Engineers
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August 12, 1994

BAE28830.P5

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Subject: Soil and Groundwater Investigation East of Boiler House on East Parcel
Del Monte Plant 35, Emeryville, California

Enclosed is a copy of a technical memorandum describing the results of soil and groundwater investigation activities recently undertaken on the East Parcel of the Del Monte Plant 35 in Emeryville. Please review the findings and recommendations and contact me with any comments you have. I can be reached at (510) 251-2888 ext 2189.

Sincerely,

CH2M HILL

Madeline Wall

Madeline Wall
Project Manager

cc: Dr. Ravi Arulanantham/ACDEH/RWQCB
Mr. Thomas Bender/The Bender Partnership
Mr. Steven Ronzone/Del Monte
Mr. Soon Kim/Del Monte
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Mr. David Harnish/ENVIRON
Mr. Bern Baumgartner/CH2M HILL

TECHNICAL MEMORANDUM

CH2M HILL

TO: Thomas Bender/The Bender Partnership
Steve Ronzone/Del Monte

COPIES: Bern Baumgartner/CH2M HILL

FROM: Madeline Wall/CH2M HILL

DATE: August 12, 1994

SUBJECT: Soil and Groundwater Investigation East of Boiler House on East Parcel Del Monte Plant 35, Emeryville, California

PROJECT: BAE28830.P2

INTRODUCTION

This technical memorandum presents the results of soil and groundwater investigation activities conducted in June 1994 at Del Monte's Plant 35 property in Emeryville, California. The area of investigation was on the East Parcel between the boiler house and label room and the former warehouse foundations. (See Figure 1.) Chlorinated hydrocarbons (including trichloroethylene, tetrachloroethylene, vinyl chloride, and methylene chloride) were detected in groundwater samples collected in this area during a previous investigation. These results were documented in the report: *Supplemental Onsite Investigation Report for Del Monte Plant 35*, dated May 1994 and prepared by CH2M HILL.

The additional investigation activities described in this technical memorandum were conducted to further identify the source of the chlorinated hydrocarbons in groundwater and to provide information needed for remedial design. The investigation consisted of two separate field events: a soil gas survey conducted on June 3, 1994; and soil and groundwater sample collection and analysis conducted on June 17, 1994.

In addition to the activities conducted by CH2M HILL for Del Monte, Woodward Clyde Consultants (WCC) collected soil samples for chemical analysis from two borings drilled during a geotechnical investigation conducted for Kaiser. Analytical results from the soil samples collected by WCC are included in this technical memorandum.

SOIL GAS SURVEY

The objective of the soil gas survey was to locate one or more areas of soil containing chlorinated hydrocarbons based on levels of chlorinated hydrocarbons measured in soil vapor samples. A soil gas survey was conducted as a possible inexpensive alternative to soil and groundwater sampling. Tracer Research Corporation was contracted to collect and analyze soil gas samples in the investigation area. Soil gas samples were obtained at the locations shown on Figure 2 at depths ranging from 3 to 11 feet below ground surface (bgs). Soil gas samples were analyzed for vinyl chloride, methylene chloride, 1,1 dichloroethene (1,1-DCE), 1,2 dichloroethene (1,2-DCE), trichloroethene (TCE), and tetrachloroethene (PCE). Results are tabulated in Table 1. Chlorinated hydrocarbons were detected at levels above the instrument detection limits in samples from 4 locations: SG-2, SG-3, SG-5, and SG-6. Compounds detected were 1,2-DCE, TCE, and PCE.

Because contaminants were detected at relatively low levels in the soil gas samples, CH2M HILL directed the Tracer Research field team to collect groundwater samples and measure chlorinated hydrocarbon levels in the container head space. Only one water sample was obtained for head space measurement because the soil did not readily yield water. The location of the groundwater sample collection (WS-2) is shown on Figure 2.

The Tracer Research report is provided as Attachment 1.

SOIL AND GROUNDWATER SAMPLING

Because the soil gas survey did not provide the necessary information for locating the source of chlorinated hydrocarbons, soil and groundwater samples were collected from the investigation area on June 17, 1994.

Groundwater

SAMPLING LOCATIONS AND PROCEDURES

Four groundwater grab samples were collected at the locations shown on Figure 2. The basis for location selection was as follows:

Sample	Location	Purpose
WH-15	East of the label room	Assess extent of chlorinated hydrocarbons north of investigation area
WH-16	Outside southeast corner of label room between railroad tracks	Confirm presence of chlorinated hydrocarbons detected by WCC during geotechnical investigation
WH-18	South of investigation area, between plant and former warehouse foundations	Assess extent of chlorinated hydrocarbons south of investigation area
WH-19	About 40 feet northeast of WH-15	Assess northern extent of chlorinated hydrocarbons (selected after reviewing results from WH-15)

To collect the groundwater samples, soil borings were drilled to a depth of approximately 5 to 10 feet below the first indication of moisture on the center rod inside the hollow stem auger. The augers were removed and a temporary 2-inch diameter PVC well casing with 10 feet of 0.01-inch slotted well screen was installed. Approximately 3 casing volumes of groundwater were purged from each temporary well. The purged waste was measured for pH, conductivity, and temperature. Purging continued until the conductivity stabilized within 10 percent and the pH within 0.20. Groundwater samples were collected using a teflon bailer with a low-flow attachment. Samples for chlorinated hydrocarbon analysis were placed in 40 ml VOA bottles and samples for petroleum hydrocarbon analysis were placed in 1 liter amber glass bottle.

ANALYSES

The groundwater samples were analyzed onsite for chlorinated hydrocarbons by EPA Method 8010 and for TPH-kerosene, diesel, and motor oil by EPA Method 8015 (modified) by Sparger Technology, Inc. in their mobile laboratory.

RESULTS

Compounds and concentrations detected in groundwater samples are listed in Table 2 and shown on Figure 3. Laboratory reports are provided in Attachment 2.

No chlorinated or petroleum hydrocarbons were detected in groundwater samples from borings WH-18 and WH-19, located the furthest south and north, respectively. Groundwater from WH-16, located near the southeast corner of the label room, contained 350 µg/l PCE, 130 µg/l TCE, and other chlorinated hydrocarbons as indicated in Figure 3 and Table 2. The groundwater sample from WH-15, located about 40 feet north of WH-16 contained 44 µg/l PCE, 40 µg/l TCE, 37 µg/l vinyl chloride, small amounts of other chlorinated hydrocarbons, and 770 µg/l TPH as kerosene.

Soil

CH2M HILL SAMPLES

Locations and procedures

Soil samples were collected from the four boreholes drilled for groundwater sampling and from three additional boreholes (B-4, B-5, and B-6) drilled to a depth of 15 feet below ground surface (bgs). Boring locations are shown on Figure 2.

Soil samples from WH-15, WH-16, WH-18, and WH-19 were collected at depths estimated to be 1 to 2 feet above the groundwater table. Samples were collected in brass tubes.

Continuous-core soil samples were collected while drilling B-4, B-5, and B-6. Soil cores were monitored with an organic vapor meter (OVM) and soil sample selection based on measurements obtained. Core monitoring started at 5 feet bgs at B-4 and at the surface at B-5 and B-6. OVM readings from soil core B-4 ranged from 0 ppm (at 15 feet bgs) to 76 ppm (at 8 feet bgs). Two samples were collected for analysis: one from 7.5 to 8 feet bgs and one from 12.5 to 13 feet bgs. OVM readings from the B-5 and B-6 soil cores were 0 ppm. Samples were collected from 7.5 to 8 feet bgs in B-5 and from 8.5 to 9 feet bgs in B-6. Samples from cores were placed in brass tubes.

Analyses

The soil samples collected by CH2M HILL were analyzed onsite for chlorinated hydrocarbons by EPA Method 8010 and for TPH-kerosene, diesel, and motor oil by EPA Method 8015 (modified) by Sparger Technology, Inc. in their mobile laboratory.

WOODWARD CLYDE CONSULTANTS SAMPLES

Locations and Procedures

During a geotechnical investigation conducted for Kaiser at the Plant 35 property, Woodward Clyde Consultants (WCC) collected soil samples from two borings (B7 and B7B), both located on the East Parcel between the label room and the former warehouse foundations to the east. Boring B7 was drilled on April 26, 1994 and Boring B7B on May 31, 1994. Their locations are shown on Figure 2. Soil was screened during drilling with an organic vapor meter. Soil samples were collected where meter readings indicated the presence of organic compounds. Two samples were collected from Boring B7 and three from Boring B7B.

Results of soil samples from the first boring, B7, were reviewed by CH2M HILL before conducting the field work described in this technical memorandum. The results indicated the presence of petroleum and chlorinated hydrocarbons in soil samples collected from B7. The locations of soil gas sample SG-5 and borings WH-15 and WH-16 in the CH2M HILL investigation were selected to further investigate WCC's findings at B7.

Analyses

Samples were analyzed for chlorinated hydrocarbons by EPA Method 8010, TPH as diesel, kerosene, and motor oil by EPA Method 8015 Modified, and TPH as gas and BTEX by EPA Method 8015.

RESULTS (CH2M HILL and Woodward Clyde Consultants)

Compounds detected in soil samples from both the CH2M HILL and the WCC sampling events are listed in Table 3. Laboratory reports are provided in Attachment 2 (CH2M HILL) and Attachment 3 (WCC).

Chlorinated hydrocarbons were detected at low levels in all soil samples collected by CH2M HILL except for the sample from boring WH-15. Maximum concentrations of PCE and TCE detected were 0.0096 mg/kg PCE (WH-16) and 0.0220 mg/kg TCE (B-4, 12.5-13 feet bgs). No vinyl chloride was detected in the soil samples. The soil sample from B-4 collected at 12.5 to 13.0 feet bgs generally contained the highest concentrations of chlorinated hydrocarbons of the samples collected by CH2M HILL.

Petroleum hydrocarbons as kerosene were detected in three CH2M HILL soil samples: WH-15 at 70 mg/kg; B-4 (7.5 - 8.0 feet bgs) at 170 mg/kg; and B-5 (7.5 - 8.0 feet bgs) at 8.8 mg/kg.

Samples collected by WCC at B7 contained low levels of trans- and cis-1,2-DCE, bromodichloromethane, TCE, PCE, and vinyl chloride. Chlorinated hydrocarbons were also detected in soil samples from B7B. Concentrations in B7B samples were similar to those detected in B7 except for PCE. PCE was detected at concentrations up to 8.2 mg/kg in Boring B7B while in B7, PCE levels were less than 1 mg/kg. Petroleum hydrocarbons in the form of motor oil, kerosene, and unknown hydrocarbons, were also detected in B7 and B7B soil samples. The maximum concentration of TPH as motor oil was 260 mg/kg and of TPH-kerosene was 87 mg/kg.

DISCUSSION

Based on analytical results of groundwater and soil samples, the investigation area shaded in Figure 1 appears to be the approximate source area of chlorinated hydrocarbons in groundwater beneath the East Parcel. The highest levels of chlorinated hydrocarbons in groundwater were detected at WH-10 and WH-16.

The area is bounded by groundwater sample locations where insignificant levels of chlorinated hydrocarbons were detected (WH-9, WH-4, A20K02, WH-19, WH-12, WH -13, WH-18, WH-11, and WH-6). Groundwater containing chlorinated hydrocarbons at lower levels than those detected in WH-10 and WH-16, extends down gradient from this area to the southwest beneath the warehouse as indicated by results of samples from WH-1, WH-2, WH-3, WH-5, and WH-7, collected during the March and April 1994 investigation activities.

Soil samples collected by CH2M HILL contained low levels (well below 1 mg/kg in any one sample) of chlorinated hydrocarbons. The highest values were detected at B-4 and B-5. Results obtained from samples collected by WCC indicated total levels of chlorinated hydrocarbons at a depth of 7 feet bgs at B7B of 8.8 mg/kg, with PCE being the primary component at 8.2 mg/kg. In the same boring at 10 feet bgs, total chlorinated hydrocarbons detected were 0.192 mg/kg. The soil in the vicinity of B7B may be the source of the chlorinated hydrocarbons detected in groundwater beneath the East Parcel. Petroleum hydrocarbons are also present at levels above 100 mg/kg in soil at some locations within the area investigated.

RECOMMENDATION

Soil Remediation

To remove a potential source of chlorinated hydrocarbons in groundwater, we recommend excavating soil in the vicinity of B7B as soon as practicable. Because building demolition may be postponed beyond the initially anticipated schedule of August/September 1994, we recommend removing the currently accessible soil containing elevated levels of chlorinated hydrocarbons prior to building demolition. Inaccessible soil containing elevated levels of chlorinated hydrocarbons would be removed after facility demolition occurs. Some of the soil removed is expected to contain petroleum hydrocarbons in addition to chlorinated hydrocarbons.

This removal action would be in addition to the remediation described in the *Draft Remediation Plan, Del Monte Plant 35*, dated April 1994 and prepared by CH2M HILL. (The draft remediation plan includes the removal of a 20,000-gallon fuel oil tank east of the boiler house and surrounding soil containing petroleum hydrocarbons. The draft plan also includes excavating soil located outside the southeast corner of the label room that contains petroleum hydrocarbons at levels greater than 100 mg/kg.

We propose the following soil clean up levels for chlorinated hydrocarbons:

Compound	Proposed Cleanup Level mg/kg	EPA PRG for Residential at 10^{-6}* mg/kg
Bromodichloromethane	1	2.9
Chloromethane	1	3.7
1,1-dichloroethene	0.07	0.07
Cis-1,2-dichloroethene	1	210
Trans-1,2-dicholorethene	1	620
Methylene Chloride	1	22
Tetrachloroethene	1	22
Trichlorothene	1	14
Vinyl Chloride	0.0097	0.0097
***USEPA Region IX Preliminary Remediation Goals (PRGs), First Half 1994.**		

The primary propose of removing soil around Boring B7B is to protect groundwater quality. The proposed cleanup levels are intended as criteria for removal of soil that could potentially act as a continuing source of chlorinated hydrocarbons to groundwater. Protection of public health was also considered when proposing these clean up levels. The table above lists the EPA Region IX Preliminary Remediation Goals (PRGs) for chlorinated hydrocarbons in soil in a residential setting for an increased cancer risk of 1×10^{-6}.[1] The proposed clean up levels for groundwater protection are well below the PRGs except two that are proposed at the PRG: 1,1-dichlorothene and vinyl chloride.

The clean up levels will be used to determine the extent, both areal and depth, to which soil will be excavated in the vicinity of Boring B7B. Soil beneath buildings or other structures will be left in place for removal after site demolition. Soil at depths that encounter groundwater sufficient to make excavation impractical will not be removed. We estimate that approximately 700 cubic yards of soil will be removed with excavation dimensions of approximately 30 feet by 40 feet by 10 to 15 feet deep.

Confirmation soil samples will be collected from the sidewalls and bottom of the excavation pit. Samples will be analyzed for chlorinated hydrocarbons and TPH-diesel, -motor oil, and -kerosene.

Excavated soil will be stockpiled onsite on a paved surface lined with plastic and bermed to prevent rainwater runoff. The soil will be spread to a height of 1 to 2 feet to enhance volatilization. Approximately 3 months later, samples of stockpiled soil will be collected to assess levels of chlorinated and petroleum hydrocarbons remaining. Based on results obtained, a recommendation on soil disposition will be made.

A work plan will be submitted to the ACDEH and the RWQCB to describe the details of the soil removal activity.

Groundwater Remediation

As discussed in the May 1994 *Supplemental Onsite Investigation Report*, we recommend remediating the chlorinated hydrocarbons in the groundwater by constructing a groundwater extraction pit, pumping groundwater from the pit, and treating the groundwater at the treatment system currently operating on the West Parcel. The extraction pit would be

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[1]PRGs are developed by EPA based on EPA toxicity values for the specific compound and health-protective exposure assumptions to develop safe contaminant levels in environmental media. PRGs for soil consider exposure from ingestion and inhalation of particulate and volatiles, including exposure to indoor air from soil gas.

constructed after the underground storage tank is removed and at or near the pit excavated during the tank removal. The existing groundwater treatment system would be modified as needed to accommodate the increase in flow and the possible addition of petroleum hydrocarbons to the wastestream.

The effectiveness of groundwater extraction would be monitored by samples collected from a new groundwater monitoring well to be installed downgradient of the underground tank following its removal and by sampling groundwater at the new extraction pit.

The groundwater cleanup goal is to achieve asymptotic levels of chlorinated hydrocarbons at these two monitoring points.

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Table 1
Soil Gas Sample Results
Del Monte Plant 35
Emeryville, California

Sample	Sample Type	Vinyl Chloride ug/l	Methylene Chloride ug/l	1,1-DCE ug/l	1,2-DCE ug/l	TCE ug/l	PCE ug/l
Air	QA/QC	<0.2	<0.02	<0.004	<0.08	<0.0008	<0.0006
SG-1-6'	soil vapor	<0.3	<0.2	<0.04	<0.8	<0.008	<0.006
SG-2A-3'	soil vapor	<0.3	<0.04	<0.008	<0.2	<0.002	0.009
SG-2B-8.5'	soil vapor	<0.3	<0.04	<0.008	<0.2	<0.002	<0.001
SG-2C-14'	soil vapor	<0.3	<0.04	<0.008	<0.2	<0.002	<0.001
SG-3-3'	soil vapor	<0.3	<0.04	<0.008	<0.2	<0.002	0.007
SG-4-6'	soil vapor	<0.3	<0.04	<0.008	<0.2	<0.002	<0.001
Air	QA/QC	<0.2	<0.02	<0.004	<0.08	<0.0008	<0.0006
SG-5-9.5	soil vapor	<0.3	<0.04	<0.008	0.5	0.004	0.01
SG-6-11'	soil vapor	<0.3	<0.04	<0.008	<0.02	0.04	0.09
Air	QA/QC	<0.2	<0.02	<0.004	<0.08	<0.0008	<0.0006
WS-2-6'	water vapor	0.4*	<0.4	<0.03	<0.09	0.03	0.009

Notes:
* The vinyl chloride detected in sample WS-2 is qualitative only.
DCE = Dichloroethene
TCE = Trichloroethene
PCE = Tetrachloroethene

Table 2
Results of Onsite Groundwater Analyses
Date Sampled: June 17, 1994
Del Monte Plant 35, Emeryville, California

Sample Location	Analytes									
	Chloromethane (ug/L)	1,1-Dichloroethene (ug/L)	Trans-1,2-Dichloroethene (ug/L)	Cis-1,2-Dichloroethene (ug/L)	Cis-1,3-Dichloropropene (ug/L)	1,1,1-Trichloroethane (ug/L)	Trichloroethene (ug/L)	Tetrachloroethene (ug/L)	Vinylchloride (ug/L)	TPH Kerosene (ug/L)
WH-15	<0.5	1.1	7.6	53	1.1	0.7	40	44	37	770
WH-16	340	58	55	250	<5.0	<5.0	130	350	<5.0	<50
WH-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50
WH-19	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50

Note:
1. "<" indicates that the laboratory detection limit was not exceeded
2. TPH = total petroleum hydrocarbons

Table 3

Results of Onsite Soil Sample Analyses

Date Sampled: April -June 1994

Del Monte Plant 35, Emeryville, California

Units are mg/kg

Sample Location	Analytes												
	Trans-1,2-Dichloro-ethene	Bromodi-chloro-methane	Methylene Chloride	Cis-1,2-dichloro-ethene	Trichloro-ethene	Tetra-chloro-ethene	Chloro-methane	1,1-Dichloro-ethene	Vinyl Chloride	TPH Motor Oil	TPH Kerosene	TEPH UNK HC	TPH-Gas/BTEX UNK HC
CH2M HILL													
WH-15 (8.5-9')	<0.001	ND	ND	<0.001	<0.001	<0.001	<0.002	<0.001	ND	ND	70.0	ND	ND
WH-16 (8.5-9')	0.0008	ND	ND	0.0059	0.0046	0.0096	0.0030	0.0008	ND	ND	<1.0	ND	ND
WH-18 (9-9.5')	<0.0005	ND	ND	0.0008	<0.0005	0.0009	<0.0005	<0.0005	ND	ND	<1.0	ND	ND
WH-19 (11.5-12')	<0.0005	ND	ND	<0.0005	<0.0005	0.0005	<0.0005	0.0008	ND	ND	<1.0	ND	ND
B-4 (7.5-8')	0.0071	ND	ND	0.0051	0.0011	0.0010	0.0077	0.0010	ND	ND	170.0	ND	ND
B-4 (12.5-13')	0.015	ND	ND	0.0150	0.0220	0.0035	0.0290	0.0011	ND	ND	<1.0	ND	ND
B-4 (7.5-8')	0.0008	ND	ND	0.0031	0.0013	0.0005	0.0043	0.0009	ND	ND	8.80	ND	ND
B-6 (8.5-9')	0.0009	ND	ND	0.0014	0.0023	0.0024	0.0016	0.0009	ND	ND	<1.0	ND	ND
WCC													
B7 (6.5')	0.0096	0.01	<0.005	0.380	0.20	0.340	ND	ND	0.0082	45.0	57.0	ND	72.0
B7 (8.0')	<0.010	<0.010	<0.010	0.240	0.140	0.280	ND	ND	<0.010	75.0	87.0	ND	91.0
B7B (7.5')	<0.005	<0.005	0.0220	0.390	0.210	8.20	ND	ND	<0.005	260.0	<1.0	150.0	61.0
B7B (9')	<0.005	<0.005	0.0240	0.130	0.150	6.40	ND	ND	<0.005	180.0	<1.0	150.0	62.0
B7B (10.5')	<0.005	<0.005	0.0150	0.0520	0.0280	0.0970	ND	ND	<0.005	<10	<1.0	ND	1.40

Note:

1. "<" indicates that the laboratory detection limit was not exceeded
2. ND = not detected
3. TEPH = total extractable petroleum hydrocarbons
4. TPH = total petroleum hydrocarbons
5. UNK HC = unknown hydrocarbon
6. CH2M HILL refers to samples collected by CH2M HLL
7. WCC refers to samples collected by Woodward Clyde Consultants

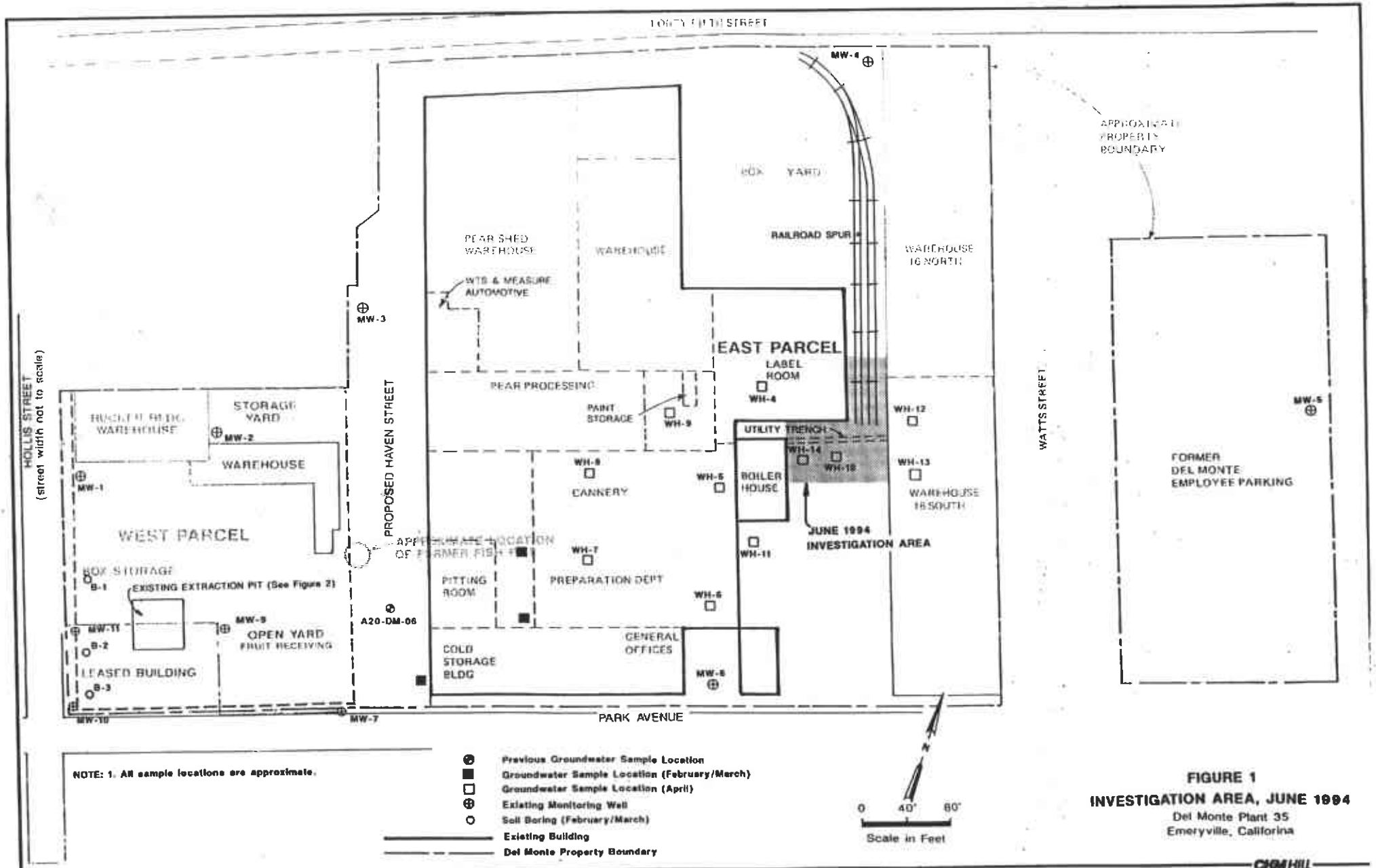

FIGURE 1
INVESTIGATION AREA, JUNE 1994
Del Monte Plant 35
Emeryville, California

CH2M HILL

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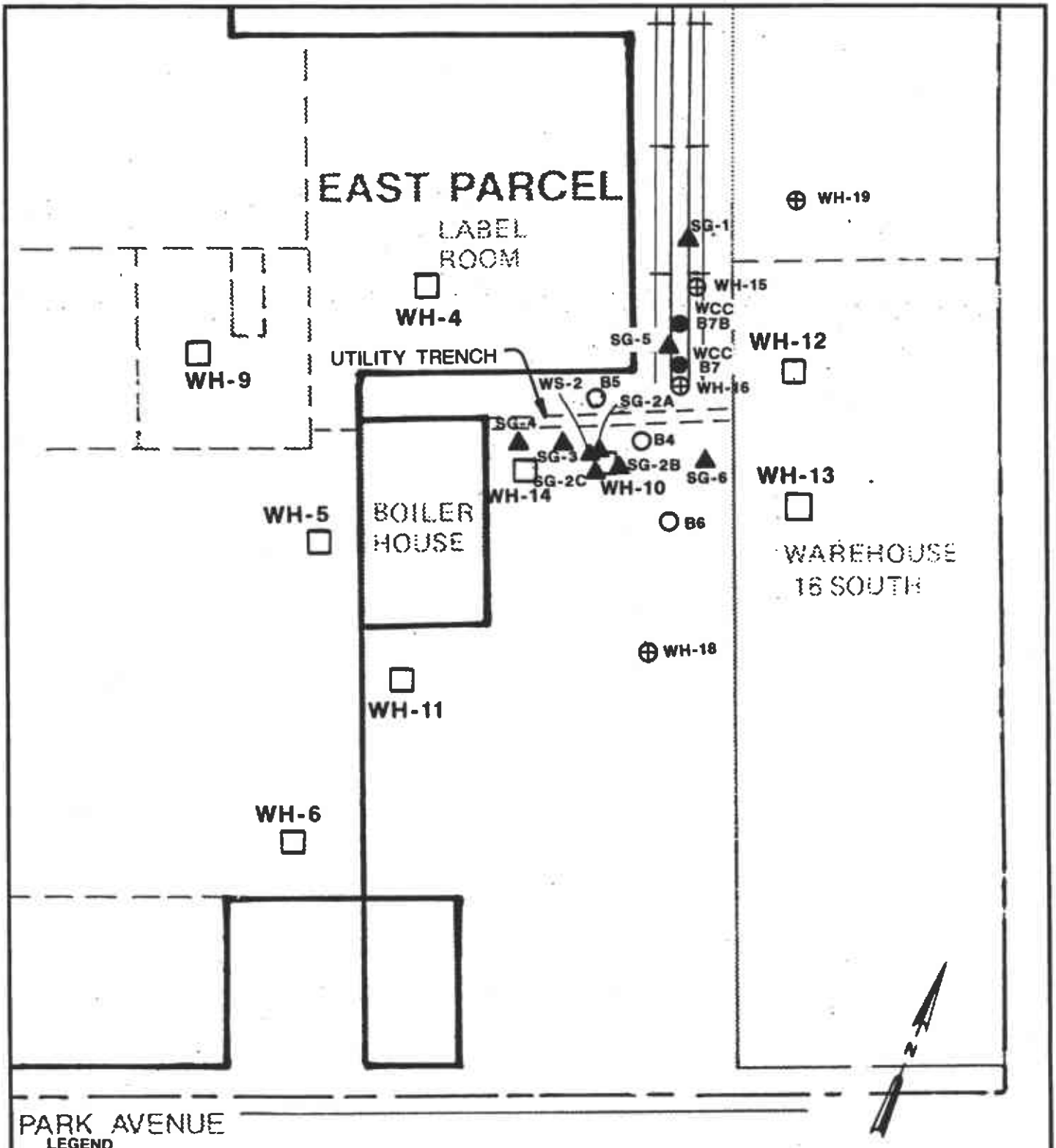

FIGURE 2

SOIL GAS, GROUNDWATER, AND SOIL SAMPLE LOCATIONS

Del Monte Plant 35
Emeryville, California

CH2M HILL

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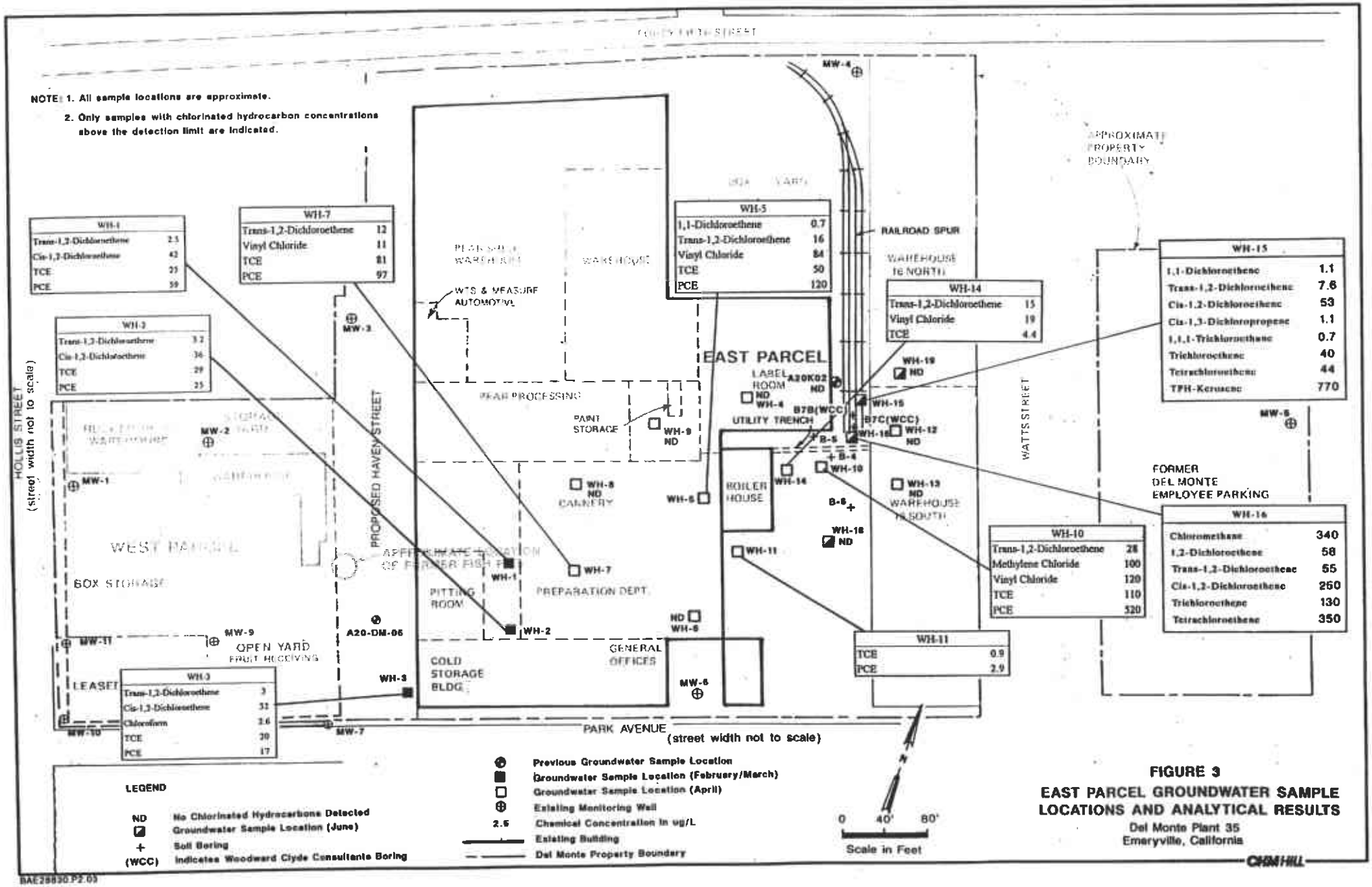
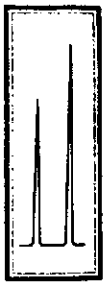


FIGURE 3
EAST PARCEL GROUNDWATER SAMPLE LOCATIONS AND ANALYTICAL RESULTS
Del Monte Plant 35
Emeryville, California



Vapor Trace® Shallow Soil Gas
and Groundwater Investigation

DEL MONTE PLANT #~~385~~
Emeryville, California

June 3, 1994

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1640270S

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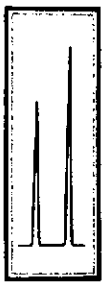


1.0 DEL MONTE PLANT #33 SITE INVESTIGATION

Tracer Research Corporation (Tracer Research) performed a shallow soil gas and groundwater investigation at Del Monte Plant #33 located in Emeryville, California. The investigation was conducted June 3, 1994 for CH2M Hill of Emeryville, California.

1.1 Objective

The purpose of the investigation was to evaluate and delineate possible subsurface contamination by screening shallow soil gas and groundwater for the presence of volatile organic compounds (VOCs). Soil gas and groundwater samples were collected and analyzed for the following analyte classes and compounds:

Analyte Class: Halocarbon:
vinyl chloride
methylene chloride (CH_2Cl_2)
1,1 dichloroethene (1,1 DCE)
1,2 dichloroethene (1,2 DCE)
trichloroethene (TCE)
tetrachloroethene (PCE)

1.2 Overview of Results

For this investigation, eight soil gas and one groundwater samples were collected from nine sample locations. Soil gas samples were collected at 3 to 14 feet below ground surface (bgs). A summary of the results of the soil gas investigation is presented in Table 1 on the following page.

The groundwater sample was collected at a depth of 6 feet bgs. A concentration could not be calculated for the vinyl chloride detected in the groundwater sample because a gas standard was used for the calibration. Therefore, an indirect standard could not be made. The vinyl chloride (0.4 micrograms per liter [µg/L]) that was detected is qualitative only. TCE (0.03 µg/L) and PCE (0.009 µg/L) were also detected in sample WS-2.

Table 1. Soil Gas Sample Summary

Compound	# of samples in which compound was detected	Low conc. µg/L	High conc. µg/L	Sample(s) with high conc.
Vinyl Chloride	0	NA	NA	NA
CH_2Cl_2	0	NA	NA	NA
1,1 DCE	0	NA	NA	NA
1,2 DCE	1	NA	0.5	SG-5-9'
TCE	2	0.004	0.04	SG-6-11'
PCE	4	0.007	0.09	SG-6-11'

NA = Not Applicable

2.0 SITE DESCRIPTION

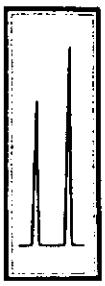
Samples at this site were collected through concrete and asphalt. The subsurface of the site was characterized by clays and silts. Groundwater was reported to be approximately 9 to 11.5 feet bgs. Groundwater flow is to the east.

3.0 SOIL GAS SAMPLING PROCEDURES

The soil gas sampling was conducted using one mobile soil gas van and Tracer Research's deep probe sampler (DPS) 550 sampling rig. Samples SG-1, SG-2A, SG-3, SG-4 and SG-2B were collected with the mobile analytical van. Samples SG-2C, SG-5 and SG-6 were collected using the DPS 550 sampling rig.

The DPS 550 consists of a hydraulic probe installation and removal device mounted on an Isuzu flatbed truck. The system employs a 550 pound hydraulic hammer and a driving and removal ram that can generate 100,000 pounds of force, which enables sample collection down to depths of 80 feet or more in most soils.

Ten foot sections of 1.5 inch outer diameter (OD) by 7/16 inch inner diameter (ID) drill steel were pounded to depth with the DPS 550 hydraulic hammer. Once at the desired depth the sections were retracted approximately 6 inches to expose an orifice on the drive/sampling tip through which the soil gas samples flowed.



The sections of drill steel were sealed together using aluminum joint sealers. Soil gas was pulled by the vacuum pump through the drill steel. Samples were collected in a syringe by inserting a syringe needle through a short silicone rubber segment connecting the probe to the evacuation line and down into the drill steel.

The soil gas sampling probes used for collection of samples with the Tracer Research mobile soil gas van consisted of 7- to 14-foot lengths of 3/4-inch diameter hollow steel pipe. The probes were fitted with detachable drive tips and hydraulically pushed and/or pounded to depths of 3 to 8.5 feet bgs.

The aboveground end of each probe was fitted with an aluminum reducer (manifold) and a length of polyethylene tubing leading to a vacuum pump. Soil gas was pulled by the vacuum pump into the probe. Samples were collected in a syringe by inserting a syringe needle through a silicone rubber segment in the evacuation line and down into the steel probe.

The soil gas flow for all sampling was monitored by a vacuum gauge to ensure an adequate gas flow from the vadose zone was maintained. The volume of air within the probe or sections of drill steel was purged by evacuating 2 to 5 probe/section volumes of soil gas. The evacuation time in minutes versus the vacuum in inches of mercury (Hg) was used to calculate the necessary evacuation time. The vacuum in inches Hg was recorded at each sampling location. Probe vacuums ranged from 9 to 21 inches Hg. The maximum capacity of the pump was approximately 21 inches Hg.

4.0 GROUNDWATER SAMPLING PROCEDURES

When groundwater was encountered, water samples were collected. Sampling probes consisted of 7-foot lengths of 3/4-inch diameter hollow steel pipe. The groundwater sample was collected at a depth of 6 feet bgs. The hollow probe with a detachable drive point was advanced below the water table. Once at the desired depth, the probe was withdrawn several inches to permit water to flow into the resulting hole. The aboveground end of the sampling probe was fitted with a vacuum adaptor (metal reducer) and a length of polyethylene tubing leading to a vacuum pump. A vacuum of up to 21 inches Hg was applied to the interior of the probe for 10 to 15 minutes or until water was drawn up the probe. The water accumulated in the

hole was removed by vacuum through a 1/4-inch polyethylene tube inserted down into the probe to the bottom of the hole. Because the water is induced to flow into a very narrow hole, it can be sampled with little exposure to air and, consequently, the loss of volatile compounds by evaporation is reduced. The polyethylene tubing was used only once and discarded to avoid cross contamination.

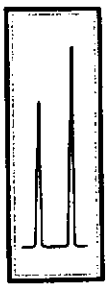
Groundwater samples were collected in 40 milliliter (mL) VOA vials that were filled to exclude air and capped with Teflon-lined septa caps. Approximately half of the liquid in the bottle was decanted, the vials were shaken vigorously, and a sample of the headspace from the container was injected into the gas chromatograph (GC).

Indirect (headspace) analysis is the preferred technique when a large number of water samples are to be performed daily. The method is more time efficient for the measurement of volatile organics than direct injection of the water sample into the GC because there is less chance of semi-volatile and non-volatile organics contaminating the system. Depending upon the partitioning coefficient of a given compound, the indirect analysis method may be more sensitive than the direct injection method. The precision and accuracy of both methods are similar.

5.0 ANALYTICAL PARAMETERS

Up to 10 mL of soil gas and 40 mL of groundwater were collected for immediate analyses in the Tracer Research analytical van. Analytical instruments were calibrated daily using fresh working standards made from National Institute of Sciences and Technology traceable standards and reagent blanked solvents.

The GC was calibrated for indirect analysis by decanting 20 ml of the known standard, leaving approximately the same amount of headspace as in the water headspace samples. The standard bottle was resealed and shaken vigorously for 30 seconds. An analysis of the headspace in the bottle determined the Response Factor (RF) which was then used to calculate the sample concentrations.



5.1 Chromatographic System

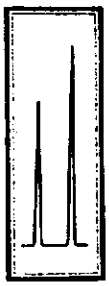
A Hewlett Packard 5890 Series II gas chromatograph, equipped with a flame ionization detector (FID), electron capture detector (ECD) and two computing integrators, was used for the soil gas and groundwater headspace analyses. The vinyl chloride, detected on the FID, was separated in the GC with a 6 foot by 1/8 inch OD packed analytical column (10% OV101 stationary phase bonded to 80/100 mesh Chromosorb W support). All remaining compounds were detected on the ECD and separated in the GC with a 6 foot by 1/8 inch OD packed analytical column (1% SP1000 stationary phase bonded to 60/80 mesh Carbopack B support). Both columns were in a temperature controlled oven. Nitrogen was used as the carrier gas. The following paragraphs explain the GC, FID, and ECD processes.

GC Process

The soil gas and groundwater headspace vapor is injected into the GC where it is swept through the analytical column by the carrier gas. The detector senses the presence of a component different from the carrier gas and converts that information to an electrical signal. The components of the sample pass through the column at different rates, according to their individual properties, and are detected by the detector. Compounds are identified by the time it takes them to pass through the column (retention time).

FID Process

The FID utilizes a flame produced by the combustion of hydrogen and air. When a component, which has been separated on the GC analytical column, is introduced into the flame, a large increase in ions occurs. A collector with a polarizing voltage is applied near the flame and the ions are attracted and produce a current, which is proportional to the amount of the sample compound in the flame. The electrical current causes the computing integrator to record a peak on a chromatogram. By measuring the area of the peak and comparing that area to the integrator response of a known aqueous standard, the concentration of the analyte in the sample is determined.



ECD Process

The ECD captures low energy thermal electrons that have been ionized by beta particles. The flow of these captured electrons into an electrode produces a small current, which is collected and measured. When the halogen atoms (halocarbons) are introduced into the detector, electrons that would otherwise be collected at the electrode are captured by the sample, resulting in decreased current. The current causes the computing integrator to record a peak on a chromatogram. The area of the peak is compared to the peak generated by a known standard to determine the concentration of the analyte.

5.2 Analyses

Subsamples (replicate injections) of each soil gas and groundwater headspace sample were injected into the GC in volumes of 1 to 1,000 microliters (µL). The detection limits for target compounds depend on the sensitivity of the detector to the individual compound as well as the volume of the injection. The detection limits of the target compounds were calculated from the response factor, the sample size, and the calculated minimum peak size (area) observed under the conditions of the analyses. If any compound was not detected in an analysis, the detection limit is given as a "less than" value, e.g., <0.1 µg/L. The following table presents the approximate detection limits of the soil gas and groundwater targeted compounds.

Table 2. Detection Limits for Targeted Compounds

Compound	Detection Limits (µg/L)	
Vinyl Chloride	0.3 sg	NA
CH_2Cl_2	0.04 sg	0.4 gr. water
1,1 DCE	0.008 sg	0.03 gr. water
1,2 DCE	0.2 sg	0.9 gr. water
TCE	0.002 sg	0.007 gr. water
PCE	0.001 sg	0.003 gr. water

sg = Soil Gas gr. water = Ground Water
NA = Not Applicable

6.0 QUALITY ASSURANCE AND QUALITY CONTROL

Tracer Research's Quality Assurance (QA) and Quality Control (QC) program was followed to maintain data that was reproducible through the investigation. An overview presenting the significant aspects of this program is presented below.

Soil Gas/Groundwater Sampling Quality Assurance

To ensure consistent collection of samples, the following procedures are performed.

- Sampling Manifolds

Tracer Research's custom designed sampling manifold connects the sample probe to the vacuum line and pump. The manifold is designed to eliminate sample exposure to the polymeric (plastic) materials that connect the probe to the vacuum pump.

The sampling manifold is attached to the end of the probe, forming an air tight union between the probe and the silicone tubing septum. The septum connects the manifold to the pump vacuum line and permits syringe sampling.

This sampling system allows the sample to be taken upstream of the sampling pump, manifold, and septum. Since cross contamination of sampling equipment can be a major problem, Tracer Research replaces the materials (probe and syringe), between sampling points, that contact the soil gas before or during sampling.

-Sampling Probes

Steel probes are used only once each day. To eliminate the possibility of cross contamination, they are washed with high pressure soap and hot water spray, or steam-cleaned. Enough sampling probes are carried on each van to avoid the need to re-use any during the day.

-Glass Syringes

Glass syringes are used for only one sample a day and are washed and baked out at night. If they must be used twice, they are purged with carrier gas (nitrogen) and baked out between probe samplings.

- Polyethylene Tubing and VOA Vials

Polyethylene tubing and VOA vials used for the collection of groundwater samples are used only once and then discarded to avoid cross contamination.

-Sampling Efficiency

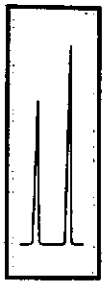
Soil gas/groundwater pumping is monitored by a vacuum gauge to ensure that an adequate flow of gas from the soil is maintained. A reliable gas sample can be obtained if the sample vacuum gauge reading is at least 2 inches Hg less than the maximum measured vacuum of the vacuum pump.

Analytical Quality Assurance Samples

Quality assurance samples are performed at the listed, or greater, frequencies in Table 3. The frequency depends on the number of samples analyzed and the length of time of the survey.

Table 3. Quality Assurance Samples

Sample type	Frequency
Ambient Air Samples	3 per day or 1 per site
Analytical Method Blanks	5% (1 per 20 samples or 1 a day)
Continuing Calibration Check	20% (1 every 5 samples)
Field System Blank	10% (1 every 10 samples or 1 a day)
Reagent Blank	1 per set of working standards
Replicate Samples	10% of all samples collected



The ambient air samples are obtained on site by sampling the air immediately outside the mobile analytical van and directly injecting it into the GC. Analytical method blanks are taken to demonstrate that the analytical instrumentation is not contaminated. These are performed by injecting carrier gas (nitrogen) into the GC with the sampling syringe. Subsampling syringes are also checked in this fashion.

The injector port septa through which samples are injected into the GC are replaced daily to prevent possible gas leaks from the chromatographic column. All sampling and subsampling syringes are decontaminated after use and are not used again until they have been decontaminated by washing in anionic detergent and baking at 90°C.

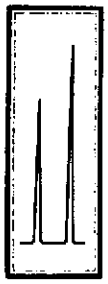
Continuing calibration checks are analyzed to verify the detector response for the target VOCs. If the response changes by more than 25 percent, the gas chromatograph is recalibrated and new response factors are calculated.

Field system blanks are analyzed to check for contamination of the sampling apparatus, e.g., probe and sampling syringe. A sample is collected using standard soil gas sampling procedures, but without putting the probe into the ground. The results are compared to those obtained from a concurrently sampled ambient air analysis.

If the blanks detect compounds of interest at concentrations that indicate equipment contamination or concentrations that exceed normal background levels (ambient air analysis), corrective actions are performed. If the problem cannot be corrected, an out-of-control event is documented and reported.

A reagent blank is performed to ensure the solvent used to dilute the stock standards is not contaminated. Analytical instruments are calibrated daily using fresh working standards made from National Institute of Sciences and Technology traceable standards and reagent blanked solvents.

Quantitative precision is assured by replicating analysis of 10 percent of the samples. Replicate analyses are performed by subsampling vapors from the same sampling syringe.

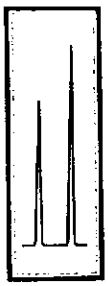


The injector port septa through which samples are injected into the GC are replaced daily to prevent possible gas leaks from the chromatographic column. All sampling and subsampling syringes are decontaminated after use and are not used again until they have been decontaminated by washing in anionic detergent and baking at 90°C.

7.0 RESULTS

The analytical results from this soil gas investigation are condensed in Appendix A. The data are presented by location and by analyte concentration. When the compound was not detected, the detection limit is presented as a "less than" value, e.g., <0.01 µg/L.

Samples are identified by sample type, sample location, and sampling depth. For example, SG-1-6' represents a soil gas sample collected from location 1 at a depth of 6 feet bgs. Sample WS-2-6' represents a water sample collected from location 2 at a depth of 6 feet bgs.



APPENDIX A Condensed Data

TRACER RESEARCH CORPORATION - ANALYTICAL RESULTS
CH2M Hill/ Del Monte Plant 33/ Emeryville, California/ Job No. 164-0270-S
06/03/94

SAMPLE	VINYL CHLORIDE µg/L	CH2Cl2 µg/L	1,1 DCE µg/L	1,2 DCE µg/L	TCE µg/L	PCE µg/L
AIR	<0.2	<0.02	<0.004	<0.08	<0.0008	<0.0006
SG-1-6'	<0.3	<0.2	<0.04	<0.8	<0.008	<0.006
SG-2A-3'	<0.3	<0.04	<0.008	<0.2	<0.002	0.009
SG-2B-8.5'	<0.3	<0.04	<0.008	<0.2	<0.002	<0.001
SG-2C-14'	<0.3	<0.04	<0.008	<0.2	<0.002	<0.001
SG-3-3'	<0.3	<0.04	<0.008	<0.2	<0.002	0.007
SG-4-6'	<0.3	<0.04	<0.008	<0.2	<0.002	<0.001
AIR	<0.2	<0.02	<0.004	<0.08	<0.0008	<0.0006
SG-5-9.5'	<0.3	<0.04	<0.008	0.5	0.004	0.01
SG-6-11'	<0.3	<0.04	<0.008	<0.2	0.04	0.09
AIR	<0.2	<0.02	<0.004	<0.08	<0.0008	<0.0006
WS-2-6'	0.4*	<0.4	<0.03	<0.9	0.03	0.009

* The vinyl chloride detected in sample WS-2 is qualitative only.

Analyzed by: J. Sinclair
Proofed by: Maisch (MS)

Sparger Technology, Inc.
With Automation in Mind

Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

June 29, 1994

Mr. Bern Baumgartner
CH2M Hill
1111 Broadway, Suite 1200
Oakland, CA 94607

Dear Mr. Baumgartner:

Enclosed is the report for the eight (8) soil and four (4) water samples. The samples were received at Sparger Technology Analytical Mobile Lab on June 17, 1994.

The samples were received in eight (8) brass tubes, four (4) 1 L amber bottles and four (4) VOAs. The samples were transported and received under documented chain of custody and stored at four (4) degrees C until analysis was performed.

The report consists of the following sections:

I. Sample Description
II. Analysis Request
III. Quality Control Report
IV. Analysis Results

No problems were encountered with the analysis of your samples.

If you have questions, please feel free to call.

Sincerely,

R. L. James
Principal Chemist

3050 Fite Circle, Suite 112 • Sacramento, California 95827 • (916) 362-8947 • FAX (916) 362-0947

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Mobile Laboratory Division
Scientific Division

I Sample Description

See attached Samples Description Information.

The samples were received under chain-of-custody.

II Analysis Request

The following analytical tests were requested:

Lab ID	Your ID	Analysis Description
STM94-06-001A	WH-15	TPHdiesel/motor oil/kerosene
STM94-06-002A	WH-15	601
STM94-06-003A	WH-15 (8.5'-9')	TPHdiesel/motor oil/kerosene
STM94-06-004A	WH-15 (8.5'-9')	8010
STM94-06-005A	WH-18 (9'-9.5')	TPHdiesel/motor oil/kerosene
STM94-06-006A	WH-18 (9'-9.5')	8010
STM94-06-007A	WH-18	TPHdiesel/motor oil/kerosene
STM94-06-008A	WH-18	601
STM94-06-009A	WH-16 (8.5'-9')	TPHdiesel/motor oil/kerosene
STM94-06-010A	WH-16 (8.5'-9')	8010
STM94-06-011A	WH-16	TPHdiesel/motor oil/kerosene
STM94-06-012A	WH-16	601
STM94-06-013A	B4-7.5'-8'	TPHdiesel/motor oil/kerosene
STM94-06-014A	B4-7.5'-8'	8010
STM94-06-015A	B4-12.5'-13'	TPHdiesel/motor oil/kerosene
STM94-06-016A	B4-12.5'-13'	8010
STM94-06-017A	B5-7.5'-8'	TPHdiesel/motor oil/kerosene
STM94-06-018A	B5-7.5'-8'	8010
STM94-06-019A	B6-8.5'-9'	TPHdiesel/motor oil/kerosene
STM94-06-020A	B6-8.5'-9'	8010
STM94-06-021A	WH-19 (11.5'-12')	TPHdiesel/motor oil/kerosene
STM94-06-022A	WH-19 (11.5'-12')	8010
STM94-06-023A	WH-19	TPHdiesel/motor oil/kerosene
STM94-06-024A	WH-19	601

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III Quality Control

A. **Project Specific QC.** No project specific QC (i.e., spikes and/or duplicates) was requested.

B. **Method Blank Results.** A method blank is a laboratory-generated sample which assesses the degree to which laboratory operations and procedures cause false-positive analytical results for your sample.

C. **Laboratory Control Spike.** A Laboratory Control Spike (LCS) is a sample which is spiked with 30 ppb BTEX, and analyzed at approximately 10% of the sample load in order to establish method-specific control limits. The LCS results associated with your samples are on the attached 8020 Modified LCS BTEX Analysis Report.

D. **Matrix Spike Results.** A Matrix Spike is a sample which is spiked with 30 ppb BTEX, and analyzed at approximately 10% of the sample load in order to establish method-specific control limits. The Matrix Spike results associated with your samples are on the attached 8020 Modified Matrix-Spike BTEX Analysis Report.

No target parameters were detected in the method blank associated with your sample at the reporting limit levels noted on the data sheets in the Analytical Results section.

Accuracy is measured by Percent Recovery as in:

$$\% \text{ recovery} = \frac{\text{(measured concentration)} \times 100}{\text{(actual concentration)}}$$

IV Analysis Results

Results of TPHdiesel/motor oil/kerosene are on the attached data sheets. Results of 8010/601 have been reported in the field.

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Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

8010 GC Analysis Report
Matrix Spike/Duplicate Spike

Attention:	Mr. Bern Baumgartner CH2M Hill 1111 Broadway, Suite 1200 Oakland, CA 94607	Date Sampled: Date Received: Date Analyzed:	Jun. 17, 1994 Jun. 17, 1994 Jun. 17, 1994
Project #:	BAE28830.P2.O3	Project Name:	Del Monte Plant 35
Client ID:	MS/MSD	LAB ID:	ST94-06-017 MS ST94-06-017 MSD
Matrix:	Soil	Dilution:	

UNITS = ug/kg

Compound	Sample Conc	Spike (ppb) Added	Spike Result	Dup. Result	Spike % Rec	Dup. % Rec	RPD	QC RPD	Limits % Rec
1,1-Dichloroethene	ND	30	24	27	80%	90%	12%	17	60-110
Methylene Chloride	ND	30	23	33	77%	110%	36%	21	63-114
trans-1,2-Dichloroethene	ND	30	24	27	80%	90%	12%	20	68-117
1,1-Dichloroethane	ND	30	23	26	77%	87%	12%	16	70-113
Chloroform	ND	30	24	25	80%	83%	4%	20	61-115
1,1,1-Trichloroethane	ND	30	24	26	80%	87%	8%	15	68-117
Carbon tetrachloride	ND	30	24	26	80%	87%	8%	18	61-110
1,2-Dichloroethane	ND	30	22	24	73%	80%	9%	14	63-112
Trichloroethene	ND	30	23	25	77%	83%	8%	19	65-115
1,2-Dichloropropane	ND	30	22	25	73%	83%	13%	15	69-119
Bromodichloromethane	ND	30	23	25	77%	83%	8%	17	66-113
cis-1,3-Dichloropropene	ND	30	22	25	73%	83%	13%	21	64-116
trans-1,3-Dichloropropene	ND	30	21	25	70%	83%	17%	17	68-110
1,1,2-Trichloroethane	ND	30	22	24	73%	80%	9%	15	67-113
Tetrachloroethene	ND	30	24	26	80%	87%	8%	19	69-111

ppb = parts per billion = ug/kg = micrograms per kilogram

ppm = parts per million = ug/g = micrograms per gram

ND = Not Detected. Compound(s) may be present at concentrations below the detection limit.

Sparger Technology, Inc.
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Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

8010 GC Analysis Report
Matrix Spike/Duplicate Spike

Attention:	Mr. Bern Baumgartner CH2M Hill 1111 Broadway, Suite 1200 Oakland, CA 94607	Date Sampled: Date Received: Date Analyzed:	Jun. 17, 1994 Jun. 17, 1994 Jun. 17, 1994
Project #:	BAE28830.P2.O3	Project Name:	Del Monte Plant 35
Client ID:	MS/MSD	LAB ID:	ST94-06-017 MS ST94-06-017 MSD
Matrix:	Soil	Dilution:	

UNITS = ug/kg

Compound	Sample Conc	Spike (ppb) Added	Spike Result	Dup. Result	Spike % Rec	Dup. % Rec	RPD	QC RPD	Limits % Rec
Dibromochloromethane	ND	30	22	24	73%	80%	9%	17	63-117
Chlorobenzene	ND	30	22	25	73%	83%	13%	14	68-120
Bromoform	ND	30	21	24	70%	80%	13%	16	65-116
1,1,2,2-Tetrachloroethane	ND	30	21	25	70%	83%	17%	20	61-113
1,3-Dichlorobenzene	ND	30	22	24	73%	80%	9%	18	64-116
1,4-Dichlorobenzene	ND	30	22	24	73%	80%	9%	15	67-120
1,2-Dichlorobenzene	ND	30	21	24	70%	80%	13%	17	65-119
					MS		MSD		
Surrogate % Recovery of Bromochloromethane				=	70%		73%		
Surrogate % Recovery of 2-Bromo-1-Chloropropane				=	70%		77%		
Surrogate % Recovery of 1,4-Dichlorobutane				=	70%		77%		

ppb = parts per billion = ug/kg = micrograms per kilogram

ppm = parts per million = ug/g = micrograms per gram

ND = Not Detected Compound(s) may be present at concentrations below the detection limit

R. L. James, Principal Chemist

Jun 17, 1994
Date Reported

SPARGER TECHNOLOGY ANALYTICAL LABORATORY, INC. IS CERTIFIED BY THE STATE OF CALIFORNIA
DEPARTMENT OF HEALTH SERVICES AS A HAZARDOUS WASTE TESTING LABORATORY
(Certification No 1614)

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Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

8015 Modified Laboratory Control Spike (LCS) & Laboratory Control Spike Duplicate (LCSD) TPHdiesel Analysis Report

Attention:	Mr. Bern Baumgartner CH2M Hill 1111 Broadway, Suite 1200 Oakland, CA 94607	Date Sampled: Date Received: Date Analyzed:	Jun 17, 1994 Jun 17, 1994 Jun 17, 1994
Project ID:	BAE28830.P2.O3	Project Name:	Del Monte Plant 35
Client ID:	LCS/LCSD	LAB ID:	ST94-06-017 LCS ST94-06-017 LCSD
Matrix:	Soil	Dilution:	

Name	Conc. Spike Added	Sample Result	LCS Result	LCSD Result	Units	LCS % Recovery	LCSD % Recovery	% RPD Recovery
TPHdiesel	125 ppm	ND	124	125	ug/g	99%	100%	1%

ppb = parts per billion = ug/kg = micrograms per kilogram
ppm= parts per million = ug/g = micrograms per gram
ND = Not Detected Compound(s) may be present at concentrations below the detection limit

R. L. James, Principal Chemist

Jun 17, 1994
Date Reported

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DEPARTMENT OF HEALTH SERVICES AS A HAZARDOUS WASTE TESTING LABORATORY
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Mobile Laboratory Division
Scientific Division

8015 Modified Matrix Spike (MS) & Matrix Spike Duplicate (MSD) TPHdiesel Analysis Report

Attention:	Mr. Bern Baumgartner CH2M Hill 1111 Broadway, Suite 1200 Oakland, CA 94607	Date Sampled: Date Received: Date Analyzed:	Jun. 17, 1994 Jun. 17, 1994 Jun. 17, 1994
Project ID:	BAE28830.P2.O3	Project Name:	Del Monte Plant 35
Client ID:	MS/MSD	LAB ID:	ST94-06-017 MS ST94-06-017 MSD
Matrix:	Soil	Dilution:	

Name	Conc. Spike Added	Sample Result	MS Result	MSD Result	Units	MS % Recovery	MSD % Recovery	% RPD Recovery
TPHdiesel	125 ppm	ND	125	126	ug/g	100%	101%	1%

ppb = parts per billion = ug/kg = micrograms per kilogram
ppm= parts per million = ug/g = micrograms per gram
ND = Not Detected Compound(s) may be present at concentrations below the detection limit

R. L. James, Principal Chemist

Jun. 17, 1994
Date Reported

SPARGER TECHNOLOGY ANALYTICAL LABORATORY, INC. IS CERTIFIED BY THE STATE OF CALIFORNIA DEPARTMENT OF HEALTH SERVICES AS A HAZARDOUS WASTE TESTING LABORATORY
(Certification No. 1614)

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8015 Modified Laboratory Control Spike (LCS) & Laboratory Control Spike Duplicate (LCSD) TPHdiesel Analysis Report

Attention:	Mr. Bern Baumgartner CH2M Hill 1111 Broadway, Suite 1200 Oakland, CA 94607	Date Sampled: Date Received: Date Analyzed:	Jun 17, 1994 Jun 17, 1994 Jun 17, 1994
Project ID:	BAE28830.P2.O3	Project Name:	Del Monte Plant 35
Client ID:	LCS/LCSD	LAB ID:	ST94-06-017 LCS ST94-06-017 LCSD
Matrix:	Water	Dilution:	

Name	Conc. Spike Added	Sample Result	LCS Result	LCSD Result	Units	LCS % Recovery	LCSD % Recovery	% RPD Recovery
TPHdiesel	125 ppb	ND	126	127	ug/L	101%	102%	1%

ppb = parts per billion = ug/L = micrograms per Liter
ppm= parts per million = ug/g = micrograms per gram
ND = Not Detected. Compound(s) may be present at concentrations below the detection limit

R. L. James, Principal Chemist

Jun 17, 1994
Date Reported

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Sparger Technology, Inc.
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Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

8015 Modified Matrix Spike (MS) & Matrix Spike Duplicate (MSD) TPHdiesel Analysis Report

Attention:	Mr. Bern Baumgartner CH2M Hill 1111 Broadway, Suite 1200 Oakland, CA 94607	Date Sampled: Date Received: Date Analyzed:	Jun. 17, 1994 Jun. 17, 1994 Jun. 17, 1994
Project ID:	BAE28830.P2.O3	Project Name:	Del Monte Plant 35
Client ID: Matrix:	WH-19 MS WH-19 MSD Water	LAB ID: Dilution:	ST94-06-017 MS ST94-06-017 MSD

Name	Conc. Spike Added	Sample Result	MS Result	MSD Result	Units	MS % Recovery	MSD % Recovery	% RPD Recovery
TPHdiesel	125 ppm	ND	126	128	ug/ml	101%	102%	2%

ppb = parts per billion = ug/L = micrograms per liter
ppm= parts per million = ug/ml = micrograms per milliliter
ND = Not Detected. Compound(s) may be present at concentrations below the detection limit.

R. L. James, Principal Chemist

Jun. 17, 1994
Date Reported

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8010 Halogenated Volatile Organics Analysis Report

Attention:	Mr. Bern Baumgartner	Date Sampled:	Jun. 17, 1994
	CH2M Hill	Date Received:	Jun. 17, 1994
	1111 Broadway	Date Analyzed:	Jun. 17, 1994
	Oakland CA 94607		
Project #:	BAE 28830.P2.03	Project Name:	Del Monte Plant 35
Client ID:	WH-15	LAB ID:	STM94-06-002A
Matrix:	Water	Dilution:	

Name	Amount	Reporting Limit	Units
1. Dichlorodifluoromethane	ND	0.5	ug/L
2. Chloromethane	ND	0.5	ug/L
3. Vinylchloride	37	0.5	ug/L
4. Bromomethane	ND	0.5	ug/L
5. Chloroethane	ND	0.5	ug/L
6. Trichlorofluoromethane	ND	0.5	ug/L
7. 1,1-Dichloroethene	1.1	0.5	ug/L
8. Methylene chloride	ND	0.5	ug/L
9. trans-1,2-Dichloroethene	7.6	0.5	ug/L
10. 1,1-Dichloroethane	ND	0.5	ug/L
11. cis-1,2-Dichloroethene	53	0.5	ug/L
12. Chloroform	ND	0.5	ug/L
13. 1,1,1-Trichloroethane	0.7	0.5	ug/L
14. Carbon tetrachloride	ND	0.5	ug/L
15. 1,2-Dichloroethane	ND	0.5	ug/L
16. Trichloroethene	40	0.5	ug/L
17. 1,2-Dichloropropane	ND	0.5	ug/L
18. Bromodichloromethane	ND	0.5	ug/L
19. cis-1,3-Dichloropropene	1.1	0.5	ug/L

ppb = parts per billion = ug/L = micrograms per Liter

ppm= parts per million = ug/mL= micrograms per milliliter

ND = Not Detected. Compound(s) may be present at concentrations below the reporting limit.

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8010 Halogenated Volatile Organics Analysis Report

Attention:	Mr. Bern Baumgartner CH2M Hill 1111 Broadway Oakland CA 94607	Date Sampled: Date Received: Date Analyzed:	Jun. 17, 1994 Jun. 17, 1994 Jun. 17, 1994
Project #:	BAE 28830.P2.03	Project Name:	Del Monte Plant 35
Client ID:	WH-15	LAB ID:	STM94-06-002A
Matrix:	Water	Dilution:	

Name	Amount	Reporting Limit	Units
20. trans-1,3-Dichloropropene	ND	0.5	ug/L
21. 1,1,2-Trichloroethane	ND	0.5	ug/L
22. Tetrachloroethene	44	0.5	ug/L
23. Dibromochloromethane	ND	0.5	ug/L
24. Chlorobenzene	ND	0.5	ug/L
25. Bomoform	ND	0.5	ug/L
26. 1,1,2,2-Tetrachloroethane	ND	0.5	ug/L
27. 1,3-Dichlorobenzene	ND	0.5	ug/L
28. 1,4-Dichlorobenzene	ND	0.5	ug/L
29. 1,2-Dichlorobenzene	ND	0.5	ug/L

Surrogate % Recovery Bomochloromethane =	110%
Surrogate % Recovery 2-Bromo-1-Chloropropane =	103%
Surrogate % Recovery 1,4-Dichlorobutane =	90%

ppb = parts per billion = ug/L = micrograms per Liter
ppm= parts per million = ug/mL= micrograms per milliliter
ND = Not Detected. Compound(s) may be present at concentrations below the reporting limit.

R. L. James, Principal Chemist

6-17-94
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Scientific Division

8015 Modified Analysis Report

Attention:	Mr. Bern Baumgartner CH2M Hill 1111 Broadway, Suite 1200 Oakland, CA 94607	Date Sampled: Date Received: Date Analyzed:	Jun 17, 1994 Jun 17, 1994 Jun 17, 1994
Project #:	BAE28830.P2.O3	Project Name:	Del Monte Plant 35
Client ID:	WH-15	LAB ID:	STM94-06-001A
Matrix:	Water	Dilution:	1:1

Name	Amount	Detection Limit	Units
TPHdiesel	ND	50	ug/L
TPHmotor oil	ND	50	ug/L
TPHkerosene	770	50	ug/L

ppb = parts per billion = ug/L = micrograms per Liter
ppm= parts per million = ug/mL = micrograms per milliliter
ND = Not Detected Compound(s) may be present at concentrations below the detection limit.

R. L. James, Principal Chemist

Jun. 21, 1994
Date Reported

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8010 Halogenated Volatile Organics Analysis Report

Attention:	Mr. Bern Baumgartner CH2M Hill 1111 Broadway, Suite 1200 Oakland, CA 94607	Date Sampled: Date Received: Date Analyzed:	Jun 17, 1994 Jun 17, 1994 Jun 17, 1994
Project #:	BAE28830.P2.O3	Project Name:	Del Monte Plant 35
Client ID:	WH-15 (8.5'-9')	LAB ID:	STM94-06-004A
Matrix:	Soil	Dilution:	1 : 1

Name	Amount	Reporting Limit	Units
1. Bromodichloromethane	ND	0.001	ug/g
2. Bromoform	ND	0.002	ug/g
3. Bromomethane	ND	0.002	ug/g
4. Carbon tetrachloride	ND	0.001	ug/g
5. Chlorobenzene	ND	0.001	ug/g
6. Chloroethane	ND	0.001	ug/g
7. Chloroform	ND	0.001	ug/g
8. Chloromethane	ND	0.002	ug/g
9. Dibromochloromethane	ND	0.001	ug/g
10. 1,2-Dichlorobenzene	ND	0.001	ug/g
11. 1,3-Dichlorobenzene	ND	0.001	ug/g
12. 1,4-Dichlorobenzene	ND	0.001	ug/g
13. Dichlorodifluoromethane	ND	0.002	ug/g
14. 1,1-Dichloroethane	ND	0.001	ug/g
15. 1,2-Dichloroethane	ND	0.001	ug/g
16. 1,1-Dichloroethylene	ND	0.001	ug/g
17. Cis-1,2 Dichloroethylene	ND	0.001	ug/g
18. Trans-1,2-Dichloroethylene	ND	0.001	ug/g
19. Dichloromethane	ND	0.005	ug/g

ppb = parts per billion = ug/kg = micrograms per kilogram

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8010 Halogenated Volatile Organics Analysis Report

Attention:	Mr. Bern Baumgartner CH2M Hill 1111 Broadway, Suite 1200 Oakland, CA 94607	Date Sampled: Date Received: Date Analyzed:	Jun 17, 1994 Jun 17, 1994 Jun 17, 1994
Project #:	BAE28830.P2.O3	Project Name:	Del Monte Plant 35
Client ID:	WH-15 (8.5'-9')	LAB ID:	STM94-06-004A
Matrix:	Soil	Dilution:	1 : 1

Name	Amount	Reporting Limit	Units
20. 1,2-Dichloropropane	ND	0.001	ug/g
21. Cis-1,3 Dichloropropylene	ND	0.001	ug/g
22. Trans-1,3-Dichloropropylene	ND	0.001	ug/g
23. 1,1,2,2-Tetrachloroethane	ND	0.001	ug/g
24. Tetrachloroethylene	ND	0.001	ug/g
25. 1,1,1-Trichloroethane	ND	0.001	ug/g
26. 1,1,2-Trichloroethane	ND	0.001	ug/g
27. Trichloroethylene	ND	0.001	ug/g
28. Trichlorofluoromethane	ND	0.001	ug/g
29. Vinyl Chloride	ND	0.001	ug/g

Surrogate % Recovery Bromochloromethane =	90%
Surrogate % Recovery 2-Bromo-1-chloropropane =	90%
Surrogate % Recovery 1,4-Dichlorobutane =	97%

ppb = parts per billion = ug/kg = micrograms per kilogram
ppm= parts per million = ug/g= micrograms per gram
ND = Not Detected. Compound(s) may be present at concentrations below the reporting limit.

R. L. James, Principal Chemist

Jun 17, 1994
Date Reported

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Scientific Division

8015 Modified Analysis Report

Attention:	Mr. Bern Baumgartner CH2M Hill 1111 Broadway, Suite 1200 Oakland, CA 94607	Date Sampled: Date Received: Date Analyzed:	Jun. 17, 1994 Jun. 17, 1994 Jun. 17, 1994
Project #:	BAE28830.P2.O3	Project Name:	Del Monte Plant 35
Client ID:	WH-15 (8.5'-9')	LAB ID:	STM94-06-003A
Matrix:	Soil	Dilution:	1 : 1

Name	Amount	Detection Limit	Units
TPHdiesel	ND	1.0	ug/g
TPHmotor oil	ND	1.0	ug/g
TPHkerosene	70	1.0	ug/g

ppb = parts per billion = ug/kg = micrograms per kilogram
ppm= parts per million = ug/g= micrograms per gram
ND = Not Detected Compound(s) may be present at concentrations below the detection limit.

R. L. James, Principal Chemist

Jun. 21, 1994
Date Reported

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Analytical Laboratory Division
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Scientific Division

8010 Halogenated Volatile Organics
Analysis Report

Attention:	Mr. Bern Baumgartner CH2M Hill 1111 Broadway Oakland CA 94607	Date Sampled: Date Received: Date Analyzed:	Jun. 17, 1994 Jun. 17, 1994 Jun. 17, 1994
Project #:	BAE 28830.P2.03	Project Name:	Del Monte Plant 35
Client ID:	WH-16	LAB ID:	STM94-06-012A
Matrix:	Water	Dilution:	1:10

Name	Amount	Reporting Limit	Units
1. Dichlorodifluoromethane	ND	5.0	ug/L
2. Chloromethane	340	5.0	ug/L
3. Vinylchloride	ND	5.0	ug/L
4. Bromomethane	ND	5.0	ug/L
5. Chloroethane	ND	5.0	ug/L
6. Trichlorofluoromethane	ND	5.0	ug/L
7. 1,1-Dichloroethene	58	5.0	ug/L
8. Methylene chloride	ND	5.0	ug/L
9. trans-1,2-Dichloroethene	55	5.0	ug/L
10. 1,1-Dichloroethane	ND	5.0	ug/L
11. cis-1,2-Dichloroethene	250	5.0	ug/L
12. Chloroform	ND	5.0	ug/L
13. 1,1,1-Trichloroethane	ND	5.0	ug/L
14. Carbon tetrachloride	ND	5.0	ug/L
15. 1,2-Dichloroethane	ND	5.0	ug/L
16. Trichloroethene	130	5.0	ug/L
17. 1,2-Dichloropropane	ND	5.0	ug/L
18. Bromodichloromethane	ND	5.0	ug/L
19. cis-1,3-Dichloropropene	ND	5.0	ug/L

ppb = parts per billion = ug/L = micrograms per Liter

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ND = Not Detected. Compound(s) may be present at concentrations below the reporting limit.

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8010 Halogenated Volatile Organics
Analysis Report

Attention:	Mr. Bern Baumgartner	Date Sampled:	Jun. 17, 1994
	CH2M Hill	Date Received:	Jun. 17, 1994
	1111 Broadway	Date Analyzed:	Jun. 17, 1994
	Oakland CA 94607		
Project #:	BAE 28830.P2.03	Project Name:	Del Monte Plant 35
Client ID:	WH-16	LAB ID:	STM94-06-012A
Matrix:	Water	Dilution:	1:10

Name	Amount	Reporting Limit	Units
20. trans-1,3-Dichloropropene	ND	5.0	ug/L
21. 1,1,2-Trichloroethane	ND	5.0	ug/L
22. Tetrachloroethene	350	5.0	ug/L
23. Dibromochloromethane	ND	5.0	ug/L
24. Chlorobenzene	ND	5.0	ug/L
25. Bomoform	ND	5.0	ug/L
26. 1,1,2,2-Tetrachloroethane	ND	5.0	ug/L
27. 1,3-Dichlorobenzene	ND	5.0	ug/L
28. 1,4-Dichlorobenzene	ND	5.0	ug/L
29. 1,2-Dichlorobenzene	ND	5.0	ug/L

Surrogate % Recovery Bomochloromethane =	140%
Surrogate % Recovery 2-Bromo-1-Chloropropane =	123%
Surrogate % Recovery 1,4-Dichlorobutane =	127%

ppb = parts per billion = ug/L = micrograms per Liter
ppm= parts per million = ug/mL= micrograms per milliliter
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R. L. James, Principal Chemist

6-17-94
Date Reported

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8010 Halogenated Volatile Organics Analysis Report

Attention:	Mr. Bem Baumgartner	Date Sampled:	Jun. 17, 1994
	CH2M Hill	Date Received:	Jun. 17, 1994
	1111 Broadway	Date Analyzed:	Jun. 17, 1994
	Oakland CA 94607		
Project #:	BAE 28830.P2.03	Project Name:	Del Monte Plant 35
Client ID:	WH-16 8.5-9.0'	LAB ID:	STM94-06-010A
Matrix:	Soil	Dilution:	

Name	Amount	Reporting Limit	Units
20. trans-1,3-Dichloropropene	ND	0.0005	ug/g
21. 1,1,2-Trichloroethane	ND	0.0005	ug/g
22. Tetrachloroethene	0.0096	0.0005	ug/g
23. Dibromochloromethane	ND	0.0005	ug/g
24. Chlorobenzene	ND	0.0005	ug/g
25. Bomoform	ND	0.0005	ug/g
26. 1,1,2,2-Tetrachloroethane	ND	0.0005	ug/g
27. 1,3-Dichlorobenzene	ND	0.0005	ug/g
28. 1,4-Dichlorobenzene	ND	0.0005	ug/g
29. 1,2-Dichlorobenzene	ND	0.0005	ug/g

Surrogate % Recovery Bomochloromethane =	120%
Surrogate % Recovery 2-Bromo-1-Chloropropane =	107%
Surrogate % Recovery 1,4-Dichlorobutane =	110%

ppb = parts per billion = ug/kg = micrograms per kilogram
ppm= parts per million = ug/g= micrograms per gram
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R. L. James, Principal Chemist

6-17-94
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8015 Modified Analysis Report

Attention:	Mr. Bern Baumgartner CH2M Hill 1111 Broadway, Suite 1200 Oakland, CA 94607	Date Sampled: Date Received: Date Analyzed:	Jun. 17, 1994 Jun. 17, 1994 Jun. 17, 1994
Project #:	BAE28830.P2.O3	Project Name:	Del Monte Plant 35
Client ID:	WH-16 (8.5'-9')	LAB ID:	STM94-06-009A
Matrix:	Soil	Dilution:	1 : 1

Name	Amount	Detection Limit	Units
TPHdiesel	ND	1.0	ug/g
TPHmotor oil	ND	1.0	ug/g
TPHkerosene	ND	1.0	ug/g

ppb = parts per billion = ug/kg = micrograms per kilogram
ppm= parts per million = ug/g= micrograms per gram
ND = Not Detected Compound(s) may be present at concentrations below the detection limit.

R. L. James, Principal Chemist

Jun. 21, 1994
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8010 Halogenated Volatile Organics Analysis Report

Attention:	Mr. Bern Baumgartner	Date Sampled:	Jun. 17, 1994
	CH2M Hill	Date Received:	Jun. 17, 1994
	1111 Broadway	Date Analyzed:	Jun. 17, 1994
	Oakland CA 94607		
Project #:	BAE 28830.P2.03	Project Name:	Del Monte Plant 35
Client ID:	WH-18	LAB ID:	STM94-06-008A
Matrix:	Water	Dilution:	

Name	Amount	Reporting Limit	Units
1. Dichlorodifluoromethane	ND	0.5	ug/L
2. Chloromethane	ND	0.5	ug/L
3. Vinylchloride	ND	0.5	ug/L
4. Bromomethane	ND	0.5	ug/L
5. Chloroethane	ND	0.5	ug/L
6. Trichlorofluoromethane	ND	0.5	ug/L
7. 1,1-Dichloroethene	ND	0.5	ug/L
8. Methylene chloride	ND	0.5	ug/L
9. trans-1,2-Dichloroethene	ND	0.5	ug/L
10. 1,1-Dichloroethane	ND	0.5	ug/L
11. cis-1,2-Dichloroethene	ND	0.5	ug/L
12. Chloroform	ND	0.5	ug/L
13. 1,1,1-Trichloroethane	ND	0.5	ug/L
14. Carbon tetrachloride	ND	0.5	ug/L
15. 1,2-Dichloroethane	ND	0.5	ug/L
16. Trichloroethene	ND	0.5	ug/L
17. 1,2-Dichloropropane	ND	0.5	ug/L
18. Bromodichloromethane	ND	0.5	ug/L
19. cis-1,3-Dichloropropene	ND	0.5	ug/L

ppb = parts per billion = ug/L = micrograms per Liter

ppm= parts per million = ug/mL= micrograms per milliliter

ND = Not Detected. Compound(s) may be present at concentrations below the reporting limit

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8010 Halogenated Volatile Organics
Analysis Report

Attention:	Mr. Bern Baumgartner	Date Sampled:	Jun. 17, 1994
	CH2M Hill	Date Received:	Jun. 17, 1994
	1111 Broadway	Date Analyzed:	Jun. 17, 1994
	Oakland CA 94607		
Project #:	BAE 28830.P2.03	Project Name:	Del Monte Plant 35
Client ID:	WH-18	LAB ID:	STM94-06-008A
Matrix:	Water	Dilution:	

Name	Amount	Reporting Limit	Units
20. trans-1,3-Dichloropropene	ND	0.5	ug/L
21. 1,1,2-Trichloroethane	ND	0.5	ug/L
22. Tetrachloroethene	ND	0.5	ug/L
23. Dibromochloromethane	ND	0.5	ug/L
24. Chlorobenzene	ND	0.5	ug/L
25. Bomoform	ND	0.5	ug/L
26. 1,1,2,2-Tetrachloroethane	ND	0.5	ug/L
27. 1,3-Dichlorobenzene	ND	0.5	ug/L
28. 1,4-Dichlorobenzene	ND	0.5	ug/L
29. 1,2-Dichlorobenzene	ND	0.5	ug/L

Surrogate % Recovery Bomochloromethane =	97%
Surrogate % Recovery 2-Bromo-1-Chloropropane =	93%
Surrogate % Recovery 1,4-Dichlorobutane =	90%

ppb = parts per billion = ug/L = micrograms per Liter
ppm= parts per million = ug/mL= micrograms per milliliter
ND = Not Detected. Compound(s) may be present at concentrations below the reporting limit.

R. L. James, Principal Chemist

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8015 Modified Analysis Report

Attention:	Mr. Bern Baumgartner CH2M Hill 1111 Broadway, Suite 1200 Oakland, CA 94607	Date Sampled: Date Received: Date Analyzed:	Jun 17, 1994 Jun 17, 1994 Jun 17, 1994
Project #:	BAE28830.P2.O3	Project Name:	Del Monte Plant 35
Client ID:	WH-18	LAB ID:	STM94-06-007A
Matrix:	Water	Dilution:	1:1

Name	Amount	Detection Limit	Units
TPHdiesel	ND	50	ug/L
TPHmotor oil	ND	50	ug/L
TPHkerosene	ND	50	ug/L

ppb = parts per billion = ug/L = micrograms per Liter
ppm= parts per million = ug/mL = micrograms per milliliter
ND = Not Detected. Compound(s) may be present at concentrations below the detection limit.

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8010 Halogenated Volatile Organics Analysis Report

Attention:	Mr. Bern Baumgartner	Date Sampled:	Jun. 17, 1994
	CH2M Hill	Date Received:	Jun. 17, 1994
	1111 Broadway	Date Analyzed:	Jun. 17, 1994
	Oakland CA 94607		
Project #:	BAE 28830.P2.03	Project Name:	Del Monte Plant 35
Client ID:	WH-18 9-9.5'	LAB ID:	STM94-06-006A
Matrix:	Soil	Dilution:	

Name	Amount	Reporting Limit	Units
1. Dichlorodifluoromethane	ND	0.0005	ug/g
2. Chloromethane	ND	0.0005	ug/g
3. Vinylchloride	ND	0.0005	ug/g
4. Bromomethane	ND	0.0005	ug/g
5. Chloroethane	ND	0.0005	ug/g
6. Trichlorofluoromethane	ND	0.0005	ug/g
7. 1,1-Dichloroethene	ND	0.0005	ug/g
8. Methylene chloride	ND	0.0005	ug/g
9. trans-1,2-Dichloroethene	ND	0.0005	ug/g
10. 1,1-Dichloroethane	ND	0.0005	ug/g
11. cis-1,2-Dichloroethene	0.0008	0.0005	ug/g
12. Chloroform	ND	0.0005	ug/g
13. 1,1,1-Trichloroethane	ND	0.0005	ug/g
14. Carbon tetrachloride	ND	0.0005	ug/g
15. 1,2-Dichloroethane	ND	0.0005	ug/g
16. Trichloroethene	ND	0.0005	ug/g
17. 1,2-Dichloropropane	ND	0.0005	ug/g
18. Bromodichloromethane	ND	0.0005	ug/g
19. cis-1,3-Dichloropropene	ND	0.0005	ug/g

ppb = parts per billion = ug/kg = micrograms per kilogram

ppm= parts per million = ug/g= micrograms per gram

ND = Not Detected. Compound(s) may be present at concentrations below the reporting limit.

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Sparger Technology, Inc.
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Analytical Laboratory Division
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Scientific Division

8010 Halogenated Volatile Organics
Analysis Report

Attention:	Mr. Bern Baumgartner	Date Sampled:	Jun. 17, 1994
	CH2M Hill	Date Received:	Jun. 17, 1994
	1111 Broadway	Date Analyzed:	Jun. 17, 1994
	Oakland CA 94607		
Project #:	BAE 28830.P2.03	Project Name:	Del Monte Plant 35
Client ID:	WH-18 9-9.5'	LAB ID:	STM94-06-006A
Matrix:	Soil	Dilution:	

Name	Amount	Reporting Limit	Units
20. trans-1,3-Dichloropropene	ND	0.0005	ug/g
21. 1,1,2-Trichloroethane	ND	0.0005	ug/g
22. Tetrachloroethene	0.0009	0.0005	ug/g
23. Dibromochloromethane	ND	0.0005	ug/g
24. Chlorobenzene	ND	0.0005	ug/g
25. Bomoform	ND	0.0005	ug/g
26. 1,1,2,2-Tetrachloroethane	ND	0.0005	ug/g
27. 1,3-Dichlorobenzene	ND	0.0005	ug/g
28. 1,4-Dichlorobenzene	ND	0.0005	ug/g
29. 1,2-Dichlorobenzene	ND	0.0005	ug/g

Surrogate % Recovery Bomochloromethane =	100%
Surrogate % Recovery 2-Bromo-1-Chloropropane =	97%
Surrogate % Recovery 1,4-Dichlorobutane =	93%

ppb = parts per billion = ug/kg = micrograms per kilogram
ppm= parts per million = ug/g= micrograms per gram
ND = Not Detected. Compound(s) may be present at concentrations below the reporting limit.

R. L. James, Principal Chemist

6-17-94
Date Reported

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Sparger Technology, Inc.
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Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

8015 Modified Analysis Report

Attention:	Mr. Bern Baumgartner CH2M Hill 1111 Broadway, Suite 1200 Oakland, CA 94607	Date Sampled: Date Received: Date Analyzed:	Jun. 17, 1994 Jun. 17, 1994 Jun. 17, 1994
Project #:	BAE28830.P2.O3	Project Name:	Del Monte Plant 35
Client ID:	WH-18 (9'-9.5')	LAB ID:	STM94-06-005A
Matrix:	Soil	Dilution:	1 : 1

Name	Amount	Detection Limit	Units
TPHdiesel	ND	1.0	ug/g
TPHmotor oil	ND	1.0	ug/g
TPHkerosene	ND	1.0	ug/g

ppb = parts per billion = ug/kg = micrograms per kilogram
ppm= parts per million = ug/g= micrograms per gram
ND = Not Detected Compound(s) may be present at concentrations below the detection limit.

R. L. James, Principal Chemist

Jun. 21, 1994
Date Reported

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8010 Halogenated Volatile Organics Analysis Report

Attention:	Mr. Bern Baumgartner	Date Sampled:	Jun. 17, 1994
	CH2M Hill	Date Received:	Jun. 17, 1994
	1111 Broadway	Date Analyzed:	Jun. 17, 1994
	Oakland CA 94607		
Project #:	BAE 28830.P2.03	Project Name:	Del Monte Plant 35
Client ID:	WH-19	LAB ID:	STM94-06-024A
Matrix:	Water	Dilution:	

Name	Amount	Reporting Limit	Units
1. Dichlorodifluoromethane	ND	0.5	ug/L
2. Chloromethane	ND	0.5	ug/L
3. Vinylchloride	ND	0.5	ug/L
4. Bromomethane	ND	0.5	ug/L
5. Chloroethane	ND	0.5	ug/L
6. Trichlorofluoromethane	ND	0.5	ug/L
7. 1,1-Dichloroethene	ND	0.5	ug/L
8. Methylene chloride	ND	0.5	ug/L
9. trans-1,2-Dichloroethene	ND	0.5	ug/L
10. 1,1-Dichloroethane	ND	0.5	ug/L
11. cis-1,2-Dichloroethene	ND	0.5	ug/L
12. Chloroform	ND	0.5	ug/L
13. 1,1,1-Trichloroethane	ND	0.5	ug/L
14. Carbon tetrachloride	ND	0.5	ug/L
15. 1,2-Dichloroethane	ND	0.5	ug/L
16. Trichloroethene	ND	0.5	ug/L
17. 1,2-Dichloropropane	ND	0.5	ug/L
18. Bromodichloromethane	ND	0.5	ug/L
19. cis-1,3-Dichloropropene	ND	0.5	ug/L

ppb = parts per billion = ug/L = micrograms per Liter

ppm= parts per million = ug/mL= micrograms per milliliter

ND = Not Detected. Compound(s) may be present at concentrations below the reporting limit.

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8010 Halogenated Volatile Organics
Analysis Report

Attention:	Mr. Bern Baumgartner	Date Sampled:	Jun. 17, 1994
	CH2M Hill	Date Received:	Jun. 17, 1994
	1111 Broadway	Date Analyzed:	Jun. 17, 1994
	Oakland CA 94607		
Project #:	BAE 28830.P2.03	Project Name:	Del Monte Plant 35
Client ID:	WH-19	LAB ID:	STM94-06-024A
Matrix:	Water	Dilution:	

Name	Amount	Reporting Limit	Units
20. trans-1,3-Dichloropropene	ND	0.5	ug/L
21. 1,1,2-Trichloroethane	ND	0.5	ug/L
22. Tetrachloroethene	ND	0.5	ug/L
23. Dibromochloromethane	ND	0.5	ug/L
24. Chlorobenzene	ND	0.5	ug/L
25. Bomoform	ND	0.5	ug/L
26. 1,1,2,2-Tetrachloroethane	ND	0.5	ug/L
27. 1,3-Dichlorobenzene	ND	0.5	ug/L
28. 1,4-Dichlorobenzene	ND	0.5	ug/L
29. 1,2-Dichlorobenzene	ND	0.5	ug/L

Surrogate % Recovery Bomochloromethane =	103%
Surrogate % Recovery 2-Bromo-1-Chloropropane =	103%
Surrogate % Recovery 1,4-Dichlorobutane =	110%

ppb = parts per billion = ug/L = micrograms per Liter
ppm= parts per million = ug/mL= micrograms per milliliter
ND = Not Detected. Compound(s) may be present at concentrations below the reporting limit.

R.L. James, Principal Chemist

6-17-94
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8015 Modified Analysis Report

Attention:	Mr. Bern Baumgartner CH2M Hill 1111 Broadway, Suite 1200 Oakland, CA 94607	Date Sampled: Date Received: Date Analyzed:	Jun 17, 1994 Jun 17, 1994 Jun 17, 1994
Project #:	BAE28830.P2.O3	Project Name:	Del Monte Plant 35
Client ID:	WH-19	LAB ID:	STM94-06-023A
Matrix:	Water	Dilution:	1:1

Name	Amount	Detection Limit	Units
TPHdiesel	ND	50	ug/L
TPHmotor oil	ND	50	ug/L
TPHkerosene	ND	50	ug/L

ppb = parts per billion = ug/L = micrograms per Liter
ppm= parts per million = ug/mL = micrograms per milliliter
ND = Not Detected Compound(s) may be present at concentrations below the detection limit

R. L. James, Principal Chemist

Jun. 21, 1994
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8010 Halogenated Volatile Organics
Analysis Report

Attention:	Mr. Bern Baumgartner	Date Sampled:	Jun. 17, 1994
	CH2M Hill	Date Received:	Jun. 17, 1994
	1111 Broadway	Date Analyzed:	Jun. 17, 1994
	Oakland CA 94607		
Project #:	BAE 28830.P2.03	Project Name:	Del Monte Plant 35
Client ID:	WH-19 11.5-12.0'	LAB ID:	STM94-06-022A
Matrix:	Soil	Dilution:	

Name	Amount	Reporting Limit	Units
1. Dichlorodifluoromethane	ND	0.0005	ug/g
2. Chloromethane	ND	0.0005	ug/g
3. Vinylchloride	ND	0.0005	ug/g
4. Bromomethane	ND	0.0005	ug/g
5. Chloroethane	ND	0.0005	ug/g
6. Trichlorofluoromethane	ND	0.0005	ug/g
7. 1,1-Dichloroethene	0.0008	0.0005	ug/g
8. Methylene chloride	ND	0.0005	ug/g
9. trans-1,2-Dichloroethene	ND	0.0005	ug/g
10. 1,1-Dichloroethane	ND	0.0005	ug/g
11. cis-1,2-Dichloroethene	ND	0.0005	ug/g
12. Chloroform	ND	0.0005	ug/g
13. 1,1,1-Trichloroethane	ND	0.0005	ug/g
14. Carbon tetrachloride	ND	0.0005	ug/g
15. 1,2-Dichloroethane	ND	0.0005	ug/g
16. Trichloroethene	ND	0.0005	ug/g
17. 1,2-Dichloropropane	ND	0.0005	ug/g
18. Bromodichloromethane	ND	0.0005	ug/g
19. cis-1,3-Dichloropropene	ND	0.0005	ug/g

ppb = parts per billion = ug/kg = micrograms per kilogram

ppm= parts per million = ug/g= micrograms per gram

ND = Not Detected. Compound(s) may be present at concentrations below the reporting limit.

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8010 Halogenated Volatile Organics Analysis Report

Attention:	Mr. Bern Baumgartner CH2M Hill 1111 Broadway Oakland CA 94607	Date Sampled: Date Received: Date Analyzed:	Jun. 17, 1994 Jun. 17, 1994 Jun. 17, 1994
Project #:	BAE 28830.P2.03	Project Name:	Del Monte Plant 35
Client ID:	WH-19 11.5-12.0'	LAB ID:	STM94-06-022A
Matrix:	Soil	Dilution:	

Name	Amount	Reporting Limit	Units
20. trans-1,3-Dichloropropene	ND	0.0005	ug/g
21. 1,1,2-Trichloroethane	ND	0.0005	ug/g
22. Tetrachloroethene	0.0005	0.0005	ug/g
23. Dibromochloromethane	ND	0.0005	ug/g
24. Chlorobenzene	ND	0.0005	ug/g
25. Bomoform	ND	0.0005	ug/g
26. 1,1,2,2-Tetrachloroethane	ND	0.0005	ug/g
27. 1,3-Dichlorobenzene	ND	0.0005	ug/g
28. 1,4-Dichlorobenzene	ND	0.0005	ug/g
29. 1,2-Dichlorobenzene	ND	0.0005	ug/g

Surrogate % Recovery Bomochloromethane =	110%
Surrogate % Recovery 2-Bromo-1-Chloropropane =	100%
Surrogate % Recovery 1,4-Dichlorobutane =	110%

ppb = parts per billion = ug/kg = micrograms per kilogram
ppm= parts per million = ug/g= micrograms per gram
ND = Not Detected. Compound(s) may be present at concentrations below the reporting limit.

R. L. James, Principal Chemist

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8015 Modified Analysis Report

Attention:	Mr. Bern Baumgartner CH2M Hill 1111 Broadway, Suite 1200 Oakland, CA 94607	Date Sampled: Date Received: Date Analyzed:	Jun. 17, 1994 Jun. 17, 1994 Jun. 17, 1994
Project #:	BAE28830.P2.O3	Project Name:	Del Monte Plant 35
Client ID:	WH-19 (11.5'-12')	LAB ID:	STM94-06-021A
Matrix:	Soil	Dilution:	1 : 1

Name	Amount	Detection Limit	Units
TPHdiesel	ND	1.0	ug/g
TPHmotor oil	ND	1.0	ug/g
TPHkerosene	ND	1.0	ug/g

ppb = parts per billion = ug/kg = micrograms per kilogram
ppm= parts per million = ug/g= micrograms per gram
ND = Not Detected Compound(s) may be present at concentrations below the detection limit

R. L. James, Principal Chemist

Jun. 21, 1994
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8010 Halogenated Volatile Organics Analysis Report

Attention:	Mr. Bern Baumgartner CH2M Hill 1111 Broadway Oakland CA 94607	Date Sampled: Date Received: Date Analyzed:	Jun. 17, 1994 Jun. 17, 1994 Jun. 17, 1994
Project #:	BAE 28830.P2.03	Project Name:	Del Monte Plant 35
Client ID:	B4 7.5-8.0'	LAB ID:	STM94-06-014A
Matrix:	Soil	Dilution:	

Name	Amount	Reporting Limit	Units
1. Dichlorodifluoromethane	ND	0.0005	ug/g
2. Chloromethane	0.0077	0.0005	ug/g
3. Vinylchloride	ND	0.0005	ug/g
4. Bromomethane	ND	0.0005	ug/g
5. Chloroethane	ND	0.0005	ug/g
6. Trichlorofluoromethane	ND	0.0005	ug/g
7. 1,1-Dichloroethene	0.0010	0.0005	ug/g
8. Methylene chloride	ND	0.0005	ug/g
9. trans-1,2-Dichloroethene	0.0071	0.0005	ug/g
10. 1,1-Dichloroethane	ND	0.0005	ug/g
11. cis-1,2-Dichloroethene	0.0051	0.0005	ug/g
12. Chloroform	ND	0.0005	ug/g
13. 1,1,1-Trichloroethane	ND	0.0005	ug/g
14. Carbon tetrachloride	ND	0.0005	ug/g
15. 1,2-Dichloroethane	ND	0.0005	ug/g
16. Trichloroethene	0.0011	0.0005	ug/g
17. 1,2-Dichloropropane	ND	0.0005	ug/g
18. Bromodichloromethane	ND	0.0005	ug/g
19. cis-1,3-Dichloropropene	ND	0.0005	ug/g

ppb = parts per billion = ug/kg = micrograms per kilogram

ppm= parts per million = ug/g= micrograms per gram

ND = Not Detected. Compound(s) may be present at concentrations below the reporting limit.

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8010 Halogenated Volatile Organics Analysis Report

Attention:	Mr. Bern Baumgartner	Date Sampled:	Jun. 17, 1994
	CH2M Hill	Date Received:	Jun. 17, 1994
	1111 Broadway	Date Analyzed:	Jun. 17, 1994
	Oakland CA 94607		
Project #:	BAE 28830.P2.03	Project Name:	Del Monte Plant 35
Client ID:	B4 7.5-8.0'	LAB ID:	STM94-06-014A
Matrix:	Soil	Dilution:	

Name	Amount	Reporting Limit	Units
20. trans-1,3-Dichloropropene	ND	0.0005	ug/g
21. 1,1,2-Trichloroethane	ND	0.0005	ug/g
22. Tetrachloroethene	0.0010	0.0005	ug/g
23. Dibromochloromethane	ND	0.0005	ug/g
24. Chlorobenzene	ND	0.0005	ug/g
25. Bomoform	ND	0.0005	ug/g
26. 1,1,2,2-Tetrachloroethane	ND	0.0005	ug/g
27. 1,3-Dichlorobenzene	ND	0.0005	ug/g
28. 1,4-Dichlorobenzene	ND	0.0005	ug/g
29. 1,2-Dichlorobenzene	ND	0.0005	ug/g

Surrogate % Recovery Bomochloromethane =	133%
Surrogate % Recovery 2-Bromo-1-Chloropropane =	117%
Surrogate % Recovery 1,4-Dichlorobutane =	123%

ppb = parts per billion = ug/kg = micrograms per kilogram
ppm= parts per million = ug/g= micrograms per gram
ND = Not Detected. Compound(s) may be present at concentrations below the reporting limit.

R. L. James, Principal Chemist

6-17-94
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8015 Modified Analysis Report

Attention:	Mr. Bern Baumgartner CH2M Hill 1111 Broadway, Suite 1200 Oakland, CA 94607	Date Sampled: Date Received: Date Analyzed:	Jun. 17, 1994 Jun. 17, 1994 Jun. 17, 1994
Project #:	BAE28830.P2.O3	Project Name:	Del Monte Plant 35
Client ID:	B4-7.5'-8'	LAB ID:	STM94-06-013A
Matrix:	Soil	Dilution:	1 : 1

Name	Amount	Detection Limit	Units
TPHdiesel	ND	1.0	ug/g
TPHmotor oil	ND	1.0	ug/g
TPHkerosene	170	1.0	ug/g

ppb = parts per billion = ug/kg = micrograms per kilogram
ppm= parts per million = ug/g= micrograms per gram
ND = Not Detected. Compound(s) may be present at concentrations below the detection limit

R. L. James, Principal Chemist

Jun. 21, 1994
Date Reported

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8010 Halogenated Volatile Organics Analysis Report

Attention:	Mr. Bern Baumgartner	Date Sampled:	Jun. 17, 1994
	CH2M Hill	Date Received:	Jun. 17, 1994
	1111 Broadway	Date Analyzed:	Jun. 17, 1994
	Oakland CA 94607		
Project #:	BAE 28830.P2.03	Project Name:	Del Monte Plant 35
Client ID:	B4 12.5-13.0'	LAB ID:	STM94-06-016A
Matrix:	Soil	Dilution:	

Name	Amount	Reporting Limit	Units
1. Dichlorodifluoromethane	ND	0.0005	ug/g
2. Chloromethane	0.0290	0.0005	ug/g
3. Vinylchloride	ND	0.0005	ug/g
4. Bromomethane	ND	0.0005	ug/g
5. Chloroethane	ND	0.0005	ug/g
6. Trichlorofluoromethane	ND	0.0005	ug/g
7. 1,1-Dichloroethene	0.0011	0.0005	ug/g
8. Methylene chloride	ND	0.0005	ug/g
9. trans-1,2-Dichloroethene	0.0150	0.0005	ug/g
10. 1,1-Dichloroethane	ND	0.0005	ug/g
11. cis-1,2-Dichloroethene	0.0150	0.0005	ug/g
12. Chloroform	ND	0.0005	ug/g
13. 1,1,1-Trichloroethane	ND	0.0005	ug/g
14. Carbon tetrachloride	ND	0.0005	ug/g
15. 1,2-Dichloroethane	ND	0.0005	ug/g
16. Trichloroethene	0.0220	0.0005	ug/g
17. 1,2-Dichloropropane	ND	0.0005	ug/g
18. Bromodichloromethane	ND	0.0005	ug/g
19. cis-1,3-Dichloropropene	ND	0.0005	ug/g

ppb = parts per billion = ug/kg = micrograms per kilogram

ppm= parts per million = ug/g= micrograms per gram

ND = Not Detected. Compound(s) may be present at concentrations below the reporting limit.

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8010 Halogenated Volatile Organics Analysis Report

Attention:	Mr. Bern Baumgartner CH2M Hill 1111 Broadway Oakland CA 94607	Date Sampled: Date Received: Date Analyzed:	Jun. 17, 1994 Jun. 17, 1994 Jun. 17, 1994
Project #:	BAE 28830.P2.03	Project Name:	Del Monte Plant 35
Client ID:	B4 12.5-13.0'	LAB ID:	STM94-06-016A
Matrix:	Soil	Dilution:	

Name	Amount	Reporting Limit	Units
20. trans-1,3-Dichloropropene	ND	0.0005	ug/g
21. 1,1,2-Trichloroethane	ND	0.0005	ug/g
22. Tetrachloroethene	0.0035	0.0005	ug/g
23. Dibromochloromethane	ND	0.0005	ug/g
24. Chlorobenzene	ND	0.0005	ug/g
25. Bomoform	ND	0.0005	ug/g
26. 1,1,2,2-Tetrachloroethane	ND	0.0005	ug/g
27. 1,3-Dichlorobenzene	ND	0.0005	ug/g
28. 1,4-Dichlorobenzene	ND	0.0005	ug/g
29. 1,2-Dichlorobenzene	ND	0.0005	ug/g

Surrogate % Recovery Bomochloromethane =	123%
Surrogate % Recovery 2-Bromo-1-Chloropropane =	110%
Surrogate % Recovery 1,4-Dichlorobutane =	120%

ppb = parts per billion = ug/kg = micrograms per kilogram
ppm= parts per million = ug/g= micrograms per gram
ND = Not Detected. Compound(s) may be present at concentrations below the reporting limit.

R. L. James, Principal Chemist

6-17-94
Date Reported

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8015 Modified Analysis Report

Attention:	Mr. Bern Baumgartner CH2M Hill 1111 Broadway, Suite 1200 Oakland, CA 94607	Date Sampled: Date Received: Date Analyzed:	Jun. 17, 1994 Jun. 17, 1994 Jun. 17, 1994
Project #:	BAE28830.P2.O3	Project Name:	Del Monte Plant 35
Client ID:	B4-12.5'-13'	LAB ID:	STM94-06-015A
Matrix:	Soil	Dilution:	1 : 1

Name	Amount	Detection Limit	Units
TPHdiesel	ND	1.0	ug/g
TPHmotor oil	ND	1.0	ug/g
TPHkerosene	ND	1.0	ug/g

ppb = parts per billion = ug/kg = micrograms per kilogram
ppm= parts per million = ug/g= micrograms per gram
ND = Not Detected. Compound(s) may be present at concentrations below the detection limit

R. L. James, Principal Chemist

Jun. 21, 1994
Date Reported

SPARGER TECHNOLOGY ANALYTICAL LABORATORY, INC IS CERTIFIED BY THE STATE OF CALIFORNIA DEPARTMENT OF HEALTH SERVICES AS A HAZARDOUS WASTE TESTING LABORATORY
(Certification No. 1614)

3050 Fite Circle, Suite 112 • Sacramento, California 95827 • (916) 362-8947 • FAX (916) 362-0947

Sparger Technology, Inc.
With Automation in Mind

Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

8010 Halogenated Volatile Organics Analysis Report

Attention:	Mr. Bern Baumgartner CH2M Hill 1111 Broadway Oakland CA 94607	Date Sampled: Date Received: Date Analyzed:	Jun. 17, 1994 Jun. 17, 1994 Jun. 17, 1994
Project #:	BAE 28830.P2.03	Project Name:	Del Monte Plant 35
Client ID:	B5 7.5-8.0'	LAB ID:	STM94-06-018A
Matrix:	Soil	Dilution:	

Name	Amount	Reporting Limit	Units
1. Dichlorodifluoromethane	ND	0.0005	ug/g
2. Chloromethane	0.0043	0.0005	ug/g
3. Vinylchloride	ND	0.0005	ug/g
4. Bromomethane	ND	0.0005	ug/g
5. Chloroethane	ND	0.0005	ug/g
6. Trichlorofluoromethane	ND	0.0005	ug/g
7. 1,1-Dichloroethene	0.0009	0.0005	ug/g
8. Methylene chloride	ND	0.0005	ug/g
9. trans-1,2-Dichloroethene	0.0008	0.0005	ug/g
10. 1,1-Dichloroethane	ND	0.0005	ug/g
11. cis-1,2-Dichloroethene	0.0031	0.0005	ug/g
12. Chloroform	ND	0.0005	ug/g
13. 1,1,1-Trichloroethane	ND	0.0005	ug/g
14. Carbon tetrachloride	ND	0.0005	ug/g
15. 1,2-Dichloroethane	ND	0.0005	ug/g
16. Trichloroethene	0.0013	0.0005	ug/g
17. 1,2-Dichloropropane	ND	0.0005	ug/g
18. Bromodichloromethane	ND	0.0005	ug/g
19. cis-1,3-Dichloropropene	ND	0.0005	ug/g

ppb = parts per billion = ug/kg = micrograms per kilogram

ppm= parts per million = ug/g= micrograms per gram

ND = Not Detected. Compound(s) may be present at concentrations below the reporting limit.

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8010 Halogenated Volatile Organics Analysis Report

Attention:	Mr. Bern Baumgartner CH2M Hill 1111 Broadway Oakland CA 94607	Date Sampled: Date Received: Date Analyzed:	Jun. 17, 1994 Jun. 17, 1994 Jun. 17, 1994
Project #:	BAE 28830.P2.03	Project Name:	Del Monte Plant 35
Client ID:	B5 7.5-8.0'	LAB ID:	STM94-06-018A
Matrix:	Soil	Dilution:	

Name	Amount	Reporting Limit	Units
20. trans-1,3-Dichloropropene	ND	0.0005	ug/g
21. 1,1,2-Trichloroethane	ND	0.0005	ug/g
22. Tetrachloroethene	0.0005	0.0005	ug/g
23. Dibromochloromethane	ND	0.0005	ug/g
24. Chlorobenzene	ND	0.0005	ug/g
25. Bomoform	ND	0.0005	ug/g
26. 1,1,2,2-Tetrachloroethane	ND	0.0005	ug/g
27. 1,3-Dichlorobenzene	ND	0.0005	ug/g
28. 1,4-Dichlorobenzene	ND	0.0005	ug/g
29. 1,2-Dichlorobenzene	ND	0.0005	ug/g

Surrogate % Recovery Bomochloromethane =	133%
Surrogate % Recovery 2-Bromo-1-Chloropropane =	120%
Surrogate % Recovery 1,4-Dichlorobutane =	133%

ppb = parts per billion = ug/kg = micrograms per kilogram
ppm= parts per million = ug/g= micrograms per gram
ND = Not Detected. Compound(s) may be present at concentrations below the reporting limit.

R. L. James, Principal Chemist

6-17-94
Date Reported

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Analytical Laboratory Division
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Scientific Division

8015 Modified Analysis Report

Attention:	Mr. Bern Baumgartner CH2M Hill 1111 Broadway, Suite 1200 Oakland, CA 94607	Date Sampled: Date Received: Date Analyzed:	Jun. 17, 1994 Jun. 17, 1994 Jun. 17, 1994
Project #:	BAE28830.P2.O3	Project Name:	Del Monte Plant 35
Client ID:	B5-7.5'-8'	LAB ID:	STM94-06-017A
Matrix:	Soil	Dilution:	1 : 1

Name	Amount	Detection Limit	Units
TPHdiesel	ND	1.0	ug/g
TPHmotor oil	ND	1.0	ug/g
TPHkerosene	8.8	1.0	ug/g

ppb = parts per billion = ug/kg = micrograms per kilogram
ppm= parts per million = ug/g= micrograms per gram
ND = Not Detected. Compound(s) may be present at concentrations below the detection limit.

R. L. James, Principal Chemist

Jun. 21, 1994
Date Reported

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Sparger Technology, Inc.
With Automation in Mind

Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

8010 Halogenated Volatile Organics Analysis Report

Attention:	Mr. Bern Baumgartner	Date Sampled:	Jun. 17, 1994
	CH2M Hill	Date Received:	Jun. 17, 1994
	1111 Broadway	Date Analyzed:	Jun. 17, 1994
	Oakland CA 94607		
Project #:	BAE 28830.P2.03	Project Name:	Del Monte Plant 35
Client ID:	B6 8.5-9.0'	LAB ID:	STM94-06-020A
Matrix:	Soil	Dilution:	

Name	Amount	Reporting Limit	Units
1. Dichlorodifluoromethane	ND	0.0005	ug/g
2. Chloromethane	0.0016	0.0005	ug/g
3. Vinylchloride	ND	0.0005	ug/g
4. Bromomethane	ND	0.0005	ug/g
5. Chloroethane	ND	0.0005	ug/g
6. Trichlorofluoromethane	ND	0.0005	ug/g
7. 1,1-Dichloroethene	0.0009	0.0005	ug/g
8. Methylene chloride	ND	0.0005	ug/g
9. trans-1,2-Dichloroethene	0.0009	0.0005	ug/g
10. 1,1-Dichloroethane	ND	0.0005	ug/g
11. cis-1,2-Dichloroethene	0.0014	0.0005	ug/g
12. Chloroform	ND	0.0005	ug/g
13. 1,1,1-Trichloroethane	ND	0.0005	ug/g
14. Carbon tetrachloride	ND	0.0005	ug/g
15. 1,2-Dichloroethane	ND	0.0005	ug/g
16. Trichloroethene	0.0023	0.0005	ug/g
17. 1,2-Dichloropropane	ND	0.0005	ug/g
18. Bromodichloromethane	ND	0.0005	ug/g
19. cis-1,3-Dichloropropene	ND	0.0005	ug/g

ppb = parts per billion = ug/kg = micrograms per kilogram

ppm= parts per million = ug/g= micrograms per gram

ND = Not Detected. Compound(s) may be present at concentrations below the reporting limit.

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8010 Halogenated Volatile Organics
Analysis Report

Attention:	Mr. Bern Baumgartner	Date Sampled:	Jun. 17, 1994
	CH2M Hill	Date Received:	Jun. 17, 1994
	1111 Broadway	Date Analyzed:	Jun. 17, 1994
	Oakland CA 94607		
Project #:	BAE 28830.P2.03	Project Name:	Del Monte Plant 35
Client ID:	B6 8.5-9.0'	LAB ID:	STM94-06-020A
Matrix:	Soil	Dilution:	

Name	Amount	Reporting Limit	Units
20. trans-1,3-Dichloropropene	ND	0.0005	ug/g
21. 1,1,2-Trichloroethane	ND	0.0005	ug/g
22. Tetrachloroethene	0.0024	0.0005	ug/g
23. Dibromochloromethane	ND	0.0005	ug/g
24. Chlorobenzene	ND	0.0005	ug/g
25. Bomoform	ND	0.0005	ug/g
26. 1,1,2,2-Tetrachloroethane	ND	0.0005	ug/g
27. 1,3-Dichlorobenzene	ND	0.0005	ug/g
28. 1,4-Dichlorobenzene	ND	0.0005	ug/g
29. 1,2-Dichlorobenzene	ND	0.0005	ug/g

Surrogate % Recovery Bomochloromethane =	130%
Surrogate % Recovery 2-Bromo-1-Chloropropane =	120%
Surrogate % Recovery 1,4-Dichlorobutane =	123%

ppb = parts per billion = ug/kg = micrograms per kilogram
ppm= parts per million = ug/g= micrograms per gram
ND = Not Detected. Compound(s) may be present at concentrations below the reporting limit

R.L. James, Principal Chemist

6-17-94
Date Reported

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With Automation in Mind

Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

8015 Modified Analysis Report

Attention:	Mr. Bern Baumgartner CH2M Hill 1111 Broadway, Suite 1200 Oakland, CA 94607	Date Sampled: Date Received: Date Analyzed:	Jun. 17, 1994 Jun. 17, 1994 Jun. 17, 1994
Project #:	BAE28830.P2.O3	Project Name:	Del Monte Plant 35
Client ID:	B6-8.5'-9'	LAB ID:	STM94-06-019A
Matrix:	Soil	Dilution:	1 : 1

Name	Amount	Detection Limit	Units
TPHdiesel	ND	1.0	ug/g
TPHmotor oil	ND	1.0	ug/g
TPHkerosene	ND	1.0	ug/g

ppb = parts per billion = ug/kg = micrograms per kilogram
ppm= parts per million = ug/g= micrograms per gram
ND = Not Detected Compound(s) may be present at concentrations below the detection limit.

R. L. James, Principal Chemist

Jun. 21, 1994
Date Reported

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SPARGER TECHNOLOGY, INC.
Analytical Laboratory
3050 Fite Circle, #112 Sacramento, CA 95827
Phone: (916) 362-8947
FAX: (916) 362-0947

CHAIN OF CUSTODY RECORD

#2

SPARGER TECHNOLOGY ANALYTICAL MOBILE LABORATORY
3100 Fite Circle - Suite 108
Sacramento, CA 95827

STAL Invoice Number:

Company: CH2M HILL
Phone: 510-251-2426
Project Manager: BERN BAUMGARTNER FAX:
Report Address: 111 BROADWAY OAKLAND CA 94607
Billing Name & Address: CH2M HILL ATTN. BERN BAUMGARTNER

ANALYSIS REQUEST

Project Name: DEL MONTE PLANT 35
Project/Job #: BAE 28830.P2.03
Project Location:
P.O. #:

REMARKS:

SAMPLE ID	Sampling: Date	Sampling: Time	Container: 40 mL VOA	Container: Brass Sleeve	Container: 1 L amber bottle	Container: 250 mL Plastic	Container: Other:	Preservative Used: HCl/HNO3/ICE	Preservative Used: None	Preservative Used: Other:	Matrix: Water	Matrix: Soil	Matrix: Air	Matrix: Other:	TCLP: BTEX (602/8020)/503.1	TCLP: BTEX/TPHgas (602/8020/8015)	TCLP: TPHdiesel/TPHmotor oil/kerosene(8015)	TCLP: EPA 601/8010/502.2/504	TCLP: EPA 602/8020	TCLP: EPA 608/8080 (Pesticides)/505/508	TCLP: EPA 608/8080 (PCB's)	TCLP: EPA 624/8240/524.2	TCLP: EPA 625/8270/525	Total Oil & Grease (5520)	Non-Polar O & G/TRPH (418.1)	Organic Lead	RCI	WET (STLC): CAM-17 Metals	TCLP: CAM-5 Metals (Cd, Cr, Pb, Ni, Zn)	TCLP: Lead	Total:		TAT: Standard	TAT: Rush Services (72hr / 48hr / 24hr / 12hr)	TAT: Holiday/Weekend Rush
WH-19(11.5-12)	6/17/94	1530		X					X			X					X	X																	
WH-19		1700	X		X				X		X						X	X													21	22			

Relinquished by: Kristi Shuck
Date: 6/17/94 Time: 1754

Received by:
Date: 6/17/94 Time: 17:41

Relinquished by:
Date: Time:

Received by:
Date: Time:

SPARGER TECHNOLOGY, INC.
Analytical Laboratory
3050 Fite Circle, #112 Sacramento, CA 95827
Phone: (916) 362-8947
FAX: (916) 362-0947

#1

CHAIN OF CUSTODY RECORD

SPARGER TECHNOLOGY ANALYTICAL MOBILE LABORATORY
3100 Fite Circle - Suite 108
Sacramento, CA 95827
STAL Invoice Number:

Company: CH2M HILL Phone: 510-251-2426
Project Manager: BERN BAUMGARTNER FAX:
Report Address: 1111 BROADWAY OAKLAND CA 94607
Billing Name & Address: CH2M HILL ATTN B. BAUMGARTNER
Project Name: DEL MONTE PLANT 35
Project/Job #: BAE28830.P2.03
Project Location:
P.O. #:

ANALYSIS REQUEST

REMARKS:

WET (STLC)
TCLP
Total

SAMPLE ID	Sampling: Date	Sampling: Time	Container: 40 mL VOA	Container: Brass Sleeve	Container: 1 L amber bottle	Container: 250 mL Plastic	Container: Other:	Preservative Used: HCl/HNO3/ICE	Preservative Used: None	Preservative Used: Other:	Matrix: Water	Matrix: Soil	Matrix: Air	Matrix: Other:	TCLP: BTEX (602/8020)/503.1	TCLP: BTEX/TPHgas (602/8020/8015)	TCLP: TPHdiesel/TPHmotor oil/kerosene(8015)	TCLP: EPA 601/8010/502.2/504	TCLP: EPA 602/8020	TCLP: EPA 608/8080 (Pesticides)/505/508	TCLP: EPA 608/8080 (PCB's)	TCLP: EPA 624/8240/524.2	TCLP: EPA 625/8270/525	Total Oil & Grease (5520)	Non-Polar O & G/TRPH (418.1)	Organic Lead	RCI	CAM-17 Metals	CAM-5 Metals (Cd, Cr, Pb, Ni, Zn)	Lead	TAT: Standard	TAT: Rush Services (72hr / 48hr / 24hr / 12hr)	TAT: Holiday/Weekend Rush
WH-1.5	6/17/94	935	X		X				X		X						X	X																
WH-1.5(8.5-9)	"	830		X					X			X					X	X																
WH-18(8.5-9)		920		X								X					X	X																
WH-18		1025	X		X				X			X					X	X																
WH-16(8.5-9)		1030		X					X			X					X	X																
WH-16		1145	X		X				X		X						X	X																
B4-7.5-8		1145		X								X					X	X																
B4-12.5-13		1220		X								X					X	X																
B5 7.5-8		1315		X								X					X	X																
B6 8.5-9	↓	1445		X								X					X	X																

Relinquished by:	Received by:	Relinquished by:	Received by:
Date: 6/17/94 Time: 1734	Date: 6/17/94 Time: 17:44	Date: Time:	Date: Time:

ETC/Mid-Pacific

625 B Clyde Avenue
Mountain View, CA 94043
(415) 964-0844
FAX (415) 961-7113

Environ
5820 Shellmound St. Suite 700
Emeryville, CA 94608

May 16, 1994
MPELI Order#: 94-04-105
Date Received: 04/26/94

Attn: David Harnish

Subject: Analysis of 6 Soil Samples, 1 Trip Blank

Work ID: 93CO216A/3001

P.O. #: None Given

Pages in report: 16

Analysis of soil samples for purgeable halogenated organic compounds was performed according to USEPA Method 8010A (Test Methods for Evaluating Solid Waste -- SW846, 3rd Ed.,Revision 1, 1992).

Analysis of water samples for purgeable halogenated organic compounds was performed according to USEPA Method 8010A (Test Methods for Evaluating Solid Waste -- SW846, 3rd Ed. Revision 1, 1992).

Analysis of soil samples for higher boiling petroleum hydrocarbons (diesel, kerosene, & oil) was performed according to guidelines established in the Regional Water Quality Control Board (RWQCB) Leaking Underground Fuel Tank (LUFT) manual. This is also known as the modified 8015 protocol based on USEPA Method 8015A (Test Methods for Evaluating Solid Waste -- SW846, 3rd Ed. Revision 1, 1992).

Analysis of soil samples for lower boiling petroleum hydrocarbons (benzene, toluene, ethylbenzene, xylenes, and gasoline) was performed according to guidelines established in the Regional Water Quality Control Board (RWQCB) Leaking Underground Fuel Tank (LUFT) manual. This is also known as the modified 8015 protocol based on USEPA Method 8015A (Test Methods for Evaluating Solid Waste -- SW846, 3rd Ed. Revision 1, 1992).

Analysis of water samples for lower boiling petroleum hydrocarbons (benzene, toluene, ethylbenzene, xylenes, and gasoline) was performed according to guidelines established in the Regional Water Quality Control Board (RWQCB) Leaking Underground Fuel Tank (LUFT) manual. This is also known as the modified 8015 protocol based on USEPA Method 8015A (Test Methods for Evaluating Solid Waste -- SW846, 3rd Ed. Revision 1, 1992).

NOTES

A discrepancy was noted between the sample collection date noted on the chain of custody record and the sample collection date indicated on the sample container labels. The sampling date reported on the chain of custody record is 4/26/94.

The collection date indicated on the sample container labels is 4/21/94. However, even when taking the earlier date into consideration, hold times were not compromised.

TPH-EXTRACTABLES:
The surrogate spiking compound Pentacosane has recently been put into use at the laboratory. Insufficient data exists at present to determine statistical acceptance limits. Therefore the entry for that information has been left blank on each page where results are reported.

Due to insufficient sample received, an MS/MSD was not analyzed. Only an LCS was analyzed for QC batch 0352A which was used in this analysis.

TPH-PURGEABLES:
The composite of the samples B7-1-1 @ 6.5', B7-1-2 @ 6.5', B7-1-3 @ 6.5' and the composite of the samples B7-2-1 @ 6.5', B7-2-2 @ 6.5', B7-2-3 @ 6.5' analyzed for TPH-Purgeables exhibited a chromatographic pattern that did not match the pattern of any of our in-house standards for this method. This component was semi-quantitated by comparison with the gasoline standard, and reported as "*Unknown Hydrocarbons".

The QC Report for the spiked sample B7-1-2 @ 6.5' shows matrix spike and matrix spike duplicate % recoveries for trichloroethene and tetrachloroethene to be outside of the QC limits. This is attributable to matrix affects as the lab control sample recoveries were well within QC limits.

All analyses were conducted in batches of 20 samples or less. Each QC batch consisted of a method blank, a matrix spike, a matrix spike duplicate and a laboratory control sample. The QC information is in a separate QC report at the end of the regular report. To find the associated QC data, identify the batch number for the analysis of interest and look for that number in the QC report for that test. Occasionally a sample will be associated with a sub-batch, which will end in a letter other than "A". The main batch will include the original blank, MS, MSD, and LCS. The sub-batch will contain the additional blank associated with the sample and LCS.

All analytes reported above detection limits on gas chromatography analyses have been confirmed by a second dissimilar column.

Samples were diluted when one or both of the following situations exists:

1) one or more analytes is present at a level above the linear calibration range of the instrument; or
2) compounds are present at levels that could damage the instrument.

The following flags and abbreviations may be used in this report:

ND - Not detected above the detection limit stated.
** - See other analysis.
Freon 113 - 1,1,2-Trichloro-1,2,2-trifluoroethane. Not an 8010 compound.
MS(D) - Matrix spike (duplicate)
LCS(D) - Laboratory control sample (duplicate)
RPD - Relative percent difference
N/A - Not applicable
Q - surrogate recovery outside the QC limits

Environ

Analytical Results - TPH as Gas,BTEX by GC /H2O

Client ID: Trip Blank
MPELI ID: 9404105-07A
Matrix: WATER
QC Batch: I191A

Collected: 04/26/94
Received: 04/26/94
Analyzed: 04/27/94
Dilution factor: 1.00

Concentration, ug/L

PARAMETER	RESULT	LIMIT
Benzene	ND	0.50
Toluene	ND	0.50
Ethylbenzene	ND	0.50
Total Xylenes	ND	0.50
Gasoline	ND	50

SURROGATE	%RECOVERY	LIMITS
Bromofluorobenzene	93	58-127

Environ

Analytical Results - 8010 Volatiles by GC /H2O

Client ID: Trip Blank
MPELI ID: 9404105-07A
Matrix: WATER
QC Batch: A045A

Collected: 04/26/94
Received: 04/26/94
Analyzed: 04/28/94
Dilution factor: 1.00

Concentration, ug/L

PARAMETER	RESULT	LIMIT
Dichlorodifluoromethane	ND	0.50
Chloromethane	ND	0.50
Vinyl Chloride	ND	0.50
Bromomethane	ND	0.50
Chloroethane	ND	0.50
Trichlorofluoromethane	ND	0.50
1,1-Dichloroethene	ND	0.50
Methylene Chloride	ND	0.50
trans-1,2-Dichloroethene	ND	0.50
1,1-Dichloroethane	ND	0.50
cis-1,2-Dichloroethene	ND	0.50
Chloroform	ND	0.50
1,1,1-Trichloroethane	ND	0.50
Carbon Tetrachloride	ND	0.50
1,2-Dichloroethane	ND	0.50
Trichloroethene	ND	0.50
1,2-Dichloropropane	ND	0.50
Bromodichloromethane	ND	0.50
2-Chloroethylvinyl ether	ND	5.0
trans-1,3-Dichloropropene	ND	0.50
1,1,2-Trichloroethane	ND	0.50
Tetrachloroethene	ND	0.50
Dibromochloromethane	ND	0.50
Chlorobenzene	ND	0.50
Bromoform	ND	0.50
1,1,2,2-Tetrachloroethane	ND	0.50
1,3-Dichlorobenzene	ND	0.50
1,4-Dichlorobenzene	ND	0.50
1,2-Dichlorobenzene	ND	0.50

SURROGATE	%RECOVERY	LIMITS
Bromochloromethane	103	66-126

Lab ID	Sample ID	Analysis	Batch
9404105-07A	Trip Blank	8010 Volatiles by GC /H2O	A045A
9404105-08A	Composite of 1,2,3	8010 Volatiles by GC /soil	S151A
9404105-09A	Composite of 4,5,6	8010 Volatiles by GC /soil	S151A
9404105-08B	Composite of 1,2,3	TPH as Diesel by GC /soil	
9404105-09B	Composite of 4,5,6	TPH as Diesel by GC /soil	
9404105-07A	Trip Blank	TPH as Gas,BTEX by GC /H2O	I191A

If you should have any technical questions, please contact the undersigned at (415) 964-0844.

Approved by: Client Services

Environ

Analytical Results - 8010 Volatiles by GC /soil

Client ID: Composite of 1,2,3
MPELI ID: 9404105-08A
Matrix: SOIL
QC Batch: 8151A

Collected: 04/26/94
Received: 04/26/94
Analyzed: 04/28/94
Dilution factor: 1.00

Concentration, ug/kg

PARAMETER	RESULT	LIMIT
Dichlorodifluoromethane	ND	5.0
Chloromethane	ND	5.0
Vinyl Chloride	8.2	5.0
Bromomethane	ND	5.0
Chloroethane	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	9.4	5.0
1,1-Dichloroethane	ND	5.0
cis-1,2-Dichloroethene	380	5.0
Chloroform	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Trichloroethene	200	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	10	5.0
2-Chloroethylvinyl ether	ND	50
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Tetrachloroethene	340	5.0
Dibromochloromethane	ND	5.0
Chlorobenzene	ND	5.0
Bromoform	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0

SURROGATE	%RECOVERY	LIMITS
Bromochloromethane	97	66-126

Environ

Analytical Results - TPH as Diesel by GC /soil

Client ID: Composite of 1,2,3
MPELI ID: 9404105-08B
Matrix: SOIL
QC Batch: 0352A

Collected: 04/26/94
Received: 04/26/94
Extracted: 05/03/94
Analyzed: 05/12/94
Dilution factor: 1.00

Concentration, mg/kg

PARAMETER	RESULT	LIMIT
Diesel	ND	1.00
Kerosene	57	1.00
Motor Oil	45	10.0

SURROGATE	%RECOVERY	LIMITS
Pentacosane	81	-

Environ

Analytical Results - TPH as Gas,BTEX by GC/soil

Client ID: Composite of 1,2,3 Collected: 04/26/94
NPELI ID: 9404105-08A Received: 04/26/94
Matrix: SOIL Analyzed: 04/28/94
QC Batch: S337A Dilution factor: 2.00

Concentration, ug/kg

PARAMETER	RESULT	LIMIT
Benzene	ND	10
Toluene	ND	10
Ethylbenzene	ND	10
Total Xylenes	ND	10
Gasoline	ND	2000
*Unknown Hydrocarbons	72000	2000

SURROGATE	%RECOVERY	LIMITS
Bromofluorobenzene	69	42-137

Environ

Analytical Results - 8010 Volatiles by GC /soil

Client ID: Composite of 4,5,6
MPELI ID: 9404105-09A
Matrix: SOIL
QC Batch: S151A

Collected: 04/26/94
Received: 04/26/94
Analyzed: 04/28/94
Dilution factor: 2.00

Concentration, ug/kg

PARAMETER	RESULT	LIMIT
Dichlorodifluoromethane	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	10
1,1-Dichloroethene	ND	10
Methylene Chloride	ND	10
trans-1,2-Dichloroethene	ND	10
1,1-Dichloroethane	ND	10
cis-1,2-Dichloroethene	240	10
Chloroform	ND	10
1,1,1-Trichloroethane	ND	10
Carbon Tetrachloride	ND	10
1,2-Dichloroethane	ND	10
Trichloroethene	140	10
1,2-Dichloropropane	ND	10
Bromodichloromethane	ND	10
2-Chloroethylvinyl ether	ND	100
trans-1,3-Dichloropropene	ND	10
1,1,2-Trichloroethane	ND	10
Tetrachloroethene	280	10
Dibromochloromethane	ND	10
Chlorobenzene	ND	10
Bromoform	ND	10
1,1,2,2-Tetrachloroethane	ND	10
1,3-Dichlorobenzene	ND	10
1,4-Dichlorobenzene	ND	10
1,2-Dichlorobenzene	ND	10

SURROGATE	%RECOVERY	LIMITS
Bromochloromethane	107	66-126

Environ

Analytical Results - TPH as Diesel by GC /soil

Client ID: Composite of 4,5,6
MPELI ID: 9404105-09B
Matrix: SOIL
QC Batch: 0352A

Collected: 04/26/94
Received: 04/26/94
Extracted: 05/03/94
Analyzed: 05/12/94
Dilution factor: 1.00

Concentration, mg/kg

PARAMETER	RESULT	LIMIT
Diesel	ND	1.00
Kerosene	87	1.00
Motor Oil	75	10.0

SURROGATE	%RECOVERY	LIMITS
Pentacosane	78	-

Environ

Analytical Results - TPH as Gas,BTEX by GC/soil

Client ID: Composite of 4,5,6
MPELI ID: 9404105-09A
Matrix: SOIL
QC Batch: S337A

Collected: 04/26/94
Received: 04/26/94
Analyzed: 04/28/94
Dilution factor: 2.00

Concentration, ug/kg

PARAMETER	RESULT	LIMIT
Benzene	ND	10
Toluene	ND	10
Ethylbenzene	ND	10
Total Xylenes	ND	10
Gasoline	ND	2000
*Unknown Hydrocarbons	91000	2000

SURROGATE	%RECOVERY	LIMITS
Bromofluorobenzene	63	42-137

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Environ

8010 Volatiles in Soil

Sample Spiked: B7-1-2 @ 6.5'

QC Batch#: S151A
Units: ug/kg
Prep Date: N/A

Analysis Dates
Blank: 04/28/94
MS: 04/28/94
MSD: 04/28/94
LCS: 04/28/94

Analytes	Blank Result	Blank Limit	Spike level	%Recovery MS	%Recovery MSD	%Recovery LCS	LCS/Surr Limits	RPD
Dichlorodifluoromethane	ND	5.0						
Chloromethane	ND	5.0						
Vinyl Chloride	ND	5.0						
Bromomethane	ND	5.0						
Chloroethane	ND	5.0						
Trichlorofluoromethane	ND	5.0						
1,1-Dichloroethene	ND	5.0	250	69	73	95	28-167	5.6
Methylene Chloride	ND	5.0						
trans-1,2-Dichloroethene	ND	5.0						
1,1-Dichloroethane	ND	5.0						
cis-1,2-Dichloroethene	ND	5.0						
Chloroform	ND	5.0	250	86	91	98	49-133	5.6
1,1,1-Trichloroethane	ND	5.0						
Carbon Tetrachloride	ND	5.0	250	80	85	105	43-143	6.1
1,2-Dichloroethane	ND	5.0	250	86	86	112	51-147	0
Trichloroethene	ND	5.0	250	156	184	102	35-146	16
1,2-Dichloropropane	ND	5.0						
Bromodichloromethane	ND	5.0						
2-Chloroethylvinyl ether	ND	50						
trans-1,3-Dichloropropene	ND	5.0						
1,1,2-Trichloroethane	ND	5.0						
Tetrachloroethene	ND	5.0	250	216	219	95	26-162	1.4
Dibromochloromethane	ND	5.0						
Chlorobenzene	ND	5.0	250	78	77	91	38-150	1.3
Bromoform	ND	5.0						
1,1,2,2-Tetrachloroethane	ND	5.0						
1,3-Dichlorobenzene	ND	5.0						
1,4-Dichlorobenzene	ND	5.0	250	81	78	95	42-143	3.8
1,2-Dichlorobenzene	ND	5.0						
Freon 113	ND	5.0						
Bromochloromethane (surr)	124%		20	84	94	111	66-126	

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Environ

8010 Volatiles in H2O

QC Batch#: A045A
Units: ug/L
Prep Date: N/A

Analysis Dates
Blank: 04/28/94
MS: 04/28/94
MSD: 04/28/94
LCS: 04/28/94

Analytes	Blank Result	Blank Limit	Spike level	%Recovery MS	%Recovery MSD	%Recovery LCS	LCS/Surr Limits	RPD
Dichlorodifluoromethane	ND	0.50						
Chloromethane	ND	0.50						
Vinyl Chloride	ND	0.50						
Bromomethane	ND	0.50						
Chloroethane	ND	0.50						
Trichlorofluoromethane	ND	0.50						
1,1-Dichloroethene	ND	0.50	10	107	107	103	28-167	0
Methylene Chloride	ND	0.50						
trans-1,2-Dichloroethene	ND	0.50						
1,1-Dichloroethane	ND	0.50						
cis-1,2-Dichloroethene	ND	0.50						
Chloroform	ND	0.50	10	116	115	106	49-133	0.8
1,1,1-Trichloroethane	ND	0.50						
Carbon Tetrachloride	ND	0.50	10	118	120	115	43-143	1.7
1,2-Dichloroethane	ND	0.50	10	128	127	117	51-177	0.7
Trichloroethene	ND	0.50	10	118	119	113	35-146	0.8
1,2-Dichloropropane	ND	0.50						
Bromodichloromethane	ND	0.50						
2-Chloroethylvinyl ether	ND	5.0						
trans-1,3-Dichloropropene	ND	0.50						
1,1,2-Trichloroethane	ND	0.50						
Tetrachloroethene	ND	0.50	10	116	114	109	26-162	1.7
Dibromochloromethane	ND	0.50						
Chlorobenzene	ND	0.50	10	102	101	99	38-150	0.9
Bromoform	ND	0.50						
1,1,2,2-Tetrachloroethane	ND	0.50						
1,3-Dichlorobenzene	ND	0.50						
1,4-Dichlorobenzene	ND	0.50	10	101	101	100	42-143	0
1,2-Dichlorobenzene	ND	0.50						
Freon 113	ND	0.50						
Bromochloromethane (surr)	104%		10	107	114	105	66-126	
1,2-Dibromoethane	ND	0.50						

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Environ

Tot. Pet. Hydrocarbon/soil

QC Batch#: 0352A
Units: mg/Kg
Prep Date: 05/03/94

Analysis Dates
Blank: 05/12/94
LCS: 05/12/94
LCSD:

Analytes	Blank Result	Blank Limit	Spike level	%Recovery LCS	%Recovery LCSD	LCS/Surr Limits	RPD
Diesel	ND	1	2000	104		53-119	N/A
Kerosene	ND	1					
Motor Oil	ND	10					
Pentacosane (surr)	77%		1000	78			

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Environ

Gas BTEX in soil

Sample Spiked: Composite of 1,2,3

QC Batch#: S337A
Units: ug/kg
Prep Date: 04/28/94

Analysis Dates
Blank: 04/28/94
MS: 04/28/94
MSD: 04/28/94
LCS: 04/28/94

Analytes	Blank Result	Blank Limit	Spike level	%Recovery MS	%Recovery MSD	%Recovery LCS	LCS/Surr Limits	RPD
Benzene	ND	5	125	58	60	73	39-150	3.4
Toluene	ND	5	125	56	58	73	46-148	3.5
Ethylbenzene	ND	5	125	53	55	73	32-160	3.7
Total Xylenes	ND	5	125	74	75	73	32-160	1.3
Gasoline	ND	1000						
Bromofluorobenzene (surr)	92		1250	77	80	85	42-137	

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Environ

Gas BTEX in Water

QC Batch#: X191A
Units: ug/L
Prep Date: N/A

Analysis Dates
Blank: 04/27/94
MS: 04/27/94
MSD: 04/27/94
LCS: 04/27/94

Analytes	Blank Result	Blank Limit	Spike level	%Recovery MS	%Recovery MSD	%Recovery LCS	LCS/Surr Limits	RPD
Benzene	ND	.5	10	102	100	101	39-150	2.0
Toluene	ND	.5	10	102	100	101	46-148	2.0
Ethylbenzene	ND	.5	10	102	98	99	32-160	4.0
Total Xylenes	ND	.5	20	100	98	99	32-160	2.0
Gasoline	ND	50						
Bromofluorobenzene (surr)	98%			98	92	100	58-127	

Woodward-Clyde Consultants

500 12th Street, Suite 100, Oakland, CA 94607-4041
(415) 893-3600

Chain of Custody Record

PROJECT NO. 93C0216A/3021

SAMPLERS: (Signature)

	DATE	TIME	SAMPLE NUMBER	General Mineral	Priority Pollutant Metals	EPA Method 624	EPA Method 625	EPA Method 608	8010	TPH Gas BTEX	TEPH				Number of Containers
1	4/26/94	0840	B7-1-1 @ 6.5'						X	X	X				1
2	"	"	B7-1-2 @ 6.5'						X	X	X				1
3	"	"	B7-1-3 @ 6.5'						X	X	X				1
4	"	0850	B7-2-1 @ 8.0						X	X	X				1
5	"	"	B7-2-2 @ 8.0						X	X	X				1
6	"	"	B7-2-3 @ 8.0						X	X	X				1
7	"	"	Trip Blank						X	X	[illegible]				1

ANALYSES

REMARKS (Sample preservation, handling procedures, etc.)
ice cool
@ 4/26/94

composite
B-7-1-1 @ 6.5'
B-7-1-2 @ 6.5'
B-7-1-3 @ 6.5'

composite
B-7-2-1 @ 8.0'
B-7-2-2 @ 8.0'
B-7-2-3 @ 8.0'

TEPH = diesel
motor oil
kerosene

Please send results attn David Harnish at ENVIRON

TOTAL NUMBER OF CONTAINERS: 7

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
	4/26/94 1037	Heidi Delfenbach	Heidi Delfenbach	4-26-94 1155	Sheri Ridgely
METHOD OF SHIPMENT: Aero	SHIPPED BY: (Signature) Aero		COURIER: (Signature) Aero	RECEIVED FOR LAB BY: (Signature)	DATE/TIME 4/26/94 2?4

ETC/Mid-Pacific

625 B Clyde Avenue
Mountain View, CA 94043
(415) 964-0944
FAX (415) 961-7113

Environ
5820 Shellmound St. Suite 700
Emeryville, CA 94608

June 15, 1994
MPELI Order#: 94-06-003
Date Received: 05/31/94

Attn: David Harnish

Subject: Analysis of 3 Composites of 2 Soils each

Work ID: 93C0216A/3001

P.O. #: None Given

Pages in report: 16

Analysis of soil samples for purgeable halogenated organic compounds was performed according to USEPA Method 8010A (Test Methods for Evaluating Solid Waste -- SW846, 3rd Ed.,Revision 1, 1992).

Analysis of soil samples for higher boiling petroleum hydrocarbons (diesel, kerosene, & oil) was performed according to guidelines established in the Regional Water Quality Control Board (RWQCB) Leaking Underground Fuel Tank (LUFT) manual. This is also known as the modified 8015 protocol based on USEPA Method 8015A (Test Methods for Evaluating Solid Waste -- SW846, 3rd Ed. Revision 1, 1992).

Analysis of soil samples for lower boiling petroleum hydrocarbons (benzene, toluene, ethylbenzene, xylenes, and gasoline) was performed according to guidelines established in the Regional Water Quality Control Board (RWQCB) Leaking Underground Fuel Tank (LUFT) manual. This is also known as the modified 8015 protocol based on USEPA Method 8015A (Test Methods for Evaluating Solid Waste -- SW846, 3rd Ed. Revision 1, 1992).

NOTES

The samples, as delivered to ETC/Mid-Pacific, were received at a temperature that was greater than ambient. The samples were immediately placed into a refrigerated sample storage locker by lab personnel upon receipt.

Method 8010, Volatiles by GC:
In the second dilution analysis of composite samples B7B-3-3, B7B-3-4 and B7B-4-3, B7B-4-4 the surrogate recoveries were outside of QC limits due to the extent of the dilution required.

Method 8015, TPH as Diesel:
In the analysis of composite samples B7B-3-3, B7B-3-4 and B7B-4-3, B7B-4-4 chromatographic patterns were observed that did not match the pattern of any of our in-house standards for this method. These components were semi-quantitated by comparison with the diesel standard, and are reported as "*Unknown

Hydrocarbons". These samples exhibited a chromatographic pattern suggestive of a motor oil as well as a jet fuel although no particular motor oil or jet fuel could be identified.

QC Batch 0366A: In the analysis of TPH as diesel, the MS/MSD was found to have a high % RPD due to the high concentration of hydrocarbons present.

Method 8015, TPH as Gasoline/BTXE:
In the analysis of composite samples B7B-3-3, B7B-3-4; B7B-4-3, B7B-4-4 and B7B-5-3, B7B-5-4 a chromatographic pattern was observed that did not match the pattern of any of our in-house standards for this method. This component was semi-quantitated by comparison with the gasoline standard, and is reported as "*Unknown Hydrocarbons."

All analyses were conducted in batches of 20 samples or less. Each QC batch consisted of a method blank, a matrix spike, a matrix spike duplicate and a laboratory control sample. The QC information is in a separate QC report at the end of the regular report. To find the associated QC data, identify the batch number for the analysis of interest and look for that number in the QC report for that test. Occasionally a sample will be associated with a sub-batch, which will end in a letter other than "A". The main batch will include the original blank, MS, MSD, and LCS. The sub-batch will contain the additional blank associated with the sample and LCS.

All analytes reported above detection limits on gas chromatography analyses have been confirmed by a second dissimilar column.

Samples were diluted when one or both of the following situations exists:

1) one or more analytes is present at a level above the linear calibration range of the instrument; or
2) compounds are present at levels that could damage the instrument.

The following flags and abbreviations may be used in this report:

ND - Not detected above the detection limit stated.
** - See other analysis.
Freon 113 - 1,1,2-Trichloro-1,2,2-trifluoroethane. Not an 8010 compound.
MS(D) - Matrix spike (duplicate)
LCS(D) - Laboratory control sample (duplicate)
RPD - Relative percent difference
N/A - Not applicable
Q - surrogate recovery outside the QC limits

If you should have any technical questions, please contact the undersigned at (415) 964-0844.

Approved by: _____
Client Services

These results were obtained by following standard laboratory procedures; the liability of Mid-Pacific Environmental Laboratory, Inc. shall not exceed the amount paid for this report. In no event shall Mid-Pacific be liable for special or consequential damages.

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Environ

Analytical Results - 8010 Volatiles by GC /soil

Client ID: Comp: B7B-3-3, B7B-3-4
MPSLI ID: 2406003-07A
Matrix: SOIL
QC Batch: 8152A

Collected: 05/31/94
Received: 05/31/94
Analyzed: 06/13/94
Dilution factor: 1.00

Concentration, ug/kg

PARAMETER	RESULT	LIMIT
Dichlorodifluoromethane	ND	5.0
Chloromethane	ND	5.0
Vinyl Chloride	ND	5.0
Bromomethane	ND	5.0
Chloroethane	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	22	5.0
trans-1,2-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
cis-1,2-Dichloroethene	**	5.0
Chloroform	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Trichloroethene	210	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
2-Chloroethylvinyl ether	ND	50
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Tetrachloroethene	**	5.0
Dibromochloromethane	ND	5.0
Chlorobenzene	ND	5.0
Bromoform	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0

SURROGATE	%RECOVERY	LIMITS
Bromochloromethane	66	60-109

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Page 4 Mid-Pacific REPORT Work Order # 94-06-003

Environ

Analytical Results - TPH as Diesel by GC /soil

Client ID: Comp: B7B-3-3, B7B-3-4
MPELI ID: 9406003-07B
Matrix: SOIL
QC Batch: 0366A

Collected: 05/31/94
Received: 06/31/94
Extracted: 06/07/94
Analyzed: 06/08/94
Dilution factor: 1.00

Concentration, mg/kg

PARAMETER	RESULT	LIMIT
Diesel	ND	1.00
Kerosene	ND	1.00
Motor Oil	260	10.0
*Unknown Hydrocarbons	180	1.00

Page 5 Mid-Pacific REPORT Work Order # 94-06-003

Environ

Analytical Results - TPH as Gas,BTEX by GC/soil

Client ID: Comp: B7B-3-3, B7B-3-4
NPELI ID: 9406003-07A
Matrix: SOIL
QC Batch: 8346A

Collected: 05/31/94
Received: 05/31/94
Analyzed: 06/09/94
Dilution factor: 5.00

Concentration, ug/kg

PARAMETER	RESULT	LIMIT
Benzene	ND	25
Toluene	ND	25
Ethylbenzene	ND	25
Total Xylenes	ND	25
Gasoline	ND	5000
*Unknown Hydrocarbons	61000	5000

SURROGATE	%RECOVERY	LIMITS
Bromofluorobenzene	76	51-120

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Environ

Analytical Results - 8010 Volatiles by GC /soil

Client ID: Comp: B7B-3-3,B7B-3-4 run2
MPELI ID: 9406003-07C
Matrix: SOIL
QC Batch: 8152A

Collected: 05/31/94
Received: 05/31/94
Analyzed: 06/14/94
Dilution factor: 20.0

Concentration, ug/kg

PARAMETER	RESULT	LIMIT
Dichlorodifluoromethane	**	100
Chloromethane	**	100
Vinyl Chloride	**	100
Bromomethane	**	100
Chloroethane	**	100
Trichlorofluoromethane	**	100
1,1-Dichloroethene	**	100
Methylene Chloride	**	100
trans-1,2-Dichloroethene	**	100
1,1-Dichloroethane	**	100
cis-1,2-Dichloroethene	390	100
Chloroform	**	100
1,1,1-Trichloroethane	**	100
Carbon Tetrachloride	**	100
1,2-Dichloroethane	**	100
Trichloroethene	**	100
1,2-Dichloropropane	**	100
Bromodichloromethane	**	100
2-Chloroethylvinyl ether	**	1000
trans-1,3-Dichloropropene	**	100
1,1,2-Trichloroethane	**	100
Tetrachloroethene	8200	100
Dibromochloromethane	**	100
Chlorobenzene	**	100
Bromoform	**	100
1,1,2,2-Tetrachloroethane	**	100
1,3-Dichlorobenzene	**	100
1,4-Dichlorobenzene	**	100
1,2-Dichlorobenzene	**	100

SURROGATE	%RECOVERY	LIMITS
Bromochloromethane	0	60-109

Page 7 **Mid-Pacific** **REPORT** **Work Order # 94-06-003**

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Environ

Analytical Results - 8010 Volatiles by GC /soil

Client ID: Comp: B7B-4-3, B7B-4-4
MPELI ID: 9406003-08A
Matrix: SOIL
QC Batch: 5152A

Collected: 05/31/94
Received: 06/31/94
Analyzed: 06/13/94
Dilution factor: 1.00

Concentration, ug/kg

PARAMETER	RESULT	LIMIT
Dichlorodifluoromethane	ND	5.0
Chloromethane	ND	5.0
Vinyl Chloride	ND	5.0
Bromomethane	ND	5.0
Chloroethane	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	24	5.0
trans-1,2-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
cis-1,2-Dichloroethene	130	5.0
Chloroform	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Trichloroethene	150	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
2-Chloroethylvinyl ether	ND	50
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Tetrachloroethene	**	5.0
Dibromochloromethane	ND	5.0
Chlorobenzene	ND	5.0
Bromoform	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0

SURROGATE	%RECOVERY	LIMITS
Bromochloromethane	67	60-109

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4

Environ

Analytical Results - TPH as Diesel by GC /soil

Client ID: Comp: B7B-4-3, B7B-4-4
MPELI ID: 9406003-08B
Matrix: SOIL
QC Batch: 0366A

Collected: 05/31/94
Received: 05/31/94
Extracted: 06/07/94
Analysed: 06/08/94
Dilution factor: 1.00

Concentration, mg/kg

PARAMETER	RESULT	LIMIT
Diesel	ND	1.00
Kerosene	ND	1.00
Motor Oil	180	10.0
*Unknown Hydrocarbons	150	1.00

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Environ

Analytical Results - TPH as Gas,BTEX by GC/soil

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Client ID: Comp: B7B-4-3, B7B-4-4 Collected: 05/31/94
MPELI ID: 9406003-08A Received: 05/31/94
Matrix: SOIL Analyzed: 06/09/94
QC Batch: 5348A Dilution factor: 5.00

Concentration, ug/kg

PARAMETER	RESULT	LIMIT
Benzene	ND	25
Toluene	ND	25
Ethylbenzene	ND	25
Total Xylenes	30	25
Gasoline	ND	5000
*Unknown Hydrocarbons	62000	5000

SURROGATE	%RECOVERY	LIMITS
Bromofluorobenzene	84	51-120

Environ

Analytical Results - 8010 Volatiles by GC /soil

Client ID: Comp: B7B-4-3,B7B-4-4 run2
NPELI ID: 9406003-08C
Matrix: SOIL
QC Batch: 8152A

Collected: 05/31/94
Received: 05/31/94
Analyzed: 06/14/94
Dilution factor: 20.0

Concentration, ug/kg

PARAMETER	RESULT	LIMIT
Dichlorodifluoromethane	**	100
Chloromethane	**	100
Vinyl Chloride	**	100
Bromomethane	**	100
Chloroethane	**	100
Trichlorofluoromethane	**	100
1,1-Dichloroethene	**	100
Methylene Chloride	**	100
trans-1,2-Dichloroethene	**	100
1,1-Dichloroethane	**	100
cis-1,2-Dichloroethene	**	100
Chloroform	**	100
1,1,1-Trichloroethane	**	100
Carbon Tetrachloride	**	100
1,2-Dichloroethane	**	100
Trichloroethene	**	100
1,2-Dichloropropane	**	100
Bromodichloromethane	**	100
2-Chloroethylvinyl ether	**	1000
trans-1,3-Dichloropropene	**	100
1,1,2-Trichloroethane	**	100
Tetrachloroethene	6400	100
Dibromochloromethane	**	100
Chlorobenzene	**	100
Bromoform	**	100
1,1,2,2-Tetrachloroethane	**	100
1,3-Dichlorobenzene	**	100
1,4-Dichlorobenzene	**	100
1,2-Dichlorobenzene	**	100

SURROGATE	%RECOVERY	LIMITS
Bromochloromethane	Q	60-109

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Environ

Analytical Results - 8010 Volatiles by GC /soil

Client ID: Comp: B7B-S-3, B7B-S-4
MPELI ID: 9406003-09A
Matrix: SOIL
QC Batch: 8152A

Collected: 05/31/94
Received: 05/31/94
Analyzed: 06/13/94
Dilution factor: 1.00

Concentration, ug/kg

PARAMETER	RESULT	LIMIT
Dichlorodifluoromethane	ND	5.0
Chloromethane	ND	5.0
Vinyl Chloride	ND	5.0
Bromomethane	ND	5.0
Chloroethane	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	18	5.0
trans-1,2-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
cis-1,2-Dichloroethene	52	5.0
Chloroform	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Trichloroethene	28	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
2-Chloroethylvinyl ether	ND	50
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Tetrachloroethene	97	5.0
Dibromochloromethane	ND	5.0
Chlorobenzene	ND	5.0
Bromoform	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0

SURROGATE	%RECOVERY	LIMITS
Bromochloromethane	63	60-109

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Environ

Analytical Results - TPH as Diesel by GC /soil

Client ID: Comp: B7B-5-3, B7B-5-4
MPKLI ID: 9406003-09B
Matrix: SOIL
QC Batch: 0366A

Collected: 05/31/94
Received: 05/31/94
Extracted: 06/07/94
Analyzed: 06/08/94
Dilution factor: 1.00

Concentration, mg/kg

PARAMETER	RESULT	LIMIT
Diesel	ND	1.00
Kerosene	ND	1.00
Motor Oil	ND	10.0

Environ

Analytical Results - TPH as Gas,BTEX by GC/soil

Client ID: Comp: B7B-5-3, B7B-5-4 Collected: 05/31/94
MPELI ID: 9406003-09A Received: 05/31/94
Matrix: SOIL Analyzed: 06/09/94
QC Batch: 5348A Dilution factor: 1.00

Concentration, ug/kg

PARAMETER	RESULT	LIMIT
Benzene	ND	5.0
Toluene	ND	5.0
Ethylbenzene	ND	5.0
Total Xylenes	ND	5.0
Gasoline	ND	1000
*Unknown Hydrocarbons	1400	1000

SURROGATE	%RECOVERY	LIMITS
Bromofluorobenzene	95	51-120

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Environ

8010 Volatiles in Soil

Sample Spiked: Comp: B7B-S-3, B7B-S-4

QC Batch#: 8132A
Units: ug/kg
Prep Date: N/A

Analysis Dates
Blank: 06/13/94
MS: 06/14/94
MSD: 06/14/94
LCS: 06/14/94

Analytes	Blank Result	Blank Limit	Spike level	%Recovery MS	%Recovery MSD	%Recovery LCS	Control Limits	RPD
Dichlorodifluoromethane	ND	5.0						
Chloromethane	ND	5.0						
Vinyl Chloride	ND	5.0						
Bromomethane	ND	5.0						
Chloroethane	ND	5.0						
Trichlorofluoromethane	ND	5.0						
1,1-Dichloroethene	ND	5.0	250	88	93	108	40-139	5.5
Methylene Chloride	ND	5.0						
trans-1,2-Dichloroethene	ND	5.0						
1,1-Dichloroethane	ND	5.0						
cis-1,2-Dichloroethene	ND	5.0						
Chloroform	ND	5.0	250	94	94	107	70-138	0
1,1,1-Trichloroethane	ND	5.0						
Carbon Tetrachloride	ND	5.0	250	89	93	105	68-141	4.4
1,2-Dichloroethane	ND	5.0	250	96	100	113	65-158	4.1
Trichloroethene	ND	5.0	250	97	98	100	69-149	1.0
1,2-Dichloropropane	ND	5.0						
Bromodichloromethane	ND	5.0						
2-Chloroethylvinyl ether	ND	50						
trans-1,3-Dichloropropene	ND	5.0						
1,1,2-Trichloroethane	ND	5.0						
Tetrachloroethene	ND	5.0	250	106	98	99	72-140	7.8
Dibromochloromethane	ND	5.0						
Chlorobenzene	ND	5.0	250	81	87	92	62-127	7.1
Bromoform	ND	5.0						
1,1,2,2-Tetrachloroethane	ND	5.0						
1,3-Dichlorobenzene	ND	5.0						
1,4-Dichlorobenzene	ND	5.0	250	75	79	86	57-127	5.2
1,2-Dichlorobenzene	ND	5.0						
Freon 113	ND	5.0						
Bromochloromethane (surr)	109%		20	83	89	103	60-109	

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Environ

Tot. Pet. Hydrocarbon/soil

Sample Spiked: Comp: B78-3-3, B78-3-4

QC Batch#: 0366A
Units: mg/kg
Prep Date: 06/07/94

Analysis Dates
Blank: 06/08/94
MS: 06/08/94
MSD: 06/08/94
LCS: 06/08/94

Analytes	Blank Result	Blank Limit	Spike level	%Recovery MS	%Recovery MSD	%Recovery LCS	Control Limits	RPD
Diesel	ND	1	2000	57	104	99	53-119	58
Kerosene	ND	1						
Motor Oil	ND	10						

Gas BTEX in soil

QC Batch#: 2349A
Units: ug/kg
Prep Date: 06/08/94

Analysis Dates
Blank: 06/08/94
MS: 06/08/94
MSD: 06/08/94
LCS: 06/08/94

Analytes	Blank Result	Blank Limit	Spike level	%Recovery MS	%Recovery MSD	%Recovery LCS	Control Limits	RPD
Benzene	ND	5	125	83	75	80	49-109	10
Toluene	ND	5	125	81	74	80	46-112	9.0
Ethylbenzene	ND	5	125	83	75	81	51-117	10
Total Xylenes	ND	5	125	82	76	82	53-113	7.6
Gasoline	ND	1000						
Bromofluorobenzene (surr)	100%		1250	101	91	96	51-120	

94-06-003

Woodward-Clyde Consultants

500 12th Street, Suite 100, Oakland, CA 94607-4041
(415) 893-3600

Chain of Custody Record

PROJECT NO.: 93C0216A-/3001

SAMPLERS: (Signature)

	DATE	TIME	SAMPLE NUMBER	ANALYSES: General Mineral	Priority Pollutant Metals	EPA Method 624	EPA Method 625	EPA Method 608	TPH BTEX	TPH Diesel	EPA 8010	Number of Containers	REMARKS (Sample preservation, handling procedures, etc.)
1	5/31/94	0930	B7B-3-3						X	X	X	1	composite
2		0930	B7B-3-4						X	X	X	1	
3		0940	B7B-4-3						X	X	X	1	composite
4		0940	B7B-4-4						X	X	X	1	
5		0950	B7B-5-3						X	X	X	1	composite
6	↓	0950	B7B-5-4						X	X	X	1	
			~~Trip Blank~~						X	X	X	1	Rec'd Wet 5/31/94

Test Results to:
David Harnish
Environ
5820 Shellmound Street, Ste 700
Emeryville, CA 94608
(510) 655-7400

TOTAL NUMBER OF CONTAINERS: 6

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
	5/31/94 1120			5/31/94 1600	

METHOD OF SHIPMENT:	SHIPPED BY: (Signature)	COURIER: (Signature)	RECEIVED FOR LAB BY: (Signature)	DATE/TIME
Ice Chest/Courier	Hand Carried	Hand Carried		6/1/94 10:30