTAL LABORATORY
 2218 RAILROAD AVENUE
 REDDING, CA 96001 916-243-5831

REPORT TO: DEL MONTE-EMERYVILLE
 CH2M HILL/SFO
 SFO27035.AO.FW
 ATTENTION: SUSAN COLMAN
 SAMPLE DESCRIPTION: SOIL-DMEMS-7/SPIKE
 DATE OF SAMPLE: 12-6-88
 TEST METHODS: EPA-625/8270

REFERENCE NUMBER: 21766
 PAGE 7A OF 7
 DATE: 1-20-89
 PHONE:
 SAMPLED BY: SANDI MADSON
 DATE RECEIVED: 12-7-88
 DATE EXTRACTED: 12-19-88

A M E N D E D R E P O R T

COMPOUND	SAMPLE RESULT (PPB)	DETECT LIMIT (PPB)	SPIKE RESULT (PPB)	SPIKE AMOUNT (PPB)	% RECOVERY
ACID COMPOUNDS					
Phenol	ND	30	660	666	99
2-chlorophenol	ND	30	640	666	96
2-methyl phenol	ND	30	650	666	98
4-methyl phenol	ND	30	630	666	95
2-nitrophenol	ND	30	600	666	90
2,4-dimethylphenol	ND	30	570	666	86
2,4-dichlorophenol	ND	30	650	666	98
4-chloro-3-methylphenol	ND	30	670	666	101
2,4,5-trichlorophenol	ND	30	690	666	104
2,4,6-trichlorophenol	ND	30	540	666	81
2,4-dinitrophenol	ND	200	400	666	60
4-nitrophenol	ND	200	390	666	58
2-methyl-4,6-dinitrophenol	ND	30	680	666	102
pentachlorophenol	ND	30	620	666	93
BASE/NEUTRAL COMPOUNDS					
N-nitrosodimethylamine	ND	200	450	666	68
Bis(2-chloroethyl)ether	ND	30	620	666	93
1,3-dichlorobenzene	ND	30	580	666	87
1,4-dichlorobenzene	ND	30	550	666	83
1,2-dichlorobenzene	ND	30	570	666	86
Bis-(2-chloroisopropyl)ether	ND	30	600	666	90
N-nitrosodi-n-propylamine	ND	30	630	666	94
Hexachloroethane	ND	30	510	666	77
Nitrobenzene	ND	30	600	666	90
Isophorone	ND	30	650	666	98
Bis-(2-chloroethoxy)methane	ND	30	780	666	117
1,2,4-trichlorobenzene	ND	30	620	666	93
naphthalene	ND	30	660	666	99
hexachlorobutadiene	ND	30	630	666	95
2-chloronaphthalene	ND	30	670	666	101
2-Methyl Naphthalene	ND	30	700	666	105

COMMENTS: Results are in micrograms per kilogram.
 ND = Not detected at or above limit of detection.

The information shown on this sheet is test data only and no analysis or interpretation is intended or implied.

APPROVED BY: *Samuel J. Tyson*



CH2M HILL ENVIRONMENTAL LABORATORY
 2218 RAILROAD AVENUE
 REDDING, CA 96001 916-243-5831

REPORT TO: DEL MONTE-EMERYVILLE
 CH2M HILL/SFO
 SFO27035.AO.FW

REFERENCE NUMBER: 21766
 PAGE 7B OF 7
 DATE: 1-20-89
 PHONE:
 SAMPLED BY: SANDI MADSON
 DATE RECEIVED: 12-7-88
 DATE EXTRACTED: 12-19-88

ATTENTION: SUSAN COLMAN
 SAMPLE DESCRIPTION: SOIL-DMEMS-7/SPIKE
 DATE OF SAMPLE: 12-6-88
 TEST METHODS: EPA-625/8270

A M E N D E D R E P O R T

COMPOUND	SAMPLE RESULT (PPB)	DETECT LIMIT (PPB)	SPIKE RESULT (PPB)	SPIKE AMOUNT (PPB)	% RECOVERY
BASE/NEUTRAL COMPOUNDS					
4-chloroaniline	ND	200	100	666	15
2-nitroaniline	ND	200	590	666	89
3-nitroaniline	ND	200	270	666	40
4-nitroaniline	ND	200	240	666	36
hexachlorocyclopentadiene	ND	30	350	666	53
dimethyl phthalate	ND	300	710	666	107
acenaphthylene	ND	30	720	666	108
acenaphthene	ND	30	730	666	110
2,4-dinitrotoluene	ND	30	580	666	87
2,6-dinitrotoluene	ND	30	650	666	96
diethyl phthalate	ND	30	800	666	120
4-chlorophenylphenylether	ND	30	710	666	107
fluorene	ND	30	720	666	108
N-nitrosodiphenylamine	ND	30	700	666	105
4-bromophenylphenylether	ND	30	710	666	107
hexachlorobenzene	ND	30	740	666	111
Phenanthrene	ND	30	750	666	113
Anthracene	ND	30	750	666	113
Di-N-Butyl phthalate	100	30	850	666	128
Fluorethene	ND	30	750	666	113
Benzidene	ND	1000	ND	666	0
pyrene	ND	30	730	666	110
benzylbutylphthalate	ND	30	710	666	107
3,3-Dichlorobenzidine	ND	1000	75 (a)	666	11
Benz(a)anthracene	ND	30	750	666	113
bis(2-Ethylhexyl)phthalate	ND	300	780	666	117
chrysene	ND	70	690	666	104
Di-n-octyl phthalate	ND	30	470	666	71
Benzo(b)fluoranthene	ND	70	500	666	75
Benzo(k)fluoranthene	ND	30	560	666	84
Benzo(a)pyrene	ND	30	540	666	81
Indeno(1,2,3-cd)pyrene	ND	30	510	666	77
Dibenz(a,h)anthracene	ND	30	500	666	75
Benzo(g,h,i)perylene	ND	30	530	666	80
Dibenzofuran	ND	30	670	666	101
Benzoic Acid	ND	2000	420 (a)	666	63
Benzyl Alcohol	ND	30	ND	666	0

COMMENTS: Results are in micrograms per kilogram.
 ND = Not detected at or above limit of detection.
 (a) = Compound found but value was below the reporting limit.
 The information shown on this sheet is test data only and
 no analysis or interpretation is intended or implied.

APPROVED BY: Bernard J. Tyson

SUBCONTRACTOR'S REPORTS

CERTIFICATE OF ANALYSIS

LAB I.D.: P-73787
 SAMPLE LOCATION: 21766-1
 COLLECTED BY: Client
 DATE COLLECTED: December 13, 1988

RUSH
 (gold)

DATE RECEIVED: December 15, 1988
 DATE STARTED: December 16, 1988
 DATE COMPLETED: December 19, 1988
 DATE REPORTED: December 20, 1988

DA

CLIENT: CH2M Hill
 STREET: 2218 Railroad
 CITY: Redding
 STATE: CA

ZIP: 96881

PURCHASE ORDER: R097714
 QFN #: L0773
 COPY TO: No cc Req.

EPA Method 8240 VOLATILE ORGANICS by GC/MS

Analyte	Result (ug/kg)	Detection Limit (ug/kg)	Analyte	Result (ug/kg)	Detection Limit (ug/kg)
Chloroethane	ND	10	Dibromochloroethane	ND	5
Bromoethane	ND	10	1,1,2 - Trichloroethane	ND	5
Vinyl Chloride	ND	10	Benzene	ND	5
Chloroethane	ND	10	Cis-1,3-Dichloropropene	ND	10
Methylene Chloride	ND	10	2 - Chloroethylvinyl Ether	ND	25
Trichlorofluoromethane	ND	10	Bromoform	ND	10
1,1 - Dichloroethene	ND	10	Tetrachloroethene	ND	5
1,1 - Dichloroethane	ND	10	1,1,2,2 - Tetrachloroethane	ND	10
1,2-Dichloroethene (Total)	ND	5	Toluene	*	10
Chloroform	ND	5	Chlorobenzene	ND	5
1,2 - Dichloroethane	ND	5	Ethylbenzene	ND	5
1,1,1 - Trichloroethane	ND	5	Styrene	ND	5
Carbon Tetrachloride	ND	5	Xylenes (Total)	ND	15
Bromodichloromethane	ND	5	1,2 - Dichlorobenzene	ND	5
1,2 - Dichloropropane	ND	10	1,3 - Dichlorobenzene	ND	5
Trans-1,3-Dichloropropene	ND	10	1,4 - Dichlorobenzene	ND	5
Trichloroethane	ND	5			

*Found below detection limit.

APPROVED: _____

CERTIFICATE OF ANALYSIS

LAB I.D.: P-73708
 SAMPLE LOCATION: 21766-2
 COLLECTED BY: Client
 DATE COLLECTED: December 13, 1988

RUSH
 (gold)

DATE RECEIVED: December 15, 1988
 DATE STARTED: December 16, 1988
 DATE COMPLETED: December 19, 1988
 DATE REPORTED: December 20, 1988

CLIENT: EM2H Hill
 STREET: 2218 Railroad
 CITY: Redding
 STATE: CA

ZIP: 96001

PURCHASE ORDER: R807714
 OFW #: LB773
 COPY TO: No cc Req.

EPA Method 8240 VOLATILE ORGANICS by GC/MS

Analyte	Result (ug/kg)	Detection Limit (ug/kg)	Analyte	Result (ug/kg)	Detection Limit (ug/kg)
Chloroethane	ND	10	Dibromochloroethane	ND	5
Bromoethane	ND	10	1,1,2 - Trichloroethane	ND	5
Vinyl Chloride	ND	10	Benzene	ND	5
Chloroethane	ND	10	Cis-1,3-Dichloropropene	ND	10
Methylene Chloride	ND	10	2 - Chloroethylvinyl Ether	ND	25
Trichlorofluoroethane	ND	10	Bromoform	ND	10
1,1 - Dichloroethene	ND	10	Tetrachloroethene	ND	5
1,1 - Dichloroethane	ND	10	1,1,2,2 - Tetrachloroethane	ND	10
1,2-Dichloroethene (Total)	ND	5	Toluene	*	10
Chloroform	ND	5	Chlorobenzene	ND	5
1,2 - Dichloroethane	ND	5	Ethylbenzene	ND	5
1,1,1 - Trichloroethane	ND	5	Styrene	ND	5
Carbon Tetrachloride	ND	5	Xylenes (Total)	ND	15
Bromodichloroethane	ND	5	1,2 - Dichlorobenzene	ND	5
1,2 - Dichloropropane	ND	10	1,3 - Dichlorobenzene	ND	5
Trans-1,3-Dichloropropene	ND	10	1,4 - Dichlorobenzene	ND	5
Trichloroethane	*	5			

*Found below detection limit.

APPROVED: _____

CERTIFICATE OF ANALYSIS

LAB I.D.: P-73789
 SAMPLE LOCATION: 21766-3
 COLLECTED BY: Client
 DATE COLLECTED: December 13, 1988

RUSH
 (gold)

DATE RECEIVED: December 15, 1988
 DATE STARTED: December 16, 1988
 DATE COMPLETED: December 19, 1988
 DATE REPORTED: December 20, 1988

CLIENT: CH2M Hill
 STREET: 2218 Railroad
 CITY: Redding
 STATE: CA

ZIP: 96001

PURCHASE ORDER: R007714
 OFW #: L0773
 COPY TO: No cc Req.

EPA Method 8240 VOLATILE ORGANICS by GC/MS

Analyte	Result (ug/kg)	Detection Limit (ug/kg)	Analyte	Result (ug/kg)	Detection Limit (ug/kg)
Chloroethane	ND	10	Dibromochloroethane	ND	5
Bromoethane	ND	10	1,1,2 - Trichloroethane	ND	5
Vinyl Chloride	ND	10	Benzene	ND	5
Chloroethane	ND	10	Cis-1,3-Dichloropropene	ND	10
Methylene Chloride	ND	10	2 - Chloroethylvinyl Ether	ND	25
Trichlorofluoromethane	ND	10	Bromoform	ND	10
1,1 - Dichloroethene	ND	10	Tetrachloroethene	ND	5
1,1 - Dichloroethane	ND	10	1,1,2,2 - Tetrachloroethane	ND	10
1,2-Dichloroethene (Total)	ND	5	Toluene	*	10
Chloroform	ND	5	Chlorobenzene	ND	5
1,2 - Dichloroethane	ND	5	Ethylbenzene	ND	5
1,1,1 - Trichloroethane	ND	5	Styrene	ND	5
Carbon Tetrachloride	ND	5	Xylenes (Total)	ND	15
Bromodichloroethane	ND	5	1,2 - Dichlorobenzene	ND	5
1,2 - Dichloropropane	ND	10	1,3 - Dichlorobenzene	ND	5
Trans-1,3-Dichloropropene	ND	10	1,4 - Dichlorobenzene	ND	5
Trichloroethene	ND	5	Methyl Pentenoic Acid	35	5

*Found below detection limit.

APPROVED: _____

CERTIFICATE OF ANALYSIS

LAB I.D.: P-73708
 SAMPLE LOCATION: 21766-2 - *spec. file*
 COLLECTED BY: Client
 DATE COLLECTED: December 13, 1988

RUSH
 (silver)

DATE RECEIVED: December 15, 1988
 DATE STARTED: December 16, 1988
 DATE COMPLETED: December 17, 1988
 DATE REPORTED: December 28, 1988

CLIENT: CH2M Hill
 STREET: 2218 Railroad
 CITY: Redding
 STATE: CA

ZIP: 96001

PURCHASE ORDER: RDD7714
 OFW #: L0773
 COPY TO: No cc Req.

DETECTION LIMIT SPIKE

EPA Method 8240 VOLATILE ORGANICS by GC/MS

Analyte	SPIKE (pg/kg)	Result (pg/kg)	Detection		Analyte	SPIKE (pg/kg)	Result (pg/kg)	Detection	
			Limit (pg/kg)	% REC.				Limit (pg/kg)	% REC.
Chloroethane	5	0	10	0	Dibromochloroethane	5	6.6	5	130
Bromoethane	5	1.3	10	26	1,1,2 - Trichloroethane	5	8.3	5	166
Vinyl Chloride	5	0	10	0	Benzene	5	6.8	5	120
	5	0	10	0	Cis-1,3-Dichloropropene	5	4.8	10	96
o-Nitrochlorobenzene * (1.9)	5	4.5	10	52	2 - Chloroethylvinyl Ether	5	9.0	25	196
Trichlorofluoromethane	5	8.98	10	18	Bromofors	5	7.2	10	144
1,1 - Dichloroethene	5	3.8	10	76	Tetrachloroethene	5	5.0	5	100
1,2 - Dichloroethane	5	3.7	10	74	1,1,2,2 - Tetrachloroethane	5	11	10	220
1,1,2 - Dichloroethane (Total)	5	3.3	5	66	Toluene * (7.1)	5	13	10	120
Bromofors	5	3.8	5	76	Chlorobenzene	5	5.9	5	120
1,2 - Dichloroethane	5	4.7	5	94	Ethylbenzene	5	4.7	5	94
1,1,1 - Trichloroethane	5	4.2	5	84	Styrene	5	3.8	5	76
Carbon Tetrachloride	5	4.1	5	82	Xylenes (Total)	5	4.0	15	80
1,1,2,2 - Tetrachloroethane	5	5.4	5	110	1,2 - Dichlorobenzene	-----	-----	5	-----
1,2 - Dichloropropane	5	6.3	10	126	1,3 - Dichlorobenzene	5	3.4	5	68
trans-1,3-Dichloropropene	5	4.8	10	96	1,4 - Dichlorobenzene	-----	-----	5	-----
1,1,1 - Trichloroethane * (2.6)	5	5.5	5	58					

* Found in the sample

APPROVED: *Mehdi Sami*

Clayton Environmental Consultants, Inc.

P.O. Box 9019 • 1252 Quarry Lane • Pleasanton, CA 94566 • (415) 426-2600

January 23, 1989

Mr. Jim Hawley
CH₂M HILL INC.
2218 Railroad Avenue
Redding, CA 96001

Client Ref. No.:
Lab Batch No.: 8901067
Clayton Project No.: 21341.00
Client Code No.: 0560

Dear Mr. Hawley:

Attached is our analytical laboratory report for the samples received on January 18, 1989. Results were sent to you by facsimile on January 20, 1989. A copy of the Chain of Custody form acknowledging receipt of these samples is attached.

Please note that any unused portion of the samples will be retained at our facility for approximately 30 days after the date of this report, unless you have requested otherwise.

We appreciate the opportunity to be of assistance to you. If you have any questions, please contact Client Services at (415) 426-2657.

Sincerely,


Ronald H. Peters, CIH
Manager, Laboratory Services

RHP/ewg
Attachment

EPA METHOD 8270
BASE/NEUTRALS AND ACIDS

Sample I.D.: 21925-1 (A+BN) Client: CH₂M HILL INC.
 Sample Received: 01/18/89 Client Ref. No.:
 Sample Analyzed: 01/19/89 Lab Client Code: 0560
 Sample Matrix: Water Lab No.: 8901067-01

Concentration
μg/L (ppb)

Limit of Detection
μg/L (ppb)

ACID COMPOUNDS

Phenol	ND	1
2-chlorophenol	ND	1
2-methyl phenol	ND	1
4-methyl phenol	ND	1
2-nitrophenol	ND	1
2,4-dimethylphenol	ND	1
2,4-dichlorophenol	ND	1
4-chloro-3-methylphenol	ND	1
2,4,5-trichlorophenol	ND	1
2,4,6-trichlorophenol	ND	1
2,4-dinitrophenol	ND	5
4-nitrophenol	ND	5
2-methyl-4,6-dinitrophenol	ND	1
pentachlorophenol	ND	1

BASE/NEUTRAL COMPOUNDS

N-nitrosodimethylamine	ND	5
Bis(2-chloroethyl)ether	ND	1
1,3-dichlorobenzene	ND	1
1,4-dichlorobenzene	ND	1
1,2-dichlorobenzene	ND	1
Bis-(2-chloroisopropyl)ether	ND	1
N-nitrosodi-n-propylamine	ND	1
Hexachloroethane	ND	1
Nitrobenzene	ND	1
Isophorone	ND	1
Bis-(2-chloroethoxy)methane	ND	1
1,2,4-trichlorobenzene	ND	1
naphthalene	ND	1
hexachlorobutadiene	ND	1
2-chloronaphthalene	ND	1
2-Methyl Naphthalene	ND	1

ND = Not detected at or above limit of detection

EPA METHOD 8270
BASE/NEUTRALS AND ACIDS
(Cont.d)

Sample I.D.: 21925-1 (A+BN) Client: CH₂M HILL INC.

	Concentration µg/L (ppb)	Limit of Detection µg/L (ppb)
BASE/NEUTRAL COMPOUNDS		
4-chloroaniline	ND	5
2-nitroaniline	ND	5
3-nitroaniline	ND	5
4-nitroaniline	ND	5
1,2-dichlorocyclopentadiene	ND	1
diethyl phthalate	ND	10
1,2,3,4-tetrahydronaphthalene	ND	1
acenaphthene	ND	1
2,4-dinitrotoluene	ND	1
2,6-dinitrotoluene	ND	1
diethyl phthalate	ND	1
4-chlorophenylphenylether	ND	1
fluorene	ND	1
N-nitrosodiphenylamine	ND	1
1,1'-biphenylphenylether	ND	1
1,2-dichlorobenzene	ND	1
phenanthrene	ND	1
anthracene	ND	1
di-n-butylphthalate	ND	1
fluoranthene	ND	1
benzidine	ND	30
pyrene	ND	1
benzylbutylphthalate	ND	1
1,3-dichlorobenzidine	ND	40
benzo(a)anthracene	ND	1
bis-(2-ethylhexyl)phthalate	ND	10
Chrysene	ND	2
di-n-octylphthalate	ND	1
benzo(b)fluoranthene	ND	2
benzo(k)fluoranthene	ND	1
benzo(a)pyrene	ND	1
indeno(1,2,3-cd)pyrene	ND	1
dibenzo(a,h)anthracene	ND	1
benzo(ghi)perylene	ND	1
Dibenzofuran	ND	1
Benzoic Acid	ND	50
Benzyl Alcohol	ND	1

ND = Not detected at or above limit of detection

EPA METHOD 8270
BASE/NEUTRALS AND ACIDS

Sample I.D.:	21925-2 (A+BN)	Client:	CH ₂ M HILL INC.
Sample Received:	01/18/89	Client Ref. No.:	
Sample Analyzed:	01/19/89	Lab Client Code:	0560
Sample Matrix:	Water	Lab No.:	8901067-02

	Concentration <u>µg/L (ppb)</u>	Limit of Detection <u>µg/L (ppb)</u>
ACID COMPOUNDS		
Phenol	ND	1
2-chlorophenol	ND	1
2-methyl phenol	ND	1
4-methyl phenol	ND	1
2-nitrophenol	ND	1
2,4-dimethylphenol	ND	1
2,4-dichlorophenol	ND	1
4-chloro-3-methylphenol	ND	1
2,4,5-trichlorophenol	ND	1
2,4,6-trichlorophenol	ND	1
2,4-dinitrophenol	ND	5
3-nitrophenol	ND	5
2-methyl-4,6-dinitrophenol	ND	1
2,4,6-trichlorophenol	ND	1

BASE/NEUTRAL COMPOUNDS

N-nitrosodimethylamine	ND	5
Bis(2-chloroethyl)ether	ND	1
1,3-dichlorobenzene	ND	1
1,4-dichlorobenzene	ND	1
1,2-dichlorobenzene	ND	1
Bis-(2-chloroisopropyl)ether	ND	1
N-nitrosodi-n-propylamine	ND	1
Hexachloroethane	ND	1
Nitrobenzene	ND	1
Isophorone	ND	1
Bis-(2-chloroethoxy)methane	ND	1
1,2,4-trichlorobenzene	ND	1
naphthalene	ND	1
hexachlorobutadiene	ND	1
2-chloronaphthalene	ND	1
2-Methyl Napthalene	ND	1

ND = Not detected at or above limit of detection

EPA METHOD 8270
BASE/NEUTRALS AND ACIDS
(Cont.d)

Sample I.D.: 21925-2 (A+BN) Client: CH₂M HILL INC.

	Concentration <u>µg/L (ppb)</u>	Limit of Detection <u>µg/L (ppb)</u>
<u>BASE/NEUTRAL COMPOUNDS</u>		
4-chloroaniline	ND	5
2-nitroaniline	ND	5
3-nitroaniline	ND	5
4-nitroaniline	ND	5
hexachlorocyclopentadiene	ND	1
dimethyl phthalate	ND	10
acenaphthylene	ND	1
acenaphthene	ND	1
2,4-dinitrotoluene	ND	1
2,6-dinitrotoluene	ND	1
diethyl phthalate	ND	1
4-chlorophenylphenylether	ND	1
fluorene	ND	1
N-nitrosodiphenylamine	ND	1
4-bromophenylphenylether	ND	1
hexachlorobenzene	ND	1
phenanthrene	ND	1
anthracene	ND	1
di-n-butylphthalate	ND	1
fluoranthene	ND	1
benzidine	ND	30
pyrene	ND	1
benzylbutylphthalate	ND	1
2,3'-dichlorobenzidine	ND	40
benzo(a)anthracene	ND	1
bis-(2-ethylhexyl)phthalate	90	10
Chrysene	ND	2
di-n-octylphthalate	ND	1
benzo(b)fluoranthene	ND	2
benzo(k)fluoranthene	ND	1
benzo(a)pyrene	ND	1
indeno(1,2,3-cd)pyrene	ND	1
dibenzo(a,h)anthracene	ND	1
benzo(ghi)perylene	ND	1
Dibenzofuran	ND	1
Benzoic Acid	ND	50
Benzyl Alcohol	ND	1

ND = Not detected at or above limit of detection

**EPA METHOD 8270
BASE/NEUTRALS AND ACIDS**

Sample I.D.:	RB-12-28(A+BN)	Client:	CH ₂ M HILL INC.
Sample Received:	01/18/89	Client Ref. No.:	
Sample Analyzed:	01/18/89	Lab Client Code:	0560
Sample Matrix:	Water	Lab No.:	8901067-05

	Concentration µg/L (ppb)	Limit of Detection µg/L (ppb)
<u>ACID COMPOUNDS</u>		
Phenol	ND	1
2-chlorophenol	ND	1
2-methyl phenol	ND	1
4-methyl phenol	ND	1
2-nitrophenol	ND	1
2,4-dimethylphenol	ND	1
2,4-dichlorophenol	ND	1
4-chloro-3-methylphenol	ND	1
2,4,5-trichlorophenol	ND	1
2,4,6-trichlorophenol	ND	1
2,4-dinitrophenol	ND	5
3-nitrophenol	ND	5
2-methyl-4,6-dinitrophenol	ND	1
pentachlorophenol	ND	1
<u>BASE/NEUTRAL COMPOUNDS</u>		
N-nitrosodimethylamine	ND	5
Bis(2-chloroethyl)ether	ND	1
1,3-dichlorobenzene	ND	1
1,4-dichlorobenzene	ND	1
1,2-dichlorobenzene	ND	1
Bis-(2-chloroisopropyl)ether	ND	1
N-nitrosodi-n-propylamine	ND	1
Hexachloroethane	ND	1
Nitrobenzene	ND	1
Isophorone	ND	1
Bis-(2-chloroethoxy)methane	ND	1
1,2,4-trichlorobenzene	ND	1
naphthalene	ND	1
hexachlorobutadiene	ND	1
2-chloronaphthalene	ND	1
2-Methyl Napthalene	ND	1

ND = Not detected at or above limit of detection

EPA METHOD 8270
BASE/NEUTRALS AND ACIDS
(Cont.d)

Sample I.D.: RB-12-28(A+BN) Client: CH₂M HILL INC.

	Concentration <u>µg/L (ppb)</u>	Limit of Detection <u>µg/L (ppb)</u>
<u>BASE/NEUTRAL COMPOUNDS</u>		
4-chloroaniline	ND	5
2-nitroaniline	ND	5
3-nitroaniline	ND	5
4-nitroaniline	ND	5
hexachlorocyclopentadiene	ND	1
dimethyl phthalate	ND	10
acenaphthylene	ND	1
acenaphthene	ND	1
2,4-dinitrotoluene	ND	1
2,6-dinitrotoluene	ND	1
diethyl phthalate	ND	1
4-chlorophenylphenylether	ND	1
fluorene	ND	1
N-nitrosodiphenylamine	ND	1
4-bromophenylphenylether	ND	1
hexachlorobenzene	ND	1
phenanthrene	ND	1
anthracene	ND	1
di-n-butylphthalate	ND	1
fluoranthene	ND	1
benzidine	ND	30
pyrene	ND	1
benzylbutylphthalate	ND	1
3,3'-dichlorobenzidine	ND	40
benzo(a)anthracene	ND	1
bis-(2-ethylhexyl)phthalate	10	10
Chrysene	ND	2
di-n-octylphthalate	ND	1
benzo(b)fluoranthene	ND	2
benzo(k)fluoranthene	ND	1
benzo(a)pyrene	ND	1
indeno(1,2,3-cd)pyrene	ND	1
dibenzo(a,h)anthracene	ND	1
benzo(ghi)perylene	ND	1
Dibenzofuran	ND	1
Benzoic Acid	ND	50
Benzyl Alcohol	ND	1

ND = Not detected at or above limit of detection

EPA METHOD 8270
BASE/NEUTRALS AND ACIDS
(LOW LEVEL METHOD)

Sample I.D.:	21766-1	Client:	CH ₂ M HILL
Sample Received:	01/18/89	Client Ref. No.:	
Sample Analyzed:	01/19/89	Lab Client Code:	0560
Sample Matrix:	Soil	Lab No.:	8901067-06

	Concentration <u>µg/kg (ppb)</u>	Limit of Detection <u>µg/kg (ppb)</u>
--	-------------------------------------	--

ACID COMPOUNDS

Phenol	ND	30
2-chlorophenol	ND	30
2-methyl phenol	ND	30
4-methyl phenol	ND	30
2-nitrophenol	ND	30
2,4-dimethylphenol	ND	30
2,4-dichlorophenol	ND	30
4-chloro-3-methylphenol	ND	30
2,4,5-trichlorophenol	ND	30
2,4,6-trichlorophenol	ND	30
2,4-dinitrophenol	ND	200
4-nitrophenol	ND	200
2-methyl-4,6-dinitrophenol	ND	30
pentachlorophenol	ND	30

BASE/NEUTRAL COMPOUNDS

N-nitrosodimethylamine	ND	200
Bis(2-chloroethyl)ether	ND	30
1,3-dichlorobenzene	ND	30
1,4-dichlorobenzene	ND	30
1,2-dichlorobenzene	ND	30
Bis-(2-chloroisopropyl)ether	ND	30
N-nitrosodi-n-propylamine	ND	30
Hexachloroethane	ND	30
Nitrobenzene	ND	30
Isophorone	ND	30
Bis-(2-chloroethoxy)methane	ND	30
1,2,4-trichlorobenzene	ND	30
naphthalene	ND	30
hexachlorobutadiene	ND	30
2-chloronaphthalene	ND	30
2-Methyl Napthalene	ND	30

ND = Not detected at or above limit of detection

EPA METHOD 8270
 BASE/NEUTRALS AND ACIDS
 (LOW LEVEL METHOD)
 (Cont.d)

Sample I.D.:

21766-1

Client:

CH₂M HILL

	Concentration <u>µg/kg (ppb)</u>	Limit of Detection <u>µg/kg (ppb)</u>
<u>BASE/NEUTRAL COMPOUNDS</u>		
4-chloroaniline	ND	200
2-nitroaniline	ND	200
3-nitroaniline	ND	200
4-nitroaniline	ND	200
hexachlorocyclopentadiene	ND	30
dimethyl phthalate	ND	300
acenaphthylene	ND	30
acenaphthene	ND	30
2,4-dinitrotoluene	ND	30
2,6-dinitrotoluene	ND	30
diethyl phthalate	ND	30
4-chlorophenylphenylether	ND	30
fluorene	ND	30
nitrosodiphenylamine	ND	30
4-bromophenylphenylether	ND	30
hexachlorobenzene	ND	30
phenanthrene	ND	30
anthracene	ND	30
di-n-butylphthalate	150	30
fluoranthene	ND	30
benzidine	ND	1000
pyrene	ND	30
benzylbutylphthalate	ND	30
3,3'-dichlorobenzidine	ND	1000
benzo(a)anthracene	ND	30
bis-(2-ethylhexyl)phthalate	ND	300
Chrysene	ND	70
di-n-octylphthalate	ND	30
benzo(b)fluoranthene	ND	70
benzo(k)fluoranthene	ND	30
benzo(a)pyrene	ND	30
indeno(1,2,3-cd)pyrene	ND	30
dibenzo(a,h)anthracene	ND	30
benzo(ghi)perylene	ND	30
Dibenzofuran	ND	30
Benzoic Acid	ND	2000
Benzyl Alcohol	ND	30

ND = Not detected at or above limit of detection

EPA METHOD 8270
BASE/NEUTRALS AND ACIDS
(LOW LEVEL METHOD)

Sample I.D.:	21766-2	Client:	CH ₂ M HILL
Sample Received:	01/18/89	Client Ref. No.:	
Sample Analyzed:	01/19/89	Lab Client Code:	0560
Sample Matrix:	Soil	Lab No.:	8901067-07

	Concentration <u>µg/kg (ppb)</u>	Limit of Detection <u>µg/kg (ppb)</u>
ACID COMPOUNDS		
Phenol	ND	30
2-chlorophenol	ND	30
2-methyl phenol	ND	30
4-methyl phenol	ND	30
2-nitrophenol	ND	30
2,4-dimethylphenol	ND	30
2,4-dichlorophenol	ND	30
4-chloro-3-methylphenol	ND	30
2,4,5-trichlorophenol	ND	30
2,4,6-trichlorophenol	ND	30
2,4-dinitrophenol	ND	200
4-nitrophenol	ND	200
2-methyl-4,6-dinitrophenol	ND	30
pentachlorophenol	ND	30

BASE/NEUTRAL COMPOUNDS

Nitrosodimethylamine	ND	200
(2-chloroethyl)ether	ND	30
1,3-dichlorobenzene	ND	30
1,4-dichlorobenzene	ND	30
1,2-dichlorobenzene	ND	30
Bis-(2-chloroisopropyl)ether	ND	30
N-nitrosodi-n-propylamine	ND	30
Hexachloroethane	ND	30
Nitrobenzene	ND	30
Isophorone	ND	30
Bis-(2-chloroethoxy)methane	ND	30
1,2,4-trichlorobenzene	ND	30
naphthalene	ND	30
hexachlorobutadiene	ND	30
2-chloronaphthalene	ND	30
2-Methyl Napthalene	ND	30

ND = Not detected at or above limit of detection

EPA METHOD 8270
 BASE/NEUTRALS AND ACIDS
 (LOW LEVEL METHOD)
 (Cont.d)

Sample I.D.:

21766-2

Client:

CH₂M HILL

	Concentration <u>µg/kg (ppb)</u>	Limit of Detection <u>µg/kg (ppb)</u>
<u>BASE/NEUTRAL COMPOUNDS</u>		
4-chloroaniline	ND	200
2-nitroaniline	ND	200
3-nitroaniline	ND	200
4-nitroaniline	ND	200
hexachlorocyclopentadiene	ND	30
dimethyl phthalate	ND	300
acenaphthylene	ND	30
acenaphthene	ND	30
2,4-dinitrotoluene	ND	30
2,6-dinitrotoluene	ND	30
diethyl phthalate	ND	30
4-chlorophenylphenylether	ND	30
fluorene	ND	30
nitrosodiphenylamine	ND	30
p-bromophenylphenylether	ND	30
hexachlorobenzene	ND	30
phenanthrene	ND	30
anthracene	ND	30
di-n-butylphthalate	50	30
fluoranthene	ND	30
benzidine	ND	1000
pyrene	ND	30
benzylbutylphthalate	ND	30
3,3'-dichlorobenzidine	ND	1000
benzo(a)anthracene	ND	30
bis-(2-ethylhexyl)phthalate	ND	300
Chrysene	ND	70
di-n-octylphthalate	ND	30
benzo(b)fluoranthene	ND	70
benzo(k)fluoranthene	ND	30
benzo(a)pyrene	ND	30
indeno(1,2,3-cd)pyrene	ND	30
dibenzo(a,h)anthracene	ND	30
benzo(ghi)perylene	ND	30
Dibenzofuran	ND	30
Benzoic Acid	ND	2000
Benzyl Alcohol	ND	30

ND = Not detected at or above limit of detection

EPA METHOD 8270
BASE/NEUTRALS AND ACIDS
(LOW LEVEL METHOD)

Sample I.D.:	21766-3	Client:	CH ₂ M HILL
Sample Received:	01/18/89	Client Ref. No.:	
Sample Analyzed:	01/19/89	Lab Client Code:	0560
Sample Matrix:	Soil	Lab No.:	8901067-08

	Concentration <u>µg/kg (ppb)</u>	Limit of Detection <u>µg/kg (ppb)</u>
<u>ACID COMPOUNDS</u>		
Phenol	ND	30
2-chlorophenol	ND	30
2-methyl phenol	ND	30
4-methyl phenol	ND	30
2-nitrophenol	ND	30
2,4-dimethylphenol	ND	30
2,4-dichlorophenol	ND	30
4-chloro-3-methylphenol	ND	30
2,4,5-trichlorophenol	ND	30
2,4,6-trichlorophenol	ND	30
2,4-dinitrophenol	ND	200
3-nitrophenol	ND	200
2-methyl-4,6-dinitrophenol	ND	30
pentachlorophenol	ND	30

BASE/NEUTRAL COMPOUNDS

N-nitrosodimethylamine	ND	200
Bis(2-chloroethyl)ether	ND	30
1,3-dichlorobenzene	ND	30
1,4-dichlorobenzene	ND	30
1,2-dichlorobenzene	ND	30
Bis-(2-chloroisopropyl)ether	ND	30
N-nitrosodi-n-propylamine	ND	30
Hexachloroethane	ND	30
Nitrobenzene	ND	30
Isophorone	ND	30
Bis-(2-chloroethoxy)methane	ND	30
1,2,4-trichlorobenzene	ND	30
naphthalene	ND	30
hexachlorobutadiene	ND	30
2-chloronaphthalene	ND	30
2-Methyl Napthalene	ND	30

ND = Not detected at or above limit of detection

EPA METHOD 8270
BASE/NEUTRALS AND ACIDS
(LOW LEVEL METHOD)
(Cont.d)

Sample I.D.:

21766-3

Client:

CH₂M HILL

	Concentration <u>µg/kg (ppb)</u>	Limit of Detection <u>µg/kg (ppb)</u>
BASE/NEUTRAL COMPOUNDS		
4-chloroaniline	ND	200
2-nitroaniline	ND	200
3-nitroaniline	ND	200
4-nitroaniline	ND	200
hexachlorocyclopentadiene	ND	30
dimethyl phthalate	ND	300
acenaphthylene	ND	30
acenaphthene	ND	30
2,4-dinitrotoluene	ND	30
2,6-dinitrotoluene	ND	30
diethyl phthalate	ND	30
4-chlorophenylphenylether	ND	30
fluorene	ND	30
N-nitrosodiphenylamine	ND	30
4-bromophenylphenylether	ND	30
hexachlorobenzene	ND	30
phenanthrene	ND	30
anthracene	ND	30
di-n-butylphthalate	100	30
fluoranthene	ND	30
benzidine	ND	1000
pyrene	ND	30
benzylbutylphthalate	ND	30
3,3'-dichlorobenzidine	ND	1000
benzo(a)anthracene	ND	30
bis-(2-ethylhexyl)phthalate	ND	300
Chrysene	ND	70
di-n-octylphthalate	ND	30
benzo(b)fluoranthene	ND	70
benzo(k)fluoranthene	ND	30
benzo(a)pyrene	ND	30
indeno(1,2,3-cd)pyrene	ND	30
dibenzo(a,h)anthracene	ND	30
benzo(ghi)perylene	ND	30
Dibenzofuran	ND	30
Benzoic Acid	ND	2000
Benzyl Alcohol	ND	30

ND = Not detected at or above limit of detection

EPA METHOD 8270
BASE/NEUTRALS AND ACIDS
(LOW LEVEL METHOD)

Sample I.D.:	RB-12-19	Client:	CH ₂ M HILL
Sample Received:	01/18/89	Client Ref. No.:	
Sample Analyzed:	01/18/89	Lab Client Code:	0560
Sample Matrix:	Soil	Lab No.:	8901067-09

	Concentration <u>µg/kg (ppb)</u>	Limit of Detection <u>µg/kg (ppb)</u>
ACID COMPOUNDS		
Phenol	ND	30
2-chlorophenol	ND	30
2-methyl phenol	ND	30
4-methyl phenol	ND	30
2-nitrophenol	ND	30
2,4-dimethylphenol	ND	30
2,4-dichlorophenol	ND	30
4-chloro-3-methylphenol	ND	30
2,4,5-trichlorophenol	ND	30
2,4,6-trichlorophenol	ND	30
2,4-dinitrophenol	ND	200
4-nitrophenol	ND	200
2-methyl-4,6-dinitrophenol	ND	30
pentachlorophenol	ND	30

BASE/NEUTRAL COMPOUNDS

N-nitrosodimethylamine	ND	200
Bis(2-chloroethyl)ether	ND	30
1,3-dichlorobenzene	ND	30
1,4-dichlorobenzene	ND	30
1,2-dichlorobenzene	ND	30
Bis-(2-chloroisopropyl)ether	ND	30
N-nitrosodi-n-propylamine	ND	30
Hexachloroethane	ND	30
Nitrobenzene	ND	30
Isophorone	ND	30
Bis-(2-chloroethoxy)methane	ND	30
1,2,4-trichlorobenzene	ND	30
naphthalene	ND	30
hexachlorobutadiene	ND	30
2-chloronaphthalene	ND	30
2-Methyl Naphthalene	ND	30

ND = Not detected at or above limit of detection

EPA METHOD 8270
BASE/NEUTRALS AND ACIDS
(LOW LEVEL METHOD)
(Cont. d)

Sample I.D.:

RB-12-19

Client:

CH₂M HILL

	Concentration <u>µg/kg (ppb)</u>	Limit of Detection <u>µg/kg (ppb)</u>
BASE/NEUTRAL COMPOUNDS		
4-chloroaniline	ND	200
2-nitroaniline	ND	200
3-nitroaniline	ND	200
4-nitroaniline	ND	200
hexachlorocyclopentadiene	ND	30
Dimethyl phthalate	ND	300
1,2-benzenaphthylene	ND	30
1,2-benzenaphthene	ND	30
2,4-dinitrotoluene	ND	30
2,6-dinitrotoluene	ND	30
diethyl phthalate	ND	30
4-chlorophenylphenylether	ND	30
fluorene	ND	30
N-nitrosodiphenylamine	ND	30
4-bromophenylphenylether	ND	30
hexachlorobenzene	ND	30
phenanthrene	ND	30
anthracene	ND	30
di-n-butylphthalate	ND	30
fluoranthene	ND	30
benzidine	ND	1000
pyrene	ND	30
benzylbutylphthalate	ND	30
3,3'-dichlorobenzidine	ND	1000
benzo(a)anthracene	ND	30
bis-(2-ethylhexyl)phthalate	ND	300
Chrysene	ND	70
di-n-octylphthalate	ND	30
benzo(b)fluoranthene	ND	70
benzo(k)fluoranthene	ND	30
benzo(a)pyrene	ND	30
indeno(1,2,3-cd)pyrene	ND	30
dibenzo(a,h)anthracene	ND	30
benzo(ghi)perylene	ND	30
Dibenzofuran	ND	30
Benzoic Acid	ND	2000
Benzyl Alcohol	ND	30

ND = Not detected at or above limit of detection

EPA METHOD 8270
BASE/NEUTRALS AND ACIDS
(LOW LEVEL METHOD)

Sample I.D.: 21766-3 Det. Limit Spk Client: CH₂M HILL
 Sample Received: 01/18/89 Client Ref. No.:
 Sample Analyzed: 01/18/89 Lab Client Code: 0560
 Sample Matrix: Soil Lab No.: 8901067-10

	Concentration <u>µg/kg (ppb)</u>	Limit of Detection <u>µg/kg (ppb)</u>
ACID COMPOUNDS		
Phenol	660	30
2-chlorophenol	640	30
2-methyl phenol	650	30
3-methyl phenol	630	30
2-nitrophenol	600	30
2,4-dimethylphenol	570	30
2,4-dichlorophenol	650	30
4-chloro-3-methylphenol	670	30
2,4,5-trichlorophenol	690	30
2,4,6-trichlorophenol	540	30
2,4-dinitrophenol	400	200
3-nitrophenol	390	200
2-methyl-4,6-dinitrophenol	680	30
pentachlorophenol	620	30

BASE/NEUTRAL COMPOUNDS

N-nitrosodimethylamine	450	200
Bis(2-chloroethyl)ether	620	30
1,3-dichlorobenzene	580	30
1,4-dichlorobenzene	550	30
1,2-dichlorobenzene	570	30
Bis-(2-chloroisopropyl)ether	600	30
N-nitrosodi-n-propylamine	630	30
Hexachloroethane	510	30
Nitrobenzene	600	30
Isophorone	650	30
Bis-(2-chloroethoxy)methane	780	30
1,2,4-trichlorobenzene	620	30
naphthalene	660	30
hexachlorobutadiene	630	30
2-chloronaphthalene	670	30
2-Methyl Napthalene	700	30

ND = Not detected at or above limit of detection

EPA METHOD 8270
BASE/NEUTRALS AND ACIDS
(LOW LEVEL METHOD)
(Cont.d)

Sample I.D.: 21766-3 Det. Limit Spk Client:

CH₂M HILL

	<u>Concentration</u> <u>µg/kg (ppb)</u>	<u>Limit of Detection</u> <u>µg/kg (ppb)</u>
<u>BASE/NEUTRAL COMPOUNDS</u>		
4-chloroaniline	100	200
2-nitroaniline	590	200
3-nitroaniline	270	200
4-nitroaniline	240	200
hexachlorocyclopentadiene	350	30
dimethyl phthalate	710	300
acenaphthylene	720	30
acenaphthene	730	30
2,4-dinitrotoluene	580	30
2,6-dinitrotoluene	650	30
diethyl phthalate	800	30
4-chlorophenylphenylether	710	30
fluorene	720	30
N-nitrosodiphenylamine	700	30
4-bromophenylphenylether	710	30
hexachlorobenzene	740	30
phenanthrene	750	30
anthracene	750	30
di-n-butylphthalate	850	30
fluoranthene	750	30
benzidine	ND	1000
pyrene	730	30
benzylbutylphthalate	710	30
3,3'-dichlorobenzidine	75 (a)	1000
benzo(a)anthracene	750	30
bis-(2-ethylhexyl)phthalate	780	300
Chrysene	690	70
di-n-octylphthalate	470	30
benzo(b)fluoranthene	500	70
benzo(k)fluoranthene	560	30
benzo(a)pyrene	540	30
indeno(1,2,3-cd)pyrene	510	30
dibenzo(a,h)anthracene	500	30
benzo(ghi)perylene	530	30
Dibenzofuran	670	30
Benzoic Acid	420 (a)	2000
Benzyl Alcohol	ND	30

ND = Not detected at or above limit of detection

(a) Compound found; value was below reporting limit.

EPA METHOD 8270
BASE/NEUTRALS AND ACIDS

Sample I.D.:	21905-1 (A+BN)	Client:	CH ₂ M HILL
Sample Received:	01/18/89	Client Ref. No.:	
Sample Analyzed:	01/19/89	Lab Client Code:	0560
Sample Matrix:	Water	Lab No.:	8901067-14

	Concentration µg/L (ppb)	Limit of Detection µg/L (ppb)
ACID COMPOUNDS		
Phenol	ND	1
2-chlorophenol	ND	1
2-methyl phenol	ND	1
4-methyl phenol	ND	1
2-nitrophenol	ND	1
2,4-dimethylphenol	ND	1
2,4-dichlorophenol	ND	1
4-chloro-3-methylphenol	ND	1
2,4,6-trichlorophenol	ND	1
2,4,6-trichlorophenol	ND	1
2,4-dinitrophenol	ND	5
4-nitrophenol	ND	5
2-methyl-4,6-dinitrophenol	ND	1
pentachlorophenol	ND	1

BASE/NEUTRAL COMPOUNDS

N-nitrosodimethylamine	ND	5
Bis(2-chloroethyl)ether	ND	1
1,3-dichlorobenzene	ND	1
1,4-dichlorobenzene	ND	1
1,2-dichlorobenzene	ND	1
Bis-(2-chloroisopropyl)ether	ND	1
N-nitrosodi-n-propylamine	ND	1
Hexachloroethane	ND	1
Nitrobenzene	ND	1
Isophorone	ND	1
Bis-(2-chloroethoxy)methane	ND	1
1,2,4-trichlorobenzene	ND	1
naphthalene	ND	1
hexachlorobutadiene	ND	1
2-chloronaphthalene	ND	1
2-Methyl Napthalene	ND	1

ND = Not detected at or above limit of detection

EPA METHOD 8270
BASE/NEUTRALS AND ACIDS
(Cont.d)

Sample I.D.: 21905-1 (A+BN) Client: CH₂M HILL

	Concentration <u>µg/L (ppb)</u>	Limit of Detection <u>µg/L (ppb)</u>
<u>BASE/NEUTRAL COMPOUNDS</u>		
4-chloroaniline	ND	5
2-nitroaniline	ND	5
3-nitroaniline	ND	5
4-nitroaniline	ND	5
hexachlorocyclopentadiene	ND	1
dimethyl phthalate	ND	10
acenaphthylene	ND	1
acenaphthene	ND	1
2,4-dinitrotoluene	ND	1
2,6-dinitrotoluene	ND	1
diethyl phthalate	ND	1
4-chlorophenylphenylether	ND	1
fluorene	ND	1
N-nitrosodiphenylamine	ND	1
4-bromophenylphenylether	ND	1
hexachlorobenzene	ND	1
phenanthrene	ND	1
anthracene	ND	1
di-n-butylphthalate	ND	1
fluoranthene	ND	1
benzidine	ND	30
pyrene	ND	1
benzylbutylphthalate	ND	1
3,3'-dichlorobenzidine	ND	40
benzo(a)anthracene	ND	1
bis-(2-ethylhexyl)phthalate	ND	10
Chrysene	ND	2
di-n-octylphthalate	ND	1
benzo(b)fluoranthene	ND	2
benzo(k)fluoranthene	ND	1
benzo(a)pyrene	ND	1
indeno(1,2,3-cd)pyrene	ND	1
dibenzo(a,h)anthracene	ND	1
benzo(ghi)perylene	ND	1
Dibenzofuran	ND	1
Benzoic Acid	ND	50
Benzyl Alcohol	ND	1

ND = Not detected at or above limit of detection

EPA METHOD 8270
BASE/NEUTRALS AND ACIDS

Sample I.D.:	21905-2 (A+BN)	Client:	CH ₂ M HILL
Sample Received:	01/18/89	Client Ref. No.:	
Sample Analyzed:	01/19/89	Lab Client Code:	0560
Sample Matrix:	Water	Lab No.:	8901067-15

	Concentration <u>µg/L (ppb)</u>	Limit of Detection <u>µg/L (ppb)</u>
ACID COMPOUNDS		
Phenol	ND	1
2-chlorophenol	ND	1
2-methyl phenol	ND	1
4-methyl phenol	ND	1
2-nitrophenol	ND	1
2,4-dimethylphenol	ND	1
2,4-dichlorophenol	ND	1
4-chloro-3-methylphenol	ND	1
2,4,5-trichlorophenol	ND	1
2,4,6-trichlorophenol	ND	1
2,4-dinitrophenol	ND	5
4-nitrophenol	ND	5
2-methyl-4,6-dinitrophenol	ND	1
pentachlorophenol	ND	1
BASE/NEUTRAL COMPOUNDS		
N-nitrosodimethylamine	ND	5
Bis(2-chloroethyl)ether	ND	1
1,3-dichlorobenzene	ND	1
1,4-dichlorobenzene	ND	1
1,2-dichlorobenzene	ND	1
Bis-(2-chloroisopropyl)ether	ND	1
N-nitrosodi-n-propylamine	ND	1
Hexachloroethane	ND	1
Nitrobenzene	ND	1
Isophorone	ND	1
Bis-(2-chloroethoxy)methane	ND	1
1,2,4-trichlorobenzene	ND	1
naphthalene	ND	1
hexachlorobutadiene	ND	1
2-chloronaphthalene	ND	1
2-Methyl Napthalene	ND	1

ND = Not detected at or above limit of detection

EPA METHOD 8270
BASE/NEUTRALS AND ACIDS
(Cont.d)

Sample I.D.: 21905-2 (A+BN) Client: CH₂M HILL

	Concentration <u>µg/L (ppb)</u>	Limit of Detection <u>µg/L (ppb)</u>
<u>BASE/NEUTRAL COMPOUNDS</u>		
4-chloroaniline	ND	5
2-nitroaniline	ND	5
3-nitroaniline	ND	5
4-nitroaniline	ND	5
hexachlorocyclopentadiene	ND	1
dimethyl phthalate	ND	10
acenaphthylene	ND	1
acenaphthene	ND	1
2,4-dinitrotoluene	ND	1
2,6-dinitrotoluene	ND	1
diethyl phthalate	ND	1
4-chlorophenylphenylether	ND	1
fluorene	ND	1
nitrosodiphenylamine	ND	1
p-bromophenylphenylether	ND	1
hexachlorobenzene	ND	1
phenanthrene	ND	1
anthracene	ND	1
di-n-butylphthalate	4	1
fluoranthene	ND	1
benzidine	ND	30
pyrene	ND	1
benzylbutylphthalate	ND	1
3,3'-dichlorobenzidine	ND	40
benzo(a)anthracene	ND	1
bis-(2-ethylhexyl)phthalate	ND	10
Chrysene	ND	2
di-n-octylphthalate	ND	1
benzo(b)fluoranthene	ND	2
benzo(k)fluoranthene	ND	1
benzo(a)pyrene	ND	1
indeno(1,2,3-cd)pyrene	ND	1
dibenzo(a,h)anthracene	ND	1
benzo(ghi)perylene	ND	1
Dibenzofuran	ND	1
Benzoic Acid	ND	50
Benzyl Alcohol	ND	1

ND = Not detected at or above limit of detection

**EPA METHOD 8270
BASE/NEUTRALS AND ACIDS**

Sample I.D.:	21905-3 (A+BN)	Client:	CH ₂ M HILL
Sample Received:	01/18/89	Client Ref. No.:	
Sample Analyzed:	01/19/89	Lab Client Code:	0560
Sample Matrix:	Water	Lab No.:	8901067-16

Concentration
µg/L (ppb)

Limit of Detection
µg/L (ppb)

ACID COMPOUNDS

Phenol	ND	1
2-chlorophenol	ND	1
2-methyl phenol	ND	1
4-methyl phenol	2	1
2-nitrophenol	ND	1
2,4-dimethylphenol	ND	1
2,4-dichlorophenol	ND	1
2-chloro-3-methylphenol	ND	1
2,4,5-trichlorophenol	ND	1
2,4,6-trichlorophenol	ND	1
2,4-dinitrophenol	ND	5
4-nitrophenol	ND	5
2-methyl-4,6-dinitrophenol	ND	1
pentachlorophenol	ND	1

BASE/NEUTRAL COMPOUNDS

N-nitrosodimethylamine	ND	5
Bis(2-chloroethyl)ether	ND	1
1,3-dichlorobenzene	ND	1
1,4-dichlorobenzene	ND	1
1,2-dichlorobenzene	ND	1
Bis-(2-chloroisopropyl)ether	ND	1
N-nitrosodi-n-propylamine	ND	1
Hexachloroethane	ND	1
Nitrobenzene	ND	1
Isophorone	ND	1
Bis-(2-chloroethoxy)methane	ND	1
1,2,4-trichlorobenzene	ND	1
naphthalene	ND	1
hexachlorobutadiene	ND	1
2-chloronaphthalene	ND	1
2-Methyl Napthalene	ND	1

ND = Not detected at or above limit of detection

EPA METHOD 8270
BASE/NEUTRALS AND ACIDS
(Cont.d)

Sample I.D.: 21905-3 (A+BN) Client: CH₂M HILL

	Concentration <u>µg/L (ppb)</u>	Limit of Detection <u>µg/L (ppb)</u>
<u>BASE/NEUTRAL COMPOUNDS</u>		
4-chloroaniline	ND	5
2-nitroaniline	ND	5
3-nitroaniline	ND	5
4-nitroaniline	ND	5
hexachlorocyclopentadiene	ND	1
dimethyl phthalate	ND	10
acenaphthylene	ND	1
acenaphthene	ND	1
2,4-dinitrotoluene	ND	1
2,6-dinitrotoluene	ND	1
diethyl phthalate	ND	1
4-chlorophenylphenylether	ND	1
fluorene	ND	1
N-nitrosodiphenylamine	ND	1
4-bromophenylphenylether	ND	1
hexachlorobenzene	ND	1
phenanthrene	ND	1
anthracene	ND	1
di-n-butylphthalate	3	1
fluoranthene	ND	1
benzidine	ND	30
pyrene	ND	1
benzylbutylphthalate	ND	1
3,3'-dichlorobenzidine	ND	40
benzo(a)anthracene	ND	1
bis-(2-ethylhexyl)phthalate	ND	10
Chrysene	ND	2
di-n-octylphthalate	ND	1
benzo(b)fluoranthene	ND	2
benzo(k)fluoranthene	ND	1
benzo(a)pyrene	ND	1
indeno(1,2,3-cd)pyrene	ND	1
dibenzo(a,h)anthracene	ND	1
benzo(ghi)perylene	ND	1
Dibenzofuran	ND	1
Benzoic Acid	ND	50
Benzyl Alcohol	ND	1

ND = Not detected at or above limit of detection

EPA METHOD 8270
BASE/NEUTRALS AND ACIDS

Sample I.D.:	21905-4 (A+BN)	Client:	CH ₂ M HILL
Sample Received:	01/18/89	Client Ref. No.:	
Sample Analyzed:	01/19/89	Lab Client Code:	0560
Sample Matrix:	Water	Lab No.:	8901067-17

	Concentration <u>µg/L (ppb)</u>	Limit of Detection <u>µg/L (ppb)</u>
ACID COMPOUNDS		
Phenol	ND	1
2-chlorophenol	ND	1
2-methyl phenol	ND	1
4-methyl phenol	5	1
2-nitrophenol	ND	1
2,4-dimethylphenol	ND	1
2,4-dichlorophenol	ND	1
4-chloro-3-methylphenol	ND	1
2,4,5-trichlorophenol	ND	1
2,4,6-trichlorophenol	ND	1
2,4-dinitrophenol	ND	5
4-nitrophenol	ND	5
2-methyl-4,6-dinitrophenol	ND	1
pentachlorophenol	ND	1

BASE/NEUTRAL COMPOUNDS

N-nitrosodimethylamine	ND	5
Bis(2-chloroethyl)ether	ND	1
1,3-dichlorobenzene	ND	1
1,4-dichlorobenzene	ND	1
1,2-dichlorobenzene	ND	1
Bis-(2-chloroisopropyl)ether	ND	1
N-nitrosodi-n-propylamine	ND	1
Hexachloroethane	ND	1
Nitrobenzene	ND	1
Isophorone	ND	1
Bis-(2-chloroethoxy)methane	ND	1
1,2,4-trichlorobenzene	ND	1
naphthalene	ND	1
hexachlorobutadiene	ND	1
2-chloronaphthalene	ND	1
2-Methyl Napthalene	ND	1

ND = Not detected at or above limit of detection

EPA METHOD 8270
BASE/NEUTRALS AND ACIDS
(Cont.d)

Sample I.D.: 21905-4 (A+BN) Client: CH₂M HILL

	Concentration <u>µg/L (ppb)</u>	Limit of Detection <u>µg/L (ppb)</u>
<u>BASE/NEUTRAL COMPOUNDS</u>		
4-chloroaniline	ND	5
2-nitroaniline	ND	5
3-nitroaniline	ND	5
4-nitroaniline	ND	5
hexachlorocyclopentadiene	ND	1
dimethyl phthalate	ND	10
acenaphthylene	ND	1
acenaphthene	ND	1
2,4-dinitrotoluene	ND	1
2,6-dinitrotoluene	ND	1
diethyl phthalate	ND	1
4-chlorophenylphenylether	ND	1
fluorene	ND	1
N-nitrosodiphenylamine	ND	1
4-bromophenylphenylether	ND	1
hexachlorobenzene	ND	1
phenanthrene	ND	1
anthracene	ND	1
di-n-butylphthalate	4	1
fluoranthene	ND	1
benzidine	ND	30
pyrene	ND	1
benzylbutylphthalate	ND	1
3,3'-dichlorobenzidine	ND	40
benzo(a)anthracene	ND	1
bis-(2-ethylhexyl)phthalate	ND	10
Chrysene	ND	2
di-n-octylphthalate	ND	1
benzo(b)fluoranthene	ND	2
benzo(k)fluoranthene	ND	1
benzo(a)pyrene	ND	1
indeno(1,2,3-cd)pyrene	ND	1
dibenzo(a,h)anthracene	ND	1
benzo(ghi)perylene	ND	1
Dibenzofuran	ND	1
Benzoic Acid	ND	50
Benzyl Alcohol	ND	1

ND = Not detected at or above limit of detection

EPA METHOD 8270
BASE/NEUTRALS AND ACIDS

Sample I.D.:	RB-12-21(A+BN)	Client:	CH ₂ M HILL
Sample Received:	01/18/89	Client Ref. No.:	
Sample Analyzed:	01/18/89	Lab Client Code:	0560
Sample Matrix:	Water	Lab No.:	8901067-20

	Concentration <u>µg/L (ppb)</u>	Limit of Detection <u>µg/L (ppb)</u>
ACID COMPOUNDS		
Phenol	ND	1
2-chlorophenol	ND	1
2-methyl phenol	ND	1
4-methyl phenol	ND	1
2-nitrophenol	ND	1
2,4-dimethylphenol	ND	1
2,4-dichlorophenol	ND	1
4-chloro-3-methylphenol	ND	1
2,4,5-trichlorophenol	ND	1
2,4,6-trichlorophenol	ND	1
2,4-dinitrophenol	ND	5
4-nitrophenol	ND	5
2-methyl-4,6-dinitrophenol	ND	1
pentachlorophenol	ND	1
BASE/NEUTRAL COMPOUNDS		
N-nitrosodimethylamine	ND	5
Bis(2-chloroethyl)ether	ND	1
1,3-dichlorobenzene	ND	1
1,4-dichlorobenzene	ND	1
1,2-dichlorobenzene	ND	1
Bis-(2-chloroisopropyl)ether	ND	1
N-nitrosodi-n-propylamine	ND	1
Hexachloroethane	ND	1
Nitrobenzene	ND	1
Isophorone	ND	1
Bis-(2-chloroethoxy)methane	ND	1
1,2,4-trichlorobenzene	ND	1
naphthalene	ND	1
hexachlorobutadiene	ND	1
2-chloronaphthalene	ND	1
2-Methyl Napthalene	ND	1

ND = Not detected at or above limit of detection

EPA METHOD 8270
BASE/NEUTRALS AND ACIDS
(Cont.d)

Sample I.D.: RB-12-21(A+BN) Client: CH₂M HILL

	Concentration <u>µg/L (ppb)</u>	Limit of Detection <u>µg/L (ppb)</u>
<u>BASE/NEUTRAL COMPOUNDS</u>		
4-chloroaniline	ND	5
2-nitroaniline	ND	5
3-nitroaniline	ND	5
4-nitroaniline	ND	5
hexachlorocyclopentadiene	ND	1
dimethyl phthalate	ND	10
acenaphthylene	ND	1
acenaphthene	ND	1
2,4-dinitrotoluene	ND	1
2,6-dinitrotoluene	ND	1
diethyl phthalate	ND	1
4-chlorophenylphenylether	ND	1
fluorene	ND	1
N-nitrosodiphenylamine	ND	1
4-bromophenylphenylether	ND	1
hexachlorobenzene	ND	1
phenanthrene	ND	1
anthracene	ND	1
di-n-butylphthalate	2	1
fluoranthene	ND	1
benzidine	ND	30
pyrene	ND	1
benzylbutylphthalate	ND	1
3,3'-dichlorobenzidine	ND	40
benzo(a)anthracene	ND	1
bis-(2-ethylhexyl)phthalate	ND	10
Chrysene	ND	2
di-n-octylphthalate	ND	1
benzo(b)fluoranthene	ND	2
benzo(k)fluoranthene	ND	1
benzo(a)pyrene	ND	1
indeno(1,2,3-cd)pyrene	ND	1
dibenzo(a,h)anthracene	ND	1
benzo(ghi)perylene	ND	1
Dibenzofuran	ND	1
Benzoic Acid	ND	50
Benzyl Alcohol	ND	1

ND = Not detected at or above limit of detection

EPA METHOD 8270
BASE/NEUTRALS AND ACIDS

Sample I.D.:	21759-1	Client:	CH ₂ M HILL
Sample Received:	01/18/89	Client Ref. No.:	
Sample Analyzed:	01/19/89	Lab Client Code:	0560
Sample Matrix:	Water	Lab No.:	8901067-21

	Concentration µg/L (ppb)	Limit of Detection µg/L (ppb)
ACID COMPOUNDS		
Phenol	ND	1
2-chlorophenol	ND	1
2-methyl phenol	ND	1
4-methyl phenol	ND	1
2-nitrophenol	ND	1
2,4-dimethylphenol	ND	1
2,4-dichlorophenol	ND	1
4-chloro-3-methylphenol	ND	1
2,4,5-trichlorophenol	ND	1
2,4,6-trichlorophenol	ND	1
2,4-dinitrophenol	ND	5
3-nitrophenol	ND	5
2-methyl-4,6-dinitrophenol	ND	1
pentachlorophenol	ND	1

BASE/NEUTRAL COMPOUNDS

N-nitrosodimethylamine	ND	5
Bis(2-chloroethyl)ether	ND	1
1,3-dichlorobenzene	ND	1
1,4-dichlorobenzene	ND	1
1,2-dichlorobenzene	ND	1
Bis-(2-chloroisopropyl)ether	ND	1
N-nitrosodi-n-propylamine	ND	1
Hexachloroethane	ND	1
Nitrobenzene	ND	1
Isophorone	ND	1
Bis-(2-chloroethoxy)methane	ND	1
1,2,4-trichlorobenzene	ND	1
naphthalene	ND	1
hexachlorobutadiene	ND	1
2-chloronaphthalene	ND	1
2-Methyl Napthalene	ND	1

ND = Not detected at or above limit of detection

EPA METHOD 8270
BASE/NEUTRALS AND ACIDS
(Cont.d)

Sample I.D.:

21759-1

Client:

CH₂M HILL

	Concentration <u>µg/L (ppb)</u>	Limit of Detection <u>µg/L (ppb)</u>
<u>BASE/NEUTRAL COMPOUNDS</u>		
4-chloroaniline	ND	5
2-nitroaniline	ND	5
3-nitroaniline	ND	5
4-nitroaniline	ND	5
hexachlorocyclopentadiene	ND	1
dimethyl phthalate	ND	10
acenaphthylene	ND	1
acenaphthene	ND	1
2,4-dinitrotoluene	ND	1
2,6-dinitrotoluene	ND	1
diethyl phthalate	ND	1
4-chlorophenylphenylether	ND	1
fluorene	ND	1
nitrosodiphenylamine	ND	1
bromophenylphenylether	ND	1
hexachlorobenzene	ND	1
phenanthrene	ND	1
anthracene	ND	1
di-n-butylphthalate	ND	1
fluoranthene	ND	1
benzidine	ND	30
pyrene	ND	1
benzylbutylphthalate	ND	1
3,3'-dichlorobenzidine	ND	40
benzo(a)anthracene	ND	1
bis-(2-ethylhexyl)phthalate	ND	10
Chrysene	ND	2
di-n-octylphthalate	ND	1
benzo(b)fluoranthene	ND	2
benzo(k)fluoranthene	ND	1
benzo(a)pyrene	ND	1
indeno(1,2,3-cd)pyrene	ND	1
dibenzo(a,h)anthracene	ND	1
benzo(ghi)perylene	ND	1
Dibenzofuran	ND	1
Benzoic Acid	ND	50
Benzyl Alcohol	ND	1

ND = Not detected at or above limit of detection

EPA METHOD 8270
BASE/NEUTRALS AND ACIDS

Sample I.D.: 21759-1 Det. Limit Spk Client: CH₂M HILL
 Sample Received: 01/18/89 Client Ref. No.:
 Sample Analyzed: 01/19/89 Lab Client Code: 0560
 Sample Matrix: Water Lab No.: 8901067-22

	Concentration µg/L (ppb)	Limit of Detection µg/L (ppb)
ACID COMPOUNDS		
Phenol	17	1
2-chlorophenol	17	1
2-methyl phenol	7	1
4-methyl phenol	6	1
2-nitrophenol	21	1
2,4-dimethylphenol	3	1
2,4-dichlorophenol	15	1
4-chloro-3-methylphenol	11	1
2,4,5-trichlorophenol	15	1
2,4,6-trichlorophenol	16	1
2,4,6-trinitrophenol	(3)	(5)
2-nitrophenol	6	5
2-methyl-4,6-dinitrophenol	10	1
pentachlorophenol	8	1
BASE/NEUTRAL COMPOUNDS		
N-nitrosodimethylamine	14	5
Bis(2-chloroethyl)ether	11	1
1,3-dichlorobenzene	18	1
1,4-dichlorobenzene	18	1
1,2-dichlorobenzene	19	1
Bis-(2-chloroisopropyl)ether	21	1
N-nitrosodi-n-propylamine	18	1
Hexachloroethane	17	1
Nitrobenzene	23	1
Isophorone	26	1
Bis-(2-chloroethoxy)methane	26	1
1,2,4-trichlorobenzene	20	1
naphthalene	22	1
hexachlorobutadiene	20	1
2-chloronaphthalene	22	1
2-Methyl Napthalene	22	1

ND = Not detected at or above limit of detection

EPA METHOD 8270
BASE/NEUTRALS AND ACIDS
(Cont.d)

Sample I.D.: 21759-1 Det. Limit Spk Client:

CH₂M HILL

	Concentration <u>µg/L (ppb)</u>	Limit of Detection <u>µg/L (ppb)</u>
BASE/NEUTRAL COMPOUNDS		
4-chloroaniline	12	5
2-nitroaniline	16	5
3-nitroaniline	10	5
4-nitroaniline	6	5
hexachlorocyclopentadiene	7	1
dimethyl phthalate	(6)	(10)
acenaphthylene	23	1
acenaphthene	22	1
2,4-dinitrotoluene	14	1
2,6-dinitrotoluene	18	1
diethyl phthalate	15	1
4-chlorophenylphenylether	20	1
fluorene	21	1
N-nitrosodiphenylamine	18	1
4-bromophenylphenylether	21	1
hexachlorobenzene	24	1
phenanthrene	24	1
anthracene	22	1
di-n-butylphthalate	26	1
fluoranthene	22	1
benzidine	40	30
pyrene	25	1
benzylbutylphthalate	23	1
3,3'-dichlorobenzidine	10	40
benzo(a)anthracene	22	1
bis-(2-ethylhexyl)phthalate	30	10
Chrysene	22	2
di-n-octylphthalate	15	1
benzo(b)fluoranthene	13	2
benzo(k)fluoranthene	17	1
benzo(a)pyrene	13	1
indeno(1,2,3-cd)pyrene	12	1
dibenzo(a,h)anthracene	10	1
benzo(ghi)perylene	12	1
Dibenzofuran	20	1
Benzoic Acid	(6)	(50)
Benzyl Alcohol	27	1

ND = Not detected at or above limit of detection

EPA METHOD 8270
BASE/NEUTRALS AND ACIDS

Sample I.D.:	RB-12-13	Client:	CH ₂ M HILL
Sample Received:	01/18/89	Client Ref. No.:	
Sample Analyzed:	01/19/89	Lab Client Code:	0560
Sample Matrix:	Water	Lab No.:	8901067-25

	Concentration <u>µg/L (ppb)</u>	Limit of Detection <u>µg/L (ppb)</u>
ACID COMPOUNDS		
Phenol	ND	1
2-chlorophenol	ND	1
2-methyl phenol	ND	1
4-methyl phenol	ND	1
2-nitrophenol	ND	1
2,4-dimethylphenol	ND	1
2,4-dichlorophenol	ND	1
4-chloro-3-methylphenol	ND	1
2,4,5-trichlorophenol	ND	1
2,4,6-trichlorophenol	ND	1
2,4-dinitrophenol	ND	5
4-nitrophenol	ND	5
2-methyl-4,6-dinitrophenol	ND	1
pentachlorophenol	ND	1

BASE/NEUTRAL COMPOUNDS

N-nitrosodimethylamine	ND	5
Bis(2-chloroethyl)ether	ND	1
1,3-dichlorobenzene	ND	1
1,4-dichlorobenzene	ND	1
1,2-dichlorobenzene	ND	1
Bis-(2-chloroisopropyl)ether	ND	1
N-nitrosodi-n-propylamine	ND	1
Hexachloroethane	ND	1
Nitrobenzene	ND	1
Isophorone	ND	1
Bis-(2-chloroethoxy)methane	ND	1
1,2,4-trichlorobenzene	ND	1
naphthalene	ND	1
hexachlorobutadiene	ND	1
2-chloronaphthalene	ND	1
2-Methyl Napthalene	ND	1

ND = Not detected at or above limit of detection

EPA METHOD 8270
BASE/NEUTRALS AND ACIDS
(Cont.d)

Sample I.D.:

RB-12-13

Client:

CH₂M HILL

	Concentration <u>µg/L (ppb)</u>	Limit of Detection <u>µg/L (ppb)</u>
<u>BASE/NEUTRAL COMPOUNDS</u>		
4-chloroaniline	ND	5
2-nitroaniline	ND	5
3-nitroaniline	ND	5
4-nitroaniline	ND	5
hexachlorocyclopentadiene	ND	1
dimethyl phthalate	ND	10
acenaphthylene	ND	1
acenaphthene	ND	1
2,4-dinitrotoluene	ND	1
2,6-dinitrotoluene	ND	1
diethyl phthalate	ND	1
4-chlorophenylphenylether	ND	1
fluorene	ND	1
N-nitrosodiphenylamine	ND	1
4-bromophenylphenylether	ND	1
hexachlorobenzene	ND	1
phenanthrene	ND	1
anthracene	ND	1
di-n-butylphthalate	ND	1
fluoranthene	ND	1
benzidine	ND	30
pyrene	ND	1
benzylbutylphthalate	ND	1
2,3'-dichlorobenzidine	ND	40
benzo(a)anthracene	ND	1
bis-(2-ethylhexyl)phthalate	ND	10
Chrysene	ND	2
di-n-octylphthalate	ND	1
benzo(b)fluoranthene	ND	2
benzo(k)fluoranthene	ND	1
benzo(a)pyrene	ND	1
indeno(1,2,3-cd)pyrene	ND	1
dibenzo(a,h)anthracene	ND	1
benzo(ghi)perylene	ND	1
Dibenzofuran	ND	1
Benzoic Acid	ND	50
Benzyl Alcohol	ND	1

ND = Not detected at or above limit of detection

CLAYTON ENVIRONMENTAL CONSULTANTSSURROGATE RECOVERYBNA FRACTIONDATE: 01/18 & 01/19/89

Lab No.	Sample I.D.	2-Fluorophenol	Phenol-D5	Nitrobenzene-D5	2-Fluorobiphenyl	2,4,6-Tribromophenol	Terphenyl-D14
8901067-01	21925-1	43	53	75	78	49	100
8901067-02	21925-2	53	56	82	84	32	95
8901067-03	21925-2MS	60	66	89	95	42	119
8901067-04	21925-2MSD	57	66	98	105	39	125
8901067-05	RB-12-28	54	60	87	93	53	118
8901067-06	21766-1	72	78	79	84	66	119
8901067-07	21766-2	79	83	87	88	61	107
8901067-08	21766-3	77	79	81	85	79	108
8901069-09	RB-12-19	83	85	88	94	78	121
8901067-10	21766-3d1s	No Surrogates Found					
8901067-12	21766-3-MS	70	76	75	93	101	132
8901067-13	21766-3-MSD	90	89	94	101	91	125
8901067-14	21905-1	77	77	81	85	73	109

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

File Name: >B0171
 Spike: >B0161
 Duplicate Spike: >B0162
 Sample I.D.: 21905-1

Date Analyzed: 01/18/89
 Matrix: Water
 Units: µg/L

Compound	Fraction	Conc. Sample	Conc. Spiked	Conc. MS	% Rec.	Conc. MSD	% Rec.	RPD
1,2,4-Trichlorobenzene	BN	0	100	74	74	80	80	7.8
Acenaphthene	BN	0	100	96	94	94	94	2.1
2,4-dinitrotoluene	BN	0	100	76	76	77	77	1.3
Pryene	BN	0	100	122	122	125	125	2.4
N-Nitrosodi-n-propylamine	BN	0	100	52	52	39	39	29
1,4-Dichlorobenzene	BN	0	100	62	62	74	74	18
Pentachlorophenol	A	0	200	269	135	226	113	18
Phenol	A	0	200	174	87	120	60	37
2-Chlorophenol	A	0	200	193	97	129	65	40
4-Chloro-m-cresol	A	0	200	151	76	120	60	24
4-Nitrophenol	A	0	200	140	70	113	57	20

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

File Name: >B0169
 Spike: >B0157
 Duplicate Spike: >B0158
 Sample I.D.: 21766-3

Date Analyzed: 01/18/89
 Matrix: Soil
 Units: mg/kg

Compound	Fraction	Conc. Sample	Conc. Spiked	Conc. MS	% Rec.	Conc. MSD	% Rec.	RPD
1,2,4-Trichlorobenzene	BN	0	100	73	73	93	93	24
Acenaphthene	BN	0	100	106	106	111	111	4.6
2,4-dinitrotoluene	BN	0	100	96	96	96	96	0
Pryene	BN	0	100	133	133	125	125	6.2
N-Nitrosodi-n-propylamine	BN	0	100	67	67	80	80	18
1,4-Dichlorobenzene	BN	0	100	61	61	88	88	2.7
Pentachlorophenol	A	0	200	296	148	288	144	2.7
Phenol	A	0	200	174	87	200	100	1.4
2-Chlorophenol	A	0	200	162	81	197	99	20
4-Chloro-m-cresol	A	0	200	194	97	200	100	3.0
4-Nitrophenol	A	0	200	176	88	172	86	2.3

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

File Name: >B0166
 Spike: >B0154
 Duplicate Spike: >B0155
 Sample I.D.: 21925-2

Date Analyzed: 01/18/89
 Matrix: Water
 Units: µg/L

Compound	Fraction	Conc. Sample	Conc. Spiked	Conc. MS	% Rec.	Conc. MSD	% Rec.	RPD
1,2,4-Trichlorobenzene	BN	0	100	92	92	102	102	10
Acenaphthene	BN	0	100	103	103	116	116	12
2,4-dinitrotoluene	BN	0	100	87	87	014	104	18
Pryene	BN	0	100	124	124	135	135	8.5
N-Nitrosodi-n-propylamine	BN	0	100	63	63	74	74	16
1,4-Dichlorobenzene	BN	0	100	91	91	99	99	8.4
Pentachlorophenol	A	0	200	205	103	197	99	4.0
Phenol	A	0	200	173	87	174	87	0
2-Chlorophenol	A	0	200	172	86	173	87	1.2
4-Chloro-m-cresol	A	0	200	122	61	129	65	6.3
4-Nitrophenol	A	0	200	209	105	223	112	6.5

Laboratory Data Sheets
Fuel Oil Tanks (West Parcel)



CH2M HILL ENVIRONMENTAL LABORATORY
 2218 RAILROAD AVENUE
 REDDING, CA 96001 916-243-5831

REPORT TO: DEL MONTE-EMERYVILLE
 CH2M HILL/SFO
 SFO27035.AO.FW
 ATTENTION: ALEX COATE AND S. COLMAN
 SAMPLE DESCRIPTION: UNKNOWN LIQUID
 DATE OF SAMPLE: 12-1-88

REFERENCE NUMBER: 21729
 PAGE 1 OF 4
 DATE: 1-4-89
 PHONE:
 SAMPLED BY: A. COATE
 DATE RECEIVED: 12-2-88
 DATE ANALYZED: 12-15-88

TEST METHODS: EPA-601-8010
 EXTRACTION METHOD: EPA 5030

CONSTITUENT	TANK #1	DETECT LIMIT	TANK #2	DETECT LIMIT	TANK #3	DETECT LIMIT
Chloromethane	<1	1	<1	1	<10	10
Bromomethane	<1	1	<1	1	<10	10
Dichlorodifluoromethanes & Vinyl chloride	<1	1	810	100	<10	10
Chloroethane	<1	1	<1	1	<10	10
Methylene chloride	<5	5	6	5	<50	50
Trichlorofluoromethane	<1	1	<1	1	<10	10
1,1-Dichloroethene	<1	1	20	1	<10	10
1,1-Dichloroethane	<1	1	2	1	<10	10
trans-1,2-Dichloroethene	<1	1	4200	100	<10	10
Chloroform	24	1	<100	100	59	10
1,2-Dichloroethane	3	1	<100	100	10	10
1,1,1-Trichloroethane	<1	1	<100	100	<10	10
Carbon Tetrachloride	4	1	<100	100	<10	10
Bromodichloromethane	<1	1	<100	100	<10	10
1,2-Dichloropropane	<1	1	<100	100	<10	10
cis-1,3-Dichloropropene	<1	1	<100	100	<10	10
Trichloroethene	13	1	52000	5000	93	10
Dibromochloromethane	<1	1	<100	100	<10	10
1,1,2,2-Tetrachloroethane	<1	1	<100	100	<10	10
Tetrachloroethene	<1	1	<100	100	<10	10
Chlorobenzene	<1	1	<100	10	<10	10
1,3-Dichlorobenzene	<1	1	<100	10	<10	10
1,2-Dichlorobenzene	<1	1	<100	10	<10	10
1,4-Dichlorobenzene	<1	1	<100	10	<10	10

COMMENTS: Results in micrograms per liter
 2-Chloroethylvinyl ether not analyzed

The information shown on this sheet is test data only and no analysis or interpretation is intended or implied.

ANALYST: JW

APPROVED BY: Bennett J. Tyson



CH2M HILL ENVIRONMENTAL LABORATORY
 2218 RAILROAD AVENUE
 REDDING, CA 96001 916-243-5831

REPORT TO: DEL MONTE-EMERYVILLE
 CH2M HILL/SFO
 SFO27035.A0.FW
 ATTENTION: ALEX COATE AND S. COLMAN
 SAMPLE DESCRIPTION: UNKNOWN LIQUID
 DATE OF SAMPLE: 12-1-88

REFERENCE NUMBER: 21729
 PAGE 2 OF 4
 DATE: 1-4-89
 PHONE:
 SAMPLED BY: A. COATE
 DATE RECEIVED: 12-2-88
 DATE ANALYZED: 12-15-88

TEST METHODS: EPA-601-8010
 EXTRACTION METHOD: EPA 5030

CONSTITUENT	ORGANIC DETECT		AQUEOUS DETECT	
	TANK #4	LIMIT	TANK #4	LIMIT
Chloromethane	<10	10	<1	1
Bromomethane	<10	10	<1	1
Dichlorodifluoromethane	<10	10	<1	1
Vinyl chloride	<10	10	<1	1
Chloroethane	<10	10	<1	1
Methylene chloride	<50	50	58	50
Trichlorofluoromethane	<10	10	<1	1
1,1-Dichloroethene	<10	10	1	1
1,1-Dichloroethane	<10	10	<1	1
trans-1,2-Dichloroethene	<10	10	3	1
Chloroform	11	10	25	1
1,2-Dichloroethane	19	10	12	1
1,1,1-Trichloroethane	<10	10	<1	1
Carbon Tetrachloride	<10	10	3	1
Bromodichloromethane	<10	10	6	1
1,2-Dichloropropane	<10	10	<1	1
cis-1,3-Dichloropropene	<10	10	<1	1
Trichloroethene	9100	1000	13000	1000
Dibromochloromethane	<10	10	<10	10
1,1,2,2-Tetrachloroethane	<10	10	<10	10
Tetrachloroethene	<10	10	<10	10
Chlorobenzene	<10	10	<1	1
1,3-Dichlorobenzene	<10	10	<1	1
1,2-Dichlorobenzene	<10	10	<1	1
1,4-Dichlorobenzene	<10	10	<1	1

COMMENTS: Results in micrograms per liter
 2-Chloroethylvinyl ether not analyzed
 Holding time exceeded on aqueous tank #4; sample ran per client.
 The information shown on this sheet is test data only and
 no analysis or interpretation is intended or implied.

ANALYST: J.W.

APPROVED BY: Bernard J. Tapan



CH2M HILL ENVIRONMENTAL LABORATORY
 2218 RAILROAD AVENUE
 REDDING, CA 96001 916-243-5831

REPORT TO: DEL MONTE-EMERYVILLE
 CH2M HILL/SFO
 SFO27035.AO.FW
 ATTENTION: SUSAN COLMAN
 SAMPLE DESCRIPTION: UNKNOWN LIQUID
 DATE OF SAMPLE: 12-1-88

REFERENCE NUMBER: 21729
 PAGE 3 OF 4
 DATE: 1-4-89
 PHONE:
 SAMPLED BY: A. COATE
 DATE RECEIVED: 12-2-88
 DATE ANALYZED: 12-15-88

TEST METHODS: EPA-602-8020
 EXTRACTION METHOD: EPA 5030

A M E N D E D R E P O R T

CONSTITUENT	TANK #1	DETECT LIMIT	TANK #2	DETECT LIMIT	TANK #3	DETECT LIMIT
Benzene	17	1	<5000 *	5000 *	47000	1000
Toluene	14	1	54	10 *	260	100
Ethyl benzene	4	1	45	10 *	220	100
Xylene	15	1	130	10 *	<100	100
Chlorobenzene	<1	1	<10	10 *	<100	100
1,4-Dichlorobenzene	<1	1	<10	10 *	<100	100
1,3-Dichlorobenzene	<1	1	<10	10 *	<100	100
1,2-Dichlorobenzene	<1	1	<10	10 *	<100	100
tertbutylmethylether	<1	1	<10	10 *	<100	100

COMMENTS: Results are in micrograms per liter.
 * 2/9/89 Corrected value supersedes previous data.

The information shown on this sheet is test data only and no interpretation is intended or implied.

ANALYST: JW

APPROVED: Bernard J. Tyson



CH2M HILL ENVIRONMENTAL LABORATORY
2218 RAILROAD AVENUE
REDDING, CA 96001 916-243-5831

REPORT TO: DEL MONTE-EMERYVILLE
CH2M HILL/SFO
SFO27035.AD.FW
ATTENTION: SUSAN
SAMPLE DESCRIPTION: UNKNOWN LIQUID
DATE OF SAMPLE: 12-1-88

REFERENCE NUMBER: 21729
PAGE 4 OF 4
DATE: 1-4-89
PHONE:
SAMPLED BY: A. COATE
DATE RECEIVED: 12-2-88
DATE ANALYZED: 12-15-88

TEST METHODS: EPA-602-8020
EXTRACTION METHOD: EPA 5030

CONSTITUENT	ORGANIC DETECT TANK #4	DETECT LIMIT	AQUEOUS DETECT TANK #4	DETECT LIMIT
Benzene	3900	100	3600	100
Toluene	78	10	160	10
Ethyl benzene	20	10	53	10
Xylene	70	10	280	10
Chlorobenzene	<10	10	<10	10
1,4-Dichlorobenzene	<10	10	<10	10
1,3-Dichlorobenzene	<10	10	<10	10
1,2-Dichlorobenzene	<10	10	<10	10
tertbutylmethylether	<10	10	<10	10

COMMENTS: Results are in micrograms per litre.
Aqueous Tank #4 exceeded holding time, analyzed by client.

The information shown on this sheet is test data only and
no interpretation is intended or implied.

ANALYST: J.W.

APPROVED: Bernard J. Tyson



BROWN AND CALDWELL LABORATORIES

1255 POWELL STREET EMERYVILLE, CA 94608 • (415) 428-2300

ANALYTICAL REPORT

LOG NO: EB9-02-248

Received: 08 FEB 89
Reported: 22 FEB 89

Ms. Susan Colman
CH2M HILL
6425 Christie Street, Suite 500
Emeryville, California 94608

Project: SFO 27289.AD.FW

REPORT OF ANALYTICAL RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED				
02-248-1	EMS 1-6	08 FEB 89				
02-248-2	EMS 1-9	08 FEB 89				
02-248-3	EMS 2-6	08 FEB 89				
02-248-4	EMS 2-9	08 FEB 89				
02-248-5	EMS 3-6	08 FEB 89				
PARAMETER	02-248-1	02-248-2	02-248-3	02-248-4	02-248-5	
C18-C30 Hydrocarbons, mg/kg	<10	<10	<10	<10	<10	
Fuel Hydrocarbons, Volatile (Low Level), mg/kg	<0.1	<0.1	0.3	<0.1	1.5	



LOG NO: E89-02-248

Received: 08 FEB 89
Reported: 22 FEB 89

Ms. Susan Colman
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Project: SFO 27289.AD.FW

REPORT OF ANALYTICAL RESULTS

Page 2

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
02-248-1	EMS 1-6	08 FEB 89
02-248-2	EMS 1-9	08 FEB 89
02-248-3	EMS 2-6	08 FEB 89
02-248-4	EMS 2-9	08 FEB 89
02-248-5	EMS 3-6	08 FEB 89

PARAMETER	02-248-1	02-248-2	02-248-3	02-248-4	02-248-5
EPA Method 8010					
Date Extracted	02/15/89	02/15/89	02/15/89	02/15/89	---
1,1,2,2-Tetrachloroethane, ug/kg	<5	<5	<5	<5	---
1,1,2-Trichloroethane, ug/kg	<5	<5	<5	<5	---
1,1-Dichloroethane, ug/kg	<5	<5	<5	<5	---
1,1-Dichloroethylene, ug/kg	<5	<5	<5	<5	---
1,2-Dichlorobenzene, ug/kg	<5	<5	<5	<5	---
1,2-Dichloroethane, ug/kg	<5	<5	<5	<5	---
trans-1,2-Dichloroethylene, ug/kg	<5	<5	<5	<5	---
1,2-Dichloropropane, ug/kg	<5	<5	<5	<5	---
1,3-Dichlorobenzene, ug/kg	<5	<5	<5	<5	---
1,4-Dichlorobenzene, ug/kg	<5	<5	<5	<5	---
2-Chloroethylvinylether, ug/kg	<5	<5	<5	<5	---
Bromodichloromethane, ug/kg	<5	<5	<5	<5	---
Bromomethane, ug/kg	<5	<5	<5	<5	---
Bromoform, ug/kg	<5	<5	<5	<5	---
Chlorobenzene, ug/kg	<5	<5	<5	<5	---
Carbon Tetrachloride, ug/kg	<5	<5	<5	<5	---
Chloroethane, ug/kg	<5	<5	<5	<5	---
Chloroform, ug/kg	<5	<5	8	<5	---
Chloromethane, ug/kg	<5	<5	<5	<5	---
Dibromochloromethane, ug/kg	<5	<5	<5	<5	---
Dichlorodifluoromethane, ug/kg	<5	<5	<5	<5	---



Ms. Susan Colman
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Project: SFO 27289.AD.FW

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED				
02-248-1	EMS 1-6	08 FEB 89				
02-248-2	EMS 1-9	08 FEB 89				
02-248-3	EMS 2-6	08 FEB 89				
02-248-4	EMS 2-9	08 FEB 89				
02-248-5	EMS 3-6	08 FEB 89				
PARAMETER		02-248-1	02-248-2	02-248-3	02-248-4	02-248-5
Freon 113, ug/kg		6	8	<5	<5	---
Methylene chloride, ug/kg		<5	<5	<5	<5	---
Tetrachloroethylene, ug/kg		<5	<5	<5	<5	---
1,1,1-Trichloroethane, ug/kg		<5	<5	<5	<5	---
Trichloroethylene, ug/kg		<5	<5	8	17	---
Trichlorofluoromethane, ug/kg		<5	<5	<5	<5	---
Vinyl chloride, ug/kg		<5	<5	<5	<5	---
cis-1,3-Dichloropropene, ug/kg		<5	<5	<5	<5	---
trans-1,3-Dichloropropene, ug/kg		<5	<5	<5	<5	---
Other EPA Method 8010		---	---	---	---	---

**BROWN AND CALDWELL LABORATORIES**

1255 POWELL STREET EMERYVILLE, CA 94608 • (415) 428-2300

ANALYTICAL REPORT

LOG NO: E89-02-248

Received: 08 FEB 89

Reported: 22 FEB 89

Ms. Susan Colman
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 6425 Christie Street, Suite 500
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Project: SFO 27289.AD.FW

REPORT OF ANALYTICAL RESULTS

Page 4

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED				
02-248-1	EMS 1-6					08 FEB 89
02-248-2	EMS 1-9					08 FEB 89
02-248-3	EMS 2-6					08 FEB 89
02-248-4	EMS 2-9					08 FEB 89
02-248-5	EMS 3-6					08 FEB 89
PARAMETER		02-248-1	02-248-2	02-248-3	02-248-4	02-248-5
EPA Method 8020						
Date Extracted		02/15/89	02/15/89	02/15/89	02/15/89	02/16/89
1,2-Dichlorobenzene, ug/kg		<5	<5	<5	<5	<5
1,3-Dichlorobenzene, ug/kg		<5	<5	<5	<5	<5
1,4-Dichlorobenzene, ug/kg		<5	<5	<5	<5	<5
Chlorobenzene, ug/kg		<5	<5	<5	<5	<5
Benzene, ug/kg		<5	<5	<5	<5	<5
Ethylbenzene, ug/kg		<5	<5	<5	<5	<5
Toluene, ug/kg		<5	<5	<5	6	<5
Total Xylene Isomers, ug/kg		<5	<5	<5		
Other EPA Method 8020		---	---	---	---	---

CHM Hill CHAIN OF CUSTODY RECORD

LOG # 8902248

PROJECT NUMBER SFO 27289.AO.Fw		PROJECT NAME Plant 35 Tanks			ANALYSES REQUESTED							FOR LAB USE ONLY		
CLIENT NAME Del Monte					NUMBER OF CONTAINERS	TPH as geo - 5030	TPH as diesel-sonication	BTEX - EPA 8020	Solvents - 8010					LAB # _____
REPORT TO: Susan Colman		COPY TO:												PROJ # _____
REQUESTED COMPLETION DATE 2/22/89		LABORATORY Brown & Caldwell												ACK _____ VERIFIED _____
														DATE INVOICED _____
STA NO	DATE	TIME	COMP	GRAB	SAMPLE DESCRIPTION								NO. OF SAMPLES _____ pg _____ of _____	
													DISPOSITION: D R _____ DATE _____	
													REMARKS	
1	2/8/89	10:10		✓	EMS1-6	1	✓	✓	✓	✓			Note methods -	
1		10:30		✓	EMS1-9	1	✓	✓	✓	✓			TPH as geo → 5030	
2		10:40		✓	EMS2-6	1	✓	✓	✓	✓			TPH diesel → sonication	
2		11:05		✓	EMS2-9	1	✓	✓	✓	✓				
3		11:55		✓	EMS3-6	1	✓	✓	✓	✓			Fuel smell	
3		12:05		✓	EMS3-9	1	✓	✓	✓	✓			↓	
SAMPLED BY AND TITLE (SIGNATURE)		DATE/TIME	RELINQUISHED BY (SIGNATURE)			DATE/TIME	RECEIVED BY: (SIGNATURE)			DATE/TIME				
1 Susan Colman		2/8/89 12:30	2 Susan Colman			2/8/89 12:40	3 Del Monte Asca			2/9/89 12:43				
RELINQUISHED BY: (SIGNATURE)		DATE/TIME	RECEIVED BY: (SIGNATURE)		DATE/TIME	RELINQUISHED BY: (SIGNATURE)		DATE/TIME	RECEIVED BY LAB: (SIGNATURE)		DATE/TIME			
4			5			6			7					
REMARKS			SAMPLING PROGRAM				SAMPLE SHIPPED VIA			AIR BUS BILL NUMBER				
			SDWA	NPDES	OCRA	OTHER	<input type="checkbox"/> UPS <input type="checkbox"/> BUS <input type="checkbox"/> FED-EX <input type="checkbox"/> HAND OTHER _____							
			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	(SPECIFY)								



LOG NO: E89-03-552

Received: 22 MAR 89
Reported: 07 APR 89

Ms. Susan Colman
CH2M HILL
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Emeryville, California 94608

Project: SF027289.AD.FW

REPORT OF ANALYTICAL RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED		
03-552-1	S2-S4	22 MAR 89		
03-552-2	S2-S2	22 MAR 89		
03-552-3	S2-G2	22 MAR 89		
PARAMETER		03-552-1	03-552-2	03-552-3
C18-C30 Hydrocarbons, mg/kg		<10	<10	<10
Fuel Hydrocarbons + BTX				
Date Analyzed		04.03.89	04.03.89	04.03.89
Dilution Factor, Times		1	1	50
Benzene, mg/kg		<0.1	<0.1	<0.1
Ethylbenzene, mg/kg		<0.1	<0.1	<0.1
Toluene, mg/kg		<0.1	<0.1	0.14
Total Xylene Isomers, mg/kg		<0.1	<0.1	0.72
Fuel Characterization, .		---	---	GAS
Volatile Fuel Hydrocarbons, mg/kg		<5.0	<5.0	220
Other Fuel Hydrocarbons + BTX		---	---	---

This fuel characterization is a qualitative identification based upon a visual comparison of sample chromatograms with those from authentic standards.



Ms. Susan Colman
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Project: SF027289.AD.FW

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED		
03-552-1	S2-S4			22 MAR 89
03-552-2	S2-S2			22 MAR 89
03-552-3	S2-G2			22 MAR 89
		03-552-1	03-552-2	03-552-3
PARAMETER				
EPA Method 8010.		03.29.89	04.01.89	---
Date Analyzed		03.29.89	04.01.89	---
Date Extracted		<0.01	<0.01	---
1,1,1-Trichloroethane, mg/kg		<0.01	<0.01	---
1,1,2,2-Tetrachloroethane, mg/kg		<0.01	<0.01	---
1,1,2-Trichloroethane, mg/kg		<0.01	<0.01	---
1,1-Dichloroethane, mg/kg		<0.01	<0.01	---
1,1-Dichloroethylene, mg/kg		<0.01	<0.01	---
1,2-Dichlorobenzene, mg/kg		<0.01	<0.01	---
1,2-Dichloroethane, mg/kg		0.03	0.07	---
1,2-Dichloroethene (Total), mg/kg		<0.01	<0.01	---
1,2-Dichloropropane, mg/kg		<0.01	<0.01	---
1,3-Dichlorobenzene, mg/kg		<0.01	<0.01	---
1,4-Dichlorobenzene, mg/kg		<0.01	<0.01	---
2-Chloroethylvinylether, mg/kg		<0.01	<0.01	---
Bromodichloromethane, mg/kg		<0.01	<0.01	---
Bromomethane, mg/kg		<0.01	<0.01	---
Bromoform, mg/kg		<0.01	<0.01	---
Chlorobenzene, mg/kg		<0.01	<0.01	---
Carbon Tetrachloride, mg/kg		<0.01	<0.01	---
Chloroethane, mg/kg		<0.01	<0.01	---
Chloroform, mg/kg		<0.01	<0.01	---
Chloromethane, mg/kg		<0.01	<0.01	---
Dibromochloromethane, mg/kg		<0.01	<0.01	---
Dichlorodifluoromethane, mg/kg		<0.01	<0.01	---



BROWN AND CALDWELL LABORATORIES

1255 POWELL STREET EMERYVILLE, CA 94608 • (415) 428-2300

ANALYTICAL REPORT

LOG NO: E89-03-552

Received: 22 MAR 89

Reported: 07 APR 89

Ms. Susan Colman
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6425 Christie Street, Suite 500
Emeryville, California 94608

Project: SF027289.AD.FW

REPORT OF ANALYTICAL RESULTS

Page 3

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED		
03-552-1	S2-S4	22 MAR 89		
03-552-2	S2-S2	22 MAR 89		
03-552-3	S2-G2	22 MAR 89		
PARAMETER		03-552-1	03-552-2	03-552-3
Freon 113, mg/kg		<0.01	<0.01	---
Methylene chloride, mg/kg		<0.01	<0.01	---
Tetrachloroethylene, mg/kg		<0.01	<0.01	---
Trichloroethylene, mg/kg		<0.01	0.07	---
Trichlorofluoromethane, mg/kg		<0.01	<0.01	---
Vinyl chloride, mg/kg		<0.01	<0.01	---
cis-1,3-Dichloropropene, mg/kg		<0.01	<0.01	---
trans-1,3-Dichloropropene, mg/kg		<0.01	<0.01	---



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Emeryville, California 94608

Project: SF027289.AD.FW

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED		
03-552-1	S2-S4			22 MAR 89
03-552-2	S2-S2			22 MAR 89
03-552-3	S2-G2			22 MAR 89
PARAMETER		03-552-1	03-552-2	03-552-3
B/N,A Ext.Pri.Poll. (EPA-8270)		03.22.89	03.22.89	---
Date Extracted		03.31.89	03.31.89	---
Date Analyzed		1	1	---
Dilution Factor, Times		<0.1	<0.1	---
1,2,4-Trichlorobenzene, mg/kg		<0.1	<0.1	---
1,2-Dichlorobenzene, mg/kg		<0.1	<0.1	---
1,2-Diphenylhydrazine, mg/kg		<0.1	<0.1	---
1,3-Dichlorobenzene, mg/kg		<0.1	<0.1	---
1,4-Dichlorobenzene, mg/kg		<0.1	<0.1	---
2,4,6-Trichlorophenol, mg/kg		<0.1	<0.1	---
2,4-Dichlorophenol, mg/kg		<0.1	<0.1	---
2,4-Dimethylphenol, mg/kg		<0.1	<0.1	---
2,4-Dinitrotoluene, mg/kg		<1	<1	---
2,4-Dinitrophenol, mg/kg		<0.1	<0.1	---
2,6-Dinitrotoluene, mg/kg		<0.1	<0.1	---
2-Chloronaphthalene, mg/kg		<0.1	<0.1	---
2-Nitrophenol, mg/kg		<0.1	<0.1	---
2-Chlorophenol, mg/kg		<0.1	<0.1	---
2-Methyl-4,6-dinitrophenol, mg/kg		<0.1	<0.1	---
3,3'-Dichlorobenzidine, mg/kg		<0.1	<0.1	---
4-Bromophenylphenylether, mg/kg		<0.1	<0.1	---
4-Chloro-3-methylphenol, mg/kg		<0.1	<0.1	---
4-Chlorophenylphenylether, mg/kg		<0.1	<0.1	---
4-Nitrophenol, mg/kg		<2	<2	---
Acenaphthene, mg/kg		<0.1	<0.1	---



LOG NO: E89-03-552

Received: 22 MAR 89

Reported: 07 APR 89

Ms. Susan Colman
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Project: SF027289.AD.FW

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED		
03-552-1	S2-S4			22 MAR 89
03-552-2	S2-S2			22 MAR 89
03-552-3	S2-G2			22 MAR 89
PARAMETER		03-552-1	03-552-2	03-552-3
Acenaphthylene, mg/kg		<0.1	<0.1	---
Anthracene, mg/kg		<0.1	<0.1	---
Bis(2-ethylhexyl)phthalate, mg/kg		<10	<10	---
Benzidine, mg/kg		<4	<4	---
Bis(2-chloroethyl)ether, mg/kg		<0.1	<0.1	---
Bis(2-chloroisopropyl)ether, mg/kg		<0.1	<0.1	---
Bis(2-chloroethoxy)methane, mg/kg		<0.1	<0.1	---
Benzo(a)anthracene, mg/kg		<0.1	<0.1	---
Benzo(a)pyrene, mg/kg		<0.1	<0.1	---
Benzo(b)fluoranthene, mg/kg		<0.1	<0.1	---
Benzo(g,h,i)perylene, mg/kg		<0.1	<0.1	---
Benzo(k)fluoranthene, mg/kg		<0.1	<0.1	---
Butylbenzylphthalate, mg/kg		<0.1	<0.1	---
Chrysene, mg/kg		<0.1	<0.1	---
Di-n-octylphthalate, mg/kg		<0.1	<0.1	---
Dibenzo(a,h)anthracene, mg/kg		<0.1	<0.1	---
Dibutylphthalate, mg/kg		<0.1	<0.1	---
Diethylphthalate, mg/kg		<0.1	<0.1	---
Dimethylphthalate, mg/kg		<0.1	<0.1	---
Fluorene, mg/kg		<0.1	<0.1	---
Fluoranthene, mg/kg		<0.1	<0.1	---
Hexachlorobenzene, mg/kg		<0.1	<0.1	---
Hexachlorobutadiene, mg/kg		<0.1	<0.1	---
Hexachlorocyclopentadiene, mg/kg		<0.1	<0.1	---
Hexachloroethane, mg/kg		<0.1	<0.1	---



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LOG NO: E89-03-552

Received: 22 MAR 89
Reported: 07 APR 89

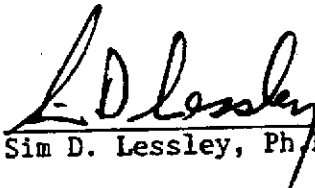
Ms. Susan Colman
CH2M HILL
6425 Christie Street, Suite 500
Emeryville, California 94608

Project: SF027289.AD.FW

REPORT OF ANALYTICAL RESULTS

Page 6

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED		
03-552-1	S2-S4	22 MAR 89		
03-552-2	S2-S2	22 MAR 89		
03-552-3	S2-G2	22 MAR 89		
PARAMETER		03-552-1	03-552-2	03-552-3
Indeno(1,2,3-c,d)pyrene, mg/kg		<0.1	<0.1	---
Isophorone, mg/kg		<0.1	<0.1	---
N-Nitrosodi-n-propylamine, mg/kg		<0.1	<0.1	---
N-Nitrosodimethylamine, mg/kg		<0.1	<0.1	---
N-Nitrosodiphenylamine, mg/kg		<0.1	<0.1	---
Naphthalene, mg/kg		<0.1	<0.1	---
Nitrobenzene, mg/kg		<0.1	<0.1	---
Pentachlorophenol, mg/kg		<0.1	<0.1	---
Phenanthrene, mg/kg		<0.1	<0.1	---
Phenol, mg/kg		0.2	<0.1	---
Pyrene, mg/kg		<0.1	<0.1	---


Sim D. Lessley, Ph.D., Laboratory Director



1255 POWELL STREET EMERYVILLE, CA 94608 • (415) 428-2300

LOG NO: E89-05-143

Received: 04 MAY 89
Reported: 08 MAY 89

REVISED 5/25/89


Ms. Susan Colman
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Project: SF027289.A0.GW

REPORT OF ANALYTICAL RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED		
05-143-1	AS-1, Aerated Soil From Gas Excavation			04 MAY 89
05-143-2	GT-1, Well Cuttings From Gas Tank			04 MAY 89
05-143-3	ST-1, Well Cuttings From Solvent Tanks			04 MAY 89
PARAMETER		05-143-1	05-143-2	05-143-3
Ammonia Nitrogen, mg/kg		---	---	4.6
TPH - Volatile Hydrocarbons				
Date Analyzed		05.04.89	05.04.89	---
Dilution Factor, Times		1	1	---
C4 to C12 Hydrocarbons, mg/kg		18	52	---
Other TPH - Volatile Hydrocarbons		---	---	---


Sim D. Lessley, Ph.D., Laboratory Director



1255 POWELL STREET EMERYVILLE, CA 94608 • (415) 428-2300

LOG NO: E89-05-143

Received: 04 MAY 89

Reported: 08 MAY 89

Ms. Susan Colman
CH2M HILL
6425 Christie Street, Suite 500
Emeryville, California 94608

Project: SF027289.A0.GW

REPORT OF ANALYTICAL RESULTS

Page 2

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
05-143-3	ST-1, Well Cuttings From Solvent Tanks	04 MAY 89
PARAMETER	05-143-3	
Ammonia Nitrogen, mg/kg	4.6	



1255 POWELL STREET EMERYVILLE, CA 94608 • (415) 428-2300

LOG NO: E89-05-143

Received: 04 MAY 89

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Ms. Susan Colman
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6425 Christie Street, Suite 500
Emeryville, California 94608

Project: SF027289.A0.GW

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
05-143-3	ST-1, Well Cuttings From Solvent Tanks	04 MAY 89
PARAMETER		05-143-3
EPA Method 8010		
Date Analyzed		05.06.89
Date Extracted		05.04.89
1,1,1-Trichloroethane, mg/kg		<0.01
1,1,2,2-Tetrachloroethane, mg/kg		<0.01
1,1,2-Trichloroethane, mg/kg		<0.01
1,1-Dichloroethane, mg/kg		<0.01
1,1-Dichloroethene, mg/kg		<0.01
1,2-Dichlorobenzene, mg/kg		<0.01
1,2-Dichloroethane, mg/kg		<0.01
1,2-Dichloroethene (Total), mg/kg		0.02
1,2-Dichloropropane, mg/kg		<0.01
1,3-Dichlorobenzene, mg/kg		<0.01
1,4-Dichlorobenzene, mg/kg		<0.01
2-Chloroethylvinylether, mg/kg		<0.01
Bromodichloromethane, mg/kg		<0.01
Bromomethane, mg/kg		<0.01
Bromoform, mg/kg		<0.01
Chlorobenzene, mg/kg		<0.01
Carbon Tetrachloride, mg/kg		<0.01
Chloroethane, mg/kg		<0.01
Chloroform, mg/kg		<0.01
Chloromethane, mg/kg		<0.01
Dibromochloromethane, mg/kg		<0.01
Dichlorodifluoromethane, mg/kg		<0.01
Freon 113, mg/kg		<0.01
Methylene chloride, mg/kg		<0.01



1255 POWELL STREET EMERYVILLE, CA 94608 * (415) 428-2300

LOG NO: E89-05-143

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6425 Christie Street, Suite 500
Emeryville, California 94608

Project: SF027289.A0.GW

REPORT OF ANALYTICAL RESULTS

Page 4

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
05-143-3	ST-1, Well Cuttings From Solvent Tanks	04 MAY 89
PARAMETER		05-143-3
Tetrachloroethylene, mg/kg		<0.01
Trichloroethene, mg/kg		0.63
Trichlorofluoromethane, mg/kg		<0.01
Vinyl chloride, mg/kg		<0.01
cis-1,3-Dichloropropene, mg/kg		<0.01
trans-1,3-Dichloropropene, mg/kg		<0.01

Results were reported verbally to you on 05.08.89. TB 05.09.89
Results for TCE on sample ST-1 were confirmed upon a second review of the data.
TB 05.10.89

Sandy J. Ficklin for
Sim D. Lessley, Ph.D., Laboratory Director

Client name **CH2M HILL** Project or PO# **SF027289.A0.GW**
 Address **6425 Christie Ave** Phone # **652-2426**
 City, State, Zip **Emeryville CA** Report attention **Susan Colman**

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sampled by	Number of containers	Analyses required										Remarks		
						TPH	TPH- gasoline	8010	NH3								Hazardous sample Special handling required	
AS-1	5/4/89	0800	SO	Aerated soil from gas excavation	1	X												1 1/2 hr Rush (TB)
GT-1	5/4/89	0820	SO	well cuttings from gas tank	1	X												
ST-1	↓	0830	SO	well cuttings from solvent tanks	1			X	X									

Signature	Print Name	Company	Date	Time
Relinquished by <i>Susan Colman</i>	Susan Colman	CH2M HILL	5/4/89	9:15
Received by				
Relinquished by				
Received by				
Relinquished by				
Received by Laboratory <i>Tony Blake</i>	Tony Blake	BCAL	5/4/89	09:15

BROWN AND CALDWELL LABORATORIES
 1255 Powell Street, Emeryville, CA 94608 (415) 428-2300
 373 South Fair Oaks Avenue, Pasadena, CA 91105 (818) 795-7553
 1200 Pacific Avenue, Anaheim, CA 92805

Note:
 Samples are discarded 30 days after results are reported unless other arrangements are made.
 Hazardous samples will be returned to client or disposed of at client expense.
 *KEY: AQ—Aqueous NA—Nonaqueous SL—Sludge GW—Groundwater SO—Soil C Other PE—Petroleum



Ms. Susan Colman
CH2M HILL
6425 Christie Street, Suite 500
Emeryville, California 94608

Project: SF027289.A0.GW

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
05-590-1	DM-MW8S-589	19 MAY 89
PARAMETER		05-590-1
EPA Method 8010		
Date Analyzed		06.01.89
Date Extracted		05.31.89
1,1,1-Trichloroethane, mg/kg		<0.01
1,1,2,2-Tetrachloroethane, mg/kg		<0.01
1,1,2-Trichloroethane, mg/kg		<0.01
1,1-Dichloroethene, mg/kg		<0.01
1,1-Dichloroethane, mg/kg		<0.01
1,2-Dichloroethane, mg/kg		<0.01
1,2-Dichlorobenzene, mg/kg		<0.01
1,2-Dichloroethene (Total), mg/kg		<0.01
1,2-Dichloropropane, mg/kg		<0.01
1,3-Dichlorobenzene, mg/kg		<0.01
1,4-Dichlorobenzene, mg/kg		<0.01
2-Chloroethylvinylether, mg/kg		<0.01
Bromodichloromethane, mg/kg		<0.01
Bromomethane, mg/kg		<0.01
Bromoform, mg/kg		<0.01
Chlorobenzene, mg/kg		<0.01
Carbon Tetrachloride, mg/kg		<0.01
Chloroethane, mg/kg		<0.01
Chloroform, mg/kg		0.15
Chloromethane, mg/kg		<0.01
Dibromochloromethane, mg/kg		<0.01
Dichlorodifluoromethane, mg/kg		<0.01
Freon 113, mg/kg		<0.01
Methylene chloride, mg/kg		<0.01



1255 POWELL STREET EMERYVILLE, CA 94608 • (415) 428-2300

LOG NO: E89-05-590

Received: 19 MAY 89

Reported: 06 JUN 89

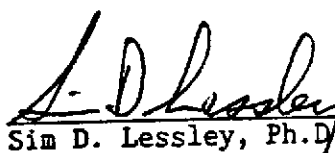
Ms. Susan Colman
CH2M HILL
6425 Christie Street, Suite 500
Emeryville, California 94608

Project: SF027289.A0.GW

REPORT OF ANALYTICAL RESULTS

Page 2

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
05-590-1	DM-MW8S-589	19 MAY 89
PARAMETER		05-590-1
Trichloroethene, mg/kg		0.18
Trichlorofluoromethane, mg/kg		<0.01
Tetrachloroethene, mg/kg		<0.01
Vinyl chloride, mg/kg		<0.01
Cis-1,3-Dichloropropene, mg/kg		<0.01
trans-1,3-Dichloropropene, mg/kg		<0.01


Sim D. Lessley, Ph.D., Laboratory Director



RECEIVED

1250 POWELL STREET EMERYVILLE, CA 94608 • (415) 428-2300

JUL 31 1989

LOG NO: E89-07-044

CH2M - HILL
SAN FRANCISCO

Received: 05 JUL 89

Reported: 17 JUL 89

Ms. Susan Colman
CH2M HILL
6425 Christie Street, Suite 500
Emeryville, California 94608

Project: SFO 27289.A0.GW

REPORT OF ANALYTICAL RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES					DATE SAMPLED
07-044-1	MW9-8-8.5					05 JUL 89
07-044-2	MW9-14-14.5					05 JUL 89
07-044-3	MW11-10-10.5					05 JUL 89
07-044-4	MW11-16-16.5					05 JUL 89
07-044-5	MW10-10.5-11					06 JUL 89
PARAMETER	07-044-1	07-044-2	07-044-3	07-044-4	07-044-5	
EPA Method 8010						
Date Analyzed	07.12.89	07.13.89	07.13.89	07.13.89	07.13.89	
Date Extracted	07.12.89	07.12.89	07.12.89	07.12.89	07.12.89	
1,1,1-Trichloroethane, mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	
1,1,2,2-Tetrachloroethane, mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	
1,1,2-Trichloroethane, mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	
1,1-Dichloroethene, mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	
1,1-Dichloroethane, mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	
1,2-Dichloroethane, mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	
1,2-Dichlorobenzene, mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	
1,2-Dichloroethene (Total), mg/kg	<0.01	<0.01	<0.01	<0.01	0.01	
1,2-Dichloropropane, mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	
1,3-Dichlorobenzene, mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	
1,4-Dichlorobenzene, mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	
2-Chloroethylvinylether, mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	
Bromodichloromethane, mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	
Bromomethane, mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	
Bromoform, mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	
Chlorobenzene, mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	
Carbon Tetrachloride, mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	
Chloroethane, mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	
Chloroform, mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	
Chloromethane, mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	



LOG NO: E89-07-044

Received: 05 JUL 89

Reported: 17 JUL 89

Ms. Susan Colman
CH2M HILL
6425 Christie Street, Suite 500
Emeryville, California 94608

Project: SFO 27289.A0.GW

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED				
07-044-1	MW9-8-8.5	05 JUL 89				
07-044-2	MW9-14-14.5	05 JUL 89				
07-044-3	MW11-10-10.5	05 JUL 89				
07-044-4	MW11-16-16.5	05 JUL 89				
07-044-5	MW10-10.5-11	06 JUL 89				
PARAMETER	07-044-1	07-044-2	07-044-3	07-044-4	07-044-5	
Dibromochloromethane, mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	
Dichlorodifluoromethane, mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	
Freon 113, mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	
Methylene chloride, mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	
Trichloroethene, mg/kg	<0.01	<0.01	0.02	0.02	<0.01	
Trichlorofluoromethane, mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	
Tetrachloroethene, mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	
Vinyl chloride, mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	
Cis-1,3-Dichloropropene, mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	
trans-1,3-Dichloropropene, mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	



1255 POWELL STREET EMERYVILLE, CA 94608 • (415) 428-2300

LOG NO: E89-07-044

Received: 05 JUL 89

Reported: 17 JUL 89

Ms. Susan Colman
CH2M HILL
6425 Christie Street, Suite 500
Emeryville, California 94608

Project: SFO 27289.AO.GW

REPORT OF ANALYTICAL RESULTS

Page 3

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-044-6	MW10-15.5-16	06 JUL 89
PARAMETER		07-044-6
EPA Method 8010		
Date Analyzed		07.13.89
Date Extracted		07.12.89
1,1,1-Trichloroethane, mg/kg		<0.01
1,1,2,2-Tetrachloroethane, mg/kg		<0.01
1,1,2-Trichloroethane, mg/kg		<0.01
1,1-Dichloroethene, mg/kg		<0.01
1,1-Dichloroethane, mg/kg		<0.01
1,2-Dichloroethane, mg/kg		<0.01
1,2-Dichlorobenzene, mg/kg		<0.01
1,2-Dichloroethene (Total), mg/kg		0.02
1,2-Dichloropropane, mg/kg		<0.01
1,3-Dichlorobenzene, mg/kg		<0.01
1,4-Dichlorobenzene, mg/kg		<0.01
2-Chloroethylvinylether, mg/kg		<0.01
Bromodichloromethane, mg/kg		<0.01
Bromomethane, mg/kg		<0.01
Bromoform, mg/kg		<0.01
Chlorobenzene, mg/kg		<0.01
Carbon Tetrachloride, mg/kg		<0.01
Chloroethane, mg/kg		<0.01
Chloroform, mg/kg		<0.01
Chloromethane, mg/kg		<0.01
Dibromochloromethane, mg/kg		<0.01
Dichlorodifluoromethane, mg/kg		<0.01
Freon 113, mg/kg		<0.01
Methylene chloride, mg/kg		<0.01



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LOG NO: E89-07-044

Received: 05 JUL 89

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CH2M HILL
6425 Christie Street, Suite 500
Emeryville, California 94608

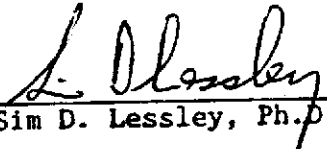
Project: SFO 27289.A0.GW

REPORT OF ANALYTICAL RESULTS

Page 4

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-044-6	MW10-15.5-16	06 JUL 89
PARAMETER	07-044-6	
Trichloroethene, mg/kg	<0.01	
Trichlorofluoromethane, mg/kg	<0.01	
Tetrachloroethene, mg/kg	0.01	
Vinyl chloride, mg/kg	<0.01	
Cis-1,3-Dichloropropene, mg/kg	<0.01	
trans-1,3-Dichloropropene, mg/kg	<0.01	

Note: QA report included consists only of laboratory control standard.
No charge will be applied. T. Blake 07.26.89


Sim D. Lessley, Ph.D., Laboratory Director

BROWN AND CALDWELL LABORATORIES

BATCH QC REPORT
ORDER E8907044

Page 1

REPORTED : 07/20/89

LABORATORY CONTROL STANDARDS

	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
METER						
Method 8010					No.	100
Analyst ID	07.12.89	247	7231	7231	ug	100
Detection Limit	07.12.89	247	0.010	0.010	ug	100
Dilution Factor	07.12.89	247	1	1	Times	100
1,1,1-Trichloroethane	07.12.89	247	0.101	0.100	ug	101
1,1-Dichloroethene	07.12.89	247	0.094	0.100	ug	94
1,1-Dichloroethane	07.12.89	247	0.103	0.100	ug	103
1,2-Dichloroethane	07.12.89	247	0.102	0.100	ug	102
1,2-Dichlorobenzene	07.12.89	247	0.122	0.100	ug	122
1,2-Dichloroethene (Total)	07.12.89	247	0.089	0.100	ug	89
1,2-Dichloropropane	07.12.89	247	0.104	0.100	ug	104
1,3-Dichlorobenzene	07.12.89	247	0.116	0.100	ug	116
1,4-Dichlorobenzene	07.12.89	247	0.120	0.100	ug	120
2-Chloroethylvinylether	07.12.89	247	0.106	0.100	ug	106
Bromodichloromethane	07.12.89	247	0.106	0.100	ug	106
Bromomethane	07.12.89	247	0.082	0.100	ug	82
Bromoform	07.12.89	247	0.112	0.100	ug	112
Chlorobenzene	07.12.89	247	0.108	0.100	ug	108
Carbon Tetrachloride	07.12.89	247	0.103	0.100	ug	103
Chloroethane	07.12.89	247	0.097	0.100	ug	97
Chloroform	07.12.89	247	0.103	0.100	ug	103
Chloromethane	07.12.89	247	0.069	0.100	ug	69
Dibromochloromethane	07.12.89	247	0.110	0.100	ug	110
Freon 113	07.12.89	247	0.109	0.100	ug	109
Methylene chloride	07.12.89	247	0.140	0.100	ug	140
Trichloroethene	07.12.89	247	0.102	0.100	ug	102
Trichlorofluoromethane	07.12.89	247	0.118	0.100	ug	118
Tetrachloroethene	07.12.89	247	0.091	0.100	ug	91
Vinyl chloride	07.12.89	247	0.050	0.100	ug	50

CHM HILL CHAIN OF CUSTODY RECORD

PROJECT NUMBER SFO 77289.AQ.GW		PROJECT NAME Del Monte				ANALYSES REQUESTED										FOR LAB USE ONLY																							
CLIENT NAME CHM HILL		REPORT TO: Susan Colman				COPY TO:				LAB # _____ PROJ # _____ ACK _____ VERIFIED _____ DATE INVOICED _____ NO. OF SAMPLES _____ pg _____ of _____ DISPOSITION: D R _____ DATE _____ REMARKS																													
REQUESTED COMPLETION DATE 7/20/89		LABORATORY Brown & Caldwell				NUMBER OF CONTAINERS PCID																																	
STA NO	DATE	TIME	COMP	GRAB	SAMPLE DESCRIPTION																																		
mw9	7/5/89	1200		X	mw9-8-8.5	1	X																																
↓	↓	1300		X	mw9-14-14.5	1	X																																
mw11		1520		X	mw11-10-10.5	1	X																																
↓	↓	1535		X	mw16-16.5	1	X																																
LOG # 8907044																																							
SAMPLED BY AND TITLE (SIGNATURE) 1 Susan Colman					DATE/TIME 7/5/89 1615					RELINQUISHED BY (SIGNATURE) 2 Susan Colman					DATE/TIME 7/5/89 1625					RECEIVED BY: (SIGNATURE) 3 _____					DATE/TIME _____														
RELINQUISHED BY: (SIGNATURE) 4 _____					DATE/TIME _____					RECEIVED BY: (SIGNATURE) 5 _____					DATE/TIME _____					RELINQUISHED BY: (SIGNATURE) 6 _____					DATE/TIME _____					RECEIVED BY LAB: (SIGNATURE) 7 Ulysses Bellon					DATE/TIME 7/5/89 1620				
REMARKS _____										SAMPLING PROGRAM SDWA <input type="checkbox"/> NPDES <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER _____ (SPECIFY)										SAMPLE SHIPPED VIA <input type="checkbox"/> UPS <input type="checkbox"/> BUS <input type="checkbox"/> FED-EX <input type="checkbox"/> HAND OTHER _____					AIR BUS BILL NUMBER														



Engineers
Planners
Economists
Scientists

August 15, 1989

LRD191.10

CH2M HILL
6425 Christie Ave., Suite 500
Emeryville, CA 94608

Attention: Susan Colman

Dear Susan:

Enclosed please find the results for samples received at our laboratory on July 7, 1989 for the Del Monte Project.

If you have any questions please feel free to contact us.

Thank you for selecting a CH2M HILL laboratory for your analytical testing needs.

Sincerely,

CH2M HILL QUALITY ANALYTICS LABORATORY

A handwritten signature in cursive script that reads "Barbara J. Hurley".

Barbara J. Hurley
Document Control Officer

Encl.

Report To: Del Monte Plant 35
CH2M Hill/SFO
SFO 27289.AO.GW
Attention: Susan Coleman/SFO
Sample Description: Soils
Date of Sample: 7/5/89

Reference Number: 23680
Page 1 of 3
Date: 8/14/89
Phone:
Sampled By: Client
Date Received: 7/7/89

TEST	MW9	MW9	UNITS	DETECTION LIMIT	DATE ANALYZED	METHOD NUMBER
	8.5-9	13- 13.5				
Bulk Density	1.60	1.48	grams/cm ³	N/A	7-28-89	30.2
Porosity	38.5	43.3	*	N/A	8-9-89	21-2.1
% Sand	39	31	%	1	7-13-89	514.4.4
% Silt	30	44	%	1	7-13-89	514.4.4
% Clay	31	25	%	1	7-13-89	514.4.4
TOC/Sand 75-2000u	560	2310	mg/kg	100	8-11-89	3-75
TOC/Silt 45-75u	675	410	mg/kg	100	8-11-89	3-75
TOC/Clay <45u	1170	1390	mg/kg	100	8-11-89	3-75
Particle Density	2.60	2.61	units	N/A	7-28-89	29-3.2

Comments: mg/kg = milligrams per kilogram.
TOC = Total Organic Carbon.
* Percentage of the bulk volume not occupied by solids.

The information shown on this sheet is test data only and no analysis or interpretation is intended or implied.

Approved By: *Susan M. Jones*

Report To: Del Monte Plant 35
CH2M Hill/SFO
SFO 27289.AO.GW
Attention: Susan Coleman/SFO
Sample Description: Soils
Date of Sample: 7/5/89

Reference Number: 23680
Page 2 of 3
Date: 8/14/89
Phone:
Sampled By: Client
Date Received: 7/7/89

TEST	MW11 10.5 -11	MW11 16.5 -17	UNITS	DETECTION LIMIT	DATE ANALYZED	METHOD NUMBER
Bulk Density	1.47	1.40	grams/cm3	N/A	7-28-89	30.2
Porosity	43.5	46.0	*	N/A	8-9-89	21-2.1
% Sand	24	31	%	1	7-13-89	514.4.4
% Silt	44	41	%	1	7-13-89	514.4.4
% Clay	32	28	%	1	7-13-89	514.4.4
TOC/Sand 75-2000u	735	395	mg/kg	100	8-11-89	3-75
TOC/Silt 45-75u	525	870	mg/kg	100	8-11-89	3-75
TOC/Clay <45u	1450	1370	mg/kg	100	8-11-89	3-75
Particle Density	2.60	2.59	units	N/A	7-28-89	29-3.2

Comments: mg/kg = milligrams per kilogram.
TOC = Total Organic Carbon.
* Percentage of the bulk volume not occupied by solids.

The information shown on this sheet is test data only and no analysis or interpretation is intended or implied.

Approved By: 

Report To: Del Monte Plant 35
CH2M Hill/SFO
SFO 27289.AO.GW
Attention: Susan Coleman/SFO
Sample Description: Soils
Date of Sample: 7/5/89

Reference Number: 23680
Page 3 of 3
Date: 8/14/89
Phone:
Sampled By: Client
Date Received: 7/7/89

TEST	MW10	MW10	UNITS	DETECTION LIMIT	DATE ANALYZED	METHOD NUMBER
	11- 11.5	16- 16.5				
Bulk Density	1.55	1.45	grams/cm ³	N/A	7-28-89	30.2
Porosity	39.5	44.2	*	N/A	8-9-89	21-2.1
% Sand	20	33	%	1	7-13-89	514.4.4
% Silt	49	39	%	1	7-13-89	514.4.4
% Clay	31	28	%	1	7-13-89	514.4.4
TOC/Sand 75-2000u	325	260	mg/kg	100	8-11-89	3-75
TOC/Silt 45-75u	295	780	mg/kg	100	8-11-89	3-75
TOC/Clay <45u	285	19700	mg/kg	100	8-11-89	3-75
Particle Density	2.56	2.60	units	N/A	7-28-89	29-3.2

Comments: mg/kg = milligrams per kilogram.
TOC = Total Organic Carbon.
* Percentage of the bulk volume not occupied by solids.

The information shown on this sheet is test data only and no analysis or interpretation is intended or implied.

Approved By: Susan R. Jensen

CHM HILL CHAIN OF CUSTODY RECORD

PROJECT NUMBER 5FO27287.A2.GW		PROJECT NAME Del Monke Plant 35		ANALYSES REQUESTED						FOR LAB USE ONLY									
CLIENT NAME CHM HILL																			
REPORT TO: Susan Colman			COPY TO:			LAB # _____		PROJ # _____											
REQUESTED COMPLETION DATE 7/27/89			LABORATORY CHM HILL - Rockling			ACK _____		VERIFIED _____											
STA NO		DATE	TIME	COMP	GRAB	SAMPLE DESCRIPTION	NUMBER OF CONTAINERS	Bulk density	Porosity	% sand	% silt	% clay	% organic C in sand	% organic C in silt	% organic C in clay	DATE INVOICED _____	NO. OF SAMPLES _____ pg _____ of _____	DISPOSITION: D R _____	DATE _____

STA NO	DATE	TIME	COMP	GRAB	SAMPLE DESCRIPTION	NUMBER OF CONTAINERS	Bulk density	Porosity	% sand	% silt	% clay	% organic C in sand	% organic C in silt	% organic C in clay	REMARKS
MW19	7/5	1200		X	MW19-8.5-9	1	X	X	X	X	X	X	X	X	
↓		1240		X	MW19-13.-13.5	1	X	X	X	X	X	X	X	X	Cylinder 7 7/16" x 2 1/2"
MW11		1520		X	MW11-10.5-11	1	X	X	X	X	X	X	X	X	
↓		1535		X	MW11-16.5-17	1	X	X	X	X	X	X	X	X	
MW10	7/6	1005		X	MW10-11-11.5	1	X	X	X	X	X	X	X	X	
↓		1030		X	MW10-16-16.5	1	X	X	X	X	X	X	X	X	* Note % organic carbon NOT organic matter

SAMPLED BY AND TITLE (SIGNATURE) 1 Susan Colman		DATE/TIME 7/6/89 1100	RELINQUISHED BY (SIGNATURE) 2 Susan Colman		DATE/TIME 7/6/89 1200	RECEIVED BY: (SIGNATURE) 3 _____	DATE/TIME _____
RELINQUISHED BY: (SIGNATURE) 4 _____	DATE/TIME _____	RECEIVED BY: (SIGNATURE) 5 _____	DATE/TIME _____	RELINQUISHED BY: (SIGNATURE) 6 _____	DATE/TIME _____	RECEIVED BY LAB: (SIGNATURE) 7 _____	DATE/TIME _____

REMARKS _____	SAMPLING PROGRAM				SAMPLE SHIPPED VIA		AIR BUS BILL NUMBER	
	SDWA <input type="checkbox"/>	NPDES <input type="checkbox"/>	RCRA <input type="checkbox"/>	OTHER (SPECIFY) _____	<input type="checkbox"/> UPS	<input checked="" type="checkbox"/> BUS	<input type="checkbox"/> FED-EX	258 976 5



BROWN AND CALDWELL LABORATORIES

1255 POWELL STREET EMERYVILLE, CA 94608 • (415) 428-2300

RECEIVED

ANALYTICAL REPORT

JUN 05 1989

CH2M-HILL
SAN FRANCISCO

LOG NO: E89-05-416

Received: 12 MAY 89

Reported: 31 MAY 89

Ms. Susan Colman
CH2M HILL
6425 Christie Street, Suite 500
Emeryville, California 94608

Project: SF027289.A0.GW

REPORT OF ANALYTICAL RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED		
05-416-1	DM-MW6-589	12 MAY 89		
05-416-2	DM-MW7-589	12 MAY 89		
05-416-3	DM-MW8-589	12 MAY 89		
PARAMETER		05-416-1	05-416-2	05-416-3
EPA Method 604 - Phenols				
2,4,6-Trichlorophenol, ug/L		---	---	<20
2,4-Dichlorophenol, ug/L		---	---	<10
2,4-Dimethylphenol, ug/L		---	---	<10
2,4-Dinitrophenol, ug/L		---	---	<20
2-Nitrophenol, ug/L		---	---	<10
2-Chlorophenol, ug/L		---	---	<10
2-Methyl-4,6-dinitrophenol, ug/L		---	---	<20
4-Chloro-3-methylphenol, ug/L		---	---	<20
4-Nitrophenol, ug/L		---	---	<20
Dilution Factor, Times		---	---	1
Pentachlorophenol, ug/L		---	---	<20
Phenol, ug/L		---	---	<10
Other EPA Method 604 - Phenols				



Ms. Susan Colman
 CH2M HILL
 6425 Christie Street, Suite 500
 Emeryville, California 94608

Project: SF027289.A0.GW

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED		
05-416-1	DM-MW6-589	12 MAY 89		
05-416-2	DM-MW7-589	12 MAY 89		
05-416-3	DM-MW8-589	12 MAY 89		
PARAMETER		05-416-1	05-416-2	05-416-3
EPA Method 601				
Date Analyzed		---	---	05.26.89
Date Extracted		---	---	05.26.89
1,1,1-Trichloroethane, ug/L		---	---	<10
1,1,2,2-Tetrachloroethane, ug/L		---	---	<10
1,1,2-Trichloroethane, ug/L		---	---	<10
1,1-Dichloroethane, ug/L		---	---	<10
1,1-Dichloroethene, ug/L		---	---	<10
1,2-Dichlorobenzene, ug/L		---	---	<10
1,2-Dichloroethane, ug/L		---	---	<10
1,2-Dichloroethene (Total), ug/L		---	---	290
1,2-Dichloropropane, ug/L		---	---	<10
1,3-Dichlorobenzene, ug/L		---	---	<10
1,4-Dichlorobenzene, ug/L		---	---	<10
2-Chloroethylvinylether, ug/L		---	---	<10
Bromodichloromethane, ug/L		---	---	<10
Bromomethane, ug/L		---	---	<10
Bromoform, ug/L		---	---	<10
Chlorobenzene, ug/L		---	---	<10
Carbon Tetrachloride, ug/L		---	---	<10
Chloroethane, ug/L		---	---	<10
Chloroform, ug/L		---	---	<10
Chloromethane, ug/L		---	---	<10
Dibromochloromethane, ug/L		---	---	<10
Dichlorodifluoromethane, ug/L		---	---	<10



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LOG NO: E89-05-416

Received: 12 MAY 89

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CH2M HILL
6425 Christie Street, Suite 500
Emeryville, California 94608

Project: SF027289.A0.GW

REPORT OF ANALYTICAL RESULTS

Page 4

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED		
05-416-1	DM-MW6-589	12 MAY 89		
05-416-2	DM-MW7-589	12 MAY 89		
05-416-3	DM-MW8-589	12 MAY 89		
PARAMETER		05-416-1	05-416-2	05-416-3
Freon 113, ug/L		---	---	<10
Methylene chloride, ug/L		---	---	<10
Trichloroethene, ug/L		---	---	1400
Trichlorofluoromethane, ug/L		---	---	<10
Tetrachloroethene, ug/L		---	---	20
Vinyl chloride, ug/L		---	---	78
cis-1,3-Dichloropropene, ug/L		---	---	<10
trans-1,3-Dichloropropene, ug/L		---	---	<10


Sim D. Lessley, Ph.D., Laboratory Director

CH2MHILL CHAIN OF CUSTODY RECORD

LOG # 890416

PROJECT NUMBER		PROJECT NAME		ANALYSES REQUESTED										FOR LAB USE ONLY								
SFO27289.A06W		Del Monte Plant 35												LAB # _____								
CLIENT NAME														PROJ # _____								
Del Monte														ACK _____ VERIFIED _____								
REPORT TO		COPY TO												DATE INVOICED _____								
Sue Colman		CH2MHILL												NO. OF SAMPLES _____ pg _____ of _____								
REQUESTED COMPLETION DATE				LABORATORY										DISPOSITION: D R _____ DATE _____								
STA NO	DATE	TIME	COMP	GRAB	SAMPLE DESCRIPTION	NUMBER OF CONTAINERS	BTXE-EPA602	TPH-Gasoline	Halogenated VOCs-601	Phenol-EPA604											REMARKS	
MW-60512		13:58	X		DM-MW6-589	2	X	X														Standard Turn-Around
MW-70512		15:20	X		DM-MW7-589	2	X	X														"
MW-80512		16:00	X		DM-MW8-589	3			X	X												"
						NOTE: HCl Preservative { Added by Lab																
SAMPLED BY AND TITLE (SIGNATURE)				DATE/TIME	RELINQUISHED BY (SIGNATURE)				DATE/TIME	RECEIVED BY: (SIGNATURE)				DATE/TIME								
1 [Signature] Hydrogeologist				051289	1630					3												
RELINQUISHED BY: (SIGNATURE)		DATE/TIME	RECEIVED BY: (SIGNATURE)		DATE/TIME	RELINQUISHED BY: (SIGNATURE)		DATE/TIME	RECEIVED BY LAB: (SIGNATURE)		DATE/TIME											
4			5			6 [Signature]		051289	7 [Signature]		1640	5/12/99										
REMARKS				SAMPLING PROGRAM				SAMPLE SHIPPED VIA				AIR BUS BILL NUMBER										
				SDWA <input type="checkbox"/> NPDES <input type="checkbox"/> OTHER (SPECIFY) _____				<input type="checkbox"/> UPS <input type="checkbox"/> BUS <input type="checkbox"/> FED-EX <input checked="" type="checkbox"/> HAND OTHER _____														



LOG NO: E89-07-137

Received: 11 JUL 89

Reported: 25 JUL 89

Ms. Susan Coleman
 CH2M HILL
 6425 Christie Street, Suite 500
 Emeryville, California 94608

Purchase Order: SFO 27289.A0.GW

REPORT OF ANALYTICAL RESULTS

Page 2

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED	
07-137-3	MW-8	10 JUL 89	
07-137-4	MW-13	10 JUL 89	
PARAMETER		07-137-3	07-137-4
EPA Method 601			
Date Analyzed		07.14.89	07.14.89
Date Extracted		07.14.89	07.14.89
1,1,1-Trichloroethane, ug/L		<2.5	<2.5
1,1,2,2-Tetrachloroethane, ug/L		<2.5	<2.5
1,1,2-Trichloroethane, ug/L		<2.5	<2.5
1,1-Dichloroethene, ug/L		<2.5	<2.5
1,1-Dichloroethane, ug/L		<2.5	<2.5
1,2-Dichloroethane, ug/L		<2.5	<2.5
1,2-Dichlorobenzene, ug/L		<2.5	<2.5
1,2-Dichloroethene (Total), ug/L		140	130
1,2-Dichloropropane, ug/L		<2.5	<2.5
1,3-Dichlorobenzene, ug/L		<2.5	<2.5
1,4-Dichlorobenzene, ug/L		<2.5	<2.5
2-Chloroethylvinylether, ug/L		<2.5	<2.5
Bromodichloromethane, ug/L		<2.5	<2.5
Bromomethane, ug/L		<2.5	<2.5
Bromoform, ug/L		<2.5	<2.5
Chlorobenzene, ug/L		<2.5	<2.5
Carbon Tetrachloride, ug/L		<2.5	<2.5
Chloroethane, ug/L		<2.5	<2.5
Chloroform, ug/L		<2.5	<2.5
Chloromethane, ug/L		<2.5	<2.5
Dibromochloromethane, ug/L		<2.5	<2.5
Dichlorodifluoromethane, ug/L		<2.5	<2.5
Freon 113, ug/L		<2.5	<2.5



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LOG NO: E89-07-137

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6425 Christie Street, Suite 500
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Purchase Order: SFO 27289.AO.GW

REPORT OF ANALYTICAL RESULTS

Page 3

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED	
07-137-3	MW-8	10 JUL 89	
07-137-4	MW-13	10 JUL 89	
PARAMETER		07-137-3	07-137-4
Methylene chloride, ug/L		<2.5	<2.5
Trichloroethene, ug/L		330	310
Trichlorofluoromethane, ug/L		<2.5	<2.5
Tetrachloroethene, ug/L		14	12
Vinyl chloride, ug/L		17	16
Cis-1,3-Dichloropropene, ug/L		<2.5	<2.5
trans-1,3-Dichloropropene, ug/L		<2.5	<2.5



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LOG NO: E89-07-137

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6425 Christie Street, Suite 500
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Purchase Order: SFO 27289.A0.GW

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED		
07-137-5	MW-9			10 JUL 89
07-137-6	MW-10			10 JUL 89
07-137-7	MW-11			10 JUL 89
PARAMETER		07-137-5	07-137-6	07-137-7
Nitrate (as N), mg/L		5.6	6.0	4.2
Conductivity, umhos/cm		870	920	900
pH, Units		6.9	6.9	6.9
Filterable Residue (TDS), mg/L		540	650	610
Chloride, mg/L		32	24	25
Sulfate, mg/L		54	60	51



LOG NO: E89-07-137

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Ms. Susan Coleman
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 6425 Christie Street, Suite 500
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Purchase Order: SFO 27289.A0.GW

REPORT OF ANALYTICAL RESULTS

Page 5

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED		
07-137-5	MW-9	10 JUL 89		
07-137-6	MW-10	10 JUL 89		
07-137-7	MW-11	10 JUL 89		
PARAMETER		07-137-5	07-137-6	07-137-7
EPA Method 601				
Date Analyzed		07.13.89	07.13.89	07.13.89
Date Extracted		07.13.89	07.13.89	07.13.89
1,1,1-Trichloroethane, ug/L		<0.5	<0.5	<1.0
1,1,2,2-Tetrachloroethane, ug/L		<0.5	<0.5	<1.0
1,1,2-Trichloroethane, ug/L		<0.5	<0.5	<1.0
1,1-Dichloroethene, ug/L		<0.5	0.8	<1.0
1,1-Dichloroethane, ug/L		<0.5	<0.5	<1.0
1,2-Dichloroethane, ug/L		<0.5	<0.5	4.0
1,2-Dichlorobenzene, ug/L		<0.5	<0.5	<1.0
1,2-Dichloroethene (Total), ug/L		63	85	73
1,2-Dichloropropane, ug/L		<0.5	<0.5	5.7
1,3-Dichlorobenzene, ug/L		<0.5	<0.5	<1.0
1,4-Dichlorobenzene, ug/L		<0.5	<0.5	<1.0
2-Chloroethylvinylether, ug/L		<0.5	<0.5	<1.0
Bromodichloromethane, ug/L		<0.5	<0.5	<1.0
Bromomethane, ug/L		<0.5	<0.5	<1.0
Bromoform, ug/L		<0.5	<0.5	<1.0
Chlorobenzene, ug/L		<0.5	<0.5	<1.0
Carbon Tetrachloride, ug/L		<0.5	<0.5	<1.0
Chloroethane, ug/L		<0.5	<0.5	<1.0
Chloroform, ug/L		<0.5	<0.5	<1.0
Chloromethane, ug/L		<0.5	<0.5	<1.0
Dibromochloromethane, ug/L		<0.5	<0.5	<1.0
Dichlorodifluoromethane, ug/L		<0.5	<0.5	<1.0



1256 POWELL STREET EMERYVILLE, CA 94608 • (415) 428-2300

LOG NO: E89-07-137

Received: 11 JUL 89

Reported: 25 JUL 89

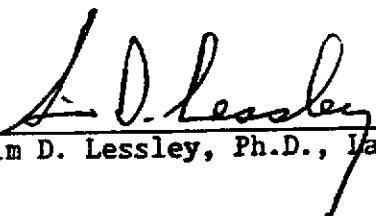
Ms. Susan Coleman
CH2M HILL
6425 Christie Street, Suite 500
Emeryville, California 94608

Purchase Order: SFO 27289.A0.GW

REPORT OF ANALYTICAL RESULTS

Page 6

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED		
07-137-5	MW-9			10 JUL 89
07-137-6	MW-10			10 JUL 89
07-137-7	MW-11			10 JUL 89
PARAMETER		07-137-5	07-137-6	07-137-7
Freon 113, ug/L		<0.5	<0.5	<1.0
Methylene chloride, ug/L		<0.5	<0.5	<1.0
Trichloroethene, ug/L		13	27	160
Trichlorofluoromethane, ug/L		<0.5	<0.5	<1.0
Tetrachloroethene, ug/L		38	42	12
Vinyl chloride, ug/L		16	28	16
Cis-1,3-Dichloropropene, ug/L		<0.5	<0.5	<1.0
trans-1,3-Dichloropropene, ug/L		<0.5	<0.5	<1.0


Sim D. Lessley, Ph.D., Laboratory Director

BROWN AND CALDWELL ANALYTICAL LABORATORIES

BATCH QC REPORT Definitions and Terms

- Accuracy:** The ability of a procedure to determine the "true" concentration of an analyte.
- Batch:** A group of samples analyzed sequentially using the same calibration curve, reagents, and instrument.
- Laboratory Control Standard (LCS):** Laboratory reagent water spiked with known compounds and subjected to the same procedures as the samples. The LCS thus indicates the accuracy of the analytical method and, because it is prepared from a different source than the standard used to calibrate the instrument, it also serves to double-check the calibration.
- LC Result:** Laboratory result of an LCS analysis.
- LT Result:** Expected result, or true value, of the LCS analysis.
- Matrix QC:** Quality control tests performed on actual client samples. For most inorganic analyses, the laboratory uses a pair of duplicate samples and a spiked sample. For most organic analyses, the laboratory uses a pair of spiked samples (duplicate spikes).
- Percent Recovery:** The percentage of analyte recovered.
For LCS, the percent recovery calculation is
$$LC \div LT \times 100.$$

For spike recoveries, the percent recovery calculation is
$$\frac{(S \text{ Bar} - \text{Sample Concentration})}{\text{Spike Amount}} \times 100$$
- Precision:** The reproducibility of a procedure demonstrated by the agreement between analyses performed on either duplicates of the same sample or a pair of duplicate spikes.
- R1, R2 Result:** Result of the analysis of replicate aliquots of a sample, with R1 indicating the first analysis of the sample and R2 its corresponding duplicate; used to determine precision.
- Relative Percent Difference (RPD):** Calculated using one of the following:
$$\frac{(R1 - R2) \times 100}{(R1 + R2) \div 2} \qquad \frac{(S1 - S2) \times 100}{(S1 + S2) \div 2}$$
- S Bar Result:** The average of spike analysis results.
- S1, S2 Result:** Result of the analysis of replicate spiked aliquots, with S1 indicating one spike of the sample and S2 the second spike; used to determine precision and accuracy.
- True value:** The theoretical, or expected, result of a spike sample analysis.

BROWN AND CALDWELL LABORATORIES

BATCH QC REPORT
ORDER E8907137

DATE REPORTED : 07/26/89

Page 1

LABORATORY CONTROL STANDARDS

PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
PH-Volatile Hydrocarbons/BTEX						
Dilution Factor	07.14.89	38	1	1	Times	100
C4 to C12 Hydrocarbons	07.14.89	38	1140	1110	ug/L	103
PH-Volatile Hydrocarbons/BTEX						
Dilution Factor	07.14.89	38	1	1	Times	100
Benzene	07.14.89	38	101	100	ug/L	101
Ethylbenzene	07.14.89	38	95	100	ug/L	95
Toluene	07.14.89	38	98	100	ug/L	98
Total Xylene Isomers	07.14.89	38	236	200	ug/L	118
C4 to C12 Hydrocarbons	07.14.89	38	1130	1100	ug/L	103
PH-Volatile Hydrocarbons/BTEX						
Dilution Factor	07.17.89	39	1	1	Times	100
Benzene	07.17.89	39	99	100	ug/L	99
Ethylbenzene	07.17.89	39	91	100	ug/L	91
Toluene	07.17.89	39	96	100	ug/L	96
Total Xylene Isomers	07.17.89	39	230	200	ug/L	115
C4 to C12 Hydrocarbons	07.17.89	39	1150	1110	ug/L	104
SA Method 601						
1,1,1-Trichloroethane	07.13.89	250	18	20	ug/L	90
1,1-Dichloroethene	07.13.89	250	20	20	ug/L	100
1,1-Dichloroethane	07.13.89	250	21	20	ug/L	105
1,2-Dichloroethane	07.13.89	250	20	20	ug/L	100
1,2-Dichlorobenzene	07.13.89	250	17	20	ug/L	85
1,2-Dichloroethene (Total)	07.13.89	250	42	40	ug/L	105
1,2-Dichloropropane	07.13.89	250	19	20	ug/L	95
1,3-Dichlorobenzene	07.13.89	250	17	20	ug/L	85
1,4-Dichlorobenzene	07.13.89	250	18	20	ug/L	90
2-Chloroethylvinylether	07.13.89	250	22	20	ug/L	110
Bromodichloromethane	07.13.89	250	20	20	ug/L	100
Bromomethane	07.13.89	250	21	20	ug/L	105
Bromoform	07.13.89	250	20	20	ug/L	100
Chlorobenzene	07.13.89	250	19	20	ug/L	95
Carbon Tetrachloride	07.13.89	250	18	20	ug/L	90
Chloroethane	07.13.89	250	21	20	ug/L	105
Chloroform	07.13.89	250	26	20	ug/L	130
Chloromethane	07.13.89	250	12	20	ug/L	60
Dibromochloromethane	07.13.89	250	20	20	ug/L	100
Freon 113	07.13.89	250	16	20	ug/L	80
Methylene chloride	07.13.89	250	21	20	ug/L	105
Trichloroethene	07.13.89	250	19	20	ug/L	95
Trichlorofluoromethane	07.13.89	250	18	20	ug/L	90

BROWN AND CALDWELL LABORATORIES

BATCH QC REPORT
ORDER E8907137

DATE REPORTED : 07/26/89

Page 2

LABORATORY CONTROL STANDARDS

PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
Tetrachloroethene	07.13.89	250	21	20	ug/L	105
Vinyl chloride	07.13.89	250	23	20	ug/L	115
Nitrate (as N)	07.21.89	47	1.0	1.0	mg/L	100
Conductivity	07.12.89	60	1030	1000	umhos/c	103
pH	07.12.89	145	7.0	7.0	Units	100
pH	07.12.89	145	7.0	7.0	Units	100
Sulfate	07.19.89	34	20	20	mg/L	100
Sulfate	07.19.89	34	16	15	mg/L	107
EPA Method 601						
1,1,1-Trichloroethane	07.13.89	248	14	20	ug/L	70
1,1-Dichloroethene	07.13.89	248	22	20	ug/L	110
1,1-Dichloroethane	07.13.89	248	19	20	ug/L	95
1,2-Dichloroethane	07.13.89	248	16	20	ug/L	80
1,2-Dichlorobenzene	07.13.89	248	24	20	ug/L	120
1,2-Dichloroethene (Total)	07.13.89	248	30	40	ug/L	75
1,2-Dichloropropane	07.13.89	248	15	20	ug/L	75
1,3-Dichlorobenzene	07.13.89	248	23	20	ug/L	115
1,4-Dichlorobenzene	07.13.89	248	25	20	ug/L	125
2-Chloroethylvinylether	07.13.89	248	20	20	ug/L	100
Bromodichloromethane	07.13.89	248	25	20	ug/L	125
Bromomethane	07.13.89	248	23	20	ug/L	115
Bromoform	07.13.89	248	23	20	ug/L	115
Chlorobenzene	07.13.89	248	22	20	ug/L	110
Carbon Tetrachloride	07.13.89	248	15	20	ug/L	75
Chloroethane	07.13.89	248	23	20	ug/L	115
Chloroform	07.13.89	248	16	20	ug/L	80
Chloromethane	07.13.89	248	21	20	ug/L	105
Dibromochloromethane	07.13.89	248	22	20	ug/L	110
Freon 113	07.13.89	248	12	20	ug/L	60
Methylene chloride	07.13.89	248	13	20	ug/L	65
Trichloroethene	07.13.89	248	14	20	ug/L	70
Trichlorofluoromethane	07.13.89	248	19	20	ug/L	95
Tetrachloroethene	07.13.89	248	21	20	ug/L	105
Vinyl chloride	07.13.89	248	25	20	ug/L	125
EPA Method 601						
1,1,1-Trichloroethane	07.13.89	248	13	20	ug/L	65
1,1-Dichloroethene	07.13.89	248	21	20	ug/L	105
1,1-Dichloroethane	07.13.89	248	18	20	ug/L	90
1,2-Dichloroethane	07.13.89	248	17	20	ug/L	85

BROWN AND CALDWELL LABORATORIES

BATCH QC REPORT
 ORDER E8907137

DATE REPORTED : 07/26/89

Page 3

LABORATORY CONTROL STANDARDS

PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
1,2-Dichlorobenzene	07.13.89	248	25	20	ug/L	125
1,2-Dichloroethene (Total)	07.13.89	248	28	40	ug/L	70
1,2-Dichloropropane	07.13.89	248	15	20	ug/L	75
1,3-Dichlorobenzene	07.13.89	248	23	20	ug/L	115
1,4-Dichlorobenzene	07.13.89	248	25	20	ug/L	125
2-Chloroethylvinylether	07.13.89	248	24	20	ug/L	120
Bromodichloromethane	07.13.89	248	25	20	ug/L	125
Bromomethane	07.13.89	248	21	20	ug/L	105
Bromoform	07.13.89	248	25	20	ug/L	125
Chlorobenzene	07.13.89	248	22	20	ug/L	110
Carbon Tetrachloride	07.13.89	248	15	20	ug/L	75
Chloroethane	07.13.89	248	20	20	ug/L	100
Chloroform	07.13.89	248	16	20	ug/L	80
Chloromethane	07.13.89	248	11	20	ug/L	55
Dibromochloromethane	07.13.89	248	21	20	ug/L	105
Freon 113	07.13.89	248	9.0	20	ug/L	45
ethylene chloride	07.13.89	248	12	20	ug/L	60
Trichloroethene	07.13.89	248	13	20	ug/L	65
Trichlorofluoromethane	07.13.89	248	19	20	ug/L	95
Tetrachloroethene	07.13.89	248	22	20	ug/L	110
Vinyl chloride	07.13.89	248	21	20	ug/L	105
chloride	07.18.89	43	10	10	mg/L	100

BROWN AND CALDWELL LABORATORIES

BATCH QC REPORT
ORDER E8907137

DATE REPORTED : 07/26/89

Page 1

MATRIX QC PRECISION (DUPLICATES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	R1 RESULT	R2 RESULT	UNIT	RELATIVE % DIFF
Nitrate (as N)	07.21.89	47	7.2	7.2	mg/L	0
Conductivity	07.12.89	60	920	900	umhos/c	2
pH	07.12.89	145	6.9	6.9	Units	0
Ammonia	07.12.89	145	7.8	7.9	Units	1
Sulfate	07.19.89	34	54	54	mg/L	0
Chloride	07.18.89	43	25	26	mg/L	4

BROWN AND CALDWELL LABORATORIES

BATCH QC REPORT
ORDER E8907137

DATE REPORTED : 07/26/89

Page 1

MATRIX QC PRECISION (DUPLICATE SPIKES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	S1 RESULT	S2 RESULT	UNIT	RELATIVE % DIFF
PH-Volatile Hydrocarbons/BTEX						
Dilution Factor	07.14.89	38	1	1	Times	0
Benzene	07.14.89	38	3.47	3.51	mg/kg	1
Ethylbenzene	07.14.89	38	3.66	3.57	mg/kg	2
Toluene	07.14.89	38	3.62	3.60	mg/kg	1
Total Xylene Isomers	07.14.89	38	9.24	8.97	mg/kg	3
C4 to C12 Hydrocarbons	07.14.89	38	50.5	49.5	mg/kg	2
PA Method 601						
1,1,1-Trichloroethane	07.13.89	250	21	7.5	ug/L	95
1,1-Dichloroethene	07.13.89	250	11	12	ug/L	9
1,1-Dichloroethane	07.13.89	250	11	10	ug/L	10
1,2-Dichloroethane	07.13.89	250	11	9.8	ug/L	12
1,2-Dichloroethene (Total)	07.13.89	250	120	110	ug/L	9
1,2-Dichloropropane	07.13.89	250	12	11	ug/L	9
Bromodichloromethane	07.13.89	250	17	16	ug/L	6
Bromoform	07.13.89	250	15	13	ug/L	14
Carbon Tetrachloride	07.13.89	250	8.2	8.7	ug/L	6
Chloroform	07.13.89	250	11	12	ug/L	9
Dibromochloromethane	07.13.89	250	17	16	ug/L	6
Methylene chloride	07.13.89	250	7.3	8.3	ug/L	13
Trichloroethene	07.13.89	250	170	160	ug/L	6
Tetrachloroethene	07.13.89	250	30	32	ug/L	6
Vinyl chloride	07.13.89	250	25	27	ug/L	8
SPA Method 601						
1,1,1-Trichloroethane	07.13.89	248	21	7.5	ug/L	95
1,1-Dichloroethene	07.13.89	248	11	12	ug/L	9
1,1-Dichloroethane	07.13.89	248	11	10	ug/L	10
1,2-Dichloroethane	07.13.89	248	11	9.8	ug/L	12
1,2-Dichloroethene (Total)	07.13.89	248	120	110	ug/L	9
1,2-Dichloropropane	07.13.89	248	12	11	ug/L	9
Bromodichloromethane	07.13.89	248	17	16	ug/L	6
Bromoform	07.13.89	248	15	13	ug/L	14
Carbon Tetrachloride	07.13.89	248	8.2	8.7	ug/L	6
Chloroform	07.13.89	248	11	12	ug/L	9
Dibromochloromethane	07.13.89	248	17	16	ug/L	6
Methylene chloride	07.13.89	248	7.3	8.3	ug/L	13
Trichloroethene	07.13.89	248	170	160	ug/L	6
Tetrachloroethene	07.13.89	248	30	32	ug/L	6
Vinyl chloride	07.13.89	248	25	27	ug/L	8

BROWN AND CALDWELL LABORATORIES

BATCH QC REPORT
ORDER E8907137

DATE REPORTED : 07/26/89

Page 1

MATRIX QC ACCURACY (SPIKES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	SBAR RESULT	TRUE VALUE	UNIT	PERCENT RECOVERY
PH-Volatile Hydrocarbons/BTEX						
Dilution Factor	07.14.89	38	1	1	Times	100
Benzene	07.14.89	38	3.49	4.87	mg/kg	72
Ethylbenzene	07.14.89	38	3.615	4.87	mg/kg	74
Toluene	07.14.89	38	3.61	4.87	mg/kg	74
Total Xylene Isomers	07.14.89	38	9.105	9.74	mg/kg	93
C4 to C12 Hydrocarbons	07.14.89	38	50	54.1	mg/kg	92
PA Method 601						
1,1,1-Trichloroethane	07.13.89	250	14.25	12	ug/L	119
1,1-Dichloroethene	07.13.89	250	11.5	13	ug/L	88
1,1-Dichloroethane	07.13.89	250	10.5	12	ug/L	88
1,2-Dichloroethane	07.13.89	250	10.4	12	ug/L	87
1,2-Dichloroethene (Total)	07.13.89	250	115	100	ug/L	143
1,2-Dichloropropane	07.13.89	250	11.5	12	ug/L	96
Bromodichloromethane	07.13.89	250	16.5	12	ug/L	138
Bromoform	07.13.89	250	14	12	ug/L	117
Carbon Tetrachloride	07.13.89	250	8.45	12	ug/L	70
Chloroform	07.13.89	250	11.5	12	ug/L	96
Dibromochloromethane	07.13.89	250	16.5	12	ug/L	138
Methylene chloride	07.13.89	250	7.8	12	ug/L	65
Trichloroethene	07.13.89	250	165	194	ug/L	26
Tetrachloroethene	07.13.89	250	31	33	ug/L	93
Vinyl chloride	07.13.89	250	26	27	ug/L	95
Nitrate (as N)	07.21.89	47	4.1	4.1	mg/L	100
Conductivity	07.12.89	60	1830	1920	umhos/c	91
Sulfate	07.19.89	34	75	74	mg/L	105
PA Method 601						
1,1,1-Trichloroethane	07.13.89	248	14.25	12	ug/L	119
1,1-Dichloroethene	07.13.89	248	11.5	13	ug/L	88
1,1-Dichloroethane	07.13.89	248	10.5	12	ug/L	88
1,2-Dichloroethane	07.13.89	248	10.4	12	ug/L	87
1,2-Dichloroethene (Total)	07.13.89	248	115	100	ug/L	143
1,2-Dichloropropane	07.13.89	248	11.5	12	ug/L	96
Bromodichloromethane	07.13.89	248	16.5	12	ug/L	138
Bromoform	07.13.89	248	14	12	ug/L	117
Carbon Tetrachloride	07.13.89	248	8.45	12	ug/L	70
Chloroform	07.13.89	248	11.5	12	ug/L	96
Dibromochloromethane	07.13.89	248	16.5	12	ug/L	138
Methylene chloride	07.13.89	248	7.8	12	ug/L	65
Trichloroethene	07.13.89	248	165	194	ug/L	26

BROWN AND CALDWELL LABORATORIES

BATCH QC REPORT
ORDER E8907137

DATE REPORTED : 07/26/89

Page 2

MATRIX QC ACCURACY (SPIKES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	SBAR RESULT	TRUE VALUE	UNIT	PERCENT RECOVERY
Tetrachloroethene	07.13.89	248	31	33	ug/L	93
Vinyl chloride	07.13.89	248	26	27	ug/L	95
Chloride	07.18.89	43	48	46	mg/L	110

CKM HILL CHAIN OF CUSTODY RECORD

Lot # 896 37

PROJECT NUMBER		PROJECT NAME				NUMBER OF CONTAINERS	BTX-E <i>Examine</i>	TPH	Method <i>GC.F</i>	PH, Lead, SO ₄ , TDS, Nitrate, <i>water</i>									REMARKS
50 27289.AQ.6W		Del Monte																	
LABORATORY																			
Brown and Caldwell, Emeryville																			
STA. NO.	DATE	TIME	COMP	GRAB	SAMPLE IDENTIFICATION														
1	MW-6	7/10/89		X	MW-6 ✓	3	X	X											Didn't know if lab needed 2 VOA's, total or five for each analysis, so filled three VOA's (didn't have enough VOA's onsite for 6 or VOA's per sample for BTX-E and TPH)
2	MW-7	7/10/89		X	MW-7 ✓	3	X	X											
<hr/>																			
3	MW 8	7/10/89		X	MW-8 ✓	2			X										
5	MW 9	7/10/89		X	MW-9 ✓	4			X	X									
6	MW 10	7/10/89		X	MW-10 ✓	4			X	X									
7	MW 11	7/10/89		X	MW-11 ✓	4			X	X									
X	MW-13	7/10/89		X	MW-13 ✓	2			X										

SAMPLED BY AND TITLE (SIGNATURE) <i>Kevin Z. [Signature] Hydrogeologist 05848</i>			DATE/TIME <i>7/14/89 4:11 PM</i>	RELINQUISHED BY: (SIGNATURE) <i>Kevin Z. [Signature]</i>	DATE/TIME <i>7/11/89 7:49</i>	RECEIVED BY: (SIGNATURE) <i>[Signature]</i>
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME <i>7/11/89 7:50</i>	RECEIVED BY LAB: (SIGNATURE) <i>[Signature]</i>	
REMARKS					SAMPLE SHIPPED VIA <input type="checkbox"/> UPS <input type="checkbox"/> BUS <input type="checkbox"/> FEDERAL EXPRESS	
					AIR BUS BILL NUMBER	

**Laboratory Data Sheets
Gasoline Tank Investigation
(West Parcel)**



BROWN AND CALDWELL LABORATORIES

1255 POWELL STREET EMERYVILLE, CA 94608 * (415) 428-2300

ANALYTICAL REPORT

LOG NO: EB9-02-248

Received: 08 FEB 89

Reported: 22 FEB 89

Ms. Susan Colman
CH2M HILL
6425 Christie Street, Suite 500
Emeryville, California 94608

Project: SFO 27289.AD.FW

REPORT OF ANALYTICAL RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES					DATE SAMPLED
02-248-1	EMS 1-6					08 FEB 89
02-248-2	EMS 1-9					08 FEB 89
02-248-3	EMS 2-6					08 FEB 89
02-248-4	EMS 2-9					08 FEB 89
02-248-5	EMS 3-6					08 FEB 89
PARAMETER	02-248-1	02-248-2	02-248-3	02-248-4	02-248-5	
C18-C30 Hydrocarbons, mg/kg	<10	<10	<10	<10	<10	<10
Fuel Hydrocarbons, Volatile (Low Level), mg/kg	<0.1	<0.1	0.3	<0.1	1.5	



LOG NO: E89-02-248

Received: 08 FEB 89

Reported: 22 FEB 89

Ms. Susan Colman
CH2M HILL
6425 Christie Street, Suite 500
Emeryville, California 94608

Project: SFO 27289.AD.FW

REPORT OF ANALYTICAL RESULTS

Page 4

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
02-248-1	EMS 1-6	08 FEB 89
02-248-2	EMS 1-9	08 FEB 89
02-248-3	EMS 2-6	08 FEB 89
02-248-4	EMS 2-9	08 FEB 89
02-248-5	EMS 3-6	08 FEB 89

PARAMETER	02-248-1	02-248-2	02-248-3	02-248-4	02-248-5
EPA Method 8020					
Date Extracted	02/15/89	02/15/89	02/15/89	02/15/89	02/16/89
1,2-Dichlorobenzene, ug/kg	<5	<5	<5	<5	<5
1,3-Dichlorobenzene, ug/kg	<5	<5	<5	<5	<5
1,4-Dichlorobenzene, ug/kg	<5	<5	<5	<5	<5
Chlorobenzene, ug/kg	<5	<5	<5	<5	<5
Benzene, ug/kg	<5	<5	<5	<5	<5
Ethylbenzene, ug/kg	<5	<5	<5	<5	<5
Toluene, ug/kg	<5	<5	<5	<5	<5
Total Xylene Isomers, ug/kg	<5	<5	<5	6	<5
Other EPA Method 8020	---	---	---	---	---



Ms. Susan Colman
CH2M HILL
6425 Christie Street, Suite 500
Emeryville, California 94608


Project: SFO 27289.AD.FW

REPORT OF ANALYTICAL RESULTS

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LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
02-248-6	RMS 3-9	08 FEB 89
PARAMETER		02-248-6
C18-C30 Hydrocarbons, mg/kg		<10
Fuel Hydrocarbons, Volatile (Low Level), mg/kg		0.9
EPA Method 8020		
Date Extracted		02/16/89
1,2-Dichlorobenzene, ug/kg		<5
1,3-Dichlorobenzene, ug/kg		<5
1,4-Dichlorobenzene, ug/kg		<5
Chlorobenzene, ug/kg		<5
Benzene, ug/kg		<5
Ethylbenzene, ug/kg		<5
Toluene, ug/kg		<5
Total Xylene Isomers, ug/kg		<5
Other EPA Method 8020		---

Preliminary results were transmitted to you by facsimile on 02.22.89.
Invoice amount adjusted to correct for discrepancy with original price quote
(shared difference = \$225.00)
TB 02.23.89


Sim D. Lessley, Ph.D., Laboratory Director

CHM Hill CHAIN OF CUSTODY RECORD

LOG # 8902248

PROJECT NUMBER SFO 27289.A0.FW		PROJECT NAME Plant 35 Tanks		ANALYSES REQUESTED NUMBER OF CONTAINERS TPH as geo - 5030 TPH as diesel-sonication BTEX - EPA 8020 Solvents - 8010								FOR LAB USE ONLY	
CLIENT NAME Del Monte												REPORT TO: Susan Colman	
REQUESTED COMPLETION DATE 2/22/89				LABORATORY Brown & Caldwell		ACK _____		VERIFIED _____		DATE INVOICED _____			
NO. OF SAMPLES _____ pg _____ of _____				DISPOSITION: D R _____		DATE _____		REMARKS					

STA NO	DATE	TIME	COMP	GRAB	SAMPLE DESCRIPTION	NUMBER OF CONTAINERS	TPH as geo - 5030	TPH as diesel-sonication	BTEX - EPA 8020	Solvents - 8010	REMARKS
1	2/18/89	10:10		✓	EMS1-6	1	✓	✓	✓	✓	Note methods - TPH as geo → 5030 TPH diesel → sonication Fuel smell ↓
1		10:30		✓	EMS1-9	1	✓	✓	✓	✓	
2		10:40		✓	EMS2-6	1	✓	✓	✓	✓	
2		11:05		✓	EMS2-9	1	✓	✓	✓	✓	
3		11:55		✓	EMS3-6	1	✓	✓	✓	✓	
3	✓	12:05		✓	EMS3-9	1	✓	✓	✓	✓	

SAMPLED BY AND TITLE (SIGNATURE) 1 <i>Suzanne Chrym</i>		DATE/TIME 2/18/89 12:30	RELINQUISHED BY (SIGNATURE) 2 <i>Suzanne Chrym</i>		DATE/TIME 2/18/89 12:40	RECEIVED BY: (SIGNATURE) 3 <i>Monica Scott</i>		DATE/TIME 2/19/89 12:43
RELINQUISHED BY: (SIGNATURE) 4	DATE/TIME	RECEIVED BY: (SIGNATURE) 5	DATE/TIME	RELINQUISHED BY: (SIGNATURE) 6	DATE/TIME	RECEIVED BY LAB: (SIGNATURE) 7	DATE/TIME	

REMARKS	SAMPLING PROGRAM				SAMPLE SHIPPED VIA		AIR BUS BILL NUMBER
	SDWA <input type="checkbox"/>	NPDES <input type="checkbox"/>	RCRA <input type="checkbox"/>	OTHER (SPECIFY)	<input type="checkbox"/> UPS	<input type="checkbox"/> BUS	<input type="checkbox"/> FED-EX
					<input type="checkbox"/> HAND OTHER		



LOG NO: E89-03-551

Received: 22 MAR 89

Reported: 07 APR 89

Ms. Susan Coleman
CH2M HILL
6425 Christie Street, Suite 500
Emeryville, California 94608

Project: SF027289.AD.FW

REPORT OF ANALYTICAL RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
03-551-1	SI-G1	22 MAR 89
PARAMETER	03-551-1	
C18-C30 Hydrocarbons, mg/kg	<10	
Fuel Hydrocarbons + BTX		
Date Analyzed	04.03.89	
Dilution Factor, Times	1	
Benzene, mg/kg	<0.1	
Ethylbenzene, mg/kg	<0.1	
Toluene, mg/kg	<0.1	
Total Xylene Isomers, mg/kg	1.5	
Fuel Characterization, .	GAS	
Volatile Fuel Hydrocarbons, mg/kg	280	
Other Fuel Hydrocarbons + BTX	---	

This fuel characterization is a qualitative identification based upon a visual comparison of sample chromatograms with those from authentic standards.

L. D. Lessley
Sim D. Lessley, Ph.D., Laboratory Director



LOG NO: E89-03-552

Received: 22 MAR 89

Reported: 07 APR 89

Ms. Susan Colman
CH2M HILL
6425 Christie Street, Suite 500
Emeryville, California 94608

Project: SF027289.AD.FW

REPORT OF ANALYTICAL RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED		
03-552-1	S2-S4	22 MAR 89		
03-552-2	S2-S2	22 MAR 89		
03-552-3	S2-G2	22 MAR 89		
PARAMETER		03-552-1	03-552-2	03-552-3
C18-C30 Hydrocarbons, mg/kg		<10	<10	<10
Fuel Hydrocarbons + BTX				
Date Analyzed		04.03.89	04.03.89	04.03.89
Dilution Factor, Times		1	1	50
Benzene, mg/kg		<0.1	<0.1	<0.1
Ethylbenzene, mg/kg		<0.1	<0.1	<0.1
Toluene, mg/kg		<0.1	<0.1	0.14
Total Xylene Isomers, mg/kg		<0.1	<0.1	0.72
Fuel Characterization, .		---	---	GAS
Volatile Fuel Hydrocarbons, mg/kg		<5.0	<5.0	220
Other Fuel Hydrocarbons + BTX		---	---	---

This fuel characterization is a qualitative identification based upon a visual comparison of sample chromatograms with those from authentic standards.



LOG NO: BB9-03-550

Received: 22 MAR 89

Reported: 28 MAR 89

Ms. Susan Colman
 CH2M HILL
 6425 Christie Street, Suite 500
 Emeryville, California 94608

REVISED 4/13/89

Project: SF027289.AD.FW

REPORT OF ANALYTICAL RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED		
03-550-1	S2-G3	22 MAR 89		
03-550-2	S2-G4	22 MAR 89		
03-550-3	S2-G5	22 MAR 89		
PARAMETER		03-550-1	03-550-2	03-550-3
C18-C30 Hydrocarbons, mg/kg		<10	<10	<10
Fuel Hydrocarbons + BTX				
Date Analyzed		03.22.89	03.22.89	03.22.89
Dilution Factor, Times		1	1	1
Benzene, mg/kg		<0.1	<0.1	<0.1
Ethylbenzene, mg/kg		<0.1	<0.1	<0.1
Toluene, mg/kg		<0.1	<0.1	<0.1
Total Xylene Isomers, mg/kg		<0.1	<0.1	5.4
Carbon Range, .		C4-C12	C4-C12	C4-C12
Total Fuel Hydrocarbons, mg/kg		<10	<10	470
Other Fuel Hydrocarbons + BTX		---	---	---

Carbon range refers to volatile fuel hydrocarbons reported as gasoline which is a qualitative identification based upon a visual comparison of sample chromatograms with those from authentic standards.
 Report revised to correct xylene result for sample S2-G5. TB 04.13.89

Sig D. Lessley, Ph.D., Laboratory Director



Ms. Susan Colman
CH2M HILL
6425 Christie Street, Suite 500
Emeryville, California 94608

Project: SF027289.AD.FW

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED		
03-550-1	S2-G3	22 MAR 89		
03-550-2	S2-G4	22 MAR 89		
03-550-3	S2-G5	22 MAR 89		
PARAMETER		03-550-1	03-550-2	03-550-3
C18-C30 Hydrocarbons, mg/kg		<10	<10	<10
Fuel Hydrocarbons + BTX				
Date Analyzed		03.22.89	03.22.89	03.22.89
Dilution Factor, Times		1	1	1
Benzene, mg/kg		<0.1	<0.1	<0.1
Ethylbenzene, mg/kg		<0.1	<0.1	<0.1
Toluene, mg/kg		<0.1	<0.1	<0.1
Total Xylene Isomers, mg/kg		<0.1	<0.1	<0.1
Carbon Range, .		C4-C12	C4-C12	C4-C12
Total Fuel Hydrocarbons, mg/kg		<10	<10	470
Other Fuel Hydrocarbons + BTX		---	---	---

Carbon range refers to volatile fuel hydrocarbons reported as gasoline which is a qualitative identification based upon a visual comparison of sample chromatograms with those from authentic standards.

Sim D. Lessley, Ph.D., Laboratory Director

RECEIVED

MAY 16 1989



BROWN AND CALDWELL LABORATORIES SAN FRANCISCO ANALYTICAL REPORT

1255 POWELL STREET EMERYVILLE, CA 94608 • (415) 428-2300

LOG NO: E89-05-143

Received: 04 MAY 89
Reported: 08 MAY 89

Ms. Susan Colman
CH2M HILL
6425 Christie Street, Suite 500
Emeryville, California 94608

Project: SF027289.A0.GW

REPORT OF ANALYTICAL RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED	
05-143-1	AS-1, Aerated Soil From Gas Excavation	04 MAY 89	
05-143-2	GT-1, Well Cuttings From Gas Tank	04 MAY 89	
PARAMETER		05-143-1	05-143-2
TPH - Volatile Hydrocarbons			
Date Analyzed		05.04.89	05.04.89
Dilution Factor, Times		1	1
C4 to C12 Hydrocarbons, mg/kg		18	52
Other TPH - Volatile Hydrocarbons		---	---

CHAIN OF CUSTODY RECORD

BC Log Number E81-25-142

Client name <u>CHAM HILL</u>			Project or PO# <u>SEN27289, Ad. GW</u>		Analyses required TPH TPH TPH - gasoline JD 20 SOLO NH3 Hazardous sample Special handling required								
Address <u>6425 Christie Ave</u>			Phone # <u>652-2426</u>										
City, State, Zip <u>Emeryville CA</u>		Report attention <u>Susan Colman</u>											
Lab Sample number	Date sampled	Time sampled	Type* See key below	Sampled by	Number of containers						Remarks		
AS-1	5/4/89	0800	SO	Aerated soil from gas excavation	1	X							1-1 hr Rush (TB)
GT-1	5/4/89	0820	SO	well cuttings from gas tank	1	X							
ST-1	↓	0830	SO	well cuttings from solvent tanks	1		X	X					

Signature	Print Name	Company	Date	Time
Relinquished by <u>Susan Colman</u>	<u>Susan Colman</u>	<u>CHAM HILL</u>	<u>5/4/89</u>	<u>9:15</u>
Received by				
Relinquished by				
Received by				
Relinquished by				
Received by Laboratory <u>Tony Blake</u>	<u>Tony Blake</u>	<u>BCAL</u>	<u>5/4/89</u>	<u>09:15</u>

BROWN AND CALDWELL LABORATORIES
 1255 Powell Street, Emeryville, CA 94608 (415) 428-2300
 373 South Fair Oaks Avenue, Pasadena, CA 91105 (818) 795-7553
 1200 Pacific Rim, Anaheim, CA 92805

Note:
 Samples are discarded 30 days after results are reported unless other arrangements are made.
 Hazardous samples will be returned to client or disposed of at client expense.

*KEY: AO—Aqueous NA—Nonaqueous SL—Sludge GW—Groundwater SO—Soil C—Other PE—Petroleum



BROWN AND CALDWELL LABORATORIES

ANALYTICAL REPORT

1255 POWELL STREET EMERYVILLE, CA 94608 • (415) 428-2300

RECEIVED

MAY 25 1989

CH2M-HILL
SAN FRANCISCO

LOG NO: E89-05-594

Received: 19 MAY 89

Reported: 23 MAY 89

Ms. Susan Colman
CH2M HILL
6425 Christie Street, Suite 500
Emeryville, California 94608

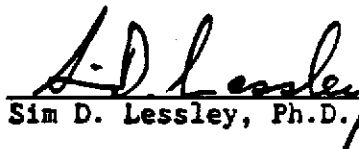
Project: SF027289.A0.GW

REPORT OF ANALYTICAL RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
05-594-1	DM-MW7S-589	19 MAY 89
PARAMETER	05-594-1	
TPH - Modified 8015		
Date Analyzed	05.19.89	
Dilution Factor, Times	1	
Total Fuel Hydrocarbons, mg/kg	<10	
Other TPH - Modified 8015	---	

Verbal results were reported to you on 05.23.89.
TB 05.23.89


Sim D. Lessley, Ph.D., Laboratory Director

CHM HILL CHAIN OF CUSTODY RECORD

PROJECT NUMBER SFO27289.A00W	PROJECT NAME Plant 35 Groundwater	ANALYSES REQUESTED						FOR LAB USE ONLY	
CLIENT NAME Del Monte		NUMBER OF CONTAINERS	TPH-Gas - Solvent Extr.	EPA 8010 = Hal. VOCs					LAB # _____
REPORT TO: Sue Colman/SFO	COPY TO: Jeff Heglie/SFO								
REQUESTED COMPLETION DATE See remarks.	LABORATORY BIC/Emeryville							ACK _____ VERIFIED _____	
								DATE INVOICED _____	
								NO. OF SAMPLES _____ pg _____ of _____	
								DISPOSITION: D R _____ DATE _____	

STA NO	DATE	TIME	COMP	GRAB	SAMPLE DESCRIPTION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835
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JUN 14 1989



BROWN AND CALDWELL LABORATORIES

CH2M-HILL
SAN FRANCISCO ANALYTICAL REPORT

1255 POWELL STREET EMERYVILLE, CA 94608 • (415) 428-2300

LOG NO: E89-06-004

Received: 25 MAY 89

Reported: 08 JUN 89

Ms. Susan Colman
CH2M HILL
6425 Christie Street, Suite 500
Emeryville, California 94608

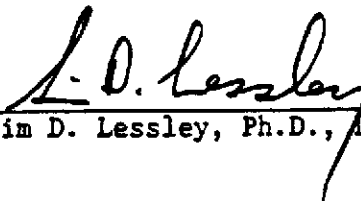
Project: SF027289.A0.GW

REPORT OF ANALYTICAL RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION, CALIF WASTE EXTRACT, WASTE SAMP	DATE SAMPLED
C6-004-1	AS-2	25 MAY 89
C6-004-2	S-2	25 MAY 89
PARAMETER	06-004-1	06-004-2
Lead, mg/L	3.8	0.5
CAM WET Extraction, Date	06.05.89	06.05.89

Results were transmitted by facsimile to you on 06.08.89.
TB 06.08.89


Jim D. Lessley, Ph.D., Laboratory Director



CH2M HILL ENVIRONMENTAL LABORATORY
 2218 RAILROAD AVENUE
 REDDING, CA 96001 916-243-5831

REPORT TO: DEL MONTE-EMERYVILLE
 CH2M HILL/SFO
 SFO27035.AO.FW
 ATTENTION: SUSAN COLMAN
 SAMPLE DESCRIPTION: WATER-DMEMR
 DATE OF SAMPLE: 12-20-88

REFERENCE NUMBER: 21905
 PAGE 1 OF 9
 DATE: 1-20-89
 PHONE:
 SAMPLED BY: SANDI MADSON
 DATE RECEIVED: 12-21-88

TEST	GW-1	GW-2	GW-3	GW-8	UNITS	DETECT LIMIT	DATE ANALYZED	METHOD NUMBER
CHLDRINE CHLORIDE	<0.1	<0.1	<0.1	<0.1	mg/l	0.1	12-21-88	330.5
ELECTRICAL CONDUCTIVITY	24.8	30.3	29.5	27.6	umhos/cm	1	12-23-88	325.3
pH	1010	886	972	1010	units	10	1-3-89	120.1
TOTAL DISSOLVED SOLIDS	6.79	6.76	6.88	6.92	mg/l	-	12-21-88	150.1
	532	516	610	647	mg/l	3	12-22-88	160.1

COMMENTS: mg/l = milligrams per liter

The information shown on this sheet is test data only and no analysis or interpretation is intended or implied.

ANALYST: RLW

APPROVED BY: LJ Family



CH2M HILL ENVIRONMENTAL LABORATORY
 2218 RAILROAD AVENUE
 REDDING, CA 96001 916-243-5831

REPORT TO: DEL MONTE-EMERYVILLE
 CH2M HILL/SFO
 SFO27035.AO.FW
 ATTENTION: SUSAN COLMAN
 SAMPLE DESCRIPTION: WATER
 DATE OF SAMPLE: 12-21-88

REFERENCE NUMBER: 21925
 PAGE 1 OF 7
 DATE: 1-17-89
 PHONE:
 SAMPLED BY: ALEX COATE
 DATE RECEIVED: 12-21-88

TEST	DMEMR GW-4	DMEMR GW-5	UNITS	DETECT LIMIT	DATE ANALYZED	METHOD NUMBER
CHLORIDE	34.5	27.7	mg/l	1	12-23-88	325.3
pH	6.91	7.1	units	-	12-22-88	150.1
TOTAL DISSOLVED SOLIDS	570	668	mg/l	3	12-28-88	160.1
ELECTRICAL CONDUCTIVITY	849	1100	umhos/cm	10	1-3-89	120.1
CHLDRINE	<0.1	<0.1	mg/l	0.1	12-22-88	330.5

COMMENTS: mg/l = milligrams per liter
 cc: A. Coate/sfo
 S. Coleman/SFO

The information shown on this sheet is test data only and
 no analysis or interpretation is intended or implied.

ANALYST: RLW APPROVED BY: L J Jacoby



CH2M HILL ENVIRONMENTAL LABORATORY
2218 RAILROAD AVENUE
REDDING, CA 96001 916-243-5831

REPORT TO: DEL MONTE-EMERYVILLE
CH2M HILL/SFO
SFO27035.AO.FW
ATTENTION: SUSAN COLEMAN
SAMPLE DESCRIPTION: WATER
DATE OF SAMPLE: 12-6-88

REFERENCE NUMBER: 21759
PAGE 1 OF 4
DATE: 1-17-89
PHONE:
SAMPLED BY: SANDI MADSON
DATE RECEIVED: 12-7-88

TEST	DMEMRGW-6	UNITS	DETECT LIMIT	DATE ANALYZED	METHOD NUMBER
TOTAL FUEL HYDROCARBONS(GAS)	<1	PPM	1	12-20-88	DHSLUFT
TOTAL FUEL HYDROCARBONS(DIESEL)	<200	ug/l	200	12-28-88	CALUFT
CHLORINE	<0.1	mg/l	0.1	12-8-88	330.5
CHLORIDE	20.6	mg/l	1	12-15-88	325.3
pH	7.04	units	-	12-8-88	150.1
ELECTRICAL CONDUCTIVITY	683	umhos/cm	10	12-19-88	120.1
TOTAL DISSOLVED SOLIDS	453	mg/l	3	12-9-88	160.1

COMMENTS: ug/l = micrograms per liter
mg/l = milligrams per liter

The information shown on this sheet is test data only and
no analysis or interpretation is intended or implied.

ANALYST: RLW

APPROVED BY: L. J. Harty



CH2M HILL ENVIRONMENTAL LABORATORY
 2218 RAILROAD AVENUE
 REDDING, CA 96001 916-243-5831

REPORT TO: DEL MONTE-EMERYVILLE
 CH2M HILL/SFO
 SFO27035.AD.FW
 ATTENTION: SUSAN COLEMAN
 SAMPLE DESCRIPTION: WATER-DMEMRGW-6
 DATE OF SAMPLE: 12-6-88

REFERENCE NUMBER: 21759
 PAGE 2 OF 4
 DATE: 1-17-89
 PHONE:
 SAMPLED BY: SANDI MADSON
 DATE RECEIVED: 12-7-88
 DATE ANALYZED: 12-16-88

VOLATILE TOXIC
 ORGANIC POLLUTANTS
 EPA METHOD: 624

CONSTITUENT	RESULT	DETECT LIMIT	CONSTITUENT	RESULT	DETECT LIMIT
Chloromethane	ND	5.0	Hexane	10	5
Bromomethane	ND	5.0	Methyl-pentene	35	5
Vinyl chloride	ND	5.0	Cyclohexane	15	5
Chloroethane	ND	5.0	Methyl-cyclohexane	30	5
Methylene chloride	ND	2.0	2-Butanone	6.1	5
Trichlorofluoromethane	ND	2.0	2-Hexanone	5.3	5
1,1-Dichloroethene	ND	2.0			
1,1-Dichloroethane	ND	2.0			
1,2-Dichloroethene (total)	ND	1.0			
Chloroform	ND	1.0			
1,2-Dichloroethane	8.8	1.0			
1,1,1-Trichloroethane	ND	1.0			
Carbon tetrachloride	ND	1.0			
Bromodichloromethane	ND	1.0			
1,2-Dichloropropane	ND	2.0			
trans-1,3-Dichloropropene	ND	2.0			
Trichloroethene	1.6	1.0			
Dibromochloromethane	ND	1.0			
1,1,2-Trichloroethane	ND	1.0			
Benzene	ND	1.0			
cis-1,3-Dichloropropene	ND	2.0			
2-Chloroethylvinyl ether	ND	5.0			
Bromoform	ND	2.0			
Tetrachloroethene	ND	1.0			
1,1,2,2-Tetrachloroethane	ND	2.0			
Toluene	*	2.0			
Chlorobenzene	ND	1.0			
Ethyl benzene	ND	1.0			
Styrene	ND	1.0			
Xylenes (Total)	ND	3.0			
1,2-Dichlorobenzene	ND	1.0			
1,3-Dichlorobenzene	ND	1.0			
1,4-Dichlorobenzene	ND	1.0			

COMMENTS: Results are in micrograms per kilogram. ND = none detected.

The information shown on this sheet is test data only and no analysis or interpretation is intended or implied.

APPROVED BY: *[Signature]*



CH2M HILL ENVIRONMENTAL LABORATORY
 2218 RAILROAD AVENUE
 REDDING, CA 96001 916-243-5831

REPORT TO: DEL MONTE-EMERYVILLE
 CH2M HILL/SFD
 SFO27035.B0.FW
 ATTENTION: SUSAN COLMAN
 SAMPLE DESCRIPTION: WATER
 DATE OF SAMPLE: 12-6-88
 TEST METHODS: EPA-625/8270

REFERENCE NUMBER: 21759
 PAGE 3 OF 4
 DATE: 1-20-89
 PHONE:
 SAMPLED BY: SANDI MADSON
 DATE RECEIVED: 12-7-88
 DATE EXTRACTED: 12-13-88

BLANK DETECT
 RB-12-13 DMEMRGW-6 LIMIT

ACID COMPOUNDS

	BLANK	DETECT	LIMIT
Phenol	ND	ND	1
2-chlorophenol	ND	ND	1
2-methyl phenol	ND	ND	1
4-methyl phenol	ND	ND	1
2-nitrophenol	ND	ND	1
2,4-dimethylphenol	ND	ND	1
2,4-dichlorophenol	ND	ND	1
4-chloro-3-methylphenol	ND	ND	1
2,4,5-trichlorophenol	ND	ND	1
2,4,6-trichlorophenol	ND	ND	1
2,4-dinitrophenol	ND	ND	5
4-nitrophenol	ND	ND	5
2-methyl-4,6-dinitrophenol	ND	ND	1
pentachlorophenol	ND	ND	1

BASE/NEUTRAL COMPOUNDS

N-Nitrosodimethylamine	ND	ND	5
bis(2-Chloroethyl)ether	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
bis(2-Chloroisopropyl)ether	ND	ND	1
N-Nitroso-di-n-propylamine	ND	ND	1
Hexachloroethane	ND	ND	1
Nitrobenzene	ND	ND	1
Isophorone	ND	ND	1
bis(2-Chloroethoxy)methane	ND	ND	1
1,2,4-Trichlorobenzene	ND	ND	1
Naphthalene	ND	ND	1
Hexachlorobutadiene	ND	ND	1
2-Chloronaphthalene	ND	ND	1
2-Methyl Naphthalene	ND	ND	1

COMMENTS: Results are in micrograms per liter.
 ND=Not detected at or above limit of detection.
 The information shown on this sheet is test data only and
 no analysis or interpretation is intended or implied.

APPROVED BY: Bennett J. Tyson



CH2M HILL ENVIRONMENTAL LABORATORY
 2218 RAILROAD AVENUE
 REDDING, CA 96001 916-243-5831

REPORT TO: DEL MONTE-EMERYVILLE
 CH2M HILL/SFO
 SFO27035.AQ.FW
 ATTENTION: SUSAN COLMAN
 SAMPLE DESCRIPTION: WATER
 DATE OF SAMPLE: 12-6-88

REFERENCE NUMBER: 21759
 PAGE 4 OF 4
 DATE: 1-20-89
 PHONE:
 SAMPLED BY: SANDI MADSON
 DATE RECEIVED: 12-7-88
 DATE EXTRACTED: 12-13-88

TEST METHODS: EPA-625/8270

BASE-NEUTRAL EXTRACTABLES CONT.	BLANK RB-12-13	DMEMR GW-6	DETECT LIMIT
4-chloroaniline	ND	ND	5
2-nitroaniline	ND	ND	5
3-nitroaniline	ND	ND	5
4-nitroaniline	ND	ND	5
hexachlorocyclopentadiene	ND	ND	1
dimethyl phthalate	ND	ND	10
acenaphthylene	ND	ND	1
acenaphthene	ND	ND	1
2,4-dinitrotoluene	ND	ND	1
2,6-dinitrotoluene	ND	ND	1
diethyl phthalate	ND	ND	1
4-chlorophenylphenylether	ND	ND	1
fluorene	ND	ND	1
N-nitrosodiphenylamine	ND	ND	1
4-bromophenylphenylether	ND	ND	1
hexachlorobenzene	ND	ND	1
Phenanthrene	ND	ND	1
Anthracene	ND	ND	1
Di-N-Butyl phthalate	ND	ND	1
Fluorethene	ND	ND	1
Benzidene	ND	ND	30
pyrene	ND	ND	1
benzylbutylphthalate	ND	ND	1
3,3-Dichlorobenzidine	ND	ND	40
Benz(a)anthracene	ND	ND	1
bis(2-Ethylhexyl)phthalate	ND	ND	10
chrysene	ND	ND	2
Di-n-octyl phthalate	ND	ND	1
Benzo(b)fluoranthene	ND	ND	2
Benzo(k)fluoranthene	ND	ND	1
Benzo(a)pyrene	ND	ND	1
Indeno(1,2,3-cd)pyrene	ND	ND	1
Dibenz(a,h)anthracene	ND	ND	1
Benzo(g,h,i)perylene	ND	ND	1
Dibenzofuran	ND	ND	1
Benzoic Acid	ND	ND	50
Benzyl Alcohol	ND	ND	1

DATE ANALYZED: 1-18-89 1-19-89

COMMENTS: Results are in micrograms per liter.

ND = Not detected at or above limit of detection.

The information shown on this sheet is test data only and no analysis or interpretation is intended or implied.

APPROVED BY: Samuel J. Tyeau



CH2M HILL ENVIRONMENTAL LABORATORY
 2218 RAILROAD AVENUE
 REDDING, CA 96001 916-243-5831

REPORT TO: DEL MONTE-EMERYVILLE
 CH2M HILL/SFO
 SFO27035.BO.FW

ATTENTION: SUSAN COLMAN
 SAMPLE DESCRIPTION: WATER
 DATE OF SAMPLE: 12-6-88

TEST METHODS: EPA-625/B270

REFERENCE NUMBER: 21759
 PAGE 3A OF 4
 DATE: 1-20-89
 PHONE:
 SAMPLED BY: SANDI MADSON
 DATE RECEIVED: 12-7-88
 DATE EXTRACTED: 12-13-88

A M E N D E D R E P O R T

CONCENTRATION*

	DMEMRGW-6 (ug/l)	SPIKE* ADDED (ug/l)	ug/l SPIKE RECOVERED	% RECOVERY
ACID COMPOUNDS				
Phenol	ND	20	17	85
2-chlorophenol	ND	20	17	85
2-methyl phenol	ND	20	7	35
4-methyl phenol	ND	20	6	30
2-nitrophenol	ND	20	21	105
2,4-dimethylphenol	ND	20	3	15
2,4-dichlorophenol	ND	20	15	75
4-chloro-3-methylphenol	ND	20	11	55
2,4,5-trichlorophenol	ND	20	15	75
2,4,6-trichlorophenol	ND	20	16	80
2,4-dinitrophenol	ND	20	3	15
4-nitrophenol	ND	20	6	30
2-methyl-4,6-dinitrophenol	ND	20	10	50
pentachlorophenol	ND	20	8	40
BASE/NEUTRAL COMPOUNDS				
N-Nitrosodimethylamine	ND	20	14	70
bis(2-Chloroethyl)ether	ND	20	11	55
1,3-Dichlorobenzene	ND	20	18	90
1,4-Dichlorobenzene	ND	20	18	90
1,2-Dichlorobenzene	ND	20	19	95
bis(2-Chloroisopropyl)ether	ND	20	21	105
N-Nitroso-di-n-propylamine	ND	20	18	90
Hexachloroethane	ND	20	17	85
Nitrobenzene	ND	20	23	115
Isophorone	ND	20	26	130
bis(2-Chloroethoxy)methane	ND	20	26	130
1,2,4-Trichlorobenzene	ND	20	20	100
Naphthalene	ND	20	22	110
Hexachlorobutadiene	ND	20	20	100
2-Chloronaphthalene	ND	20	22	110
2-Methyl Naphthalene	ND	20	22	110

COMMENTS: Results are in micrograms per liter.

ND = Not detected

* Incorrect headings on original report 1-24-89.

The information shown on this sheet is test data only and no analysis or interpretation is intended or implied.

APPROVED BY: Bernard J. Tyson



CH2M HILL ENVIRONMENTAL LABORATORY
 2218 RAILROAD AVENUE
 REDDING, CA 96001 916-243-5831

REPORT TO: DEL MONTE-EMERYVILLE
 CH2M HILL/SFO
 SFO27035.AO.FW
 ATTENTION: SUSAN COLMAN
 SAMPLE DESCRIPTION: WATER
 DATE OF SAMPLE: 12-6-88
 TEST METHODS: EPA-625/8270

REFERENCE NUMBER: 21759
 PAGE 4A OF 4
 DATE: 1-20-89
 PHONE:
 SAMPLED BY: SANDI MADSON
 DATE RECEIVED: 12-7-88
 DATE EXTRACTED: 12-13-88

A M E N D E D R E P O R T
 CONCENTRATION*

BASE-NEUTRAL EXTRACTABLES CONT.	DMEMRGW-6 (ug/l)	SPIKE* ADDED (ug/l)	ug/l SPIKE RECOVERED	% RECOVERY
4-chloroaniline	ND	20	12	60
2-nitroaniline	ND	20	16	80
3-nitroaniline	ND	20	10	50
4-nitroaniline	ND	20	6	30
hexachlorocyclopentadiene	ND	20	7	35
dimethyl phthalate	ND	20	6	30
acenaphthylene	ND	20	23	115
acenaphthene	ND	20	22	110
2,4-dinitrotoluene	ND	20	14	70
2,6-dinitrotoluene	ND	20	18	90
diethyl phthalate	ND	20	15	75
4-chlorophenylphenylether	ND	20	20	100
fluorene	ND	20	21	105
N-nitrosodiphenylamine	ND	20	18	90
4-bromophenylphenylether	ND	20	21	105
hexachlorobenzene	ND	20	24	120
Phenanthrene	ND	20	24	120
Anthracene	ND	20	22	110
Di-N-Butyl phthalate	ND	20	26	130
Fluorethene	ND	20	22	110
Benzidene	ND	20	40	-
pyrene	ND	20	25	125
benzylbutylphthalate	ND	20	23	115
3,3-Dichlorobenzidine	ND	20	10	50
Benz(a)anthracene	ND	20	22	110
bis(2-Ethylhexyl)phthalate	ND	20	30	150
chrysene	ND	20	22	110
Di-n-octyl phthalate	ND	20	15	75
Benzo(b)fluoranthene	ND	20	13	65
Benzo(k)fluoranthene	ND	20	17	85
Benzo(a)pyrene	ND	20	13	65
Indeno(1,2,3-cd)pyrene	ND	20	12	60
Dibenz(a,h)anthracene	ND	20	10	50
Benzo(g,h,i)perylene	ND	20	12	60
Dibenzofuran	ND	20	20	100
Benzoic Acid	ND	20	6	30
Benzyl Alcohol	ND	20	27	135

COMMENTS: Results are in micrograms per liter
 ND = Not detected *Incorrect headings on original report 1/24/89.
 The information shown on this sheet is test data only and
 no analysis or interpretation is intended or implied.

APPROVED BY: Bernell J. Tyson

CHAIN OF CUSTODY RECORD

PROJECT NUMBER 702703SAW		PROJECT NAME DEL MONTE LMR			ANALYSES REQUESTED							FOR LAB USE ONLY	
CLIENT NAME DEL MONTE					NUMBER OF CONTAINERS	620 (100%)	625 (2.5L)	TFT (10)	TFT (2)	CL2 (100%)	Cl, EC, PH, TDS	LAB # _____	
REPORT TO: D. WALLACE / SFU		COPY TO: A. (DATE & SIGNATURE)										PROJ # _____	
REQUESTED COMPLETION DATE 1/21/99		LABORATORY CHAMHILL										ACK _____ VERIFIED _____	
STA NO	DATE	TIME	COMP	GRAB	SAMPLE DESCRIPTION							DATE INVOICED _____	
1	12/20	9 ⁰⁰		X	DMEUR 6W-1							NO. OF SAMPLES _____ pg _____ of _____	
2	12/20	10 ⁰⁰		X	DMEUR 6W-2							DISPOSITION: D R _____ DATE _____	
REMARKS													
SAMPLED BY AND TITLE (SIGNATURE) <i>[Signature]</i>				DATE/TIME 12/20/99	RELINQUISHED BY (SIGNATURE) 2				DATE/TIME	RECEIVED BY: (SIGNATURE) 3			DATE/TIME
RELINQUISHED BY: (SIGNATURE) 4		DATE/TIME	RECEIVED BY: (SIGNATURE) 5		DATE/TIME	RELINQUISHED BY: (SIGNATURE) 6		DATE/TIME	RECEIVED BY LAB: (SIGNATURE) 7		DATE/TIME		
REMARKS _____					SAMPLING PROGRAM <input type="checkbox"/> SDWA <input type="checkbox"/> NPDES <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER _____ (SPECIFY)				SAMPLE SHIPPED VIA <input type="checkbox"/> UPS <input type="checkbox"/> BUS <input type="checkbox"/> FED-EX <input type="checkbox"/> HAND OTHER _____		AIR BUS BILL NUMBER 659 465 207 7		



1255 POWELL STREET EMERYVILLE, CA 94608 • (415) 428-2300

LOG NO: E89-05-416

Received: 12 MAY 89

Reported: 31 MAY 89

Ms. Susan Colman
CH2M HILL
6425 Christie Street, Suite 500
Emeryville, California 94608

Project: SF027289.A0.GW

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED		
05-416-1	DM-MW6-589	12 MAY 89		
05-416-2	DM-MW7-589	12 MAY 89		
05-416-3	DM-MW8-589	12 MAY 89		
PARAMETER		05-416-1	05-416-2	05-416-3
TPH-Volatile Hydrocarbons/BTEX				
Date Analyzed		05.15.89	05.15.89	---
Dilution Factor, Times		1	1	---
Benzene, ug/L		<0.3	49	---
Ethylbenzene, ug/L		<0.3	4.5	---
Toluene, ug/L		<0.3	1.6	---
Total Xylene Isomers, ug/L		11	5.9	---
C4 to C12 Hydrocarbons, ug/L		910	1000	---
Other TPH-Volatile Hydrocarbons		---	---	---

CH2MHILL CHAIN OF CUSTODY RECORD

106 # 890416

PROJECT NUMBER SFO27289.A06W		PROJECT NAME Del Monte Plant 35		ANALYSES REQUESTED						FOR LAB USE ONLY	
CLIENT NAME Del Monte											
REPORT TO Sue Colman		COPY TO CH2MHILL		ACK _____	VERIFIED _____						
REQUESTED COMPLETION DATE			LABORATORY			DATE INVOICED _____		NO. OF SAMPLES _____ pg _____ of _____		DISPOSITION: D R _____	
STA NO	DATE	TIME	COMP	GRAB	SAMPLE DESCRIPTION					REMARKS	
MW-60512	13:58		X		DM-MW6-589	2	X	X		Standard Turn-Around	
MW-70512	15:20		X		DM-MW7-589	2	X	X		"	
MW-80512	16:00		X		DM-MW8-589	3		X	X	"	

NOTE: HCl Preservative Added by Lab

SAMPLED BY AND TITLE (SIGNATURE) 1 <i>[Signature]</i> Hydrogeologist		DATE/TIME 051289 / 1630	RELINQUISHED BY (SIGNATURE)		DATE/TIME	RECEIVED BY: (SIGNATURE)		DATE/TIME
RELINQUISHED BY: (SIGNATURE) 4		DATE/TIME	RECEIVED BY: (SIGNATURE) 5	DATE/TIME	RELINQUISHED BY: (SIGNATURE) 6 <i>[Signature]</i>	DATE/TIME 051289 / 1640	RECEIVED BY LAB: (SIGNATURE) 7 <i>[Signature]</i>	DATE/TIME 5/12/89 1640

REMARKS _____	SDWA <input type="checkbox"/>	SAMPLING PROGRAM NPDES <input type="checkbox"/> RA <input type="checkbox"/> OTHER _____ (SPECIFY)	SAMPLE SHIPPED VIA <input type="checkbox"/> UPS <input type="checkbox"/> BUS <input type="checkbox"/> FED-EX <input checked="" type="checkbox"/> HAND OTHER _____	AIR BUS BILL NUMBER _____
---------------	-------------------------------	--	---	---------------------------

RECEIVED
JUL 28 1989



BROWN AND CALDWELL LABORATORIES SAN FRANCISCO **ANALYTICAL REPORT**

1255 POWELL STREET EMERYVILLE, CA 94608 • (415) 426-2300

LOG NO: E89-07-137

Received: 11 JUL 89
Reported: 25 JUL 89

Ms. Susan Coleman
CH2M HILL
6425 Christie Street, Suite 500
Emeryville, California 94608

Purchase Order: SFO 27289.A0.GW

REPORT OF ANALYTICAL RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED	
07-137-1	MW-6	10 JUL 89	
07-137-2	MW-7	10 JUL 89	
PARAMETER		07-137-1	07-137-2
TPH-Volatile Hydrocarbons/BTEX		07.14.89	07.17.89
Date Analyzed		1	1
Dilution Factor, Times		<0.3	5.2
Benzene, ug/L		<0.3	<0.3
Ethylbenzene, ug/L		<0.3	0.6
Toluene, ug/L		6.0	5.6
Total Xylene Isomers, ug/L		210	500
C4 to C12 Hydrocarbons, ug/L		---	---
Other TPH-Volatile Hydrocarbons/BTEX		---	---

CHAIN OF CUSTODY RECORD

Lot # 8967137

PROJECT NUMBER: **SKO 27289.A01.01**
 PROJECT NAME: **Del Monte**

LABORATORY: **Brown and Caldwell, Emeryville**

STA. NO. DATE TIME COMP GRAB SAMPLE IDENTIFICATION

NUMBER OF CONTAINERS

BTX-E
 TPH
 Method Col. F
 pH, Cond, SO₄, TD, Nitrate

REMARKS

STA. NO.	DATE	TIME	COMP	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	BTX-E	TPH	Method Col. F	pH, Cond, SO ₄ , TD, Nitrate	REMARKS
1 MW-6	7/10/89	1220	X	X	MW-6 ✓	3	X	X			Don't know if lab needed 2 VOAs, total or two for each analyte, so filled three VOAs (didn't have enough VOAs onsite for 6 or 12 per sample for BTX-E and TPH)
2 MW-7	7/10/89	1630	X	X	MW-7 ✓	3	X	X			
3 MW-8	7/10/89	1730	X	X	MW-8 ✓	2		X			
5 MW-9	7/10/89	1810	X	X	MW-9 ✓	4		X	X		
6 MW-10	7/10/89	1445	X	X	MW-10 ✓	4		X	X		
7 MW-11	7/10/89	1117	X	X	MW-11 ✓	4		X	X		
8 MW-13	7/10/89	1800	X	X	MW-13 ✓	2		X			

SAMPLED BY AND TITLE (SIGNATURE): Ken Z Hydrogeologist 05048	DATE/TIME: 7/10/89 4PM	RELINQUISHED BY: (SIGNATURE): Ken Z	DATE/TIME: 7/10/89 7:49	RECEIVED BY: (SIGNATURE): [Signature]
RELINQUISHED BY: (SIGNATURE):	DATE/TIME:	RECEIVED BY: (SIGNATURE):	DATE/TIME: 7/11/89 7:50	RECEIVED BY LAB: (SIGNATURE): [Signature]

REMARKS: _____

SAMPLE SHIPPED VIA:
 UPS BUS FEDERAL EXPRESS

AIR BUS BILL NUMBER: _____

Laboratory Data Sheets
Haven Street Investigation



Engineers
Planners
Economists
Scientists

November 29, 1989

LRD191.10

CH2M HILL
6425 Christie Ave., Suite 500
Emeryville, CA 94608

Attn: Jeff Holloway

RE: Del Monte - CH2M HILL/SFO 28521.A1

Dear Jeff:

Enclosed please find the results the samples received at our laboratory on November 15, 1989.

For any problems encountered refer to case narratives in the Organic and Inorganic sections.

If you have any questions please contact Dr. Lawrence Jacoby or Mona Jones in our client services group.

Thank you for selecting a CH2M HILL laboratory for your analytical testing needs.

Sincerely,

CH2M HILL QUALITY ANALYTICS LABORATORY

Peggy A. Norton for

Barbara J. Hurley

Document Control Officer

Encl.

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: CH2M HILL/LRD
 Lab Sample ID: 24878B1
 Client Sample ID: VBLKS1

Concentration: LOW
 Sample Matrix: SOIL
 Percent Moisture: _____

Date Extracted: _____
 Date Analyzed: 11/15/89
 Dilution Factor: 1.0

VOLATILE COMPOUNDS

CAS Number		ug/Kg		CAS Number		ug/Kg
74-87-3	Chloromethane	10	U	71-43-2	Benzene	5 U
74-83-9	Bromomethane	10	U	10061-02-6	trans-1,3-Dichloropropene	5 U
75-01-4	Vinyl Chloride	10	U	110-75-8	2-Chloroethylvinylether .	10 U
75-00-3	Chloroethane	10	U	75-25-2	Bromoform	5 U
75-09-2	Methylene Chloride	5	U	591-78-6	2-Hexanone	10 U
67-64-1	Acetone	10	U	108-10-1	4-Methyl-2-Pentanone . . .	10 U
75-15-0	Carbon Disulfide	5	U	127-18-4	Tetrachloroethene	5 U
75-69-4	Trichlorofluoromethane . . .	5	U	79-34-5	1,1,2,2-Tetrachloroethane	10 U
75-35-4	1,1-Dichloroethene	5	U	108-88-3	Toluene	5 U
75-34-3	1,1-Dichloroethane	5	U	108-90-7	Chlorobenzene	5 U
75-059-0	1,2-Dichloroethene (total)	5	U	100-41-4	Ethylbenzene	5 U
75-076-3	Chloroform	5	U	100-42-5	Styrene	5 U
107-06-2	1,2-Dichloroethane	5	U	1330-20-7	Xylenes (total)	5 U
75-089-3	2-Butanone	10	U	541-73-1	1,3-Dichlorobenzene	5 U
75-055-6	1,1,1-Trichloroethane	5	U	106-46-7	1,4-Dichlorobenzene	5 U
56-23-5	Carbon Tetrachloride	5	U	95-50-1	1,2-Dichlorobenzene	5 U
108-05-4	Vinyl Acetate	10	U	123-91-1	1,4-Dioxane	200 U
75-052-4	Bromodichloromethane	5	U		-----	
75-078-5	1,2-Dichloropropane	5	U		Toluene-d8 - SS	97
10061-01-5	cis-1,3-Dichloropropene . . .	5	U		1,4-Bromofluorobenzene - SS	100
75-009-1	Trichloroethene	5	U		1,2-Dichloroethane-d4 - SS	98
75-024-1	Dibromochloromethane	5	U			
79-00-5	1,1,2-Trichloroethane	5	U			

- U - Compound analyzed for but not detected.
- B - Compound was detected in QC blank.
- J - Reported value less than quantitation limit.
- SS - Surrogate Standard reported as percent recovery.

*** This sample analyzed by EPA Method 8240 ***

II. EXTRACTION

- A. Holding Times: All met
- B. Problems : None encountered

III. ANALYSIS

- A. Holding Times: All met
- B. Problems : Siloxane compounds are routinely seen as tentatively identified non-TCL compounds (TICs) and are reported on Form 1-F for samples. Siloxanes, as well as N-Nitrosodiphenylamine, are common products used in GC septum and silinizing reagents for injector liners.

No additional problems were encountered.

- C. Surrogate Recoveries : All samples met acceptable QC. limits.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature. Diskette deliverables have not been provided for this data package.

Rick Schrynemeckers

Rick Schrynemeckers
GC/MS Section Supervisor/
Technology Director

11/17/85

Date

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: CH2M HILL/LRD
 Sample ID: 24878001
 Client Sample ID: FP-1

Concentration: LOW
 Sample Matrix: SOIL
 Percent Moisture: _____

Date Extracted: 11/15/89
 Date Analyzed: 11/16/89
 Dilution Factor: 1.0

SEMIVOLATILE COMPOUNDS

CAS Number		ug/Kg		CAS Number		ug/Kg
75-9	N-Nitrosodimethylamine . . .	330	U	100-02-7	4-Nitrophenol	1600 U
98-95-2	Phenol	330	U	132-64-9	Dibenzofuran	330 U
62-53-3	Aniline	330	U	121-14-2	2,4-Dinitrotoluene	330 U
1-44-4	bis(2-Chloroethyl)Ether	330	U	84-66-2	Diethylphthalate	330 U
5-57-8	2-Chlorophenol	330	U	7005-72-3	4-Chlorophenyl-phenylether	330 U
541-73-1	1,3-Dichlorobenzene	330	U	86-73-7	Fluorene	330 U
106-46-7	1,4-Dichlorobenzene	330	U	100-01-6	4-Nitroaniline	1600 U
0-51-6	Benzyl Alcohol	330	U	534-52-1	4,6-Dinitro-2-methylphenol	1600 U
55-50-1	1,2-Dichlorobenzene	330	U	86-30-6	N-Nitrosodiphenylamine (1)	330 U
95-48-7	2-Methylphenol	330	U	122-66-7	1,2-Diphenylhydrazine . . .	330 U
8-60-1	bis(2-Chloroisopropyl)Ether	330	U	101-55-3	4-Bromophenyl-phenylether	330 U
6-44-5	4-Methylphenol	330	U	118-74-1	Hexachlorobenzene	330 U
621-64-7	N-Nitroso-di-n-propylamine	330	U	87-86-5	Pentachlorophenol	1600 U
67-72-1	Hexachloroethane	330	U	85-01-8	Phenanthrene	330 U
8-95-3	Nitrobenzene	330	U	120-12-7	Anthracene	180 J
78-59-1	Isophorone	330	U	84-74-2	Di-n-Butylphthalate	330 U
88-75-5	2-Nitrophenol	330	U	206-44-0	Fluoranthene	350
05-67-9	2,4-Dimethylphenol	330	U	129-00-0	Pyrene	220 J
6-85-0	Benzoic Acid	1600	U	85-68-7	Butylbenzylphthalate	330 U
111-91-1	bis(2-Chloroethoxy)Methane	330	U	91-94-1	3,3'-Dichlorobenzidine . . .	660 U
0-83-2	2,4-Dichlorophenol	330	U	56-55-3	Benzo(a)anthracene	330 U
0-82-1	1,2,4-Trichlorobenzene . . .	330	U	218-01-9	Chrysene	190 J
91-20-3	Naphthalene	330	U	117-81-7	bis(2-Ethylhexyl)Phthalate	1900
106-47-8	4-Chloroaniline	330	U	117-84-0	Di-n-octylphthalate	330 U
7-68-3	Hexachlorobutadiene	330	U	205-99-2	Benzo(b)fluoranthene	330 U
99-50-7	4-Chloro-3-methylphenol . . .	330	U	207-08-9	Benzo(k)fluoranthene	330 U
91-57-6	2-Methylnaphthalene	330	U	50-32-8	Benzo(a)pyrene	330 U
7-47-4	Hexachlorocyclopentadiene	330	U	193-39-5	Indeno(1,2,3-cd)Pyrene . . .	330 U
8-06-2	2,4,6-Trichlorophenol	330	U	53-70-3	Dibenz(a,h)Anthracene . . .	330 U
95-95-4	2,4,5-Trichlorophenol	1600	U	191-24-2	Benzo(g,h,i)perylene	330 U
1-58-7	2-Chloronaphthalene	330	U			
8-74-4	2-Nitroaniline	1600	U		Nitrobenzene-d5 - SS	73
131-11-3	Dimethyl Phthalate	330	U		2-Fluorobiphenyl - SS	96
208-96-8	Acenaphthylene	330	U		Terphenyl-d14 - SS	76
06-20-2	2,6-Dinitrotoluene	330	U		Phenol-d5 - SS	71
99-09-2	3-Nitroaniline	1600	U		2-Fluorophenol - SS	67
83-32-9	Acenaphthene	330	U		2,4,6-Tribromophenol - SS . .	64
1-28-5	2,4-Dinitrophenol	1600	U			

- (1) - Cannot be separated from diphenylamine.
- U - Compound analyzed for but not detected.
- B - Compound was detected in QC blank.
- J - Reported value less than quantitation limit.
- SS - Surrogate Standard reported as percent recovery.

RS

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: CH2M HILL/LRD
 Sample ID: 24878B1
 Client Sample ID: SBLKS1

Concentration: LOW
 Sample Matrix: SOIL
 Percent Moisture: _____

Date Extracted: 11/15/89
 Date Analyzed: 11/15/89
 Dilution Factor: 1.0

SEMIVOLATILE COMPOUNDS

CAS Number	Compound	ug/Kg	CAS Number	Compound	ug/Kg
75-9	N-Nitrosodimethylamine . . .	330 U	100-02-7	4-Nitrophenol	1600 U
8-95-2	Phenol	330 U	132-64-9	Dibenzofuran	330 U
62-53-3	Aniline	330 U	121-14-2	2,4-Dinitrotoluene	330 U
11-44-4	bis(2-Chloroethyl)Ether	330 U	84-66-2	Diethylphthalate	330 U
5-57-8	2-Chlorophenol	330 U	7005-72-3	4-Chlorophenyl-phenylether	330 U
541-73-1	1,3-Dichlorobenzene	330 U	86-73-7	Fluorene	330 U
106-46-7	1,4-Dichlorobenzene	330 U	100-01-6	4-Nitroaniline	1600 U
0-51-6	Benzyl Alcohol	330 U	534-52-1	4,6-Dinitro-2-methylphenol	1600 U
5-50-1	1,2-Dichlorobenzene	330 U	86-30-6	N-Nitrosodiphenylamine (1)	330 U
95-48-7	2-Methylphenol	330 U	122-66-7	1,2-Diphenylhydrazine	330 U
8-60-1	bis(2-Chloroisopropyl)Ether	330 U	101-55-3	4-Bromophenyl-phenylether	330 U
6-44-5	4-Methylphenol	330 U	118-74-1	Hexachlorobenzene	330 U
621-64-7	N-Nitroso-di-n-propylamine	330 U	87-86-5	Pentachlorophenol	1600 U
67-72-1	Hexachloroethane	330 U	85-01-8	Phenanthrene	330 U
8-95-3	Nitrobenzene	330 U	120-12-7	Anthracene	330 U
78-59-1	Isophorone	330 U	84-74-2	Di-n-Butylphthalate	330 U
88-75-5	2-Nitrophenol	330 U	206-44-0	Fluoranthene	330 U
05-67-9	2,4-Dimethylphenol	330 U	129-00-0	Pyrene	330 U
6-85-0	Benzoic Acid	1600 U	85-68-7	Butylbenzylphthalate	330 U
111-91-1	bis(2-Chloroethoxy)Methane	330 U	91-94-1	3,3'-Dichlorobenzidine	660 U
20-83-2	2,4-Dichlorophenol	330 U	56-55-3	Benzo(a)anthracene	330 U
20-82-1	1,2,4-Trichlorobenzene	330 U	218-01-9	Chrysene	330 U
91-20-3	Naphthalene	330 U	117-81-7	bis(2-Ethylhexyl)Phthalate	330 U
106-47-8	4-Chloroaniline	330 U	117-84-0	Di-n-octylphthalate	330 U
7-68-3	Hexachlorobutadiene	330 U	205-99-2	Benzo(b)fluoranthene	330 U
9-50-7	4-Chloro-3-methylphenol	330 U	207-08-9	Benzo(k)fluoranthene	330 U
91-57-6	2-Methylnaphthalene	330 U	50-32-8	Benzo(a)pyrene	330 U
4-47-4	Hexachlorocyclopentadiene	330 U	193-39-5	Indeno(1,2,3-cd)Pyrene	330 U
3-06-2	2,4,6-Trichlorophenol	330 U	53-70-3	Dibenz(a,h)Anthracene	330 U
95-95-4	2,4,5-Trichlorophenol	1600 U	191-24-2	Benzo(g,h,i)perylene	330 U
01-58-7	2-Chloronaphthalene	330 U			
8-74-4	2-Nitroaniline	1600 U		Nitrobenzene-d5 - SS	67
131-11-3	Dimethyl Phthalate	330 U		2-Fluorobiphenyl - SS	71
208-96-8	Acenaphthylene	330 U		Terphenyl-d14 - SS	120
06-20-2	2,6-Dinitrotoluene	330 U		Phenol-d5 - SS	64
9-09-2	3-Nitroaniline	1600 U		2-Fluorophenol - SS	59
83-32-9	Acenaphthene	330 U		2,4,6-Tribromophenol - SS	77
4-28-5	2,4-Dinitrophenol	1600 U			

- (1) - Cannot be separated from diphenylamine.
- U - Compound analyzed for but not detected.
- B - Compound was detected in QC blank.
- J - Reported value less than quantitation limit.
- SS - Surrogate Standard reported as percent recovery.

RS



Engineers
Planners
Economists
Scientists

November 20, 1989

SFO28521.A1

Ms. Barb Hurley
CH2M HILL/LRD
5090 Caterpillar Road
Redding, CA 96003

RE: Analytical Data for Del Monte, Laboratory No. 14866

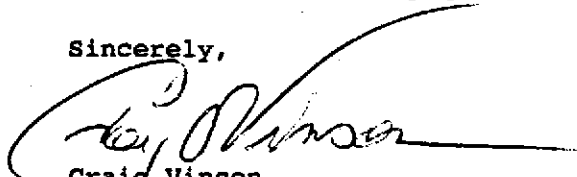
Dear Ms. Hurley:

On November 16, 1989, the CH2M Hill Montgomery Laboratory received one sample with a request for analysis of selected inorganic parameters.

The analytical results are enclosed. No unusual difficulties were encountered during the analysis of these samples.

If you should have any questions concerning the data, please inquire.

Sincerely,



Craig Vinson
Laboratory Manager

Enclosures



Engineers
 Planners
 Economists
 Scientists

TABLE OF CONTENTS

CH2M HILL Laboratory No. 14866

	<u>Page No.</u>
Sample Cross-reference	1
INORGANIC DATA	
Analytical Results of Field Samples	
FP-1 (LMG #14866001)	1
Copy of Chain-of-custody	2



TABLE 1

SAMPLE CROSS-REFERENCE SUMMARY

CH2M HILL Laboratory No. 14866

<u>CH2M HILL Sample No.</u>	<u>LRD Number</u>	<u>Sample Description</u>				
14866001	24878-1	SAMPLE FP-1	STA 1	11/14/89	1330	GRAB



REPORT OF ANALYTICAL RESULTS

Date: 11/17/89
Page: 1 of 1

Client: CH2M HILL/LRD
5090 CATERPILLAR ROAD
REDDING CA 96003

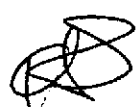
Project Number: SFO28521.A1
DEL MONTE
Laboratory Number: 14866
Date Received: 11/16/89

Atten: MS. BARB HURLEY

Sample Description: FP-1 LRD24878-1 11/14/89 1330 GRAB
Laboratory Sample Number: 14866001 Date Collected: 11/14/89 Matrix: SOIL

Analytical Parameter	Method	Det Limit	Result	Units	Ana Date
Total Petroleum Hydrocarbons	EPA418.1	225	1360	mg/Kg	11/17/89

Results for non-aqueous matrices are based on dry sample weight unless noted otherwise.

Reviewed by: 

INORGREP(v8911B)

000001

CHAIN OF CUSTODY RECORD

2478
2487

PROJECT NUMBER: SFO28521.A
PROJECT NAME: Del Monte, Haven St.

LABORATORY: CH2M Hill (Redding)

NUMBER OF CONTAINERS: 2
TPH (418.1)
Ext. Orgs (8240)
Residual Orgs (8270)
13 P.P. Metals (6010/7000)

48 Hr Turn-Around-Time
Results by FAX
FRIDAY
11/17

STA. NO. DATE TIME COMP GRAB SAMPLE IDENTIFICATION

1 11/14 1:30 ✓ FP-1

2 X X X X -1

Soil, low to no contamination
- please send QC data also

FOR LAB USE ONLY

LAB# 14866
PROJ# SFO28521.A
ACK ~~K~~ 11/17/89 VERIFIED (K 11/17/89)
DATE INVOICED
NO. OF SAMPLES 1 pg 1 of 1
DISPOSITION: D-R
DATE

Report to Barb
Hurley by 11/17/89
(verbal) Level 1
Multi-Pier 2X
Questions Larry Jacoby

- Unsure of required vol
so sent (2) containers

split made for
418.1 sent to LMB
rec'd 1 lb, in soil
Verbals due 11/17/89 2X
soil, Fr, X, cool (or vice versa)

000002

SAMPLER BY AND TITLE (SIGNATURE) <i>[Signature]</i>		DATE/TIME 11/14 1:30	RELINQUISHED BY: (SIGNATURE) <i>[Signature]</i>	DATE/TIME 11/14 4:00	RECEIVED BY: (SIGNATURE) _____
RELINQUISHED BY: (SIGNATURE) <i>[Signature]</i>		DATE/TIME 11/14 3:00	RECEIVED BY: (SIGNATURE) _____	RELINQUISHED BY: (SIGNATURE) _____	DATE/TIME 11/15/89
REMARKS Shipped via via Fed. Express BUS rec'd Skye 11/16/89 0900		SAMPLE SHIPPED VIA <input type="checkbox"/> UPS <input type="checkbox"/> BUS <input checked="" type="checkbox"/> FEDERAL EXPRESS		RECEIVED BY LAB: (SIGNATURE) <i>[Signature]</i>	
DISTRIBUTION		ORIGINAL		AIR BUS BILL NUMBER 5081310496	



Engineers
Planners
Economists
Scientists

November 17, 1989

LRD191.10

CH2M HILL
6425 Christie Avenue, Suite 500
Emeryville, CA 94608

Attention: Jeff Halloway

Dear Mr. Halloway:

Enclosed please find the results for the sample received at our laboratory on November 15, 1989. Sample results are reported on an "as received" basis.

The Cadmium sample result was determined by a single-point Method of Standard Additions due to matrix interference. The percent recoveries of both the pre-digestion and post-digestion spikes were outside advisory limits.

The Copper concentration in the Method Blank was greater than our reporting limit. The sample result is reportable since it is greater than ten times the Method Blank concentration.

The relative percent difference of Lead between the sample and the duplicate was 27.0%.

The percent recovery of Antimony in the pre-digestion spike was outside advisory limits. A post-digestion spike was performed which was within advisory limits.

No other problems were encountered. All holding times were met. If you have any questions please contact Dr. Lawrence Jacoby or Mona Jones in our client services group.

Thank you for selecting a CH2M HILL laboratory for your analytical testing needs.

Sincerely,

CH2M HILL QUALITY ANALYTICS LABORATORY


Jim Hawley
Inorganics Manager

Encl.



Engineers
Planners
Economists
Scientists

Report To: Del Monte
CH2M Hill/SFO 28521.A1

Reference Number: 24878

Page 1 of 1

Date: 11/17/89

Phone:

Sampled By: J. Halloway

Date Received: 11/15/89

Attention: Jeff Halloway
Sample Description: Sludge
Date of Sample: 11/14/89

Test Methods: Priority Pollutant Metals

TEST	METHOD BLANK	FP-1	UNITS	DETECTION LIMIT	DATE ANALYZED	METHOD NUMBER
Antimony	<4.0	<4.0	mg/kg	4.0	11-16-89	6010
Arsenic	<2.8	8.9	mg/kg	2.8	11-16-89	6010
Beryllium	<0.2	0.3	mg/kg	0.2	11-16-89	6010
Cadmium	<0.4	2.0 *	mg/kg	0.4	11-16-89	6010
Chromium	<0.6	57.4	mg/kg	0.6	11-16-89	6010
Copper	1	51.3	mg/kg	0.8	11-16-89	6010
Lead	<6.0	119	mg/kg	6.0	11-16-89	6010
Mercury	<0.06	0.07	mg/kg	0.06	11-16-89	7471
Nickel	<2.8	36.3	mg/kg	2.8	11-16-89	6010
Selenium	<6.4	<6.4	mg/kg	6.4	11-16-89	6010
Silver	<1.4	<1.4	mg/kg	1.4	11-16-89	6010
Thallium	<4.0	<4.0	mg/kg	4.0	11-16-89	6010
Zinc	<1.2	305	mg/kg	1.2	11-16-89	6010

Comments: Results reported on an "as received" basis.
mg/kg = milligrams per kilogram.

* Reported by single point MSA.

The information shown on this sheet is test data only and no analysis or interpretation is intended or implied.

Approved By: 



LOG NO: E89-11-203

Received: 07 NOV 89

Reported: 27 NOV 89

Mr. Jeff Holloway
 CH2M HILL
 6425 Christie Street, Suite 500
 Emeryville, California 94608

Project: SF0.28521.A1

REPORT OF ANALYTICAL RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES					DATE SAMPLED
11-203-1	S2 1.5-2.0					07 NOV 89
11-203-2	S8 9.0-9.5					07 NOV 89
11-203-3	S10 2.5-3.0					07 NOV 89
11-203-4	S12 18.0-24.0					07 NOV 89
11-203-5	S16 2.0-2.5					07 NOV 89
PARAMETER	11-203-1	11-203-2	11-203-3	11-203-4	11-203-5	
Priority Pollutant Metals						
Silver, mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Beryllium, mg/kg	<0.2	0.44	<0.2	0.36	0.41	
Cadmium, mg/kg	4.3	4.5	4.3	4.6	4.8	
Chromium, mg/kg	56	54	58	48	43	
Copper, mg/kg	19	17	23	23	19	
Nickel, mg/kg	55	53	42	46	40	
Lead, mg/kg	<6	<6	14	<6	<6	
Antimony, mg/kg	<1	<1	<1	<1	<1	
Thallium, mg/kg	<4	<4	<4	<4	<4	
Zinc, mg/kg	50	46	72	54	49	
Arsenic, mg/kg	4.1	5.1	2.8	4.6	7.2	
Selenium, mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4	
Mercury, mg/kg	0.08	0.10	0.16	0.08	0.06	
Priority Pol Metals	11.13.89	11.13.89	11.13.89	11.13.89	11.13.89	
Digestions, Date						



LOG NO: E89-11-203

Received: 07 NOV 89

Reported: 27 NOV 89

Mr. Jeff Holloway
 CH2M HILL
 6425 Christie Street, Suite 500
 Emeryville, California 94608

Project: SF0.28521.A1

REPORT OF ANALYTICAL RESULTS

Page 3

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED				
11-203-6	S2 2.0-2.5	07 NOV 89				
11-203-7	S8 9.0-9.5	07 NOV 89				
11-203-8	S10 2.0-2.5	07 NOV 89				
11-203-9	S12 12.0-18.0	07 NOV 89				
11-203-10	S16 18.0-24.0	07 NOV 89				
PARAMETER		11-203-6	11-203-7	11-203-8	11-203-9	11-203-10
B/N,A Ext.Pri.Poll. (EPA-8270)						
Date Analyzed		11.20.89	11.20.89	11.20.89	11.20.89	11.20.89
Date Extracted		11.15.89	11.15.89	11.15.89	11.15.89	11.15.89
Dilution Factor, Times		1	1	12	1	1
1,2,4-Trichlorobenzene, mg/kg		<0.03	<0.03	<0.4	<0.03	<0.03
1,2-Dichlorobenzene, mg/kg		<0.03	<0.03	<0.4	<0.03	<0.03
1,2-Diphenylhydrazine, mg/kg		<0.03	<0.03	<0.4	<0.03	<0.03
1,3-Dichlorobenzene, mg/kg		<0.03	<0.03	<0.4	<0.03	<0.03
1,4-Dichlorobenzene, mg/kg		<0.03	<0.03	<0.4	<0.03	<0.03
2,4,5-Trichlorophenol, mg/kg		<0.03	<0.03	<0.4	<0.03	<0.03
2,4,6-Trichlorophenol, mg/kg		<0.03	<0.03	<0.4	<0.03	<0.03
2,4-Dichlorophenol, mg/kg		<0.03	<0.03	<0.4	<0.03	<0.03
2,4-Dimethylphenol, mg/kg		<0.03	<0.03	<0.4	<0.03	<0.03
2,4-Dinitrophenol, mg/kg		<0.3	<0.3	<4	<0.3	<0.3
2,4-Dinitrotoluene, mg/kg		<0.03	<0.03	<0.4	<0.03	<0.03
2,6-Dinitrotoluene, mg/kg		<0.03	<0.03	<0.4	<0.03	<0.03
2-Chloronaphthalene, mg/kg		<0.03	<0.03	<0.4	<0.03	<0.03
2-Chlorophenol, mg/kg		<0.03	<0.03	<0.4	<0.03	<0.03
2-Methyl-4,6-dinitrophenol, mg/kg		<0.03	<0.03	<0.4	<0.03	<0.03
2-Methylnaphthalene, mg/kg		<0.03	<0.03	<0.4	<0.03	<0.03
2-Methylphenol, mg/kg		<0.03	<0.03	<0.4	<0.03	<0.03
2-Nitroaniline, mg/kg		<0.2	<0.2	<2	<0.2	<0.2
2-Nitrophenol, mg/kg		<0.03	<0.03	<0.4	<0.03	<0.03



LOG NO: E89-11-203

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Mr. Jeff Holloway
 CH2M HILL
 6425 Christie Street, Suite 500
 Emeryville, California 94608

Project: SFO.28521.A1

REPORT OF ANALYTICAL RESULTS

Page 4

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED				
11-203-6	S2 2.0-2.5	07 NOV 89				
11-203-7	S8 9.0-9.5	07 NOV 89				
11-203-8	S10 2.0-2.5	07 NOV 89				
11-203-9	S12 12.0-18.0	07 NOV 89				
11-203-10	S16 18.0-24.0	07 NOV 89				
PARAMETER	11-203-6	11-203-7	11-203-8	11-203-9	11-203-10	
3,3'-Dichlorobenzidine, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03	
3-Nitroaniline, mg/kg	<0.2	<0.2	<2	<0.2	<0.2	
4-Bromophenylphenylether, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03	
4-Chloro-3-methylphenol, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03	
4-Chloroaniline, mg/kg	<0.2	<0.2	<2	<0.2	<0.2	
4-Chlorophenylphenylether, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03	
4-Methylphenol, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03	
4-Nitroaniline, mg/kg	<0.2	<0.2	<2	<0.2	<0.2	
4-Nitrophenol, mg/kg	<0.6	<0.6	<8	<0.6	<0.6	
Acenaphthene, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03	
Acenaphthylene, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03	
Aniline, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03	
Anthracene, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03	
Benzidine, mg/kg	<1	<1	<20	<1	<1	
Benzo(a)anthracene, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03	
Benzo(a)pyrene, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03	
Benzo(b)fluoranthene, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03	
Benzo(g,h,i)perylene, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03	
Benzo(k)fluoranthene, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03	
Benzyl alcohol, mg/kg	<0.03	<0.03	<2	<0.2	<0.2	
Benzoic acid, mg/kg	<0.2	<0.2	<2	<0.2	<0.2	
Butylbenzylphthalate, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03	
Chrysene, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03	



LOG NO: E89-11-203

Received: 07 NOV 89

Reported: 27 NOV 89

Mr. Jeff Holloway
 CH2M HILL
 6425 Christie Street, Suite 500
 Emeryville, California 94608

Project: SF0.28521.A1

REPORT OF ANALYTICAL RESULTS

Page 5

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED				
11-203-6	S2 2.0-2.5	07 NOV 89				
11-203-7	S8 9.0-9.5	07 NOV 89				
11-203-8	S10 2.0-2.5	07 NOV 89				
11-203-9	S12 12.0-18.0	07 NOV 89				
11-203-10	S16 18.0-24.0	07 NOV 89				
PARAMETER	11-203-6	11-203-7	11-203-8	11-203-9	11-203-10	
Di-n-octylphthalate, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03	
Dibenzo(a,h)anthracene, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03	
Dibenzofuran, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03	
Dibutylphthalate, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03	
Diethylphthalate, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03	
Dimethylphthalate, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03	
Fluoranthene, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03	
Fluorene, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03	
Hexachlorobenzene, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03	
Hexachlorobutadiene, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03	
Hexachlorocyclopentadiene, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03	
Hexachloroethane, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03	
Indeno(1,2,3-c,d)pyrene, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03	
Isophorone, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03	
N-Nitrosodimethylamine, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03	
N-Nitrosodiphenylamine, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03	
N-Nitrosodi-n-propylamine, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03	
Nitrobenzene, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03	
Naphthalene, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03	
Phenanthrene, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03	
Phenol, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03	
Pentachlorophenol, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03	
Pyrene, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03	



LOG NO: E89-11-203

Received: 07 NOV 89

Reported: 27 NOV 89

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Project: SFO.28521.A1

REPORT OF ANALYTICAL RESULTS

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LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
11-203-6	S2 2.0-2.5	07 NOV 89
11-203-7	S8 9.0-9.5	07 NOV 89
11-203-8	S10 2.0-2.5	07 NOV 89
11-203-9	S12 12.0-18.0	07 NOV 89
11-203-10	S16 18.0-24.0	07 NOV 89

PARAMETER	11-203-6	11-203-7	11-203-8	11-203-9	11-203-10
Bis(2-chloroethoxy)methane, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03
Bis(2-chloroethyl)ether, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03
Bis(2-chloroisopropyl)ether, mg/kg	<0.03	<0.03	<0.4	<0.03	<0.03
Bis(2-ethylhexyl)phthalate, mg/kg	<3	<3	<40	<3	<3

Semi-Quantified Results **

Molecular Sulfur, mg/kg	---	---	---	---	1
Total C20-C30 Hydrocarbons, mg/kg	---	---	---	---	1

** Quantification based upon comparison of total ion count of the compound with that of the nearest internal standard.



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REPORT OF ANALYTICAL RESULTS

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LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED				
11-203-6	S2 2.0-2.5	07 NOV 89				
11-203-7	S8 9.0-9.5	07 NOV 89				
11-203-8	S10 2.0-2.5	07 NOV 89				
11-203-9	S12 12.0-18.0	07 NOV 89				
11-203-10	S16 18.0-24.0	07 NOV 89				
PARAMETER	11-203-6	11-203-7	11-203-8	11-203-9	11-203-10	
Purgeable Priority Pollutants						
Date Extracted	11.14.89	11.14.89	11.14.89	11.14.89	11.14.89	
1,1,1-Trichloroethane, mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	
1,1,2,2-Tetrachloroethane, mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	
1,1,2-Trichloroethane, mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	
1,1-Dichloroethane, mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	
1,1-Dichloroethene, mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	
1,2-Dichloroethane, mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	
1,2-Dichloroethene (Total), mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	
1,2-Dichloropropane, mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	
1,3-Dichloropropene, mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	
2-Chloroethylvinylether, mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	
2-Hexanone, mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	
Acetone, mg/kg	<1	<1	<1	<1	<1	
Acrolein, mg/kg	<1	<1	<1	<1	<1	
Acrylonitrile, mg/kg	<1	<1	<1	<1	<1	
Bromodichloromethane, mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	
Bromomethane, mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	
Benzene, mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	
Bromoform, mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	
Chlorobenzene, mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	
Carbon Tetrachloride, mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	
Chloroethane, mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	



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REPORT OF ANALYTICAL RESULTS

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LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED				
11-203-6	S2 2.0-2.5	07 NOV 89				
11-203-7	S8 9.0-9.5	07 NOV 89				
11-203-8	S10 2.0-2.5	07 NOV 89				
11-203-9	S12 12.0-18.0	07 NOV 89				
11-203-10	S16 18.0-24.0	07 NOV 89				
PARAMETER	11-203-6	11-203-7	11-203-8	11-203-9	11-203-10	
Chloroform, mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	
Chloromethane, mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	
Carbon Disulfide, mg/kg	50	<0.1	<0.1	<0.1	<0.1	
Dibromochloromethane, mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	
Ethylbenzene, mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	
Freon 113, mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	
Methyl ethyl ketone, mg/kg	<2	<2	<2	<2	<2	
Methyl isobutyl ketone, mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	
Methylene chloride, mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	
Styrene, mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	
Trichloroethene, mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	
Trichlorofluoromethane, mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	
Toluene, mg/kg	<0.1	<0.1	0.1	0.7	0.3	
Tetrachloroethene, mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	
Vinyl acetate, mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	
Vinyl chloride, mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	
Total Xylene Isomers, mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	
trans-1,3-Dichloropropene, mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	



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Project: SF0.28521.A1

REPORT OF ANALYTICAL RESULTS

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LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED				
11-203-11	S1 12.0-18.0	07 NOV 89				
11-203-12	S3 7.5-8.0	07 NOV 89				
11-203-13	S4 12.0-18.0	07 NOV 89				
11-203-14	S5 12.0-18.0	07 NOV 89				
11-203-15	S6 12.0-18.0	07 NOV 89				
PARAMETER	11-203-11	11-203-12	11-203-13	11-203-14	11-203-15	
Petroleum Hydrocarbons by IR, mg/kg	<50	<50	1200	670	220	



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REPORT OF ANALYTICAL RESULTS

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LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED			
11-203-16	S7 12.0-18.0	07 NOV 89			
11-203-17	S9 12.0-18.0	07 NOV 89			
11-203-18	S11 18.0-24.0	07 NOV 89			
11-203-19	S13 12.0-18.0	07 NOV 89			
11-203-20	S14 9.0-9.5	07 NOV 89			
PARAMETER	11-203-16	11-203-17	11-203-18	11-203-19	11-203-20
Petroleum Hydrocarbons by IR, mg/kg	<50	<50	<50	<50	<50



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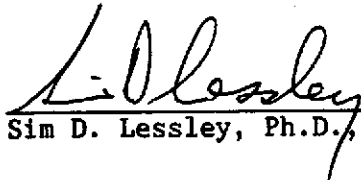
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REPORT OF ANALYTICAL RESULTS

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LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
11-203-21	S15 9.0-9.5	07 NOV 89
PARAMETER	11-203-21	
Petroleum Hydrocarbons by IR, mg/kg	<50	


Sim D. Lessley, Ph.D., Laboratory Director

BROWN AND CALDWELL ANALYTICAL LABORATORIES

BATCH QC REPORT Definitions and Terms

- Accuracy:** The ability of a procedure to determine the "true" concentration of an analyte.
- Batch:** A group of samples analyzed sequentially using the same calibration curve, reagents, and instrument.
- Laboratory Control Standard (LCS):** Laboratory reagent water spiked with known compounds and subjected to the same procedures as the samples. The LCS thus indicates the accuracy of the analytical method and, because it is prepared from a different source than the standard used to calibrate the instrument, it also serves to double-check the calibration.
- LC Result:** Laboratory result of an LCS analysis.
- LT Result:** Expected result, or true value, of the LCS analysis.
- Matrix QC:** Quality control tests performed on actual client samples. For most inorganic analyses, the laboratory uses a pair of duplicate samples and a spiked sample. For most organic analyses, the laboratory uses a pair of spiked samples (duplicate spikes).
- Percent Recovery:** The percentage of analyte recovered.
For LCS, the percent recovery calculation is
$$LC \div LT \times 100.$$

For spike recoveries, the percent recovery calculation is
$$\frac{(\text{S Bar} - \text{Sample Concentration})}{\text{Spike Amount}} \times 100$$
- Precision:** The reproducibility of a procedure demonstrated by the agreement between analyses performed on either duplicates of the same sample or a pair of duplicate spikes.
- R1, R2 Result:** Result of the analysis of replicate aliquots of a sample, with R1 indicating the first analysis of the sample and R2 its corresponding duplicate; used to determine precision.
- Relative Percent Difference (RPD):** Calculated using one of the following:
$$\frac{(R1 - R2) \times 100}{(R1 + R2) \div 2} \qquad \frac{(S1 - S2) \times 100}{(S1 + S2) \div 2}$$
- S Bar Result:** The average of spike analysis results.
- S1, S2 Result:** Result of the analysis of replicate spiked aliquots, with S1 indicating one spike of the sample and S2 the second spike; used to determine precision and accuracy.
- True value:** The theoretical, or expected, result of a spike sample analysis.

BROWN AND CALDWELL LABORATORIES

BATCH QC REPORT
ORDER E8911203

DATE REPORTED : 11/30/89

Page 1

LABORATORY CONTROL STANDARDS

PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
Priority Pollutant Metals						
Silver	11.21.89	167	0.95	1	mg/L	95
Beryllium	11.21.89	167	0.23	0.25	mg/L	92
Cadmium	11.21.89	167	10.3	12.5	mg/L	82
Chromium	11.21.89	167	10.8	12.5	mg/L	86
Copper	11.21.89	167	25	25	mg/L	100
Nickel	11.21.89	167	9.3	10	mg/L	93
Lead	11.21.89	167	47	50	mg/L	94
Antimony	11.21.89	167	0.91	1	mg/L	91
Thallium	11.21.89	167	3.0	3.0	mg/L	100
Zinc	11.21.89	167	96	100	mg/L	96
Arsenic	11.20.89	121	0.019	0.020	mg/L	95
Arsenic	11.20.89	121	0.020	0.020	mg/L	100
Arsenic	11.20.89	121	0.019	0.020	mg/L	95
Selenium	11.20.89	119	0.020	0.020	mg/L	100
Selenium	11.20.89	119	0.019	0.020	mg/L	95
Mercury	11.18.89	101	0.0019	0.0020	mg/L	95
Mercury	11.18.89	101	0.0019	0.0020	mg/L	95
Mercury	11.18.89	101	0.0016	0.0020	mg/L	80
Mercury	11.18.89	101	0.0018	0.0020	mg/L	90
Petroleum Hydrocarbons by IR	11.21.89	63	320	310	mg/L	103
Purgeable Priority Pollutants						
1,1,1-Trichloroethane	11.17.89	354	54	50	ug/L	108
1,1,2,2-Tetrachloroethane	11.17.89	354	63	50	ug/L	126
1,1,2-Trichloroethane	11.17.89	354	57	50	ug/L	114
1,1-Dichloroethane	11.17.89	354	55	50	ug/L	110
1,1-Dichloroethene	11.17.89	354	52	50	ug/L	104
1,2-Dichloroethane	11.17.89	354	58	50	ug/L	116
1,2-Dichloroethene (Total)	11.17.89	354	53	50	ug/L	106
1,2-Dichloropropane	11.17.89	354	55	50	ug/L	110
1,3-Dichloropropene	11.17.89	354	56	50	ug/L	112
2-Chloroethylvinylether	11.17.89	354	57	50	ug/L	114
2-Hexanone	11.17.89	354	59	50	ug/L	118
Acetone	11.17.89	354	50	50	ug/L	100
Acrolein	11.17.89	354	290	250	ug/L	116
Acrylonitrile	11.17.89	354	300	250	ug/L	120
Bromodichloromethane	11.17.89	354	55	50	ug/L	110
Bromomethane	11.17.89	354	49	50	ug/L	98
Benzene	11.17.89	354	55	50	ug/L	110

BROWN AND CALDWELL LABORATORIES

BATCH QC REPORT
ORDER E8911203

DATE REPORTED : 11/30/89

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LABORATORY CONTROL STANDARDS

PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
Bromoform	11.17.89	354	57	50	ug/L	114
Chlorobenzene	11.17.89	354	54	50	ug/L	108
Carbon Tetrachloride	11.17.89	354	53	50	ug/L	106
Chloroethane	11.17.89	354	48	50	ug/L	96
Chloroform	11.17.89	354	55	50	ug/L	110
Chloromethane	11.17.89	354	61	50	ug/L	122
Carbon Disulfide	11.17.89	354	53	50	ug/L	106
Dibromochloromethane	11.17.89	354	55	50	ug/L	110
Ethylbenzene	11.17.89	354	54	50	ug/L	108
Freon 113	11.17.89	354	53	50	ug/L	106
Methyl ethyl ketone	11.17.89	354	53	50	ug/L	106
Methyl isobutyl ketone	11.17.89	354	61	50	ug/L	122
Methylene chloride	11.17.89	354	58	50	ug/L	116
Styrene	11.17.89	354	55	50	ug/L	110
Trichloroethene	11.17.89	354	53	50	ug/L	106
Trichlorofluoromethane	11.17.89	354	54	50	ug/L	108
Toluene	11.17.89	354	54	50	ug/L	108
Tetrachloroethene	11.17.89	354	55	50	ug/L	110
Vinyl acetate	11.17.89	354	62	50	ug/L	124
Vinyl chloride	11.17.89	354	48	50	ug/L	96
Total Xylene Isomers	11.17.89	354	110	100	ug/L	110
trans-1,3-Dichloropropene	11.17.89	354	55	50	ug/L	110
Purgeable Priority Pollutants						
1,1,1-Trichloroethane	11.17.89	354	62	50	ug/L	124
1,1,2,2-Tetrachloroethane	11.17.89	354	46	50	ug/L	92
1,1,2-Trichloroethane	11.17.89	354	47	50	ug/L	94
1,1-Dichloroethane	11.17.89	354	59	50	ug/L	118
1,1-Dichloroethene	11.17.89	354	46	50	ug/L	92
1,2-Dichloroethane	11.17.89	354	68	50	ug/L	136
1,2-Dichloroethene (Total)	11.17.89	354	48	50	ug/L	96
1,2-Dichloropropane	11.17.89	354	49	50	ug/L	98
1,3-Dichloropropene	11.17.89	354	50	50	ug/L	100
2-Chloroethylvinylether	11.17.89	354	46	50	ug/L	92
2-Hexanone	11.17.89	354	50	50	ug/L	100
Acetone	11.17.89	354	56	50	ug/L	112
Acrolein	11.17.89	354	180	250	ug/L	72
Acrylonitrile	11.17.89	354	270	250	ug/L	108
Bromodichloromethane	11.17.89	354	62	50	ug/L	124



BROWN AND CALDWELL LABORATORIES

BATCH QC REPORT
ORDER E8911203

DATE REPORTED : 11/30/89

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LABORATORY CONTROL STANDARDS

PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
Bromomethane	11.17.89	354	51	50	ug/L	102
Benzene	11.17.89	354	50	50	ug/L	100
Bromoform	11.17.89	354	47	50	ug/L	94
Chlorobenzene	11.17.89	354	50	50	ug/L	100
Carbon Tetrachloride	11.17.89	354	62	50	ug/L	124
Chloroethane	11.17.89	354	60	50	ug/L	120
Chloroform	11.17.89	354	61	50	ug/L	122
Chloromethane	11.17.89	354	54	50	ug/L	108
Carbon Disulfide	11.17.89	354	36	50	ug/L	72
Dibromochloromethane	11.17.89	354	49	50	ug/L	98
Ethylbenzene	11.17.89	354	47	50	ug/L	94
Freon 113	11.17.89	354	54	50	ug/L	108
Methyl ethyl ketone	11.17.89	354	34	50	ug/L	68
Methyl isobutyl ketone	11.17.89	354	46	50	ug/L	92
Methylene chloride	11.17.89	354	58	50	ug/L	116
Styrene	11.17.89	354	50	50	ug/L	100
Trichloroethene	11.17.89	354	45	50	ug/L	90
Trichlorofluoromethane	11.17.89	354	58	50	ug/L	116
Toluene	11.17.89	354	47	50	ug/L	94
Tetrachloroethene	11.17.89	354	45	50	ug/L	90
Vinyl acetate	11.17.89	354	43	50	ug/L	86
Vinyl chloride	11.17.89	354	59	50	ug/L	118
Total Xylene Isomers	11.17.89	354	96	100	ug/L	96
trans-1,3-Dichloropropene	11.17.89	354	49	50	ug/L	98
Purgeable Priority Pollutants						
1,1,1-Trichloroethane	11.17.89	354	6.2	6.2	mg/kg	100
1,1,2,2-Tetrachloroethane	11.17.89	354	5.6	6.2	mg/kg	90
1,2-Dichloroethane	11.17.89	354	6.1	6.2	mg/kg	98
1,2-Dichloroethene (Total)	11.17.89	354	6.8	6.2	mg/kg	110
1,3-Dichloropropene	11.17.89	354	5.9	6.2	mg/kg	95
Bromodichloromethane	11.17.89	354	5.9	6.2	mg/kg	95
Benzene	11.17.89	354	5.9	6.2	mg/kg	95
Bromoform	11.17.89	354	6.1	6.2	mg/kg	98
Ethylbenzene	11.17.89	354	6.6	6.2	mg/kg	106
Trichlorofluoromethane	11.17.89	354	6.6	6.2	mg/kg	106
Toluene	11.17.89	354	6.3	6.2	mg/kg	102
trans-1,3-Dichloropropene	11.17.89	354	6.0	6.2	mg/kg	97

BROWN AND CALDWELL LABORATORIES

BATCH QC REPORT
ORDER E8911203

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Page 1

MATRIX QC PRECISION (DUPLICATES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	R1 RESULT	R2 RESULT	UNIT	RELATIVE % DIFF
Priority Pollutant Metals						
Silver	11.21.89	167	<0.4	<0.4	mg/kg	NA
Beryllium	11.21.89	167	<0.2	<0.2	mg/kg	NA
Cadmium	11.21.89	167	4.3	4.4	mg/kg	2
Chromium	11.21.89	167	58	55	mg/kg	5
Copper	11.21.89	167	23	23	mg/kg	0
Nickel	11.21.89	167	42	43	mg/kg	2
Lead	11.21.89	167	14	30	mg/kg	73
Antimony	11.21.89	167	<1	<1	mg/kg	NA
Thallium	11.21.89	167	<4	75	mg/kg	NA
Arsenic	11.20.89	121	2.8	4.2	mg/kg	40
Arsenic	11.20.89	121	<0.002	0.004	mg/L	NA
Arsenic	11.20.89	121	<0.002	<0.002	mg/L	NA
Selenium	11.20.89	119	<0.4	<0.4	mg/kg	NA
Selenium	11.20.89	119	<0.002	<0.002	mg/L	NA
Mercury	11.18.89	101	0.0004	0.0004	mg/L	0
Petroleum Hydrocarbons by IR	11.21.89	63	<50	<50	mg/kg	NA
Petroleum Hydrocarbons by IR	11.21.89	63	<50	<50	mg/kg	NA

BROWN AND CALDWELL LABORATORIES

BATCH QC REPORT
ORDER E8911203

Page 1

DATE REPORTED : 11/30/89

MATRIX QC PRECISION (DUPLICATE SPIKES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	S1 RESULT	S2 RESULT	UNIT	RELATIVE % DIFF
B/N,A Ext.Pri.Poll. (EPA-8270)						
Dilution Factor	11.20.89	125	1	1	Times	0
1,2,4-Trichlorobenzene	11.20.89	125	1.8	1.9	mg/kg	5
2,4,6-Trichlorophenol	11.20.89	125	2.7	2.9	mg/kg	7
2,4-Dichlorophenol	11.20.89	125	2.2	2.5	mg/kg	13
2,4-Dimethylphenol	11.20.89	125	1.3	1.8	mg/kg	32
2,6-Dinitrotoluene	11.20.89	125	2.6	2.1	mg/kg	21
2-Chlorophenol	11.20.89	125	2.5	2.6	mg/kg	4
2-Methyl-4,6-dinitrophenol	11.20.89	125	2.4	2.8	mg/kg	15
4-Chloro-3-methylphenol	11.20.89	125	3.6	3.8	mg/kg	5
Acenaphthene	11.20.89	125	2.2	2.2	mg/kg	0
Fluoranthene	11.20.89	125	1.6	1.4	mg/kg	13
Fluorene	11.20.89	125	2.1	2.1	mg/kg	0
Phenanthrene	11.20.89	125	1.9	1.9	mg/kg	0
Phenol	11.20.89	125	2.6	2.7	mg/kg	4
Pyrene	11.20.89	125	1.7	1.5	mg/kg	13
2-Fluorobiphenyl Reported	11.20.89	125	1.2	1.2	mg/kg	0
2-Fluorobiphenyl Theoretical	11.20.89	125	1.7	1.7	mg/kg	0
2-Fluorophenol Reported	11.20.89	125	2.2	2.3	mg/kg	4
2-Fluorophenol Theoretical	11.20.89	125	3.3	3.3	mg/kg	0
2,4,6-Tribromophenol Reported	11.20.89	125	2.2	1.9	mg/kg	15
2,4,6-Tribromophenol Theoretical	11.20.89	125	3.3	3.3	mg/kg	0
Nitrobenzene-d5 Reported	11.20.89	125	1.2	1.3	mg/kg	8
Nitrobenzene-d5 Theoretical	11.20.89	125	1.7	1.7	mg/kg	0
Phenol-d5 Reported	11.20.89	125	2.2	2.3	mg/kg	4
Phenol-d5 Theoretical	11.20.89	125	3.3	3.3	mg/kg	0
Terphenyl-d14 Reported	11.20.89	125	1.7	0.4	mg/kg	124
Terphenyl-d14 Theoretical	11.20.89	125	1.7	1.3	mg/kg	27
Purgeable Priority Pollutants						
1,1,1-Trichloroethane	11.17.89	354	5.2	5.6	mg/kg	7
1,1,2,2-Tetrachloroethane	11.17.89	354	7.5	5.7	mg/kg	27
1,2-Dichloroethane	11.17.89	354	6.6	6.0	mg/kg	10
1,2-Dichloroethene (Total)	11.17.89	354	5.8	6.0	mg/kg	3
1,3-Dichloropropene	11.17.89	354	7.1	5.9	mg/kg	18
Bromodichloromethane	11.17.89	354	6.0	5.5	mg/kg	9
Benzene	11.17.89	354	6.2	5.4	mg/kg	14
Bromoform	11.17.89	354	7.4	5.9	mg/kg	23
Ethylbenzene	11.17.89	354	6.6	6.0	mg/kg	10
Trichlorofluoromethane	11.17.89	354	4.0	5.2	mg/kg	26

BROWN AND CALDWELL LABORATORIES

BATCH QC REPORT
ORDER E8911203

DATE REPORTED : 11/30/89

Page 2

MATRIX QC PRECISION (DUPLICATE SPIKES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	S1 RESULT	S2 RESULT	UNIT	RELATIVE % DIFF
Toluene	11.17.89	354	6.7	5.9	mg/kg	13
trans-1,3-Dichloropropene	11.17.89	354	7.0	5.8	mg/kg	19

BROWN AND CALDWELL LABORATORIES

BATCH QC REPORT
ORDER E8911203

DATE REPORTED : 11/30/89

Page 1

MATRIX QC ACCURACY (SPIKES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	SBAR RESULT	TRUE VALUE	UNIT	PERCENT RECOVERY
Priority Pollutant Metals						
Silver	11.21.89	167	18	20	mg/kg	90
Beryllium	11.21.89	167	11	10	mg/kg	110
Cadmium	11.21.89	167	47	54	mg/kg	86
Chromium	11.21.89	167	140	160	mg/kg	81
Copper	11.21.89	167	950	1000	mg/kg	95
Nickel	11.21.89	167	130	140	mg/kg	90
Lead	11.21.89	167	970	1000	mg/kg	97
Antimony	11.21.89	167	15	50	mg/kg	30
Zinc	11.21.89	167	1000	1000	mg/kg	100
Arsenic	11.21.89	121	100	100	mg/kg	100
Arsenic	11.20.89	121	0.025	0.032	mg/L	77
Arsenic	11.20.89	121	0.033	0.031	mg/L	106
Selenium	11.20.89	119	110	100	mg/kg	110
Selenium	11.20.89	119	0.022	0.025	mg/L	88
Mercury	11.18.89	101	0.0012	0.0014	mg/L	80
Petroleum Hydrocarbons by IR /N,A Ext.Pri.Poll. (EPA-8270)	11.21.89	63	250	350	mg/kg	71
Dilution Factor	11.20.89	125	1	1	Times	100
1,2,4-Trichlorobenzene	11.20.89	125	1.85	3.3	mg/kg	56
2,4,6-Trichlorophenol	11.20.89	125	2.8	3.3	mg/kg	85
2,4-Dichlorophenol	11.20.89	125	2.35	3.3	mg/kg	71
2,4-Dimethylphenol	11.20.89	125	1.55	3.3	mg/kg	47
2,6-Dinitrotoluene	11.20.89	125	2.35	3.3	mg/kg	71
2-Chlorophenol	11.20.89	125	2.55	3.3	mg/kg	77
2-Methyl-4,6-dinitrophenol	11.20.89	125	2.6	3.3	mg/kg	79
4-Chloro-3-methylphenol	11.20.89	125	3.7	3.3	mg/kg	112
Acenaphthene	11.20.89	125	2.2	3.3	mg/kg	67
Fluoranthene	11.20.89	125	1.5	3.3	mg/kg	45
Fluorene	11.20.89	125	2.1	3.3	mg/kg	64
Phenanthrene	11.20.89	125	1.9	3.3	mg/kg	58
Phenol	11.20.89	125	2.65	3.3	mg/kg	80
Pyrene	11.20.89	125	1.6	3.3	mg/kg	48
Surgeable Priority Pollutants						
1,1,1-Trichloroethane	11.17.89	354	5.4	6.2	mg/kg	87
1,1,2,2-Tetrachloroethane	11.17.89	354	6.6	6.2	mg/kg	106
1,2-Dichloroethane	11.17.89	354	6.3	6.2	mg/kg	102
1,2-Dichloroethene (Total)	11.17.89	354	5.9	6.2	mg/kg	95
1,3-Dichloropropene	11.17.89	354	6.5	6.2	mg/kg	105
Bromodichloromethane	11.17.89	354	5.75	6.2	mg/kg	93

BROWN AND CALDWELL LABORATORIES

BATCH QC REPORT
ORDER E8911203

DATE REPORTED : 11/30/89

Page 2

MATRIX QC ACCURACY (SPIKES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	SBAR RESULT	TRUE VALUE	UNIT	PERCENT RECOVERY
Benzene	11.17.89	354	5.8	6.2	mg/kg	94
Bromoform	11.17.89	354	6.65	6.2	mg/kg	107
Ethylbenzene	11.17.89	354	6.3	6.2	mg/kg	102
Trichlorofluoromethane	11.17.89	354	4.6	6.2	mg/kg	74
Toluene	11.17.89	354	6.3	6.2	mg/kg	102
trans-1,3-Dichloropropene	11.17.89	354	6.4	6.2	mg/kg	103

CO# 8711

p25/2

CHAIN OF CUSTODY RECORD

PROJECT NUMBER: PROJECT NAME: Haven St

LABORATORY: Brown & Caldwell

STA. NO.	DATE	TIME	COMP	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	TPH 418.1	Priority Pollutants	Volatiles	Extractables - Acid/Bare	Metals	REMARKS
S13	11/7	1405		✓	S13 12"-18"	1	✓				14	
S14	↓	1430		✓	S14 9-9.5'	1	✓				20	
S15	↓	1455		✓	S15 9-9.5'	1	✓				21	
S16	↓	1515		✓	S16 18"-24"	1	✓	✓	✓		10	
↓	↓	1515		✓	↓ 2'-2.5'	1					(5)	

SAMPLED BY AND TITLE (SIGNATURE): *[Signature]* DATE/TIME: 11/7/97 3:30
 RELINQUISHED BY: (SIGNATURE) _____ DATE/TIME: _____ RECEIVED BY: (SIGNATURE) _____
 RELINQUISHED BY: (SIGNATURE) _____ DATE/TIME: _____ RECEIVED BY: (SIGNATURE) _____
 RELINQUISHED BY: (SIGNATURE) _____ DATE/TIME: 11/21/97 3:55 PM RECEIVED BY LAB: (SIGNATURE) *[Signature]*

REMARKS: _____ SAMPLE SHIPPED VIA: UPS BUS FEDERAL EXPRESS AIR BUS BILL NUMBER: _____

LOG # 8911

pl 12

CHAIN OF CUSTODY RECORD

PROJECT NUMBER		PROJECT NAME				NUMBER OF CONTAINERS	TPH 418.1	Priority Pollutants: Volatiles	Extractables - Arsenic/Benz	Metals	REMARKS
		Haven St									
LABORATORY						STA. NO.	DATE	TIME	COMP	GRAB	SAMPLE IDENTIFICATION
Brown & Caldwell											
51	11/7	1030	✓	✓	7 S1 12"-18"	1	✓				11
52		1050	✓	✓	S2 6.5'-2'	1	✓				(1)
			✓	✓	S2 2-2.5'	1	✓	✓	✓		6
53		1125	✓	✓	S3 7.5-8'	1	✓				12
54		1155	✓	✓	S4 12+18"	1	✓				13
55		1205	✓	✓	S5 12-18"	1	✓				14
56		1220	✓	✓	S6 12-18"	1	✓				15
57		1230	✓	✓	S7 12-18"	1	✓				14
58		1250	✓	✓	S8 9-9.5'	1	✓	✓	✓		7
			✓	✓	S8 ↓	1	✓				(2)
59		1310	✓	✓	S9 12"-18"	1	✓				17
510		1330	✓	✓	S10 2-2.5'	1	✓	✓	✓		8
			✓	✓	S10 2.5'-3'	1	✓		✓		(3)
511		1340	✓	✓	S11 18"-24"	1	✓				8
512		1355	✓	✓	S12 12"-18"	1	✓	✓	✓		9
			✓	✓	S12 18"-24"	1	✓		✓		(4)

SAMPLED BY AND TITLE (SIGNATURE)		DATE/TIME	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
<i>[Signature]</i>		11/7/81 3:30			
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY LAB: (SIGNATURE)
				11/7/81 3:55	<i>[Signature]</i>

REMARKS _____

SAMPLE SHIPPED VIA
 UPS BUS
 FEDERAL EXPRESS

AIR BUS BILL NUMBER _____



RECEIVED

DEC - 5 1989

CH2M - HILL
SAN FRANCISCO

Mr. Jeff Holloway
CH2M HILL
6425 Christie Street, Suite 500
Emeryville, California 94608

LOG NO: E89-11-225

Received: 08 NOV 89

Reported: 27 NOV 89

Project: SFO.28521.A1

REPORT OF ANALYTICAL RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED	
11-225-1	S17 12-18"	08 NOV 89	
11-225-2	S18 12-18"	08 NOV 89	
PARAMETER		11-225-1	11-225-2
Priority Pollutant Metals			
Silver, mg/kg		<0.4	---
Beryllium, mg/kg		<0.2	---
Cadmium, mg/kg		4.3	---
Chromium, mg/kg		280	---
Copper, mg/kg		27	---
Nickel, mg/kg		46	---
Lead, mg/kg		42	---
Antimony, mg/kg		<1	---
Thallium, mg/kg		<4	---
Zinc, mg/kg		97	---
Arsenic, mg/kg		3.9	---
Selenium, mg/kg		<0.4	---
Mercury, mg/kg		0.08	---
Priority Pol Metals Digestions, Date		11.11.89	---
Petroleum Hydrocarbons by IR, mg/kg		78	68



LOG NO: E89-11-225

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Project: SFO.28521.A1

REPORT OF ANALYTICAL RESULTS

Page 2

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED	
11-225-1	S17 12-18"	08 NOV 89	
11-225-2	S18 12-18"	08 NOV 89	
PARAMETER		11-225-1	11-225-2
B/N,A Ext.Pri.Poll. (EPA-8270)			
Date Analyzed		11.20.89	---
Date Extracted		11.14.89	---
Dilution Factor, Times		5	---
1,2,4-Trichlorobenzene, mg/kg		<0.2	---
1,2-Dichlorobenzene, mg/kg		<0.2	---
1,2-Diphenylhydrazine, mg/kg		<0.2	---
1,3-Dichlorobenzene, mg/kg		<0.2	---
1,4-Dichlorobenzene, mg/kg		<0.2	---
2,4,5-Trichlorophenol, mg/kg		<0.2	---
2,4,6-Trichlorophenol, mg/kg		<0.2	---
2,4-Dichlorophenol, mg/kg		<0.2	---
2,4-Dimethylphenol, mg/kg		<0.2	---
2,4-Dinitrophenol, mg/kg		<2	---
2,4-Dinitrotoluene, mg/kg		<0.2	---
2,6-Dinitrotoluene, mg/kg		<0.2	---
2-Chloronaphthalene, mg/kg		<0.2	---
2-Chlorophenol, mg/kg		<0.2	---
2-Methyl-4,6-dinitrophenol, mg/kg		<0.2	---
2-Methylnaphthalene, mg/kg		<0.2	---
2-Methylphenol, mg/kg		<0.2	---
2-Nitroaniline, mg/kg		<0.8	---
2-Nitrophenol, mg/kg		<0.2	---
3,3'-Dichlorobenzidine, mg/kg		<0.2	---
3-Nitroaniline, mg/kg		<0.8	---
4-Bromophenylphenylether, mg/kg		<0.2	---



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REPORT OF ANALYTICAL RESULTS

Page 3

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED	
11-225-1	S17 12-18"	08 NOV 89	
11-225-2	S18 12-18"	08 NOV 89	
PARAMETER		11-225-1	11-225-2
4-Chloro-3-methylphenol, mg/kg		<0.2	---
4-Chloroaniline, mg/kg		<0.8	---
4-Chlorophenylphenylether, mg/kg		<0.2	---
4-Methylphenol, mg/kg		<0.2	---
4-Nitroaniline, mg/kg		<0.8	---
4-Nitrophenol, mg/kg		<3	---
Acenaphthene, mg/kg		<0.2	---
Acenaphthylene, mg/kg		<0.2	---
Aniline, mg/kg		<0.2	---
Anthracene, mg/kg		<0.2	---
Benzidine, mg/kg		<6	---
Benzo(a)anthracene, mg/kg		<0.2	---
Benzo(a)pyrene, mg/kg		<0.2	---
Benzo(b)fluoranthene, mg/kg		<0.2	---
Benzo(g,h,i)perylene, mg/kg		<0.2	---
Benzo(k)fluoranthene, mg/kg		<0.2	---
Benzyl alcohol, mg/kg		<0.8	---
Benzoic acid, mg/kg		<0.8	---
Butylbenzylphthalate, mg/kg		<0.2	---
Chrysene, mg/kg		<0.2	---
Di-n-octylphthalate, mg/kg		<0.2	---
Dibenzo(a,h)anthracene, mg/kg		<0.2	---
Dibenzofuran, mg/kg		<0.2	---
Dibutylphthalate, mg/kg		<0.2	---
Diethylphthalate, mg/kg		<0.2	---
Dimethylphthalate, mg/kg		<0.2	---



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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED	
11-225-1	S17 12-18"	08 NOV 89	
11-225-2	S18 12-18"	08 NOV 89	
PARAMETER		11-225-1	11-225-2
Fluoranthene, mg/kg		<0.2	---
Fluorene, mg/kg		<0.2	---
Hexachlorobenzene, mg/kg		<0.2	---
Hexachlorobutadiene, mg/kg		<0.2	---
Hexachlorocyclopentadiene, mg/kg		<0.2	---
Hexachloroethane, mg/kg		<0.2	---
Indeno(1,2,3-c,d)pyrene, mg/kg		<0.2	---
Isophorone, mg/kg		<0.2	---
N-Nitrosodimethylamine, mg/kg		<0.2	---
N-Nitrosodiphenylamine, mg/kg		<0.2	---
N-Nitrosodi-n-propylamine, mg/kg		<0.2	---
Nitrobenzene, mg/kg		<0.2	---
Naphthalene, mg/kg		<0.2	---
Phenanthrene, mg/kg		<0.2	---
Phenol, mg/kg		<0.2	---
Pentachlorophenol, mg/kg		<0.2	---
Pyrene, mg/kg		<0.2	---
Bis(2-chloroethoxy)methane, mg/kg		<0.2	---
Bis(2-chloroethyl)ether, mg/kg		<0.2	---
Bis(2-chloroisopropyl)ether, mg/kg		<0.2	---
Bis(2-ethylhexyl)phthalate, mg/kg		<20	---



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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED	
11-225-1	S17 12-18"	08 NOV 89	
11-225-2	S18 12-18"	08 NOV 89	
PARAMETER		11-225-1	11-225-2
Purgeable Priority Pollutants			
Date Extracted		11.14.89	---
1,1,1-Trichloroethane, mg/kg		<0.1	---
1,1,2,2-Tetrachloroethane, mg/kg		<0.1	---
1,1,2-Trichloroethane, mg/kg		<0.1	---
1,1-Dichloroethane, mg/kg		<0.1	---
1,1-Dichloroethene, mg/kg		<0.1	---
1,2-Dichloroethane, mg/kg		<0.1	---
1,2-Dichloroethene (Total), mg/kg		<0.1	---
1,2-Dichloropropane, mg/kg		<0.1	---
1,3-Dichloropropene, mg/kg		<0.1	---
2-Chloroethylvinylether, mg/kg		<0.1	---
2-Hexanone, mg/kg		<0.1	---
Acetone, mg/kg		<1	---
Acrolein, mg/kg		<1	---
Acrylonitrile, mg/kg		<1	---
Bromodichloromethane, mg/kg		<0.1	---
Bromomethane, mg/kg		<0.1	---
Benzene, mg/kg		<0.1	---
Bromoform, mg/kg		<0.1	---
Chlorobenzene, mg/kg		<0.1	---
Carbon Tetrachloride, mg/kg		<0.1	---
Chloroethane, mg/kg		<0.1	---
Chloroform, mg/kg		<0.1	---
Chloromethane, mg/kg		<0.1	---
Carbon Disulfide, mg/kg		<0.1	---



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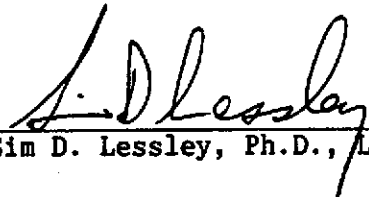
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REPORT OF ANALYTICAL RESULTS

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LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED	
11-225-1	S17 12-18"	08 NOV 89	
11-225-2	S18 12-18"	08 NOV 89	
PARAMETER		11-225-1	11-225-2
Dibromochloromethane, mg/kg		<0.1	---
Ethylbenzene, mg/kg		<0.1	---
Freon 113, mg/kg		<0.1	---
Methyl ethyl ketone, mg/kg		<2	---
Methyl isobutyl ketone, mg/kg		<0.1	---
Methylene chloride, mg/kg		<0.1	---
Styrene, mg/kg		<0.1	---
Trichloroethene, mg/kg		<0.1	---
Trichlorofluoromethane, mg/kg		<0.1	---
Toluene, mg/kg		<0.1	---
Tetrachloroethene, mg/kg		<0.1	---
Vinyl acetate, mg/kg		<0.1	---
Vinyl chloride, mg/kg		<0.1	---
Total Xylene Isomers, mg/kg		<0.1	---
trans-1,3-Dichloropropene, mg/kg		<0.1	---


Sim D. Lessley, Ph.D., Laboratory Director

BROWN AND CALDWELL ANALYTICAL LABORATORIES

BATCH QC REPORT

Definitions and Terms

- Accuracy:** The ability of a procedure to determine the "true" concentration of an analyte.
- Batch:** A group of samples analyzed sequentially using the same calibration curve, reagents, and instrument.
- Laboratory Control Standard (LCS):** Laboratory reagent water spiked with known compounds and subjected to the same procedures as the samples. The LCS thus indicates the accuracy of the analytical method and, because it is prepared from a different source than the standard used to calibrate the instrument, it also serves to double-check the calibration.
- LC Result:** Laboratory result of an LCS analysis.
- LT Result:** Expected result, or true value, of the LCS analysis.
- Matrix QC:** Quality control tests performed on actual client samples. For most inorganic analyses, the laboratory uses a pair of duplicate samples and a spiked sample. For most organic analyses, the laboratory uses a pair of spiked samples (duplicate spikes).
- Percent Recovery:** The percentage of analyte recovered.
For LCS, the percent recovery calculation is
$$LC \div LT \times 100.$$

For spike recoveries, the percent recovery calculation is
$$\frac{(\text{S Bar} - \text{Sample Concentration})}{\text{Spike Amount}} \times 100$$
- Precision:** The reproducibility of a procedure demonstrated by the agreement between analyses performed on either duplicates of the same sample or a pair of duplicate spikes.
- R1, R2 Result:** Result of the analysis of replicate aliquots of a sample, with R1 indicating the first analysis of the sample and R2 its corresponding duplicate; used to determine precision.
- Relative Percent Difference (RPD):** Calculated using one of the following:
$$\frac{(R1 - R2) \times 100}{(R1 + R2) \div 2} \qquad \frac{(S1 - S2) \times 100}{(S1 + S2) \div 2}$$
- S Bar Result:** The average of spike analysis results.
- S1, S2 Result:** Result of the analysis of replicate spiked aliquots, with S1 indicating one spike of the sample and S2 the second spike; used to determine precision and accuracy.
- True value:** The theoretical, or expected, result of a spike sample analysis.



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LABORATORY CONTROL STANDARDS

PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
Petroleum Hydrocarbons by IR Purgeable Priority Pollutants	11.21.89	63	320	310	mg/L	103
1,1,1-Trichloroethane	11.17.89	354	54	50	ug/L	108
1,1,2,2-Tetrachloroethane	11.17.89	354	63	50	ug/L	126
1,1,2-Trichloroethane	11.17.89	354	57	50	ug/L	114
1,1-Dichloroethane	11.17.89	354	55	50	ug/L	110
1,1-Dichloroethene	11.17.89	354	52	50	ug/L	104
1,2-Dichloroethane	11.17.89	354	58	50	ug/L	116
1,2-Dichloroethene (Total)	11.17.89	354	53	50	ug/L	106
1,2-Dichloropropane	11.17.89	354	55	50	ug/L	110
1,3-Dichloropropene	11.17.89	354	56	50	ug/L	112
2-Chloroethylvinylether	11.17.89	354	57	50	ug/L	114
2-Hexanone	11.17.89	354	59	50	ug/L	118
Acetone	11.17.89	354	50	50	ug/L	100
Acrolein	11.17.89	354	290	250	ug/L	116
Acrylonitrile	11.17.89	354	300	250	ug/L	120
Bromodichloromethane	11.17.89	354	55	50	ug/L	110
Bromomethane	11.17.89	354	49	50	ug/L	98
Benzene	11.17.89	354	55	50	ug/L	110
Bromoform	11.17.89	354	57	50	ug/L	114
Chlorobenzene	11.17.89	354	54	50	ug/L	108
Carbon Tetrachloride	11.17.89	354	53	50	ug/L	106
Chloroethane	11.17.89	354	48	50	ug/L	96
Chloroform	11.17.89	354	55	50	ug/L	110
Chloromethane	11.17.89	354	61	50	ug/L	122
Carbon Disulfide	11.17.89	354	53	50	ug/L	106
Dibromochloromethane	11.17.89	354	55	50	ug/L	110
Ethylbenzene	11.17.89	354	54	50	ug/L	108
Freon 113	11.17.89	354	53	50	ug/L	106
Methyl ethyl ketone	11.17.89	354	53	50	ug/L	106
Methyl isobutyl ketone	11.17.89	354	61	50	ug/L	122
Methylene chloride	11.17.89	354	58	50	ug/L	116
Styrene	11.17.89	354	55	50	ug/L	110
Trichloroethene	11.17.89	354	53	50	ug/L	106
Trichlorofluoromethane	11.17.89	354	54	50	ug/L	108
Toluene	11.17.89	354	54	50	ug/L	108
Tetrachloroethene	11.17.89	354	55	50	ug/L	110
Vinyl acetate	11.17.89	354	62	50	ug/L	124

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LABORATORY CONTROL STANDARDS

PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
Vinyl chloride	11.17.89	354	48	50	ug/L	96
Total Xylene Isomers	11.17.89	354	110	100	ug/L	110
trans-1,3-Dichloropropene	11.17.89	354	55	50	ug/L	110
Purgeable Priority Pollutants						
1,1,1-Trichloroethane	11.17.89	354	62	50	ug/L	124
1,1,2,2-Tetrachloroethane	11.17.89	354	46	50	ug/L	92
1,1,2-Trichloroethane	11.17.89	354	47	50	ug/L	94
1,1-Dichloroethane	11.17.89	354	59	50	ug/L	118
1,1-Dichloroethene	11.17.89	354	46	50	ug/L	92
1,2-Dichloroethane	11.17.89	354	68	50	ug/L	136
1,2-Dichloroethene (Total)	11.17.89	354	48	50	ug/L	96
1,2-Dichloropropane	11.17.89	354	49	50	ug/L	98
1,3-Dichloropropene	11.17.89	354	50	50	ug/L	100
2-Chloroethylvinylether	11.17.89	354	46	50	ug/L	92
2-Hexanone	11.17.89	354	50	50	ug/L	100
Acetone	11.17.89	354	56	50	ug/L	112
Acrolein	11.17.89	354	180	250	ug/L	72
Acrylonitrile	11.17.89	354	270	250	ug/L	108
Bromodichloromethane	11.17.89	354	62	50	ug/L	124
Bromomethane	11.17.89	354	51	50	ug/L	102
Benzene	11.17.89	354	50	50	ug/L	100
Bromoform	11.17.89	354	47	50	ug/L	94
Chlorobenzene	11.17.89	354	50	50	ug/L	100
Carbon Tetrachloride	11.17.89	354	62	50	ug/L	124
Chloroethane	11.17.89	354	60	50	ug/L	120
Chloroform	11.17.89	354	61	50	ug/L	122
Chloromethane	11.17.89	354	54	50	ug/L	108
Carbon Disulfide	11.17.89	354	36	50	ug/L	72
Dibromochloromethane	11.17.89	354	49	50	ug/L	98
Ethylbenzene	11.17.89	354	47	50	ug/L	94
Freon 113	11.17.89	354	54	50	ug/L	108
Methyl ethyl ketone	11.17.89	354	34	50	ug/L	68
Methyl isobutyl ketone	11.17.89	354	46	50	ug/L	92
Methylene chloride	11.17.89	354	58	50	ug/L	116
Styrene	11.17.89	354	50	50	ug/L	100
Trichloroethene	11.17.89	354	45	50	ug/L	90
Trichlorofluoromethane	11.17.89	354	58	50	ug/L	116
Toluene	11.17.89	354	47	50	ug/L	94



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LABORATORY CONTROL STANDARDS

PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
Tetrachloroethene	11.17.89	354	45	50	ug/L	90
Vinyl acetate	11.17.89	354	43	50	ug/L	86
Vinyl chloride	11.17.89	354	59	50	ug/L	118
Total Xylene Isomers	11.17.89	354	96	100	ug/L	96
trans-1,3-Dichloropropene	11.17.89	354	49	50	ug/L	98
Purgeable Priority Pollutants						
1,1,1-Trichloroethane	11.17.89	354	6.2	6.2	mg/kg	100
1,1,2,2-Tetrachloroethane	11.17.89	354	5.6	6.2	mg/kg	90
1,2-Dichloroethane	11.17.89	354	6.1	6.2	mg/kg	98
1,2-Dichloroethene (Total)	11.17.89	354	6.8	6.2	mg/kg	110
1,3-Dichloropropene	11.17.89	354	5.9	6.2	mg/kg	95
Bromodichloromethane	11.17.89	354	5.9	6.2	mg/kg	95
Benzene	11.17.89	354	5.9	6.2	mg/kg	95
Bromoform	11.17.89	354	6.1	6.2	mg/kg	98
Ethylbenzene	11.17.89	354	6.6	6.2	mg/kg	106
Trichlorofluoromethane	11.17.89	354	6.6	6.2	mg/kg	106
Toluene	11.17.89	354	6.3	6.2	mg/kg	102
trans-1,3-Dichloropropene	11.17.89	354	6.0	6.2	mg/kg	97
Priority Pollutant Metals						
Silver	11.21.89	167	0.95	1	mg/L	95
Beryllium	11.21.89	167	0.23	0.25	mg/L	92
Cadmium	11.21.89	167	10.3	12.5	mg/L	82
Chromium	11.21.89	167	10.8	12.5	mg/L	86
Copper	11.21.89	167	25	25	mg/L	100
Nickel	11.21.89	167	9.3	10	mg/L	93
Lead	11.21.89	167	47	50	mg/L	94
Antimony	11.21.89	167	0.91	1	mg/L	91
Thallium	11.21.89	167	3.0	3.0	mg/L	100
Zinc	11.21.89	167	96	100	mg/L	96
Arsenic	11.20.89	121	0.019	0.020	mg/L	95
Arsenic	11.20.89	121	0.020	0.020	mg/L	100
Arsenic	11.20.89	121	0.019	0.020	mg/L	95
Selenium	11.20.89	119	0.020	0.020	mg/L	100
Selenium	11.20.89	119	0.019	0.020	mg/L	95
Mercury	11.18.89	102	0.0017	0.0020	mg/L	85
Mercury	11.18.89	102	0.0018	0.0020	mg/L	90



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MATRIX QC PRECISION (DUPLICATES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	R1 RESULT	R2 RESULT	UNIT	RELATIVE % DIFF
Petroleum Hydrocarbons by IR	11.21.89	63	<50	<50	mg/kg	NA
Petroleum Hydrocarbons by IR	11.21.89	63	<50		mg/kg	NA
Priority Pollutant Metals						
Silver	11.21.89	167	<0.4	<0.4	mg/kg	NA
Beryllium	11.21.89	167	<0.2	<0.2	mg/kg	NA
Cadmium	11.21.89	167	4.3	4.4	mg/kg	2
Chromium	11.21.89	167	58	55	mg/kg	5
Copper	11.21.89	167	23	23	mg/kg	0
Nickel	11.21.89	167	42	43	mg/kg	2
Lead	11.21.89	167	14	30	mg/kg	73
Antimony	11.21.89	167	<1	<1	mg/kg	NA
Thallium	11.21.89	167	<4	75	mg/kg	NA
Arsenic	11.20.89	121	2.8	4.2	mg/kg	40
Arsenic	11.20.89	121	<0.002	0.004	mg/L	NA
Arsenic	11.20.89	121	<0.002	<0.002	mg/L	NA
Selenium	11.20.89	119	<0.4	<0.4	mg/kg	NA
Selenium	11.20.89	119	<0.002	<0.002	mg/L	NA
Mercury	11.18.89	102	0.0003	0.0002	mg/L	40
Mercury	11.18.89	102	0.0001	0.0001	mg/L	0
Mercury	11.18.89	102	0.0005	0.0005	mg/L	0

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MATRIX QC PRECISION (DUPLICATE SPIKES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	S1 RESULT	S2 RESULT	UNIT	RELATIVE % DIFF
B/N,A Ext.Pri.Poll. (EPA-8270)						
Dilution Factor	11.20.89	125	1	1	Times	0
1,2,4-Trichlorobenzene	11.20.89	125	1.8	1.9	mg/kg	5
2,4,6-Trichlorophenol	11.20.89	125	2.7	2.9	mg/kg	7
2,4-Dichlorophenol	11.20.89	125	2.2	2.5	mg/kg	13
2,4-Dimethylphenol	11.20.89	125	1.3	1.8	mg/kg	32
2,6-Dinitrotoluene	11.20.89	125	2.6	2.1	mg/kg	21
2-Chlorophenol	11.20.89	125	2.5	2.6	mg/kg	4
2-Methyl-4,6-dinitrophenol	11.20.89	125	2.4	2.8	mg/kg	15
4-Chloro-3-methylphenol	11.20.89	125	3.6	3.8	mg/kg	5
Acenaphthene	11.20.89	125	2.2	2.2	mg/kg	0
Fluoranthene	11.20.89	125	1.6	1.4	mg/kg	13
Fluorene	11.20.89	125	2.1	2.1	mg/kg	0
Phenanthrene	11.20.89	125	1.9	1.9	mg/kg	0
Phenol	11.20.89	125	2.6	2.7	mg/kg	4
Pyrene	11.20.89	125	1.7	1.5	mg/kg	13
2-Fluorobiphenyl Reported	11.20.89	125	1.2	1.2	mg/kg	0
2-Fluorobiphenyl Theoretical	11.20.89	125	1.7	1.7	mg/kg	0
2-Fluorophenol Reported	11.20.89	125	2.2	2.3	mg/kg	4
2-Fluorophenol Theoretical	11.20.89	125	3.3	3.3	mg/kg	0
2,4,6-Tribromophenol Reported	11.20.89	125	2.2	1.9	mg/kg	15
2,4,6-Tribromophenol Theoretical	11.20.89	125	3.3	3.3	mg/kg	0
Nitrobenzene-d5 Reported	11.20.89	125	1.2	1.3	mg/kg	8
Nitrobenzene-d5 Theoretical	11.20.89	125	1.7	1.7	mg/kg	0
Phenol-d5 Reported	11.20.89	125	2.2	2.3	mg/kg	4
Phenol-d5 Theoretical	11.20.89	125	3.3	3.3	mg/kg	0
Terphenyl-d14 Reported	11.20.89	125	1.7	0.4	mg/kg	124
Terphenyl-d14 Theoretical	11.20.89	125	1.7	1.3	mg/kg	27
Purgeable Priority Pollutants						
1,1,1-Trichloroethane	11.17.89	354	5.2	5.6	mg/kg	7
1,1,2,2-Tetrachloroethane	11.17.89	354	7.5	5.7	mg/kg	27
1,2-Dichloroethane	11.17.89	354	6.6	6.0	mg/kg	10
1,2-Dichloroethene (Total)	11.17.89	354	5.8	6.0	mg/kg	3
1,3-Dichloropropene	11.17.89	354	7.1	5.9	mg/kg	18
Bromodichloromethane	11.17.89	354	6.0	5.5	mg/kg	9
Benzene	11.17.89	354	6.2	5.4	mg/kg	14
Bromoform	11.17.89	354	7.4	5.9	mg/kg	23
Ethylbenzene	11.17.89	354	6.6	6.0	mg/kg	10
Trichlorofluoromethane	11.17.89	354	4.0	5.2	mg/kg	26

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MATRIX QC PRECISION (DUPLICATE SPIKES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	S1 RESULT	S2 RESULT	UNIT	RELATIVE % DIFF
Toluene	11.17.89	354	6.7	5.9	mg/kg	13
trans-1,3-Dichloropropene	11.17.89	354	7.0	5.8	mg/kg	19



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MATRIX QC ACCURACY (SPIKES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	SBAR RESULT	TRUE VALUE	UNIT	PERCENT RECOVERY
Petroleum Hydrocarbons by IR B/N,A Ext.Pri.Poll. (EPA-8270)	11.21.89	63	250	350	mg/kg	71
Dilution Factor	11.20.89	125	1	1	Times	100
1,2,4-Trichlorobenzene	11.20.89	125	1.85	3.3	mg/kg	56
2,4,6-Trichlorophenol	11.20.89	125	2.8	3.3	mg/kg	85
2,4-Dichlorophenol	11.20.89	125	2.35	3.3	mg/kg	71
2,4-Dimethylphenol	11.20.89	125	1.55	3.3	mg/kg	47
2,6-Dinitrotoluene	11.20.89	125	2.35	3.3	mg/kg	71
2-Chlorophenol	11.20.89	125	2.55	3.3	mg/kg	77
2-Methyl-4,6-dinitrophenol	11.20.89	125	2.6	3.3	mg/kg	79
4-Chloro-3-methylphenol	11.20.89	125	3.7	3.3	mg/kg	112
Acenaphthene	11.20.89	125	2.2	3.3	mg/kg	67
Fluoranthene	11.20.89	125	1.5	3.3	mg/kg	45
Fluorene	11.20.89	125	2.1	3.3	mg/kg	64
Phenanthrene	11.20.89	125	1.9	3.3	mg/kg	58
Phenol	11.20.89	125	2.65	3.3	mg/kg	80
Pyrene	11.20.89	125	1.6	3.3	mg/kg	48
Purgeable Priority Pollutants						
1,1,1-Trichloroethane	11.17.89	354	5.4	6.2	mg/kg	87
1,1,2,2-Tetrachloroethane	11.17.89	354	6.6	6.2	mg/kg	106
1,2-Dichloroethane	11.17.89	354	6.3	6.2	mg/kg	102
1,2-Dichloroethene (Total)	11.17.89	354	5.9	6.2	mg/kg	95
1,3-Dichloropropene	11.17.89	354	6.5	6.2	mg/kg	105
Bromodichloromethane	11.17.89	354	5.75	6.2	mg/kg	93
Benzene	11.17.89	354	5.8	6.2	mg/kg	94
Bromoform	11.17.89	354	6.65	6.2	mg/kg	107
Ethylbenzene	11.17.89	354	6.3	6.2	mg/kg	102
Trichlorofluoromethane	11.17.89	354	4.6	6.2	mg/kg	74
Toluene	11.17.89	354	6.3	6.2	mg/kg	102
trans-1,3-Dichloropropene	11.17.89	354	6.4	6.2	mg/kg	103
Priority Pollutant Metals						
Silver	11.21.89	167	18	20	mg/kg	90
Beryllium	11.21.89	167	11	10	mg/kg	110
Cadmium	11.21.89	167	47	54	mg/kg	86
Chromium	11.21.89	167	140	160	mg/kg	81
Copper	11.21.89	167	950	1000	mg/kg	95
Nickel	11.21.89	167	130	140	mg/kg	90
Lead	11.21.89	167	970	1000	mg/kg	97
Antimony	11.21.89	167	15	50	mg/kg	30
Zinc	11.21.89	167	1000	1000	mg/kg	100



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MATRIX QC ACCURACY (SPIKES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	SBAR RESULT	TRUE VALUE	UNIT	PERCENT RECOVERY
Arsenic	11.21.89	121	100	100	mg/kg	100
Arsenic	11.20.89	121	0.025	0.032	mg/L	77
Arsenic	11.20.89	121	0.033	0.031	mg/L	106
Selenium	11.20.89	119	110	100	mg/kg	110
Selenium	11.20.89	119	0.022	0.025	mg/L	88
Mercury	11.18.89	102	0.0013	0.0013	mg/L	100
Mercury	11.18.89	102	0.0013	0.0011	mg/L	120
Mercury	11.18.89	102	0.0015	0.0015	mg/L	100



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METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT
Petroleum Hydrocarbons by IR	11.21.89	63	0	50	mg/kg
B/N,A Ext.Pri.Poll. (EPA-8270)					
1,2,4-Trichlorobenzene	11.20.89	125	0	0.03	mg/kg
1,2-Dichlorobenzene	11.20.89	125	0	0.03	mg/kg
1,2-Diphenylhydrazine	11.20.89	125	0	0.03	mg/kg
1,3-Dichlorobenzene	11.20.89	125	0	0.03	mg/kg
1,4-Dichlorobenzene	11.20.89	125	0	0.03	mg/kg
2,4,5-Trichlorophenol	11.20.89	125	0	0.03	mg/kg
2,4,6-Trichlorophenol	11.20.89	125	0	0.03	mg/kg
2,4-Dichlorophenol	11.20.89	125	0	0.03	mg/kg
2,4-Dimethylphenol	11.20.89	125	0	0.03	mg/kg
2,4-Dinitrophenol	11.20.89	125	0	0.3	mg/kg
2,4-Dinitrotoluene	11.20.89	125	0	0.03	mg/kg
2,6-Dinitrotoluene	11.20.89	125	0	0.03	mg/kg
2-Chloronaphthalene	11.20.89	125	0	0.03	mg/kg
2-Chlorophenol	11.20.89	125	0	0.03	mg/kg
2-Methyl-4,6-dinitrophenol	11.20.89	125	0	0.03	mg/kg
2-Methylnaphthalene	11.20.89	125	0	0.03	mg/kg
2-Methylphenol	11.20.89	125	0	0.03	mg/kg
2-Nitroaniline	11.20.89	125	0	0.2	mg/kg
2-Nitrophenol	11.20.89	125	0	0.03	mg/kg
3,3'-Dichlorobenzidine	11.20.89	125	0	0.03	mg/kg
3-Nitroaniline	11.20.89	125	0	0.2	mg/kg
4-Bromophenylphenylether	11.20.89	125	0	0.03	mg/kg
4-Chloro-3-methylphenol	11.20.89	125	0	0.03	mg/kg
4-Chloroaniline	11.20.89	125	0	0.2	mg/kg
4-Chlorophenylphenylether	11.20.89	125	0	0.03	mg/kg
4-Methylphenol	11.20.89	125	0	0.03	mg/kg
4-Nitroaniline	11.20.89	125	0	0.2	mg/kg
4-Nitrophenol	11.20.89	125	0	0.6	mg/kg
Acenaphthene	11.20.89	125	0	0.03	mg/kg
Acenaphthylene	11.20.89	125	0	0.03	mg/kg
Aniline	11.20.89	125	0	0.03	mg/kg
Anthracene	11.20.89	125	0	0.03	mg/kg
Benzidine	11.20.89	125	0	1	mg/kg
Benzo(a)anthracene	11.20.89	125	0	0.03	mg/kg
Benzo(a)pyrene	11.20.89	125	0	0.03	mg/kg
Benzo(b)fluoranthene	11.20.89	125	0	0.03	mg/kg

BROWN AND CALDWELL LABORATORIES

BATCH QC REPORT
ORDER E8911225

DATE REPORTED : 11/30/89

Page 2

METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT
Benzo(g,h,i)perylene	11.20.89	125	0	0.03	mg/kg
Benzo(k)fluoranthene	11.20.89	125	0	0.03	mg/kg
Benzyl alcohol	11.20.89	125	0	0.03	mg/kg
Benzoic acid	11.20.89	125	0	0.2	mg/kg
Butylbenzylphthalate	11.20.89	125	0	0.03	mg/kg
Chrysene	11.20.89	125	0	0.03	mg/kg
Di-n-octylphthalate	11.20.89	125	0	0.03	mg/kg
Dibenzo(a,h)anthracene	11.20.89	125	0	0.03	mg/kg
Dibenzofuran	11.20.89	125	0	0.03	mg/kg
Dibutylphthalate	11.20.89	125	0	0.03	mg/kg
Diethylphthalate	11.20.89	125	0	0.03	mg/kg
Dimethylphthalate	11.20.89	125	0	0.03	mg/kg
Fluoranthene	11.20.89	125	0	0.03	mg/kg
Fluorene	11.20.89	125	0	0.03	mg/kg
Hexachlorobenzene	11.20.89	125	0	0.03	mg/kg
Hexachlorobutadiene	11.20.89	125	0	0.03	mg/kg
Hexachlorocyclopentadiene	11.20.89	125	0	0.03	mg/kg
Hexachloroethane	11.20.89	125	0	0.03	mg/kg
Indeno(1,2,3-c,d)pyrene	11.20.89	125	0	0.03	mg/kg
Isophorone	11.20.89	125	0	0.03	mg/kg
N-Nitrosodimethylamine	11.20.89	125	0	0.03	mg/kg
N-Nitrosodiphenylamine	11.20.89	125	0	0.03	mg/kg
N-Nitrosodi-n-propylamine	11.20.89	125	0	0.03	mg/kg
Nitrobenzene	11.20.89	125	0	0.03	mg/kg
Naphthalene	11.20.89	125	0	0.03	mg/kg
Phenanthrene	11.20.89	125	0	0.03	mg/kg
Phenol	11.20.89	125	0	0.03	mg/kg
Pentachlorophenol	11.20.89	125	0	0.03	mg/kg
Pyrene	11.20.89	125	0	0.03	mg/kg
Bis(2-chloroethoxy)methane	11.20.89	125	0	0.03	mg/kg
Bis(2-chloroethyl)ether	11.20.89	125	0	0.03	mg/kg
Bis(2-chloroisopropyl)ether	11.20.89	125	0	0.03	mg/kg
Bis(2-ethylhexyl)phthalate	11.20.89	125	0.15	3	mg/kg
Purgeable Priority Pollutants					
1,1,1-Trichloroethane	11.17.89	354	0	0.1	ug/L
1,1,2,2-Tetrachloroethane	11.17.89	354	0	0.1	ug/L
1,1,2-Trichloroethane	11.17.89	354	0	0.1	ug/L
1,1-Dichloroethane	11.17.89	354	0	0.1	ug/L

BROWN AND CALDWELL LABORATORIES

BATCH QC REPORT
ORDER E8911225

DATE REPORTED : 11/30/89

Page 3

METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT
1,1-Dichloroethene	11.17.89	354	0	0.1	ug/L
1,2-Dichloroethane	11.17.89	354	0	0.1	ug/L
1,2-Dichloroethene (Total)	11.17.89	354	0	0.1	ug/L
1,2-Dichloropropane	11.17.89	354	0	0.1	ug/L
1,3-Dichloropropene	11.17.89	354	0	0.1	ug/L
2-Chloroethylvinylether	11.17.89	354	0	0.1	ug/L
2-Hexanone	11.17.89	354	0	0.1	ug/L
Acetone	11.17.89	354	0	1	ug/L
Acrolein	11.17.89	354	0	1	ug/L
Acrylonitrile	11.17.89	354	0	1	ug/L
Bromodichloromethane	11.17.89	354	0	0.1	ug/L
Bromomethane	11.17.89	354	0	0.1	ug/L
Benzene	11.17.89	354	0	0.1	ug/L
Bromoform	11.17.89	354	0	0.1	ug/L
Chlorobenzene	11.17.89	354	0	0.1	ug/L
Carbon Tetrachloride	11.17.89	354	0	0.1	ug/L
Chloroethane	11.17.89	354	0	0.1	ug/L
Chloroform	11.17.89	354	0	0.1	ug/L
Chloromethane	11.17.89	354	0	0.1	ug/L
Carbon Disulfide	11.17.89	354	0	0.1	ug/L
Dibromochloromethane	11.17.89	354	0	0.1	ug/L
Ethylbenzene	11.17.89	354	0	0.1	ug/L
Freon 113	11.17.89	354	0	0.1	ug/L
Methyl ethyl ketone	11.17.89	354	0	2	ug/L
Methyl isobutyl ketone	11.17.89	354	0	0.1	ug/L
Methylene chloride	11.17.89	354	5.2	0.1	ug/L
Styrene	11.17.89	354	0	0.1	ug/L
Trichloroethene	11.17.89	354	0	NA	ug/L
Trichlorofluoromethane	11.17.89	354	0	0.1	ug/L
Toluene	11.17.89	354	0	0.1	ug/L
Tetrachloroethene	11.17.89	354	0	0.1	ug/L
Vinyl acetate	11.17.89	354	0	0.1	ug/L
Vinyl chloride	11.17.89	354	0	0.1	ug/L
Total Xylene Isomers	11.17.89	354	0	0.1	ug/L
trans-1,3-Dichloropropene	11.17.89	354	0	0.1	ug/L
Purgeable Priority Pollutants					
1,1,1-Trichloroethane	11.17.89	354	0	1	mg/kg
1,1,2,2-Tetrachloroethane	11.17.89	354	0	1	mg/kg

BROWN AND CALDWELL LABORATORIES

BATCH QC REPORT
ORDER E8911225

DATE REPORTED : 11/30/89

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METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT
1,1,2-Trichloroethane	11.17.89	354	0	1	mg/kg
1,1-Dichloroethane	11.17.89	354	0	1	mg/kg
1,1-Dichloroethene	11.17.89	354	0	1	mg/kg
1,2-Dichloroethane	11.17.89	354	0	1	mg/kg
1,2-Dichloroethene (Total)	11.17.89	354	0	1	mg/kg
1,2-Dichloropropane	11.17.89	354	0	1	mg/kg
2-Chloroethylvinylether	11.17.89	354	0	1	mg/kg
2-Hexanone	11.17.89	354	0	1	mg/kg
Acetone	11.17.89	354	0	10	mg/kg
Acrolein	11.17.89	354	0	10	mg/kg
Acrylonitrile	11.17.89	354	0	10	mg/kg
Bromodichloromethane	11.17.89	354	0	1	mg/kg
Bromomethane	11.17.89	354	0	1	mg/kg
Benzene	11.17.89	354	0	1	mg/kg
Bromoform	11.17.89	354	0	1	mg/kg
Chlorobenzene	11.17.89	354	0	1	mg/kg
Carbon Tetrachloride	11.17.89	354	0	1	mg/kg
Chloroethane	11.17.89	354	0	1	mg/kg
Chloroform	11.17.89	354	0	1	mg/kg
Chloromethane	11.17.89	354	0	1	mg/kg
Carbon Disulfide	11.17.89	354	0	1	mg/kg
Dibromochloromethane	11.17.89	354	0	1	mg/kg
Ethylbenzene	11.17.89	354	0	1	mg/kg
Freon 113	11.17.89	354	0	1	mg/kg
Methyl ethyl ketone	11.17.89	354	2.4	20	mg/kg
Methyl isobutyl ketone	11.17.89	354	0	1	mg/kg
Methylene chloride	11.17.89	354	1.4	1	mg/kg
Styrene	11.17.89	354	0	1	mg/kg
Trichloroethene	11.17.89	354	0	1	mg/kg
Trichlorofluoromethane	11.17.89	354	0	1	mg/kg
Toluene	11.17.89	354	0	1	mg/kg
Tetrachloroethene	11.17.89	354	0	1	mg/kg
Vinyl acetate	11.17.89	354	0	1	mg/kg
Vinyl chloride	11.17.89	354	0	1	mg/kg
Total Xylene Isomers	11.17.89	354	0	1	mg/kg
trans-1,3-Dichloropropene	11.17.89	354	0	1	mg/kg
Priority Pollutant Metals					
Silver	11.21.89	167	0	0.02	mg/kg

BROWN AND CALDWELL LABORATORIES

BATCH QC REPORT
ORDER E8911225

DATE REPORTED : 11/30/89

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METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT
Beryllium	11.21.89	167	0	0.01	mg/kg
Cadmium	11.21.89	167	0	0.04	mg/kg
Chromium	11.21.89	167	0	0.05	mg/kg
Copper	11.21.89	167	0	0.08	mg/kg
Nickel	11.21.89	167	0	0.03	mg/kg
Lead	11.21.89	167	0	0.3	mg/kg
Antimony	11.21.89	167	0	0.06	mg/kg
Thallium	11.21.89	167	0	0.2	mg/kg
Zinc	11.21.89	167	0	0.01	mg/kg
Arsenic	11.20.89	121	0	0.002	mg/L
Arsenic	11.20.89	121	0	0.4	mg/kg
Selenium	11.20.89	119	0	0.002	mg/L
Selenium	11.20.89	119	0.26	0.4	mg/kg

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. **CADD001391V002** Manifest Document No. **271948**

2. Page 1 of information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
1250 PARK AVE FOLSOM CA 94608

A. State Manifest Document Number
88227448

5. Transporter 1 Company Name
HALL SHIP SERVICE CO

C. State Transporter's ID

7. Transporter 2 Company Name

E. State Transporter's ID

9. Designated Facility Name and Site Address
**HALL SHIP SERVICE CO
220 CHINA BASIN ST
SAN FRANCISCO CA 94102**

G. State Facility's ID
H. Facility's Phone
(415) 543-4935

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers		13. Total Quantity	14. Unit Wt/Vol	Waste No.
	No.	Type			
a. WASTE EMPTY GASOLINE TANK FLAMMABLE LIQUID UN 1203	001	TP	160	100	5R D001
b. WASTE EMPTY FUEL OIL TANKS COMBUSTIBLE LIQUID UN 1993	004	TP	460	5	5B NA
c.					
d.					

J. Additional Descriptions for Materials Listed Above
EMPTY UNDER GROUND GASOLINE & FUEL OIL STORAGE TANKS WITH LESS THAN ONE GALLON RESIDUAL LIQUID IN EACH TANK

K. Handling Codes for Wastes Listed Above
a. b. c. d.

15. Special Handling Instructions and Additional Information
BOOT'S & GLOVE'S

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: **BHARAT SHAM** Signature: *[Signature]* Month Day Year: **1 13 1989**

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: **KEVIN E. JOHNSON** Signature: *[Signature]* Month Day Year: **02 22 89**

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: Signature: Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.
Printed/Typed Name: Signature: Month Day Year:

GENERATOR
TRANSPORTER
FACILITY

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. **CIAD98113911188** Manifest Document No. **049188** 2. Page 1 of 1 Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
**Del Monte Foods, USA
1250 Park Ave
Emeryville, CA 94608**

A. State Manifest Document Number
88605988
B. State Generator's ID
H1A40369988169

4. Generator's Phone (415) **470-2600**

C. State Transporter's ID
900958

5. Transporter 1 Company Name
Solvent Service Inc

D. Transporter's Phone
453-6046

6. US EPA ID Number
CAAD059494310
7. Transporter 2 Company Name
8. US EPA ID Number
9. Designated Facility Name and Site Address
**Solvent Service, Inc
1021 BERRYESSA RD
SAN JOSE, CA 95133**

E. State Transporter's ID
F. Transporter's Phone
G. State Facility's ID
CIAD059494310
H. Facility's Phone
(408) 453-6046

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers		13. Total Quantity	14. Unit Wt./Vol	1. Waste No.
	No.	Type			
a. Hazardous waste liquid, n.o.s., ORM-E, NA 9189 DETE 8706	001	TT	09500	G	State 213 EPA/Other EQ01/EQ05
b.					State EPA/Other
c.					State EPA/Other
d.					State EPA/Other

J. Additional Descriptions for Materials Listed Above
A) Profile # HWL 1255

K. Handling Codes for Wastes Listed Above
a. b. c. d.

15. Special Handling Instructions and Additional Information
Gloves + Respirators

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name **BHARAT SHAH** Signature *[Signature]* Month Day Year **10 32 1989**

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name **James L. Lehn** Signature *[Signature]* Month Day Year **10 32 1989**

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name Signature Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name Signature Month Day Year

GENERATOR
TRANSPORTER
FACILITY

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. CA109813A118E000011	Manifest Document No.	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address DEL MONTE CORP. 1250 PARK ME EMERYVILLE CA 94608				A. State Manifest Document Number 8823125		
4. Generator's Phone 415 420-2500				B. State Generator's ID		
5. Transporter 1 Company Name H H SHIP SERVICE		6. US EPA ID Number CA100PH1711168		C. State Transporter's ID		
7. Transporter 2 Company Name H H SHIP SERVICE		8. US EPA ID Number		D. Transporter's Phone		
9. Designated Facility Name and Site Address H H SHIP SERVICE 220 CHINA BAY SAN FRANCISCO, CA 94107		10. US EPA ID Number CA100047711168		E. State Transporter's ID		
				F. Transporter's Phone		
				G. State Facility's ID		
				H. Facility's Phone 543 0000		
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)						12. Containers No. Type
a. WASTE HAZARDOUS LIQUIDS OSM-E 001H 11/1000G MA 9189						13. Total Quantity
b.						14. Unit Wt/Vol
c.						15. State
d.						16. EPA/Other
J. Additional Descriptions for Materials Listed Above 97% WATER 2% MUD 1% PETROLEUM PRODUCT (KINATE)						K. Handling Codes for Wastes Listed Above
15. Special Handling Instructions and Additional Information CLEAN						
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.						
Printed/Typed Name WALTER BERRIS		Signature 		Month Day Year 01 22 09		
17. Transporter 1 Acknowledgement of Receipt of Materials		Printed/Typed Name STEVE MESCOUTE		Signature 		Month Day Year 01 22 09
18. Transporter 2 Acknowledgement of Receipt of Materials		Printed/Typed Name		Signature		Month Day Year
19. Discrepancy Indication Space						
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.						
Printed/Typed Name		Signature		Month Day Year		

GENERATOR
 TRANSPORTER
 FACILITY
 IN CASE OF AN EMERGENCY OR SPILL CALL THE NATIONAL CHEMICAL HAZARD TREATMENT CENTER AT 1-800-424-9300

Do Not Write Below This Line

Blue: GENERATOR SENDS THIS COPY TO DOHS WITHIN 30 D
 To: P.O. Box 400, Sacramento, CA 95812-0400

Please print or type. (Form designed for use on elite (12-pitch typewriter).

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CA1078V139V V 02 201998
Manifest Document No. 88227448

2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
INCOMTE Corp
1250 PARK AVE FRESNO CA 94008

A. State Manifest Document Number
88227448

B. State Generator's ID

4. Generator's Phone (415) 433-4735

C. State Transporter's ID

5. Transporter 1 Company Name
HALL SHIP SERVICE CO CA10004771V 60

D. Transporter's Phone (415) 543-4735

6. US EPA ID Number

E. State Transporter's ID

7. Transporter 2 Company Name

F. Transporter's Phone

8. Designated Facility Name and Site Address
HALL SHIP SERVICE CO
230 CHINA BASIN ST
SAN FRANCISCO CA 94107

G. State Facility's ID

H. Facility's Phone (415) 543-4735

9. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers No.	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. WASTE EMPTY GASOLINE TANK FLAMMABLE LIQUID UN 1203	001 TP	100	5R EPA/Other D001
b. WASTE EMPTY FUEL OIL TANKS COMBUSTIBLE LIQUID NA 1993	004 TP	460	5R EPA/Other NA
c.			EPA/Other
d.			EPA/Other

J. Additional Descriptions for Materials Listed Above
EMPTY UNDER GROUND GASOLINE & FUEL OIL STORAGE TANKS WITH LESS THAN ONE GALLON RESIDUAL LIQUID IN EACH TANK

K. Handling Codes for Wastes Listed Above
a. b. c. d.

15. Special Handling Instructions and Additional Information
BOOTS & GLOVES

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name
BANKIT SHIH

Signature
[Signature] Month Day Year
1 13 12 19

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name
KEVIN E. JOHNSON

Signature
[Signature] Month Day Year
03 22 89

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name

Signature
Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Rem 19.
Printed/Typed Name
Signature
Month Day Year

GENERATOR

TRANSPORTER

FACILITY

Well, Tank No. _____
Field or Area _____

P.O. BOX 5337 • BAKERSFIELD, CALIFORNIA 93388
(805) 589-5220

No 15202

NON-HAZARDOUS WASTE HAULER RECORD TO BE USED FOR NON-HAZARDOUS WASTES ONLY

GENERATOR (Generator Must Complete)

1 Name Del Monte Plant No. 35
 Field Address 1250 Park Ave
 City, State, Zip Emeryville CA 94608
 Phone 420-2517
 Order Placed By _____
 Signature of Authorized Agent L. J. Hanson
 Date 6/23/89
 Title CONTROLLER

WASTE TO BE DISPOSED
 Type NON-HAZARDOUS
 2 Generating Location DEL MONTE 1250 PARK AVE, EMERYVILLE, CA
 Special Handling Instructions:
 Gloves Goggles Other _____
 Quantity 10 YARDS -Bbls
 DESIGNATED FACILITY
 3 Name LIQUID WASTE MANAGEMENT, INC.
 Address STAR ROUTE BOX 4
 City, State, Zip ME KITTRICK, CA. 93251
 Phone 805-762-7607

TRANSPORTER (Hauler Must Complete)

Name KERN BACKHOE SERVICE, INC.
 Address P.O. BOX 5337
 City, State, Zip BAKERSFIELD, CA. 93388
 Phone 805-589-5220
 Signature of Authorized Agent or Driver MIKE ADAMS Mike Adams
 Date 6-23-89

Ticket # 15103 Unit No. 196 1-
 Pick Up Date 6-23-89 Time 8:00 AM PM
 NOTE: This form to be used in lieu of the California Department of Health Services Hazardous Waste Manifest for NON-HAZARDOUS wastes only
 REMARKS:
paid by CH²M Hill
Corporate Headquarters
P.O. Box 428 Corvallis Oregon 97330

DISPOSAL FACILITY (Facility Operator Must Complete)

Name LIQUID WASTE MANAGEMENT, INC.
 Address STAR ROUTE BOX 4
 City, State, Zip ME KITTRICK, CA. 93251
 Phone 805-762-7607 / Disp. Ticket # 30073
 Signature of Authorized Agent Maitha Rao Date 6-23-89

Quantity Received _____ ^{TONS} Bbls Date 6-23-89
 Time _____ AM PM
 DISPOSAL METHOD: Surface Impoundment Injection
 Landfill Other _____
 Return Copy To: **GENERATOR UNLESS OTHERWISE SPECIFIED**
 NOTE: It is not necessary to send copy to Dept. of Health Services. NO HAZARDOUS FEES SHOULD BE LEVIED

Appendix H
Monitoring Well Logs

WELL COMPLETION DETAIL

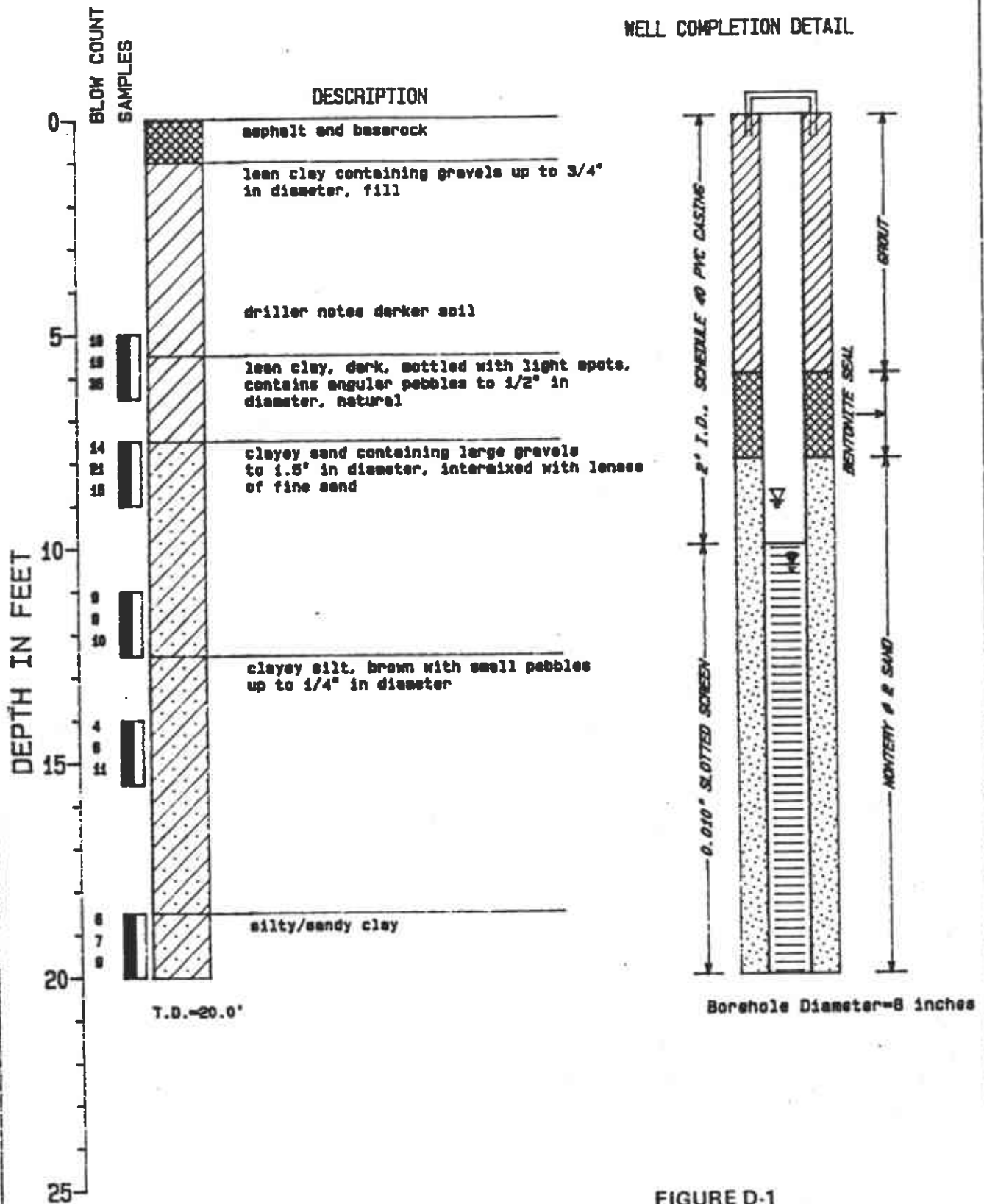


FIGURE D-1

▽ = Water level first encountered

▽ = Water level after development

MW1

DEL MONTE EMERYVILLE PLANT NO. 35

Date Completed: 12/7/88

Top of casing elevation (MSL) = 20.79 FT

SF027035.A0.FW

WELL COMPLETION DETAIL

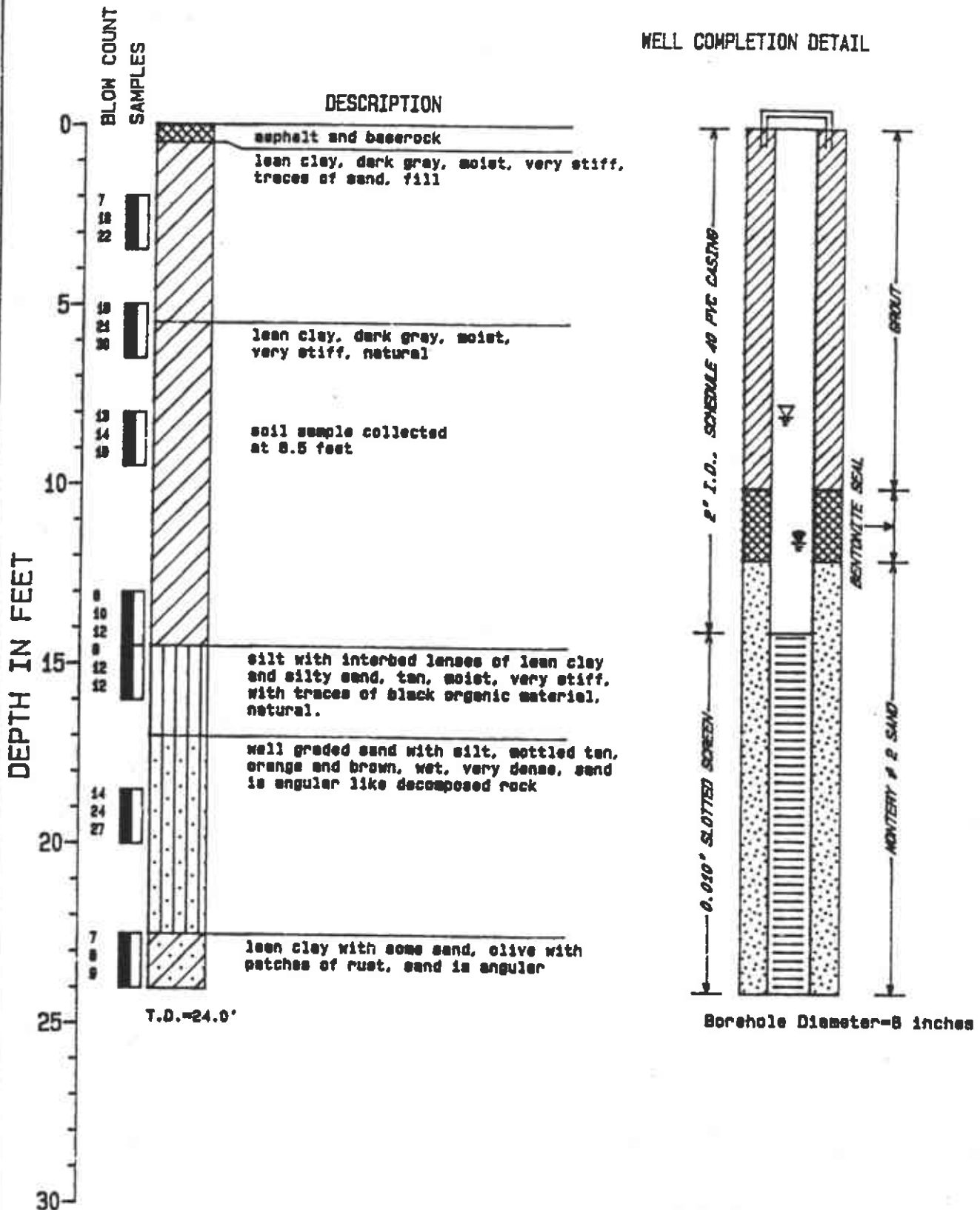


FIGURE D-2

▽ - Water level first encountered

⊕ - Water level after development

MW2

DEL MONTE EMERYVILLE PLANT NO. 35

Date Completed: 12/5/88

Top of casing elevation (MSL) = 24.47 FT

SF027035.A0.FW

WELL COMPLETION DETAIL

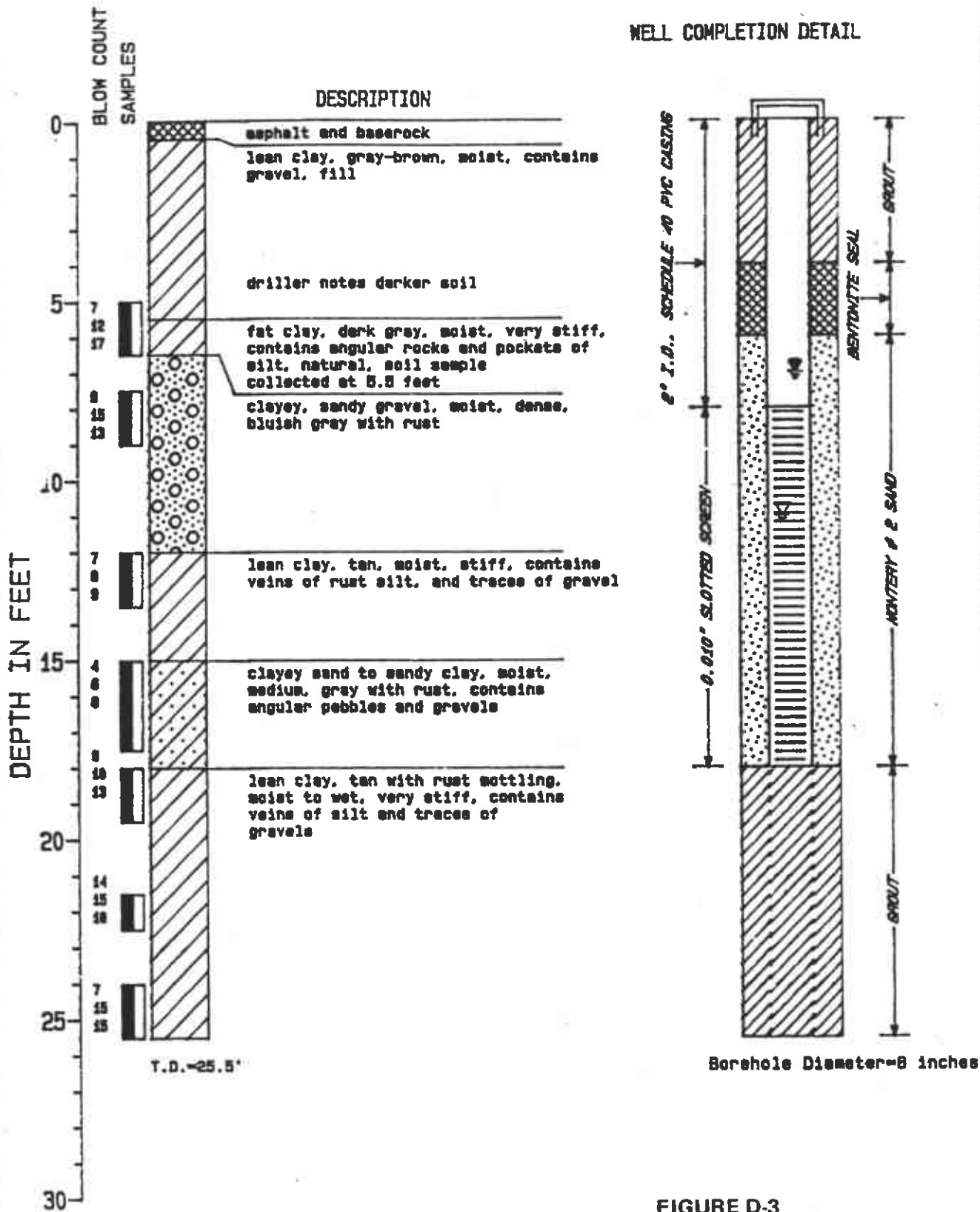


FIGURE D-3

▽ = Water level first encountered

◊ = Water level after development

MW3
 DEL MONTE EMERYVILLE PLANT NO. 35
 Date Completed: 12/6/88
 Top of casing elevation (MSL) = 23.17 FT
 SF027035.A0.FW

WELL COMPLETION DETAIL

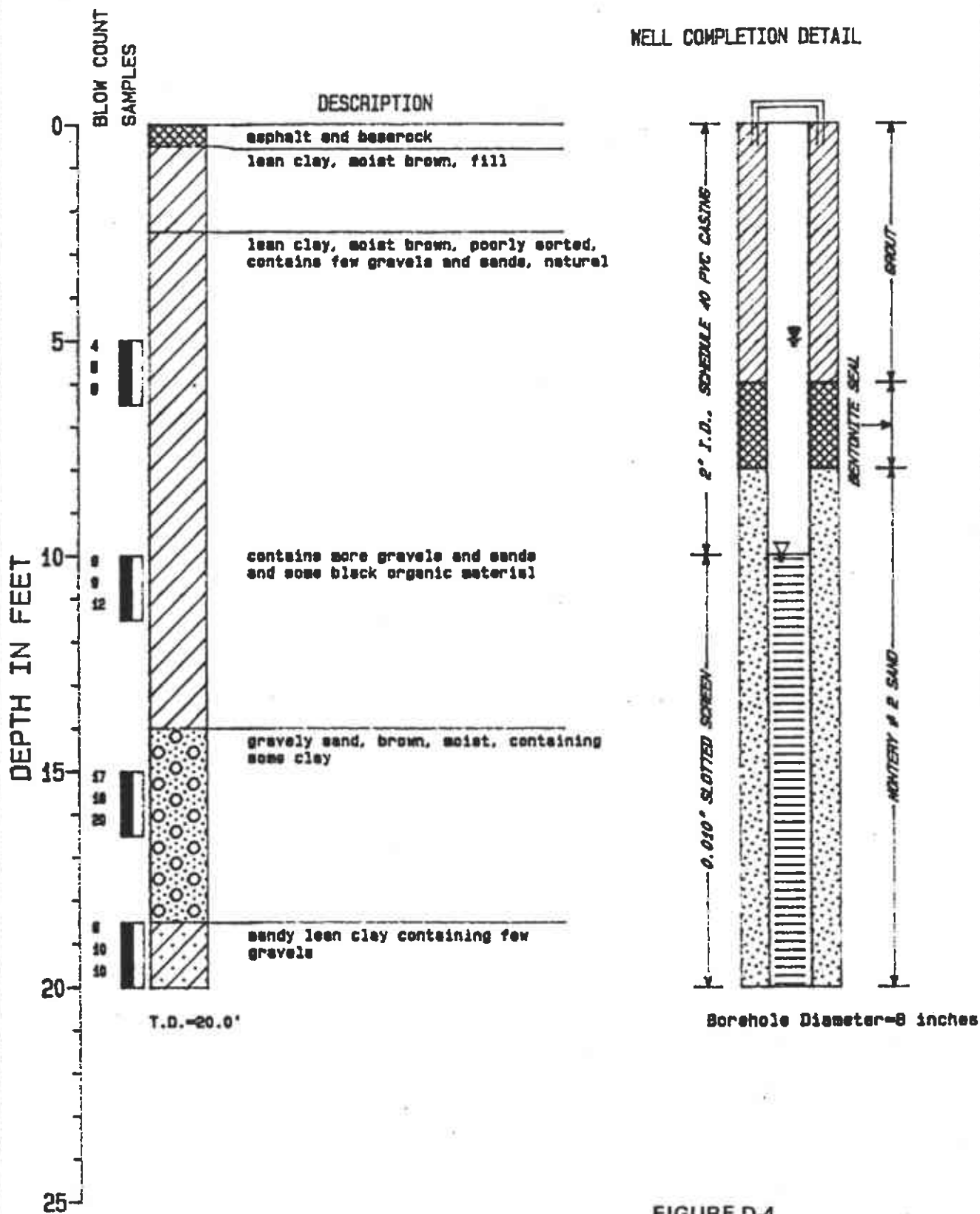


FIGURE D-4

▽ = Water level first encountered

◊ = Water level after development

MW4

DEL MONTE EMERYVILLE PLANT NO. 35

Date Completed: 12/8/88

Top of casing elevation (MSL) = 28.81 FT

SF027035.A0.FM

WELL COMPLETION DETAIL

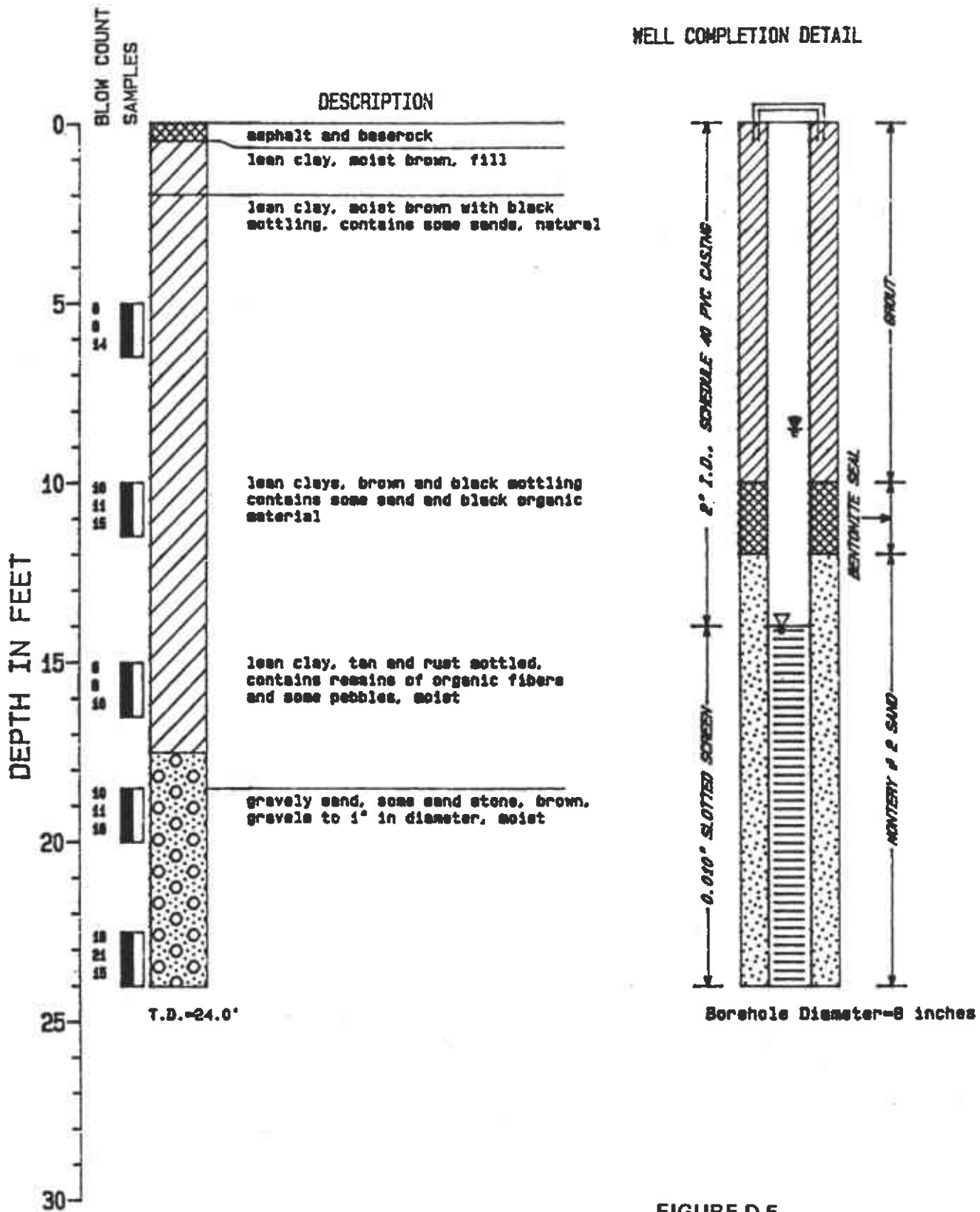


FIGURE D-5

MW5

DEL MONTE EMERYVILLE PLANT NO. 35

Date Completed: 12/7/88

Top of casing elevation (MSL) = 36.97 FT

SF027035.A0.FW

▽ = Water level first encountered

⊕ = Water level after development

BLOW COUNT
SAMPLES

DESCRIPTION

WELL COMPLETION DETAIL



ASPHALT

LEAN CLAY, black, soft, possibly silty (bay mud) (CL)

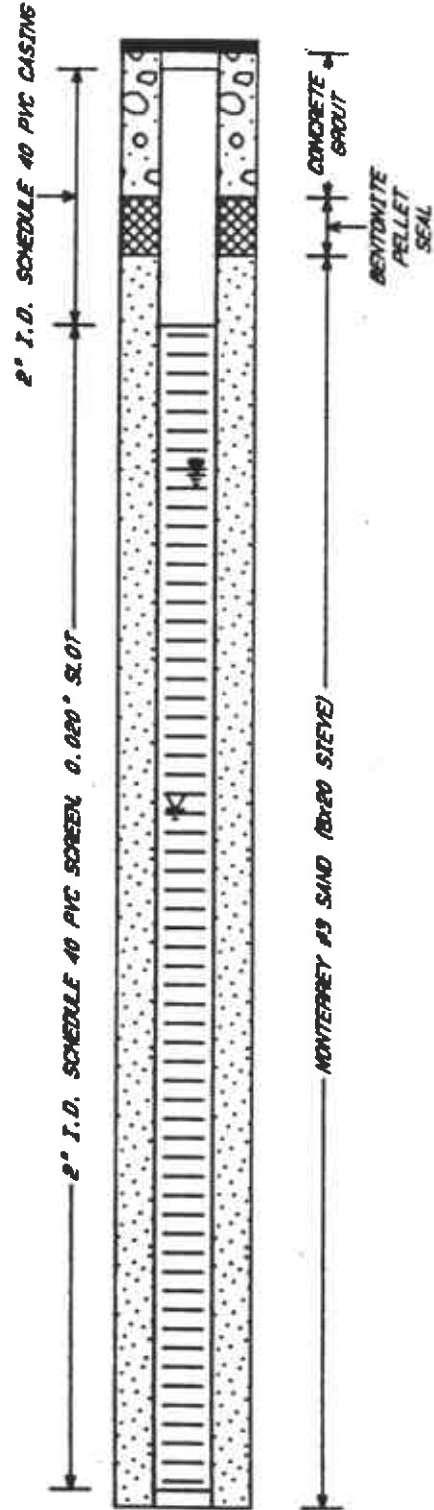
WELL-GRADED GRAVEL WITH CLAY, 5-10 mm diameter, gray to brown, "pea gravel" backfill (GW-GC)

SILTY CLAY, green-gray, color may be from gasoline, gasoline odor evident (CL-ML)

Change to brown, moist

LEAN CLAY, brown and gray mottled, fine to stiff (CL)

T.D.=25.0'



Borehole Diameter=6 inches

▽ = Water level first encountered

▽ = Water level after development

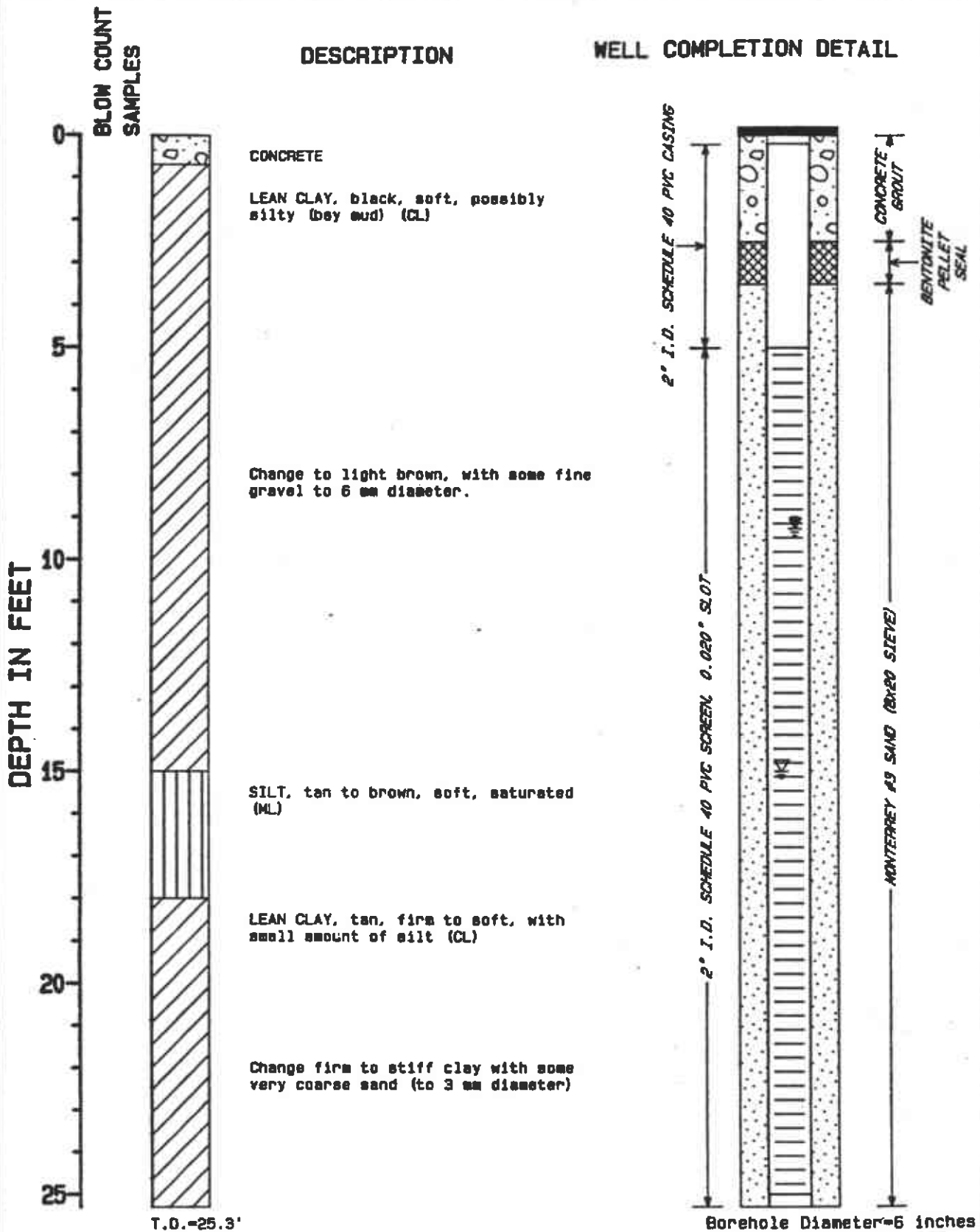
MW7

Del Monte Emeryville Plant No. 35

Date Completed: 05/03/89

Top of casing elevation (MSL) = 22.38

SF027289.A0.6M



▽ = Water level first encountered

◻ = Water level after development

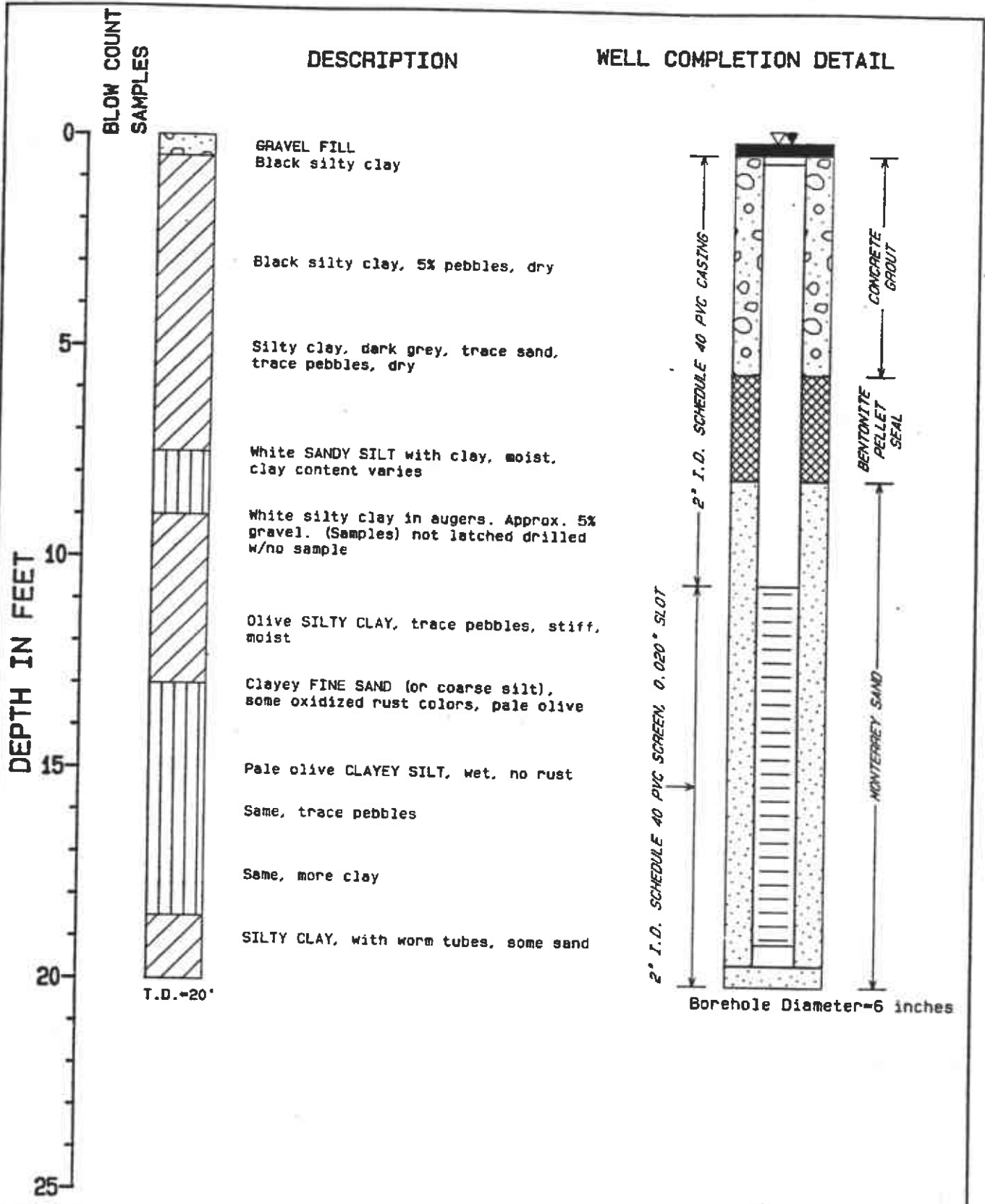
MW8

Del Monte Emeryville Plant No. 35

Date Completed: 05/03/89

Top of casing elevation (MSL) = 21.72

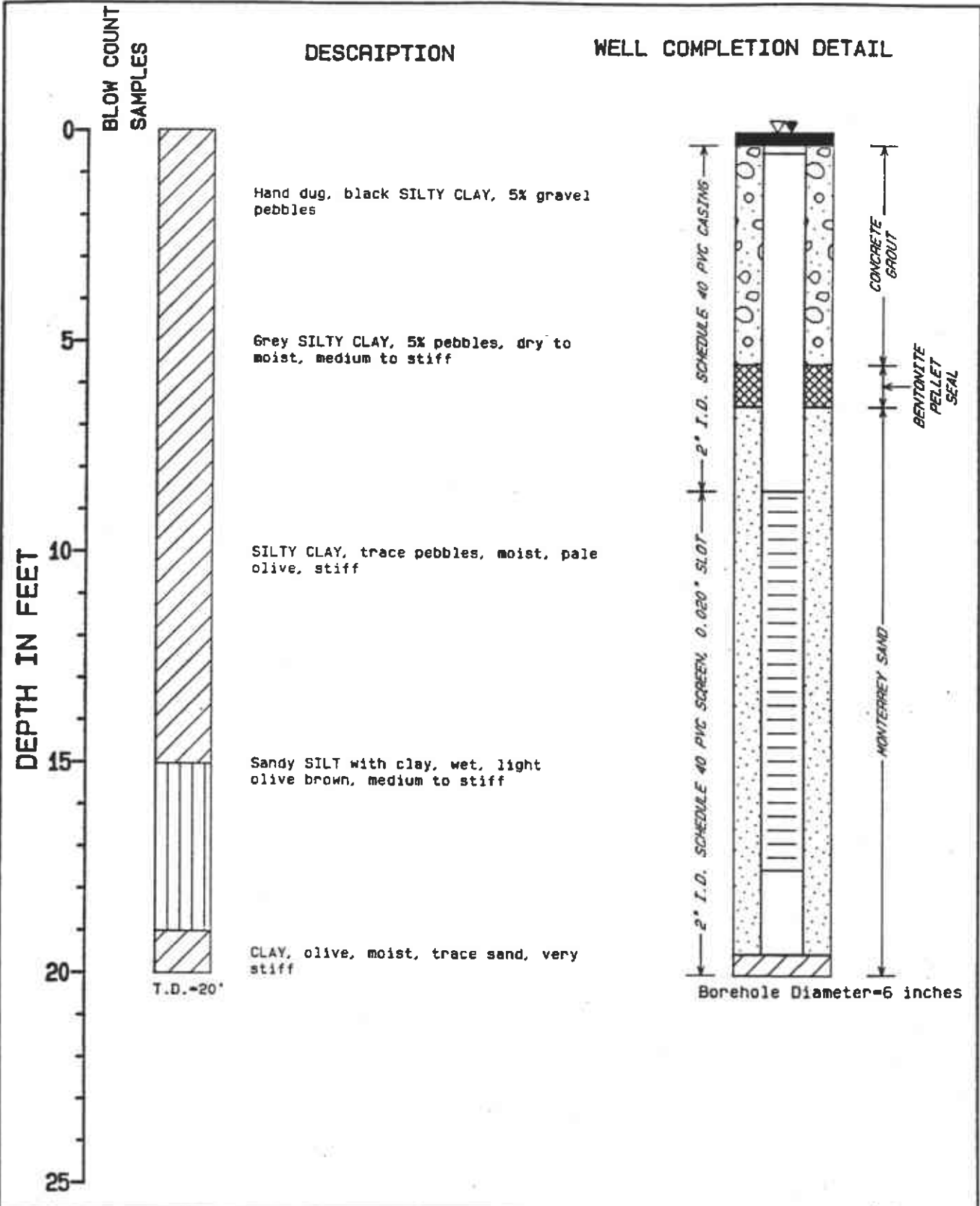
SF027289.A0.6W





▽ = Water level first encountered

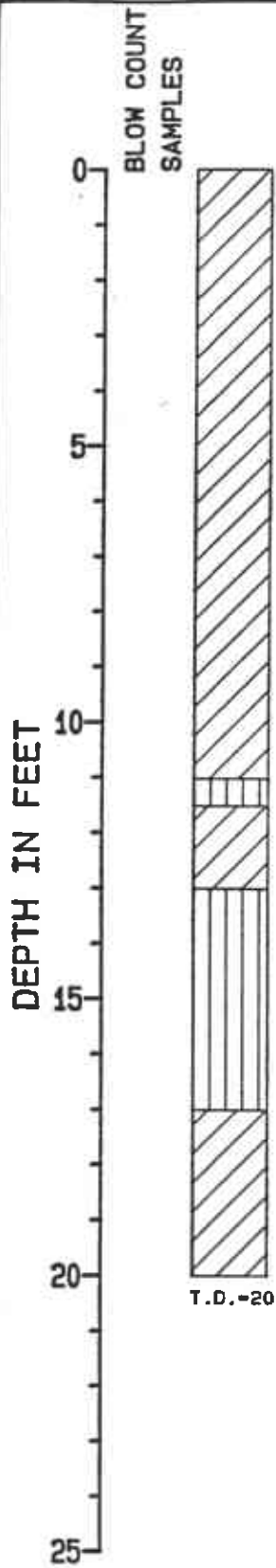
▽ = Water level after development

MW-9
 Del Monte Emeryville Plant No. 35
 Date Completed: 07/05/89
 Top of casing elevation (MSL)=0
 SF027289.A0.6W



 = Water level first encountered
 = Water level after development

MW-10
 Del Monte Emeryville Plant No. 35
 Date Completed: 07/06/89
 Top of casing elevation (MSL) = 0
 SF027289.A0.6W



DESCRIPTION

Black, SILTY CLAY, trace pebbles, dry, stiff

White, SILTY CLAY, with sand, trace pebbles. Silty sand seams at about 7.5' & 8' (1" approx. thick), dry to moist, medium

Pale olive SILTY CLAY, trace pebbles, moist, stiff

Sandy SILT with clay
Olive SILTY CLAY, mottled with black splotches that look oxidized, worm tubes, stiff

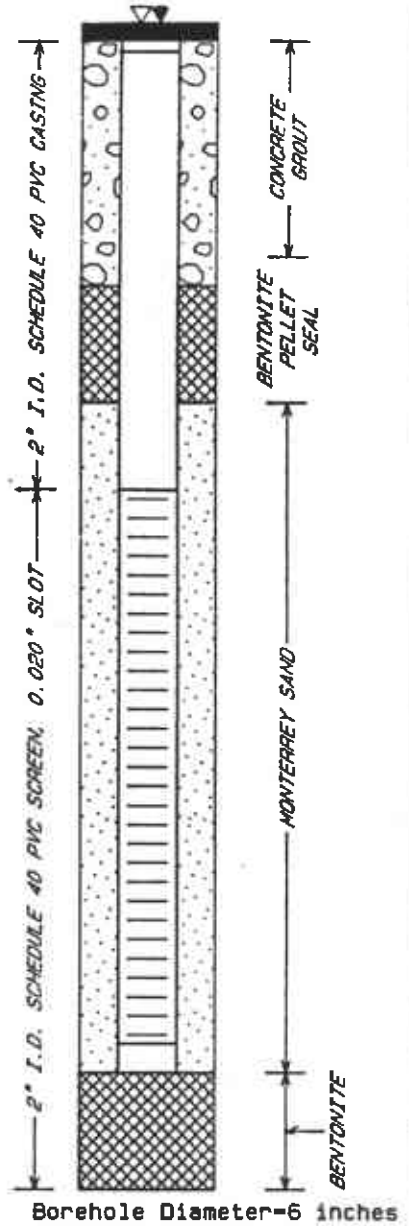
Pale olive with rust stains, clayey SILT, with sand, medium (not as stiff as before). No recovery.

Sandy silt-silty sand, trace gravel, some clay, light olive brown

Olive SILTY CLAY, trace pebbles, wet

Olive CLAY, moist, very stiff

WELL COMPLETION DETAIL



▽ = Water level first encountered

▽ = Water level after development

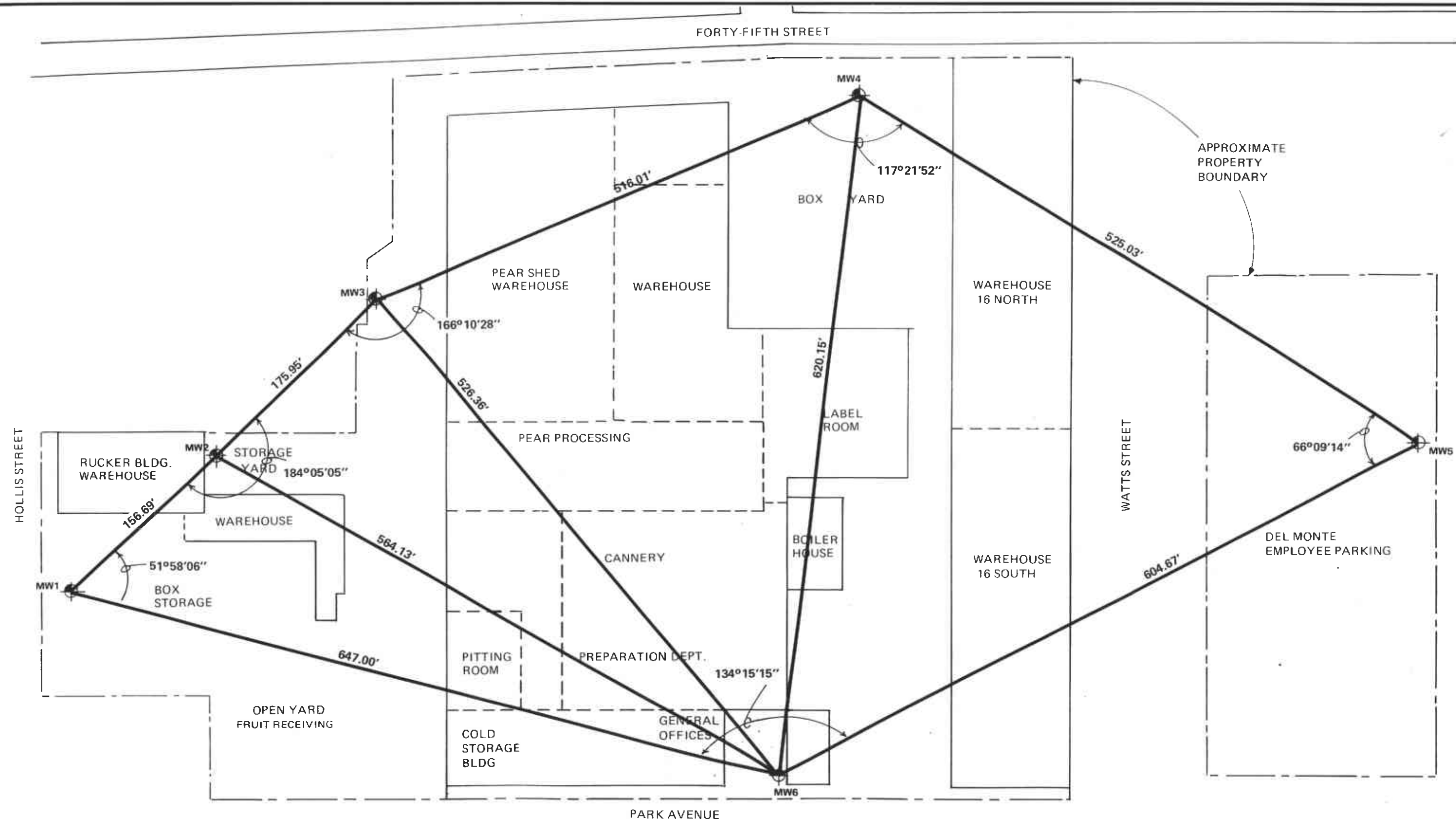
MW-11

Del Monte Emeryville Plant No. 35

Date Completed: 07/06/89

Top of casing elevation (MSL)=0

SF027289.A0.GW



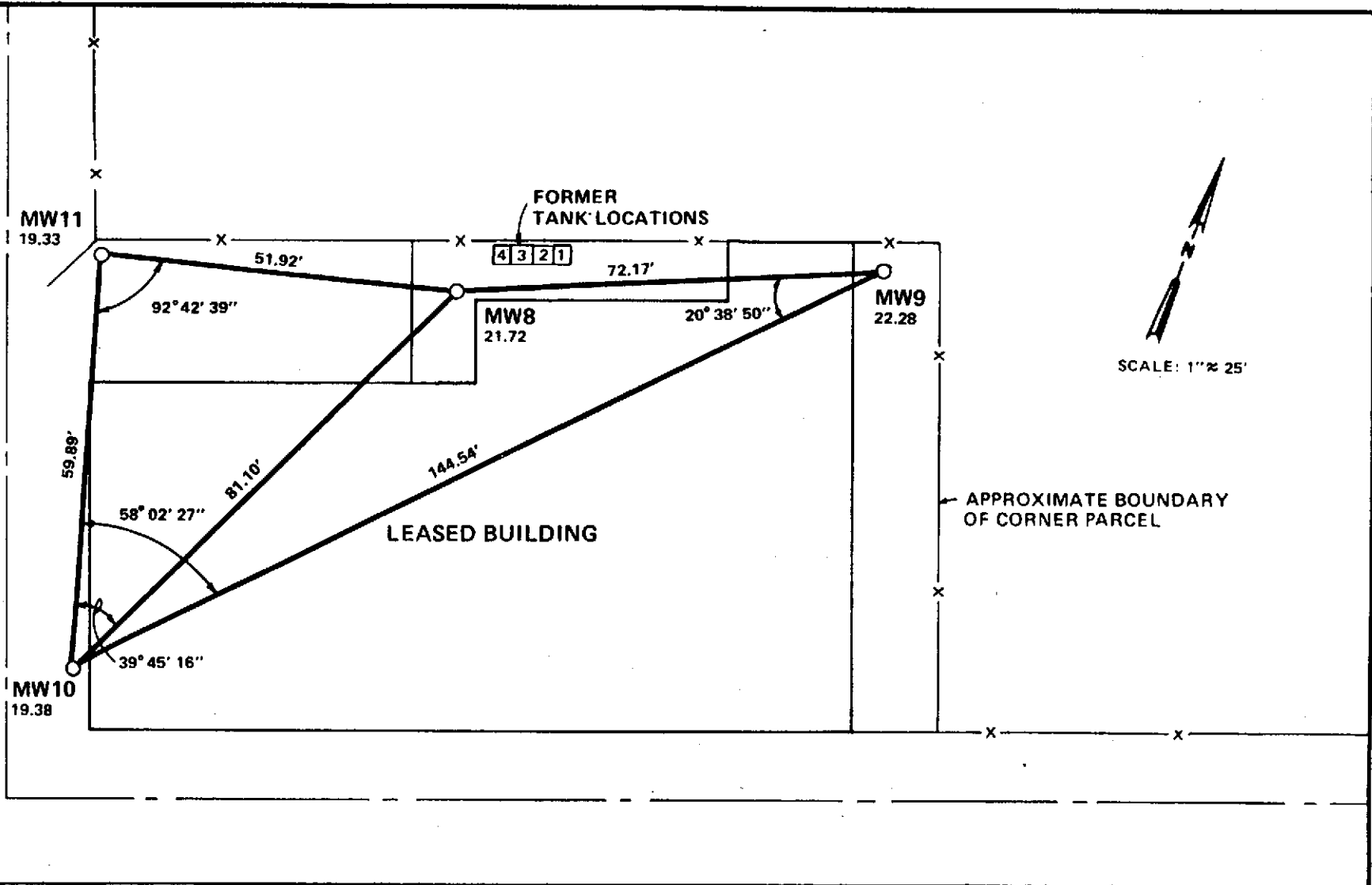
ELEVATIONS

MW1	20.79'	MW4	28.81'
MW2	24.47'	MW5	36.97'
MW3	23.17'	MW6	27.51'

Elevations Based on Mean Sea Level
1973 Adjustment

FIGURE D-6
SURVEY DATA
DEL MONTE EMERYVILLE PLANT NO. 35
EMERYVILLE, CALIFORNIA

HOLLIS STREET



APPROXIMATE BOUNDARY OF CORNER PARCEL

PARK AVENUE

□ TANK

MW1 21.72 ○ MONITORING WELL
ELEVATIONS (FEET ABOVE MEAN SEA LEVEL)

SURVEY DATA
DEL MONTE CORNER PARCEL
EMERYVILLE, CALIFORNIA

CHM HILL

Appendix J
Geotechnical Data



Engineers
Planners
Economists
Scientists

August 15, 1989

LRD191.10

CH2M HILL
6425 Christie Ave., Suite 500
Emeryville, CA 94608

Attention: Susan Colman

Dear Susan:

Enclosed please find the results for samples received at our laboratory on July 7, 1989 for the Del Monte Project.

If you have any questions please feel free to contact us.

Thank you for selecting a CH2M HILL laboratory for your analytical testing needs.

Sincerely,

CH2M HILL QUALITY ANALYTICS LABORATORY

Barbara J. Hurley

Barbara J. Hurley
Document Control Officer

Encl.

Report To: Del Monte Plant 35
 CH2M Hill/SFO
 SFO 27289.AO.GW
 Attention: Susan Coleman/SFO
 Sample Description: Soils
 Date of Sample: 7/5/89

Reference Number: 23680
 Page 1 of 3
 Date: 8/14/89
 Phone:
 Sampled By: Client
 Date Received: 7/7/89

TEST	MW9	MW9	UNITS	DETECTION LIMIT	DATE ANALYZED	METHOD NUMBER
	8.5-9	13.5				
Bulk Density	1.60	1.48	grams/cm3	N/A	7-28-89	30.2
Porosity	38.5	43.3	*	N/A	8-9-89	21-2.1
% Sand	39	31	%	1	7-13-89	514.4.4
% Silt	30	44	%	1	7-13-89	514.4.4
% Clay	31	25	%	1	7-13-89	514.4.4
TOC/Sand 75-2000u	560	2310	mg/kg	100	8-11-89	3-75
TOC/Silt 45-75u	675	410	mg/kg	100	8-11-89	3-75
TOC/Clay <45u	1170	1390	mg/kg	100	8-11-89	3-75
Particle Density	2.60	2.61	units	N/A	7-28-89	29-3.2

Comments: mg/kg = milligrams per kilogram.
 TOC = Total Organic Carbon.
 * Percentage of the bulk volume not occupied by solids.

The information shown on this sheet is test data only and
 no analysis or interpretation is intended or implied.

Approved By: 



Engineers
Planners
Economists
Scientists

Report To: Del Monte Plant 35
CH2M Hill/SFO
SFO 27289.AO.GW

Attention: Susan Coleman/SFO

Sample Description: Soils

Date of Sample: 7/5/89

Reference Number: 23680

Page 2 of 3

Date: 8/14/89

Phone:

Sampled By: Client

Date Received: 7/7/89

TEST	MW11 10.5 -11	MW11 16.5 -17	UNITS	DETECTION LIMIT	DATE ANALYZED	METHOD NUMBER
Bulk Density	1.47	1.40	grams/cm3	N/A	7-28-89	30.2
Porosity	43.5	46.0	*	N/A	8-9-89	21-2.1
% Sand	24	31	%	1	7-13-89	514.4.4
% Silt	44	41	%	1	7-13-89	514.4.4
% Clay	32	28	%	1	7-13-89	514.4.4
TOC/Sand 75-2000u	735	395	mg/kg	100	8-11-89	3-75
TOC/Silt 45-75u	525	870	mg/kg	100	8-11-89	3-75
TOC/Clay <45u	1450	1370	mg/kg	100	8-11-89	3-75
Particle Density	2.60	2.59	units	N/A	7-28-89	29-3.2

Comments: mg/kg = milligrams per kilogram.

TOC = Total Organic Carbon.

* Percentage of the bulk volume not occupied by solids.

The information shown on this sheet is test data only and no analysis or interpretation is intended or implied.

Approved By: Susan P. Jones

Report To: Del Monte Plant 35
CH2M Hill/SFO
SFO 27289.AO.GW
Attention: Susan Coleman/SFO
Sample Description: Soils
Date of Sample: 7/5/89

Reference Number: 23680
Page 3 of 3
Date: 8/14/89
Phone:
Sampled By: Client
Date Received: 7/7/89

TEST	MW10	MW10	UNITS	DETECTION LIMIT	DATE ANALYZED	METHOD NUMBER
	11- 11.5	16- 16.5				
Bulk Density	1.55	1.45	grams/cm ³	N/A	7-28-89	30.2
Porosity	39.5	44.2	*	N/A	8-9-89	21-2.1
% Sand	20	33	%	1	7-13-89	514.4.4
% Silt	49	39	%	1	7-13-89	514.4.4
% Clay	31	28	%	1	7-13-89	514.4.4
TOC/Sand 75-2000u	325	260	mg/kg	100	8-11-89	3-75
TOC/Silt 45-75u	295	780	mg/kg	100	8-11-89	3-75
TOC/Clay <45u	285	19700	mg/kg	100	8-11-89	3-75
Particle Density	2.56	2.60	units	N/A	7-28-89	29-3.2

Comments: mg/kg = milligrams per kilogram.
TOC = Total Organic Carbon.
* Percentage of the bulk volume not occupied by solids.

The information shown on this sheet is test data only and no analysis or interpretation is intended or implied.

Approved By: Susan R. Arnold

CHAIN HILL CHAIN OF CUSTODY RECORD

PROJECT NUMBER: 5F027289.A2.GW
 PROJECT NAME: Del Monte Plant 35
 CLIENT NAME: Chain Hill
 REPORT TO: Susan Colman
 REQUESTED COMPLETION DATE: 7/27/89
 LABORATORY: Chain Hill - Rockling

ANALYSES REQUESTED

NUMBER OF CONTAINERS	Bulk density	Porosity	% sand	% silt	% clay	% organic Cinsand	% org. carbon in silt	% org. carbon in clay
----------------------	--------------	----------	--------	--------	--------	-------------------	-----------------------	-----------------------

FOR LAB USE ONLY

LAB # _____
 PROJ # _____
 ACK _____ VERIFIED _____
 DATE INVOICED _____
 NO. OF SAMPLES _____ pg _____ of _____
 DISPOSITION: D R _____ DATE _____

STA NO	DATE	TIME	COMP	GRAB	SAMPLE DESCRIPTION	NUMBER OF CONTAINERS	Bulk density	Porosity	% sand	% silt	% clay	% organic Cinsand	% org. carbon in silt	% org. carbon in clay
MW19	7/5	1200	X		MW19-8.5-9	1	X	X	X	X	X	X	X	X
↓		1240	X		MW19-13.-13.5	1	X	X	X	X	X	X	X	X
MW11		1520	X		MW11-10.5-11	1	X	X	X	X	X	X	X	X
↓		1535	X		MW11-16.5-17	1	X	X	X	X	X	X	X	X
MW10	7/6	1005	X		MW10-11-11.5	1	X	X	X	X	X	X	X	X
↓		1030	X		MW10-16-16.5	1	X	X	X	X	X	X	X	X

REMARKS

Cylinder 7 9/16" x 2 1/2"

* Note
 % organic carbon
 NOT organic matter

SAMPLED BY AND TITLE (SIGNATURE) 1 <i>Susan Colman</i>		DATE/TIME 7/6/89 11:00	RELINQUISHED BY (SIGNATURE) 2 <i>Susan Colman</i>		DATE/TIME 7/6/89 12:10	RECEIVED BY: (SIGNATURE) 3 _____	DATE/TIME _____
RELINQUISHED BY: (SIGNATURE) 4 _____	DATE/TIME _____	RECEIVED BY: (SIGNATURE) 5 _____	DATE/TIME _____	RELINQUISHED BY: (SIGNATURE) 6 _____	DATE/TIME _____	RECEIVED BY LAB: (SIGNATURE) 7 _____	DATE/TIME _____

REMARKS _____

SAMPLING PROGRAM
 SDWA NPDES RCRA OTHER _____ (SPECIFY)

SAMPLE SHIPPED VIA
 UPS BUS FED-EX HAND OTHER _____

AIR BUS BILL NUMBER
 258 976 5

Appendix K
Recent Quarterly Groundwater
Monitoring Report



Engineers
Planners
Economists
Scientists

February 25, 1992.

SFO28830.A1

Mr. Wilbur Sprague
Associated Services
2128 Tice Creek Drive #3
Walnut Creek, CA 94595

Subject: Quarterly monitoring data for Del Monte's Plant 35; West Parcel, removed fuel oil and gasoline tank areas at 4204 Hollis Street, Emeryville, California

Dear Wilbur:

This report presents the quarterly groundwater monitoring data for the removed fuel tank areas at Del Monte Plant No. 35 - West Parcel located at 4204 Hollis Street in Emeryville, California. As part of the quarterly groundwater monitoring program, the five Plant 35 West Parcel wells (MW7 through MW11) were sampled on January 23, 1992. Figure 1 shows the West Parcel well locations. Tables 1 and 2 summarize Plant 35 West Parcel monitoring data through January 23, 1992 and correspond with the quarterly monitoring reports previously submitted to the Alameda County Health Agency (ACHA). The laboratory data sheets are also attached. This data needs to be submitted to the following:

Mr. Dennis Byrne
Hazardous Materials Specialist
Alameda County Health Care Services
Division of Hazardous Materials
80 Swan Way, Room 200
Oakland, CA 94621

Mr. Lester Feldman
Regional Water Quality Control Board
San Francisco Region
1800 Harrison, 7th Floor
Oakland, CA 94612

Shallow groundwater exists beneath the West Parcel at a depth of approximately 7 to 10 feet below grade. This shallow groundwater generally flows westward toward the San Francisco Bay.

The analytical results summarized in Tables 1 and 2 indicate that no significant changes in groundwater quality have occurred beneath the West Parcel since the previous quarterly sampling date (October 22, 1991). Benzene continues to be below detection limits (since April 17, 1991) in Well MW7 (Table 1).

The January 23, 1992 sample results indicate that concentrations of trichloroethene (TCE) (MW7 - MW11), tetrachloroethene (PCE) (MW7 - MW11), vinyl chloride (VC) (MW7, MW9 - MW11), 1,2-dichloroethane (1,2-DCA) (MW11), and 1,2-dichloropropane (1,2-DP) (MW11) exceed State of California Maximum Contaminant Levels (MCL). Applicable MCLs are shown at the bottom of Tables 1 and 2. No MCL has been established for TPH-gas in groundwater. It should be noted that the laboratory detection limit exceeded the MCL for the following sample analytes: VC and 1,2-DCA in well MW8, 1,2-DCA in well MW10, and VC in well MW11. This is due to high concentrations of analytes in the sample causing the laboratory to dilute the sample in order to obtain a result within the instrument detection range; sample dilution increases the detection limits (Personal Communication, BC Analytical, February 25, 1992).

Based on the enclosed data and according to the water quality goals promulgated by the Regional Water Quality Control Board (RWQCB), additional monitoring is required at Del Monte Plant 35, West Parcel.

If you have any questions or comments, please call me at my office (510) 652-8149 (ext. 2118).

Sincerely,



Bern Baumgartner
Project Manager

Enclosures

cc: Ron Thibault/Del Monte
Lee Bosche/Del Monte
Mark Rosenquist/Del Monte
Cora Lewis/Del Monte
Liz Dodge/CH2M HILL/SFO
Jeff Holloway/CH2M HILL/SFO

TABLE 1
 DEL MONTE PLANT NO. 35
 4204 HOLLIS STREET, EMERYVILLE, CA
 QUARTERLY GROUNDWATER MONITORING RESULTS
 (Removed Gasoline Tank)

Concentration (mg/l)

Monitoring Well	Sampling Date	TPH Gasoline	Benzene	Ethyl-benzene	Toluene	Xylene
MW7	12-May-89	1.000	0.0490	0.0045	0.0016	0.0059
MW7	10-Jul-89	0.500	0.0052	<0.0003	0.0006	0.0056
MW7	24-Oct-89	1.800	0.0081	<0.0003	<0.0003	0.0120
MW7	07-Feb-90	1.300	0.0100	0.0039	0.0010	0.0130
MW7	10-Jul-90	0.210	0.0006	<0.0003	0.0003	0.0010
MW7	17-Oct-90	0.640	0.0020	0.0030	0.0010	0.0014
MW7	24-Jan-91	0.300	0.0018	0.0024	0.0019	0.0053
MW7	17-Apr-91	0.400	<0.0005	<0.0005	<0.0005	<0.0005
MW7	31-Jul-91	0.070	<0.0005	<0.0005	<0.0005	0.0009
MW7	22-Oct-91	0.100	<0.0005	0.0010	<0.0005	<0.0005
MW7	23-Jan-92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
WATER QUALITY STANDARDS						
	Cancer Risk	--	0.00066	--	--	--
	Primary MCL	--	0.001	0.68	2.0	1.75
	AATC (Freshwater)	--	5.3	32.0	17.0	--

TABLE 2
 DEL MONTE PLANT NO. 35, WEST PARCEL
 4204 HOLLIS STREET, EMERYVILLE, CA
 QUARTERLY GROUNDWATER MONITORING RESULTS

Monitoring Well	Sampling Date	Concentration (mg/l)						
		1,2-DCE(a)	1,1-DCE(b)	1,2-DCA(c)	TCE(d)	PCE(e)	VC(f)	1,2-DP(g)
MW7	17-Apr-91	0.085	<0.0005	<0.0005	0.023	0.014	0.0051	<0.0005
MW7	31-Jul-91	0.100	<0.0005	<0.0005	0.029	0.019	0.0051	<0.0005
MW7	22-Oct-91	0.130	<0.001	<0.001	0.030	0.020	0.003	<0.001
MW7	23-Jan-92	0.100	<0.0005	<0.0005	0.029	0.017	0.0031	<0.0005
MW8	12-May-89	0.29	<0.0100	<0.0100	1.400	0.020	0.0780	<0.0100
MW8	10-Jul-89	0.14	<0.0025	<0.0025	0.330	0.014	0.0170	<0.0025
MW8-dup	10-Jul-89	0.13	<0.0025	<0.0025	0.310	0.012	0.0160	<0.0025
MW8	24-Oct-89	0.10	<0.0020	<0.0020	0.330	0.024	0.0040	<0.0020
MW8	07-Feb-90	0.10	<0.0020	<0.0020	0.520	0.018	0.0120	<0.0020
MW8	10-Jul-90	0.005	<0.0002	<0.0005	0.091	0.036	0.0030	<0.0005
MW8	17-Oct-90	0.059	<0.0010	<0.0010	0.160	0.021	0.0020	<0.0010
MW8	24-Jan-91	0.160	<0.0020	0.0050	0.450	0.013	0.0090	0.0270
MW8	17-Apr-91	0.210	<0.0050	<0.0050	0.830	0.016	<0.0050	<0.0050
MW8	31-Jul-91	0.085	<0.0020	<0.0020	0.350	0.030	0.0020	<0.0020
MW8	22-Oct-91	0.040	<0.0050	<0.0050	0.630	0.020	<0.0050	<0.0050
MW8	23-Jan-92	0.160	<0.0050	<0.0050	0.690	0.029	<0.0050	<0.0050
WATER QUALITY STANDARDS								
Primary MCL	---	0.006	0.00050	0.0050	0.0050	0.0050	0.0005	0.0050
Cancer Risk	---	0.000033	0.00094	0.0027	0.0008	0.0020	---	---
AATC (Freshwater)	23.2	11.6	118	45	5.28	---	23	
a total 1,2-Dichloroethene*			d Trichloroethene			f Vinyl chloride		
b 1,1-Dichloroethene			e Tetrachloroethene			g 1,2-Dichloropropane		
c 1,2-Dichloroethane			* Sum of cis-1,2-Dichloroethene and trans-1,2-Dichloroethene					

TABLE 2
DEL MONTE PLANT NO. 35, WEST PARCEL
4204 HOLLIS STREET, EMERYVILLE, CA
QUARTERLY GROUNDWATER MONITORING RESULTS

Monitoring Well	Sampling Date	Concentration (mg/l)						
		1,2-DCE(a)	1,1-DCE(b)	1,2-DCA(c)	TCE(d)	PCE(e)	VC(f)	1,2-DP(g)
MW9	10-Jul-89	0.0630	<0.0005	<0.0005	0.013	0.038	0.0160	<0.0005
MW9	24-Oct-89	0.0064	<0.0005	<0.0005	0.029	0.048	0.0230	<0.0005
MW9	07-Feb-90	0.0550	<0.0005	<0.0005	0.015	0.030	0.0071	<0.0005
MW9	10-Jul-90	0.0030	<0.0002	<0.0005	0.009	0.043	0.0100	<0.0005
MW9	17-Oct-90	0.0700	<0.0005	<0.0005	0.014	0.032	0.0046	<0.0005
MW9	24-Jan-91	0.0700	<0.0020	<0.0020	0.220	0.023	<0.0020	<0.0020
MW9	17-Apr-91	0.0440	<0.0005	<0.0005	0.012	0.026	<0.0005	<0.0005
MW9	31-Jul-91	0.0550	<0.0005	<0.0005	0.014	0.032	0.0023	<0.0005
MW9	22-Oct-91	0.0710	<0.0005	<0.0005	0.015	0.033	0.0028	<0.0005
MW9	23-Jan-92	0.0640	<0.0005	<0.0005	0.010	0.027	0.0021	<0.0005
MW10	10-Jul-89	0.0850	0.0008	<0.0005	0.027	0.042	0.0280	<0.0005
MW10	24-Oct-89	0.1048	<0.0005	<0.0005	0.037	0.028	0.0069	<0.0005
MW10	07-Feb-90	0.0500	<0.0005	<0.0005	0.011	0.008	0.0053	<0.0005
MW10	10-Jul-90	0.0090	<0.0002	<0.0005	0.030	0.076	0.054	<0.0005
MW10-dup	10-Jul-90	0.0100	0.0050	<0.0005	0.028	0.069	0.017	<0.0005
MW10	17-Oct-90	0.1400	<0.0005	<0.0005	0.035	0.037	0.013	<0.0005
WATER QUALITY STANDARDS								
	Primary MCL	---	0.006	0.00050	0.0050	0.0050	0.0005	0.0050
	Cancer Risk	---	0.000033	0.00094	0.0027	0.0008	0.0020	---
	AATC (Freshwater)	23.2	11.6	118	45	5.28	---	23
a total 1,2-Dichloroethene*			d Trichloroethene			f Vinyl chloride		
b 1,1-Dichloroethene			e Tetrachloroethene			g 1,2-Dichloropropane		
c 1,2-Dichloroethane			* Sum of cis-1,2-Dichloroethene and trans-1,2-Dichloroethene					

TABLE 2
DEL MONTE PLANT NO. 35, WEST PARCEL
4204 HOLLIS STREET, EMERYVILLE, CA
QUARTERLY GROUNDWATER MONITORING RESULTS

Monitoring Well	Sampling Date	Concentration (mg/l)						
		1,2-DCE(a)	1,1-DCE(b)	1,2-DCA(c)	TCE(d)	PCE(e)	VC(f)	1,2-DP(g)
MW10	24-Jan-91	0.0650	<0.0005	<0.0005	0.014	0.031	0.0033	<0.0005
MW10	17-Apr-91	0.2100	<0.002	<0.002	0.048	0.052	0.010	<0.002
MW10	31-Jul-91	0.2800	<0.002	<0.002	0.066	0.014	0.002	<0.002
MW10	22-Oct-91	0.1600	<0.001	<0.001	0.040	0.040	0.005	<0.001
MW10	23-Jan-92	0.2400	<0.002	<0.002	0.046	0.054	0.010	<0.002
MW11	10-Jul-89	0.073	<0.001	0.004	0.160	0.012	0.0160	0.0057
MW11	24-Oct-89	0.188	<0.002	0.010	0.410	0.015	0.0220	0.0200
MW11	07-Feb-90	0.105	<0.002	0.002	0.270	0.008	0.0110	0.0130
MW11	10-Jul-90	0.004	<0.002	0.023	0.046	0.018	0.0150	<0.0005
MW11	17-Oct-90	0.150	<0.002	0.011	0.300	0.008	<0.002	0.0310
MW11	24-Jan-91	0.120	<0.001	<0.001	0.029	0.029	0.0030	<0.0010
MW11	17-Apr-91	0.100	<0.001	0.014	0.160	0.012	0.005	0.0290
MW11	31-Jul-91	0.250	<0.002	<0.002	0.061	0.065	0.012	0.0020
MW11	22-Oct-91	0.180	<0.002	0.005	0.560	0.020	0.005	0.0300
MW11	23-Jan-92	0.160	<0.002	0.013	0.290	0.019	<0.002	0.0210
WATER QUALITY STANDARDS								
	Primary MCL	---	0.006	0.00050	0.0050	0.0050	0.0005	0.0050
	Cancer Risk	---	0.000033	0.00094	0.0027	0.0008	0.0020	---
	AATC (Freshwater)	23.2	11.6	118	45	5.28	---	23
a	total 1,2-Dichloroethene*		d	Trichloroethene		f	Vinyl chloride	
b	1,1-Dichloroethene		e	Tetrachloroethene		g	1,2-Dichloropropane	
c	1,2-Dichloroethane		* Sum of cis-1,2-Dichloroethene and trans-1,2-Dichloroethene					

Analytical Report

LOG NO: E92-01-498

Received: 23 JAN 92

Mailed: FEB 07 1992

Mr. Jeff Holloway
CH2M Hill
6425 Christie Street, Suite 500
Emeryville, California 94608

CC: Larry Anderson

Project: SFO28830.A1 Del Monte

REPORT OF ANALYTICAL RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED				
01-498-1	MW-7	23 JAN 92				
01-498-2	MW-8	23 JAN 92				
01-498-3	MW-9	23 JAN 92				
01-498-4	MW-10	23 JAN 92				
01-498-5	MW-11	23 JAN 92				
PARAMETER		01-498-1	01-498-2	01-498-3	01-498-4	01-498-5
TPH-Volatile/BTEX						
Date Analyzed		01.28.92	---	---	---	---
Dilution Factor, Times		1	---	---	---	---
Benzene, ug/L		<0.5	---	---	---	---
Ethylbenzene, ug/L		<0.5	---	---	---	---
Toluene, ug/L		<0.5	---	---	---	---
Total Xylene Isomers, ug/L		<0.5	---	---	---	---
C6 to C14 (as gasoline), ug/L		<50	---	---	---	---
Approximate Character, .		NO PEAKS	---	---	---	---

Analytical Report

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Mr. Jeff Holloway
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Project: SF028830.A1 Del Monte

REPORT OF ANALYTICAL RESULTS

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LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED				
01-498-1	MW-7	23 JAN 92				
01-498-2	MW-8	23 JAN 92				
01-498-3	MW-9	23 JAN 92				
01-498-4	MW-10	23 JAN 92				
01-498-5	MW-11	23 JAN 92				
PARAMETER	01-498-1	01-498-2	01-498-3	01-498-4	01-498-5	
Halocarbons (EPA 601)						
Date Analyzed	01.29.92	01.29.92	01.29.92	01.29.92	01.30.92	
Confirmation Date	01.30.92	01.30.92	01.30.92	01.30.92	01.30.92	
Dilution Factor, Times	1	10	1	5	5	
1,1,1-Trichloroethane, ug/L	<0.5	<5	<0.5	<2	<2	
1,1,2,2-Tetrachloroethane, ug/L	<0.5	<5	<0.5	<2	<2	
1,1,2-Trichloroethane, ug/L	<0.5	<5	<0.5	<2	<2	
1,1-Dichloroethane, ug/L	<0.5	<5	<0.5	<2	<2	
- 1,1-Dichloroethene, ug/L	<0.5	<5	<0.5	<2	<2	
- 1,2-Dichloroethane, ug/L	<0.5	<5	<0.5	<2	13	
1,2-Dichlorobenzene, ug/L	<0.5	<5	<0.5	<2	<2	
- 1,2-Dichloroethene (Total), ug/L	100	160	64	240	160	
- 1,2-Dichloropropane, ug/L	<0.5	<5	<0.5	<2	21	
1,3-Dichlorobenzene, ug/L	<0.5	<5	<0.5	<2	<2	
1,4-Dichlorobenzene, ug/L	<0.5	<5	<0.5	<2	<2	
2-Chloroethylvinylether, ug/L	<0.5	<5	<0.5	<2	<2	
Bromodichloromethane, ug/L	<0.5	<5	<0.5	<2	<2	
Bromomethane, ug/L	<0.5	<5	<0.5	<2	<2	
Bromoform, ug/L	<0.5	<5	<0.5	<2	<2	
Chlorobenzene, ug/L	<0.5	<5	<0.5	<2	<2	
Carbon Tetrachloride, ug/L	<0.5	<5	<0.5	<2	<2	
Chloroethane, ug/L	<0.5	<5	<0.5	<2	<2	
Chloroform, ug/L	<0.5	<5	<0.5	<2	4	
Chloromethane, ug/L	<0.5	<5	<0.5	<2	<2	

Analytical Report

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Project: SFO28830.A1 Del Monte

REPORT OF ANALYTICAL RESULTS

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LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
01-498-1	MW-7	23 JAN 92
01-498-2	MW-8	23 JAN 92
01-498-3	MW-9	23 JAN 92
01-498-4	MW-10	23 JAN 92
01-498-5	MW-11	23 JAN 92

PARAMETER	01-498-1	01-498-2	01-498-3	01-498-4	01-498-5
Dibromochloromethane, ug/L	<0.5	<5	<0.5	<2	<2
Dichlorodifluoromethane, ug/L	<0.5	<5	<0.5	<2	<2
Freon 113, ug/L	<0.5	<5	<0.5	<2	<2
Methylene chloride, ug/L	<0.5	<5	<0.5	<2	<2
- Trichloroethene, ug/L	29	690	10	46	290
Trichlorofluoromethane, ug/L	<0.5	<5	<0.5	<2	<2
- Tetrachloroethene, ug/L	17	29	27	54	19
- Vinyl chloride, ug/L	3.1	<5	2.1	10	<2
cis-1,2-Dichloroethene, ug/L	98	160	62	230	160
cis-1,3-Dichloropropene, ug/L	<0.5	<5	<0.5	<2	<2
trans-1,2-Dichloroethene, ug/L	3.2	<5	1.6	6	4
trans-1,3-Dichloropropene, ug/L	<0.5	<5	<0.5	<2	<2


Sim D. Lessley, Ph.D., Laboratory Director



BATCH QC REPORT: Definitions and Terms

Accuracy	The ability of a procedure to determine the "true" concentration of an analyte
Precision	The reproducibility of a procedure demonstrated by the agreement between analyses performed on either duplicates of the same sample or a pair of duplicate spikes
Batch	A group of samples analyzed sequentially using the same calibration curve, reagents, and instrument
Laboratory Control Standard (LCS)	Laboratory reagent water spiked with known compounds and subjected to the same procedures as the samples. The LCS thus indicates the accuracy of the analytical method and, because it is prepared from a different source than the standard used to calibrate the instrument, it also serves to double-check the calibration
Matrix QC	Quality control tests performed on actual client samples. For most inorganic analyses, the laboratory uses a pair of duplicate samples and a spiked sample. For most organic analyses, the laboratory uses a pair of spiked samples (duplicate spikes)
LC Result	Laboratory result of an LCS analysis
LT Result	Expected result, or true value, of the LCS analysis
R1, R2 Result:	Result of the analysis of replicate aliquots of a sample, with R1 indicating the first analysis of the sample and R2 its corresponding duplicate; used to determine precision
S1, S2 Result	Result of the analysis of replicate spiked aliquots, with S1 indicating one spike of the sample and S2 the second spike; used to determine precision and accuracy
R Bar Result	The average of replicate analysis results
S Bar Result:	The average of spike analysis results
True value	The theoretical, or expected, result of a spike sample analysis
Percent Recovery	The percentage of analyte recovered. For LCS, the percent recovery calculation is: $LC + LT \times 100$ For spike recoveries, the percent recovery calculation is: $\frac{(S \text{ Bar} - \text{Sample Concentration})}{\text{Spike Amount}} \times 100$
Relative Percent Difference (RPD)	Calculated using one of the following: $\frac{(R1 - R2) \times 100}{(R1 + R2) + 2} \quad \frac{(S1 - S2) \times 100}{(S1 + S2) + 2}$
Blank Result	The result of the analysis of a method blank, which is reagent water that is analysed using the same reagents, instruments and procedures as the samples in a batch; used to determine laboratory contamination
Reporting Detection Limit (RDL)	BCA-assigned limit based on—but not the same as—method detection limits (MDLs) determined using EPA guidelines

ORDER PLACED FOR CLIENT: CH2M Hill 9201498 :
BC ANALYTICAL : EMVL LAB : 15:42:55 06 FEB 1992 - P. 1 :
=====

SAMPLE...	SAMPLE DESCRIPTION..	DETERM.....	DATE....	METHOD.....	EQUIP.	BATCH	ID.NO
			ANALYZED				
201498*1	MW-7	TPHG.5030.BTEX	01.28.92	5030/8015	516-23	9239	7877
		VH.601	01.29.92	601	516-20	92035	7314
9201498*2	MW-8	VH.601	01.29.92	601	516-20	92035	7314
201498*3	MW-9	VH.601	01.29.92	601	516-20	92035	7314
201498*4	MW-10	VH.601	01.29.92	601	516-20	92035	7314
9201498*5	MW-11	VH.601	01.30.92	601	516-20	92037	7314

Notes: Equipment = BC Analytical identification number for a particular piece of analytical equipment.

ID.NO = BC Analytical employee identification number of analyst.

BC ANALYTICAL

BATCH QC REPORT
ORDER: E9201498

DATE REPORTED : 02/06/92

Page 1

LABORATORY CONTROL STANDARDS

PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
PH-Volatile/BTEX						
Benzene	01.28.92	9239	18	18	ug/L	100
Ethylbenzene	01.28.92	9239	19	18	ug/L	106
Toluene	01.28.92	9239	19	19	ug/L	100
Total Xylene Isomers	01.28.92	9239	70	68	ug/L	103
C6 to C14 (as gasoline)	01.28.92	9239	300	280	ug/L	107
halocarbons (EPA 601)						
1,1,1-Trichloroethane	01.29.92	92035	29	20	ug/L	145
1,1,2,2-Tetrachloroethane	01.29.92	92035	21	20	ug/L	105
1,1,2-Trichloroethane	01.29.92	92035	20	20	ug/L	100
1,1-Dichloroethane	01.29.92	92035	24	20	ug/L	120
1,1-Dichloroethene	01.29.92	92035	15	20	ug/L	75
1,2-Dichloroethane	01.29.92	92035	28	20	ug/L	140
1,2-Dichlorobenzene	01.29.92	92035	24	20	ug/L	120
1,2-Dichloroethene (Total)	01.29.92	92035	40	40	ug/L	100
1,2-Dichloropropane	01.29.92	92035	20	20	ug/L	100
1,3-Dichlorobenzene	01.29.92	92035	24	20	ug/L	120
1,4-Dichlorobenzene	01.29.92	92035	24	20	ug/L	120
2-Chloroethylvinylether	01.29.92	92035	18	20	ug/L	90
Bromodichloromethane	01.29.92	92035	19	20	ug/L	95
Bromomethane	01.29.92	92035	17	20	ug/L	85
Bromoform	01.29.92	92035	25	20	ug/L	125
Chlorobenzene	01.29.92	92035	23	20	ug/L	115
Carbon Tetrachloride	01.29.92	92035	26	20	ug/L	130
Chloroethane	01.29.92	92035	17	20	ug/L	85
Chloroform	01.29.92	92035	25	20	ug/L	125
Chloromethane	01.29.92	92035	19	20	ug/L	95
Dibromochloromethane	01.29.92	92035	18	20	ug/L	90
Dichlorodifluoromethane	01.29.92	92035	22	20	ug/L	110
Freon 113	01.29.92	92035	15	20	ug/L	75
Methylene chloride	01.29.92	92035	17	20	ug/L	85
Trichloroethene	01.29.92	92035	21	20	ug/L	105
Trichlorofluoromethane	01.29.92	92035	18	20	ug/L	90
Tetrachloroethene	01.29.92	92035	21	20	ug/L	105
Vinyl chloride	01.29.92	92035	20	20	ug/L	100
cis-1,2-Dichloroethene	01.29.92	92035	24	20	ug/L	120
cis-1,3-Dichloropropene	01.29.92	92035	35	32	ug/L	109

Note: For EPA 601, batch 92035, the laboratory control standard recoveries for 1,1,1-Trichloroethane and 1,2-Dichloroethane exceeded the upper control limit, creating a possible high bias in the samples. The two compounds were not detected in the samples.

BC ANALYTICAL

BATCH QC REPORT
ORDER: E9201498

DATE REPORTED : 02/06/92

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LABORATORY CONTROL STANDARDS

PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
trans-1,2-Dichloroethene	01.29.92	92035	16	20	ug/L	80
trans-1,3-Dichloropropene	01.29.92	92035	6.9	7.6	ug/L	91
EPA Method 601						
1,1,1-Trichloroethane	01.30.92	92037	26	20	ug/L	130
1,1,2,2-Tetrachloroethane	01.30.92	92037	21	20	ug/L	105
1,1,2-Trichloroethane	01.30.92	92037	19	20	ug/L	95
1,1-Dichloroethane	01.30.92	92037	23	20	ug/L	115
1,1-Dichloroethene	01.30.92	92037	14	20	ug/L	70
1,2-Dichloroethane	01.30.92	92037	26	20	ug/L	130
1,2-Dichlorobenzene	01.30.92	92037	28	20	ug/L	140
1,2-Dichloroethene (Total)	01.30.92	92037	38	40	ug/L	95
1,2-Dichloropropane	01.30.92	92037	23	20	ug/L	115
1,3-Dichlorobenzene	01.30.92	92037	28	20	ug/L	140
1,4-Dichlorobenzene	01.30.92	92037	30	20	ug/L	150
2-Chloroethylvinylether	01.30.92	92037	21	20	ug/L	105
Bromodichloromethane	01.30.92	92037	23	20	ug/L	115
Bromomethane	01.30.92	92037	15	20	ug/L	75
Bromoform	01.30.92	92037	24	20	ug/L	120
Chlorobenzene	01.30.92	92037	21	20	ug/L	105
Carbon Tetrachloride	01.30.92	92037	22	20	ug/L	110
Chloroethane	01.30.92	92037	16	20	ug/L	80
Chloroform	01.30.92	92037	24	20	ug/L	120
Chloromethane	01.30.92	92037	9.9	20	ug/L	50
Dibromochloromethane	01.30.92	92037	17	20	ug/L	85
Dichlorodifluoromethane	01.30.92	92037	21	20	ug/L	105
Freon 113	01.30.92	92037	14	20	ug/L	70
Methylene chloride	01.30.92	92037	17	20	ug/L	85
Trichloroethene	01.30.92	92037	22	20	ug/L	110
Trichlorofluoromethane	01.30.92	92037	16	20	ug/L	80
Tetrachloroethene	01.30.92	92037	17	20	ug/L	85
Vinyl chloride	01.30.92	92037	18	20	ug/L	90
cis-1,2-Dichloroethene	01.30.92	92037	22	20	ug/L	110
cis-1,3-Dichloropropene	01.30.92	92037	42	32	ug/L	131
trans-1,2-Dichloroethene	01.30.92	92037	16	20	ug/L	80
trans-1,3-Dichloropropene	01.30.92	92037	8.1	7.6	ug/L	107

Note: For EPA 601, batch 92037, the laboratory control standard recoveries for 1,3-Dichlorobenzene and cis-1,3-Dichloropropene exceeded the upper control limit, creating a possible high bias in the sample. The two compounds were not detected in the sample.

BC ANALYTICAL

BATCH QC REPORT
ORDER: E9201498

DATE REPORTED : 02/06/92

Page 1

MATRIX QC PRECISION (DUPLICATE SPIKES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	S1 RESULT	S2 RESULT	UNIT	RELATIVE %DIFF
PH-Volatile/BTEX						
Benzene	01.28.92	9239	16	19	ug/L	17
Ethylbenzene	01.28.92	9239	17	20	ug/L	16
Toluene	01.28.92	9239	18	20	ug/L	11
Total Xylene Isomers	01.28.92	9239	63	72	ug/L	13
C6 to C14 (as gasoline)	01.28.92	9239	300	360	ug/L	18
Haloaromatics (EPA 601)						
Trichloroethene	01.29.92	92035	37	28	ug/L	28
Tetrachloroethene	01.29.92	92035	24	17	ug/L	34
Vinyl chloride	01.29.92	92035	3.4	2.9	ug/L	16
cis-1,2-Dichloroethene	01.29.92	92035	100	98	ug/L	2
trans-1,2-Dichloroethene	01.29.92	92035	13	3.0	ug/L	125
EPA Method 601						
1,1,1-Trichloroethane	01.30.92	92037	17	17	ug/L	0
1,1-Dichloroethane	01.30.92	92037	14	14	ug/L	0
1,1-Dichloroethene	01.30.92	92037	8.5	9.1	ug/L	7
1,2-Dichloroethane	01.30.92	92037	16	16	ug/L	0
1,2-Dichloropropane	01.30.92	92037	14	14	ug/L	0
Bromodichloromethane	01.30.92	92037	14	14	ug/L	0
Bromoform	01.30.92	92037	12	14	ug/L	15
Carbon Tetrachloride	01.30.92	92037	14	14	ug/L	0
Chloroform	01.30.92	92037	15	14	ug/L	7
Dibromochloromethane	01.30.92	92037	11	12	ug/L	9
Methylene chloride	01.30.92	92037	8.5	9.5	ug/L	11
Trichloroethene	01.30.92	92037	14	14	ug/L	0
Tetrachloroethene	01.30.92	92037	12	12	ug/L	0

Note: For EPA 601, batch 92035, the spike solution was not added to S2, creating high relative percent differences for some of the compounds. Precision data was also not available for non-detected compounds.

BC ANALYTICAL

BATCH QC REPORT
ORDER: E9201498

DATE REPORTED : 02/06/92

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MATRIX QC ACCURACY (SPIKES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	SBAR RESULT	TRUE RESULT	RBAR RESULT	UNIT	PERCENT RECOVERY
PH-Volatile/BTEX							
Benzene	01.28.92	9239	17.5	18	<0.5	ug/L	97
Ethylbenzene	01.28.92	9239	18.5	18	<0.5	ug/L	103
Toluene	01.28.92	9239	19	19	<0.5	ug/L	100
Total Xylene Isomers	01.28.92	9239	67.5	68	<0.5	ug/L	99
C6 to C14 (as gasoline)	01.28.92	9239	330	280	<50	ug/L	118
Halocarbons (EPA 601)							
1,1,1-Trichloroethane	01.29.92	92035	16	12	<0.5	ug/L	133
1,1-Dichloroethane	01.29.92	92035	16	12	<0.5	ug/L	133
1,1-Dichloroethene	01.29.92	92035	12	12	<0.5	ug/L	100
1,2-Dichloroethane	01.29.92	92035	14	12	<0.5	ug/L	117
1,2-Dichloroethene (Total)	01.29.92	92035	110	120	100	ug/L	SOR
1,2-Dichloropropane	01.29.92	92035	19	12	<0.5	ug/L	158
Bromodichloromethane	01.29.92	92035	18	12	<0.5	ug/L	150
Bromoform	01.29.92	92035	17	12	<0.5	ug/L	142
Carbon Tetrachloride	01.29.92	92035	13	12	<0.5	ug/L	108
Chloroform	01.29.92	92035	14	12	<0.5	ug/L	117
Dibromochloromethane	01.29.92	92035	13	12	<0.5	ug/L	108
Methylene chloride	01.29.92	92035	13	12	<0.5	ug/L	108
Trichloroethene	01.29.92	92035	32.5	41	29	ug/L	SOR
Tetrachloroethene	01.29.92	92035	20.5	29	17	ug/L	29
cis-1,2-Dichloroethene	01.29.92	92035	99	110	98	ug/L	SOR
trans-1,2-Dichloroethene	01.29.92	92035	8	15	3.2	ug/L	41
EPA Method 601							
1,1,1-Trichloroethane	01.30.92	92037	17	12	<0.5	ug/L	142
1,1-Dichloroethane	01.30.92	92037	14	12	<0.5	ug/L	117
1,1-Dichloroethene	01.30.92	92037	8.8	12	<0.5	ug/L	73
1,2-Dichloroethane	01.30.92	92037	16	12	<0.5	ug/L	133
1,2-Dichloropropane	01.30.92	92037	14	12	<0.5	ug/L	117
Bromodichloromethane	01.30.92	92037	14	12	<0.5	ug/L	117
Bromoform	01.30.92	92037	13	12	<0.5	ug/L	108
Carbon Tetrachloride	01.30.92	92037	14	12	<0.5	ug/L	117
Chloroform	01.30.92	92037	14.5	12	<0.5	ug/L	121
Dibromochloromethane	01.30.92	92037	11.5	12	<0.5	ug/L	96
Methylene chloride	01.30.92	92037	9	12	<0.5	ug/L	75
Trichloroethene	01.30.92	92037	14	12	<0.5	ug/L	117
Tetrachloroethene	01.30.92	92037	12	12	<0.5	ug/L	100

Note: For EPA 601, batch 92035, the matrix spike recovery for Tetrachloroethene was less than the lower control limit. The results for Tetrachloroethene were accepted based on the acceptable recovery of the laboratory control standard.

OR = Spike Out of Range
(relative to high sample concentration)

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MATRIX QC ACCURACY (SPIKES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	SBAR RESULT	TRUE RESULT	RBAR RESULT	UNIT	PERCENT RECOVERY
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SOR = Spike Out of Range
(relative to high sample concentration)

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METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT	METHOD
PH-Volatile/BTEX						
Date Analyzed	01.28.92	9239	1.28.92	NA	Date	5030/8015
Benzene	01.28.92	9239	0.11	0.5	ug/L	5030/8015
Ethylbenzene	01.28.92	9239	0	0.5	ug/L	5030/8015
Toluene	01.28.92	9239	0.034	0.5	ug/L	5030/8015
Total Xylene Isomers	01.28.92	9239	0.21	0.5	ug/L	5030/8015
C6 to C14 (as gasoline)	01.28.92	9239	3.3	50	ug/L	5030/8015
halocarbons (EPA 601)						
Date Analyzed	01.29.92	92035	1.29.92	NA	Date	601
1,1,1-Trichloroethane	01.29.92	92035	0	0.5	ug/L	601
1,1,2,2-Tetrachloroethane	01.29.92	92035	0	0.5	ug/L	601
1,1,2-Trichloroethane	01.29.92	92035	0	0.5	ug/L	601
1,1-Dichloroethane	01.29.92	92035	0	0.5	ug/L	601
1,1-Dichloroethene	01.29.92	92035	0	0.5	ug/L	601
1,2-Dichloroethane	01.29.92	92035	0	0.5	ug/L	601
1,2-Dichlorobenzene	01.29.92	92035	0	0.5	ug/L	601
1,2-Dichloroethene (Total)	01.29.92	92035	0	0.5	ug/L	601
1,2-Dichloropropane	01.29.92	92035	0	0.5	ug/L	601
1,3-Dichlorobenzene	01.29.92	92035	0	0.5	ug/L	601
1,4-Dichlorobenzene	01.29.92	92035	0	0.5	ug/L	601
2-Chloroethylvinylether	01.29.92	92035	0	0.5	ug/L	601
Bromodichloromethane	01.29.92	92035	0	0.5	ug/L	601
Bromomethane	01.29.92	92035	0	0.5	ug/L	601
Bromoform	01.29.92	92035	0	0.5	ug/L	601
Chlorobenzene	01.29.92	92035	0	0.5	ug/L	601
Carbon Tetrachloride	01.29.92	92035	0	0.5	ug/L	601
Chloroethane	01.29.92	92035	0	0.5	ug/L	601
Chloroform	01.29.92	92035	0	0.5	ug/L	601
Chloromethane	01.29.92	92035	0	0.5	ug/L	601
Dibromochloromethane	01.29.92	92035	0	0.5	ug/L	601
Dichlorodifluoromethane	01.29.92	92035	0	0.5	ug/L	601
Freon 113	01.29.92	92035	0	0.5	ug/L	601
Methylene chloride	01.29.92	92035	0	0.5	ug/L	601
Trichloroethene	01.29.92	92035	0	0.5	ug/L	601
Trichlorofluoromethane	01.29.92	92035	0	0.5	ug/L	601
Tetrachloroethene	01.29.92	92035	0	0.5	ug/L	601
Vinyl chloride	01.29.92	92035	0	0.5	ug/L	601

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METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT	METHOD
cis-1,2-Dichloroethene	01.29.92	92035	0	0.5	ug/L	601
cis-1,3-Dichloropropene	01.29.92	92035	0	0.5	ug/L	601
trans-1,2-Dichloroethene	01.29.92	92035	0	0.5	ug/L	601
trans-1,3-Dichloropropene	01.29.92	92035	0	0.5	ug/L	601
EPA Method 601						
Date Analyzed	01.30.92	92037	1.30.92	NA	Date	601
1,1,1-Trichloroethane	01.30.92	92037	0	0.5	ug/L	601
1,1,2,2-Tetrachloroethane	01.30.92	92037	0	0.5	ug/L	601
1,1,2-Trichloroethane	01.30.92	92037	0	0.5	ug/L	601
1,1-Dichloroethane	01.30.92	92037	0	0.5	ug/L	601
1,1-Dichloroethene	01.30.92	92037	0	0.5	ug/L	601
1,2-Dichloroethane	01.30.92	92037	0	0.5	ug/L	601
1,2-Dichlorobenzene	01.30.92	92037	0	0.5	ug/L	601
1,2-Dichloroethene (Total)	01.30.92	92037	0	0.5	ug/L	601
1,2-Dichloropropane	01.30.92	92037	0	0.5	ug/L	601
1,3-Dichlorobenzene	01.30.92	92037	0	0.5	ug/L	601
1,4-Dichlorobenzene	01.30.92	92037	0	0.5	ug/L	601
2-Chloroethylvinylether	01.30.92	92037	0	0.5	ug/L	601
Bromodichloromethane	01.30.92	92037	0	0.5	ug/L	601
Bromomethane	01.30.92	92037	0	0.5	ug/L	601
Bromoform	01.30.92	92037	0	0.5	ug/L	601
Chlorobenzene	01.30.92	92037	0	0.5	ug/L	601
Carbon Tetrachloride	01.30.92	92037	0	0.5	ug/L	601
Chloroethane	01.30.92	92037	0	0.5	ug/L	601
Chloroform	01.30.92	92037	0	0.5	ug/L	601
Chloromethane	01.30.92	92037	0	0.5	ug/L	601
Dibromochloromethane	01.30.92	92037	0	0.5	ug/L	601
Dichlorodifluoromethane	01.30.92	92037	0	0.5	ug/L	601
Freon 113	01.30.92	92037	0	0.5	ug/L	601
Methylene chloride	01.30.92	92037	0	0.5	ug/L	601
Trichloroethene	01.30.92	92037	0	0.5	ug/L	601
Trichlorofluoromethane	01.30.92	92037	0	0.5	ug/L	601
Tetrachloroethene	01.30.92	92037	0	0.5	ug/L	601
Vinyl chloride	01.30.92	92037	0	0.5	ug/L	601
cis-1,2-Dichloroethene	01.30.92	92037	0	0.5	ug/L	601
cis-1,3-Dichloropropene	01.30.92	92037	0	0.5	ug/L	601
trans-1,2-Dichloroethene	01.30.92	92037	0	0.5	ug/L	601

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METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT	METHOD
trans-1,3-Dichloropropene	01.30.92	92037	0	0.5	ug/L	601

CHM Hill QUALITY ANALYTICS
CHAIN OF CUSTODY RECORD

LOG# 9201498

PROJECT NUMBER EFO28830 A1		PROJECT NAME DEL MONTE PLANT 35			# OF CONTAINERS	CLIENT ADDRESS AND PHONE NUMBER EMERYVILLE, CA 6425 CHRISTIE AVE.					LAB ID	FOR LAB USE ONLY				
CLIENT NAME CH2M HILL						ANALYSES REQUESTED						LAB#	LAB#			
PROJECT MANAGER J. HOLLOWAY			COPY TO: L. ANDERSON			EPA 601 TPH - 905 w/ BTEX (8015 med.)						PROJECT NO.				
REQUESTED COMP. DATE			SAMPLING REQUIREMENTS									ACK			VERIFIED	
			SDWA <input type="checkbox"/> NPDES <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input checked="" type="checkbox"/>							QUOTE#		BS				
STA NO.	DATE	TIME	COMP	GRAIL	SOIL	SAMPLE DESCRIPTIONS (12 CHARACTERS)					NO. OF SAMP			PG	OF	
1				X		MW-7	5	X	X							REMARKS
2				X		MW-8	2	X	X							
3				X		MW-9	2	X	X							
4				X		MW-10	2	X	X							
5				X		MW-11	2	X	X							
SAMPLED BY AND TITLE <i>Jerry Anderson</i>			DATE/TIME 1/23/92		RELINQUISHED BY <i>Jerry Anderson</i>			DATE/TIME 1/23/92		HAZWRAP/NEESA Y N						
RECEIVED BY: <i>Sharon Koenig</i>			DATE/TIME 1/23/92 @ 0205		RELINQUISHED BY:			DATE/TIME		QC LEVEL 1 2 3						
RECEIVED BY:			DATE/TIME		RELINQUISHED BY:			DATE/TIME		COC		ICE				
RECEIVED BY LAB:			DATE/TIME		SAMPLE SHIPPED VIA			AIR BILL#		ANA REQ		TEMP				
					UPS <input type="checkbox"/> BUS <input type="checkbox"/> FED-EX <input type="checkbox"/> HAND <input type="checkbox"/> OTHER <input checked="" type="checkbox"/>					CUST SEAL		Ph				
REMARKS										SAMPLE COND.						
										ENTERED INTO LIMS		COC REVIEWED				

Appendix L
Regulatory Levels

**Table L-1
Regulatory Criteria for Water**

Compound	Drinking Water Standards (mg/l)			Lowest Reported Effects Level (mg/l)	
	California Action Level ^a	California MCL ^b	Federal MCL ^c	Freshwater	Saltwater
Acetone	--	--	--	--	--
1,2-Dichloroethane	0.0005	0.0005	0.005	--	--
2-Butanone	1.77 ^e	--	--	--	--
4-Methylphenol	--	--	--	--	--
Trichloroethylene	0.005	0.005	0.005	0.045	0.002
Bis(2-ethylhexyl)phthalate	--	--	--	--	--
Tetrachloroethylene	0.004	0.005	0.005 ^f	5.280 ^g	10.200 ^g
di-n-Butylphthalate	--	--	--	--	--
Vinyl Chloride	0.0005	0.0005	0.002	--	--
1,1-Dichloroethylene	--	0.006	0.007	--	--
TPH-Gasoline	--	--	--	--	--
Benzene	0.001	0.001	0.005	5.3	--
Toluene	2.0	2.0	2.0	17.0	--
Ethylbenzene	2.0	0.68	0.70	32.0	--
Xylenes	0.04	1.75	10	--	--

^aCalifornia AIs are nonpromulgated guidance levels developed by the DHS Water Supply Branch.

^bCalifornia MCLs became final in early 1989; CAC, Title 22, Section 6444.5.

^cSafe Drinking Water Act MCLs listed in 40 CFR 141.

^dNot enough data were available to derive national water quality criteria for the protection of freshwater and saltwater aquatic life. The values reflect the lowest reported acute toxicity effects levels from 45 FR 79318, November 28, 1980.

^eCalifornia applied action level--a nonpromulgated guidance level developed by DHS, Toxic Substances Control Division.

^fThis federal MCL is effective July 1992.

^gPCE also has the lowest reported chronic toxicity effects levels for freshwater and saltwater life of 0.850 and 0.450 ppm, respectively.

Table 1-2
CALIFORNIA SECONDARY DRINKING WATER STANDARDS

<u>Constituent</u>	<u>Maximum Contaminant Levels</u> <u>(MCLS) (ppm)</u>		
	<u>Recommended</u>	<u>Upper</u>	<u>Short-Term</u>
Total Dissolved Solids	500	1,000	1,500
Electrical Conductivity (umhos/cm)	900	1,600	2,200
Chloride	250	500	500

Source: CCR, Title 22, Section 64473.
