



92 07 17 11 00 00

August 13, 1992

SFO28830.A1

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

Subject: **Quarterly monitoring data for Del Monte Plant 35 - West Parcel, 4204 Hollis Street, 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 July 17, 1992.** Figure 1 shows the West Parcel well locations. Table 1 summarizes Plant 35 West Parcel monitoring data through July 17, 1992. This table corresponds with the quarterly monitoring reports previously submitted to the Alameda County Health Agency (ACHA). The laboratory data sheets are also attached. This data needs to be submitted to the following:

Mr. 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

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.

The analytical results summarized in Table 1 indicate that no significant changes in groundwater quality have occurred beneath the West Parcel since the previous quarterly sampling date (April 23, 1992).

The July 17, 1992 sample results indicate that concentrations of trichloroethene (TCE) (MW7 - MW11), tetrachloroethene (PCE) (MW7 - MW10), 1,2-dichloroethane (1,2-DCA) (MW11), and vinyl chloride (VC) (MW7 and MW10) exceed State of California Maximum Contaminant Levels (MCLs). Applicable MCLs are shown at the bottom of Table 1. An MCL has not been established for Total Petroleum Hydrocarbons (TPH) as gasoline in groundwater. It should be noted that the laboratory detection limit exceeded the MCL for the following sample analytes: 1,2-DCA and VC in well MW8 and 1,2-DCA in well 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.**

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

Sincerely,



Bern Baumgartner
Project Manager

Enclosures

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

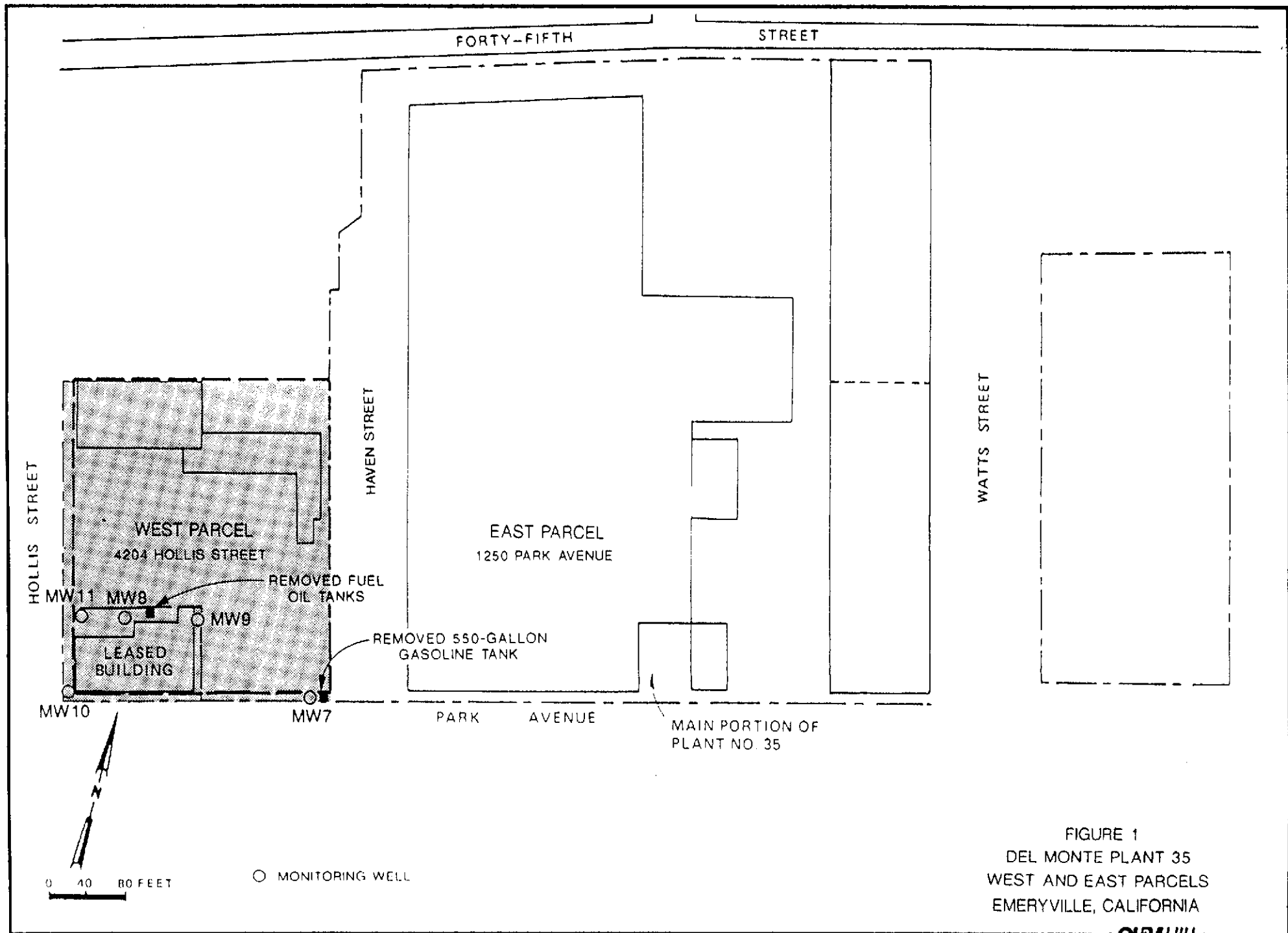


FIGURE 1
 DEL MONTE PLANT 35
 WEST AND EAST PARCELS
 EMERYVILLE, CALIFORNIA



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

Monitoring Well	Sampling Date	Concentration						
		1,2-DCE(a)	1,1-DCE(b)	1,2-DCA(c)	TCE(d)	PCE(e)	VC(f)	1,2-DP(g)
MW7	17-Apr-91	0.085	<0.0005	<0.0005	0.023	0.014	0.0051	<0.0005
MW7	31-Jul-91	0.100	<0.0005	<0.0005	0.029	0.019	0.0051	<0.0005
MW7	22-Oct-91	0.130	<0.0010	<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
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
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

WATER QUALITY STANDARDS								
Primary MCL	---	0.006	0.00050	0.0050	0.0050	0.0005	0.0050	0.0050
Cancer Risk	---	0.000033	0.00094	0.0027	0.0008	0.0020	---	---
AATC (Freshwater)	23.2	11.6	118	45	5.28	---	23	---
a total 1,2-Dichloroethene*			d Trichloroethene			f Vinyl chloride		
b 1,1-Dichloroethene			e Tetrachloroethene			g 1,2-Dichloropropane		
c 1,2-Dichloroethane			* Sum of cis-1,2-Dichloroethene and trans-1,2-Dichloroethene					

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

Monitoring Well	Sampling Date	Concentration (mg/l)						
		1,2-DCE(a)	1,1-DCE(b)	1,2-DCA(c)	TCE(d)	PCE(e)	VC(f)	1,2-DP(g)
MW10	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
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
WATER QUALITY STANDARDS								
	Primary MCL	---	0.006	0.00050	0.0050	0.0050	0.0005	0.0050
	Cancer Risk	---	0.000033	0.00094	0.0027	0.0008	0.0020	---
	AATC (Freshwater)	23.2	11.6	118	45	5.28	---	23
a total 1,2-Dichloroethene*			d Trichloroethene			f Vinyl chloride		
b 1,1-Dichloroethene			e Tetrachloroethene			g 1,2-Dichloropropane		
c 1,2-Dichloroethane			* Sum of cis-1,2-Dichloroethene and trans-1,2-Dichloroethene					

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

LOG NO: E92-07-328

Received: 17 JUL 92

Mailed: JUL 28 1992

Mr. Bern 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
07-328-1	MW-7	17 JUL 92
07-328-2	MW-8	17 JUL 92
07-328-3	MW-9	17 JUL 92
07-328-4	MW-10	17 JUL 92
07-328-5	MW-11	17 JUL 92

PARAMETER	07-328-1	07-328-2	07-328-3	07-328-4	07-328-5
Halocarbons (EPA 601)					
Date Analyzed	07.21.92	07.22.92	07.21.92	07.22.92	07.22.92
Confirmation Date	07.22.92	07.22.92	07.22.92	07.22.92	07.22.92
Dilution Factor, Times	1	5	1	2	1
1,1,1-Trichloroethane, ug/L	<0.5	<2	<0.5	<1	<0.5
1,1,2,2-Tetrachloroethane, ug/L	<0.5	<2	<0.5	<1	<0.5
1,1,2-Trichloroethane, ug/L	<0.5	<2	<0.5	<1	<0.5
1,1-Dichloroethane, ug/L	<0.5	<2	<0.5	<1	<0.5
1,1-Dichloroethene, ug/L	<0.5	<2	<0.5	<1	<0.5
1,2-Dichloroethane, ug/L	<0.5	<2	<0.5	<1	1.4
1,2-Dichlorobenzene, ug/L	<0.5	<2	<0.5	<1	<0.5
1,2-Dichloroethene (Total), ug/L	93	35	26	180	26
1,2-Dichloropropane, ug/L	<0.5	<2	<0.5	<1	3.5
1,3-Dichlorobenzene, ug/L	<0.5	<2	<0.5	<1	<0.5
1,4-Dichlorobenzene, ug/L	<0.5	<2	<0.5	<1	<0.5
2-Chloroethylvinylether, ug/L	<0.5	<2	<0.5	<1	<0.5
Bromodichloromethane, ug/L	<0.5	<2	<0.5	<1	<0.5
Bromomethane, ug/L	<0.5	<2	<0.5	<1	<0.5
Bromoform, ug/L	<0.5	<2	<0.5	<1	<0.5
Chlorobenzene, ug/L	<0.5	<2	<0.5	<1	<0.5
Carbon Tetrachloride, ug/L	<0.5	<2	<0.5	<1	<0.5
Chloroethane, ug/L	<0.5	<2	<0.5	<1	<0.5
Chloroform, ug/L	<0.5	<2	<0.5	<1	<0.5
Chloromethane, ug/L	<0.5	<2	<0.5	<1	<0.5

BC Analytical

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

LOG NO: E92-07-328

Received: 17 JUL 92

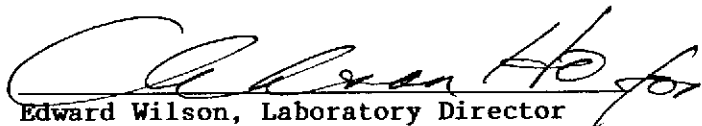
Mr. Bern Baumgartner
CH2M Hill
1111 Broadway, Suite 1200
Oakland, California 94607-4046

Project: SF028830.A1

REPORT OF ANALYTICAL RESULTS

Page 2

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED				
07-328-1	MW-7	17 JUL 92				
07-328-2	MW-8	17 JUL 92				
07-328-3	MW-9	17 JUL 92				
07-328-4	MW-10	17 JUL 92				
07-328-5	MW-11	17 JUL 92				
PARAMETER	07-328-1	07-328-2	07-328-3	07-328-4	07-328-5	
Dibromochloromethane, ug/L	<0.5	<2	<0.5	<1	<0.5	
Dichlorodifluoromethane, ug/L	<0.5	<2	<0.5	<1	<0.5	
Freon 113, ug/L	<0.5	<2	<0.5	<1	<0.5	
Methylene chloride, ug/L	<0.5	<2	<0.5	<1	<0.5	
Trichloroethene, ug/L	51	490	13	78	81	
Trichlorofluoromethane, ug/L	<0.5	<2	<0.5	<1	<0.5	
Tetrachloroethene, ug/L	30	11	32	82	<0.5	
Vinyl chloride, ug/L	1.8	<2	<0.5	15	<0.5	
cis-1,2-Dichloroethene, ug/L	86	35	26	170	24	
cis-1,3-Dichloropropene, ug/L	<0.5	<2	<0.5	<1	<0.5	
trans-1,2-Dichloroethene, ug/L	6.9	<2	<0.5	11	1.5	
trans-1,3-Dichloropropene, ug/L	<0.5	<2	<0.5	<1	<0.5	


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: $\text{Sample Concentration} + \text{Spike Amount} \qquad \text{R Bar} + \text{Spike Amount}$
Percent Recovery	The percentage of analyte recovered. For LCS, the percent recovery calculation is: $LC \div LT \times 100$ For spike recoveries, the percent recovery calculation is: $\frac{(\text{S Bar} - \text{Sample Concentration}) \times 100}{\text{Spike Amount}}$
Relative Percent Difference (RPD)	Calculated using one of the following: $\frac{(R1 - R2) \times 100}{(R1 + R2) \div 2} \qquad \frac{(S1 - S2) \times 100}{(S1 + S2) \div 2}$
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 9207328 :
∴ BC ANALYTICAL : EMVL LAB : 11:48:35 28 JUL 1992 - P. 1 :
=====

SAMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE....	METHOD.....	EQUIP.	BATCH	ID.NO
			ANALYZED				
9207328*1	MW-7	VH.601	07.21.92	601	516-21	92293	7553
9207328*2	MW-8	VH.601	07.22.92	601	516-21	92294	7553
9207328*3	MW-9	VH.601	07.21.92	601	516-21	92293	7553
9207328*4	MW-10	VH.601	07.22.92	601	516-21	92294	7553
9207328*5	MW-11	VH.601	07.22.92	601	516-21	92293	7553

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: E9207328

Page 1

DATE REPORTED : 07/28/92

LABORATORY CONTROL STANDARDS

PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
EPA Method 601						
1,1,1-Trichloroethane	07.21.92	92293	28	20	ug/L	140
1,1,2,2-Tetrachloroethane	07.21.92	92293	26	20	ug/L	130
1,1,2-Trichloroethane	07.21.92	92293	28	20	ug/L	140
1,1-Dichloroethane	07.21.92	92293	26	20	ug/L	130
1,1-Dichloroethene	07.21.92	92293	26	20	ug/L	130
1,2-Dichloroethane	07.21.92	92293	30	20	ug/L	150
1,2-Dichlorobenzene	07.21.92	92293	22	20	ug/L	110
1,2-Dichloroethene (Total)	07.21.92	92293	60	40	ug/L	150
1,2-Dichloropropane	07.21.92	92293	28	20	ug/L	140
1,3-Dichlorobenzene	07.21.92	92293	23	20	ug/L	115
1,4-Dichlorobenzene	07.21.92	92293	25	20	ug/L	125
2-Chloroethylvinylether	07.21.92	92293	21	20	ug/L	105
Bromodichloromethane	07.21.92	92293	28	20	ug/L	140
Bromomethane	07.21.92	92293	25	20	ug/L	125
Bromoform	07.21.92	92293	16	20	ug/L	80
Chlorobenzene	07.21.92	92293	24	20	ug/L	120
Carbon Tetrachloride	07.21.92	92293	28	20	ug/L	140
Chloroethane	07.21.92	92293	25	20	ug/L	125
Chloroform	07.21.92	92293	33	20	ug/L	165
Chloromethane	07.21.92	92293	24	20	ug/L	120
Dibromochloromethane	07.21.92	92293	24	20	ug/L	120
Dichlorodifluoromethane	07.21.92	92293	19	20	ug/L	95
Freon 113	07.21.92	92293	22	20	ug/L	110
Methylene chloride	07.21.92	92293	27	20	ug/L	135
Trichloroethene	07.21.92	92293	29	20	ug/L	145
Trichlorofluoromethane	07.21.92	92293	27	20	ug/L	135
Tetrachloroethene	07.21.92	92293	30	20	ug/L	150
Vinyl chloride	07.21.92	92293	30	20	ug/L	150
cis-1,2-Dichloroethene	07.21.92	92293	27	20	ug/L	135
cis-1,3-Dichloropropene	07.21.92	92293	34	32	ug/L	106
trans-1,2-Dichloroethene	07.21.92	92293	33	20	ug/L	165
trans-1,3-Dichloropropene	07.21.92	92293	8.8	7.6	ug/L	116
EPA Method 8010						
1,1,1-Trichloroethane	07.22.92	92294	27	20	ug/L	135
1,1,2,2-Tetrachloroethane	07.22.92	92294	28	20	ug/L	140
1,1,2-Trichloroethane	07.22.92	92294	29	20	ug/L	145

BC ANALYTICAL

BATCH QC REPORT
ORDER: E9207328

Page 2

DATE REPORTED : 07/28/92

LABORATORY CONTROL STANDARDS

PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
1,1-Dichloroethane	07.22.92	92294	26	20	ug/L	130
1,1-Dichloroethene	07.22.92	92294	28	20	ug/L	140
1,2-Dichloroethane	07.22.92	92294	31	20	ug/L	155
1,2-Dichlorobenzene	07.22.92	92294	30	20	ug/L	150
1,2-Dichloroethene (Total)	07.22.92	92294	60	40	ug/L	150
1,2-Dichloropropane	07.22.92	92294	27	20	ug/L	135
1,3-Dichlorobenzene	07.22.92	92294	29	20	ug/L	145
1,4-Dichlorobenzene	07.22.92	92294	30	20	ug/L	150
2-Chloroethylvinylether	07.22.92	92294	23	20	ug/L	115
Bromodichloromethane	07.22.92	92294	26	20	ug/L	130
Bromomethane	07.22.92	92294	29	20	ug/L	145
Bromoform	07.22.92	92294	16	20	ug/L	80
Chlorobenzene	07.22.92	92294	22	20	ug/L	110
Carbon Tetrachloride	07.22.92	92294	27	20	ug/L	135
Chloroethane	07.22.92	92294	28	20	ug/L	140
Chloroform	07.22.92	92294	33	20	ug/L	165
Chloromethane	07.22.92	92294	28	20	ug/L	140
Dibromochloromethane	07.22.92	92294	24	20	ug/L	120
Dichlorodifluoromethane	07.22.92	92294	21	20	ug/L	105
Freon 113	07.22.92	92294	25	20	ug/L	125
Methylene chloride	07.22.92	92294	29	20	ug/L	145
Trichloroethene	07.22.92	92294	28	20	ug/L	140
Trichlorofluoromethane	07.22.92	92294	28	20	ug/L	140
Tetrachloroethene	07.22.92	92294	29	20	ug/L	145
Vinyl chloride	07.22.92	92294	32	20	ug/L	160
cis-1,2-Dichloroethene	07.22.92	92294	26	20	ug/L	130
cis-1,3-Dichloropropene	07.22.92	92294	57	32	ug/L	178
trans-1,2-Dichloroethene	07.22.92	92294	34	20	ug/L	170
trans-1,3-Dichloropropene	07.22.92	92294	8.4	7.6	ug/L	111

Note: For EPA method 8010/601, batch 92294, the laboratory control standard recoveries for Chloroethane and cis-1,3-Dichloropropene exceeded the upper control limit, creating possible high bias in the samples. Both compounds were not detected in the samples.

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MATRIX QC PRECISION (DUPLICATE SPIKES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	S1 RESULT	S2 RESULT	UNIT	RELATIVE %DIFF
EPA Method 601						
1,1,1-Trichloroethane	07.21.92	92293	20	17	ug/L	16
1,1-Dichloroethane	07.21.92	92293	20	18	ug/L	11
1,1-Dichloroethene	07.21.92	92293	18	17	ug/L	6
1,2-Dichloroethane	07.21.92	92293	22	20	ug/L	10
1,2-Dichloropropane	07.21.92	92293	19	18	ug/L	5
Bromodichloromethane	07.21.92	92293	20	17	ug/L	16
Bromoform	07.21.92	92293	19	19	ug/L	0
Carbon Tetrachloride	07.21.92	92293	18	17	ug/L	6
Chloroform	07.21.92	92293	23	21	ug/L	9
Dibromochloromethane	07.21.92	92293	16	19	ug/L	17
Methylene chloride	07.21.92	92293	18	17	ug/L	6
Trichloroethene	07.21.92	92293	19	19	ug/L	0
Tetrachloroethene	07.21.92	92293	19	18	ug/L	5
EPA Method 8010						
1,1,1-Trichloroethane	07.22.92	92294	11	15	ug/L	31
1,1-Dichloroethane	07.22.92	92294	11	14	ug/L	24
1,1-Dichloroethene	07.22.92	92294	11	14	ug/L	24
1,2-Dichloroethane	07.22.92	92294	12	16	ug/L	29
1,2-Dichloropropane	07.22.92	92294	11	16	ug/L	37
Bromodichloromethane	07.22.92	92294	11	15	ug/L	31
Bromoform	07.22.92	92294	4.9	6.1	ug/L	22
Carbon Tetrachloride	07.22.92	92294	11	14	ug/L	24
Chloroform	07.22.92	92294	14	16	ug/L	13
Dibromochloromethane	07.22.92	92294	14	14	ug/L	0
Methylene chloride	07.22.92	92294	10	14	ug/L	33
Trichloroethene	07.22.92	92294	11	15	ug/L	31
Tetrachloroethene	07.22.92	92294	12	14	ug/L	15

Note: For EPA method 8010/601, batch 92294, the relative percent differences for 1,2-Dichloroethane, 1,2-Dichloropropane, and Bromodichloromethane exceeded the upper control limit due to low S2 recoveries.

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MATRIX QC ACCURACY (SPIKES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	SBAR RESULT	TRUE RESULT	RBAR RESULT	PERCENT UNIT RECOVERY
EPA Method 601						
1,1,1-Trichloroethane	07.21.92	92293	18.5	20	<0.5	ug/L 93
1,1-Dichloroethane	07.21.92	92293	19	20	<0.5	ug/L 95
1,1-Dichloroethene	07.21.92	92293	17.5	20	<0.5	ug/L 88
1,2-Dichloroethane	07.21.92	92293	21	20	<0.5	ug/L 105
1,2-Dichloropropane	07.21.92	92293	18.5	20	<0.5	ug/L 93
Bromodichloromethane	07.21.92	92293	18.5	20	<0.5	ug/L 93
Bromoform	07.21.92	92293	19	20	<0.5	ug/L 95
Carbon Tetrachloride	07.21.92	92293	17.5	20	<0.5	ug/L 88
Chloroform	07.21.92	92293	22	20	<0.5	ug/L 110
Dibromochloromethane	07.21.92	92293	17.5	20	<0.5	ug/L 88
Methylene chloride	07.21.92	92293	17.5	20	<0.5	ug/L 88
Trichloroethene	07.21.92	92293	19	20	<0.5	ug/L 95
Tetrachloroethene	07.21.92	92293	18.5	20	<0.5	ug/L 93
EPA Method 8010						
1,1,1-Trichloroethane	07.22.92	92294	13	12	<0.5	ug/L 108
1,1-Dichloroethane	07.22.92	92294	12.5	12	<0.5	ug/L 104
1,1-Dichloroethene	07.22.92	92294	12.5	12	<0.5	ug/L 104
1,2-Dichloroethane	07.22.92	92294	14	12	<0.5	ug/L 117
1,2-Dichloropropane	07.22.92	92294	13.5	12	<0.5	ug/L 113
Bromodichloromethane	07.22.92	92294	13	12	<0.5	ug/L 108
Bromoform	07.22.92	92294	5.5	12	<0.5	ug/L 46
Carbon Tetrachloride	07.22.92	92294	12.5	12	<0.5	ug/L 104
Chloroform	07.22.92	92294	15	12	<0.5	ug/L 125
Dibromochloromethane	07.22.92	92294	14	12	<0.5	ug/L 117
Methylene chloride	07.22.92	92294	12	12	<0.5	ug/L 100
Trichloroethene	07.22.92	92294	13	12	<0.5	ug/L 108
Tetrachloroethene	07.22.92	92294	13	12	<0.5	ug/L 108

Note: For EPA method 601/8010, the matrix spike recovery for Bromoform was less than the lower control limit. The results for Bromoform were accepted based on the acceptable recovery of the laboratory control standard.

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METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT	METHOD
EPA Method 601						
Date Analyzed	07.21.92	92293	7.21.92	NA	Date	601
1,1,1-Trichloroethane	07.21.92	92293	0	0.5	ug/L	601
1,1,2,2-Tetrachloroethane	07.21.92	92293	0	0.5	ug/L	601
1,1,2-Trichloroethane	07.21.92	92293	0	0.5	ug/L	601
1,1-Dichloroethane	07.21.92	92293	0	0.5	ug/L	601
1,1-Dichloroethene	07.21.92	92293	0	0.5	ug/L	601
1,2-Dichloroethane	07.21.92	92293	0	0.5	ug/L	601
1,2-Dichlorobenzene	07.21.92	92293	0	0.5	ug/L	601
1,2-Dichloroethene (Total)	07.21.92	92293	0	0.5	ug/L	601
1,2-Dichloropropane	07.21.92	92293	0	0.5	ug/L	601
1,3-Dichlorobenzene	07.21.92	92293	0	0.5	ug/L	601
1,4-Dichlorobenzene	07.21.92	92293	0	0.5	ug/L	601
2-Chloroethylvinylether	07.21.92	92293	0	0.5	ug/L	601
Bromodichloromethane	07.21.92	92293	0	0.5	ug/L	601
Bromomethane	07.21.92	92293	0	0.5	ug/L	601
Bromoform	07.21.92	92293	0	0.5	ug/L	601
Chlorobenzene	07.21.92	92293	0	0.5	ug/L	601
Carbon Tetrachloride	07.21.92	92293	0	0.5	ug/L	601
Chloroethane	07.21.92	92293	0	0.5	ug/L	601
Chloroform	07.21.92	92293	0	0.5	ug/L	601
Chloromethane	07.21.92	92293	0	0.5	ug/L	601
Dibromochloromethane	07.21.92	92293	0	0.5	ug/L	601
Dichlorodifluoromethane	07.21.92	92293	0	0.5	ug/L	601
Freon 113	07.21.92	92293	0	0.5	ug/L	601
Methylene chloride	07.21.92	92293	0	0.5	ug/L	601
Trichloroethene	07.21.92	92293	0	0.5	ug/L	601
Trichlorofluoromethane	07.21.92	92293	0	0.5	ug/L	601
Tetrachloroethene	07.21.92	92293	0	0.5	ug/L	601
Vinyl chloride	07.21.92	92293	0	0.5	ug/L	601
cis-1,2-Dichloroethene	07.21.92	92293	0	0.5	ug/L	601
cis-1,3-Dichloropropene	07.21.92	92293	0	0.5	ug/L	601
trans-1,2-Dichloroethene	07.21.92	92293	0	0.5	ug/L	601
trans-1,3-Dichloropropene	07.21.92	92293	0	0.5	ug/L	601
EPA Method 8010						
Date Analyzed	07.22.92	92294	7.22.92	NA	Date	8010
1,1,1-Trichloroethane	07.22.92	92294	0	0.5	ug/L	8010

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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	07.22.92	92294	0	0.5	ug/L	8010
1,1,2-Trichloroethane	07.22.92	92294	0	0.5	ug/L	8010
1,1-Dichloroethane	07.22.92	92294	0	0.5	ug/L	8010
1,1-Dichloroethene	07.22.92	92294	0	0.5	ug/L	8010
1,2-Dichloroethane	07.22.92	92294	0	0.5	ug/L	8010
1,2-Dichlorobenzene	07.22.92	92294	0	0.5	ug/L	8010
1,2-Dichloroethene (Total)	07.22.92	92294	0	0.5	ug/L	8010
1,2-Dichloropropane	07.22.92	92294	0	0.5	ug/L	8010
1,3-Dichlorobenzene	07.22.92	92294	0	0.5	ug/L	8010
1,4-Dichlorobenzene	07.22.92	92294	0	0.5	ug/L	8010
2-Chloroethylvinylether	07.22.92	92294	0	0.5	ug/L	8010
Bromodichloromethane	07.22.92	92294	0	0.5	ug/L	8010
Bromomethane	07.22.92	92294	0	0.5	ug/L	8010
Bromoform	07.22.92	92294	0	0.5	ug/L	8010
Chlorobenzene	07.22.92	92294	0	0.5	ug/L	8010
Carbon Tetrachloride	07.22.92	92294	0	0.5	ug/L	8010
Chloroethane	07.22.92	92294	0	0.5	ug/L	8010
Chloroform	07.22.92	92294	0	0.5	ug/L	8010
Chloromethane	07.22.92	92294	0	0.5	ug/L	8010
Dibromochloromethane	07.22.92	92294	0	0.5	ug/L	8010
Dichlorodifluoromethane	07.22.92	92294	0	0.5	ug/L	8010
Freon 113	07.22.92	92294	0	0.5	ug/L	8010
Methylene chloride	07.22.92	92294	0	0.5	ug/L	8010
Trichloroethene	07.22.92	92294	0	0.5	ug/L	8010
Trichlorofluoromethane	07.22.92	92294	0	0.5	ug/L	8010
Tetrachloroethene	07.22.92	92294	0	0.5	ug/L	8010
Vinyl chloride	07.22.92	92294	0	0.5	ug/L	8010
cis-1,2-Dichloroethene	07.22.92	92294	0	0.5	ug/L	8010
cis-1,3-Dichloropropene	07.22.92	92294	0	0.5	ug/L	8010
trans-1,2-Dichloroethene	07.22.92	92294	0	0.5	ug/L	8010
trans-1,3-Dichloropropene	07.22.92	92294	0	0.5	ug/L	8010

CHAIN OF CUSTODY RECORD

BCA Log Number **9207328**

HILL				Project or PO# SFO28830.A1		Analyses required														
111 BROADWAY, AK				Phone # 251-2426		EPA 601														
City, State, Zip OAKLAND, CA				Report attention BERN BAUMGARTNER																
Lab Sample number	Date sampled	Time sampled	Type* See key below	Sampled by <i>Bern Baumgartner</i>	Number of containers	Hazardous sample Special handling required										Remarks				
1	7/17/92		GW	MW-7	3	X														
2	↓		↓	MW-8	↓	↓														
3	↓		↓	MW-9	↓	↓														
4	↓		↓	MW-10	↓	↓														
5	↓		↓	MW-11	↓	↓														

Signature	Print Name	Company	Date	Time
<i>Bern Baumgartner</i>	BERN BAUMGARTNER	CH2M HILL	7/17/92	1330
Received by				
Relinquished by				
Received by				
Relinquished by				
Received by Laboratory	<i>Stephen Jones</i>	BCA	7/17/92	1332

BC ANALYTICAL
 1255 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