Report on Focused Soil Removal East Parcel Del Monte Plant 35 Emeryville, California

Prepared for

Del Monte Foods

Prepared by

CHAMHILL

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Subject:

Focused Soil Removal Report

East Parcel, Del Monte Plant 35, Emeryville, California

Enclosed is a copy of the Focused Soil Removal report for the East Parcel at Del Monte Plant 35 in Emeryville, California. The report documents the excavation and aeration of soil containing chlorinated hydrocarbons conducted in September 1994 and makes recommendations regarding future remediation at the property.

Please contact me if you have any questions about this submittal. I can be reached at (510) 251-2888, ext. 2189.

Sincerely,

CH2M HILL

Madeline Wall Project Manager

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Section 1 Introduction

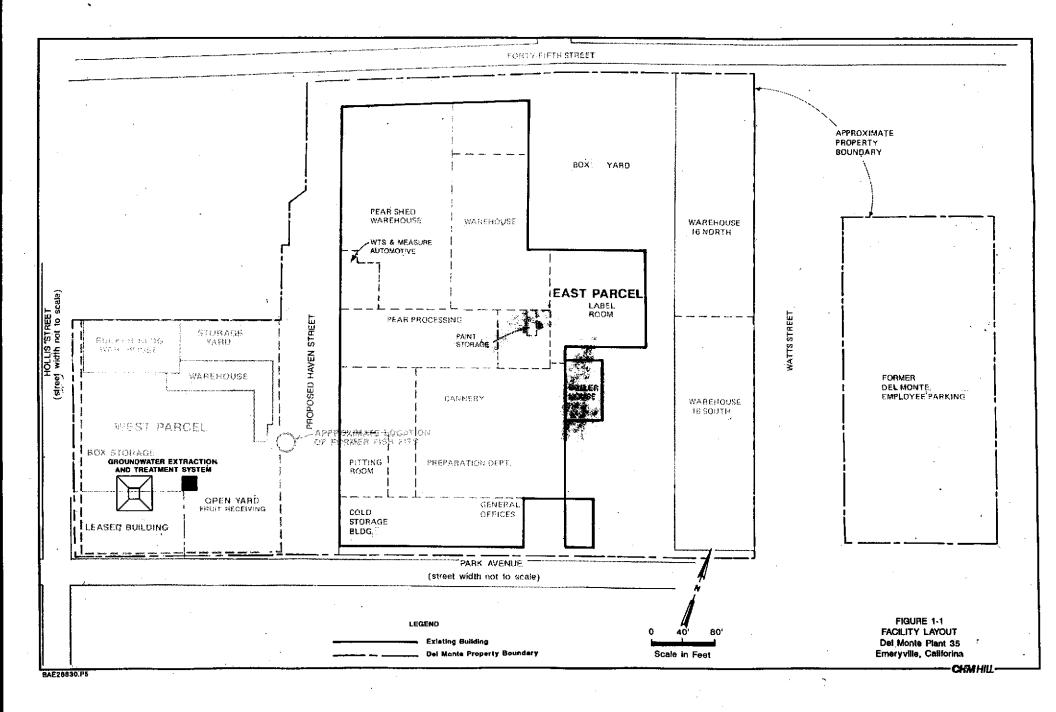
Section 1 Introduction

This report documents a focused soil removal action conducted on the East Parcel of Del Monte Plant 35 in Emeryville, California between September 6th and 9th, 1994. The work was conducted in accordance with the *Work Plan for Focused Soil Remediation, East Parcel, Del Monte Plant 35*, dated August 15, 1994 which was submitted to the Alameda County Department of Environmental Health (ACDEH) and the Regional Water Quality Control Board (RWQCB) (CH2M HILL, 1994d).

Between March and June 1994, Del Monte investigated the presence of chlorinated hydrocarbons in soil and groundwater on the East Parcel (see Figure 1-1). Results were reported in the Supplemental Onsite Investigation Report for Del Monte Plant 35 (CH2M HILL, 1994b) and a technical memorandum from CH2M HILL to Del Monte dated August 12, 1994 (CH2M HILL, 1994c). (Both of these documents were submitted to the ACDEH and the RWQCB.) Results of the investigations indicated that groundwater beneath the main processing building and east of the boiler house and label room contained chlorinated hydrocarbons.

The purpose of the focused soil remediation was to remove a potential source of chlorinated hydrocarbons in groundwater. Del Monte had initially planned to conduct this activity along with other remediation activities after demolition of site buildings and other property improvements. To avoid delaying the potential source removal, Del Monte decided to excavate accessible soil containing chlorinated hydrocarbons before facility demolition.

THE REAL PROPERTY.



Section 2
Description of Activities

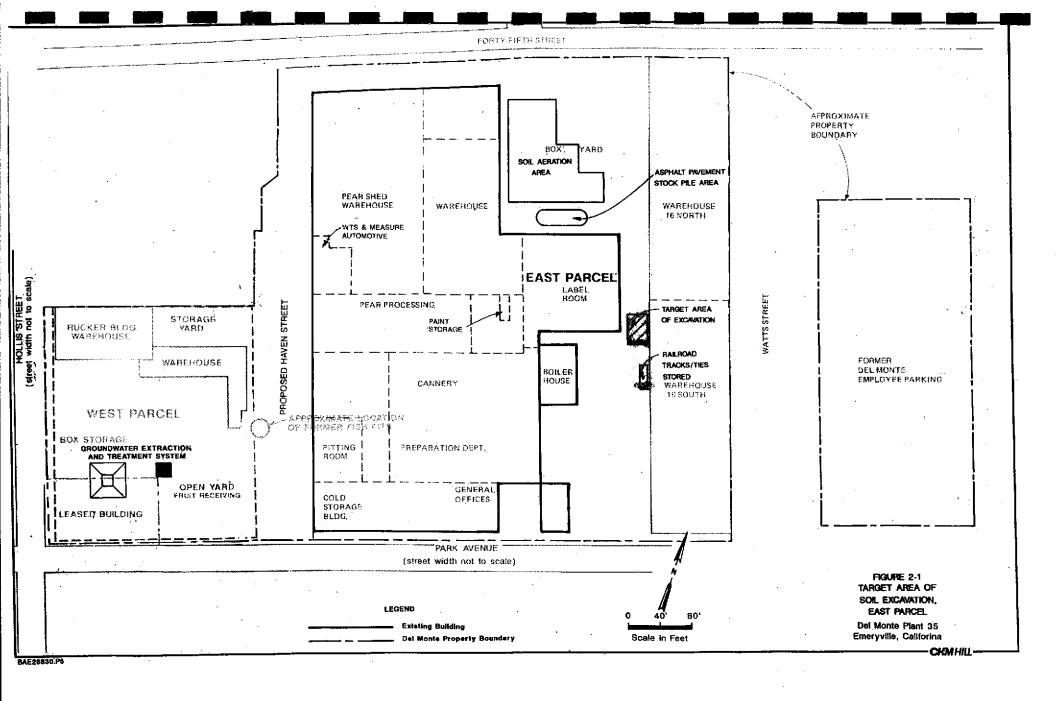
Section 2 **Description of Activities**

The focused soil removal involved excavating soil and spreading the excavated soil for aeration. The area targeted for soil removal is shown on Figure 2-1. Dimensions of the area are 60 feet by 30 feet. The target depth was approximately 10 feet below ground surface (bgs); however, a slope of about 1.5:1.0 (horizontal to vertical), maintained along the west side of the excavation to protect footings that support the label building, prevented excavation to the target depth in the western half of the pit.

Components of the removal action were as follows:

- Appropriate agencies were notified
- Surface pavement and railroad ties were removed in the excavation area and a soil aeration area was prepared
- Approximately 500 to 600 cubic yards of soil were excavated
- Soil samples were collected during excavation and compared against target cleanup levels presented in the work plan
- Excavated soil was transferred to the soil aeration area and spread to an average depth of 18 inches
- Aerating soil was sampled to determine initial chemical concentrations and re-sampled approximately 2 months later to assess effectiveness of aeration
- Samples of groundwater that entered the excavation pit were collected and analyzed to provide data for evaluating groundwater treatment alternatives
- Water was pumped from the pit to temporary storage tanks to allow assessment of the inflow rate of groundwater to the pit and collection of a sample of groundwater as it initially entered the pit
- Drums of soil generated during previous onsite and offsite investigations were emptied and added to aerating soil on the East Parcel or to stockpiled soil on the West Parcel

The excavation, soil stockpiling, and drum management were conducted by ICONCO. The pumping of water from the pit to temporary holding tanks was conducted by DECON Environmental. CH2M HILL provided field oversight, including sample collection. Sparger Technology, Inc. analyzed soil and groundwater samples onsite during the excavation. Chromalab, Inc. analyzed groundwater samples and stockpiled soil samples.



Details of the project activities, including analytical results and observations, are provided in the following subsections.

2.1 Agency Notification

As previously mentioned, a work plan for the focused soil removal was submitted to the ACDEH and RWQCB on August 15, 1994 for review and concurrence. Concurrence was obtained from representatives of both agencies. Telephone notification of the excavation schedule was made to both agencies the week before the work began.

The Bay Area Air Quality Management District (BAAQMD), Enforcement Division was also notified of the excavation and soil aeration plan. A copy of the notification letter and form are provided in Appendix A.

2.2 Surface Demolition and Aeration Area Preparation

On September 6 and 7, 1994, ICONCO removed asphalt partition, traitroad tracks and ties, and a portion of a utility trench that were within the targeted excavation area. Railroad tracks and ties and utility trench piping were placed on plastic south of the excavation area. Asphalt was placed on plastic in the former box yard area next to the soil aeration area. See Figure 2-1.

The soil aeration area was set up in the former box yard. Rolls of 10 mil plastic were placed on the pavement.

Soil Excavation

Soil was excavated with the goal of removing accessible soil containing chlorinated hydrocarbons at levels exceeding the following target action levels:

Table 2-1 Target Clean-Up Levels								
Compound	Proposed Clean-Up Level (mg/kg)	EPA PRG for Residential at 10 ⁴⁶ (mg/kg)						
Bromodichloromethane	1	2.9						
Chloromethane	1	3.7						
1,1-dichloroethene	0.97	(CD)						
Cis-1,2-dichloroethene	1	210						
Trans-1,2-dicholorethene	1	620						
Methylene Chloride	1	. 22						
Tetrachloroethene	1	22						
Trichloroethene	1	14						
Vinyl Chloride	0.0097	0.0097						

Although the primary goal of soil excavation was to remove soil containing chlorinated hydrocarbons, petroleum hydrocarbons were also present in the soil. The target clean-up level for petroleum hydrocarbons, as presented in the Draft Remediation Plan for Del Monte Plant 35, is 100 mg/kg total petroleum hydrocarbons (CH2M HILL, 1994a). Confirmation samples collected were analyzed for total petroleum hydrocarbons as diesel, kerosene, and motor oil in addition to chlorinated hydrocarbons.

2.3.1 Excavation

On September 8th, ICONCO began excavating soil from the target area. Excavated soil was loaded into a dump truck and transported to the soil aeration area where it was stockpiled onto the plastic. Two samples (SA-1 and SB-1) were collected at an approximate depth of 5 feet bgs and delivered to sparger Technology's onsite laboratory for analysis for chlorinated hydrocarbons by EPA Method 8010 and total extractable petroleum hydrocarbons (diesel, kerosene, and motor oil) by EPA Method 8015 Modified.

As part of the worker health and safety plan for the project, air emissions from the excavation area were monitored for organic vapors with an Organic Vapor Meter (QMM). When the excavation reached depths between 5 and 9 feet bgs, odors were noted and OVM readings became elevated, exceeding action levels for work in Level D personnel protective equipment (PPE). As a result, work was stopped while SA-1 and SA-2 analyses were completed. Analytical results indicated the presence of chlorinated hydrocarbons (including vinyl chloride at 0.270 mg/kg), motor oil, and kerosene. Analytical results are shown on Table 2-1. Laboratory reports are provided in Appendix B.

Based on the analytical results, further excavation was stopped while monitoring equipment for vinyl chloride and Level C PPE were brought to the work site.

Excavation resumed on September 9th with field personnel working in Level C PPE. Air emissions were monitored using an OVM for organic vapors and Draeger tubes for vinyl chloride. Soil was removed from the entire target area to a maximum depth of 10 to 11 feet bgs along the edge of the former warehouse foundation. Figure 2-2 shows the area and depth of the excavation. A total of approximately 525 cubic yards of soil were removed.

2.3.2 Confirmation Samples

Confirmation soil samples were collected during excavation and analyzed for chlorinated hydrocarbons and total extractable petroleum hydrocarbons. Results of sample analyses are provided in Table 2-2. Sample locations are indicated on Figure 2-3.

Samples labeled SS-1B and SS-1G were collected from the east sidewall of the excavation at the edge of the former warehouse foundation. Sample depths were about 8 feet bgs. Levels of chlorinated and petroleum hydrocarbons detected in these samples exceeded target cleanup levels.

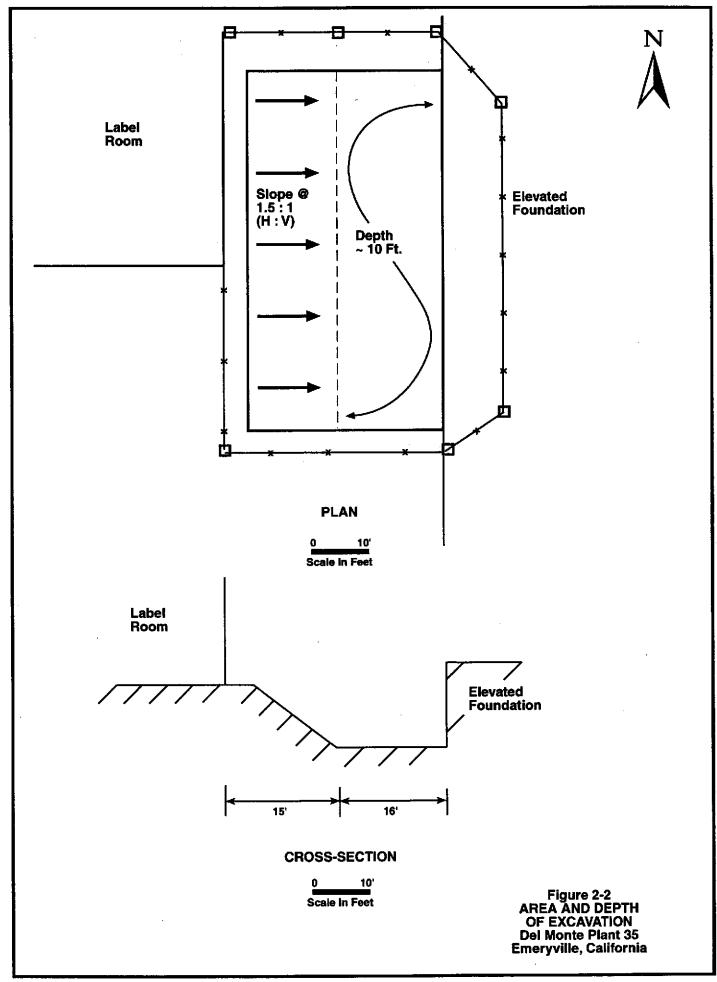


Table 2-2
Results of Soil Analyses During Soil Excavation on East Parcel
Date: September 8 and 9, 1994
Del Monte Plant 35, Emeryville, California

<u> </u>											
	·					Analytes					
	Depth	Cis-1,2-Di-	Trans-1,2-	1,2-Dichloro-	1,1,2,2-Tetra-	Tetrachloro-	1,1,2-Tri-	Trichloro-	Vinyl	TPH	TPH
Sample	Ft. Bgs	chloroethene	Dichloroethene	ргорапе	chloro ethane	ethene	chloroethane	ethene	Chloride	Motor Oil	Kerosene
Location		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
SA-1	5	<0.001	<0.001	0.0011	0.0027	<0.001	0.0021	<0.001	<0.001	28.*	78 *
SB-1	11	0.0072	<0.001	0.0011	<0.001	0.0490	<0.001	0.0092	0.0040	100 *	19 *
SA-2	5	0.330	0.0450	<0.020	<0.020	<0.020	<0.020	<0. 02 0	0.27 *	130 *	620 *
SA-3	7	0.0025	0.0020	<0.002	<0.002	0.030	<0.002	0.0084	0.0093	<1.0	<1.0
SB-4	10	0.110	0.0230	<0.005	<0.005	0.210	<0.005	0.0930	0.12 *	<1.0	<1.0
SA-5	6	<0.001	<0.001	<0.001	<0.001	0.0160	<0.001	<0.001	<0.001	140	130 *
SA-6	6	0.0660	0.0160	<0.010	<0.010	0.270	<0.010	0.10	0.029 *	92 *	33 *
SB-6	10	0.0090	0.0015	0.0013	<0.001	0.020	<0.001	0.0045	0.031 *	<1.0	<1.0
SA-7	8	0.0034	<0.001	0.0012	<0.001	0.0027	<0.001	0.0025	<0.001	<1.0	<1.0
SB-7	10	0.0078	0.0015	0.0016	<0.001	0.0058	<0.001	0.0061	0.018	<1.0	<1.0
SB-8	10	0.0240	0.0049	0.0018	<0.001	0.0230	≥0.001	0.0180	0.056 *	<1,0	<1.0
SS-1B	8	9,160	<0.050	0.0790	<0.50	47.	⊲ ∮.050	1 *	0.49 *	65 *	180 +
SS-1G	8	1.3	<1.0	1.9 *	<1.0	247 *	<1.0	6.8 *	8.9 */	300 *	660 *
UT-1	3	<0.001	<0.001	<0.001	<0.001	0.0022	<0.001	<0.001	₹0.001	58	27
Action Level		1	1	1	1	7	1	1	0.0097	10	00

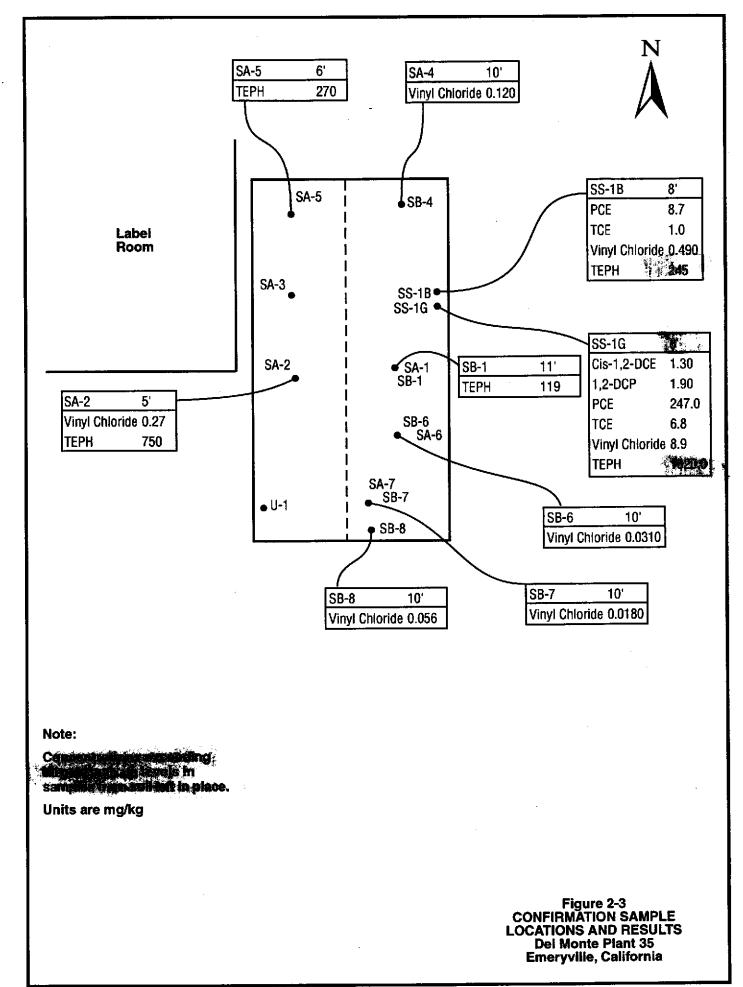
Note

my cleaning agreet

^{1. &}quot;<" indicates that the laboratory detection limit was not exceeded

^{2.} TPH = total petroleum hydrocarbons

^{3. *} indicates that result is above the action level



Sample UT-1 was collected from the west sidewall beneath the bottom of the utility trench at a depth of about 3 feet bgs. Soil appeared discolored (dark brown to black) at that location; however, results did not exceed action levels.

Figure 2-3 shows confirmation sample analytical results that exceed target clean-up levels. As previously stated, soil along the west side of the excavation **results to protect** the label room foundation, therefore, confirmation samples in that area were only collected at depths of 5 feet bgs.

2.4 Soil Stockpiling and Sampling

Soil that was transported to the aeration area was stockpiled on top of plastic that was rolled out as soil was added. After the excavated soil was placed on the plastic, the soil was spread with a front end loader to an average depth of 18 inches. The area covered by aerating soil is approximately appeare feet.

The edges of the aeration area were bermed by nailing two 4 by 4 wood boards together and placing them beneath the plastic. The edges of plastic were held down with rocks and asphalt chunks.

Initial Sampling

On September 16th, CH2M HILL collected samples of the aerating soil. The section was divided into eleven areas of approximately 50 cubic yards each. Four individual samples were collected from each 50 cubic yard area. Samples were collected by driving a 6-inch-long brass sleeve into the soil beginning at a depth of 3 inches below the soil surface. The brass sleeves were sealed with Teflon sheets and plastic end caps, placed in plastic bags, and placed in a cooler with ice. Samples were picked up at the job site by Chromalab, Inc.

The laboratory composited the four individual samples for each area into one sample. Eleven samples were analyzed for chlorinated hydrocarbons by EPA 6010, TPH-gasoline/BTEX by EPA Methods 8015/602, and TPH-diesel, kerosene, and motor oil by EPA Method 8015 Modified. Table 2-3 is a summary of detected constituents in each area. Figure 2-4 shows the area locations within the stockpile.

Follow-Up Sampling

On Messanber 22nd, CH2M HILL collected additional samples of aerating soil from three of the eleven areas: Areas 3, 5, and 9. The samples were collected and analyzed to assess the effectiveness of the passive aeration process on the stockpiled soil. The highest levels of chlorinated and petroleum hydrocarbons were detected in samples collected in September from Areas 3, 5, and 9. The samples were collected using the same procedures used during the initial sampling event. Samples were analyzed by Chromalab, Inc. for the same

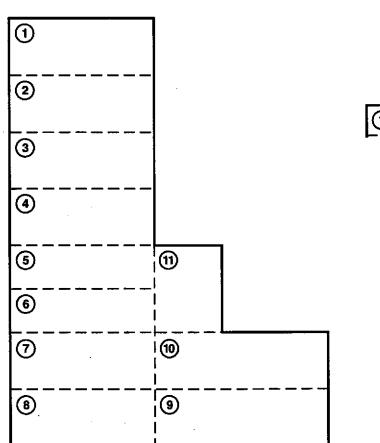
Table 2-3
Stockpiled Soil Sample Results
Date: September 16 and November 22, 1994
Del Monte Plant 35, Emeryville, California

	1								Amai	-4	_							
									Ana									
	Cis-1	,2-Di-	Tetrac	hloro-	Trick	ıloro-	T	PH	TP	H	TP	Н	TF	PH H	To	tal	Et.	hyl
Sample	chloro	ethene	ethe	ne	eth	ene	Moto	r Oil	Kero	sene	Gaso	line	Die	sel	Xyle	enes	Ben	zene
Location	(mg	/kg)	(mg/	kg)	(mg	/kg)	(mg	/kg)	(mg/	kg)	(mg/	/kg)	(mg	/kg)	(mg	/kg)	(mg	/kg)
	Sept	Nov	Sept	Nov	Sept	Nov	Sept	_	Sept	Nov	Sept	Nov	Sept	Nov	Sept	Nov	Sept	Nov
Area 1	<0.005	NA	< 0.005	NA	<0.005	NA	62	NA	3.8	NA	<1.0	NA	<1.0	NA	<0.005	NA	<0.005	NA
Area 2	<0.005	NA	0.059	NA	0.0071	NA	140	NA	10	NA	1.3	NA	<1.0	NA	0.0057	NA	<0.005	NA
Area 3	0.027	<0.005	0,64	0,01	0.059	<0.00S	240	44.	130	<1	.17	<1	<1.0	6.5	0.028	< 9.005	0.014	<0.005
Area 4	<0.005	NA	0.065	NA	0.0086	NA	150	NA	30	NA	<1.0	NA	<1.0	NA	<0.005	NA	<0.005	NA
Area 5	0.057	<0.005	0.22	0.01	0.02	<0,005	100	95	17	~1	3.5	<1	<1.0	1.6	0.083	< 9.005	<0.005	<0.005
Area 6	<0.005	NA	0.0052	NA	<0.005	NA	160	ΝA	3	NA	<1.0	NA	<1.0	NA	0.0014	NA	<0.005	NA
Area 7	0.023	NA	0.3	NA	0.03	NA	58	NA	<1.0	NA	<1.0	NA	<1.0	NA	<0.005	NA	<0.005	NA
Area 8	<0.005	NA	0.063	NA	<0.005	NA	94	NA	14	NA	<1.0	NA	<1.0	NA	<0.005	NA	<0.005	NA.
Area 9	49,005	<0.005	– 13	0.015	<0.005	<0.005	250	160	200	<10	11	<1	<5.0	21	0.019	<0.005	0.0088	<0.005
Area 10	<0.005	NA	0.35	NA	0.0074	NA	170	NA	39	NA	8.6	NA	<1.0	NA	0.018	NA	0.0087	NA
Area 11	<0.005	NA	0.02	NA	<0.005	NA	50	NA.	12	NA	2	NA	<1.0	NA	<0.005	NA	<0.005	NA

Notes:

- 1. "<" indicates that the laboratory detection limit was not exceeded
- 2. TPH = total petroleum hydrocarbons
- 3. NA = not analyzed





LEGEND

50 cubic yard soil volume

0 20' Scale In Feet

Figure 2-4 STOCKPILED SOIL AREAS East Parcel, Del Monte Plant 35 Emeryville, California constituents and using the same methods used in the initial sampling event. Table 2-3 includes results of constituents detected during the second sampling of Areas 3, 5, and 9.

2.5 Groundwater Sampling/Analysis

During soil excavation on September 8, groundwater began entering the pit at a depth of 8.5 to 9 feet bgs. A sample of the groundwater entering the pit was collected and submitted to Sparger Technology's contractory for analysis. The sample was analyzed for chlorinated hydrocarbons and petroleum hydrocarbons. Analytical results for this sample (GW-1) are shown on Table 2-4. Chlorinated and petroleum hydrocarbons (kerosene and motor oil) were detected. When soil excavation had ceased for the day, the contractor filled the bottom 2 to 3 feet of the pit with clean soil to eliminate standing water in the pit.

A second groundwater sample (GW-2) was collected from the excavation pit the morning of September 9th and submitted to Chromalab, Inc. for chlorinated hydrocarbon analysis by EPA Method 8010. Before collecting the water sample, additional soil was removed from the pit allowing groundwater to enter. As shown on Table 2-4, lower levels of vinyl chloride but higher levels of tetrachloroethene (PCE) and trichloroethene (TCE) were detected in GW-2 than in GW-1.

After the excavation was completed, groundwater rose in the pit to a depth of about 5 feet bgs. A third groundwater sample (GW-3) was collected from the pit on September 16th. Three samples were collected between 2 and 3 feet below the water surface, at the north, middle, and south ends of the pit. The samples were composited into one sample by Chromalab, Inc. and analyzed for chlorinated hydrocarbons, TPH-gasoline/BTEX, and TPH-diesel, -kerosene, and -motor oil. Results are shown on Table 2-4. Levels of chlorinated hydrocarbons, particularly vinyl chloride, were much lower than those detected in GW-1 and GW-2. Trace amounts of xylenes were also detected in the sample.

A fourth water sample (GW-4) was collected on November 8, 1994, after the excavation was dewatered (see Section 2.6 below). A sample of water flowing into the pit was collected and analyzed by Chromalab for chlorinated hydrocarbons by EPA Method 8010. Levels of chlorinated hydrocarbons detected in GW-4 were significantly lower than those detected in any of the previous samples. Results are shown on Table 2-4.

The water removed from the excavation on November 8th was pumped into two temporary storage tanks. For purposes of disposal characterization, water samples were collected from both of the tanks and composited by Chromalab. The composited sample was analyzed for chlorinated hydrocarbons by EPA Method 8010, TPH-kerosene, -diesel, and -motor oil by EPA Method 8015 and for TDH-gasoline/BTEX by EPA Method 8015/602. Results are shown on Table 2-4.

Table 2-4
Results of Groundwater Sample Analyses During Excavation on East Parcel
September/November 1994
Del Monte Plant 35, Emeryville, California

			Analytes											
		Cis-1,2-Di-	Trans-1,2-Di-	1,1-Di-Chlo	Tetrachlo-	Trichloro-	Vinyl		Ethyl-	Total	TPH	TPH	TPH	TPH
Sample	Date	chloroethene	chloroethene	roethene	roethene	ethene	Chloride	Benzene	benzene	Xylenes	Gasoline 4	Karesene		Motor Oil
Location	Collected	ug/l	ug/l	ug/l	ug/l	ug/l	ue/L _{Ar} Ar	ug/l	ug/l	ug/l	mg/l	mg/l	mg/l	mg/l
GW-1	9/8/94	243.0	60.0 °	<130	770.0	9000,0	1700 0.0	NA	NA	NA	NA	1.4	<0.05	7310 0
GW-2	9/9/94		Mo"	9.90	22000	150.0	120.0	NA	NA	NA	NA	NA	NA	NA
GW-3	9/16/94	500.0	140.	1.10	200.0	100.0	22.0	<0.5	<0.5	0.80	<0.05	<1.0	<1.0	<0.001
GW-4	11/8/94	11.0	0.80	<0.5	120.0	12.0	<0.5	NA	NA	NA	NA	NA	NA	NA
BT-1/-2	11/8/94	8.70	<0.5	<0.5	51.0	10.0	<0.5	2.2	2.5	1.20	0.13	<0.05	0.18	<0.5

Note

1. "<" indicates that the laboratory detection limit was not exceeded

2. TPM = total pelesioum hydrocarbons

2.6 Flow Rate of Groundwater Into Excavation

To estimate the flow rate of groundwater into the excavation, groundwater was pumped from the pit and the recovery of water in the excavation was observed.

Water was pumped from the excavation on November 8, 1994. During pumping, water levels were continuously monitored by a water level transducer and data logger. After pumping, water levels in the excavation were allowed to recover for approximately 12 hours. At the end of 12 hours, the data logger was removed from the excavation.

Evaluation of the data indicated that flow rates of groundwater entering the excavation were in the range of 3.4 to 6 gallons per minute. Appendix C provides details of the methodology and flow rate calculations.

2.7 Drummed Soil

Approximately 130 drums of investigation-derived soil and water were present at various locations onsite. About 42 of the drums were generated during investigations conducted by CH2M HILL for Del Monte and about 88 were generated during a generated investigation conducted by Woodward Clyde Consultants (WCC) for Keiser. The drums were divided into three groups:

- 1. Drums of purge and decontamination water
- 2. Drums of soil from CH2M HILL investigations and from WCC borings in areas of the site where contaminants were potentially present
- 3. Drums of soil from WCC borings in areas of the site where no contaminants have been found or are suspected

The groups were managed in the following way:

- 1. The drums of water were moved to the paved area adjacent to the groundwater treatment system on the West Parcel. The water was pumped from the drums into the Baker tank and treated by the carbon adsorption system on October 14, 1994.
- 2. Drums of soil from group 2 were moved to the soil aeration area on the East Parcel, emption onto plastic, and special for aeration.
- 3. Drums of soil from group 3 were aimsed to the west parcel and emptied onto pavement lined with plastic

The empty drums will be recycled or disposed offsite at an appropriately permitted facility.

Section 3
Discussion of Results

Section 3 Discussion of Results

This section discusses the results of the activities described in Section 2: confirmation soil sampling and analyses associated with the excavation; stockpiled soil sample analyses; and groundwater sample analyses.

3.1 Soil Removal

Resed on confirmation sampling results, chlorinated and petroleum hydrocarbons are present in soil beyond the excavation limits at levels above target clean-up criteria.

Chlorinated Hydrocarbons

Vinyl chloride is present above the target clean-up level of 0.0097 mg/kg at the pit bottom (about 10 feet bgs) along the east half of the pit (SB-4, SB-6, SB-7, and SB-8) and at one location (SA-2) about 5 feet bgs along the west side slope of the pit. The presente of chlorinated hydrocarbons at depths greater than 5 feet bgs on the west side of the pit is not known because soil is inaccessible in this area. Vinyl chloride, PCE, TCE, 1,2-dichloropropane, and cis-1,2-DCE are present above target clean-up levels along the east side wall at a depth of about 8 feet bgs (SS-1G and SS-1B).

Petroleum Hydrocarbons

TEPH is present above the target clean-up level of 100 mg/kg in the following areas: the pit bottom at about 11 feet bgs (sample SA-1 at 119 mg/kg); on the west side slope at about 5 feet bgs (SA-2 at 750 mg/kg); and on the east sidewall at about 8 feet bgs (SA-1 at 245 to 1,020 mg/kg). The presence of petroleum hydrocarbons at depths greater than 5 feet bgs along the west side slope is not known because soil is inaccessible in this area.

3.2 Soil Aeration

Analytical results of the initial soil samples collected from the aerating soil indicated that further aeration of soil was needed to reduce chlorinated hydrocarbons. The proposed concentrations measured (ranging from <1 to 17 mg/kg) could also be reduced through further aeration. Although kerosene (<1 to 200 mg/kg) and motor oil (<10 to 250 mg/kg) are less volatile than gasoline and chlorinated hydrocarbons, some reduction in concentrations may occur over time from aeration and natural biodegradation.

Results of follow-up soil samples collected on November 22nd indicate that the accration process has been effective. The only chlorinated hydrocarbon detected in the second

sampling event, PCE, was reduced from concentrations ranging from 0.22 to 13 mg/kg to concentrations ranging from 0.005 to 0.015 mg/kg. The reduced levels of PCE are well below the proposed clean-up level for the soil excavation of I mg/kg and the EPA PRG for residential exposure to soil of 22 mg/kg.

No BTEX compounds or TPH as keroscore or gaspline were detected in the follow-up sample. It is that were lower than those initially detected: 25 to 160 mg/kg in November versus 100 to 250 mg/kg in September. TPH as diesel was not detected in the initial samples but was detected in the follow-up samples at levels ranging from 1.6 to 21 mg/kg. These levels of TPH-diesel are well below the clean-up level for petroleum hydrocarbons of 100 mg/kg established for the property.

3.3 Groundwater

Results of the four groundwater samples collected from the excavation pit varied widely. GW-1 and GW-2 were collected while soil was being excavated. The differences in concentrations measured in GW-1 and GW-2 may be due to the fact that soil at different locations within the pit had been disturbed before the water samples were collected. Results, therefore, may reflect the variability in soil concentrations.

Sample GW-3 was collected after excavation of the "hot spot" was completed and the water level had stabilized. To obtain a sample of water that had lost an amount of chlorinated hydrocarbons to volatilization to the atmosphere, three samples were collected from a depth of 2 to 3 feet beneath the water surface. The three samples were composited by the laboratory before analysis. Results of GW-3 indicated lower levels of chlorinated hydrocarbons than those detected in GW-1 and GW-2. Some chlorinated hydrocarbons may have been lost to volatilization to the atmosphere before the sample was collected.

Sample GW-4 was collected from water flowing into the excavation immediately after the pit was dewatered. Chlorinated hydrocarbon levels were significantly lower in GW-4, with PCE detected at $120 \mu g/l$ and TCE at $12 \mu g/l$. The relatively low levels of chlorinated hydrocarbons in GW-4 may be because the water sampled had not contacted soil containing chlorinated hydrocarbons at elevated levels. Samples GW-1 and GW-2 were from water in contact with soil containing chlorinated hydrocarbons at levels where the action levels established for the project. Although sample GW-2 with the remaining soil that still contains chlorinated hydrocarbons at concentrations above the action levels. For these reasons, sample GW-1, GW-2, or GW-3.

Section 4 Recommendations

Section 4 Recommendations

Recommendations for soil and groundwater remediation on the East Parcel and for management of aerating soil are discussed in this section.

4.1 Soil and Groundwater

Information from previous soil and groundwater investigations on the East Parcel, previously developed remediation plans, and the results of the recent soil removal action were reviewed in formulating the recommendations outlined in this section.

Features of this area of the property that need to be addressed in the remediation approach to the East Parcel are:

- Existence of a closed-in-place underground fuel oil storage tank next to the boiler house (about 80 feet downgradient of the excavation); soil around the tank contains fuel oil constituents; groundwater beneath the tank may contain fuel oil constituents. Remediation plans for Plant 35 include the removal of this tank (CH2M HILL, 1994d).
- The highest concentrations of chlorinated hydrocarbons detected in groundwater samples from the East Parcel are at the excavation and immediately downgradient.
- Chlorinated hydrocarbons have been detected in groundwater southwest of the boiler house extending to the west parcel.
- Soil containing chlorinated and petroleum hydrocarbons above target cleanup levels exists beyond the limits of the excavation. This soil was inaccessible due to the location of buildings and foundations or the soil was below the groundwater table.

In previous documents, Del Monte recommended extracting groundwater containing chlorinated hydrocarbons from an extraction pit constructed in the pit left after the tank is removed. For treatment of the extracted groundwater, the recommendation was to pump the water to the existing carbon adsorption system on the West Parcel. The information collected during the recent soil excavation and water sampling and analysis activities support this approach.

The pit that will be left after the tank is removed is about 80 feat downgradient from the area of recent soil excavation. Levels of chlorinated hydrocarbons detected in groundwater entering the excavation were lower than those previously detected in groundwater 40 feet

downgradient from the pit, that is, about halfway between the pit and the underground tank. Extracting water at the location of the underground tank (after it is removed) would address both the chlorinated hydrocarbons known to be present in groundwater and petroleum hydrocarbons if found to be present in groundwater after the tank is removed.

Before beginning groundwater extraction, presently inaccessible soil beyond the excavated area that may continue to release chlorinated hydrocarbons to the groundwater would be removed.

In summary, Del Monte recommends conducting the following remediation actions on the East Parcel after building structures on the property are demolished:

- Remove additional soil containing chlorinated hydrocarbons.
- Remove the underground tank and affected soil.
- Install monitoring well downgradient of the tank.
- Obtain amendment to the East Bay Municipal Utility District Wastewater
 Discourse Portain for the West Parcel treatment system.
- Construct groundwater extraction system at the former underground tank location.
- Install piping and pumps to transport extracted water to the West Parcel.
- Modify West Parcel treatment system to accommodate increased flow and potentially the addition of petroleum hydrocarbons.
- Extract and treat groundwater until asymptotic levels of contaminants are

4.2 Soil Aeration

Based on the results of the follow-up sampling of stockpiled soil, the soil aeration has effectively reduced chlorinated hydrocarbon levels to well below the target clean-up levels shown on Table 2-1. TPH-gasoline and -kerosene have been reduced to levels below the detection limit. TPH-diesel is present at levels well below the clean-up level for petroleum hydrocarbons of 100 mg/kg. TPH-motor oil was significantly reduced but was detected in one sample at 160 mg/kg, a level above the 100 mg/kg clean-up level for the property.

Del Monte recommends that the soil be left stockpiled on the East Parcel until demolition activities begin (anticipated for 1995). Natural biodegradation processes are expected to further reduce the levels of TPH-motor oil during this time period. If, at the time of property demolition, the levels of chemical constituents present in the soil are acceptable

for fill material, the stockpiled soil will be used to backfill excavations left after demolition and remediation activities. Before property demolition begins, additional samples of the stockpiled soil will be collected and analyzed to determine acceptability for use as onsite fill.

If acceptable levels of chemical constituents are not attained, the soil will be disposed of at an appropriate offsite facility.

Section 5 References

Section 5 References

CH2M HILL. 1994a. Draft Remediation Plan, Del Monte Plant 35. April 1994.

CH2M HILL. 1994b. Supplemental Onsite Investigation Report for Del Monte Plant 35. May 1994.

CH2M HILL. 1994c. Technical Memorandum on Soil and Groundwater Investigation East of Boiler House on East Parcel. August 12, 1994.

CH2M HILL. 1994d. Work Plan for Focused Soil Remediation, East Parcel, Del Monte Plant 35. August 15, 1994.

Appendix A Notification to BAAQMD



August 25, 1994

BAE28830.P5

Bay Area Air Quality Management District 939 Ellis Street San Francisco, CA 94109

Attention:

Enforcement Division

Subject:

Soil Excavation and Aeration at Del Monte Plant 35, 1250 Park Avenue

Emeryville, California

This letter is notification to the Bay Area Air Quality Management District that on September 7, 1994 Del Monte will begin excavation and aeration of soil containing chlorinated and petroleum hydrocarbons at 1250 Park Avenue in Emeryville, California. The source of the soil contaminants is unknown.

An estimated 500 cubic yards of soil will be excavated by ICONCO as a remedial action to remove soil containing chlorinated hydrocarbons. Maximum concentrations of constituents detected during recent soil sampling in the vicinity of the planned excavation are as follows:

8.2 ppm Tetrachloroethene ... 0.21 ppm Trichloroethene Other chlorinated hydro-< 1 ppm

carbons

91 ppm Unknown hydrocarbons in gas/BTEX analysis

Exempt Non-Volatile Hydrocarbons:

260 ppm TPH-motor oil 170 ppm TPH-kerosene 150 ppm Unknown extractable hydrocarbons

Bay Area Air Quality Management District Page 2 August 25, 1994 BAE28830.P5

The attached table is a tabulation of analytical results of soil samples collected from the excavation area.

ICONCO will aerate the excavated soil by spreading it to a thickness of 1 foot on a plastic-lined aeration bed.

In addition, drummed soil cuttings from investigations conducted at Plant 35 will be spread on the aeration bed. The soil cuttings potentially contain low levels (<1 ppm) of chlorinated hydrocarbons. Approximately 40 drums of cuttings will be aerated.

Based on the assumption that the excavation and aeration will take 2 days to complete, less than 500 cubic yards per day of soil will be excavated and added to the aeration bed.

If you have any questions regarding this work, please call me at (510) 251-2888 ext. 2189.

Sincerely,

CH2M HILL

Madeline Wall Project Manager

Nadeline Wall



BAY AREA AIR QUALITY MANAGEMENT DISTRICT

939 ELLIS STREET SAN FRANCISCO. CALIFORNIA 94109 (415) 771-6000

REGULATION 8, RULE 40

Aeration of Contaminated Soil and Removal of Underground Storage Tanks

NOTI	FICAT	<u> 10N</u>	<u>FORM</u>

Removal or Replacement of Tanks

Excavation of Contaminated Soil

SIT	E INFORMATION	
SITE ADDRESS 1250 PARK AVENUE CITY, STATE EMERYULE, CALIFO OWNER NAME DEL MONTE SPECIFIC LOCATION OF PROJECT EAST PORTI	ON OF PROPERTY	21P <u>9460B</u>
TANK REMOVAL SCHEOULED STARTUP DATE VAPORS REMOVED BY: [] WATER WASH [] VAPOR FREEING (CO ²) [] VENTILATION	SCHEDULED STARTUP DATE STOCKPILES WILL BE COVERED ALTERNATIVE METHOD OF AERA AS DISCUSSED (A) 47	917194 ? yes no_X_
CONTR	ACTOR INFORMATION	
ADDRESS 303 DERBY AVE. CITY, STATE, ZIP DAKLAND, CA 9	CONTACT DICK D PHONE (510) 201- 4601 ULTANT INFORMATION (IF APPLICABLE)	1900 ·
NAME CH2M HILL ADDRESS 1111 BROADWAY, SUITE CITY, STATE, ZIP OAKLAND, CA 94	CONTACT MADALI	NE WALL .
FOR OFFICE USE ONLY		
DATE POSTMARKED	BY(init.) BY(init.)	
CC: INSPECTOR NO	DATEDATEDATA ENTRY	BY(init.)

Appendix B Laboratory Reports



Analytical Laboratory Division Mobile Laboratory Division Scientific Division

With Automation in Mind

RECEIVED

557 î **3 1994**

CTLM THLL SAN FRANCISCO

September 16, 1994

Ms. Madeline Wall CH2M Hill 1111 Broadway, Suite 1200 Oakland, CA 94607

Dear Ms. Wall:

Enclosed is the report for the two (2) soil and one (1) water samples. The samples were received at Sparger Technology Analytical Mobile Lab on September 8, 1994.

The samples were received in two (2) VOAs, two (2) 1 L amber bottles, and two (2) 8 oz glass jars. 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



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
STM94-09-001A	SA-1	TPHdiesel/motor oil/kerosene
STM94-09-002A	SA-1	8010
STM94-09-003A	SA-2	TPHdiesel/motor oil/kerosene
STM94-09-004A	SA-2	8010
STM94-09-005A	GW-1	TPHdiesel/motor oil/kerosene
STM94-09-006A	GW-1	8010

III Quality Control

- A. <u>Project Specific QC</u>. No project specific QC (i.e., spikes and/or duplicates) was requested.
- B. <u>Method Blank Results</u>. 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.

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:

% recovery = (measured concentration) x 100 (actual concentration)

IV Analysis Results

Results are on the attached data sheets.



8015 Modified Analysis Report

Attention:

Ms. Madeline Wall

CH2M Hill

1111 Broadway, Suite 1200

Oakland, CA 94607

BAE28830.P4.ZZ

Project Name:

Date Sampled:

Date Received:

Date Analyzed:

Del Monte Plant 35

Sep 8, 1994

Sep 8, 1994

Sep 8, 1994

Client ID:

Project #:

GW-1

LAB ID:

STM94-09-005A

Matrix:

Water

Dilution:

1:1

		Detection	
Name	Amount	Limit	Units
TPHdiesel	ND	50	ug/L
TPHmotor oil	3100	50	ug/L
TPHkerosene	1400	50	ug/L

ppb = parts per billion = ug-c = micrograms per Liter

ppm= parts per million = ug/mu = micrograms per matiliter

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

R. L. James, Principal Chemist

Sep. 8, 1994

Date Reported

SPARGER TECHNOLOGY ANALYTICAL LABORATORY INCLUDING CERTIFIED BY THE STATE OF CALIFORNIA DEPARTMENT OF HEALTH SERVICES AS A HAZARDOUS WASTE TESTING LABORATORY (Certification (Id. 1614))



8015 Modified Analysis Report

Attention:

Ms. Madeline Wall

Date Sampled:

Sep. 8, 1994

CH2M Hill

Date Received:

Sep. 8, 1994

1111 Broadway, Suite 1200

Date Analyzed:

Sep. 8, 1994

Oakland, CA 94607

Project Name:

Del Monte Plant 35

Project #:

BAE28830.P4.ZZ

, ,0,000, ,10,...

Client ID:

SA-1

LAB ID:

STM94-09-001A

Matrix:

Soil

Dilution:

1:1

Detection

		Detection	
Name	Amount	Limit	Units
TPHdiesel	ND	1.0	ug/g
TPHmotor oil	28	1.0	ug/g
TPHkerosene	78	1.0	ug/g

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

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

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

At Junes

R. L. James, Principal Chemist

Sep. 8, 1994

Date Reported

SPARGER TECHNOLOGY ANALYTICAL LABORATORY INCLIS CERTIFIED BY THE STATE OF CALIFORNIA DEPARTMENT OF HEALTH SERVICES AS A HAZARDOUS WASTE TESTING LABORATORY (Certification tip. 1614)



8015 Modified Analysis Report

Attention:

Ms. Madeline Wall

CH2M Hill

1111 Broadway, Suite 1200

Oakland, CA 94607

Date Sampled:

Sep. 8, 1994

Date Received:

Sep. 8, 1994

Date Analyzed:

Sep. 8, 1994

Project #:

BAE28830.P4.ZZ

Project Name:

Del Monte Plant 35

Client ID:

SA-2

LAB ID:

STM94-09-003A

Matrix:

Soil

Dilution:

1: 1

Name	Amount	Detection Limit	Units	_
TPHdiesel	ND	1.0	ug/g	
TPHmotor oil	130	1.0	ug/g	
TPHkerosene	620	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

Sep. 8, 1994

Date Reported

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



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

Attention:

Ms. Madeline Wall

Date Sampled:

Sep 8, 1994

CH2M Hill

Date Received:

Sep 8, 1994

1111 Broadway, Suite 1200

Date Analyzed:

Sep 8, 1994

Oakland, CA 94607

BAE28830.P4.ZZ

Project Name:

Del Monte Plant 35

Client ID:

Project ID:

LCS/LCSD

LAB ID:

STM94-09-008 LCS STM94-09-008 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	128	127	ug/g	102%	102%	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 until

R. L. James, Principal Chemist

Sep 8, 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)



8010 Halogenated Volatile Organics **Analysis Report**

Attention:

Ms. Madeline Wall

CH2M Hill

1111 Broadway, Suite 1200

Oakland, CA 94607

Date Sampled:

Sep 8, 1994

Date Received:

Sep 8, 1994

Date Analyzed:

Sep 8, 1994

Project #:

BAE28830.P4.ZZ

Project Name:

Del Monte Plant 35

Client ID:

SA-1

LAB ID:

STM94-09-002A

Matrix:

Soil

Dilution:

1: 1

Name	Amount	Reporting Limit	Units
Bromodichloromethane	ND	1.0	ug/kg
2. Bromoform	ND	2.0	ug/kg
3. Bromomethane	ND	2.0	ug/kg
Carbon tetrachloride	ND	1.0	ug/kg
5. Chlorobenzene	ND	1.0	ug/kg
6. Chloroethane	ND	1.0	ug/kg
7. Chloroform	ND	1.0	ug/kg
8. Chloromethane	ND	2.0	ug/kg
9. Dibromochloromethane	ND	1.0	ug/kg
10. 1,2-Dichlorobenzene	ND	1.0	ug/kg
11. 1,3-Dichlorobenzene	ND	1.0	ug/kg
12. 1,4-Dichlorobenzene	» ND	1.0	ug/kg
13. Dichlorodifluoromethane	ND	2.0	ug/kg
14. 1,1-Dichloroethane	ND	1.0	ug/kg
15. 1,2-Dichloroethane	ND	1.0	ug/kg
16. 1,1-Dichloroethylene	ND	1.0	ug/kg
17. Cis-1,2 Dichloroethylene	ND	1.0	ug/kg
18. Trans-1,2-Dichloroethylene	ND	1.0	ug/kg
19. Dichloromethane	ND	5.0	ug/kg

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



8010 Halogenated Volatile Organics Analysis Report

Attention:

Ms. Madeline Wall

CH2M Hill

1111 Broadway, Suite 1200

Oakland, CA 94607

Date Sampled:

Sep 8, 1994

Date Received:

Sep 8, 1994

Date Analyzed:

Sep 8, 1994

Project #:

BAE28830.P4.ZZ

Project Name:

Del Monte Plant 35

Client ID:

SA-1

LAB ID:

STM94-09-002A

Matrix:

Soil

Dilution:

1: 1

Name	Amount	Reporting Limit	Units
20. 1,2-Dichloropropane	1.1	1.0	ug/kg
21. Cis-1,3 Dichloropropylene	ND	1.0	ug/kg
22. Trans-1,3-Dichloropropylene	ND	1.0	ug/kg
23. 1,1,2,2-Tetrachloroethane	2.7	1.0	ug/kg
24. Tetrachloroethylene	ND	1.0	ug/kg
25. 1,1,1-Trichloroethane	ND	1.0	ug/kg
26. 1,1,2-Trichloroethane	2.1	1.0	ug/kg
27. Trichloroethylene	ND	1.0	ug/kg
28. Trichlorofluoromethane	NĎ	1.0	ug/kg
29. Vinyl Chloride	ND	1.0	ug/kg
Surrogate % Recovery Bromochloromethane =		107%	
Surrogate % Recovery 2-Bromo-1-cl		97%	
Surrogate % Recovery 1,4-Dichlorot	outane =	100%	

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

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

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

R. L. James, Principal Chemist

Sep 8, 1994

Date Reported

SPARGER TECHNOLOGY ANALYTICAL LABORATORY INCLIS CERTIFIED BY THE STATE OF CALIFORNIA DEPARTMENT OF HEAR THIS ERROCES AS A HAZARDOUS WASTE TESTING LABORATORY (Certification for 1814).



8010 Halogenated Volatile Organics **Analysis Report**

Attention:

Ms. Madeline Wall

CH2M Hill

1111 Broadway, Suite 1200

Oakland, CA 94607

Date Sampled:

Sep 8, 1994

Date Received:

Sep 8, 1994

Date Analyzed:

Sep 8, 1994

BAE28830.P4.ZZ

Project Name:

Del Monte Plant 35

Client ID:

Project #:

SA-2

LAB ID:

STM94-09-004A

Matrix:

Soil

Dilution:

1: 20

Name	Amount	Reporting Limit	Units
1. Bromodichloromethane	ND	20	ug/kg
2. Bromoform	ND	40	ug/kg
3. Bromomethane	ND	40	ug/kg
4. Carbon tetrachloride	ND	20	ug/kg
5. Chlorobenzene	ND	20	ug/kg
6. Chloroethane	ND	20	ug/kg
7. Chloroform	ND	20	ug/kg
8. Chloromethane	ND	40	ug/kg
9. Dibromochloromethane	ND	20	ug/kg
10. 1,2-Dichlorobenzene	ND	20	ug/kg
11. 1,3-Dichlorobenzene	ND	20	ug/kg
12. 1,4-Dichlorobenzene	ND	20	ug/kg
13. Dichlorodifluoromethane	ND	40	ug/kg
14. 1,1-Dichloroethane	ND	20	ug/kg
15. 1,2-Dichloroethane	ND	20	ug/kg
16. 1,1-Dichloroethylene	ND	20	ug/kg
17. Cis-1,2 Dichloroethylene	330	20	ug/kg
18. Trans-1,2-Dichloroethylene	45	20	ug/kg
19. Dichloromethane	ND	100	ug/kg

ppb # parts per billion = ug/kg = m.programs per kilogram

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

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



8010 Halogenated Volatile Organics Analysis Report

Attention:

Ms. Madeline Wall

CH2M Hill

1111 Broadway, Suite 1200

Oakland, CA 94607

Date Sampled:

Date Received:

Sep 8, 1994

Sep 8, 1994

Date Analyzed:

Sep 8, 1994

Project #:

BAE28830.P4.ZZ

Project Name:

Del Monte Plant 35

Client ID:

SA-2

LAB ID:

STM94-09-004A

Matrix:

Soil

Dilution:

1: 20

Name	Amount	Reporting Limit	Units
20. 1,2-Dichloropropane	2.2 *	20	ug/kg
21. Cis-1,3 Dichloropropylene	ND	20	ug/kg
22. Trans-1,3-Dichloropropylene	ND	20	ug/kg
23. 1,1,2,2-Tetrachloroethane	ND	20	ug/kg
24. Tetrachloroethylene	2.9 *	20	ug/kg
25. 1,1,1-Trichloroethane	ND	20	ug/kg
26. 1,1,2-Trichloroethane	ND	20	ug/kg
27. Trichloroethylene	4.1 *	20	ug/kg
28. Trichlorofluoromethane	ND	20	ug/kg
29. Vinyl Chloride	270	20	ug/kg
Surrogate % Recovery Bromochlor	omethane =	118%	
Surrogate % Recovery 2-Bromo-1-	chloropropane =	87%	·
Surrogate % Recovery 1,4-Dichlord	obutane =	80%	

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

pom= 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

Sep 8, 1994

Date Reported

SPARGER TECHNOLOGY AMALYTICAL LABORATORY INC. IS CERTIFIED BY THE STATE OF CALIFORNIA

DEPARTMENT OF HEALTH SERVICES AS A HAZARDOUS WASTE TESTING LABORATORY

(Certification for 1614)

^{*} These compounds were detected below the reporting limit.



8010 Halogenated Volatile Organics Analysis Report

Attention:

Ms. Madeline Wall

CH2M Hill

1111 Broadway, Suite 1200

Oakland, CA 94607

Date Sampled:

mpled: Sep. 8, 1994

Date Received: Sep. 8, 1994

Date Analyzed:

Sep. 8, 1994

BAE28830.P4.ZZ

Project Name:

Del Monte Plant 35

Client ID:

Project #:

GW-1

LAB ID:

STM94-09-006A

Matrix:

Water

Dilution:

1:100

Name	Amount	Reporting Limit	Units
1. Bromodichloromethane	ND	100	ug/L
2. Bromoform	ND	200	ug/L
3. Bromomethane	ND	80	ug/L
4. Carbon tetrachloride	ND	120	ug/L
5. Chlorobenzene	ND	250	ug/L
6. Chloroethane	ND	520	ug/L
7. Chloroform	ND	. 50	ug/L
8. Chloromethane	ND	80	ug/L
9. Dibromochloromethane	ND	90	ug/L
10. 1,2-Dichlorobenzene	ND	150	ug/L
11. 1,3-Dichlorobenzene	ND	320	ug/L
12. 1,4-Dichlorobenzene	ND	240	ug/L
13. Dichlorodifluoromethane	ND	200	ug/L
14. 1,1-Dichloroethane	ND	70	ug/L
15. 1,2-Dichloroethane	. ND	30	ug/L
16. 1,1-Dichloroethylene	ND	130	ug/L
17. Cis 1,2-Dichloroethylene	2400	100	ug/L
18. Trans-1.2-Dichloroethylene	450	100	ug/L
19. Dichloromethane	ND	500	ug/L

ppb = parts per biliion = ug/E = micrograms per Liter

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

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



8010 Halogenated Volatile Organics **Analysis Report**

Attention:

Ms. Madeline Wall

CH2M Hill

1111 Broadway, Suite 1200

Oakland, CA 94607

Date Sampled:

Sep. 8, 1994

Date Received: Sep. 8, 1994

Date Analyzed:

Sep. 8, 1994

Project #:

BAE28830.P4.ZZ

Project Name:

Del Monte Plant 35

Client ID:

GW-1

LAB ID:

STM94-09-006A

Matrix:

Water

Dilution:

1:100

Name	Amount_	Reporting Limit	Units	_
20. 1,2-Dichloropropane	ND	40	ug/L	
21. Cis-1,3 Dichloropropylene	ND	340	ug/L	
22. Trans-1,3-Dichloropropylene	ND	340	ug/L	
23. 1,1.2,2-Tetrachloroethane	ND	30	ug/L	
24. Tetrachloroethylene	770	30	ug/L	
25. 1,1,1-Trichloroethane	ND	30	ug/L	
26. 1,1,2-Trichloroethane	ND	20	ug/L	
27. Trichloroethylene	800	120	ug/L	
28. Trichlorofluoromethane	ND	300	ug/L	
29. Vinyl Chloride	6700	180	ug/L	
Surrogate % Recovery Bromochlorom Surrogate % Recovery 2-Bromo-1-chlo Surrogate % Recovery 1,4-Dichlorobu	oropropane =	114% 90% 95%		

ppb = paπs per billion = ug/L = micrograms per Lite

ppm= parts per million = ug/mil= inicrograms per millitrer

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

R. L. James, Principal Chemist

Sep. 8, 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)



8010 GC Analysis Report iboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (LCSD)

Attention:

Ms. Madeline Wall

Date Sampled:

Sep. 8, 1994

CH2M Hill

Date Received:

Sep. 8, 1994

1111 Broadway, Suite 1200

Date Analyzed:

Sep. 8, 1994

Oakland, CA 94607

Project #:

BAE28830.P4.ZZ

Project Name:

Del Monte Plant 35

Client ID:

LCS/LCSD

LAB ID:

STM94-09-008 LCS

STM94-09-008 LCSD

Matrix:

Water

Dilution:

•	UNITS = ug/L							<u></u>	
	Sample	Spike (ppb)	Spike	Dup.	Spike	Dup.		QC	Limits
Compound	Conc	Added	Result	Result	% Rec	% Rec	RPD	RPD	% Rec
1,1-Dichloroethene	ND	40	37	37	93%	93%	0%	22	59-172
Trichloroethene	ND	40	41	39	103%	98%	5%	21	60-133
Chiorobenzene	ND	40	41	40	103%	100%	2%	21	66-142

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

Sep 8, 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)



8010 GC Analysis Report Matrix Control Spike (MS) and Matrix Spike Duplicate (MSD)

Attention:

Ms. Madeline Wall

CH2M Hill

1111 Broadway, Suite 1200

Oakland, CA 94607

Date Sampled:

Sep 8, 1994

Date Received:

Sep 8, 1994

Date Analyzed:

Sep 8, 1994

Project #:

BAE28830.P4.ZZ

Project Name:

Del Monte Plant 35

Client ID:

GW-1 MS

GW-1 MSD

LAB ID:

STM94-09-006A MS

STM94-09-006A MSD

Matrix:

Water

Dilution:

1:100

				UNITS =	ug/L				
	Sample	Spike (ppb)	Spike	Dup.	Spike	Dup.		QC	Limits
Compound	Conc	Added	Result	Result	% Rec	% Rec	RPD	RPD	% Rec
1,1-Dichloroethene	ND	40	40	35	100%	88%	13%	22	59-172
Trichloroethene	800	40	46	38	115%	95%	19%	21	60-133
Chlorobenzene	ND	40	42	36	105%	90%	15%	21	66-142

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

Sep 8, 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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SAMPLE ID	Date 9/8/94	Time Neo S	40 mL VOA	Brass Sleeve	1 L amber bottle	250 mL Pleatic	Other:	HCI/HN03/ICE	X None	Other:	Water	Soil	Air	Other:	BTEX (602/8020)/503.1	BTEX/TPHgas (602/8020/8015)	TPHdiesel/TPHmotor oil/kerosene(8015)	EPA 601 (8010) 502.2/504 CHUNENATED	EPA 602/8020	EPA 608/8080 (Pesticides)/505/508	EPA 608/8080 (PCB's)	EPA 624/8240/524.2	EPA 625/8270/525	Total Oil & Greese (5520)	Non-Poler O & G/TRPH (418.1)	Organic Lead	RCI		CAM-17 Metals	CAM-5 Metels (Cd, Cr, Pb, Ni, Zn)	Lead			Standard	Rush Services (72hr / 48hr / 24hr / 12hr	Holiday/Weekend Rush
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September 16, 1994

Ms. Madeline Wall CH2M Hill 1111 Broadway, Suite 1200 Oakland, CA 94607

Dear Ms. Wall:

Enclosed is the report for the fourteen (14) soil samples. The samples were received at Sparger Technology Analytical Mobile Lab on September 9, 1994.

The samples were received in eight (8) glass jars and six (6) plastic containers. 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



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
STM94-09-007A	SS-1B	TPHdiesel/motor oil/kerosene
STM94-09-008A	SS-1B	8010
STM94-09-009A	SS-1G	TPHdiesel/motor oil/kerosene
STM94-09-010A	SS-1G	8010
STM94-09-011A	SB-1	TPHdiesel/motor oil/kerosene
STM94-09-012A	SB-1	8010
STM94-09-013A	SA-3	TPHdiesel/motor oil/kerosene
STM94-09-014A	SA-3	8010
STM94-09-015A	SB-4	TPHdiesel/motor oil/kerosene
STM94-09-016A	SB-4	8010
STM94-09-017A	SA-5	TPHdiesel/motor oil/kerosene
STM94-09-018A	SA-5	8010
STM94-09-019A	SA-6	TPHdiesel/motor oil/kerosene
STM94-09-020A	SA-6	8010
STM94-09-021A	SB-6	TPHdiesel/motor oil/kerosene
STM94-09-022A	SB-6	8010
STM94-09-023A	SA-7	TPHdiesel/motor oil/kerosene
STM94-09-024A	SA-7	8010
STM94-09-025A	UT-1	TPHdiesel/motor oil/kerosene
STM94-09-026A	UT-1	8010
STM94-09-027A	SB-7	TPHdiesel/motor oil/kerosene
STM94-09-028A	SB-7	8010
STM94-09-029A	SB-8	TPHdiesel/motor oil/kerosene
STM94-09-030A	SB-8	8010
STM94-09-031A	SP-N	TPHdiesel/motor oil/kerosene



Lab ID	Your ID	Analysis Description
STM94-09-032A	SP-N	8010
STM94-09-033A	SP-S	TPHdiesel/motor oil/kerosene
STM94-09-034A	SP-S	8010

III Quality Control

- A. <u>Project Specific QC</u>. No project specific QC (i.e., spikes and/or duplicates) was requested.
- B. <u>Method Blank Results</u>. 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.

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:

% recovery = (measured concentration) x 100 (actual concentration)

IV Analysis Results

Results are on the attached data sheets.



8015 Modified Analysis Report Project: Del Monte Plant 35 (BAE28830.P4.ZZ)

Attention:

Ms. Madeline Wall

CH2M Hill

1111 Broadway, Suite 1200

Oakland, CA 94607

Date Sampled:

Sep 9, 1994

Date Received :

Sep 9, 1994

Date Analyzed: Invoice #:

Sep 9, 1994 087M

SOIL SAMPLES

Units: ug/g

								ilita. ugig
Lab	Client	TPH	Det.	TPH	Det.	TPH	Det.	Dilution
ID	ID	Diesel	Limit	Motor Oil	Limit	Kerosene	Limit	1:
STM94-09-007A	SS-1B	ND	1.0	65	1.0	180	1.0	1
STM94-09-009A	SS-1G	ND	1.0	360	1.0	660	1.0	1
STM94-09-011A	SB-1	ND	1.0	100	1.0	1 9	1.0	1
STM94-09-013A	SA-3	ND	1.0	NĐ	1.0	ND	1.0	1
STM94-09-015A	SB-4	ND	1.0	ND	1.0	ND	1.0	1
STM94-09-017A	SA-5	ND	1.0	140	1.0	130	1.0	1
ST94-09-019A	SA-6	ND	1.0	92	1.0	33	1.0	1
STM94-09-021A	SB-6	ND	1.0	ND	1.0	ND	1.0	1
STM94-09-023A	SA-7	ND	1.0	ND	1.0	ND	1.0	1
STM94-09-025A	UT-1	ND	1.0	58	1.0	27	1.0	1
STM94-09-027A	SB-7	ND	1.0	ND	1.0	ND	1.0	1
STM94-09-029A	SB-8	ND	1.0	ND	1.0	ND	1.0	1
STM94-09-031A	SP-N	ND	1.0	94	1.0	33	1.0	1
STM94-09-033A	SP-S	ND	1.0	220	1.0	76	1.0	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

Sep 9, 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)



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

Attention:

Ms. Madeline Wall

CH2M Hill

1111 Broadway, Suite 1200

Oakland, CA 94607

Date Sampled:

Sep 9, 1994

Date Received:

Sep 9, 1994

Date Analyzed:

Sep 9, 1994

Project ID:

BAE28830.P4.ZZ

Project Name:

Del Monte Plant 35

Client ID:

SB-8 MS

SB-8 MSD

LAB ID:

STM94-09-029A MS

STM94-09-029A 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 *	157	146	ug/g	126%	117%	7%

ppb = parts per billion = ug/kg = m:crograms per kilogram ppm= parts per million = ug/g = m:crograms per gram

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

R. L. James, Principal Chemist

Sep. 9, 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)

^{*} High percent recovery was due to matrix effect of sample.



8010 Halogenated Volatile Organics Analysis Report

Attention:

Ms. Madeline Wall

Date Sampled:

Sep 9, 1994

CH2M Hill

Date Received:

Sep 9, 1994

1111 Broadway, Suite 1200

Date Analyzed:

Sep 9, 1994

Oakland, CA 94607

BAE28830.P4.ZZ

Project Name:

Del Monte Plant 35

Client ID:

Project #:

SS-1B

LAB ID:

STM94-09-008A

Matrix:

Soil

Dilution:

1: 50

Name	Amount	Reporting Limit	Units	
Bromodichloromethane	ND	50	ug/kg	
2. Bromoform	ND	100	ug/kg	
3. Bromomethane	ND	100	ug/kg	
4. Carbon tetrachloride	ND	50	ug/kg	
5. Chlorobenzene	ND	50	ug/kg	
6. Chloroethane	ND	50	ug/kg	
7. Chloroform	ND	50	ug/kg	
8. Chloromethane	ND	100	ug/kg	
9. Dibromochloromethane	ND	50	ug/kg	
10. 1,2-Dichlorobenzene	ND	50	ug/kg	
11. 1,3-Dichlorobenzene	ND	50	ug/kg	
12. 1,4-Dichlorobenzene	ND	50	ug/kg	
13. Dichlorodifluoromethane	ND	100	ug/kg	٠,
14. 1,1-Dichloroethane	ND	50	ug/kg	
15. 1,2-Dichloroethane	ND	50	ug/kg	
16. 1,1-Dichloroethylene	ND	50	ug/kg	
17. Cis-1,2 Dichloroethylene	160	50	ug/kg	
18. Trans-1,2-Dichloroethylene	ND	50	ug/kg	
19. Dichloromethane	ND	250	ug/kg	

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.



8010 Halogenated Volatile Organics Analysis Report

Attention:

Ms. Madeline Wall

CH2M Hill

1111 Broadway, Suite 1200

Oakland, CA 94607

Date Sampled:

Sep 9, 1994

Date Received:

Sep 9, 1994

Date Analyzed:

Sep 9, 1994

Project #:

BAE28830.P4.ZZ

Project Name:

Del Monte Plant 35

Client ID:

SS-1B

LAB ID:

STM94-09-008A

Matrix:

Soil

Dilution:

1: 50

Name	Amount	Reporting Limit	Units
20. 1,2-Dichloropropane	79	50	ug/kg
21. Cis-1,3 Dichloropropylene	ND	50	· ug/kg
22. Trans-1,3-Dichloropropylene	ND	50	ug/kg
23. 1,1,2,2-Tetrachloroethane	ND	50	ug/kg
24. Tetrachloroethylene	8700	50	ug/kg
25. 1,1,1-Trichloroethane	ND	50	ug/kg
26. 1,1,2-Trichloroethane	ND	50	ug/kg
27. Trichloroethylene	1000	50	ug/kg
28. Trichlorofluoromethane	ND	50	ug/kg
29. Vinyl Chloride	490	50	ug/kg
Surrogate % Recovery Bromochloro	methane =	98%	
Surrogate % Recovery 2-Bromo-1-c	hloropropane =	88%	
Surrogate % Recovery 1,4-Dichlorol	outane =	92%	

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

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

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

R. L. James, Principal Chemist

Sep 9, 1994

Date Reported

SPARGER TECHNOLOGY ANALYTICAL LABORATORY, INC. IS CERTIFIED BY THE STATE OF CALIFORNIA DEPARTMENT OF HEACTH SERVICES AS A HAZARDOUS WASTE TESTING LABORATORY

(Certification for 1814)



8010 Halogenated Volatile Organics Analysis Report

Attention:

Ms. Madeline Wall

CH2M Hill

1111 Broadway, Suite 1200

Oakland, CA 94607

Date Sampled:

Sep 9, 1994

Date Received:

Sep 9, 1994

Date Analyzed:

Sep 9, 1994

Project #:

BAE28830.P4.ZZ

Project Name:

Del Monte Plant 35

Client ID:

SS-1G

LAB ID:

STM94-09-010A

Matrix:

Soil

Dilution:

1: 1000

Name	Amount	Reporting Limit	Units
1. Bromodichloromethane	ND	1000	ug/kg
2. Bromoform	ND	2000	ug/kg
3. Bromomethane	ND	2000	ug/kg
4. Carbon tetrachloride	ND	1000	ug/kg
5, Chlorobenzene	ND	1000	ug/kg
6. Chloroethane	ND	1000	ug/kg
7. Chloroform	ND	1000	ug/kg
8. Chloromethane	ND	2000	ug/kg
9. Dibromochloromethane	ND	1000	ug/kg
10. 1,2-Dichlorobenzene	ND	1000	ug/kg
11. 1,3-Dichlorobenzene	ND	1000	ug/kg
12. 1,4-Dichlorobenzene	ND	1000	ug/kg
13. Dichlorodifluoromethane	ND	2000	ug/kg
14. 1,1-Dichloroethane	ND	1000	ug/kg
15. 1,2-Dichloroethane	ND	1000	ug/kg
16. 1,1-Dichloroethylene	ND	1000	ug/kg
17. Cis-1,2 Dichloroethylene	1300	1000	ug/kg
18. Trans-1,2-Dichloroethylene	ND	1000	ug/kg
19. Dichloromethane	ND	5000	ug/kg

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 hard



8010 Halogenated Volatile Organics **Analysis Report**

Attention:

Project #:

Client ID:

Ms. Madeline Wall

CH2M Hill

1111 Broadway, Suite 1200

Oakland, CA 94607

BAE28830 P4.ZZ

SS-1G

Project Name:

LAB ID:

Date Sampled:

Date Received:

Date Analyzed:

Del Monte Plant 35

Sep 9, 1994

Sep 9, 1994

Sep 9, 1994

STM94-09-010A

Matrix:

Soil

Dilution:

1: 1000

Name	Amount	Reporting Limit	Units
20. 1,2-Dichloropropane	1900	1000	ug/kg
21. Cis-1,3 Dichloropropylene	ND	1000	ug/kg
22. Trans-1,3-Dichloropropylene	ND	1000	ug/ kg
23. 1,1,2,2-Tetrachloroethane	ND	1000	ug/kg
24. Tetrachloroethylene	247000 *	1000	ug/kg
25. 1,1,1-Trichloroethane	ND	1000	ug/kg
26. 1,1,2-Trichloroethane	ND	1000	ug/kg
27. Trichloroethylene	6800	1000	ug/kg
28. Trichlorofluoromethane	ND	1000	ug/kg
29. Vinyl Chloride	8900	1000	ug/kg
Surrogate % Recovery Bromochloro	omethane =	128% **	
Surrogate % Recovery 2-Bromo-1-c	hloropropane =	116% **	
Surrogate % Recovery 1,4-Dichloro	butane =	118% **	

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

R. L. James, Principal Chemist

Sep 9, 1994

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

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

^{*} This compound was present above the linear range of the detector.

^{**} High surrogate recoveries due to matrix effect.



8010 Halogenated Volatile Organics Analysis Report

Attention:

Ms. Madeline Wall

CH2M Hill

1111 Broadway, Suite 1200

Oakland, CA 94607

Date Sampled:

Sep 9, 1994

Date Received:

Sep 9, 1994

Date Analyzed:

Sep 9, 1994

Project #:

BAE28830.P4.ZZ

Project Name:

Del Monte Plant 35

Client ID:

SB-1

LAB ID:

STM94-09-012A

Matrix:

Soil

Dilution:

1: 1

Name	Amount	Reporting Limit	Units
Bromodichloromethane	ND	1.0	ug/kg
2. Bromoform	ND	2.0	ug/kg
3. Bromomethane	ND	2.0	ug/kg
4. Carbon tetrachloride	ND	1.0	ug/kg
5. Chlorobenzene	ND	1.0	ug/kg
6. Chloroethane	ND	1.0	ug/kg
7. Chloroform	ND	1.0	ug/kg
8. Chloromethane	ND	2.0	ug/kg
9. Dibromochloromethane	ND	1.0	ug/kg
10. 1,2-Dichlorobenzene	ND	1.0	ug/kg
11. 1,3-Dichlorobenzene	ND	1.0	ug/kg
12. 1,4-Dichlorobenzene	· ND	1.0	ug/kg
13. Dichlorodifluoromethane	ND	2.0	ug/kg
14. 1,1-Dichloroethane	ND	1.0	ug/kg
15, 1,2-Dichloroethane	ND	1.0	ug/kg
16. 1,1-Dichloroethylene	ND	1.0	ug/kg
17. Cis-1,2 Dichloroethylene	7.2	1.0	ug/kg
18. Trans-1,2-Dichloroethylene	ND	1.0	ug/kg
19. Dichloromethane	ND	5.0	ug/kg

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.



8010 Halogenated Volatile Organics Analysis Report

Attention:

Ms. Madeline Wall

CH2M Hill

1111 Broadway, Suite 1200

Oakland, CA 94607

BAE28830.P4.ZZ

Project Name:

Date Sampled:

Date Received:

Date Analyzed:

Del Monte Plant 35

Sep 9, 1994

Sep 9, 1994

Sep 9, 1994

Client ID:

Project #:

SB-1

LAB ID:

STM94-09-012A

Matrix:

Soil

Dilution:

1: 1

Name	Amount	Reporting Limit	Units
20. 1,2-Dichloropropane	1.1	1.0	ug/kg
21. Cis-1,3 Dichloropropylene	ND	1.0	ug/kg
22. Trans-1,3-Dichloropropylene	ND	1.0	ug/kg
23. 1,1,2,2-Tetrachloroethane	ND	1.0	ug/kg
24. Tetrachloroethylene	49	1.0	ug/kg
25. 1,1,1-Trichloroethane	ND	1.0	ug/kg
26. 1,1,2-Trichloroethane	ND	1.0	ug/kg
27. Trichloroethylene	9.2	1.0	ug/kg
28. Trichlorofluoromethane	ND	1.0	ug/kg
29. Vinyl Chloride	4.0	1,0	ug/kg
Surrogate % Recovery Bromochloro	methane =	123%	
Surrogate % Recovery 2-Bromo-1-c	hloropropane =	105%	
Surrogate % Recovery 1,4-Dichlorol	outane =	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

Sep 9, 1994



8010 Halogenated Volatile Organics Analysis Report

Attention: Ms. Madeline Wall

NIS. MIAGCINE VVAI

CH2M Hill

1111 Broadway, Suite 1200

Oakland, CA 94607

Date Sampled:

Sep 9, 1994

Date Received:

Sep 9, 1994

Date Analyzed:

Sep 9, 1994

d: Sep

Project #:

BAE28830.P4.ZZ

Project Name:

Del Monte Plant 35

Client ID:

SA-3

LAB ID:

STM94-09-014A

Matrix:

Soil

Dilution:

1; 2

Name	Amount	Reporting Limit	Units
1. Bromodichloromethane	ND	2.0	ug/kg
2. Bromoform	ND	4.0	ug/kg
3. Bromomethane	ND	4.0	ug/kg
4. Carbon tetrachloride	ND	2.0	ug/kg
5. Chlorobenzene	ND	2.0	ug/kg
6. Chloroethane	ND	2.0	ug/kg
7. Chloroform	ND	2.0	ug/kg
8. Chloromethane	ND	4.0	ug/kg
9. Dibromochloromethane	ND	2.0	ug/kg
10. 1,2-Dichlorobenzene	ND	2.0	ug/kg
11. 1,3-Dichlorobenzene	ND	2.0	ug/kg
12. 1,4-Dichlorobenzene	ND	2.0	ug/kg
13. Dichlorodifluoromethane	МD	4.0	ug/kg
14. 1,1-Dichloroethane	ND	2.0	ug/kg
15. 1,2-Dichloroethane	ND	2.0	ug/kg
16. 1,1-Dichloroethylene	ND	2.0	ug/kg
17. Cis-1,2 Dichloroethylene	2.5	2.0	ug/kg
18. Trans-1,2-Dichloroethylene	2.0	2.0	ug/kg
19. Dichloromethane	ND	10.0	ug/kg

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 recorning limit



8010 Halogenated Volatile Organics Analysis Report

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Ms. Madeline Wall

CH2M Hill

1111 Broadway, Suite 1200

Oakland, CA 94607

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Sep 9, 1994

Sep 9, 1994

Project #:

BAE28830.P4.ZZ

Project Name:

Del Monte Plant 35

Client ID:

SA-3

LAB ID:

STM94-09-014A

Matrix:

Soil

Dilution:

1: 2

Name	Amount	Reporting Limit	Units
20. 1,2-Dichloropropane	ND	2.0	ug/kg
21. Cis-1,3 Dichloropropylene	ND	2.0	ug/kg
22. Trans-1,3-Dichloropropylene	ND	2.0	ug/kg
23. 1,1,2,2-Tetrachloroethane	ND	2.0	ug/kg
24. Tetrachloroethylene	30	2.0	ug/kg
25. 1,1,1-Trichloroethane	ND	2.0	ug/kg
26. 1,1,2-Trichloroethane	ND	2.0	ug/kg
27. Trichloroethylene	8.4	2.0	ug/kg
28. Trichlorofluoromethane	ND	2.0	ug/kg
29. Vinyl Chloride	9.3	2.0	ug/kg
Surrogate % Recovery Bromochloro	methane =	95%	
Surrogate % Recovery 2-Bromo-1-c		85%	
Surrogate % Recovery 1,4-Dichlorot	outane =	90%	

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

Sep 9, 1994



8010 Halogenated Volatile Organics Analysis Report

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Date Received:

Sep 9, 1994

Date Analyzed:

Sep 9, 1994

Project #:

BAE28830.P4.ZZ

Project Name:

Del Monte Plant 35

Client ID:

SB-4

LAB ID:

STM94-09-016A

Matrix:

Soil

Dilution:

1: 5

Name	Amount	Reporting Limit	Units
1. Bromodichloromethane	ND	5.0	ug/kg
2. Bromoform	ND	10.0	ug/kg
3. Bromomethane	ND	10.0	ug/kg
4. Carbon tetrachloride	ND	5.0	ug/kg
5. Chlorobenzene	ND	5.0	ug/kg
6. Chloroethane	ND	5.0	ug/kg
7. Chloroform	ND	5.0	ug/kg
8. Chloromethane	ND	10.0	ug/kg
9. Dibromochloromethane	ND	5.0	ug/kg
10. 1,2-Dichlorobenzene	ND	5.0	ug/kg
11. 1,3-Dichlorobenzene	ND	5.0	ug/kg
12. 1,4-Dichlorobenzene	ND	5.0	ug/kg
13. Dichlorodifluoromethane	ND	10.0	ug/kg
14. 1,1-Dichloroethane	ND	5.0	ug/kg
15. 1,2-Dichloroethane	ND	5.0	ug/kg
16. 1,1-Dichloroethylene	ND	5.0	ug/kg
17. Cis-1,2 Dichloroethylene	110	5.0	ug/kg
18. Trans-1,2-Dichloroethylene	23	5.0	ug/kg
19. Dichloromethane	ND	25.0	ug/kg

ppb = parts per billion = ug/kg = inicrograms 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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Date Analyzed:

Sep 9, 1994

Project #:

BAE28830.P4.ZZ

Project Name:

Del Monte Plant 35

Client ID:

SB-4

LAB ID:

STM94-09-016A

Matrix:

Soil

Dilution:

1: 5

Name	Amount	Reporting Limit	Units
20. 1,2-Dichloropropane	ND	5.0	ug/kg
21. Cis-1,3 Dichloropropylene	ND	5.0	ug/kg
22. Trans-1,3-Dichloropropylene	ND .	5.0	ug/kg
23. 1,1,2,2-Tetrachloroethane	ND	5.0	ug/kg
24. Tetrachloroethylene	210	5.0	ug/kg
25. 1,1,1-Trichloroethane	ND	5.0	ug/kg
26. 1,1,2-Trichloroethane	ND	5.0	ug/kg
27. Trichloroethylene	93	5.0	ug/kg
28. Trichlorofluoromethane	ND	5.0	ug/kg
29. Vinyl Chloride	120	5.0	ug/kg
Surrogate % Recovery Bromochlor	omethane =	125%	
Surrogate % Recovery 2-Bromo-1-	chloropropane =	108%	
Surrogate % Recovery 1,4-Dichlord	obutane =	108%	

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

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

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

R. L. James, Principal Chemist

Sep 9, 1994



8010 Halogenated Volatile Organics **Analysis Report**

Attention:

Project #:

Client ID:

Matrix:

Ms. Madeline Wall

CH2M Hill

1111 Broadway, Suite 1200

Oakland, CA 94607

BAE28830.P4.ZZ

SA-5

Soil

Date Sampled:

Date Received:

Date Analyzed:

Project Name:

Sep 9, 1994

Sep 9, 1994

Sep 9, 1994

Del Monte Plant 35

LAB ID:

STM94-09-018A

Dilution:

1: 1

Name	Amount	Reporting Limit	Units
1. Bromodichloromethane	ND	1.0	ug/kg
2. Bromoform	ND	2.0	ug/kg
3. Bromomethane	ND	2.0	ug/kg
4. Carbon tetrachloride	ND	1.0	ug/kg
5. Chlorobenzene	ND	1.0	ug/kg
6. Chloroethane	ND	1.0	ug/kg
7. Chloroform	ND	1.0	ug/kg
8. Chloromethane	ND	2.0	ug/kg
9. Dibromochloromethane	ND	1.0	ug/kg
10. 1,2-Dichlorobenzene	ND	1.0	ug/kg
11. 1,3-Dichlorobenzene	ND	1.0	ug/kg
12. 1,4-Dichlorobenzene	- ND	1.0	ug/kg
13. Dichlorodifluoromethane	ND	2.0	ug/kg
14. 1,1-Dichloroethane	ND	1.0	ug/kg
15. 1,2-Dichloroethane	ND	1.0	ug/kg
16. 1,1-Dichloroethylene	ND	1.0	ug/kg
17. Cis-1,2 Dichloroethylene	ND	1.0	ug/kg
18. Trans-1,2-Dichloroethylene	ND	1.0	ug/kg
19. Dichloromethane	ND	5.0	ug/kg

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



8010 Halogenated Volatile Organics Analysis Report

Attention:

Ms. Madeline Wall

CH2M Hill

1111 Broadway, Suite 1200

Oakland, CA 94607

BAE28830.P4.ZZ

77 Project N

Project Name:

Date Sampled:

Date Received:

Date Analyzed:

Del Monte Plant 35

Sep 9, 1994

Sep 9, 1994

Sep 9, 1994

Client ID:

Project #:

SA-5

LAB ID:

STM94-09-018A

Matrix:

Soil

Dilution:

1: 1

Name	Amount	Reporting Limit	Units
20. 1,2-Dichloropropane	ND	1.0	ug/kg
21. Cis-1,3 Dichloropropylene	ND	1.0	ug/kg
22. Trans-1,3-Dichloropropylene	ND	1.0	ug/kg
23. 1,1,2,2-Tetrachloroethane	ND	1.0	ug/kg
24. Tetrachloroethylene	16	1.0	ug/kg
25. 1,1,1-Trichloroethane	ND	1.0	ug/kg
26. 1,1,2-Trichloroethane	ND	1.0	ug/kg
27. Trichloroethylene	ND	1.0	ug/kg
28. Trichlorofluoromethane	ND	1.0	ug/kg
29. Vinyl Chloride	ND	1.0	ug/kg
Surrogate % Recovery Bromochloro	methane =	109%	
Surrogate % Recovery 2-Bromo-1-cl	hloropropane =	94%	
Surrogate % Recovery 1,4-Dichlorot	outane =	100%	

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

Sep 9, 1994



8010 Halogenated Volatile Organics **Analysis Report**

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Oakland, CA 94607

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Sep 9, 1994

Date Received:

Sep 9, 1994

Date Analyzed:

Sep 9, 1994

Project #:

BAE28830.P4.ZZ

Project Name:

Del Monte Plant 35

Client ID:

SA-6

LAB ID:

STM94-09-020A

Matrix:

Soil

Dilution:

1: 10

Name	Amount	Reporting Limit	Units
Bromodichloromethane	ND	10.0	u g /kg
2. Bromoform	ND	20.0	ug/kg
3. Bromomethane	ND	20.0	ug/kg
4. Carbon tetrachloride	ND	10.0	ug/kg
5. Chlorobenzene	ND	10.0	ug/kg
6. Chloroethane	ND	10.0	ug/kg
7. Chloroform	ND	10.0	ug/kg
8. Chloromethane	ND	20.0	ug/kg
9. Dibromochloromethane	ND	10.0	ug/kg
10. 1,2-Dichlorobenzene	ND	10.0	ug/kg
11. 1,3-Dichlorobenzene	ND	10.0	ug/kg
12. 1,4-Dichlorobenzene	ND	10.0	ug/kg
13. Dichlorodifluoromethane	ND	20.0	ug/kg
14. 1,1-Dichloroethane	ND	10.0	ug/kg
15. 1,2-Dichloroethane	ND	10.0	ug/kg
16. 1,1-Dichloroethylene	ND	10.0	ug/kg
17. Cis-1,2 Dichloroethylene	66	10.0	ug/kg
18. Trans-1,2-Dichloroethylene	16	10.0	ug/kg
19. Dichloromethane	ND	50.0	ug/kg

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



8010 Halogenated Volatile Organics **Analysis Report**

Attention:

Ms. Madeline Wall

CH2M Hill

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Oakland, CA 94607

Date Sampled: Date Received: Sep 9, 1994

Sep 9, 1994

Date Analyzed:

Sep 9, 1994

Project #:

BAE28830.P4.ZZ

Project Name:

Del Monte Plant 35

Client ID:

SA-6

LAB ID:

STM94-09-020A

Matrix:

Soil

Dilution:

1: 10

Name	Amount	Reporting Limit	Units	
20. 1,2-Dichloropropane	ND	10.0	ug/kg	
21. Cis-1,3 Dichloropropylene	ND	10.0	ug/kg	
22. Trans-1,3-Dichloropropylene	ND	10.0	ug/kg	
23. 1,1,2,2-Tetrachloroethane	ND	10.0	ug/kg	
24. Tetrachloroethylene	270	10.0	ug/kg	
25. 1,1,1-Trichloroethane	ND	10.0	ug/kg	
26. 1,1,2-Trichloroethane	ND	10.0	ug/kg	٠
27. Trichtoroethylene	100	10.0	ug/kg	
28. Trichlorofluoromethane	ND	10.0	ug/kg	
29. Vinyl Chloride	29	10.0	ug/kg	
Surrogate % Recovery Bromochloromethane =		131% *		
Surrogate % Recovery 2-Bromo-1-c	hloropropane =	111% *		
Surrogate % Recovery 1,4-Dichlorol	outane =	111% *		

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

R. L. James, Principal Chemist

Sep 9, 1994

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

^{*} High surrogate recoveries due to matrix effect.



8010 Halogenated Volatile Organics **Analysis Report**

Attention:

Project #:

Client ID:

Ms. Madeline Wall

CH2M Hill

1111 Broadway, Suite 1200

Oakland, CA 94607

BAE28830.P4.ZZ

Matrix: Soil

SB-6

Date Sampled:

Date Received:

Date Analyzed:

Sep 9, 1994

Sep 9, 1994

Sep 9, 1994

Project Name:

Del Monte Plant 35

STM94-09-022A

LAB ID: Dilution:

1: 1

Name	Amount	Reporting Limit	Units	
1. Bromodichloromethane	ND	1.0	ug/kg	
2. Bromoform	ND	2.0	ug/kg	
3. Bromomethane	ND	2.0	ug/kg	
4. Carbon tetrachloride	ND	1.0	ug/kg	
5. Chlorobenzene	ND	1.0	ug/kg	
6. Chloroethane	ND	1.0	ug/kg	
7. Chloroform	ND	1.0	ug/kg	
8. Chloromethane	ND	2.0	ug/kg	
9. Dibromochloromethane	ND	1.0	ug/kg	
10. 1,2-Dichlorobenzene	ND	1.0	ug/kg	
11. 1,3-Dichlorobenzene	ND	1.0	ug/kg	
12. 1,4-Dichlorobenzene	ND	1.0	ug/kg	
13. Dichlorodifluoromethane	ND	2.0	ug/kg	
14. 1,1-Dichloroethane	ND	1.0	ug/kg	
15, 1,2-Dichloroethane	ND	1.0	ug/kg	
16. 1,1-Dichloroethylene	ND	1.0	ug/kg	
17. Cis-1,2 Dichloroethylene	9.0	1.0	ug/kg	
18. Trans-1,2-Dichloroethylene	1.5	1.0	ug/kg	
19. Dichloromethane	ND	5.0	ug/kg	

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 time.



8010 Halogenated Volatile Organics Analysis Report

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CH2M Hill

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Sep 9, 1994

Project #:

BAE28830.P4.ZZ

Project Name:

Del Monte Plant 35

Client ID:

SB-6

LAB ID:

STM94-09-022A

Matrix:

Soil

Dilution:

1: 1

Name Name	Amount	Reporting Limit	Units
20. 1,2-Dichloropropane	1.3	1.0	ug/kg
21. Cis-1,3 Dichtoropropylene	ND	1.0	ug/kg
22. Trans-1,3-Dichloropropylene	ND	1.0	ug/kg
23. 1,1,2,2-Tetrachloroethane	ND	1.0	ug/kg
24. Tetrachloroethylene	20	1.0	ug/kg
25. 1,1,1-Trichloroethane	ND	1.0	ug/kg
26. 1,1,2-Trichloroethane	ND	1.0	ug/kg
27. Trichloroethylene	4.5	1.0	ug/kg
28. Trichlorofluoromethane	ND	1.0	ug/kg
29. Vinyl Chloride	31	1.0	ug/kg
Surrogate % Recovery Bromochloro	methane =	120%	
Surrogate % Recovery 2-Bromo-1-cl	, ,	108%	
Surrogate % Recovery 1,4-Dichlorob	outane =	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

Sep 9, 1994



8010 Halogenated Volatile Organics Analysis Report

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CH2M Hill

1111 Broadway, Suite 1200

Oakland, CA 94607

Date Sampled:

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Sep 9, 1994

Date Analyzed:

Sep 9, 1994

Project #:

BAE28830.P4.ZZ

Project Name:

Del Monte Plant 35

Client ID:

SA-7

LAB ID:

STM94-09-024A

Matrix:

Soil

Dilution:

1: 1

Name	Amount	Reporting Limit	Units
Bromodichloromethane	ND	1.0	ug/kg
2. Bromoform	ND	2.0	ug/kg
3. Bromomethane	ND	2.0	ug/kg
4. Carbon tetrachloride	ND	1.0	ug/kg
5. Chlorobenzene	ND	1.0	ug/kg
6. Chloroethane	ND	1.0	ug/kg
7. Chloroform	ND	1.0	ug/kg
8. Chloromethane	ND	2.0	ug/kg
9. Dibromochloromethane	ND	1.0	ug/kg
10. 1,2-Dichlorobenzene	ND	1.0	ug/kg
11. 1,3-Dichlorobenzene	ND	1.0	ug/kg
12. 1,4-Dichlorobenzene	· ND	1.0	ug/kg
13. Dichlorodifluoromethane	ND	2.0	ug/kg
14. 1,1-Dichloroethane	ND	1.0	ug/kg
15. 1,2-Dichloroethane	ND	1.0	ug/kg
16. 1,1-Dichloroethylene	ND	1.0	ug/kg
17. Cis-1,2 Dichloroethylene	3.4	1.0	ug/kg
18. Trans-1,2-Dichloroethylene	ND	1.0	ug/kg
19. Dichloromethane	ND	5.0	ug/kg

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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Sep 9, 1994

Project #:

BAE28830.P4.ZZ

Project Name:

Del Monte Plant 35

Client ID:

SA-7

LAB ID:

STM94-09-024A

Matrix:

Soil

Dilution:

1: 1

Name	Amount	Reporting Limit	Units
20. 1,2-Dichloropropane	1.2	1.0	ug/kg
21. Cis-1,3 Dichloropropylene	ND	1.0	ug/kg
22. Trans-1,3-Dichloropropylene	ND	1.0	ug/k g
23. 1,1,2,2-Tetrachloroethane	ND	1.0	ug/kg
24. Tetrachloroethylene	2.7	1.0	ug/kg
25. 1,1,1-Trichloroethane	ND	1.0	ug/kg
26. 1,1,2-Trichtoroethane	ND	1.0	ug/kg
27. Trichloroethylene	2.5	1.0	ug/kg
28. Trichlorofluoromethane	ND	1.0	ug/kg
29. Vinyl Chloride	ND	1.0	ug/kg
Surrogate % Recovery Bromochloromethane =		110%	
Surrogate % Recovery 2-Bromo-1-chloropropane =		98%	
Surrogate % Recovery 1,4-Dichlorot	outane =	98%	

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

Sep 9, 1994

Date Reported



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Oakland, CA 94607

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Date Analyzed:

Sep 9, 1994

Project #:

BAE28830.P4.ZZ

Project Name:

Del Monte Plant 35

Client ID:

UT-1

LAB ID:

STM94-09-026A

Matrix:

Soil

Dilution:

1: 1

Name	Amount	Reporting Limit	Units
1. Bromodichloromethane	ND	1.0	ug/kg
2. Bromoform	ND	2.0	ug/kg
3. Bromomethane	ND	2.0	ug/kg
4. Carbon tetrachloride	ND	1.0	ug/kg
5. Chlorobenzene	ND	1.0	ug/kg
6. Chloroethane	ND	1.0	ug/kg
7. Chloroform	ND	1.0	ug/kg
8. Chloromethane	ND	2.0	ug/kg
9. Dibromochloromethane	ND	1.0	ug/kg
10. 1,2-Dichlorobenzene	ND	1.0	ug/kg
11. 1,3-Dichlorobenzene	ND	1.0	ug/kg
12. 1,4-Dichlorobenzene	ND	1.0	ug/kg
13. Dichlorodifluoromethane	ND	2.0	ug/kg
14. 1,1-Dichloroethane	ND	1.0	ug/kg
15. 1,2-Dichloroethane	ND	1.0	ug/kg
16. 1,1-Dichloroethylene	ND	1.0	ug/kg
17. Cis-1,2 Dichloroethylene	ND	1.0	ug/kg
18. Trans-1,2-Dichloroethylene	ND	1.0	ug/kg
19. Dichloromethane	ND	5.0	ug/kg

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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Oamana, Ort

Project #:

BAE28830.P4.ZZ

Project Name:

Del Monte Plant 35

Client ID:

UT-1

LAB ID:

STM94-09-026A

Matrix:

Soil

Dilution:

1: 1

Name	Amount	Reporting Limit	Units
20. 1,2-Dichloropropane	ND	1.0	ug/kg
21. Cis-1,3 Dichloropropylene	ND	1.0	ug/kg
22. Trans-1,3-Dichloropropylene	ND	1.0	ug/kg
23. 1,1,2,2-Tetrachloroethane	ND	1.0	ug/kg
24. Tetrachloroethylene	2.2	1.0	ug/kg
25. 1,1,1-Trichloroethane	ND	1.0	ug/kg
26. 1,1,2-Trichloroethane	ND	1.0	ug/kg
27. Trichloroethylene	ND	1.0	ug/kg
28. Trichlorofluoromethane	ND	1.0	ug/kg
29. Vinyl Chloride	ND	1.0	ug/kg
Surrogate % Recovery Bromochloromethane =		126%	
Surrogate % Recovery 2-Bromo-1-chloropropane =		110%	
Surrogate % Recovery 1,4-Dichlorot	outane =	102%	

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

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

Sep 9, 1994

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BAE28830.P4.ZZ

Project Name:

Del Monte Plant 35

Client ID:

SB-7

LAB ID:

STM94-09-028A

Matrix:

Soil

Dilution:

1: 1

Name	Amount	Reporting Limit	Units
Bromodichloromethane	ND	1.0	ug/kg
2. Bromoform	ND	2.0	ug/kg
3. Bromomethane	ND	2.0	ug/kg
4. Carbon tetrachtoride	ND	1.0	ug/kg
5. Chlorobenzene	ND	1.0	ug/kg
6. Chloroethane	ND	1.0	ug/kg
7. Chloroform	ND	1.0	ug/kg
8. Chloromethane	ND	2.0	ug/kg
9. Dibromochloromethane	ND	1.0	ug/kg
10. 1,2-Dichlorobenzene	ND	1.0	ug/kg
11. 1,3-Dichlorobenzene	ND	1.0	ug/k g
12. 1,4-Dichlorobenzene	ND	1.0	ug/kg
13. Dichlorodifluoromethane	ND	2.0	ug/kg
14. 1,1-Dichloroethane	ND	1.0	ug/kg
15. 1,2-Dichloroethane	ND	1.0	ug/kg
16. 1,1-Dichloroethylene	ND	1.0	ug/kg
17. Cis-1,2 Dichloroethylene	7.8	1.0	ug/kg
18. Trans-1,2-Dichloroethylene	1.5	1.0	ug/kg
19. Dichloromethane	ND	5.0	ug/kg

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



8010 Halogenated Volatile Organics Analysis Report

Attention:

Ms. Madeline Wall

CH2M Hill

1111 Broadway, Suite 1200

Oakland, CA 94607

Date Sampled:

Sep 9, 1994

Date Received: Date Analyzed: Sep 9, 1994

Sep 9, 1994

Project #:

BAE28830.P4.ZZ

Project Name:

Del Monte Plant 35

Client ID:

SB-7

LAB ID:

STM94-09-028A

Matrix:

Soil

Dilution:

1: 1

Name	Amount	Reporting Limit	Units
20. 1,2-Dichloropropane	1.6	1.0	ug/kg
21. Cis-1,3 Dichloropropylene	ND	1.0	ug/kg
22. Trans-1,3-Dichloropropylene	ND	1.0	ug/kg
23. 1,1,2,2-Tetrachloroethane	ND	1.0	ug/kg
24. Tetrachloroethylene	5.8	1.0	ug/kg
25. 1,1,1-Trichloroethane	ND	1.0	ug/kg
26. 1,1,2-Trichloroethane	ND	1.0	ug/kg
27. Trichloroethylene	6.1	1.0	ug/kg
28. Trichlorofluoromethane	ND	1.0	ug/kg
29. Vinyl Chloride	18	1.0	ug/kg
Surrogate % Recovery Bromochlor	omethane =	123%	
Surrogate % Recovery 2-Bromo-1-	chloropropane =	110%	
Surrogate % Recovery 1,4-Dichlore	obutane =	108%	

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

Sep 9, 1994

Date Reported



8010 Halogenated Volatile Organics Analysis Report

Attention:

Ms. Madeline Wall

CH2M Hill

1111 Broadway, Suite 1200

Oakland, CA 94607

Date Sampled:

Sep 9, 1994

Date Received:

Sep 9, 1994

Date Analyzed:

Sep 9, 1994

Project #:

BAE28830.P4.ZZ

Project Name:

Del Monte Plant 35

Client ID:

SB-8

LAB ID:

STM94-09-030A

Matrix:

Soil

Dilution:

1: 1

Name	Amount	Reporting Limit	Units
1. Bromodichloromethane	ND	1.0	ug/kg
2. Bromoform	ND	2.0	ug/kg
3. Bromomethane	ND	2.0	u g/k g
4. Carbon tetrachloride	ND	1.0	ug/kg
5. Chlorobenzene	ND	1.0	ug/kg
6. Chloroethane	ND	1.0	ug/kg
7. Chloroform	ND	1.0	ug/kg
8. Chloromethane	ND	2.0	ug/kg
9. Dibromochloromethane	ND	1.0	ug/kg
10. 1,2-Dichlorobenzene	ND	1.0	ug/kg
11. 1,3-Dichlorobenzene	ND	1.0	ug/kg
12. 1,4-Dichlorobenzene	· ND	1.0	ug/kg
13. Dichtorodifluoromethane	ND	2.0	ug/kg
14. 1,1-Dichloroethane	ND	1.0	ug/kg
15. 1,2-Dichloroethane	ND	1.0	ug/kg
16. 1,1-Dichloroethylene	ND	1.0	ug/kg
17. Cis-1,2 Dichloroethylene	24	1.0	ug/kg
18. Trans-1,2-Dichloroethylene	4.9	1.0	ug/kg
19. Dichloromethane	ND	5.0	ug/kg

ppb = parts per billion = ug/kg = micrograms per kilog/am

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

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



8010 Halogenated Volatile Organics **Analysis Report**

Attention:

Ms. Madeline Wall

CH2M Hill

1111 Broadway, Suite 1200

Oakland, CA 94607

Date Sampled:

Date Received:

Sep 9, 1994 Sep 9, 1994

Date Analyzed:

Sep 9, 1994

Project #:

BAE28830.P4.ZZ

Project Name:

Del Monte Plant 35

Client ID:

SB-8

LAB ID:

STM94-09-030A

Matrix:

Soil

Dilution:

1: 1

Name	Amount	Reporting Limit	Units
20. 1,2-Dichloropropane	1.8	1.0	ug/kg
21. Cis-1,3 Dichloropropylene	ND	1.0	ug/kg
22. Trans-1,3-Dichloropropylene	ND	1.0	ug/kg
23. 1,1,2,2-Tetrachloroethane	ND	1.0	ug/kg
24. Tetrachloroethylene	23	1.0	ug/kg
25. 1,1,1-Trichloroethane	ND	1.0	ug/kg
26. 1,1,2-Trichloroethane	ND	1.0	ug/kg
27. Trichloroethylene	18	1.0	ug/kg
28. Trichlorofluoromethane	ND	1.0	ug/kg
29. Vinyl Chloride	56	1.0	ug/kg
Surrogate % Recovery Bromochloro	methane =	130%	
Surrogate % Recovery 2-Bromo-1-c	hloropropane =	113%	
Surrogate % Recovery 1,4-Dichloro	butane =	115%	

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

Sep 9, 1994

Date Reported



8010 Halogenated Volatile Organics **Analysis Report**

Attention:

Ms. Madeline Wall

CH2M Hill

1111 Broadway, Suite 1200

Oakland, CA 94607

Date Sampled: Date Received: Sep 9, 1994

Sep 9, 1994

Date Analyzed:

Sep 9, 1994

Project #:

BAE28830.P4.ZZ

Project Name:

Del Monte Plant 35

Client ID:

SP-N

LAB ID:

STM94-09-032A

Matrix:

Soil

Dilution:

1: 2

Name	Amount	Reporting Limit	Units
1. Bromodichloromethane	ND	2.0	ug/kg
2. Bromoform	ND	4.0	ug/kg
3. Bromomethane	ND	4.0	ug/kg
4. Carbon tetrachloride	ND	2.0	ug/kg
5. Chlorobenzene	ND	2.0	ug/kg
6. Chloroethane	ND	2.0	ug/kg
7. Chloroform	ND	2.0	ug/kg
8. Chloromethane	ND	4.0	ug/kg
9. Dibromochloromethane	ND	2.0	ug/kg
10. 1,2-Dichlorobenzene	ND	2.0	ug/kg
11. 1,3-Dichlorobenzene	ND	2.0	ug/kg
12. 1,4-Dichlorobenzene	ND	2.0	ug/kg
13. Dichlorodifluoromethane	ND	4.0	ug/kg
14. 1,1-Dichloroethane	ND	2.0	ug/kg
15. 1,2-Dichloroethane	ND	2.0	ug/kg
16. 1,1-Dichloroethylene	ND	2.0	ug/kg
17. Cis-1,2 Dichloroethylene	2.0	2.0	ug/kg
18. Trans-1,2-Dichloroethylene	ND	2.0	ug/kg
19. Dichloromethane	ND	10.0	ug/kg

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

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

NO = Not Detected - Compound(s) may be present at concentrations below the reporting limit



8010 Halogenated Volatile Organics Analysis Report

Attention:

Ms. Mageline Wall

CH2M Hill

1111 Broadway, Suite 1200

Oakland, CA 94607

Date Sampled:

Sep 9, 1994

Date Received:

Sep 9, 1994

Date Analyzed: Sep

Sep 9, 1994

Project #:

BAE28830.P4.ZZ

Project Name:

Del Monte Plant 35

Client ID:

SP-N

LAB ID:

STM94-09-032A

Matrix:

Soil

Dilution:

1: 2

Name	Amount	Reporting Limit	Units
20. 1,2-Dichloropropane	3.8	2.0	ug/kg
21. Cis-1,3 Dichloropropylene	ND	2.0	ug/kg
22. Trans-1,3-Dichloropropylene	ND	2.0	ug/kg
23. 1,1,2,2-Tetrachloroethane	3.0	2.0	ug/kg
24. Tetrachloroethylene	190	2.0	ug/kg
25. 1,1,1-Trichloroethane	ND	2.0	ug/kg
26. 1,1,2-Trichloroethane	ND	2.0	ug/kg
27. Trichloroethylene	16	2.0	ug/kg
28. Trichlorofluoromethane	ND	2.0	ug/kg
29. Vinyl Chloride	ND	2.0	ug/kg
Surrogate % Recovery Bromochloromethane =		129%	
Surrogate % Recovery 2-Bromo-1-c	hloropropane =	108%	
Surrogate % Recovery 1,4-Dichlorof	outane =	104%	

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

Sep 9, 1994

Date Reported



8010 Halogenated Volatile Organics Analysis Report

Attention:

Ms. Madeline Wall

Date Sampled:

Sep 9, 1994

CH2M Hill

Date Received:

Sep 9, 1994

1111 Broadway, Suite 1200 Oakland, CA 94607 Date Analyzed:

Sep 9, 1994

Project #:

BAE28830.P4.ZZ

Project Name:

Del Monte Plant 35

Client ID:

SP-S

LAB ID:

STM94-09-034A

Matrix:

Soil

Dilution:

1: 10

Name	Amount	Reporting Limit	Units
1. Bromodichloromethane	ND	10.0	ug/kg
2. Bromoform	ND	20.0	ug/kg
3. Bromomethane	ND	20.0	ug/kg
4. Carbon tetrachloride	ND	10.0	ug/kg
5. Chlorobenzene	ND	10.0	ug/kg
6. Chloroethane	ND	10.0	ug/kg
7. Chloroform	ND	10.0	ug/kg
8. Chloromethane	ND	20.0	ug/kg
9. Dibromochloromethane	ND	10.0	ug/kg
10. 1,2-Dichlorobenzene	ND	10.0	ug/kg
11. 1,3-Dichlorobenzene	ND	10.0	ug/kg
12. 1,4-Dichlorobenzene	ND	10.0	ug/kg
13. Dichlorodifluoromethane	ND	20.0	ug/kg
14. 1,1-Dichloroethane	ND	10.0	ug/kg
15. 1,2-Dichloroethane	ND	10.0	ug/kg
16. 1,1-Dichloroethylene	ND	10.0	ug/kg
17. Cis-1,2 Dichloroethylene	71	10.0	ug/kg
18. Trans-1,2-Dichloroethylene	12	10.0	ug/kg
19. Dichloromethane	ND	50.0	ug/kg

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 all concentrations below the reporting into the second of the control of the con



8010 Halogenated Volatile Organics **Analysis Report**

Attention:

Ms. Madeline Wall

CH2M Hill

1111 Broadway, Suite 1200

Oakland, CA 94607

Date Sampled:

Sep 9, 1994

Date Received: Date Analyzed:

Sep 9, 1994

Sep 9, 1994

Project #:

BAE28830.P4.ZZ

Project Name:

Del Monte Plant 35

Client ID:

SP-S

LAB ID:

STM94-09-034A

Matrix:

Soil

Dilution:

1: 10

Name	Amount	Reporting Limit	Units
20. 1,2-Dichloropropane	ND	10.0	ug/kg
21. Cis-1,3 Dichloropropylene	ND	10.0	ug/kg
22. Trans-1,3-Dichloropropylene	ND	10.0	ug/kg
23. 1,1,2,2-Tetrachloroethane	ND	10.0	ug/kg
24. Tetrachloroethylene	330	10.0	ug/kg
25. 1,1,1-Trichloroethane	ND	10.0	ug/kg
26. 1,1,2-Trichloroethane	ND	10.0	ug/kg
27. Trichloroethylene	97	10.0	ug/kg
28. Trichlorofluoromethane	ND	10.0	ug/kg
29. Vinyl Chloride	30	10.0	ug/kg
Surrogate % Recovery Bromochloromethane =		128%	
Surrogate % Recovery 2-Bromo-1-chloropropane =		108%	
Surrogate % Recovery 1,4-Dichlorot	outane =	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 reporting limit

R. L. James, Principal Chemist

Sep 9, 1994

Date Reported



8010 GC Analysis Report Matrix Control Spike (MS) and Matrix Spike Duplicate (MSD)

Attention:

Ms. Madeline Wall

Date Sampled:

Sep. 9, 1994

CH2M Hill

Date Received:

Sep. 9, 1994

1111 Broadway, Suite 1200

Oakland, CA 94607

Date Analyzed:

Sep. 9, 1994

Project #:

BAE28830.P4.ZZ

Project Name:

Del Monte Plant 35

Client ID:

Matrix:

SB-8 MS SB-8 MSD LAB ID:

STM94-09-030A MS STM94-09-030A MSD

Soil

Dilution:

UNITS = ua/ka

On to aging									
	Sample	Spike (ppb)	Spike	Dup.	Spike	Dup.		QC	Limits
Compound	Conc	Added	Result	Result	% Rec	% Rec	RPD	RPD	% Rec
1,1-Dichloroethene	ND	40	39	40	98%	100%	3%	22	59-172
Trichloroethene	18	40	50	50	80%	80%	0%	21	60-133
moniorodinono		.0	00		•••		•		
Chlorobenzene	ND	40	45	42	113%	105%	7%	21	66-142

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

Sep 9, 1994

Date Reported

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

CHAIN OF CUSTODY RECORD Pf 1 & 2 SPARGER TECHNOLOGY. INC. SPARGER TECHNOLOGY ANALYTICAL Analytical Laboratory Phone: (916) 362-8947 3050 Fite Circle, #112 Sacramento, CA 95827 FAX: (916) 362-0947 Phone(516)251-2888 ×2169 3100 File Circle - Suite 108 Company: CHZM HILL. Sacramento, CA 95827 Project Manager: M. Wall STAL Invoice Number: FAX: Report Address: Billing Name & Address: **ANALYSIS REQUEST** REMARKS: Project Name: Del Monte Plant 35 Project/Job #: BAE 28830, PS WET (STLC) Project Location: Emogyville **TCLP** P.O. #: **TCLP** Total Preservative Sampling Container Matrix TAT Used Rush Services (72hr / 48hr / 24hr / 12hr TPHdiesel/TPHmotor oil/kerosene(8015) EPA 608/8080 (Pesticides)/505/508 Ž Non-Poler O & G/TRPH (418.1) ž EPA 601/8010/502.2/504 Total Oil & Grease (5520) BTEX (602/8020)/503.1 EPA 608/8080 (PCB's) ວັ Holiday/Weekend Rush EPA 824/8240/524.2 EPA 625/8270/525 CAM-5 Metals (Cd, 1 L amber bottle CAM-17 Metals Other#9/455 EPA 602/8020 250 mL Plastic HCI/HN03/ICE Organic Lead RC! Brass Sleeve 40 mL VOA Other: Water None **B** Soil Air **SAMPLE ID** Time Date 9 9 94 9:30 9:30 9:40 10:20 Relinguished by; Received by: Relinguished by: Received by: Time: 9:42 Date: 9 Time: Date: Time: Time: Date:

SPARGER TECHNOLOGY. INC. CHAIN OF CUSTODY RECORD pg 2 SPARGER TECHNOLOGY ANALYTI Analytical Laboratory Phone: (916) 362-8947 3100 Fite Circle - Suite 108 Sacramento, CA 95827 3050 Fite Circle, #112 Sacramento, CA 95827 FAX: (916) 362-0947 Phone: (510) 251-2426 Company: CHZM HILL Project Manager: MADELINE WALL FAX: STAL Invoice Number: Billing Name & Address: IIII BROADWAY, SUITE 1200 OAKLAND, CA ANALYSIS REQUEST Project/Job #: BAE 28830, P4, 22 REMARKS: Project Name: WET (STLC) oject Name: DEL MONTE PLANT 35 Project Location: EMERLYVILLE, CA P.O. #: TCLP Preservative TCLP Total Sampling Container Used Matrix TAT 24hr / 12hr TPHdiesel/TPHmotor oil/kerosene(8015) EPA 608/8080 (Pesticides)/505/508 BTEX/TPHgas (602/8020/8015) Non-Polar O & G/TRPH (418.1) ź Rush Services (72hr / 48hr / EPA 601(8010/502.2/504 Fotal Oil & Grease (5520) EPA 608/8080 (PC8's) BTEX (602/8020)/503.1 ភ Holidsy/Weekend Rush EPA 624/8240/524.2 CAM-5 Metals (Cd, 1 L amber bottle CAM-17 Metals 250 mL Plastic EPA 602/8020 HCI/HN03/ICE Organic Lead Brass Sleeve 40 mL VOA Standard Other: Other: Water Other: None Soil ភ្ជ **SAMPLE ID** Date Time 1345 1400 X X 1520 X 1525 Received by: Religiouished by; Relinguished by: Received by: Time: Time:

Environmental Services (SDB)

September 22, 1994

Submission #: 9409242

CH2M HILL OAKLAND

Atten: Madeline Wall

Project: DEL MONTE 35

Received: September 16, 1994

Method: EPA 5030/8015M/8020

Project#: BAE28830.P5.ZZ

re: 11 samples for Gasoline and BTEX analysis.

Matrix: SOIL

Sampled: September 16, 1994 Run#: 3925

Analyzed: September 21, 1994

Spl # CLIENT SMPL ID	Gasoline (mg/Kg)	Benzene (ug/Kg)	Toluene (ug/Kg)	Ethyl Benzene (ug/Kg)	Total Xylenes (ug/Kg)
63052 ST-1-1/2/3/4	N.D.	N.D.	N.D.	N.D.	N.D.
63053 ST-2-1/2/3/4	1.3	N.D.	N.D.	N.D.	5.7
63054 ST-3-1/2/3/4	17	N.D.	N.D.	14	28
63055 ST-4-1/2/3/4	N.D.	N.D.	N.D.	N.D.	N.D.
63056 ST-5-1/2/3/4	3.5	N.D.	N.D.	N.D.	8.3
63057 ST-6-1/2/3/4	N.D.	N.D.	N.D.	N.D.	N.D.
63058 ST-7-1/2/3/4	1.4	N.D.	N.D.	N.D.	N.D.
63059 ST-8-1/2/3/4	N.D.	N.D.	N.D.	N.D.	N.D.
63060 ST-9-1/2/3/4	11	N.D.	N.D.	8.8	19
63061 ST-10-1/2/3/4	8.6	N.D.	N.D.	8.7	18
63062 ST-11-1/2/3/4	2.0	N.D.	N.D.	N.D.	N.D.
Reporting Limits	1.0	5.0	5.0	5.0	5.0
Blank Result	N.D.	N.D.	N.D.	N.D.	N.D.
Blank Spike Result (%)		95	97	94	95

Billy (Thach

Chemist

Environmental Services (SDB)

September 23, 1994

Submission #: 9409242

CH2M HILL OAKLAND

Atten: Madeline Wall

Project: DEL MONTE 35

Project#: BAE28830.P5.ZZ

Received: September 16, 1994

re: Eleven samples for TEPH analysis

Matrix: SOIL

Extracted: September 20, 1994

Sampled: September 16, 1994 Analyzed: September 20-21, 1994

Method: 3550/8015

Sample #	Client Sample ID	Kerosene (mg/Kg)	Diesel (mg/Kg)	Motor Oil (mg/Kg)
(2052	GT 1 1 0 2 4	2.0	NT D	62
63052	ST-1-1,2,3,4	3.8	N.D.	62
63053	ST-2-1,2,3,4	10	N.D.	140
6305 4	ST-3-1,2,3,4	130	N.D.	240
63055	ST-4-1,2,3,4	30	N.D.	150
63056	ST-5-1,2,3,4	17	N.D.	100
63057	ST-6-1,2,3,4	3.0	N.D.	160
63058	ST-7-1,2,3,4	N.D.	N.D.	58
63059	ST-8-1,2,3,4	14	N.D.	94
63060	ST-9-1,2,3,4	200	N.D.a	250
63061	ST-10-1,2,3,4	39	N.D.	170
63062	ST-11-1,2,3,4	12	N.D.	50

a - Reporting limit equals 5.0 mg/Kg due to dilution.

Blank	N.D.	N.D.	N.D.
Spike Recovery		106%	
Dup Spike Recovery		82%	_
Reporting Limit	1.0	1.0	10

ChromaLab, Inc.

Alex Tam

Analytical Chemist

Environmental Services (SDB)

September 23, 1994

Submission #: 9409242

CH2M HILL OAKLAND

Atten: Madeline Wall

Project: DEL MONTE 35

Received: September 16, 1994

Project#: BAE28830.P5.ZZ

re: One sample for Volatile Halogenated Organics analysis.

Sample ID: ST-11-1/2/3/4

Spl#: 63062 Matrix: SOIL

Sampled: September 16, 1994 Run#: 3964 Analyzed: September 21, 1994

Method: EPA 8010

110 0110 0111 0 0 1 0		REPORTING	BLANK	BLANK SPIKE
	RESULT	LIMIT	RESULT	RESULT
ANALYTE	(ug/Kg)	(ug/Kg)	(ug/Kg)	(%)
CHLOROMETHANE	N.D.	5.0	N.D.	
VINYL CHLORIDE	N.D.	5.0	N.D.	
BROMOCHLOROMETHANE	N.D.	5.0	N.D.	
CHLOROETHANE	N.D.	5.0	N.D.	
TRICHLOROFLUOROMETHANE	N.D.	5.0	N.D.	
1,1-DICHLOROETHENE	N.D.	5.0	N.D.	89
METHYLENE CHLORIDE	N.D.	25	N.D.	- -
TRANS-1,2-DICHLOROETHENE	N.D.	5.0	N.D.	
CIS-1,2-DICHLOROETHENE	N.D.	5.0	N.D.	
1,1-DICHLOROETHANE	N.D.	5.0	N.D.	
CHLOROFORM	N.D.	5.0	N.D.	
1,1,1-TRICHLOROETHANE	N.D.	5.0	N.D.	- -
CARBON TETRACHLORIDE	N.D.	5.0	N.D.	
1,2-DICHLOROETHANE	N.D.	5.0	N.D.	
TRICHLOROETHENE	N.D.	5.0	N.D.	109
1,2-DICHLOROPROPANE	N.D.	5.0	N.D.	
BROMODICHLOROMETHANE	N.D.	5.0	N.D.	
2-CHLOROETHYL VINYL ETHER	N.D.	5.0	N.D.	
TRANS-1,3-DICHLOROPROPENE	Ŋ.D.	5.0	Ŋ.D.	
CIS-1,3-DICHLOROPROPENE	Ŋ.D.	5.0	Ŋ.D.	
1,1,2-TRICHLOROETHANE	N.D.	5.0	N.D.	- -
TETRACHLOROETHENE	20	5.0	N.D.	
DIBROMOCHLOROMETHANE	N.D.	5.0	N.D.	110
CHLOROBENZENE	N.D.	5.0	N.D.	110
BROMOFORM	N.D.	5.0	N.D.	
1,1,2,2-TETRACHLOROETHANE	N.D.	5.0	N.D.	
1,3-DICHLOROBENZENE	N.D.	5.0	N.D.	
1,4-DICHLOROBENZENE	N.D.	5.0	N.D.	
1,2-DICHLOROBENZENE	N.D.	5.0	N.D. N.D.	
TRICHLOROTRIFLUOROETHANE	N.D.	5.0	IN . D .	

Caron McMichael

Chemist

Environmental Services (SDB)

September 23, 1994

Submission #: 9409242

BAE28830.P5.ZZ

Analyzed: September 21, 1994

Project#:

CH2M HILL OAKLAND

Atten: Madeline Wall

Project: DEL MONTE 35

Received: September 16, 1994

re: One sample for Volatile Halogenated Organics analysis.

Sample ID: ST-1-1/2/3/4

Spl#: 63052 Matrix: SOIL Sampled: September 16, 1994 Run#: 3964

Method: EPA 8010

REPORTING BLANK BLANK SPIKE RESULT LIMIT RESULT RESULT (ug/Kg) (%) (ug/Kg) <u>ANALYTE</u> (ug/Kg) CHLOROMETHANE N.D. N.D. 5.0 5.0 N.D. N.D. VINYL CHLORIDE 5.0 BROMOCHLOROMETHANE N.D. N.D. CHLOROETHANE N.D. N.D. TRICHLOROFLUOROMETHANE N.D. 5.0 N.D. 89 1,1-DICHLOROETHENE N.D. N.D. METHYLENE CHLORIDE TRANS-1,2-DICHLOROETHENE CIS-1,2-DICHLOROETHENE N.D. 25 N.D. N.D. N.D. N.D. 1,1-DICHLOROETHANE N.D. CHLOROFORM N.D. 1,1,1-TRICHLOROETHANE N.D. CARBON TETRACHLORIDE N.D. 1,2-DICHLOROETHANE N.D. N.D. TRICHLOROETHENE 109 N.D. N.D. 1,2-DICHLOROPROPANE N.D. N.D. BROMODICHLOROMETHANE N.D. N.D. 2-CHLOROETHYL VINYL ETHER N.D. N.D. TRANS-1,3-DICHLOROPROPENE N.D. N.D. CIS-1,3-DICHLOROPROPENE 1,1,2-TRICHLOROETHANE N.D. N.D. N.D. TETRACHLOROETHENE N.D. DIBROMOCHLOROMETHANE N.D. CHLOROBENZENE N.D. N.D. 110 BROMOFORM N.D. N.D. 1,1,2,2-TETRACHLOROETHANE 1,3-DICHLOROBENZENE N.D. N.D. N.D. 1,4-DICHLOROBENZENE N.D. N.D. 2-DICHLOROBENZENE 5.0 N.D. N.D. TRICHLOROTRIFLUOROETHANE N.D.

Juran Mc Mikael

Chemist

Environmental Services (SDB)

September 23, 1994

Submission #: 9409242

Analyzed: September 21, 1994

CH2M HILL OAKLAND

Atten: Madeline Wall

Project: DEL MONTE 35

Received: September 16, 1994

Project#: BAE28830.P5.ZZ

re: One sample for Volatile Halogenated Organics analysis.

Sample ID: ST-2-1/2/3/4

Sp1#: 63053

Matrix: SOIL Sampled: September 16, 1994 Run#: 3964

Method: EPA 8010

		REPORTING	BLANK	BLANK SPIKE
	RESULT	LIMIT	RESULT	RESULT
ANALYTE	(ug/Kg)	(ug/Kg)	(ug/Kg)	(%)
CHLOROMETHANE	N.D.	5.0	N.D.	
VINYL CHLORIDE	N.D.	5.0	N.D.	- -
BROMOCHLOROMETHANE	N.D.	5.0	N.D.	·
CHLOROETHANE	N.D.	5.0 5.0	N.D.	
TRICHLOROFLUOROMETHANE	N.D.	5.0	N.D. N.D.	
1,1-DICHLOROETHENE	N.D.	5.0	N.D.	89
METHYLENE CHLORIDE	N.D.	25	N.D.	
TRANS-1,2-DICHLOROETHENE	N.D.	5.0	N.D.	
CIS-1,2-DICHLOROETHENE	N.D.	5.0	N.D.	
1,1-DICHLOROETHANE	N.D.	5.0	N.D.	
CHLOROFORM	N.D.	5.0	N.D.	
1,1,1-TRICHLOROETHANE	N.D.	5.0	N.D.	
CARBON TETRACHLORIDE	N.D.	5.0 5.0 5.0	N.D.	
1,2-DICHLOROETHANE	N.D.	5.0	N.D.	
TRICHLOROETHENE	7.1	5.0	N.D.	109
1,2-DICHLOROPROPANE	N.D.	5.0	N.D.	
BROMODICHLOROMETHANE	N.D.	5.0	Ŋ.D.	
2-CHLOROETHYL VINYL ETHER		5.0	Ŋ.D.	- -
TRANS-1,3-DICHLOROPROPENE	N.D.	5.0	N.D.	
CIS-1,3-DICHLOROPROPENE	N.D.	5.0	N.D.	
1,1,2-TRICHLOROETHANE	Ŋ.D.	5.0	N.D.	
TETRACHLOROETHENE	-59_	40	Ŋ.D.	= =
DIBROMOCHLOROMETHANE	$\mathbf{N} \cdot \mathbf{D}$.	5.0	N.D.	
CHLOROBENZENE	N.D.	5.0	N.D.	110
BROMOFORM	N.D.	5.0	N.D. N.D.	
1,1,2,2-TETRACHLOROETHANE	N.D.	5.0	и.р.	
1,3-DICHLOROBENZENE	Ŋ.D.	5.0	Ŋ.D.	
1,4-DICHLOROBENZENE 1,2-DICHLOROBENZENE	N.D.	5.0	N.D.	
	Ŋ.D.	5.0	N.D.	
TRICHLOROTRIFLUOROETHANE	N.D.	5.0	N.D.	

Mihael

Chemist

Organic Manager

Environmental Services (SDB)

September 23, 1994

Submission #: 9409242

Analyzed: September 21, 1994

CH2M HILL OAKLAND

Atten: Madeline Wall

Project: DEL MONTE 35

Project#: BAE28830.P5.ZZ

Received: September 16, 1994

re: One sample for Volatile Halogenated Organics analysis.

Sample ID: ST-3-1/2/3/4

Spl#: 63054 Matrix: SOIL Sampled: September 16, 1994 Run#: 3964

Method: EPA 8010

RESULT LIMIT RESULT RESUL	ľ
ANALYTE (ug/Kg) (ug/Kg) (ug/Kg) $(%)$	
CHLOROMETHANE N.D. 5.0 N.D	
VINYL CHLORIDE N.D. 5.0 N.D	
BROMOCHLOROMETHANE N.D. 5.0 N.D	
CHLOROETHANE N.D. 5.0 N.D	
TRICHLOROFLUOROMETHANE N.D. 5.0 N.D	
1,1-DICHLOROETHENE N.D. 5.0 N.D. 89	
METHYLENE CHLORIDE N.D. 25 N.D	
TRANS-1,2-DICHLOROETHENE N.D. 5.0 N.D	
CIS-1,2-DICHLOROETHENE 27 5.0 N.D	
1,1-DICHLOROETHANE N.D. 5.0 N.D	
CHLOROFORM N.D. 5.0 N.D	
1,1,1-TRICHLOROETHANE N.D. 5.0 N.D	
CARBON TETRACHLORIDE N.D. 5.0 N.D	
1,2-DICHLOROETHANE N.D. 5.0 N.D	
TRICHLOROETHENE 59 45 N.D. 109	
1,2-DICHLOROPROPANE N.D. 5.0 N.D	
BROMODICHLOROMETHANE N.D. 5.0 N.D	
2-CHLOROETHYL VINYL ETHER N.D. 5.0 N.D	
TRANS-1,3-DICHLOROPROPENE N.D. 5.0 N.D	
CIS-1,3-DICHLOROPROPENE N.D. 5.0 N.D	
1,1,2-TRICHLOROETHANE N.D. 5.0 N.D	
TETRACHLOROETHENE 640 45 N.D	
DIBROMOCHLOROMETHANE N.D. 5.0 N.D	
CHLOROBENZENE N.D. 5.0 N.D. 110	
BROMOFORM N.D. 5.0 N.D	
1,1,2,2-TETRACHLOROETHANE N.D. 5.0 N.D	
1,3-DICHLOROBENZENE N.D. 5.0 N.D	
1,4-DICHLOROBENZENE N.D. 5.0 N.D	
1,2-DICHLOROBENZENE N.D. 5.0 N.D	
TRICHLOROTRIFLUOROETHANE N.D. 5.0 N.D	

aven Mc Michael

Chemist

Environmental Services (SDB)

September 23, 1994

Submission #: 9409242

CH2M HILL OAKLAND

Atten: Madeline Wall

Project: DEL MONTE 35

Received: September 16, 1994

Project#: BAE28830.P5.ZZ

re: One sample for Volatile Halogenated Organics analysis.

Sample ID: ST-4-1/2/3/4

Spl#: 63055 Matrix: SOIL

Sampled: September 16, 1994 Run#: 3964 Analyzed: September 21, 1994

Method: EPA 8010

		REPORTING	BLANK	BLANK SPIKE
	RESULT	LIMIT	RESULT	RESULT
ANALYTE	(ug/Kg)	(ug/Kg)	(uq/Kq)	(%)
CHLOROMETHANE	N.D.	5.0	N.D.	
VINYL CHLORIDE	N.D.	5.0	N.D.	
BROMOCHLOROMETHANE	N.D.	5.0	N.D.	
CHLOROETHANE	N.D.	5.0	N.D.	
TRICHLOROFLUOROMETHANE	N.D.	5.0	N.D.	
1,1-DICHLOROETHENE	N.D.	5.0	N.D.	89
METHYLENE CHLORIDE	N.D.	25	N.D.	
TRANS-1,2-DICHLOROETHENE	N.D.	5.0	N.D.	
CIS-1,2-DICHLOROETHENE	N.D.	5.0	N.D.	- -
1,1-DICHLOROETHANE	N.D.	5.0	N.D.	
CHLOROFORM	N.D.	5.0	N.D.	
1,1,1-TRICHLOROETHANE	N.D.	5.0	N.D.	
CARBON TETRACHLORIDE	N.D.	5.0	N.D.	
1,2-DICHLOROETHANE	N.D.	5.0	N.D.	
TRICHLOROETHENE	8.6	5.0	N.D.	109
1,2-DICHLOROPROPANE	N.D.	5.0	N.D.	
BROMODICHLOROMETHANE	Ŋ.D.	5.0	Ŋ.D.	
2-CHLOROETHYL VINYL ETHER	N.D.	5.0	N.D.	
TRANS-1,3-DICHLOROPROPENE	N.D.	5.0	N.D.	
CIS-1,3-DICHLOROPROPENE	N.D.	5.0	N.D.	
1,1,2-TRICHLOROETHANE	N.D.	5.0	N.D.	 .
TETRACHLOROETHENE	65_	5.0	Ŋ.D.	
DIBROMOCHLOROMETHANE	N.D.	5.0	N.D.	
CHLOROBENZENE	N.D.	5.0	N.D.	110
BROMOFORM	N.D.	5.0	N.D.	
1,1,2,2-TETRACHLOROETHANE	·N.D.	5.0	Ŋ.D.	- -
1,3-DICHLOROBENZENE	N.D.	5.0	Ŋ.D.	
1,4-DICHLOROBENZENE	N.D.	5.0	N.D.	
1,2-DICHLOROBENZENE	Ŋ.D.	5.0	N.D.	
TRICHLOROTRIFLUOROETHANE	N.D.	5.0	N.D.	

Federal ID #68-0140157

aron McMichael

Chemist

Environmental Services (SDB)

September 23, 1994

Submission #: 9409242

CH2M HILL OAKLAND

Atten: Madeline Wall

Project: DEL MONTE 35

Project#: BAE28830.P5.ZZ

Received: September 16, 1994

re: One sample for Volatile Halogenated Organics analysis.

Sample ID: ST-5-1/2/3/4

Spl#: 63056 Sampled: September 16, 1994 Matrix: SOIL Run#: 3964

Analyzed: September 21, 1994

Method: EPA 8010

		REPORTING	BLANK	BLANK SPIKE
•	RESULT	LIMIT	RESULT	RESULT
ANALYTE	(ug/Kg)	(ug/Kg)	(ug/Kg)	(%)
CHLOROMETHANE	N.D.	5.0	N.D.	- - -
VINYL CHLORIDE	N.D.	5.0	N.D.	
BROMOCHLOROMETHANE	N.D.	5.0	N.D.	
CHLOROETHANE	N.D.	5.0	N.D.	
TRICHLOROFLUOROMETHANE	N.D.	5.0	N.D.	
1,1-DICHLOROETHENE	N.D.	5.0	N.D.	89
METHYLENE CHLORIDE	N.D.	25	N.D.	- -
TRANS-1,2-DICHLOROETHENE	N.D.	5.0	N.D.	
CIS-1,2-DICHLOROETHENE	5.7	5.0	N.D.	
1,1-DICHLOROETHANE	N.D.	5.0	N.D.	- -
CHLOROFORM	N.D.	5.0	N.D.	
1,1,1-TRICHLOROETHANE	N.D.	5.0	N.D.	
CARBON TETRACHLORIDE	N.D.	5.0	N.D.	
1,2-DICHLOROETHANE	N.D.	5.0	N.D.	.
TRICHLOROETHENE	20	5.0	N.D.	109
1,2-DICHLOROPROPANE	N.D.	5.0	N.D.	
BROMODICHLOROMETHANE	N.D.	5.0	N.D.	
2-CHLOROETHYL VINYL ETHER	N.D.	5.0	N.D.	
TRANS-1,3-DICHLOROPROPENE	N.D.	5.0	N.D.	
CIS-1,3-DICHLOROPROPENE	Ŋ.D.	5.0	N.D.	- -
1,1,2-TRICHLOROETHANE	N.D.	5.0	N.D.	
TETRACHLOROETHENE	220	45	N.D.	
DIBROMOCHLOROMETHANE	N.D.	5.0	N.D.	
CHLOROBENZENE	N.D.	5.0	N.D.	
BROMOFORM	N.D.	5.0	N.D.	
1,1,2,2-TETRACHLOROETHANE	N.D.	5.0	N.D.	- -
1,3-DICHLOROBENZENE	N.D.	5.0	Ŋ.D.	
1,4-DICHLOROBENZENE	.N.D.	5.0	N.D.	
1,3-DICHLOROBENZENE 1,4-DICHLOROBENZENE 1,2-DICHLOROBENZENE TRICHLOROTRIFLUOROETHANE	N.D.	5.0	N.D.	
TRICHLOROTRIFLUOROETHANE	N.D.	5.0	N.D.	

Aaron McMichael

Chemist

Environmental Services (SDB)

September 23, 1994

Submission #: 9409242

Analyzed: September 21, 1994

CH2M HILL OAKLAND

Atten: Madeline Wall

Project: DEL MONTE 35

Received: September 16, 1994

Project#: BAE28830.P5.ZZ

re: One sample for Volatile Halogenated Organics analysis.

Sample ID: ST-6-1/2/3/4

Spl#: 63057 Matrix: SOIL Sampled: September 16, 1994 Run#: 3964

Method: EPA 8010

ndened. Hill out		REPORTING	BLANK	BLANK SPIKE
	RESULT	LIMIT	RESULT	RESULT
ANALYTE	(ug/Kg)	(ug/Kg)	(ug/Kg)	(%)
CHLOROMETHANE	N.D.	5.0	N.D.	
VINYL CHLORIDE	N.D.	5.0	N.D.	
BROMOCHLOROMETHANE	N.D.	5.0	N.D.	
CHLOROETHANE	N.D.	5.0	N.D.	
TRICHLOROFLUOROMETHANE	N.D.	5.0	N.D.	- -
1,1-DICHLOROETHENE	N.D.	5.0	N.D.	89
METHYLENE CHLORIDE	N.D.	25	N.D.	
TRANS-1,2-DICHLOROETHENE	N.D.	5.0	N.D.	
CIS-1,2-DICHLOROETHENE	N.D.	5.0	N.D.	
1,1-DICHLOROETHANE	\cdot N.D.	5.0	N.D.	- -
CHLOROFORM	N.D.	5.0	N.D.	- -
1,1,1-TRICHLOROETHANE	N.D.	5.0	N.D.	
CÁRBON TETRACHLORIDE	N.D.	5.0	N.D.	
1,2-DICHLOROETHANE	N.D.	5.0	N.D.	
TRICHLOROETHENE	N.D.	5.0	N.D.	109
1,2-DICHLOROPROPANE	N.D.	5.0	N.D.	- -
BROMODICHLOROMETHANE	N.D.	5.0	N.D.	
2-CHLOROETHYL VINYL ETHER	N.D.	5.0	N.D.	
TRANS-1,3-DICHLOROPROPENE	N.D.	5.0	N.D.	
CIS-1,3-DICHLOROPROPENE	N.D.	5.0	N.D.	
1,1,2-TRICHLOROETHANE	N.D.	5.0	N.D.	
TETRACHLOROETHENE	5.2	5.0	N.D.	·
DIBROMOCHLOROMETHANE	N.D.	5.0	N.D.	
CHLOROBENZENE	Ņ.D.	5.0	N.D.	110
BROMOFORM	N.D.	5.0	N.D.	
1,1,2,2-TETRACHLOROETHANE	N.D.	5.0	N.D.	
1,3-DICHLOROBENZENE	N.D.	5.0	N.D.	
1,4-DICHLOROBENZENE	N.D.	5.0	Ŋ.D.	
1,2-DICHLOROBENZENE	N.D.	5.0	Ŋ.D.	
TRICHLOROTRIFLUOROETHANE	N.D.	5.0	N.D.	

Maron McMichael

Chemist

Environmental Services (SDB)

September 23, 1994

Submission #: 9409242

CH2M HILL OAKLAND

Atten: Madeline Wall

Project: DEL MONTE 35

Project#: BAE28830.P5.ZZ

Received: September 16, 1994

re: One sample for Volatile Halogenated Organics analysis.

Sample ID: ST-7-1/2/3/4

Spl#: 63058 M Sampled: September 16, 1994

Matrix: SOIL Run#: 3964

Analyzed: September 21, 1994

Method: EPA 8010

		REPORTING	BLANK	BLANK SPIKE
	RESULT	LIMIT	RESULT	RESULT
ANALYTE	(ug/Kg)	(ug/Kg)	(uq/Kq)	(%)
CHLOROMETHANE	N.D.	5.0	N.D.	
VINYL CHLORIDE	N.D.	5.0	N.D.	
BROMOCHLOROMETHANE	N.D.	5.0	N.D.	 .
CHLOROETHANE	N.D.	5.0	N.D. N.D.	- -
TRICHLOROFLUOROMETHANE	N.D.	5.0	N.D.	
1,1-DICHLOROETHENE	N.D.	5.0	N.D.	89
METHYLENE CHLORIDE	N.D.	25	N.D.	. ——
TRANS-1,2-DICHLOROETHENE	N.D.	5.0	N.D.	 - ·
CIS-1,2-DICHLOROETHENE	23	5.0 5.0	N.D. N.D.	
1,1-DICHLOROETHANE	N.D.	5.0	N.D.	
CHLOROFORM	N.D.	5.0	N.D.	—. —.
1,1,1-TRICHLOROETHANE	N.D.	5.0	N.D.	
CARBON TETRACHLORIDE	N.D.	5.0	N.D.	- -
1,2-DICHLOROETHANE	N.D.	5.0	N.D. N.D.	
TRICHLOROETHENE	30	5.0	N.D.	109
1,2-DICHLOROPROPANE	N.D.	5.0	N.D.	
BROMODICHLOROMETHANE	N.D.	5.0	N.D.	
2-CHLOROETHYL VINYL ETHER	N.D.	5.0	N.D.	
TRANS-1,3-DICHLOROPROPENE	N.D.	5.0	N.D.	 .
CIS-1,3-DICHLOROPROPENE	N.D.	5.0	N.D.	
1,1,2-TRICHLOROETHANE	N.D.	5.0	N.D.	
TETRACHLOROETHENE	300	<u>4</u> 5	N.D.	
DIBROMOCHLOROMETHANE	N.D.	5.0	N.D.	
CHLOROBENZENE	N.D.	5.0	N.D.	110
BROMOFORM	N.D.	5.0	Ŋ.D.	- -
1,1,2,2-TETRACHLOROETHANE	N.D.	5.0	Ŋ.D.	
1,3-DICHLOROBENZENE	N.D.	5.0	Ŋ.D.	
	N.D.	5.0	N.D.	
	N.D.	5.0	N.D.	
TRICHLOROTRIFLUOROETHANE	N.D.	5.0	N.D.	

Jaron Mc Michael
Aaron McMichael

Chemist

Environmental Services (SDB)

September 23, 1994

Submission #: 9409242

BLANK

BLANK SPIKE

CH2M HILL OAKLAND

Madeline Wall Atten:

Project: DEL MONTE 35

Received: September 16, 1994 Project#: BAE28830.P5.ZZ

One sample for Volatile Halogenated Organics analysis.

Sample ID: ST-8-1/2/3/4

Spl#: 63059 Matrix: SOIL

REPORTING

Analyzed: September 21, 1994 Sampled: September 16, 1994 Run#: 3964 Method: EPA 8010

RESULT LIMIT RESULT RESULT (%) (ug/Kg) <u>ANALYTE</u> (ug/Kg) (ug/Kg)CHLOROMETHANE N.D. 5.0 N.D. 5.0 N.D. VINYL CHLORIDE N.D. N.D. BROMOCHLOROMETHANE 5.0 N.D. CHLOROETHANE 5.0 N.D. N.D. TRICHLOROFLUOROMETHANE N.D. N.D. 5.0 1,1-DICHLOROETHENE 89 N.D. 5.0 N.D. MÉTHYLENE CHLORIDE 25 N.D. N.D.

TRANS-1, 2-DICHLOROETHENE N.D. 5.0 N.D. CIS-1,2-DICHLOROETHENE 5.0 N.D. N.D. 1,1-DICHLOROETHANE 5.0 N.D. _ _ N.D. CHLOROFORM N.D. 5.0 N.D. 1,1,1-TRICHLOROETHANE 5.0 N.D. N.D. CARBON TETRACHLORIDE 5.0 N.D. N.D. 1,2-DICHLOROETHANE N.D. 5.0 N.D.

109 N.D. 5.0 N.D. TRICHLOROETHENE 1,2-DICHLOROPROPANE N.D. N.D. BROMODICHLOROMETHANE N.D. N.D. N.D. 2-CHLOROETHYL VINYL ETHER N.D. TRANS-1,3-DICHLOROPROPENE N.D. N.D. CIS-1,3-DICHLOROPROPENE N.D. N.D.

1,1,2-TRICHLOROETHANE N.D. N.D. N.D. TETRACHLOROETHENE 6.3 DIBROMOCHLOROMETHANE 5.0 N.D. N.D. 110 5.0 N.D. CHLOROBENZENE N.D.

BROMOFORM 5.0 N.D. N.D. 1,1,2,2-TETRACHLOROETHANE N.D. 5.0 N.D. 1,3-DICHLOROBENZENE N.D. 5.0 N.D. N.D.

1,4-DICHLOROBENZENE 5.0 N.D. 2-DICHLOROBENZENE 5.0 N.D. N.D. TRICHLOROTRIFLUOROETHANE N.D.

Ali Kharfazi Organic Manager

Aaron McMichael

Chemist

Environmental Services (SDB)

September 23, 1994

Submission #: 9409242

CH2M HILL OAKLAND

Atten: Madeline Wall

Project: DEL MONTE 35

Received: September 16, 1994

Project#: BAE28830.P5.ZZ

re: One sample for Volatile Halogenated Organics analysis.

Sample ID: ST-9-1/2/3/4

Spl#: 63060 Matrix: SOIL Sampled: September 16, 1994 Run#: 3964

Method: EPA 8010

Analyzed: September 21, 1994

	REPORTING	BLANK	BLANK SPIKE
RESULT	LIMIT	RESULT	RESULT
(ug/Kg)	(ug/Kg)	(ug/Kg)	(%)
		N.D.	
		N.D.	<u></u>
	5.0	N.D.	
	5.0	N.D.	
N.D.	5.0	N.D.	
N.D.		N.D.	89
'N.D.		N.D.	
N.D.	5.0	N.D.	
N.D.	5.0	N.D.	
	5.0		
N.D.	5.0	N.D.	
N.D.	5.0	N.D.	
N.D.	5.0	N.D.	- -
			
N.D.	5.0	N.D.	- -
N.D.	5.0	N.D.	
N.D.		N.D.	
	5.0	N.D.	- -
	5.0	N.D.	- -
	5.0		
N.D.	5.0		
N.D.	5.0	N.D.	
N.D.	5.0	N.D.	
$\cdot N \cdot D$.			
N.D.			
N.D.	5.0	N.D.	
	(ug/Kg) N.D. N.D. N.D. N.D.	(ug/Kg) (ug/Kg) N.D. 5.0 N.D. 5.0<	RESULT

Aaron McMichael

Chemist

Environmental Services (SDB)

September 23, 1994

Submission #: 9409242

CH2M HILL OAKLAND

Atten: Madeline Wall

Project: DEL MONTE 35

Received: September 16, 1994

Project#: BAE28830.P5.ZZ

One sample for Volatile Halogenated Organics analysis.

Sample ID: ST-10-1/2/3/4

Spl#: 63061

Sampled: September 16, 1994

Matrix: SOIL

Run#: 3964

Analyzed: September 21, 1994

Method: EPA 8010

ANALYTE	RESULT	REPORTING LIMIT (ug/Kg)	BLANK RESULT (ug/Kg)	BLANK SPIKE RESULT (%)
CHLOROMETHANE	N.D.	5.0	N.D.	
VINYL CHLORIDE	N.D.	5.0	N.D.	
BROMOCHLOROMETHANE	N.D.	5.0	N.D.	
CHLOROETHANE	N.D.	5.0	N.D.	
TRICHLOROFLUOROMETHANE	N.D.	5.0	N.D.	
1,1-DICHLOROETHENE	N.D.	5.0	N.D.	89
METHYLENE CHLORIDE	N.D.	25	N.D.	
TRANS-1,2-DICHLOROETHENE	N.D.	5.0	N.D.	
CIS-1,2-DICHLOROETHENE	N.D.	5.0	N.D.	
1,1-DÍCHLOROETHANE	N.D.	5.0	N.D.	
CHLOROFORM	N.D.	5.0 5.0	N.D.	
1,1,1-TRICHLOROETHANE	N.D.	5.0	N.D.	
CARBON TETRACHLORIDE	N.D.	5.0	N.D.	
1,2-DICHLOROETHANE	N.D.	5.0	N.D.	4.00
TRICHLOROETHENE	7.4	5.0	N.D.	109
1,2-DICHLOROPROPANE	N.D.	5.0	N.D.	
BROMODICHLOROMETHANE	N.D.	5.0	N.D.	
2-CHLOROETHYL VINYL ETHER	N.D.	5.0	N.D.	
TRANS-1,3-DICHLOROPROPENE	N.D.	5.0	N.D.	
CIS-1,3-DICHLOROPROPENE	N.D.	5.0	N.D.	
1,1,2-TRICHLOROETHANE	N.D.	5.0	N.D.	
TETRACHLOROETHENE	350	47	N.D.	
DIBROMOCHLOROMETHANE	N.D.	5.0	N.D.	
CHLOROBENZENE	N.D.	5.0	N.D.	110
BROMOFORM	N.D.	5.0	N.D.	
1,1,2,2-TETRACHLOROETHANE	N.D.	5.0	N.D.	
1,3-DICHLOROBENZENE	N.D.	5.0	N.D.	
1,4-DICHLOROBENZENE	N.D.	5.0	N.D.	
1,2-DICHLOROBENZENE	N.D.	5.0	N.D.	
TRICHLOROTRIFLUOROETHANE	N.D.	5.0	N.D.	

- Michael Maron McMichael

Chemist

Organic Manager

QUALITY ANALYTICAL LABORATORIES, INC.

SUBM #: 9409242 CLIENT: CH2

DUE: 09/23/94

REF #:18437

63062

Project # Purchase Order # BAE 28830. P.S. Z.Z.	Γ	a Dept.		413	LABTES	CODES		5	HADED AREA- F	OR WAB USE	ONLY
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Company Name	F	100	膠	T MIN			100 100	1 1			
Project Manager & Phone # Report Copy to:	C	1000000	- Parental		ANALYSES	REQUESTE	D	PH	oject (220
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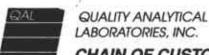
9409242 CF # 18437



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QUALITY ANALYTICAL LABORATORIES, INC.

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QUALITY ANALYTICAL LABORATORIES, INC.

CHAIN OF CUSTODY RECORD AND AGREEMENT TO PERFORM SERVICES

940924755/5

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Project Manager & Phone # Report Copy to: Mr. [] May Floring Copy to: Mr. [] May Floring Requirements Sample Disposal:	ONT				AN	ALYSE	S REQ	UESTE)			Project	amplea a	Page	ol.
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Environmental Services (SDB)

September 9, 1994

Submission #: 9409112

CH2M HILL OAKLAND

Atten: Madeline Wall

Project: DEL MONTE PLANT 35

Received: September 9, 1994

Project#: BAE 28830.P4.ZZ

e: One sample for Volatile Halogenated Organics analysis.

Sample ID: GW-2

Matrix: WATER

Sampled: September 9, 1994 Spl #: 62205 Run: 3806 Analyzed: September 9, 1994

Method: EPA 8010 by 8260

ANALYTE	RESULT	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE RESULT (%)
CHLOROMETHANE	N.D.	0.50	N.D.	
VINYL CHLORIDE	120	1.0	N.D.	
BROMOMETHANE	N.D.	0.50	N.D.	
CHLOROETHANE	N.D.	0.50	N.D.	<u>.</u>
TRICHLOROFLUOROMETHANE	N.D.	0.50	N.D.	==
1,1-DICHLOROETHENE	9.9	0.50	N.D.	106
METHYLENE CHLORIDE	N.D.	5.0	N.D.	
TRANS-1,2-DICHLOROETHENE	32	0.50	N.D.	
CIS-1,2-DICHLOROETHENE	290	1.0	N.D.	
1,1-DICHLOROETHANE	N.D.	0.5	N.D.	
CHLOROFORM	N.D.	0.5	N.D.	
1,1,1-TRICHLOROETHANE	N.D.	0.5	N.D.	- -
CARBON TETRACHLORIDE	N.D.	0.5	N.D.	
1,2-DICHLOROETHANE	N.D.	0.5	N.D.	
TRICHLOROETHENE	150	1.0	N.D.	102
1,2-DICHLOROPROPANE	N.D.	0.5	N.D.	
BROMODICHLOROMETHANE	N.D.	0.5	N.D.	
2-CHLOROETHYLVINYL ETHER	N.D.	0.5	N.D.	
TRANS-1,3-DICHLOROPROPENE	N.D.	0.5	N.D.	
CIS-1,3-DICHLOROPROPENE	N.D.	0.5	N.D.	- ;-
1,1,2-TRICHLOROETHANE	N.D.	0.5	N.D.	- -
TÉTRACHLOROETHENE	2200	5.0	N.D.	
DIBROMOCHLOROMETHANE	N.D.	0.5	N.D.	
CHLOROBENZENE	N.D.	0.5	N.D.	101
BROMOFORM	N.D.	0.5	N.D.	
1,1,2,2-TETRACHLOROETHANE	N.D.	0.5	N.D.	
1,3-DICHLOROBENZENE	N.D.	0.5	N.D.	
1,4-DICHLOROBENZENE	N.D.	0.5	N.D.	1
1,2-DICHLOROBENZENE	N.D.	0.5	N.D.	+- . , , ,
TRICHLOROTRIFLUOROETHANE	N.D.	0.5	N.D.	 1

ChromaLab, Inc.

Aaron McMichael

Chemist

DUE:

09/09/94

CHAMBILL QUALITY ANALYTIC: REF #:18307

CHAIN OF CUSTODY RECORD

12205 Pet 1820>

PROJECT NUMBER PROJECT NAME BAE 28830. PA. ZZ DEL MENTE PLANT 35 CLIENT NAME				#	CLIE	NT AD	DŖESS	AND P	HONE	NUME	SER					FOR LA	B USE ONLY_	erikiliki Kalimati		
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Total

CHROMALAB, INC.

Environmental Services (SDB)

September 19, 1994

Submission #: 9409230

Ethvl

CH2M HILL OAKLAND

Atten: Madeline Wall

Project: DEL MONTE 35

Received: September 16, 1994

Project#: BAE28830.P5.ZZ

re: 1 sample for Gasoline and BTEX analysis.

Matrix: WATER

Sampled: September 16, 1994

Lab Run#: 3876 Analyzed: September 16, 1994

Method: EPA 5030/8015M/602

Spl # CLIENT SMPL ID	Gasoline (mg/L)	Benzene (ug/L)	Toluene (ug/L)	Benzene (uq/L)	Xylenes (ug/L)
63013 GW-3-N/M/S	N.D.	N.D.	N.D.	N.D.	0.80
Reporting Limits Blank Result Blank Spike Result (%)	0.05 N.D. 117	0.5 N.D. 97	0.5 N.D. 97	0.5 N.D. 96	0.5 N.D. 97

ChromaLab, Inc.

Billy Thach

Chemist

Ali Kharrazi

Ali Khus

Organic Manager

Environmental Services (SDB)

September 19, 1994

CH2M HILL OAKLAND

Atten: Madeline Wall

Project: DEL MONTE 35

Received: September 16, 1994

Project#: BAE28830.P5.ZZ

One sample for Volatile Halogenated Organics analysis.

Sample ID: GW-3-N/M/S Matrix: WATER

Sampled: September 16, 1994 Spl#: 63013 Run: 3882 Analyzed: September 16, 1994 Method: EPA 8010

nethou. If the core	RESULT	REPORTING LIMIT	BLANK RESULT	
<u>ANALYTE</u>	(ug/L)	(ug/L)	(ug/L)	(%)
CHLOROMETHANE	N.D.	0.5	N.D.	·
VINYL CHLORIDE	42_	13 _	N.D.	
BROMOMETHANE	. N.D.	0.5	N.D.	
CHLOROETHANE	N.D.	0.5	N.D.	
TRICHLOROFLUOROMETHANE	N.D.	0.5	N.D.	
1,1-DICHLOROETHENE	1.1	0.5	N.D.	107
METHYLENE CHLORIDE	N.D.	5.0	N.D.	:
TRANS-1,2-DICHLOROETHENE	14	0.5	N.D.	· · · · · · · · · · · · · · · · · ·
CIS-1,2-DICHLOROETHENE	140	13	N.D.	
1,1-DICHLOROETHANE	N.D.	0.5	N.D.	
CHLOROFORM	N.D.	0.5 0.5	N.D.	'
1,1,1-TRICHLOROETHANE	N.D.	0.5	N.D.	
CARBON TETRACHLORIDE	N.D.	0.5	Ŋ.D.	
1,2-DICHLOROETHANE	·N.D.	0.5	Ŋ.D.	
TRICHLOROETHENE	100	13_	Ŋ.D.	108
1,2-DICHLOROPROPANE	N.D.	0.5	N.D.	
BROMODICHLOROMETHANE	N.D.	0.5	N.D.	
2-CHLOROETHYLVINYL ETHER	N.D.	0.5	N.D.	"
TRANS-1,3-DICHLOROPROPENE	N.D.	0.5	и.D.	
CIS-1,3-DICHLOROPROPENE	N.D.	0.5	N.D.	
1,1,2-TRICHLOROETHANE	N.D.	0.5	N.D.	
TETRACHLOROETHENE	460	25_	N.D.	
DIBROMOCHLOROMETHANE	Ŋ.D.	0.5	N.D.	
CHLOROBENZENE	N.D.	0.5	N.D.	115
BROMOFORM	Ŋ.D.	0.5	N.D.	
1,1,2,2-TETRACHLOROETHANE	N.D.	0.5	N.D.	
1,3-DICHLOROBENZENE	N.D.	0.5	N.D.	
1,4-DICHLOROBENZENE	N.D.	0.5	N.D.	
1,2-DICHLOROBENZENE	Ŋ.D.	0.5	N.D.	 .
TRICHLOROTRIFLUOROETHANE	N.D.	0.5	N.D.	

ChromaLab, Inc.

Aaron McMichael

Chemist

Ali Kharrazi Organic Manager

Ali than

Environmental Services (SDB)

September 20, 1994

Submission #: 9409230

CH2M HILL OAKLAND

Atten: Madeline Wall

Project: DEL MONTE 35

Received: September 16, 1994

Project#: BAE28830.P5.ZZ

re: One sample for TEPH analysis

Matrix: SOIL WATER

Sampled: September 16, 1994

Method: 3550/8015

Extracted: September 19, 1994 Analyzed: September 19, 1994

Diesel Motor Oil Client Kerosene Sample ID (mg/Kg)L (mg/Kg)/ (mg/Kg) ___ Sample # N.D. N.D. 63013 GW-3-N/M/SN.D. N.D. Blank N.D. N.D. 70% Spike Recovery 80% Dup Spike Recovery 10 Reporting Limit 1.0 1.0

ChromaLab, Inc.

Sinat Chullatorn

Sirirat Chullakorn Analytical Chemist Ali Kharrazi Organic Manager

sc

CH2M HILL

QUALITY ANALYTICAL

LABORATORIES, INC.

RUSH

CLIENT: CH2

DUE: 09/23/94 REF #:18425

13

CHAIN OF CUSTODY RECORD AND AGREEMENT TO PE

Project	#						P	urch	988	Orde	r#				14	1				No. 10	400)E9 🖟	4.64	$p_{i} \in \mathbb{R}^{n}$			1,		1	# ·		
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Environmental Services (SDB)

November 15, 1994

CH2M HILL OAKLAND

Atten: Madeline Wall

Project: DEL MONTE PLANT 35

Received: November 9, 1994

Project#: BAE-28830.P5.ZZ

One sample for Volatile Halogenated Organics analysis.

Sample ID: P-1 (Gw-4)

Sp1#: 69330 Matrix: WATER

Sampled: November 8, 1994

Method: EPA 8010

Analyzed: November 10, 1994 Run#: 4559

ANALYTE	RESULT	REPORTING LIMIT (ug/L)	BLANK RESULT (uq/L)	BLANK SPIKE RESULT (%)
CHLOROMETHANE	N.D.	0.5	N.D.	
VINYL CHLORIDE	N.D.	0.5	N.D.	
BROMOMETHANE	N.D.	0.5	N.D.	
CHLOROETHANE	N.D.	0.5	N.D.	
TRICHLOROFLUOROMETHANE	N.D.	0.5	N.D.	
1,1-DICHLOROETHENE	N.D.	0.5	N.D.	91
METHYLENE CHLORIDE	N.D.	5.0	N.D.	ere e e e e e e e e e e e e e e e e e e
TRANS-1,2-DICHLOROETHENE	0.8	0.5	N.D.	 , .
CIS-1,2-DICHLOROETHENE	ĭi	0.5	N.D.	
1,1-DICHLOROETHANE	Ñ.D.	0.5	N.D.	·
CHLOROFORM	N.D.	0.5	N.D.	,
1,1.1-TRICHLOROETHANE	N.D.	0.5	N.D.	
CARBON TETRACHLORIDE	N.D.	0.5	N.D.	· · · · · · · · · · · · · · · · · · ·
1,2-DICHLOROETHANE	N.D.	0.5	N.D.	
TRICHLOROETHENE	12	0.5	N.D.	114
1,2-DICHLOROPROPANE	N.D.	0.5	N.D.	
BROMODICHLOROMETHANE	N.D.	0.5	N.D.	
2-CHLOROETHYLVINYL ETHER	N.D.	0.5	N.D.	
TRANS-1,3-DICHLOROPROPENE	N.D.	0.5	N.D.	== 11/
CIS-1,3-DICHLOROPROPENE	N.D.	0.5	N.D.	
1,1,2-TRICHLOROETHANE	N.D.	0.5	N.D.	* = =
TETRACHLOROETHENE	120	10	N.D.	
DIBROMOCHLOROMETHANE	N.D.	0.5	N.D.	ر پر 🛥 🗕 پر پر
CHLOROBENZENE	N.D.	0.5	N.D.	118
BROMOFORM	N.D.	0.5	N.D.	
1,1,2,2-TETRACHLOROETHANE	N.D.	0.5	N.D.	
1,3-DICHLOROBENZENE	N.D.	0.5	N.D.	
1,4-DICHLOROBENZENE	N.D.	0.5	N.D.	, = = ' _{kg}
1,2-DICHLOROBENZENE	N.D.	0.5	N.D.	
TRICHLOROTRIFLUOROETHANE	N.D.	0.5	N.D.	

15 Michael

Chemist

Environmental Services (SDB)

November 15, 1994

CH2M HILL OAKLAND

Atten: Madeline Wall 🕖

Project: DEL MONTE PLANT 35

Received: November 9, 1994

Project#: BAE-28830.P5.ZZ

One sample for Volatile Halogenated Organics analysis.

Sample ID: BT-1,BT-2

Sp1#: 69329

Matrix: WATER

Run#: 4559

Sampled: November 8, 1994

Analyzed: November 10, 1994

Method: EPA 8010

	RESULT	REPORTING LIMIT	BLANK RESULT	BLANK SPIKE RESULT
ANALYTE	(ug/L)	(ug/L)	(ug/L)	(%)
CHLOROMETHANE	N.D.	0.5	N.D.	;
VINYL CHLORIDE	N.D.	0.5	N.D.	
BROMOMETHANE	N.D.	0.5	N.D.	 -
CHLOROETHANE	N.D.	0.5	N.D.	
TRICHLOROFLUOROMETHANE	N.D.	0.5	N.D.	
1,1-DICHLOROETHENE	N.D.	0.5	N.D.	91
METHYLENE CHLORIDE	N.D.	5.0	N.D.	
TRANS-1,2-DICHLOROETHENE	N.D.	0.5	N.D.	
CIS-1,2-DICHLOROETHENE	8.7	0.5	N.D.	. ==
1,1-DICHLOROETHANE	N.D.	0.5	N.D.	
CHLOROFORM	N.D.	0.5	N.D.	·
1,1,1-TRICHLOROETHANE	Ŋ.D.	0.5	N.D.	÷ -
CARBON TETRACHLORIDE	N.D.	0.5	. N.D.	
1,2-DICHLOROETHANE	N.D.	0.5	й.D.	714
TRICHLOROETHENE	10_	0.5	N.D.	上上世
1,2-DICHLOROPROPANE	Ŋ.D.	0.5	Ŋ.D.	
BROMODICHLOROMETHANE	N.D.	0.5	N.D.	·트립 ()
2-CHLOROETHYLVINYL ETHER	Ŋ.D.	0.5	N.D.	
TRANS-1,3-DICHLOROPROPENE	N.D.	0.5 0.5	N.D. N.D.	
CIS-1,3-DICHLOROPROPENE	N.D.		N.D.	
1,1,2-TRICHLOROETHANE	N.D.	0.5 2.5	N.D.	
TETRACHLOROETHENE	51 N D		N.D.	
DIBROMOCHLOROMETHANE CHLOROBENZENE	N.D.	0.5	N.D.	118
BROMOFORM	N.D. N.D.	0.5	N.D.	
1,1,2,2-TETRACHLOROETHANE	N.D.	0.5	N.D.	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1,3-DICHLOROBENZENE	N.D.	0.5	N.D.	
1,4-DICHLOROBENZENE	N.D.	0.5	N.D.	
1,2-DICHLOROBENZENE	N.D.	0.5	N.D.	
TRICHLOROTRIFLUOROETHANE	N.D.	0.5	N.D.	
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Chemist

Ali-Kha

Environmental Services (SDB)

November 16, 1994

CH2M HILL OAKLAND The state of the s

Atten: Madeline Wall

Project: DEL MONTE PLANT 35

Received: November 9, 1994

Project#: BAE-28830.P5.ZZ

re: One composite sample for TEPH analysis

Matrix: WATER

Method: 3510/8015

Extracted: November 10, 1994

Sampled: November 8, 1994 Analyzed: November 15, 1994 Method: 3510/8015

Sample #	Client Sample ID	Kerosene Diesel (µg/L)	Motor Oil (mg/L)
69329	BT-1,BT-2	N.D. 180	n.d.
Blank Spike Recover	Y	N.D. N.D. 111%	N.D.
Dup Spike Rec Reporting Lim		108% 50 50	0.5

ChromaLab, Inc.

Sirinat Chullatern

Sirirat Chullakorn Analytical Chemist

Organic Manager

ĊC

Environmental Services (SDB)

November 16, 1994

Submission #: 9411106

CH2M HILL DAKLAND

Atten: Madeline Wall

Project: DEL MONTE PLANT 35

Project#: BAE-28830.P5.ZZ

Received: November 9, 1994

re: One sample for BTEX analysis

Matrix: WATER A

Sampled: November 8, 1994 Analyzed: November 14, 1994

Method: EPA 5030/M.8015/602

RESULTS:

Sample #	Client Sample I.D.	₹	Benzene (μα/L)	Toluene	Ethyl Benzene (µg/L)	Total Xylenes (µq/L)
66329	BT-1/BT-2		2.2	N.D.	2.5	1.2
Blank Blank Sp Reportin	oike Recovery		N.D. 103% 0.5	N.D. 101% 0.5	N.D. 101% 0.5	N.D. 110% 0.5

ChromaLab, Inc.

Jack Kelly

Analytical Chemist

Ali Kharfazi Organic Manager

at

Environmental Services (SDB)

November 28, 1994

ChromaLab File No.: 9411106

CH2M HILL OAKLAND

Attn: Madeline Wall

RE: One water samples for Gasoline analysis

Project Name: DEL MONTE PLANT 35

The second of th

Project Name: DEL MONTE PLANT 35
Project Number: BAE-28830.P5.ZZ
Date Sampled: November 8, 1994 Date Submitted: November 9, 1994

RESULTS:

Client Sample Sample

I.D.

66329

BT-1/BT-2

BLANK SPIKE RECOVERY DETECTION LIMIT

0.5 3

METHOD OF ANALYSIS

5030/8015

ChromaLab, Inc.

Jack Kelly

Analytical Chemist

Ali Kharrazi Organic Manager

kv

5<u>0607 # - 941</u>1106

CLARY/I: CHA

11/16/94

REF #:19261



QUALITY ANALYTICAL LABORATORIES, INC.

Instructions and Agreement Provisions on Réverse Side

106/69329-69330

CHAIN OF CUSTODY RECORD AND AGREEMENT TO PERFORM SERVICES

THIS AREA FOR LAB USE ONLY Purchase Order # Project # LGN 5090 Caterpillar Road Redding, CA 96003-1412 (916) 244-5227 FAX (916) 244-4109 BAE 28830 PG 22 Lab# Page One Innovation Drive, Suite C Alachua, FL 32615-9586 (904) 462-3050 FAX (904) 462-1670 Project Name Del Monte Plant 35 Client Service Price Source 2567 Fairlane Drive Canviro Analytical Laboratories, Inc. Montgomery, AL 36115-1622 (205) 271-2440 FAX (205) 271-3428 50 Bathurst, Unit 12 Company Name APQS Waterloo, Ontarlo, Canada N2V 2C5 (519) 747-2575 FAX (519) 747-3806 Test Group Acct Code Project Manager or Contact & Phone # | Report Copy to: **ANALYSES REQUESTED** Hadeline Wall (510) 251-2888 × 2189 0 BIEX **Project Code** Ack. Gen. Requested Completion Date: Sample Disposal: Std 54ky TAT Return O N /इच्छ LIMS Ver Login Mult. Type | Matrix TEPH G W S R A O A T I B E L ೧೦ತಾ **COC Review** Sampling QC ID tal CLIENT SAMPLE ID LAB 1 LAB 2 (3 CHAR) (9 CHARACTERS) SAMPLE REMARKS ID Time Date Composite 8 BT-11/8 X X 4:15 for analysis to B 2 B 又 P 4:35 X 11/8 . .2 . 3 - P Relinguished By Date/Time HAZWRAP/NESSA: Y Date/Time N Sampled By & Title Mrs C. Demorst 11/8 4:45 11/9 9:05 Madeline Wall

Railing EDATA: Y N Date/Time Date/Time 11/9 9:05 11/9 QC LEVEL 1 2 3 OTHER Relinquished By Date/Time Date/Time (Please sion and print name) Ice Shipped Via Shipping # Date/Time **Fleceived By** ee sign and orint name) Custody Fed-Ex Other Temp Batch Remarks:

CHROMALAB, II

Environmental Services (SDB)

December 1, 1994

CH2M HILL OAKLAND

Atten: Madeline Wall

DELMONTE 35 Project:

Received: November 23, 1994

BAE28830.P5.ZZ

One sample for Volatile Halogenated Organics analysis.

Sample ID: ST-3-1,2,3,4

Matrix: SOIL Sp1#: 70704

Sampled: November 22, 1994 Run#: 4700

Analyzed: December 1, 1994 Method: EPA 8010 by 8260

ANALYTE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)	BLANK RESULT (ug/Kg)	BLANK SPIKE RESULT
CHLOROMETHANE	N.D.	5.0	N.D.	
VINYL CHLORIDE	N.D.	5.0	N.D.	
BROMOCHLOROMETHANE	N.D.	5.0	N.D.	ş
CHLOROETHANE	N.D.	5.0	N.D.	
TRICHLOROFLUOROMETHANE	N.D.	5.0	N.D.	** - *** : : : : : : : : : : : : : : : : :
1,1-DICHLOROETHENE	N.D.	5.0	N.D.	107
METHYLENE CHLORIDE	N.D.	25	N.D.	
TRANS-1,2-DICHLOROETHENE	N.D.	5.0	N.D.	
CIS-1,2-DICHLOROETHENE	N.D.	5.0	N.D.	
1,1-DİCHLOROETHANE	N.D.	5.0	N.D.	
CHLOROFORM	N.D.	5.0	N.D.	
1,1,1-TRICHLOROETHANE	N.D.	5.0	N.D.	
CARBON TETRACHLORIDE	. N.D.	5.0	N.D.	·
1,2-DICHLOROETHANE	N.D.	5.0	N.D.	== **
TRICHLOROETHENE	N.D.	5.0	N.D.	99
1,2-DICHLOROPROPANE	N.D.	5.0	N.D.	== '
BROMODICHLOROMETHANE	N.D.	5.0	N.D.	
2-CHLOROETHYL VINYL ETHER	N.D.	5.0	N.D.	
TRANS-1,3-DICHLOROPROPENE	N.D.	5.0	N.D.	 ∴
CIS-1,3-DICHLOROPROPENE	N.D.	5.0	N.D.	
1,1,2-TRICHLOROETHANE	N.D.	5.0	N.D.	
TETRACHLOROETHENE	10_	5.0	N.D.	· · · · · · · · · · · · · · · · · · ·
DIBROMOCHLOROMETHANE	N.D.	5.0	N.D.	
CHLOROBENZENE	N.D.	5.0	N.D.	94
BROMOFORM	N.D.	5.0	Ŋ.D.	7.7
1,1,2,2-TETRACHLOROETHANE	N.D.	5.0	N.D.	
1,3-DICHLOROBENZENE	N.D.	5.0	N.D.	
1,4-DICHLOROBENZENE	Ŋ.D.	5.0	N.D.	
1,2-DICHLOROBENZENE	Ŋ.D.	5.0	N.D.	
TRICHLOROTRIFLUOROETHANE	N.D.	5.0	N.D.	

Reg Newson Oleg Nemtsov

Ali Kharrazi Organic Manager

Chemist

Environmental Services (SDB)

December 1,

CH2M HILL OAKLAND

Atten: Madeline Wall

Project: DELMONTE 35

Received: November 23, 1994

re: One sample for Volatile Halogenated Organics analysis.

Sample ID: ST-5-1,2,3,4

Spl#: 70705

Matrix: SOIL

Sampled: November 22, 1994 Run#: 4700

Analyzed: December 1, 1994

Method: EPA 8010 by 8260

		REPORTING	BLANK	BLANK SPIKE
	RESULT	LIMIT	RESULT	RESULT
ANALYTE	(ug/Kg)	(ug/Kg) *	(ug/Kg)	(%)
CHLOROMETHANE	N.D.	- 5.0	N.D.	
VINYL CHLORIDE	N.D.	5.0	N.D.	
BROMOCHLOROMETHANE	N.D.	5.0	N.D.	: : :
CHLOROETHANE	N.D.	5.0	N.D.	
TRICHLOROFLUOROMETHANE	N.D.	5.0	N.D.	
1,1-DICHLOROETHENE	N.D.	5.0	N.D.	୍ 107 ାଞ୍ଚ
METHYLENE CHLORIDE	N.D.	າ	N.D.	
TRANS-1,2-DICHLOROETHENE	N.D.	5.0	N.D.	· · · · · · · · · · · · · · · · · · ·
CIS-1,2-DICHLOROETHENE	N.D.	5.0	N.D.	+-
1,1-DICHLOROETHANE	N.D.	5.0	N.D.	•• • · · · · · · · · · · · · · · · · ·
CHLOROFORM	N.D.	5.0	N.D.	
1,1,1-TRICHLOROETHANE	N.D.	5.0	N.D.	
CARBON TETRACHLORIDE	N.D.	5.0	N.D.	
1,2-DICHLOROETHANE	N.D.	5.0	N.D.	
TRICHLOROETHENE	N.D.	5.0	N.D.	.99
1,2-DICHLOROPROPANE	N.D.	5.0	N.D.	
BROMODICHLOROMETHANE	N.D.	5.0	N.D.	
2-CHLOROETHYL VINYL ETHER	N.D.	5.0	N.D.	
TRANS-1,3-DICHLOROPROPENE	N.D.	5.0	N.D.	
CIS-1,3-DICHLOROPROPENE	N.D.	5.0	N.D.	
1,1,2-TRICHLOROETHANE	Ŋ.D.	5.0	N.D.	
TETRACHLOROETHENE	5.0	5.0	N.D.	
DIBROMOCHLOROMETHANE	N.D.	5.0	N.D.	- (= =) (((()))
CHLOROBENZENE	N.D.	5.0	N.D.	74 g
BROMOFORM	N.D.	5.0	N.D.	5—— 79.79
1,1,2,2-TETRACHLOROETHANE	N.D.	5.0	_ N.D.	***
1,3-DICHLOROBENZENE	N.D.	5.0	N.D.	
1,4-DICHLOROBENZENE	N.D.	5.0	N.D.	
1,2-DICHLOROBENZENE	N.D.	5.0	N.D.	
TRICHLOROTRIFLUOROETHANE	N.D.	5.0	N.D.	
May Vanten		Ah.	Kh 1 30	
very record		HM	127	

Oleg Nemtsov

Chemist

Organic Manager

Environmental Services (SDB)

December 1, 1994

Submission #: 9411295

CH2M HILL OAKLAND

Atten: Madeline Wall

Project: DELMONTE 35

Received: November 23, 1994

Project#: BAE28830.P5.ZZ

re: One sample for Volatile Halogenated Organics analysis.

Sample ID: ST-9-1,2,3,4

Sp1#: 70706

Matrix: SOIL

Sampled: November 22, 1994

Run#: 4700

Analyzed: December 1, 1994

Method: EPA 8010 by 8260

ANALYTE	RESULT (ug/Kg)	REPORTING BLANK LIMIT RESULT (uq/Kq) (ug/Kg)	
CHLOROMETHANE	N.D.	5.0 N.D.	
VINYL CHLORIDE	N.D.	5.0 N.D.	
BROMOCHLOROMETHANE	N.D.	5.0 mm N.D.	
CHLOROETHANE	N.D.	5.0 N.D.	
TRICHLOROFLUOROMETHANE	N.D.	5.0 N.D.	
1,1-DICHLOROETHENE	N.D.	5.0 N.D.	107
METHYLENE CHLORIDE	N.D.	25 N.D.	
TRANS-1,2-DICHLOROETHENE	N.D.	5.0 N.D.	
CIS-1,2-DICHLOROETHENE	N.D.	5.0 N.D.	≠ =
1,1-DICHLOROETHANE	N.D.	5.0 N.D.	
CHLOROFORM	N.D.	5.0 N.D.	
1,1,1-TRICHLOROETHANE	N.D.	5.0 N.D.	
CARBON TETRACHLORIDE	N.D.	5.0 N.D.	
1,2-DICHLOROETHANE	N.D.	5.0 N.D.	
TRICHLOROETHENE	N.D.	5.0 N.D.	99
1,2-DICHLOROPROPANE	N.D.	5.0 N.D.	· · · · · · · · · · · · · · · · · · ·
BROMODICHLOROMETHANE	N.D.	5.0 N.D.	
2-CHLOROETHYL VINYL ETHER	N.D.	5.0 N.D.	
TRANS-1,3-DICHLOROPROPENE	N.D.	5.0 N.D.	
CIS-1,3-DICHLOROPROPENE	N.D.	5.0 N.D.	· · · · · · · · · · · · · · · · · · ·
1,1,2-TRICHLOROETHANE	N.D.	5.0 N.D.	
TETRACHLOROETHENE	15	5.0 N.D.	
DIBROMOCHLOROMETHANE	N.D.	5.0 N.D.	I
CHLOROBENZENE	N.D.	5.0 N.D.	94
BROMOFORM	N.D.	5.0 $N.D.$	
1,1,2,2-TETRACHLOROETHANE	N.D.	5.0 N.D.	
1,3-DICHLOROBENZENE	N.D.	5.0 <u>N</u> .D.	
1,4-DICHLOROBENZENE	Ŋ.D.	5.0 N.D.	
1,2-DICHLOROBENZENE	N.D.	5.0 N.D.	
TRICHLOROTRIFLUOROETHANE	N.D.	5.0 N.D.	-

Reg Newson

Oleg Nemtsov

Chemist

Ali Kharrazi Organic Manager

Ali Kh

Environmental Services (SDB)

December 1, 1994

Project#: BAE28830.P5.ZZ

CH2M HILL OAKLAND

Atten: Madeline Wall

Project: DELMONTE 35

Received: November 23, 1994

Three samples for TEPH analysis

Method: 3550/8015

Extracted: November 30, 1994
Sampled: November 22, 1994
Method: 3550/8015

Extracted: November 30, 1994
Analyzed: December 1, 1994

Sample #	Client Sample ID	Kerosene Diesel (mg/Kg)	Motor Oil (mg/Kg)
70704	ST-3-1,2,3,4	N.D. 6.5	44
70705	ST-5-1,2,3,4	N.D. 1.6	25 🍍
70706	ST-9-1,2,3,4	N.D. 21	160

(a) Reporting limit raised to 10 mg/Kg due to dilution.

Blank		N.D.	N.D.	N.D.
Spike Recovery			116%	
Dup Spike Recovery			102%	
Reporting Limit	:	1.0	1.0	10

ChromaLab, Inc.

Sirirat Chullakorn Analytical Chemist

Environmental Services (SDB)

一个。大学生,并与一个

December 1, 1994

Submission #: 9411295

CH2M HILL OAKLAND

Atten: Madeline Wall

Project: DELMONTE 35

Received: November 23, 1994

Project#: BAE28830.P5.ZZ

re: 3 samples for Gasoline and BTEX analysis.

Matrix: SOIL

Sampled: November 22, 1994 Run#: 4705 Analyzed: December 1, 1994

Method: EPA 5030/8015M/8020

				RCUAT	TOTAL	
Spl # CLIENT SMPL ID	Gasoline	Benzene	Toluene	Benzene	Xylenes	
	(mg/Kg)	(ug/Kg)	(ug/Kg)	(ug/Kg)	(ug/Kg)	
70704 ST-3-1,2,3,4	N.D.	N.D.	N.D.	N.D.	N.D.	
70705 ST-5-1,2,3,4	N.D.	N.D.	N.D.	N.D.	N.D.	
70706 ST-9-1,2,3,4	N.D.	N.D.	N.D.	N.D.	N.D.	
Reporting Limits	1.0	5.0	5.0	5.0	5.0	
Blank Result	N.D.	N.D.	N.D.	N.D.	N.D.	
Blank Spike Result (%)	85	92	102	106	108	

Jack Kelly Chemist

295/70704-70706



QUALITY ANALYTICAL LABORATORIES, INC.

SUBH #: 9411295 CLIENT: CH2

DUE: 12/02/94

REF #:19465

CHAIN OF CUSTODY RECORD AND AGREEMENT TO PERFORM SERVICES

19465 SHADED AREA- FOR LAB USE ONLY LAB TEST CODES Purchase Order # Project # BA638830.P5.22 Project Name DEL MONTE 35 0 CH2M HILL /SPO C **ANALYSES REQUESTED** 0 Project Manager & Phone # Mr. [] MADAUNE WALL Report Copy to: N Mask 510-251-2888×289 Requested Completion Date: Sampling Requirements Sample Disposal: STANDARD 5 DAY SOWA HPDES RCRA OTHER Type | Matrix R C G W SO M A T L L S Sampling CLIENT SAMPLE ID LAB 2 LAB 1 REMARKS (9 CHARACTERS) Date Time composite 11/22/201010 in lab 2 1005 3 3 3 composite in lab 1022 composite 135 in lab 1122 INclude ST-9-4 Relinquished By HAZWRAP/NESSA: Y Date/Time (Piease sign and print name) Date/Time MARTY MEDINIA 11/22/54 22/9411:30 MARRY MEDINA Date/Time (Please sign and print name) Date/Time Date/Time Relinguished By (Please sign and print name) Date/Time (Please sign and print name) Shipping # Shipped Via Date/Time (Please sign and print name) Received By Fed-Ex Hand Other BUS Remarks Work Authorized By (Please sign and print name)

CHEMI HI

CHAIN OF CUSTODY RECORD AND AGREEMENT TO PERFORM SERVICES **QUALITY ANALYTICAL LABORATORIES** CH2M HILL Project # Purchase Order # LAS TEST CODES SHADED AREA - POR LAB USE ONLY BLE38820. BS. 33 Project Name DELMONTE 35 Company Name/CH2M HILL Office 0 CHZM THLL KFD **ANALYSES REQUESTED** Project Manager & Phone # Report Copy to: Mr. [] MADALINE
Ma. M. WALL 0 Requested Completion Date: Sampling Requirements Sample Disposal: STANDARD Dispose Return SDWA NPDES RCRA OTHER 5 DAY Type | Matrix WATER C G R A B Sampling CLIENT SAMPLE ID HUI (9 CHARACTERS) REMARKS se atrious page . . Date/Time (Please sign and print name) Date/Time RAZWRAPNESSA: Y N MARTY MEDINA "/LYGY MARTY NEDINA 11:30 9/22/94 Relinquished By Date/Time (Please sign and print name) QC Level: 1 2 8 Other Date/Time 4-23-44/5 COC Red Date/Time Received By Relinguished By (Please sign and print name) Date/Time Am Reg TEMP Received By (Phase sign and print nerw) Date/Time Shipped Via Shipping # UPS BUS Fed-Ex Other Work Authorized By Remarks

Appendix C Groundwater Flow Rate Calculations TO:

Madeline Wall

COPIES:

Ana Demorest

FROM:

Derrik Williams

DATE:

November 18, 1994

SUBJECT:

Del Monte Plant 35 Excavation Flow Rates

PROJECT: BAE28830.P5.ZZ

Pumping groundwater from an excavation on the east parcel of Del Monte Plant 35 has been proposed as a remedial measure for existing groundwater contamination. Potential pumping rates from the excavation were estimated by observing the recovery of water in the excavation after dewatering. The methodology and results are presented below.

Methodology

Water was pumped from the excavation on November 8, 1994. A constant pumping rate of approximately 100 gallons per minute (gpm) was maintained for approximately 4.5 hours, at which point the pump failed. The pump was replaced, and pumping began approximately 1 hour and 20 minutes after the pump broke. Pumping continued until the water level fell to the pump intakes. Water pumped from the excavation was piped to a baker tank, where it was sampled for organic compounds prior to treatment.

During pumping, water levels in the excavation were continuously monitored by a water level transducer and data logger. The total water level drop in the excavation due to pumping was approximately 4.22 feet. After pumping, water levels in the excavation were allowed to recover for approximately 12 hours. At the end of 12 hours, the data logger was removed from the excavation.

Results

Water levels in the excavation after pumping ceased are plotted on Figure 1. The water level rise follows an expected gradual curve.

Potential flow rates from the excavation were estimated by estimating the amount of water flowing into the excavation over discreet time periods. Flow rates were estimated by the following general method:

MEMORANDUM

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- A relationship between water elevation and water surface area in the excavation was estimated
- A relationship between the change in water elevation, the two
 calculated surface areas and the volume of water entering the
 excavation was estimated.
- The two relationships were applied to data collected from the recovery of water levels in the excavation following pumping. A volume of water entering the excavation over a known time period resulted from the two relationships
- The change in the volume of water was divided by the approporiate time period to calculate an average flow rate.

Relationship between elevation, surface area, and volume

The excavation is rectangular at the surface with sloping sides. The general excavation shape is one of an inverted pyramid. The water surface in the excavation-covered approximately 1452 square feet before pumping (elevation -0.18). After pumping, the water surface covered approximately 813 square feet (water elevation -4.4).

Assuming the excavation sides follow a constant, linear slope, there is some linear relationship between the water elevation and the water surface area. Using the elevations and areas above, the following relationship was established:

$$A = (150)(e) + 1479$$
 (1)

Where:

A = the water surface area e = the water elevation as measured by the transducer

The volume of water between any two water elevations can be calculated with the following equation:

$$Volume = (\frac{1}{2})(\Delta e)(A_1 + A_2)$$
 (2)

Where:

 Δe = elevation change in the water surface

A 1 = the initial water surface area

A ₂= the final water surface area

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Flow rate calculations

Flow rates are calculated for two time periods. Data for the flow rate calculations are extracted from Figure 1.

The flow rate between 500 and 1000 minutes after pumping ceased was estimated from the data collected by the data logger. The water level after 500 minutes was -3.84 feet, and the water level after 1000 minutes was -3.41 feet. Applying equation one, these water levels correspond to water surface areas of 903 and 967 square feet, respectively. Applying equation two yields a total volume of 402 cubic feet (approximately 3000 gallons) of water entering the excavation between 500 and 1000 minutes after pumping ceased. Dividing the 3000 gallons by 500 minutes yields a flow rate of 6 gallons per minute.

The flow rate between 3000 and 3500 minutes was estimated from the extension of the recovery data shown on Figure 1. The estimated water level after 3000 minutes is -2.2 feet, and the estimated water level after 3500 minutes is -2.0 feet. Applying equation one, these water levels correspond to water surface areas of 1150.5 and 1179 square feet, respectively. Applying equation two yields a total volume of 226.5 cubic feet (approximately 1700 gallons) of water entering the excavation between 3000 and 3500 minutes after pumping ceased. Dividing the 1700 gallons by 500 minutes yields a flow rate of 3.4 gallons per minute.

Both of these flow rates are reasonable based on previous and ongoing pumping rates observed at the site. The obtainable pumping rate may fluctuate based on recharge from rainfall or the operation of other nearby extraction systems.

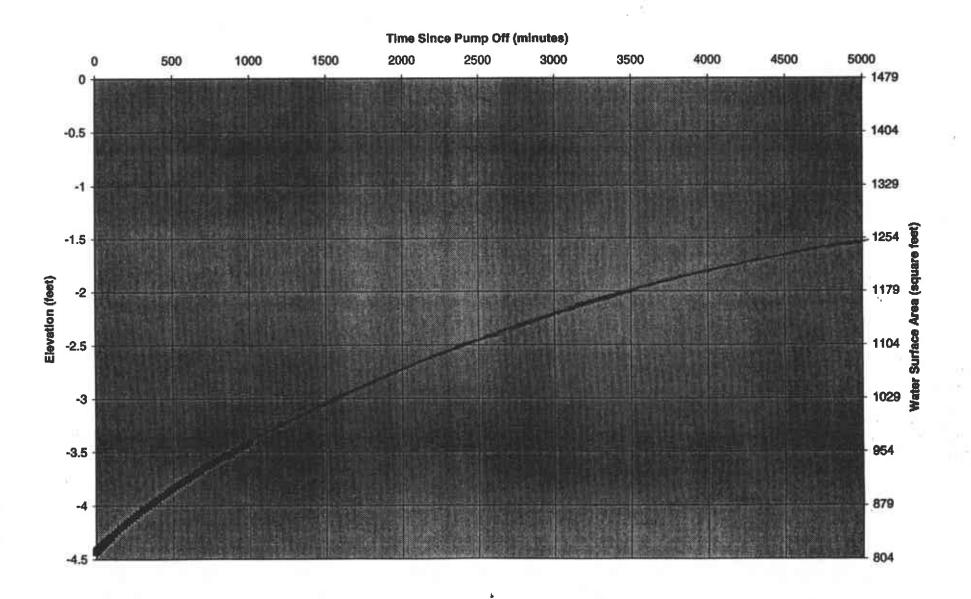


Figure 1
Water Level Recovery