



CONFIDENTIAL

November 2, 1992

SFO28830.A1

Mr. Mark Rosenquist  
Del Monte Foods  
205 North Wiget Lane  
P.O. Box 9004  
Walnut Creek, CA 94598

Subject: Quarterly Report for Del Monte Plant 35 - West Parcel,  
4204 Hollis Street, and - East Parcel, 1250 Park Avenue,  
Emeryville, California

Dear Mr. Rosenquist:

This report presents the quarterly groundwater monitoring data for the removed fuel oil tank area at Del Monte Plant 35 - West Parcel located at 4204 Hollis Street in Emeryville, California. As part of the quarterly groundwater monitoring program at Plant 35, monitoring wells (MW7 through MW11) were sampled on **October 12, 1992**.

This report also presents the analytical results of soil samples collected from beneath six randomly selected floor gutters of the Plant 35 - East Parcel Main Processing Building located at 1250 Park Avenue in Emeryville. The soil samples were collected on September 17, 1992 as part of the Remediation Activities Plan submitted to the Alameda County Health Agency (ACHA) on September 11, 1992.

This data needs to be submitted to the following:

Mr. Brian Oliva  
Hazardous Materials Specialist  
Alameda County Health Agency  
Division of Hazardous Materials  
80 Swan Way, Room 200  
Oakland, CA 94621

Mr. Lester Feldman  
Regional Water Quality Control Board  
San Francisco Region  
2101 Webster Street, Suite 500  
Oakland, CA 94612

## BACKGROUND

Del Monte Plant 35 was a food processing plant which has not been in operation since 1989. Plant 35 is located on approximately 13 acres; the West Parcel, located at 4204 Hollis Street, is approximately 2 acres in size and the East Parcel, located at 1250 Park Avenue, is approximately 11 acres in size (Figure 1). Shallow groundwater exists beneath the West Parcel at a depth of approximately 7 to 10 feet below grade. This shallow groundwater generally flows west-northwestward toward the San Francisco Bay.

Del Monte removed four 50-gallon underground tanks from the West Parcel in March 1989 as described in "Property Assessment and Tank Removal Report, Del Monte Plant No. 35, Southwest Corner" (CH2M HILL, September 1989). These tanks were located adjacent to the building that Del Monte had previously leased to medical research companies. The tanks were used to store fuel oil; however, prior to removal of the tanks, tank content sampling revealed chlorinated hydrocarbon compounds were present in the tanks. Subsequent groundwater investigations revealed the presence of chlorinated hydrocarbon compounds in the shallow groundwater in the vicinity of the former fuel oil tank area. Currently, monitoring wells MW-7 through MW-11 are monitored quarterly for chlorinated hydrocarbon compounds.

## GROUNDWATER MONITORING RESULTS

Monitoring wells MW-7 through MW-11 were sampled on October 12, 1992. The analytical results are summarized in Table 1. The results indicate that **no significant changes in groundwater quality have occurred beneath the West Parcel since the previous quarterly sampling date (July 17, 1992).**

The October 12, 1992 sample results indicate that concentrations of trichloroethene (TCE) (MW7 - MW11), tetrachloroethene (PCE) (MW7 - MW11), 1,2-dichloroethane (1,2-DCA) (MW11), 1,2-dichloropropane (1,2-DP) (MW-11) and vinyl chloride (VC) (MW7 and MW11) **exceed State of California Maximum Contaminant Levels (MCLs)**. Applicable MCLs are shown at the bottom of Table 1. It should be noted that the laboratory detection limit exceeded the MCL for 1,2-DCA in wells MW8 and MW10. This is due to high concentrations of analytes in the sample causing the laboratory to dilute the sample in order to obtain a result within the instrument detection range; sample dilution increases the detection limits (Personal Communication, BC Analytical, February 25, 1992).

Based on the enclosed data and according to the water quality goals promulgated by the San Francisco Bay Area Regional Water Quality Control Board, additional monitoring for chlorinated solvents is required in wells MW7 through MW11 at Del Monte Plant 35 - West Parcel.

## MAIN PROCESSING BUILDING SOIL SAMPLING RESULTS

As part of the Remediation Activities Plan submitted to ACHA on September 11, 1992, six soil samples were collected beneath randomly selected floor gutters in the Plant 35 -

East Parcel Main Process Building (Figure 1). Ten-inch diameter concrete cores were cut out of the base of six floor gutter locations. Soil samples were collected with a stainless steel trowel and placed in tightly sealed glass jars. The soil samples were analyzed for total petroleum hydrocarbons (TPH) as gasoline (EPA Method 8015 mod.); benzene, toluene, ethylbenzene, and xylenes (BTEX) (EPA Method 8015 mod.); and total recoverable petroleum hydrocarbons (TRPH) (EPA Method 418.1). The analytical results are summarized in Table 2. Benzene was not detected in any of the samples and sample "Gutter-6" was the only sample that contained detectable concentrations of TRPH.

If you have any questions or comments, please call me at my office (510) 251-2888 (ext. 2118).

Sincerely,

A handwritten signature in cursive script, appearing to read "Bern Baumgartner".

Bern Baumgartner  
Project Manager

Enclosures

cc: Ron Thibault/Del Monte  
Lee Bosche/Del Monte  
Bharat Shah/Del Monte  
Steve Ronzone/Del Monte  
Cora Lewis/Del Monte  
Liz Dodge/CH2M HILL/SFO  
Jeff Holloway/CH2M HILL/SFO

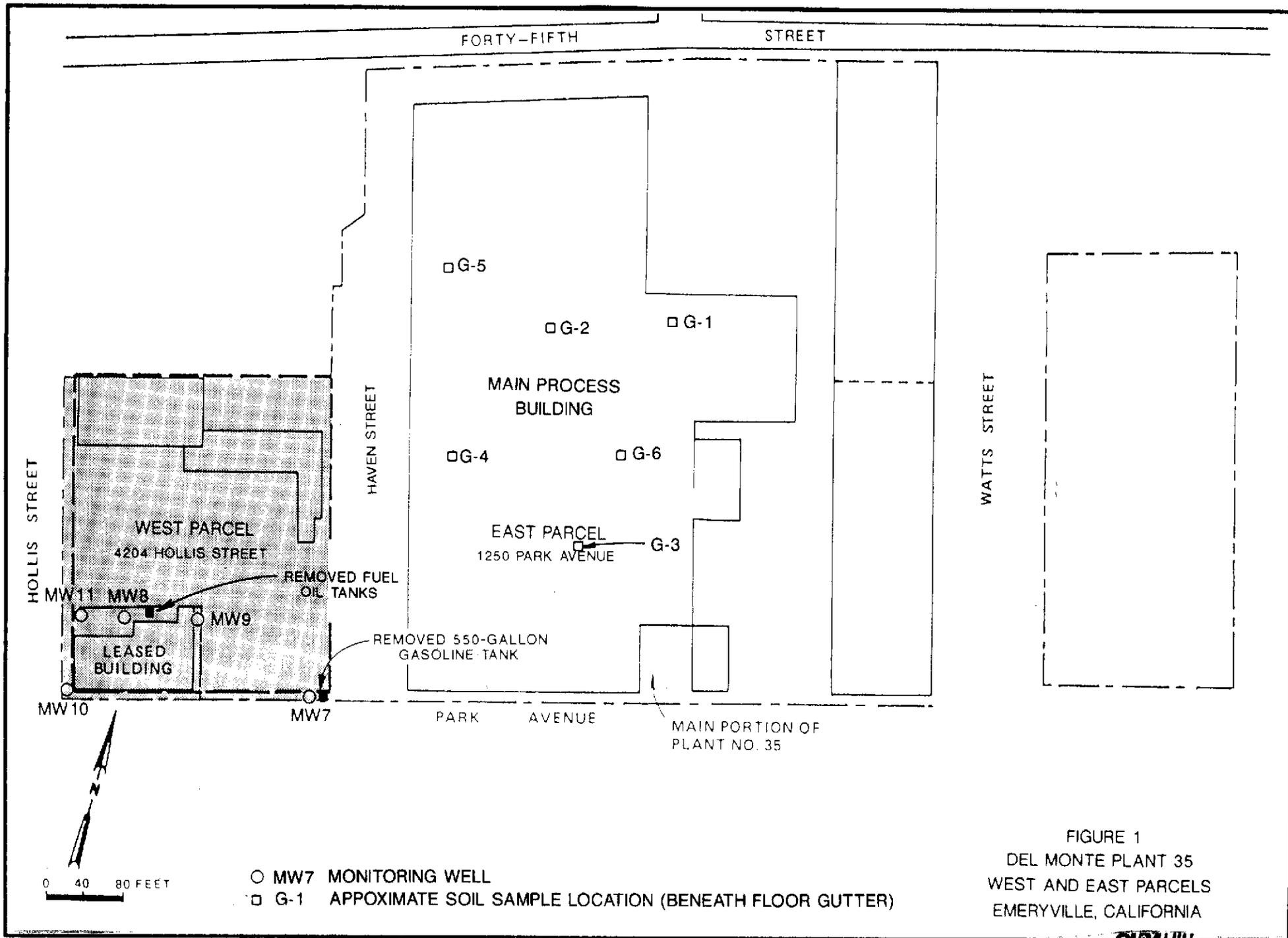


FIGURE 1  
 DEL MONTE PLANT 35  
 WEST AND EAST PARCELS  
 EMERYVILLE, CALIFORNIA

**TABLE 1**  
**DEL MONTE PLANT NO. 35, WEST PARCEL**  
**4204 HOLLIS STREET, EMERYVILLE, CA**  
**QUARTERLY GROUNDWATER MONITORING RESULTS**

Monitoring Well	Sampling Date	Concentration (mg/l)						
		1,2-DCE(a)	1,1-DCE(b)	1,2-DCA(c)	TCE(d)	PCE(e)	VCh(f)	1,2-DP(g)
MW7	17-Apr-91	0.085	<0.0005	<0.0005	0.023	0.014	0.0051	<0.0005
MW7	31-Jul-91	0.100	<0.0005	<0.0005	0.029	0.019	0.0051	<0.0005
MW7	22-Oct-91	0.130	<0.0010	<0.0010	0.030	0.020	0.0030	<0.001
MW7	23-Jan-92	0.100	<0.0005	<0.0005	0.029	0.017	0.0031	<0.0005
MW7	23-Apr-92	0.092	<0.0005	<0.0005	0.046	0.028	<0.0005	<0.0005
MW7	17-Jul-92	0.093	<0.0005	<0.0005	0.051	0.030	0.0018	<0.0005
MW7	12-Oct-92	<del>0.071</del>	<0.0005	<0.0005	<del>0.039</del>	0.028	<del>0.0028</del>	<0.0005
MW8	12-May-89	0.290	<0.0100	<0.0100	1.400	0.020	0.0780	<0.0100
MW8	10-Jul-89	0.140	<0.0025	<0.0025	0.330	0.014	0.0170	<0.0025
MW8-dup	10-Jul-89	0.130	<0.0025	<0.0025	0.310	0.012	0.0160	<0.0025
MW8	24-Oct-89	0.100	<0.0020	<0.0020	0.330	0.024	0.0040	<0.0020
MW8	07-Feb-90	0.100	<0.0020	<0.0020	0.520	0.018	0.0120	<0.0020
MW8	10-Jul-90	0.005	<0.0002	<0.0005	0.091	0.036	0.0030	<0.0005
MW8	17-Oct-90	0.059	<0.0010	<0.0010	0.160	0.021	0.0020	<0.0010
MW8	24-Jan-91	0.160	<0.0020	0.0050	0.450	0.013	0.0090	0.0270
MW8	17-Apr-91	0.210	<0.0050	<0.0050	0.830	0.016	<0.0050	<0.0050
MW8	31-Jul-91	0.085	<0.0020	<0.0020	0.350	0.030	<0.0020	<0.0020
MW8	22-Oct-91	0.040	<0.0050	<0.0050	0.630	0.020	<0.0050	<0.0050
MW8	23-Jan-92	0.160	<0.0050	<0.0050	0.690	0.029	<0.0050	<0.0050
MW8	23-Apr-92	0.130	<0.0100	<0.0100	1.600	0.030	<0.0100	<0.0100
MW8	17-Jul-92	0.035	<0.0020	<0.0020	0.490	0.011	<0.0020	<0.0020
MW8	12-Oct-92	0.022	<0.0010	<0.0010	0.110	0.024	0.0012	<0.0010
MW9	10-Jul-89	0.0630	<0.0005	<0.0005	0.013	0.038	0.0160	<0.0005
MW9	24-Oct-89	0.0064	<0.0005	<0.0005	0.029	0.048	0.0230	<0.0005
MW9	07-Feb-90	0.0550	<0.0005	<0.0005	0.015	0.030	0.0071	<0.0005
MW9	10-Jul-90	0.0030	<0.0002	<0.0005	0.009	0.043	0.0100	<0.0005
MW9	17-Oct-90	0.0700	<0.0005	<0.0005	0.014	0.032	0.0046	<0.0005
MW9	24-Jan-91	0.0700	<0.0020	<0.0020	0.220	0.023	<0.0020	<0.0020
MW9	17-Apr-91	0.0440	<0.0005	<0.0005	0.012	0.026	<0.0005	<0.0005
MW9	31-Jul-91	0.0550	<0.0005	<0.0005	0.014	0.032	0.0023	<0.0005
MW9	22-Oct-91	0.0710	<0.0005	<0.0005	0.015	0.033	0.0028	<0.0005
MW9	23-Jan-92	0.0640	<0.0005	<0.0005	0.010	0.027	0.0021	<0.0005
MW9	23-Apr-92	0.0220	<0.0005	<0.0005	0.011	0.029	<0.0005	<0.0005
MW9	17-Jul-92	0.0260	<0.0005	<0.0005	0.013	0.032	<0.0005	<0.0005
MW9	12-Oct-92	0.0410	<0.0005	<0.0005	0.017	0.036	0.0030	<0.0005
<b>WATER QUALITY STANDARDS</b>								
Primary MCL		---	0.006	0.00050	0.0050	0.0050	0.0005	0.0050
Cancer Risk		---	0.000033	0.00094	0.0027	0.0008	0.0020	---
AATC (Freshwater)		23.2	11.6	118	45	5.28	---	23
a. total 1,2-Dichloroethane*								
b. 1,1-Dichloroethene								
c. 1,2-Dichloroethane								
d. Trichloroethene								
e. Tetrachloroethene								
f. Vinyl chloride								
g. 1,2-Dichloropropane								
* Sum of cis-1,2-Dichloroethene and trans-1,2-Dichloroethene								

**TABLE 1  
DEL MONTE PLANT NO. 35, WEST PARCEL  
4204 HOLLIS STREET, EMERYVILLE, CA  
QUARTERLY GROUNDWATER MONITORING RESULTS**

Monitoring Well	Sampling Date	Concentration (mg/l)						
		1,2-DCE(a)	1,1-DCE(b)	1,2-DCA(c)	TCE(d)	PCE(e)	VCI(f)	1,2-DP(g)
MW10	10-Jul-89	0.0850	0.0008	<0.0005	0.027	0.042	0.0280	<0.0005
MW10	24-Oct-89	0.1048	<0.0005	<0.0005	0.037	0.028	0.0069	<0.0005
MW10	07-Feb-90	0.0500	<0.0005	<0.0005	0.011	0.008	0.0053	<0.0005
MW10	10-Jul-90	0.0090	<0.0002	<0.0005	0.030	0.076	0.0540	<0.0005
MW10-dup	10-Jul-90	0.0100	0.0050	<0.0005	0.028	0.069	0.0170	<0.0005
MW10	17-Oct-90	0.1400	<0.0005	<0.0005	0.035	0.037	0.0130	<0.0005
MW10	24-Jan-91	0.0650	<0.0005	<0.0005	0.014	0.031	0.0033	<0.0005
MW10	17-Apr-91	0.2100	<0.002	<0.002	0.048	0.052	0.0100	<0.002
MW10	31-Jul-91	0.2800	<0.002	<0.002	0.066	0.014	0.0020	<0.002
MW10	22-Oct-91	0.1600	<0.001	<0.001	0.040	0.040	0.0050	<0.001
MW10	23-Jan-92	0.2400	<0.002	<0.002	0.046	0.054	0.0100	<0.002
MW10	23-Apr-92	0.2100	<0.002	<0.002	0.089	0.110	<0.0020	<0.002
MW10	17-Jul-92	0.1800	<0.001	<0.001	0.078	0.082	0.0150	<0.001
MW10	12-Oct-92	0.1100	<0.001	<0.001	0.045	0.045	0.0050	<0.001
MW11	10-Jul-89	0.073	<0.001	0.004	0.160	0.012	0.0160	0.0057
MW11	24-Oct-89	0.188	<0.002	0.010	0.410	0.015	0.0220	0.0200
MW11	07-Feb-90	0.105	<0.002	0.002	0.270	0.008	0.0110	0.0130
MW11	10-Jul-90	0.004	<0.002	0.023	0.046	0.018	0.0150	<0.0005
MW11	17-Oct-90	0.150	<0.002	0.011	0.300	0.008	<0.002	0.0310
MW11	24-Jan-91	0.120	<0.001	<0.001	0.029	0.029	0.0030	<0.0010
MW11	17-Apr-91	0.100	<0.001	0.014	0.160	0.012	0.005	0.0290
MW11	31-Jul-91	0.250	<0.002	<0.002	0.061	0.065	0.012	0.0020
MW11	22-Oct-91	0.180	<0.002	0.005	0.560	0.020	0.005	0.0300
MW11	23-Jan-92	0.160	<0.002	0.013	0.290	0.019	<0.002	0.0210
MW11	23-Apr-92	0.030	<0.001	0.009	0.120	0.013	<0.001	0.0140
MW11	17-Jul-92	0.026	<0.0005	0.0014	0.081	<0.0005	<0.0005	0.0035
MW11	12-Oct-92	0.063	<0.0030	0.0044	0.45	0.016	0.0052	0.017
<b>WATER QUALITY STANDARDS</b>								
Primary MCL	---	---	0.006	0.00050	0.0050	0.0050	0.0005	0.0050
Cancer Risk	---	---	0.000033	0.00094	0.0027	0.0008	0.0020	---
AATC (Freshwater)	23.2	11.6	118	45	5.28	---	23	
a. total 1,2-Dichloroethene *			d. Trichloroethene			f. Vinyl chloride		
b. 1,1-Dichloroethane			e. Tetrachloroethene			g. 1,2-Dichloropropane		
c. 1,2-Dichloroethene			f. Sum of cis-1,2-Dichloroethene and trans-1,2-Dichloroethene					

**TABLE 2**  
**SOIL SAMPLES FROM BENEATH FLOOR GUTTERS OF MAIN BUILDING**  
**DEL MONTE PLANT 35 - EAST PARCEL**

(All Concentrations in mg/kg)							
SAMPLE	DATE	BENZENE	TOLUENE	ETHYL- BENZENE	XYLENES	TPH-GAS	TRPH
GUTTER-1	09/17/92	<0.005	<0.005	<0.005	<0.005	<0.1	<50
GUTTER-2	09/17/92	<0.005	<0.005	<0.005	0.012	<0.1	<50
GUTTER-3	09/17/92	<0.005	0.0068	0.0063	0.043	0.11	<50
GUTTER-4	09/17/92	<0.005	<0.005	<0.005	<0.005	0.36	<50
GUTTER-5	09/17/92	<0.005	<0.005	<0.005	<0.005	<0.1	<50
GUTTER-6	09/17/92	<0.3	<0.3	0.35	2.1	340	470

TPH-GAS - Total Petroleum Hydrocarbons as Gasoline

TRPH - Total Recoverable Petroleum Hydrocarbons

1255 Powell Street  
 Emeryville, CA 94608  
 510/428-2300  
 Fax: 510/547-3643

LOG NO: E92-10-217

Received: 12 OCT 92

Mailed: OCT 26 1992

Mr. B. Baumgartner  
 CH2M Hill  
 1111 Broadway, Suite 1200  
 Oakland, California 94607-4046

Project: SF028830.A1

REPORT OF ANALYTICAL RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
10-217-1	MW-7	12 OCT 92
10-217-2	MW-8	12 OCT 92
10-217-3	MW-9	12 OCT 92
10-217-4	MW-10	12 OCT 92
10-217-5	MW-11	12 OCT 92

PARAMETER	10-217-1	10-217-2	10-217-3	10-217-4	10-217-5
EPA Method 8010					
Date Analyzed	10.14.92	10.15.92	10.14.92	10.15.92	10.15.92
Confirmation Date	10.15.92	10.15.92	10.15.92	10.15.92	10.15.92
Dilution Factor, Times	1	2	1	2	5
1,1,1-Trichloroethane, ug/L	<0.5	<1	<0.5	<1	<3
1,1,2,2-Tetrachloroethane, ug/L	<0.5	<1	<0.5	<1	<3
1,1,2-Trichloroethane, ug/L	<0.5	<1	<0.5	<1	<3
1,1-Dichloroethane, ug/L	<0.5	<1	<0.5	<1	<3
1,1-Dichloroethene, ug/L	<0.5	<1	<0.5	<1	<3
1,2-Dichloroethane, ug/L	<0.5	<1	<0.5	<1	4.4
1,2-Dichlorobenzene, ug/L	<0.5	<1	<0.5	<1	<3
1,2-Dichloroethene (Total), ug/L	71	22	41	110	63
1,2-Dichloropropane, ug/L	<0.5	<1	<0.5	<1	17
1,3-Dichlorobenzene, ug/L	<0.5	<1	<0.5	<1	<3
1,4-Dichlorobenzene, ug/L	<0.5	<1	<0.5	<1	<3
2-Chloroethylvinylether, ug/L	<0.5	<1	<0.5	<1	<3
Bromodichloromethane, ug/L	<0.5	<1	<0.5	<1	<3
Bromomethane, ug/L	<0.5	<1	<0.5	<1	<3
Bromoform, ug/L	<0.5	<1	<0.5	<1	<3
Chlorobenzene, ug/L	<0.5	<1	<0.5	<1	<3
Carbon Tetrachloride, ug/L	<0.5	<1	<0.5	<1	<3
Chloroethane, ug/L	<0.5	<1	<0.5	<1	<3
Chloroform, ug/L	<0.5	<1	0.66	<1	<3
Chloromethane, ug/L	<0.5	<1	<0.5	<1	<3

# BC Analytical

1255 Powell Street  
Emeryville, CA 94608  
510/428-2300  
Fax: 510/547-3643

LOG NO: E92-10-217

Received: 12 OCT 92

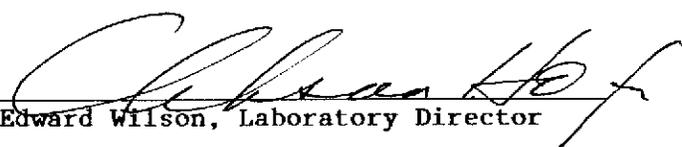
Mr. B. Baumgartner  
CH2M Hill  
1111 Broadway, Suite 1200  
Oakland, California 94607-4046

Project: SF028830.A1

## REPORT OF ANALYTICAL RESULTS

Page 2

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED				
10-217-1	MW-7	12 OCT 92				
10-217-2	MW-8	12 OCT 92				
10-217-3	MW-9	12 OCT 92				
10-217-4	MW-10	12 OCT 92				
10-217-5	MW-11	12 OCT 92				
PARAMETER	10-217-1	10-217-2	10-217-3	10-217-4	10-217-5	
Dibromochloromethane, ug/L	<0.5	<1	<0.5	<1	<3	
Dichlorodifluoromethane, ug/L	<0.5	<1	<0.5	<1	<3	
Freon 113, ug/L	<0.5	<1	<0.5	<1	<3	
Methylene chloride, ug/L	<0.5	<1	<0.5	<1	<3	
Trichloroethene, ug/L	39	110	17	45	450	
Trichlorofluoromethane, ug/L	<0.5	<1	<0.5	<1	<3	
Tetrachloroethene, ug/L	28	24	36	46	16	
Vinyl chloride, ug/L	2.8	1.3	3.0	11	5.2	
cis-1,2-Dichloroethene, ug/L	65	22	38	100	58	
cis-1,3-Dichloropropene, ug/L	<0.5	<1	<0.5	<1	<3	
trans-1,2-Dichloroethene, ug/L	6.0	<1	2.6	7.0	5.0	
trans-1,3-Dichloropropene, ug/L	<0.5	<1	<0.5	<1	<3	

  
Edward Wilson, Laboratory Director

BCA

## BATCH QC REPORT: Definitions and Terms



Accuracy	The ability of a procedure to determine the "true" concentration of an analyte
Precision	The reproducibility of a procedure demonstrated by the agreement between analyses performed on either duplicates of the same sample or a pair of duplicate spikes
Batch	A group of samples prepared together using the same reagents and equipment, and/or analyzed sequentially using the same calibration curve, reagents, and instrument
Laboratory Control Standard (LCS)	Laboratory reagent water spiked with known compounds and subjected to the same procedures as the samples. The LCS thus indicates the accuracy of the analytical method and, because it is prepared from a different source than the standard used to calibrate the instrument, it also serves to double-check the calibration.
Matrix QC	Quality control tests performed on actual client samples. For most analyses, the laboratory uses a pair of spiked samples (duplicate spikes). The laboratory may also use a pair of duplicate samples and a spiked sample.
LC Result	Laboratory result of an LCS analysis
LT Result	Expected result, or true value, of the LCS analysis
R1, R2 Result	Result of the analysis of replicate aliquots of a sample, with R1 indicating the first analysis of the sample and R2 its corresponding duplicate; used to determine precision
S1, S2 Result	Result of the analysis of replicate spiked aliquots, with S1 indicating one spike of the sample and S2 the second spike; used to determine precision and accuracy.
R Bar Result	The average of replicate analysis results
S Bar Result	The average of spike analysis results
True value	The theoretical, or expected, result of a spike sample analysis. Calculated using one of the following: $\frac{\text{Sample Concentration} + \text{Spike Amount}}{2} \qquad \text{R Bar} + \text{Spike Amount}$
Percent Recovery	The percentage of analyte recovered. For LCS, the percent recovery calculation is: $\text{LC} \div \text{LT} \times 100$ For spike recoveries, the percent recovery calculation is: $\frac{(\text{S Bar} - \text{Sample Concentration}) \times 100}{\text{Spike Amount}}$
Relative Percent Difference (RPD)	Calculated using one of the following: $\frac{(\text{R1} - \text{R2}) \times 100}{(\text{R1} + \text{R2}) \div 2} \qquad \frac{(\text{S1} - \text{S2}) \times 100}{(\text{S1} + \text{S2}) \div 2}$
Blank Result	The result of the analysis of a method blank, which is reagent water that is analyzed using the same reagents, instruments and procedures as the samples in a batch; used to determine laboratory contamination
Reporting Detection Limit (RDL)	BCA-assigned limit based on, but not the same as, method detection limits (MDLs) determined using EPA guidelines <i>B C Analytical</i>

: ORDER PLACED FOR CLIENT: CH2M Hill 9210217 :  
: BC ANALYTICAL : EMVL LAB : 11:14:30 26 OCT 1992 - P. 1 :  
=====

SAMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE....	METHOD.....	EQUIP.	BATCH	ID.NO
			ANALYZED				
9210217*1	MW-7	VH.8010	10.14.92	8010	516-20	92390	7016
9210217*2	MW-8	VH.8010	10.15.92	8010	516-20	92391	7016
9210217*3	MW-9	VH.8010	10.14.92	8010	516-20	92390	7016
9210217*4	MW-10	VH.8010	10.15.92	8010	516-20	92391	7016
9210217*5	MW-11	VH.8010	10.15.92	8010	516-20	92391	7016

\*\*\*

Notes: Equipment = BC Analytical identification number for a particular piece of analytical equipment.

ID.NO = BC Analytical employee identification number of analyst.

BC ANALYTICAL

BATCH QC REPORT  
ORDER: E9210217

DATE REPORTED : 10/26/92

Page 1

LABORATORY CONTROL STANDARDS

PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
EPA Method 8010						
1,1,1-Trichloroethane	10.14.92	92390	22.3	20.0	ug/L	112
1,1,2,2-Tetrachloroethane	10.14.92	92390	22.2	20.0	ug/L	111
1,1,2-Trichloroethane	10.14.92	92390	22.3	20.0	ug/L	112
1,1-Dichloroethane	10.14.92	92390	21.0	20.0	ug/L	105
1,1-Dichloroethene	10.14.92	92390	20.3	20.0	ug/L	102
1,2-Dichloroethane	10.14.92	92390	22.4	20.0	ug/L	112
1,2-Dichlorobenzene	10.14.92	92390	21.1	20.0	ug/L	106
1,2-Dichloroethene (Total)	10.14.92	92390	40.4	40.0	ug/L	101
1,2-Dichloropropane	10.14.92	92390	21.4	20.0	ug/L	107
1,3-Dichlorobenzene	10.14.92	92390	20.2	20.0	ug/L	101
1,4-Dichlorobenzene	10.14.92	92390	20.6	20.0	ug/L	103
2-Chloroethylvinylether	10.14.92	92390	19.3	20.0	ug/L	97
Bromodichloromethane	10.14.92	92390	22.0	20.0	ug/L	110
Bromomethane	10.14.92	92390	20.5	20.0	ug/L	103
Bromoform	10.14.92	92390	21.2	20.0	ug/L	106
Chlorobenzene	10.14.92	92390	18.2	20.0	ug/L	91
Carbon Tetrachloride	10.14.92	92390	21.4	20.0	ug/L	107
Chloroethane	10.14.92	92390	17.2	20.0	ug/L	86
Chloroform	10.14.92	92390	22.0	20.0	ug/L	110
Chloromethane	10.14.92	92390	14.7	20.0	ug/L	74
Dibromochloromethane	10.14.92	92390	22.0	20.0	ug/L	110
Dichlorodifluoromethane	10.14.92	92390	18.0	20.0	ug/L	90
Freon 113	10.14.92	92390	15.8	20.0	ug/L	79
Methylene chloride	10.14.92	92390	20.7	20.0	ug/L	104
Trichloroethene	10.14.92	92390	19.6	20.0	ug/L	98
Trichlorofluoromethane	10.14.92	92390	17.8	20.0	ug/L	89
Tetrachloroethene	10.14.92	92390	19.5	20.0	ug/L	98
Vinyl chloride	10.14.92	92390	19.4	20.0	ug/L	97
cis-1,2-Dichloroethene	10.14.92	92390	20.5	20.0	ug/L	103
cis-1,3-Dichloropropene	10.14.92	92390	35.9	32.4	ug/L	111
trans-1,2-Dichloroethene	10.14.92	92390	19.9	20.0	ug/L	100
trans-1,3-Dichloropropene	10.14.92	92390	7.91	7.60	ug/L	104
EPA Method 8010						
1,1,1-Trichloroethane	10.15.92	92391	23.0	20.0	ug/L	115
1,1,2,2-Tetrachloroethane	10.15.92	92391	21.7	20.0	ug/L	109
1,1,2-Trichloroethane	10.15.92	92391	22.4	20.0	ug/L	112

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## LABORATORY CONTROL STANDARDS

PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
1,1-Dichloroethane	10.15.92	92391	21.8	20.0	ug/L	109
1,1-Dichloroethene	10.15.92	92391	18.8	20.0	ug/L	94
1,2-Dichloroethane	10.15.92	92391	22.4	20.0	ug/L	112
1,2-Dichlorobenzene	10.15.92	92391	19.8	20.0	ug/L	99
1,2-Dichloroethene (Total)	10.15.92	92391	41.2	40.0	ug/L	103
1,2-Dichloropropane	10.15.92	92391	21.8	20.0	ug/L	109
1,3-Dichlorobenzene	10.15.92	92391	19.7	20.0	ug/L	99
1,4-Dichlorobenzene	10.15.92	92391	20.3	20.0	ug/L	102
2-Chloroethylvinylether	10.15.92	92391	20.3	20.0	ug/L	102
Bromodichloromethane	10.15.92	92391	22.1	20.0	ug/L	111
Bromomethane	10.15.92	92391	30.9	20.0	ug/L	155
Bromoform	10.15.92	92391	21.2	20.0	ug/L	106
Chlorobenzene	10.15.92	92391	18.3	20.0	ug/L	92
Carbon Tetrachloride	10.15.92	92391	21.9	20.0	ug/L	110
Chloroethane	10.15.92	92391	15.6	20.0	ug/L	78
Chloroform	10.15.92	92391	23.0	20.0	ug/L	115
Chloromethane	10.15.92	92391	10.0	20.0	ug/L	50
Dibromochloromethane	10.15.92	92391	23.4	20.0	ug/L	117
Dichlorodifluoromethane	10.15.92	92391	24.6	20.0	ug/L	123
Freon 113	10.15.92	92391	19.5	20.0	ug/L	98
Methylene chloride	10.15.92	92391	20.3	20.0	ug/L	102
Trichloroethene	10.15.92	92391	18.6	20.0	ug/L	93
Trichlorofluoromethane	10.15.92	92391	19.8	20.0	ug/L	99
Tetrachloroethene	10.15.92	92391	18.9	20.0	ug/L	95
Vinyl chloride	10.15.92	92391	22.8	20.0	ug/L	114
cis-1,2-Dichloroethene	10.15.92	92391	21.1	20.0	ug/L	106
cis-1,3-Dichloropropene	10.15.92	92391	36.1	32.4	ug/L	111
trans-1,2-Dichloroethene	10.15.92	92391	20.1	20.0	ug/L	101
trans-1,3-Dichloropropene	10.15.92	92391	7.91	7.60	ug/L	104

## BC ANALYTICAL

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## MATRIX QC PRECISION (DUPLICATE SPIKES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	S1 RESULT	S2 RESULT	UNIT	RELATIVE ZDIFF
<b>Halocarbons (EPA 601)</b>						
1,1,1-Trichloroethane	10.14.92	92390	16.6	16.6	ug/L	0
1,1-Dichloroethane	10.14.92	92390	15.1	15.0	ug/L	1
1,1-Dichloroethene	10.14.92	92390	13.4	12.7	ug/L	5
1,2-Dichloroethane	10.14.92	92390	16.6	16.2	ug/L	2
1,2-Dichloropropane	10.14.92	92390	15.5	15.4	ug/L	1
Bromodichloromethane	10.14.92	92390	16.4	15.6	ug/L	5
Bromoform	10.14.92	92390	14.4	15.6	ug/L	8
Carbon Tetrachloride	10.14.92	92390	15.2	15.3	ug/L	1
Chloroform	10.14.92	92390	17.6	17.2	ug/L	2
Dibromochloromethane	10.14.92	92390	16.6	16.8	ug/L	1
Methylene chloride	10.14.92	92390	14.3	13.8	ug/L	4
Trichloroethene	10.14.92	92390	14.0	14.0	ug/L	0
Tetrachloroethene	10.14.92	92390	13.5	13.8	ug/L	2
<b>EPA Method 601</b>						
1,1,1-Trichloroethane	10.15.92	92391	15.4	16.0	ug/L	4
1,1-Dichloroethane	10.15.92	92391	13.9	14.6	ug/L	5
1,1-Dichloroethene	10.15.92	92391	11.3	12.2	ug/L	8
1,2-Dichloroethane	10.15.92	92391	14.7	15.9	ug/L	8
1,2-Dichloropropane	10.15.92	92391	15.0	16.1	ug/L	7
Bromodichloromethane	10.15.92	92391	15.1	16.4	ug/L	8
Bromoform	10.15.92	92391	13.5	15.0	ug/L	11
Carbon Tetrachloride	10.15.92	92391	13.8	14.3	ug/L	4
Chloroform	10.15.92	92391	14.8	15.5	ug/L	5
Dibromochloromethane	10.15.92	92391	15.8	16.1	ug/L	2
Methylene chloride	10.15.92	92391	13.3	14.0	ug/L	5
Trichloroethene	10.15.92	92391	31.3	31.4	ug/L	0
Tetrachloroethene	10.15.92	92391	13.6	14.2	ug/L	4

BC ANALYTICAL

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MATRIX QC ACCURACY (SPIKES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	SBAR RESULT	TRUE RESULT	RBAR RESULT	UNIT	PERCENT RECOVERY
<b>Halocarbons (EPA 601)</b>							
1,1,1-Trichloroethane	10.14.92	92390	16.6	12.0	<0.5	ug/L	138
1,1-Dichloroethane	10.14.92	92390	15.05	12.0	<0.5	ug/L	125
1,1-Dichloroethene	10.14.92	92390	13.05	12.0	<0.5	ug/L	109
1,2-Dichloroethane	10.14.92	92390	16.4	12.0	<0.5	ug/L	137
1,2-Dichloropropane	10.14.92	92390	15.45	12.0	<0.5	ug/L	129
Bromodichloromethane	10.14.92	92390	16	12.0	<0.5	ug/L	133
Bromoform	10.14.92	92390	15	12.0	<0.5	ug/L	125
Carbon Tetrachloride	10.14.92	92390	15.25	12.0	<0.5	ug/L	127
Chloroform	10.14.92	92390	17.4	13.5	1.5	ug/L	133
Dibromochloromethane	10.14.92	92390	16.7	12.0	<0.5	ug/L	139
Methylene chloride	10.14.92	92390	14.05	12.0	<0.5	ug/L	117
Trichloroethene	10.14.92	92390	14	12.0	<0.5	ug/L	117
Tetrachloroethene	10.14.92	92390	13.65	12.0	<0.5	ug/L	114
<b>EPA Method 601</b>							
1,1,1-Trichloroethane	10.15.92	92391	15.7	12.0	<0.5	ug/L	131
1,1-Dichloroethane	10.15.92	92391	14.25	12.0	<0.5	ug/L	119
1,1-Dichloroethene	10.15.92	92391	11.75	12.0	<0.5	ug/L	98
1,2-Dichloroethane	10.15.92	92391	15.3	12.0	<0.5	ug/L	128
1,2-Dichloropropane	10.15.92	92391	15.55	12.0	<0.5	ug/L	130
Bromodichloromethane	10.15.92	92391	15.75	12.0	<0.5	ug/L	131
Bromoform	10.15.92	92391	14.25	12.0	<0.5	ug/L	119
Carbon Tetrachloride	10.15.92	92391	14.05	12.0	<0.5	ug/L	117
Chloroform	10.15.92	92391	15.15	12.0	<0.5	ug/L	126
Dibromochloromethane	10.15.92	92391	15.95	12.0	<0.5	ug/L	133
Methylene chloride	10.15.92	92391	13.65	12.0	<0.5	ug/L	114
Trichloroethene	10.15.92	92391	31.35	35	23	ug/L	70
Tetrachloroethene	10.15.92	92391	13.9	13.0	1.0	ug/L	108

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METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT	METHOD
EPA Method 8010						
Date Analyzed	10.14.92	92390	10.14.92	NA	Date	8010
1,1,1-Trichloroethane	10.14.92	92390	0	0.5	ug/L	8010
1,1,2,2-Tetrachloroethane	10.14.92	92390	0	0.5	ug/L	8010
1,1,2-Trichloroethane	10.14.92	92390	0	0.5	ug/L	8010
1,1-Dichloroethane	10.14.92	92390	0	0.5	ug/L	8010
1,1-Dichloroethene	10.14.92	92390	0	0.5	ug/L	8010
1,2-Dichloroethane	10.14.92	92390	0	0.5	ug/L	8010
1,2-Dichlorobenzene	10.14.92	92390	0	0.5	ug/L	8010
1,2-Dichloroethene (Total)	10.14.92	92390	0	0.5	ug/L	8010
1,2-Dichloropropane	10.14.92	92390	0	0.5	ug/L	8010
1,3-Dichlorobenzene	10.14.92	92390	0	0.5	ug/L	8010
1,4-Dichlorobenzene	10.14.92	92390	0	0.5	ug/L	8010
2-Chloroethylvinylether	10.14.92	92390	0	0.5	ug/L	8010
Bromodichloromethane	10.14.92	92390	0	0.5	ug/L	8010
Bromomethane	10.14.92	92390	0	0.5	ug/L	8010
Bromoform	10.14.92	92390	0	0.5	ug/L	8010
Chlorobenzene	10.14.92	92390	0	0.5	ug/L	8010
Carbon Tetrachloride	10.14.92	92390	0	0.5	ug/L	8010
Chloroethane	10.14.92	92390	0	0.5	ug/L	8010
Chloroform	10.14.92	92390	0	0.5	ug/L	8010
Chloromethane	10.14.92	92390	0	0.5	ug/L	8010
Dibromochloromethane	10.14.92	92390	0	0.5	ug/L	8010
Dichlorodifluoromethane	10.14.92	92390	0	0.5	ug/L	8010
Freon 113	10.14.92	92390	0	0.5	ug/L	8010
Methylene chloride	10.14.92	92390	0	0.5	ug/L	8010
Trichloroethene	10.14.92	92390	0	0.5	ug/L	8010
Trichlorofluoromethane	10.14.92	92390	0	0.5	ug/L	8010
Tetrachloroethene	10.14.92	92390	0	0.5	ug/L	8010
Vinyl chloride	10.14.92	92390	0	0.5	ug/L	8010
cis-1,2-Dichloroethene	10.14.92	92390	0	0.5	ug/L	8010
cis-1,3-Dichloropropene	10.14.92	92390	0	0.5	ug/L	8010
trans-1,2-Dichloroethene	10.14.92	92390	0	0.5	ug/L	8010
trans-1,3-Dichloropropene	10.14.92	92390	0	0.5	ug/L	8010
EPA Method 8010						
Date Analyzed	10.15.92	92391	10.15.92	NA	Date	8010
1,1,1-Trichloroethane	10.15.92	92391	0	0.5	ug/L	8010

## BC ANALYTICAL

BATCH QC REPORT

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## METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT	METHOD
1,1,2,2-Tetrachloroethane	10.15.92	92391	0	0.5	ug/L	8010
1,1,2-Trichloroethane	10.15.92	92391	0	0.5	ug/L	8010
1,1-Dichloroethane	10.15.92	92391	0	0.5	ug/L	8010
1,1-Dichloroethene	10.15.92	92391	0	0.5	ug/L	8010
1,2-Dichloroethane	10.15.92	92391	0	0.5	ug/L	8010
1,2-Dichlorobenzene	10.15.92	92391	0	0.5	ug/L	8010
1,2-Dichloroethene (Total)	10.15.92	92391	0	0.5	ug/L	8010
1,2-Dichloropropane	10.15.92	92391	0	0.5	ug/L	8010
1,3-Dichlorobenzene	10.15.92	92391	0	0.5	ug/L	8010
1,4-Dichlorobenzene	10.15.92	92391	0	0.5	ug/L	8010
2-Chloroethylvinylether	10.15.92	92391	0	0.5	ug/L	8010
Bromodichloromethane	10.15.92	92391	0	0.5	ug/L	8010
Bromomethane	10.15.92	92391	0	0.5	ug/L	8010
Bromoform	10.15.92	92391	0	0.5	ug/L	8010
Chlorobenzene	10.15.92	92391	0	0.5	ug/L	8010
Carbon Tetrachloride	10.15.92	92391	0	0.5	ug/L	8010
Chloroethane	10.15.92	92391	0	0.5	ug/L	8010
Chloroform	10.15.92	92391	0	0.5	ug/L	8010
Chloromethane	10.15.92	92391	0	0.5	ug/L	8010
Dibromochloromethane	10.15.92	92391	0	0.5	ug/L	8010
Dichlorodifluoromethane	10.15.92	92391	0	0.5	ug/L	8010
Freon 113	10.15.92	92391	0	0.5	ug/L	8010
Methylene chloride	10.15.92	92391	0	0.5	ug/L	8010
Trichloroethene	10.15.92	92391	0	0.5	ug/L	8010
Trichlorofluoromethane	10.15.92	92391	0	0.5	ug/L	8010
Tetrachloroethene	10.15.92	92391	0	0.5	ug/L	8010
Vinyl chloride	10.15.92	92391	0	0.5	ug/L	8010
cis-1,2-Dichloroethene	10.15.92	92391	0	0.5	ug/L	8010
cis-1,3-Dichloropropene	10.15.92	92391	0	0.5	ug/L	8010
trans-1,2-Dichloroethene	10.15.92	92391	0	0.5	ug/L	8010
trans-1,3-Dichloropropene	10.15.92	92391	0	0.5	ug/L	8010

**CHAIN OF CUSTODY RECORD**

BCA Log Number 9210217#1-Z

Client name <u>CH2M HILL/BEAN BAUMGARTNER</u>			Project or PO# <u>SC0288300 AI</u>		Analyses required EPA 810 Hazardous sample Special handling required						
Address <u>111 BROADWAY, SUITE 1200</u>			Phone # <u>751-2882</u>								
City, State, Zip <u>OAKLAND, CA</u>			Report attention <u>R. BAUMGARTNER</u>								
Lab Sample number	Date sampled	Time sampled	Type* See key below	Sampled by	Number of containers	Remarks					
				Sample description							
-1	10/12/92		GW	<u>BAUMGARTNER</u>	3	X					
-2											
-3											
-4											
-5											

Signature	Print Name	Company	Date	Time
<u>[Signature]</u>	<u>R. BAUMGARTNER</u>	<u>CH2M HILL</u>	<u>10/12/92</u>	<u>1430</u>
Received by				
Relinquished by				
Received by				
Relinquished by				
Received by Laboratory <u>Bonny Baldwin</u>	<u>Bonny Baldwin</u>	<u>BCA</u>	<u>10/12/92</u>	<u>14:30</u>

**B C ANALYTICAL**  
 4255 Powell Street, Emeryville, CA 94608 (510) 428-2300  
 801 Western Avenue, Glendale, CA 91201 (818) 247-5737  
 1200 Gene Autry Way, Anaheim, CA 92805 (714) 978-0113

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

\*KEY: WW—Wastewater SU—Surface Water SO—Soil  
 SL—Sludge PE—Petroleum OT—Other  
 NA—Nonaqueous GW—Groundwater AQ—Aqueous

1255 Powell Street  
 Emeryville, CA 94608  
 510/428-2300  
 Fax: 510/547-3643

LOG NO: E92-09-395

Received: 18 SEP 92

Mailed: OCT 06 1992

Bern Baumgartner  
 CH2M Hill  
 1111 Broadway, Suite 1200  
 Oakland, California 94607-4046

Project: SFO28830.BB

## REPORT OF ANALYTICAL RESULTS

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LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
09-395-1	Gutter-1	17 SEP 92
09-395-2	Gutter-2	17 SEP 92
09-395-3	Gutter-3	17 SEP 92
09-395-4	Gutter-4	17 SEP 92
09-395-5	Gutter-5	17 SEP 92

PARAMETER	09-395-1	09-395-2	09-395-3	09-395-4	09-395-5
Petroleum Hydrocarbons (418.1), mg/kg	<50	<50	<50	<50	<50
Aromatic Hydrocarbons					
Date Analyzed	09.23.92	09.25.92	09.23.92	09.24.92	09.23.92
Dilution Factor, Times	1	1	1	1	1
Benzene, mg/kg	<0.005	<0.005	<0.005	<0.005	<0.005
Ethylbenzene, mg/kg	<0.005	<0.005	0.0063	<0.005	<0.005
Toluene, mg/kg	<0.005	<0.005	0.0068	<0.005	<0.005
Total Xylene Isomers, mg/kg	<0.005	0.012	0.043	<0.005	<0.005
TPH - Volatile Hydrocarbons					
Date Analyzed	09.23.92	09.25.92	09.23.92	09.24.92	09.23.92
Dilution Factor, Times	1	1	1	1	1
C6 to C14 (as gasoline), mg/kg	<0.1	<0.1	0.11	0.36	<0.1
Approximate Character, .	NO PATTERN				

# BC Analytical

1255 Powell Street  
Emeryville, CA 94608  
510/428-2300  
Fax: 510/547-3643

LOG NO: E92-09-395

Received: 18 SEP 92

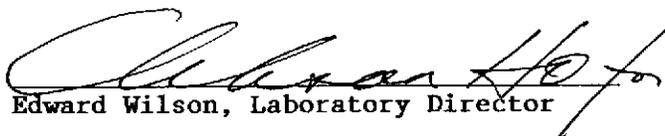
Bern Baumgartner  
CH2M Hill  
1111 Broadway, Suite 1200  
Oakland, California 94607-4046

Project: SF028830.BB

## REPORT OF ANALYTICAL RESULTS

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LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
09-395-6	Gutter-6	17 SEP 92
PARAMETER	09-395-6	
Petroleum Hydrocarbons (418.1), mg/kg	470	
Aromatic Hydrocarbons		
Date Analyzed	09.29.92	
Dilution Factor, Times	10	
Benzene, mg/kg	<0.3	
Ethylbenzene, mg/kg	0.35	
Toluene, mg/kg	<0.3	
Total Xylene Isomers, mg/kg	2.1	
TPH - Volatile Hydrocarbons		
Date Analyzed	09.29.92	
Dilution Factor, Times	10	
C6 to C14 (as gasoline), mg/kg	340	
Approximate Character, .	UNKNOWN	

  
Edward Wilson, Laboratory Director

## BATCH QC REPORT: Definitions and Terms



Accuracy	The ability of a procedure to determine the "true" concentration of an analyte
Precision	The reproducibility of a procedure demonstrated by the agreement between analyses performed on either duplicates of the same sample or a pair of duplicate spikes
Batch	A group of samples prepared together using the same reagents and equipment, and/or analyzed sequentially using the same calibration curve, reagents, and instrument
Laboratory Control Standard (LCS)	Laboratory reagent water spiked with known compounds and subjected to the same procedures as the samples. The LCS thus indicates the accuracy of the analytical method and, because it is prepared from a different source than the standard used to calibrate the instrument, it also serves to double-check the calibration.
Matrix QC	Quality control tests performed on actual client samples. For most analyses, the laboratory uses a pair of spiked samples (duplicate spikes). The laboratory may also use a pair of duplicate samples and a spiked sample.
LC Result	Laboratory result of an LCS analysis
LT Result	Expected result, or true value, of the LCS analysis
R1, R2 Result	Result of the analysis of replicate aliquots of a sample, with R1 indicating the first analysis of the sample and R2 its corresponding duplicate; used to determine precision
S1, S2 Result	Result of the analysis of replicate spiked aliquots, with S1 indicating one spike of the sample and S2 the second spike; used to determine precision and accuracy.
R Bar Result	The average of replicate analysis results
S Bar Result	The average of spike analysis results
True value	The theoretical, or expected, result of a spike sample analysis. Calculated using one of the following: $\frac{\text{Sample Concentration} + \text{Spike Amount}}{2} \quad \text{R Bar} + \text{Spike Amount}$
Percent Recovery	The percentage of analyte recovered. For LCS, the percent recovery calculation is: $\text{LC} \div \text{LT} \times 100$ For spike recoveries, the percent recovery calculation is: $\frac{(\text{S Bar} - \text{Sample Concentration}) \times 100}{\text{Spike Amount}}$
Relative Percent Difference (RPD)	Calculated using one of the following: $\frac{(\text{R1} - \text{R2}) \times 100}{(\text{R1} + \text{R2}) \div 2} \quad \frac{(\text{S1} - \text{S2}) \times 100}{(\text{S1} + \text{S2}) \div 2}$
Blank Result	The result of the analysis of a method blank, which is reagent water that is analyzed using the same reagents, instruments and procedures as the samples in a batch; used to determine laboratory contamination
Reporting Detection Limit (RDL)	BCA-assigned limit based on, but not the same as, method detection limits (MDLs) determined using EPA guidelines

: ORDER PLACED FOR CLIENT: CH2M Hill 9209395 :  
: BC ANALYTICAL : EMVL LAB : 08:16:45 06 OCT 1992 - P. 1 :  
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SAMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE....	METHOD.....	EQUIP.	BATCH	ID.NO
			ANALYZED				
9209395*1	Gutter-1	IR.PETROHC	09.25.92	418.1	513-03	9271	7453
		5030,BTEX	09.23.92	5030/8020	516-19	92260	7817
		5030.TPHG	09.23.92	5030/8015	516-19	92260	7817
9209395*2	Gutter-2	IR.PETROHC	09.25.92	418.1	513-03	9271	7453
		5030,BTEX	09.25.92	5030/8020	516-19	92262	7817
		5030.TPHG	09.25.92	5030/8015	516-19	92262	7817
9209395*3	Gutter-3	IR.PETROHC	09.25.92	418.1	513-03	9271	7453
		5030,BTEX	09.23.92	5030/8020	516-19	92260	7817
		5030.TPHG	09.23.92	5030/8015	516-19	92260	7817
9209395*4	Gutter-4	IR.PETROHC	09.25.92	418.1	513-03	9271	7453
		5030,BTEX	09.24.92	5030/8020	516-19	92262	7817
		5030.TPHG	09.24.92	5030/8015	516-19	92262	7817
9209395*5	Gutter-5	IR.PETROHC	09.25.92	418.1	513-03	9271	7453
		5030,BTEX	09.23.92	5030/8020	516-19	92260	7817
		5030.TPHG	09.23.92	5030/8015	516-19	92260	7817
9209395*6	Gutter-6	IR.PETROHC	09.25.92	418.1	513-03	9271	7453
		5030,BTEX	09.29.92	5030/MEOH	516-19	92263	7817
		5030.TPHG	09.29.92	5030/MEOH	516-19	92263	7817

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Notes: Equipment = BC Analytical identification number for a particular piece of analytical equipment.

ID.NO = BC Analytical employee identification number of analyst.

BC ANALYTICAL

BATCH QC REPORT  
 ORDER: E9209395

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LABORATORY CONTROL STANDARDS

PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
Petroleum Hydrocarbons (418.1)	09.25.92	9271	318	309	mg/kg	103
Aromatic Hydrocarbons						
Benzene	09.23.92	92260	0.0400	0.0400	ug/L	100
Ethylbenzene	09.23.92	92260	0.0377	0.0400	ug/L	94
Toluene	09.23.92	92260	0.0396	0.0400	ug/L	99
Total Xylene Isomers	09.23.92	92260	0.121	0.120	ug/L	101
TPH - Volatile Hydrocarbons						
C6 to C14 (as gasoline)	09.23.92	92260	0.497	0.444	mg/kg	112
Aromatic Hydrocarbons						
Benzene	09.24.92	92262	0.0394	0.0400	mg/kg	99
Ethylbenzene	09.24.92	92262	0.0373	0.0400	mg/kg	93
Toluene	09.24.92	92262	0.0391	0.0400	mg/kg	98
Total Xylene Isomers	09.24.92	92262	0.119	0.120	mg/kg	99
TPH - Volatile Hydrocarbons						
C6 to C14 (as gasoline)	09.24.92	92262	0.513	0.444	mg/kg	116
Aromatic Hydrocarbons						
Benzene	09.28.92	92263	1.00	1.40	mg/kg	71
Ethylbenzene	09.28.92	92263	1.17	1.40	mg/kg	84
Toluene	09.28.92	92263	1.14	1.50	mg/kg	76
Total Xylene Isomers	09.28.92	92263	2.53	3.30	mg/kg	77
Aromatic Hydrocarbons						
Benzene	09.28.92	92263	0.998	1.40	mg/kg	71
Ethylbenzene	09.28.92	92263	1.20	1.40	mg/kg	86
Toluene	09.28.92	92263	1.15	1.50	mg/kg	77
Total Xylene Isomers	09.28.92	92263	2.58	3.30	mg/kg	78
TPH - Volatile Hydrocarbons						
C6 to C14 (as gasoline)	09.29.92	92263	23.6	32.0	mg/kg	74
TPH - Volatile Hydrocarbons						
C6 to C14 (as gasoline)	09.29.92	92263	24.4	32.0	mg/kg	76

BC ANALYTICAL

BATCH QC REPORT  
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LABORATORY CONTROL STANDARDS

PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
Petroleum Hydrocarbons (418.1)	09.25.92	9271	318	309	mg/kg	103
Aromatic Hydrocarbons						
Benzene	09.23.92	92260	0.0400	0.0400	ug/L	100
Ethylbenzene	09.23.92	92260	0.0377	0.0400	ug/L	94
Toluene	09.23.92	92260	0.0396	0.0400	ug/L	99
Total Xylene Isomers	09.23.92	92260	0.121	0.120	ug/L	101
TPH - Volatile Hydrocarbons						
C6 to C14 (as gasoline)	09.23.92	92260	0.497	0.444	mg/kg	112
Aromatic Hydrocarbons						
Benzene	09.24.92	92262	0.0394	0.0400	mg/kg	99
Ethylbenzene	09.24.92	92262	0.0373	0.0400	mg/kg	93
Toluene	09.24.92	92262	0.0391	0.0400	mg/kg	98
Total Xylene Isomers	09.24.92	92262	0.119	0.120	mg/kg	99
TPH - Volatile Hydrocarbons						
C6 to C14 (as gasoline)	09.24.92	92262	0.513	0.444	mg/kg	116
Aromatic Hydrocarbons						
Benzene	09.28.92	92263	1.00	1.40	mg/kg	71
Ethylbenzene	09.28.92	92263	1.17	1.40	mg/kg	84
Toluene	09.28.92	92263	1.14	1.50	mg/kg	76
Total Xylene Isomers	09.28.92	92263	2.53	3.30	mg/kg	77
Aromatic Hydrocarbons						
Benzene	09.28.92	92263	0.998	1.40	mg/kg	71
Ethylbenzene	09.28.92	92263	1.20	1.40	mg/kg	86
Toluene	09.28.92	92263	1.15	1.50	mg/kg	77
Total Xylene Isomers	09.28.92	92263	2.58	3.30	mg/kg	78
TPH - Volatile Hydrocarbons						
C6 to C14 (as gasoline)	09.29.92	92263	23.6	32.0	mg/kg	74
TPH - Volatile Hydrocarbons						
C6 to C14 (as gasoline)	09.29.92	92263	24.4	32.0	mg/kg	76

BC ANALYTICAL

BATCH QC REPORT  
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MATRIX QC PRECISION (DUPLICATE SPIKES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	S1 RESULT	S2 RESULT	UNIT	RELATIVE ZDIFF
Petroleum Hydrocarbons (418.1)	09.25.92	9271	360	305	mg/kg	17
Aromatic Hydrocarbons						
Benzene	09.23.92	92260	0.0354	0.0382	mg/kg	8
Ethylbenzene	09.23.92	92260	0.0332	0.0331	mg/kg	0
Toluene	09.23.92	92260	0.0425	0.0451	mg/kg	6
Total Xylene Isomers	09.23.92	92260	0.106	0.106	mg/kg	0
TPH - Volatile Hydrocarbons						
C6 to C14 (as gasoline)	09.23.92	92260	0.459	0.467	mg/kg	2
Aromatic Hydrocarbons						
Benzene	09.24.92	92262	0.0355	0.0356	mg/kg	0
Ethylbenzene	09.24.92	92262	0.0335	0.0332	mg/kg	1
Toluene	09.24.92	92262	0.0396	0.0411	mg/kg	4
Total Xylene Isomers	09.24.92	92262	0.107	0.106	mg/kg	1
TPH - Volatile Hydrocarbons						
C6 to C14 (as gasoline)	09.24.92	92262	0.472	0.484	mg/kg	3
Aromatic Hydrocarbons						
Benzene	09.29.92	92263	0.856	0.806	mg/kg	6
Ethylbenzene	09.29.92	92263	1.43	1.47	mg/kg	3
Toluene	09.29.92	92263	1.05	0.971	mg/kg	8
Total Xylene Isomers	09.29.92	92263	3.50	3.85	mg/kg	10
TPH - Volatile Hydrocarbons						
C6 to C14 (as gasoline)	09.29.92	92263	369	399	mg/kg	8

BC ANALYTICAL

BATCH QC REPORT  
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MATRIX QC ACCURACY (SPIKES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	SBAR RESULT	TRUE RESULT	RBAR RESULT	UNIT	PERCENT RECOVERY
Petroleum Hydrocarbons (418.1)	09.25.92	9271	332.5	309	<50	mg/kg	108
Aromatic Hydrocarbons							
Benzene	09.23.92	92260	0.0368	0.0387	<0.005	mg/kg	95
Ethylbenzene	09.23.92	92260	0.0331	0.0387	<0.005	mg/kg	86
Toluene	09.23.92	92260	0.0438	0.0507	0.012	mg/kg	82
Total Xylene Isomers	09.23.92	92260	0.106	0.116	<0.005	mg/kg	91
TPH - Volatile Hydrocarbons							
C6 to C14 (as gasoline)	09.23.92	92260	0.463	0.430	<0.1	mg/kg	108
Aromatic Hydrocarbons							
Benzene	09.24.92	92262	0.0355	0.0387	<0.005	mg/kg	92
Ethylbenzene	09.24.92	92262	0.0333	0.0387	<0.005	mg/kg	86
Toluene	09.24.92	92262	0.0403	0.0442	0.0055	mg/kg	90
Total Xylene Isomers	09.24.92	92262	0.1065	0.116	<0.005	mg/kg	92
TPH - Volatile Hydrocarbons							
C6 to C14 (as gasoline)	09.24.92	92262	0.478	0.430	<0.1	mg/kg	111
Aromatic Hydrocarbons							
Benzene	09.29.92	92263	0.831	1.37	<0.3	mg/kg	61
Ethylbenzene	09.29.92	92263	1.45	1.72	0.35	mg/kg	80
Toluene	09.29.92	92263	1.0105	1.46	<0.3	mg/kg	69
Total Xylene Isomers	09.29.92	92263	3.675	5.32	2.1	mg/kg	49
TPH - Volatile Hydrocarbons							
C6 to C14 (as gasoline)	09.29.92	92263	384	372	340	mg/kg	SOR

SOR = Spike Out of Range  
 (relative to high sample concentration)

BC ANALYTICAL

BATCH QC REPORT  
ORDER: E9209395

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METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT	METHOD
Petroleum Hydrocarbons (418.1)	09.25.92	9271	0	50	mg/kg	418.1
Aromatic Hydrocarbons						
Date Analyzed	09.23.92	92260	9.23.92	NA	Date	5030/8020
Benzene	09.23.92	92260	0	0.005	mg/kg	5030/8020
Ethylbenzene	09.23.92	92260	0	0.005	mg/kg	5030/8020
Toluene	09.23.92	92260	0	0.005	mg/kg	5030/8020
Total Xylene Isomers	09.23.92	92260	0	0.005	mg/kg	5030/8020
TPH - Volatile Hydrocarbons						
Date Analyzed	09.23.92	92260	9.23.92	NA	Date	5030/8015
C6 to C14 (as gasoline)	09.23.92	92260	0	0.1	mg/kg	5030/8015
Aromatic Hydrocarbons						
Date Analyzed	09.24.92	92262	9.24.92	NA	Date	5030/8015
Benzene	09.24.92	92262	0	NA	mg/kg	5030/8015
Ethylbenzene	09.24.92	92262	0	NA	mg/kg	5030/8015
Toluene	09.24.92	92262	0	NA	mg/kg	5030/8015
Total Xylene Isomers	09.24.92	92262	0	NA	mg/kg	5030/8015
TPH - Volatile Hydrocarbons						
Date Analyzed	09.24.92	92262	9.24.92	NA	Date	5030/8015
C6 to C14 (as gasoline)	09.24.92	92262	0.013	0.1	mg/kg	5030/8015
Aromatic Hydrocarbons						
Date Analyzed	09.28.92	92263	9.28.92	NA	Date	5030/MEOH
Benzene	09.28.92	92263	0	0.03	mg/kg	5030/MEOH
Ethylbenzene	09.28.92	92263	0	0.03	mg/kg	5030/MEOH
Toluene	09.28.92	92263	0.011	0.03	mg/kg	5030/MEOH
Total Xylene Isomers	09.28.92	92263	0.0066	0.03	mg/kg	5030/MEOH
TPH - Volatile Hydrocarbons						
Date Analyzed	09.29.92	92263	9.28.92	NA	Date	5030/MEOH
C6 to C14 (as gasoline)	09.29.92	92263	1.12	3	mg/kg	5030/MEOH

# CHM HILL QUALITY ANALYTICS

## CHAIN OF CUSTODY RECORD

PROJECT NUMBER <i>SFO2488306BIS</i>		PROJECT NAME <i>DEL MONTE PL 35</i>		CLIENT ADDRESS AND PHONE NUMBER <i>251-2426</i>		ANALYSES REQUESTED		LAB ID		FOR LAB USE ONLY							
CLIENT NAME <i>CH2M HILL</i>		PROJECT MANAGER <i>B. BAUMGARTNER</i>								LAB# <i>9209395</i>	BCA LABS		PROJECT NO.				
REQUESTED COMP. DATE <i>≤ 2 WKS</i>		SAMPLING REQUIREMENTS		# OF CONTAINERS <i>BTEX/TPH-GAS (8015 M) TRPH (418.1)</i>						ACK		VERIFIED					
SDWA <input type="checkbox"/> NPDES <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input type="checkbox"/>		QUOTE#								BS							
STA NO.	DATE	TIME	C O M P							G R A B	S O I L	SAMPLE DESCRIPTIONS (12 CHARACTERS)		NO. OF SAMP		PG	OF
<i>P35</i>	<i>9/17/92</i>										<i>X</i>	<i>GUTTER - 1</i>					
												<i>GUTTER - 2</i>					
												<i>GUTTER - 3</i>					
												<i>GUTTER - 4</i>					
						<i>GUTTER - 5</i>											
						<i>GUTTER - 6</i>											
SAMPLED BY AND TITLE <i>B. Baumgartner</i>		DATE/TIME <i>9/17/92</i>		RELINQUISHED BY <i>Baumgartner</i>		DATE/TIME <i>9/18/92 1030</i>		HAZWRAP/NEESA		Y N							
RECEIVED BY:		DATE/TIME		RELINQUISHED BY:		DATE/TIME		QC LEVEL 1 2 3		COC		ICE					
RECEIVED BY:		DATE/TIME		RELINQUISHED BY:		DATE/TIME		ANA REQ		TEMP							
RECEIVED BY LAB: <i>G-COYATA</i>		DATE/TIME <i>9/17/92 1030</i>		SAMPLE SHIPPED VIA UPS BUS FED-EX <u>HAND</u> OTHER		AIR BILL#		CUST SEAL		Ph							
REMARKS <i>[Signature]</i>								SAMPLE COND.		ENTERED INTO LIMS		COC REVIEWED					