CAFB 99

DEPARTMENT OF THE AIR FORCE

27TH CIVIL ENGINEER SQUADRON (ACC)
CANNON AIR FORCE BASE NEW MEXICO

2 5 OCT 1999

Lt Colonel Eric J. Wilbur
Commander
506 N DL Ingram Blvd
Cannon AFB NM 88103-5136

K

NOV 1999 RECEIVED

Mr. James Bearzi, Chief
Hazardous and Radioactive Materials Bureau
New Mexico Environment Department
2044 Galisteo Street
P O Box 26110
Santa Fe NM 87502

Dear Mr. Bearzi

Enclosed for your review and records are two groundwater monitoring reports for Wells N, O and R in the east central portion of the base which monitor landfills 3, 4 and 25. One report is entitled, *Semiannual Monitoring Report Jun 99 Sampling Event*, which presents and discusses sampling in Well R at Landfill 25. Monitoring Well R had exceedances of the Maximum Contaminant Levels for iron, chromium and nickel, which are constituents of stainless steel, this well screen's type.

We suspect the problem is corrosion of the well screen. We are trying to purge the well's five casing volumes rather than the standard three. The metal exceedances present no immediate danger to human health because the nearest drinking water is approximately ½ mile north. We are contemplating lining Well R with a four inch PVC liner if the extra purging does not work.

The other report is entitled, *Annual Summary Report Assessment Monitoring 1998 Sampling Events*, which discusses the results for 1998 at Wells N, O and R. Wells N and O had no exceedances.

If you have any questions, please contact Mr. Sanford Hutsell of my environmental flight at (505) 784-6378.

Sincerely

ERIC J. WILBUR, Lt Col, USAF

Attachments:
Groundwater Monitoring Reports

cc:
NMED (C. Will)
NMED (J. Jacobs)
EPA Region VI (D. Nealy)
EPA Region VI (B. Sturdivant)

COMMENTS ON

Draft Semi-Annual Monitoring Report June 1999 Sampling Event

Long-Term Monitoring Landfill No. 25 (SWMU No. 97)

(Monitoring Well R) Dated August 1999

Cannon Air Force Base Clovis, New Mexico

Comments from: Kim Mulhern, P.G., Project Geologist, U.S. Army Corps of Engineers, Omaha District, Dated 08 September 1999

Comment 1 *App. 1. The first page of the NMED report is appropriately the "Assessment monitoring Semi-Annual Report", but all of the remaining pages ate "Assessment Monitoring Quarterly Report (continued)" at the top. Please use the semi-annual report forms.*

Response: **Pages have been changed to reflect "Semi-Annual Report" not quarterly.**

Comment 2 *On the 4th and 5th pages, it appears that the results are presented in mg/L, while the detection limits are presented in μg/L. Please check to see if the correct units ate being supplied and revise the detection limit columns as necessary.*

Response: **Units have been corrected to μg/L**

Draft Annual Summary Report
Assessment Monitoring
Long-Term Monitoring
Landfill No. 3 (SWMU 105), Landfill No. 4 (SWMU 104), and
Landfill No. 25 (SWMU 97)

Cannon Airforce Base
Clovis, New Mexico

Comments from: Kim Mulhern, PG, Project Geologist, U.S. Army Corps of Engineers, Omaha District, Dated 11 June 1999

General

Comment 1 *There is no reason to issue two separate annual monitoring reports. Please combine into one report entitled "Annual Monitoring Report, Assessment Monitoring, Long-Term Monitoring, Landfill No. 3 (SWMU 105), Landfill No. 4 (SWMU 104, and Landfill No. 25 (SWMU 97)"*

Response: **Reports have been combined**

Comment 2 *I have no comments on the LF-3 and LF-4 portion of the report.*

Response: **Comment noted**

LF-25 portion of the reports

Comment 3 *Table 1*

The results (ND) for Mercury were inadvertently made bold. Please change to normal test.

Response: **Bold notation has been removed**

Comment 4 *Well Purge Data sheet*

The copy in the report is very difficult to read. Please see that a readable copy is included in the final report.

The purge data on the purge data sheets tends to indicate that the stagnant water in the will casing and filterpack had just been removed and formation water was finally being pumped from the well, It appears for this well (at least) that it would be more appropriate to purge 5 well volumes in the future. The purge rate of 1 gpm is a little high for sampling, especially for sampling VOC's. It is likely that turbidity would be less than 5 NTU (rather than 198 NTU) if the purge had continued to 5 well volumes and the pump rate during sampling had been reduced. What is the lowest sustainable pump rate for the Bennett Piston Pump? Can it be reduced to 0.1 liters per minute for the final two well purge volumes and sampling?

Response: **More readable copied have been included**

Additional volume will be purged in the future using turbidity as key factor in determining when purging is complete. The pump operation requires a minimum of 60 pounds per square inch (psi) of pressure to lift the column of water. The operation at 60 psi results in an estimated discharge of 1/2-gallon per minute, which is the lowest sustainable pump rate.

Comment 5 *Assessment Monitoring*

Please note that the first page of the June 98 report says "Semi-Annual" but the remaining pages say "Quarterly". Please use the correct forms for semi-annual

Response: **Forms used are correct for semi-annual report. Header has been changed to reflect "Assessment Monitoring Semi-Annual Report"**

Comment 6 *Semi-Annual Report*

The final page provides the data for the June 98 event. The detection limit appear to either be incredibly elevated or they are in the wrong units. I suspect that the problem is with the units. The barium detection limit should be 0.010 mg/L rather than 10.0 mg/L, etc. Please see that the correct detection limits are inserted.

Response: **Units have been corrected to match analytical detection limits.**

Comments from: John S. Pike, GS-12

Comment 1 *GENERAL*

In two consecutive reports and in reports generated by other agencies, a problem appears to exist with regards to the proper handling and testing of nitrates by Quanterra Laboratories. Concerns exist by the base as to the defensibility of samples taken due to the failure to meet established hold tome requirements.

Response: **No problems were identified with the nitrate analysis for this sampling event. Any problems would be noted in the Data Quality Assessment portion of the report. Comment is noted for future reference.**

Comments from: Paula Peters, Project Chemist, CENWO-ED-GC

Comment 1 *Pg. 2, 3rd paragraph, sentence "Nickel was detected above the NMSS, the EPA MCL for nickel has been remanded." This sentence needs to be split into tow or rewritten. Also, explain what is meant when it is stated that the EPA MCL has been "remanded".*

Response: **The sentence has been split and now reads: "Nickel was detected above the NMSS. The EPA MCL for nickel remanded for further evaluation."**

Comment 2 *Pg. 2, 4th paragraph – In the first sentence, change "Chromium". The metals should not be capitalized unless the first word in a sentence.*

Response: **Change has been made as noted.**

Comment 3 *Pg. 2, last paragraph – The first two sentences of this paragraph need to be written as they seem to be of context.*

Response: **Paragraph has been restricted to read**

Comment 4 *Appendix IV, Data Assessment, Section 1.0, 1st paragraph – The first sentence should include that groundwater samples were taken during June 1998 as well as December 1998. Explain what the "three samples" were that are referred to in this paragraph. Provide a reference for the QAPP.*

Response: **The sentence has been restructured to include reference to "June and December 1998 sampling events". Reference to "three" samples has been removed from the text, as it does not apply. A reference to the QAPP.**

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FINAL

SEMIANNUAL MONITORING REPORT
JUNE 1999 SAMPLING EVENT

LONG-TERM MONITORING
LANDFILL NO. 25 (SWMU 97)

CANNON AIR FORCE BASE
Clovis, New Mexico

September 1999

FINAL

SEMIANNUAL MONITORING REPORT
JUNE 1999 SAMPLING EVENT

LONG-TERM MONITORING
LANDFILL NO. 25 (SWMU 97)

CANNON AIR FORCE BASE
Clovis, New Mexico

Contract No. DACW45-94-D-0031
Delivery Order No. 0033

September 1999

EXECUTIVE SUMMARY

This report summarizes data obtained during the 1999 semi-annual sampling event of monitoring well R (Landfill 25) at the Cannon Air Force Base (CAFB) near Clovis, New Mexico (Figure 1). Monitoring well R (MW-R) is located downgradient of Landfill 25 (Figure 2). The June 1999 sample event represents the first of two semi-annual sample event planned under contract number DACW45-94-D-0031, Delivery Order No. 0033 (1999).

The well was sampled using a dedicated pump previously installed in the well. One groundwater sample was collected to assess groundwater quality. For quality control purposes, one field duplicate and one field-split sample were collected during the sample event. Groundwater samples collected from Well R were analyzed for the parameters listed and analytical methods below.

- Volatile Organic Compounds (VOCs), SW-846 Method 8260B, with specific target list of Appendix IX compounds
- Semi-Volatile Organic Compounds (SVOCs), SW-846 Method 8270C
- Polychlorinated Biphenyls (PCBs), SW-846 Method 8082
- Herbicides, SW-846 Method 8151
- TAL Metals, SW-846 Method 6010B, and 6020
- Mercury, SW-846 Method 7470A
- Pesticides Organophosphorus SW-846 Method 8140
- Pesticides Organochlorine SW-846 Method 8081A
- Common Anions (chlorides, nitrates, sulfates), EPA Method 300.0A
- Total Phenols, EPA Method 420.2

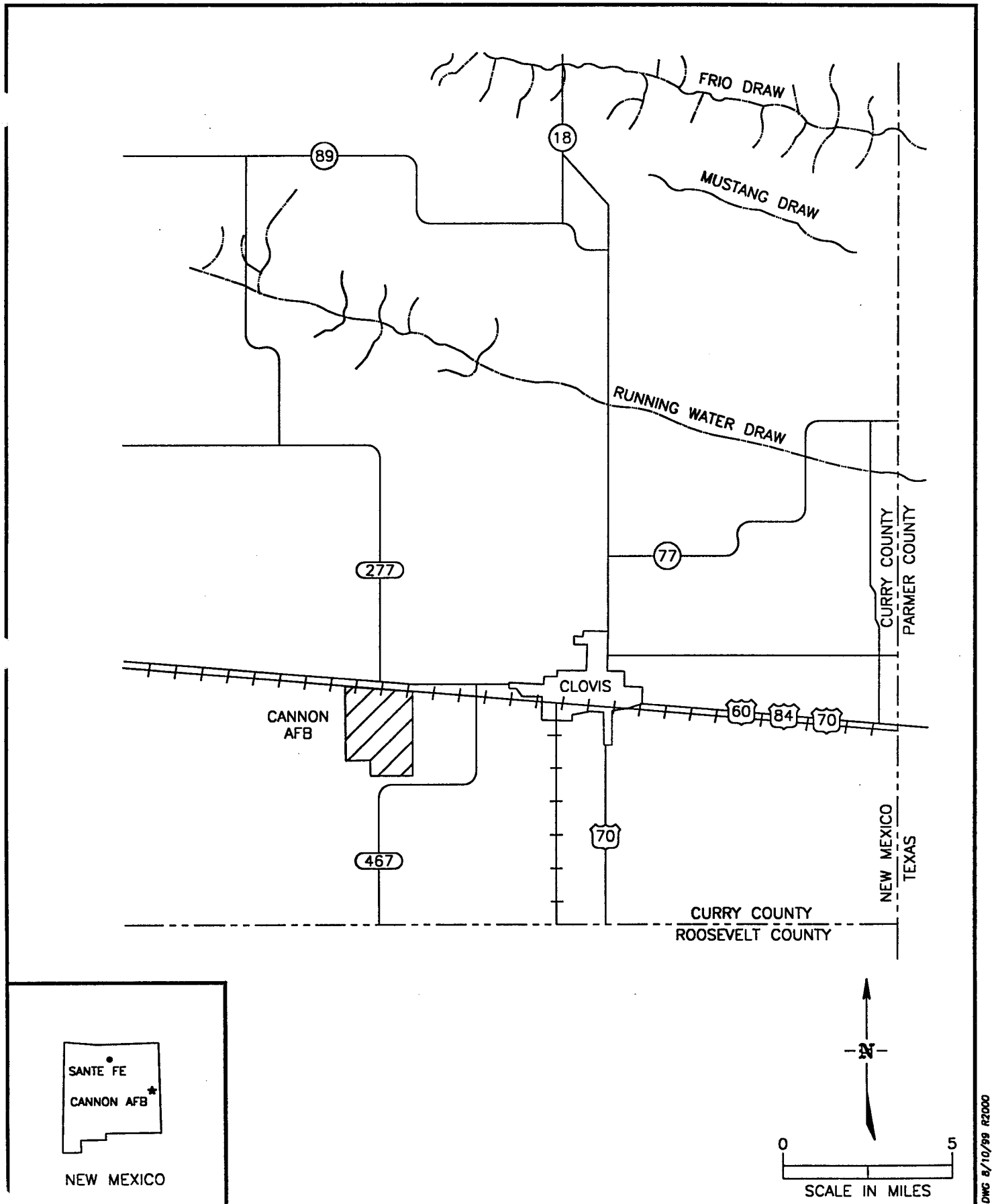
Concentrations of detected analytes are summarized in Table 1. The New Mexico Environmental Department (NMED) Semi-Annual Assessment Monitoring Report for the June 1999 sample event is provided in Appendix I. Field forms completed for the June 1999 sampling event are contained in Appendix II. Analytical results and associated quality control (QC) data, as reported and submitted by Quanterra Environmental Services, are presented in Appendix III. A data assessment summary for groundwater sample MW-R, containing a discussion of QC criteria that were evaluated, is included as Appendix IV.

As part of the QA/QC program for the June 1999 sampling event, Foothill Engineering Consultants, Inc. (FEC) collected a field duplicate to measure field and

analytical precision and accuracy. The June field duplicate sample was identified as MW-X. For analytes detected above reporting limits, adequate precision was observed in the sample-duplicate pair (MW-R/MW-X) collected during the June 1999 sampling event (see Table 1).

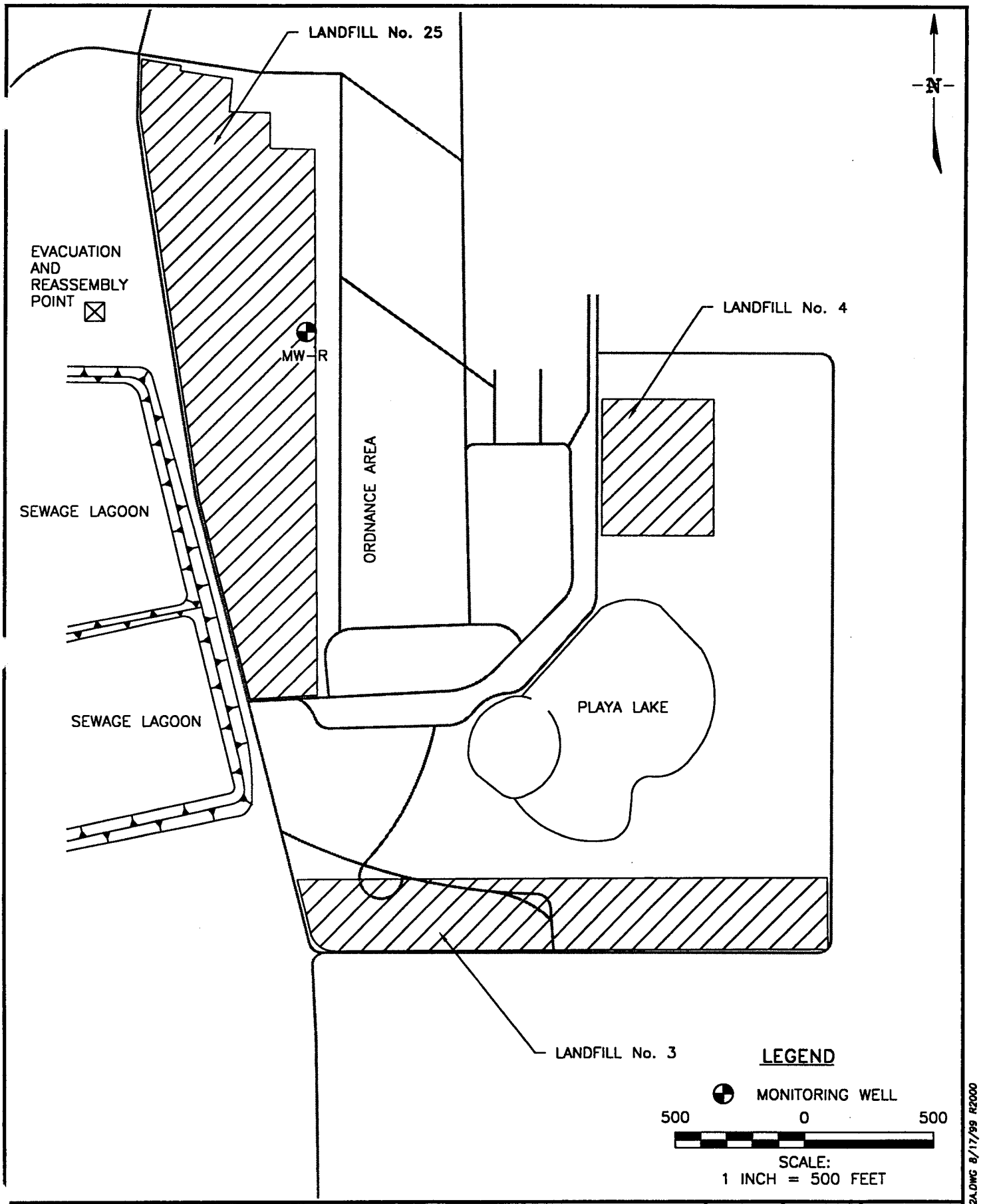
In the June 1999 samples, Chloroform, Chromium (total), Iron (total) and Nickel (total and dissolved) were detected above the U.S. Environmental Protection Agency (EPA) maximum contaminant level (MCL) and the New Mexico State Standards (NMSS). Nickel was detected above the NMSS, the EPA MCL for nickel has been remanded. Lead was detected at a trace concentration, which is a first occurrence.

Compared to historical results chromium is at a greater concentration with a general increasing trend. The other constituents are consistent with historical results. Historical results are presented in the *Annual Summary Report for Assessment Monitoring, Long-Term Monitoring Landfill No. 25 (SWMU 97), November 1998,* and summarized in Table 1.



FEC FOOTHILL ENGINEERING CONSULTANTS, INC.	FIGURE 1 SITE LOCATION MAP CANNON AIR FORCE BASE	DATE: 8/99	SCALE: SHOWN	DRAWN BY: SHN

96-333\FIGURE1.DWG 8/10/99 R2000



FEC
FOOTHILL ENGINEERING CONSULTANTS, INC.

FIGURE 2
MONITORING WELL LOCATION MAP
CANNON AIR FORCE BASE

DATE:	SCALE:	DRAWN BY:
8/99	1"=500'	SHN

96-333\FIGURE2A.DWG 8/17/99 R2000

Table 1. Groundwater Sample Results Summary - June 1999
Semiannual Groundwater Sampling - Monitoring Well R
Cannon Air Force Base, Clovis, New Mexico

Analyte and Method	Historical Results (mg/L)	MW-R (mg/L)	MW-X (Duplicate) (mg/L)	EPA MCLs (total) (mg/L)	New Mexico State Standards (dissolved) (mg/L)
Volatile Organic Compounds SW846 8260B					
Chloroform	ND-0.00018J	**0.18**	**0.18**	0.1	0.1
Methylene Chloride	ND-0.00012J	ND	ND	0.005	0.1
Trichloroethene	ND-0.00011J	ND	ND	0.005	0.1
TAL Metals (total) SW846 6010B					
Barium	0.058-0.091	0.052B	0.0483B	2	1
Calcium	58–59.3	55.7	52.4		
Chromium	ND-0.021	**0.333**	**0.0497**	0.1	0.05
Copper	ND- 0.0053J	0.0049	0.0014	1.3[3]/1.0[1]	1.0[4]
Iron	0.594-1.01	**1.48**	**0.948**	0.3[1]	1.0[4]
Lead	ND	0.003	0.001	0.015[3]	0.05
Magnesium	59.4-62.9	58.2	54.9		
Manganese	0.0756-0.0998	0.0543	0.0526	0.05[1]	0.2[4]
Nickel	0.042-0.52	**0.371**	**0.353**	0.1	0.2[5]
Potassium	7.66-8.59	8.19	8.42		
Selenium	ND-0.011	0.0096	0.0075	0.05	0.05
Sodium	42.9-43.6	42.4B	43.9B		
Vanadium	0.0073J-0.013	0.0152	0.0126		
TAL Metals (dissolved) SW846 6010B					
Barium	NA	0.0547	0.052		1.0
Cadmium	NA	0.0011	ND		0.01
Calcium	NA	56.8	56		
Magnesium	NA	60.3	59.4		
Manganese	NA	0.046	0.0513		0.2[4]
Nickel	NA	**0.302**	**0.322**		0.2[5]

Table 1. Groundwater Sample Results Summary - June 1999
Semiannual Groundwater Sampling - Monitoring Well R
Cannon Air Force Base, Clovis, New Mexico (continued)

Analyte and Method	Historical Results (mg/L)	MW-R (mg/L)	MW-X (Duplicate) (mg/L)	EPA MCLs (total) (mg/L)	New Mexico State Standards (dissolved) (mg/L)
TAL Metals (dissolved) SW846 6010B					
Potassium	NA	8.03	7.61		
Selenium	NA	0.0096	0.0068		0.05
Sodium	NA	43.1	42.3		
Vanadium	NA	0.013	0.0112		
Zinc	NA	0.0051	0.0034		10[4]
General Chemistry					
Nitrate EPA 300.0A	ND-5.2	5.1	5.2	10	10
Chloride EPA 300.0A	NA	125	119	250[1]	250
Sulfate S EPA 300.0A	NA	134	133	500[1]	600[4]
Other Constituents					
Semi-Volatile Organic Compounds SW-846 8270C	ND	ND	ND		
Herbicides- SW-846 8150	ND	ND	ND		
Organophosphorous Pesticides SW-846 8140	ND	ND	ND		
Organochlorine Pesticides SW-846 8081A	ND	ND	ND		
Phenols EPA 420.2	NA	ND	ND		0.005[4]
PCBs SW-846 8082	ND	ND	ND		

[1] Secondary Maximum Contaminant Level (SMCL)
[2] Maximum Contaminate Level Goal (MCLG)
[3] EPA Action Level
[4] Domestic Water Supply
[5] Irrigation Use

J = result is below the reporting limit; value is an estimated quantity
J1 = estimated concentration detected between method detection limit and reporting limit
MCL = maximum contaminant level
mg/L = milligrams per Liter
ND = analytes not detected above reporting limits
UB = not detected, result associated with blank contamination

Note: All samples collected on December 8, 1998; see Appendix II for reporting limits and method detection limits for all analytes.

APPENDIX I

NMED ASSESSMENT MONITORING REPORT

(SEMI-ANNUAL JUNE 1999)

ASSESSMENT MONITORING SEMI-ANNUAL REPORT

NEW MEXICO ENVIRONMENT DEPARTMENT
HAZARDOUS & RADIOACTIVE MATERIALS BUREAU
525 CAMINO DE LOS MARQUEZ, SUITE 4
SANTA FE, NM 87502

This set of data sheets is for use by all facilities in assessment monitoring (20 NMAC 4.1, Subpart VI, Section 265.93(D) (4), (5) and (7) (e) and (f), and Section 265.94 (b).

FACILITY NAME **Cannon Air Force Base** EPA I.D.# **NM 7572124454**

WELL NUMBER **MW-R** SAMPLE COLLECTION BY **Foothill Engineering Consultants, Inc.**

LABORATORY NAME **Quanterra Inc.** DATE SAMPLED **6/15/99**

TIME SAMPLED **1300** DATE RECEIVED BY LAB **6/16/99**

PARAMETERS	STORET CODE	UNITS	VALUE	DATE ANALYZED
Elevation of G. Water	71993	ft.	3993.09	6/15/99
Well Depth	N/A	ft.	307.5	6/15/99
Well Casing Volume	N/A	gal.	32.0	6/15/99
Pump Rate	N/A	gal/min	1	6/15/99
Pump Period	72004	min.	165	6/15/99
Volume Evacuated	73675	gal.	180	6/15/99
Sampler Material	N/A	N/A	TEFLN	6/15/99
Well Sampling Method:	PSPMP			

ASSESSMENT MONITORING SEMI-ANNUAL REPORT (continued)

Well Number: MW-R Facility Name Cannon Air Force Base

INDICATOR PARAMETERS

PARAMETERS	STORET CODE	UNITS	VALUE	DETECTION LIMIT	DATE ANALYZED	METHOD USED
pH	00400	S.U.	6.77 (f)	N/A	6/15/99	
	00400	S.U.	7.89 (f)	N/A	6/15/99	Field Probe
	00400	S.U.	8.02 (f)	N/A	6/15/99	
	00400	S.U.	8.09 (f)	N/A	6/15/99	
	00400	S.U.	8.26 (f)	N/A	6/15/99	
	00400	S.U.	8.27 (f)	N/A	6/15/99	
	00400	S.U.	8.26 (f)	N/A	6/15/99	
	00400	S.U.	8.25 (f)	N/A	6/15/99	
	00400	S.U.	8.29 (f)	N/A	6/15/99	
	00400	S.U.	8.34 (f)	N/A	6/15/99	
	00400	S.U.	8.30 (f)	N/A	6/15/99	
	00400	S.U.	8.29 (f)	N/A	6/15/99	
	00400	S.U.	8.29 (f)	N/A	6/15/99	
	00400	S.U.	8.23 (f)	N/A	6/15/99	
	00400	S.U.	8.29 (f)	N/A	6/15/99	
	00400	S.U.	8.32 (f)	N/A	6/15/99	
Specific Conductivity	00095	umhos/cm	1.01 (f)	N/A	6/15/99	
	00095	umhos/cm	0.98 (f)	N/A	6/15/99	Field Probe
	00095	umhos/cm	0.94 (f)	N/A	6/15/99	
	00095	umhos/cm	0.98 (f)	N/A	6/15/99	

ASSESSMENT MONITORING SEMI-ANNUAL REPORT (continued)

Well Number: **MW-R** Facility Name **Cannon Air Force Base**

INDICATOR PARAMETERS

Specific Conductivity	00095	umhos/cm	0.96 (f)	N/A	6/15/99	
	00095	umhos/cm	0.96 (f)	N/A	6/15/99	
	00095	umhos/cm	0.94 (f)	N/A	6/15/99	
	00095	umhos/cm	0.93 (f)	N/A	6/15/99	
	00095	umhos/cm	0.92 (f)	N/A	6/15/99	Field Probe
	00095	umhos/cm	0.92 (f)	N/A	6/15/99	
	00095	umhos/cm	0.93 (f)	N/A	6/15/99	
	00095	umhos/cm	0.93 (f)	N/A	6/15/99	
	00095	umhos/cm	0.92 (f)	N/A	6/15/99	
	00095	umhos/cm	0.93 (f)	N/A	6/15/99	
	00095	umhos/cm	0.92 (f)	N/A	6/15/99	
	00095	umhos/cm	0.91 (f)	N/A	6/15/99	
TOX	70354	µg/L	N/A	N/A	N/A	
	70354	mg/L	N/A	N/A	N/A	N/A
	70354	mg/L	N/A	N/A	N/A	
	70354	mg/L	N/A	N/A	N/A	
TOC	00680	mg/L	N/A	N/A	N/A	
	00680	mg/L	N/A	N/A	N/A	N/A
	00680	mg/L	N/A	N/A	N/A	
	00680	mg/L	N/A	N/A	N/A	

ASSESSMENT MONITORING SEMI-ANNUAL REPORT (continued)

Well Number: **MW-R** Facility Name **Cannon Air Force Base**

INDICATOR PARAMETERS

PARAMETERS	STORET CODE	UNITS	VALUE	DETECTION LIMIT	DATE ANALYZED	METHOD USED
Chloride	00940	mg/L	125	15	6/17/99	EPA 300.0A
Iron	01045	mg/L	1.48	100	6/28/99	SW846-6010B
Manganese	71883	mg/L	0.0543	200	6/28/99	SW846-6010B
Phenols	32730	mg/L	N/A	N/A	N/A	EPA 420.2
Sodium	00929	mg/L	42.4	5000	6/28/99	SW846-6010B
Sulfate	00945	mg/L	134	25	6/17/99	EPA 300.0A
Turbidity		NTU	7.0 (f)	N/A	6/15/99	Horiba-U10

Date Of This Report: 08/12/99

Signature: _____

Name (Printed): Curtis Carter

ASSESSMENT MONITORING SEMI-ANNUAL REPORT (continued)

Well Number: **MW-R** Facility Name **Cannon Air Force Base**

MONITORING WELL APPENDIX IX DATA FOR FACILITIES IN ASSESSMENT

Under assessment monitoring, per 20 NMAC 4.1 Subpart VI Section 265.93 (d) (4), (5), and (7) and per 42 Federal Register, 25942 (July 9, 1987), please list values for the Appendix IX parameters which were found in your Appendix IX scan.

PARAMETER	STORET CODE	VALUE	UNITS	DETECTION LIMIT	DATE EXTRACTED	DATE ANALYZED	METHOD USED
Barium		0.052	mg/L	10.0	6/19/99	6/23/99	SW846-6010B
Chromium		0.333	mg/L	10.0	6/19/99	6/23/99	SW846-6010B
Lead		0.003	mg/L	3.0	6/19/99	6/23/99	SW846-6010B
Nickel		0.371	mg/L	40.0	6/19/99	6/23/99	SW846-6010B
Nitrate		5.1	mg/L	0.50	6/17/99	6/17/99	EPA 300.0A
Selenium		0.0096	mg/L	5.0	6/24/99	6/28/99	SW846-6010B
Vanadium		0.0152	mg/L	10.0	6/19/99	6/23/99	SW846-6010B

APPENDIX II

Field Forms

GROUNDWATER SAMPLING LOG

Project Name: CAFB LTMP
Project Number: 98-325
Site Name: LF-25
Field Crew: C. CARTER, H. OTTO
Sampling Date: 15 June 99
Weather Conditions: Clear Warm 90°
Monitoring Instruments: Mini-Rae PID
Readings: BZ 0.0 TOC 0.0
Analytical Instruments: pH: Horiba U-10
Specific Conductivity: Horiba U-10
Temp: Horiba U-10 Turbidity: Horiba U-10 Dissolved O_2: Horiba U-10

Well ID Number: MW-R
Purging Equipment: Dedicated pump
Type of Well: MONITORING
CASING VOLUME CALCULATION
Casing Stickup: 3'
2" = .163 4" = .653 6" = 1.469 8" = 2.611
Static Water Level: 285.17
(TD(ft) – DTW(ft)) X Diameter of well = 1 casing vol.
Well Depth/Diameter: 6" / 307.00
(21.83)(1.469) = 32.0 x 5 [160.3]

Time	Pumping Rate (gpm)	Gallons Removed	Casing Volumes	Water Level	D.O. (mg/l)	Temp (°C)	pH	Specific Cond. (µS/cm)	Turbidity (NTU)
1000	1.0	10			9.73	19.4	6.77	1.01	207
1010	1.0	20			11.01	19.1	7.89	0.98	54
1020	1.0	30	1		10.83	19.0	8.02	0.94	32
1035	0.75	40			11.04	19.1	8.09	0.98	14
1045	0.75	50			11.57	19.3	8.26	0.96	52
1055	1.0	60	2		11.33	19.3	8.27	0.96	7
1105	1.0	70			11.02	19.3	8.26	0.94	8
1120	0.75	80			11.19	19.0	8.25	0.93	6
1130	1.0	90	3		11.59	19.0	8.29	0.92	6

Depth to Water after purging: _____ Yield of Well: L - M - H

Sampling Equipment: dedicated pump
Filtration: NO Filtration Method: NONE
Chemical Analysis to be performed and Number of Containers:
VOC(8260B), SVOC(8270C), TAL METALS, PCBs(8082), OC-PESTS(8081A), OP-PESTS(8140), Cl-HERBS(8151), Cl(300.1), SULFATE, NITRATE, PHENOL
Comments: 95 gallons – 2500 lbs. of Nitrogen

Sampler Signatures(s): _____

GROUNDWATER SAMPLING LOG

Project Name: CAFB LTMP
Project Number: 98-325
Site Name: LF-25
Field Crew: C. CARTER, H. OTTO
Sampling Date:
Weather Conditions:
Monitoring Instruments: Mini-Rae PID
Readings: BZ TOC
Analytical Instruments: pH: Horiba U-10
Specific Conductivity: Horiba U-10
Temp: Horiba U-10 Turbidity: Horiba U-10 Dissolved O_2: Horiba U-10

Well ID Number: MW-R
Purging Equipment: Dedicated pump
Type of Well: MONITORING
Casing Stickup:
Static Water Level:
Well Depth/Diameter:

CASING VOLUME CALCULATION
2" = .163 4" = .653 6" = 1.469 8" = 2.611
(TD(ft) – DTW(ft)) X Diameter of well = 1 casing vol.

Time	Pumping Rate (gpm)	Gallons Removed	Casing Volumes	Water Level	D.O. (mg/l)	Temp (°C)	pH	Specific Cond. m (µS/cm)	Turbidity (NTU)
1145	0.75	100			11.57	18.9	8.34	0.92	7.0
1155	1.00	110			11.87	18.9	8.30	0.93	3.0
1205	1.00	120	4		11.76	19.0	8.29	0.93	3.0
1215	1.00	130			11.74	18.9	8.29	0.92	4.0
1225	1.00	140			11.35	18.8	8.23	0.93	7.0
1230		150			11.28	18.9	8.29	0.92	7.0
1245		160	5		11.69	18.9	8.32	0.91	7.0

Depth to Water after purging:
Yield of Well: L - (M) - H

Sampling Equipment: dedicated pump
Filtration: NO Filtration Method: NONE
Chemical Analysis to be performed and Number of Containers:
VOC(8260B), SVOC(8270C), TAL METALS, PCBs(8082), OC-PESTS(8081A), OP-PESTS(8140), Cl-HERBS(8151), Cl(300.1), SULFATE, NITRATE, PHENOL
Comments: Purged total of 180 gallons

Sampler Signatures(s):

APPENDIX III

Analytical Results/Quality Control Data

Quanterra Incorporated
4955 Yarrow Street
Arvada, Colorado 80002

303 421-6611 Telephone
303 431-7171 Fax

ANALYTICAL REPORT

Cannon Air Force Base

Lot #: D9F170193

Karen Holliway

Foothill Engineering Consultants, Inc.

QUANTERRA INCORPORATED

Christina M. Mott
Project Manager

July 21, 1999

Case Narrative
D9F170193

With exceptions noted, standard analytical protocols were followed in the analyses of the samples and no problems were encountered or anomalies observed. All laboratory quality control samples analyzed in conjunction with the samples in this project were within acceptable limits.

Organophosphorous Pesticides by GC, Method 8140

The percent recoveries of the surrogate compounds are reported above the acceptance limits for the Laboratory Control Samples (LCS). The surrogate spike was prepared at a concentration of 0.2ug/L instead of 2.0 ug/mL. This low-level surrogate was measured using asingle point low level calibration. Although the surrogate recoveries for the LCS were higher than QC limits allow, the target constituents met precision and accuracy criteria. No targetdetections were made in the blank or samples, and the surrogate recoveries were within QC limits.

Nitrate by Ion Chromatography, Method 300.0A

Due to laboratory error, the nitrate analysis was performed approximately 6 hours outside of the method prescribed holding time.

EXECUTIVE SUMMARY - Detection Highlights

D9F170193

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
MW-X 06/15/99 13:00 001				
Arsenic - DISSOLVED	3.4 B	10.0	ug/L	SW846 6010B
Selenium - DISSOLVED	6.8	5.0	ug/L	SW846 6010B
Aluminum - DISSOLVED	78.2 B	100	ug/L	SW846 6010B
Barium - DISSOLVED	52.2	10.0	ug/L	SW846 6010B
Calcium - DISSOLVED	56000	200	ug/L	SW846 6010B
Iron - DISSOLVED	43.7 B	100	ug/L	SW846 6010B
Potassium - DISSOLVED	7610	3000	ug/L	SW846 6010B
Magnesium - DISSOLVED	59400	200	ug/L	SW846 6010B
Manganese - DISSOLVED	51.3	10.0	ug/L	SW846 6010B
Sodium - DISSOLVED	42300	5000	ug/L	SW846 6010B
Nickel - DISSOLVED	322	40.0	ug/L	SW846 6010B
Vanadium - DISSOLVED	11.2	10.0	ug/L	SW846 6010B
Zinc - DISSOLVED	3.4 B	20.0	ug/L	SW846 6010B
Lead	1.0 B	3.0	ug/L	SW846 6010B
Selenium	7.5	5.0	ug/L	SW846 6010B
Aluminum	35.9 B	100	ug/L	SW846 6010B
Barium	48.3	10.0	ug/L	SW846 6010B
Beryllium	1.2 B	5.0	ug/L	SW846 6010B
Calcium	52400	200	ug/L	SW846 6010B
Chromium	49.7	10.0	ug/L	SW846 6010B
Copper	1.4 B	10.0	ug/L	SW846 6010B
Iron	948	100	ug/L	SW846 6010B
Potassium	8420	3000	ug/L	SW846 6010B
Magnesium	54900	200	ug/L	SW846 6010B
Manganese	52.6	10.0	ug/L	SW846 6010B
Sodium	43900	5000	ug/L	SW846 6010B
Nickel	353	40.0	ug/L	SW846 6010B
Vanadium	12.6	10.0	ug/L	SW846 6010B
Acetone	2.7 J,B	10	ug/L	SW846 8260B
Chloroform	0.18 J	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	0.21 J	1.0	ug/L	SW846 8260B
Chloride	119 Q	15.0	mg/L	MCAWW 300.0A
Sulfate	133 Q	25.0	mg/L	MCAWW 300.0A
Nitrate	5.2	0.50	mg/L	MCAWW 300.0A
MW-R 06/15/99 13:00 002				
Arsenic - DISSOLVED	4.9 B	10.0	ug/L	SW846 6010B
Cadmium - DISSOLVED	1.1 B	5.0	ug/L	SW846 6010B
Selenium - DISSOLVED	9.6	5.0	ug/L	SW846 6010B
Aluminum - DISSOLVED	80.7 B	100	ug/L	SW846 6010B
Barium - DISSOLVED	54.7	10.0	ug/L	SW846 6010B
Calcium - DISSOLVED	56800	200	ug/L	SW846 6010B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

D9F170193

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
MW-R 06/15/99 13:00 002				
Iron - DISSOLVED	48.0 B	100	ug/L	SW846 6010B
Potassium - DISSOLVED	8030	3000	ug/L	SW846 6010B
Magnesium - DISSOLVED	60300	200	ug/L	SW846 6010B
Manganese - DISSOLVED	46.0	10.0	ug/L	SW846 6010B
Sodium - DISSOLVED	43100	5000	ug/L	SW846 6010B
Nickel - DISSOLVED	302	40.0	ug/L	SW846 6010B
Vanadium - DISSOLVED	13.0	10.0	ug/L	SW846 6010B
Zinc - DISSOLVED	5.1 B	20.0	ug/L	SW846 6010B
Lead	3.0	3.0	ug/L	SW846 6010B
Selenium	9.6	5.0	ug/L	SW846 6010B
Aluminum	66.9 B	100	ug/L	SW846 6010B
Barium	52.0	10.0	ug/L	SW846 6010B
Beryllium	1.1 B	5.0	ug/L	SW846 6010B
Calcium	55700	200	ug/L	SW846 6010B
Chromium	333	10.0	ug/L	SW846 6010B
Copper	4.9 B	10.0	ug/L	SW846 6010B
Iron	1480	100	ug/L	SW846 6010B
Potassium	8190	3000	ug/L	SW846 6010B
Magnesium	58200	200	ug/L	SW846 6010B
Manganese	54.3	10.0	ug/L	SW846 6010B
Sodium	42400	5000	ug/L	SW846 6010B
Nickel	371	40.0	ug/L	SW846 6010B
Vanadium	15.2	10.0	ug/L	SW846 6010B
Acetone	1.6 J,B	10	ug/L	SW846 8260B
Chloroform	0.18 J	1.0	ug/L	SW846 8260B
Chloride	125 Q	15.0	mg/L	MCAWW 300.0A
Sulfate	134 Q	25.0	mg/L	MCAWW 300.0A
Nitrate	5.1	0.50	mg/L	MCAWW 300.0A
TRIP BLANK 06/15/99 003				
Acetone	1.9 J,B	10	ug/L	SW846 8260B
Methylene chloride	0.34 J,B	1.0	ug/L	SW846 8260B

ANALYTICAL METHODS SUMMARY

D9F170193

PARAMETER	ANALYTICAL METHOD
Chloride	MCAWW 300.0A
Chlorinated Herbicides by GC	SW846 8151A
Inductively Coupled Plasma (ICP) Metals	SW846 6010B
Mercury in Liquid Waste (Manual Cold-Vapor)	SW846 7470A
Nitrate as N	MCAWW 300.0A
Organochlorine Pesticides	SW846 8081A
Organophosphorous Pesticides by GC	SW846 8140
Phenolics	MCAWW 420.2
PCBs	SW846 8082
Semivolatile Organic Compounds by GC/MS	SW846 8270C
Sulfate	MCAWW 300.0A
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010B
Volatile Organics by GC/MS	SW846 8260B

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

METHOD / ANALYST SUMMARY

D9F170193

ANALYTICAL METHOD	ANALYST	ANALYST ID
MCAWW 300.0A	Patty Jungk	002008
MCAWW 420.2	Ewa Kudla	001167
SW846 6010B	William G. Logan	002179
SW846 7470A	William G. Logan	002179
SW846 8081A	Andy Burcham	001197
SW846 8082	Andy Burcham	001197
SW846 8140	Mike Schmitt	005925
SW846 8151A	Andy Burcham	001197
SW846 8260B	Mike G. Hoffman	001880
SW846 8270C	Paula Lopez	000616

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

D9F170193

WO #	SAMPLE#	CLIENT SAMPLE ID	DATE	TIME
CX1KE	001	MW-X	06/15/99	13:00
CX1KL	002	MW-R	06/15/99	13:00
CX1KM	003	TRIP BLANK	06/15/99	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: MW-X

GC/MS Volatiles

Lot-Sample #...: D9F170193-001 **Work Order #...:** CX1KE113 **Matrix.....:** WATER
Date Sampled...: 06/15/99 13:00 **Date Received..:** 06/16/99
Prep Date.....: 06/25/99 **Analysis Date..:** 06/25/99
Prep Batch #...: 9180210 **Analysis Time..:** 16:00
Dilution Factor: 1

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	**2.7 J,B**	**10**	**ug/L**
Acrolein	ND	20	ug/L
Acrylonitrile	ND	20	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone (MEK)	ND	5.0	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	**0.18 J**	**1.0**	**ug/L**
Chloromethane	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Dibromomethane	ND	1.0	ug/L
1,2-Dibromoethane (EDB)	ND	1.0	ug/L
Dichlorodifluoromethane	ND	2.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	**0.21 J**	**1.0**	**ug/L**
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,4-Dichloro-2-butene	ND	1.0	ug/L
1,4-Dioxane	ND	200	ug/L
Ethylbenzene	ND	1.0	ug/L
Ethyl methacrylate	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Iodomethane	ND	1.0	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L

(Continued on next page)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: MW-X

GC/MS Volatiles

Lot-Sample #...: D9F170193-001 **Work Order #...:** CX1KE113 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	2.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
Vinyl acetate	ND	2.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Xylenes (total)	ND	1.0	ug/L
Acetonitrile	ND	20	ug/L
Allyl chloride	ND	2.0	ug/L
Propionitrile	ND	10	ug/L
Methacrylonitrile	ND	10	ug/L
Methyl methacrylate	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	102	(86 - 118)
1,2-Dichloroethane-d4	105	(76 - 115)
4-Bromofluorobenzene	97	(85 - 115)
Toluene-d8	93	(85 - 115)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: MW-X

GC/MS Volatiles

Lot-Sample #...: D9F170193-001 Work Order #...: CX1KE113 Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	2.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
Vinyl acetate	ND	2.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Xylenes (total)	ND	1.0	ug/L
Acetonitrile	ND	20	ug/L
Allyl chloride	ND	2.0	ug/L
Propionitrile	ND	10	ug/L
Methacrylonitrile	ND	10	ug/L
Methyl methacrylate	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	102	(86 - 118)
1,2-Dichloroethane-d4	105	(76 - 115)
4-Bromofluorobenzene	97	(85 - 115)
Toluene-d8	93	(85 - 115)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: MW-R

GC/MS Volatiles

Lot-Sample #...: D9F170193-002 **Work Order #...:** CX1KL113 **Matrix.....:** WATER
Date Sampled...: 06/15/99 13:00 **Date Received..:** 06/16/99
Prep Date.....: 06/25/99 **Analysis Date..:** 06/25/99
Prep Batch #...: 9180210 **Analysis Time..:** 17:10
Dilution Factor: 1

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	**1.6 J,B**	**10**	**ug/L**
Acrolein	ND	20	ug/L
Acrylonitrile	ND	20	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone (MEK)	ND	5.0	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	**0.18 J**	**1.0**	**ug/L**
Chloromethane	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Dibromomethane	ND	1.0	ug/L
1,2-Dibromoethane (EDB)	ND	1.0	ug/L
Dichlorodifluoromethane	ND	2.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,4-Dichloro-2-butene	ND	1.0	ug/L
1,4-Dioxane	ND	200	ug/L
Ethylbenzene	ND	1.0	ug/L
Ethyl methacrylate	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Iodomethane	ND	1.0	ug/L
Methylene chloride	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L

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FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: MW-R

GC/MS Volatiles

Lot-Sample #...: D9F170193-002 Work Order #...: CX1KL113 Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	2.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
Vinyl acetate	ND	2.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Xylenes (total)	ND	1.0	ug/L
Acetonitrile	ND	20	ug/L
Allyl chloride	ND	2.0	ug/L
Propionitrile	ND	10	ug/L
Methacrylonitrile	ND	10	ug/L
Methyl methacrylate	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	102	(86 - 118)
1,2-Dichloroethane-d4	103	(76 - 115)
4-Bromofluorobenzene	98	(85 - 115)
Toluene-d8	94	(85 - 115)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #...: D9F170193-003 **Work Order #...:** CX1KM102 **Matrix.....:** WATER
Date Sampled...: 06/15/99 **Date Received..:** 06/16/99
Prep Date.....: 06/25/99 **Analysis Date..:** 06/25/99
Prep Batch #...: 9180210 **Analysis Time..:** 17:32
Dilution Factor: 1

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	**1.9 J,B**	**10**	**ug/L**
Acrolein	ND	20	ug/L
Acrylonitrile	ND	20	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
2-Butanone (MEK)	ND	5.0	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Dibromomethane	ND	1.0	ug/L
1,2-Dibromoethane (EDB)	ND	1.0	ug/L
Dichlorodifluoromethane	ND	2.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,4-Dichloro-2-butene	ND	1.0	ug/L
1,4-Dioxane	ND	200	ug/L
Ethylbenzene	ND	1.0	ug/L
Ethyl methacrylate	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Iodomethane	ND	1.0	ug/L
Methylene chloride	**0.34 J,B**	**1.0**	**ug/L**
4-Methyl-2-pentanone	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L

(Continued on next page)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #...: D9F170193-003 Work Order #...: CX1KM102 Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	2.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
Vinyl acetate	ND	2.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Xylenes (total)	ND	1.0	ug/L
Acetonitrile	ND	20	ug/L
Allyl chloride	ND	2.0	ug/L
Propionitrile	ND	10	ug/L
Methacrylonitrile	ND	10	ug/L
Methyl methacrylate	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	105	(86 - 118)
1,2-Dichloroethane-d4	108	(76 - 115)
4-Bromofluorobenzene	99	(85 - 115)
Toluene-d8	94	(85 - 115)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: MW-X

GC/MS Semivolatiles

Lot-Sample #...: D9F170193-001 **Work Order #...:** CX1KE114 **Matrix.....:** WATER
Date Sampled...: 06/15/99 13:00 **Date Received..:** 06/16/99
Prep Date.....: 06/18/99 **Analysis Date..:** 07/01/99
Prep Batch #...: 9169182 **Analysis Time..:** 14:51
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Di-n-butyl phthalate	ND	10	ug/L
3-Methylphenol & 4-Methylphenol	ND	10	ug/L
1,3-Dichlorobenzene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Phenol	ND	10	ug/L
2-Chlorophenol	ND	10	ug/L
bis(2-Chloroethyl)-ether	ND	10	ug/L
bis(2-Chloroethoxy) methane	ND	10	ug/L
1,4-Dichlorobenzene	ND	10	ug/L
1,2-Dichlorobenzene	ND	10	ug/L
2-Methylphenol	ND	10	ug/L
bis(2-Ethylhexyl) phthalate	ND	10	ug/L
o-Toluidine	ND	10	ug/L
2,2'-oxybis(1-Chloropropane)	ND	10	ug/L
N-Nitrosodi-n-propyl-amine	ND	10	ug/L
Hexachloroethane	ND	10	ug/L
Nitrobenzene	ND	10	ug/L
Isophorone	ND	10	ug/L
2-Nitrophenol	ND	10	ug/L
2,4-Dimethylphenol	ND	10	ug/L
2,4-Dichlorophenol	ND	10	ug/L
1,2,4-Trichlorobenzene	ND	10	ug/L
Naphthalene	ND	10	ug/L
4-Chloroaniline	ND	10	ug/L
Hexachlorobutadiene	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
Hexachlorocyclopenta-diene	ND	50	ug/L
2,4,5-Trichlorophenol	ND	10	ug/L
2,4,6-Trichlorophenol	ND	10	ug/L
2-Chloronaphthalene	ND	10	ug/L
Dimethyl phthalate	ND	10	ug/L
Acenaphthene	ND	10	ug/L

(Continued on next page)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: MW-X

GC/MS Semivolatiles

Lot-Sample #...: D9F170193-001 **Work Order #...:** CX1KE114 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
3-Nitroaniline	ND	50	ug/L
2,4-Dinitrophenol	ND	50	ug/L
4-Nitrophenol	ND	50	ug/L
Dibenzofuran	ND	10	ug/L
2,4-Dinitrotoluene	ND	10	ug/L
2,6-Dinitrotoluene	ND	10	ug/L
Diethyl phthalate	ND	10	ug/L
4-Chlorophenyl phenyl ether	ND	10	ug/L
Fluorene	ND	10	ug/L
4-Nitroaniline	ND	50	ug/L
4,6-Dinitro-2-methylphenol	ND	50	ug/L
N-Nitrosodiphenylamine	ND	10	ug/L
4-Bromophenyl phenyl ether	ND	10	ug/L
Hexachlorobenzene	ND	10	ug/L
Pentachlorophenol	ND	50	ug/L
Phenanthrene	ND	10	ug/L
Anthracene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Pyrene	ND	10	ug/L
Butyl benzyl phthalate	ND	10	ug/L
3,3'-Dichlorobenzidine	ND	50	ug/L
Benzo(a)anthracene	ND	10	ug/L
Chrysene	ND	10	ug/L
Di-n-octyl phthalate	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Dibenz(a,h)anthracene	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
4-Chloro-3-methylphenol	ND	10	ug/L
2-Nitroaniline	ND	50	ug/L
Acetophenone	ND	10	ug/L
2-Acetylaminofluorene	ND	100	ug/L
4-Aminobiphenyl	ND	50	ug/L
Aniline	ND	10	ug/L
Aramite	ND	20	ug/L
Benzyl alcohol	ND	10	ug/L
2-sec-Butyl-4,6-dinitro-phenol	ND	20	ug/L

(Continued on next page)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: MW-X

GC/MS Semivolatiles

Lot-Sample #...: D9F170193-001 **Work Order #...:** CX1KE114 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2,6-Dichlorophenol	ND	10	ug/L
4-Dimethylaminoazobenzene	ND	20	ug/L
7,12-Dimethylbenz(a)-anthracene	ND	20	ug/L
3,3'-Dimethylbenzidine	ND	20	ug/L
alpha,alpha-Dimethylphenethylamine	ND	50	ug/L
1,3-Dinitrobenzene	ND	10	ug/L
Diphenylamine	ND	10	ug/L
Ethyl methanesulfonate	ND	10	ug/L
Hexachlorophene	ND	50	ug/L
Hexachloropropene	ND	100	ug/L
Isosafrole	ND	20	ug/L
Methapyrilene	ND	50	ug/L
3-Methylcholanthrene	ND	20	ug/L
Methyl methanesulfonate	ND	10	ug/L
1,4-Naphthoquinone	ND	50	ug/L
1-Naphthylamine	ND	10	ug/L
2-Naphthylamine	ND	10	ug/L
4-Nitroquinoline-1-oxide	ND	100	ug/L
N-Nitrosodi-n-butylamine	ND	10	ug/L
N-Nitrosodiethylamine	ND	10	ug/L
N-Nitrosodimethylamine	ND	10	ug/L
N-Nitrosomethylethylamine	ND	10	ug/L
N-Nitrosomorpholine	ND	10	ug/L
N-Nitrosopiperidine	ND	10	ug/L
N-Nitrosopyrrolidine	ND	10	ug/L
5-Nitro-o-toluidine	ND	20	ug/L
Pentachlorobenzene	ND	10	ug/L
Pentachloroethane	ND	50	ug/L
Pentachloronitrobenzene	ND	50	ug/L
Phenacetin	ND	20	ug/L
4-Phenylenediamine	ND	100	ug/L
2-Picoline	ND	20	ug/L
Pronamide	ND	20	ug/L
Pyridine	ND	20	ug/L
Safrole	ND	50	ug/L
1,2,4,5-Tetrachloro-benzene	ND	10	ug/L
2,3,4,6-Tetrachlorophenol	ND	50	ug/L
1,3,5-Trinitrobenzene	ND	50	ug/L

(Continued on next page)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: MW-X

GC/MS Semivolatiles

Lot-Sample #...: D9F170193-001 **Work Order #...:** CX1KE114 **Matrix.....:** WATER

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	72	(46 - 98)
Phenol-d5	67	(45 - 103)
Nitrobenzene-d5	72	(51 - 101)
2-Fluorobiphenyl	71	(49 - 106)
2,4,6-Tribromophenol	76	(54 - 107)
Terphenyl-d14	84	(49 - 117)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: MW-R

GC/MS Semivolatiles

Lot-Sample #...: D9F170193-002 **Work Order #...:** CX1KL114 **Matrix.....:** WATER
Date Sampled...: 06/15/99 13:00 **Date Received..:** 06/16/99
Prep Date.....: 06/18/99 **Analysis Date..:** 07/01/99
Prep Batch #...: 9169182 **Analysis Time..:** 15:24
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Di-n-butyl phthalate	ND	10	ug/L
3-Methylphenol & 4-Methylphenol	ND	10	ug/L
1,3-Dichlorobenzene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Phenol	ND	10	ug/L
2-Chlorophenol	ND	10	ug/L
bis(2-Chloroethyl)-ether	ND	10	ug/L
bis(2-Chloroethoxy) methane	ND	10	ug/L
1,4-Dichlorobenzene	ND	10	ug/L
1,2-Dichlorobenzene	ND	10	ug/L
2-Methylphenol	ND	10	ug/L
bis(2-Ethylhexyl) phthalate	ND	10	ug/L
o-Toluidine	ND	10	ug/L
2,2'-oxybis(1-Chloropropane)	ND	10	ug/L
N-Nitrosodi-n-propyl-amine	ND	10	ug/L
Hexachloroethane	ND	10	ug/L
Nitrobenzene	ND	10	ug/L
Isophorone	ND	10	ug/L
2-Nitrophenol	ND	10	ug/L
2,4-Dimethylphenol	ND	10	ug/L
2,4-Dichlorophenol	ND	10	ug/L
1,2,4-Trichlorobenzene	ND	10	ug/L
Naphthalene	ND	10	ug/L
4-Chloroaniline	ND	10	ug/L
Hexachlorobutadiene	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
Hexachlorocyclopenta-diene	ND	50	ug/L
2,4,5-Trichlorophenol	ND	10	ug/L
2,4,6-Trichlorophenol	ND	10	ug/L
2-Chloronaphthalene	ND	10	ug/L
Dimethyl phthalate	ND	10	ug/L
Acenaphthene	ND	10	ug/L

(Continued on next page)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: MW-R

GC/MS Semivolatiles

Lot-Sample #...: D9F170193-002 **Work Order #...:** CX1KL114 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
3-Nitroaniline	ND	50	ug/L
2,4-Dinitrophenol	ND	50	ug/L
4-Nitrophenol	ND	50	ug/L
Dibenzofuran	ND	10	ug/L
2,4-Dinitrotoluene	ND	10	ug/L
2,6-Dinitrotoluene	ND	10	ug/L
Diethyl phthalate	ND	10	ug/L
4-Chlorophenyl phenyl ether	ND	10	ug/L
Fluorene	ND	10	ug/L
4-Nitroaniline	ND	50	ug/L
4,6-Dinitro-2-methylphenol	ND	50	ug/L
N-Nitrosodiphenylamine	ND	10	ug/L
4-Bromophenyl phenyl ether	ND	10	ug/L
Hexachlorobenzene	ND	10	ug/L
Pentachlorophenol	ND	50	ug/L
Phenanthrene	ND	10	ug/L
Anthracene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Pyrene	ND	10	ug/L
Butyl benzyl phthalate	ND	10	ug/L
3,3'-Dichlorobenzidine	ND	50	ug/L
Benzo(a)anthracene	ND	10	ug/L
Chrysene	ND	10	ug/L
Di-n-octyl phthalate	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Dibenz(a,h)anthracene	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
4-Chloro-3-methylphenol	ND	10	ug/L
2-Nitroaniline	ND	50	ug/L
Acetophenone	ND	10	ug/L
2-Acetylaminofluorene	ND	100	ug/L
4-Aminobiphenyl	ND	50	ug/L
Aniline	ND	10	ug/L
Aramite	ND	20	ug/L
Benzyl alcohol	ND	10	ug/L
2-sec-Butyl-4,6-dinitro-phenol	ND	20	ug/L

(Continued on next page)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: MW-R

GC/MS Semivolatiles

Lot-Sample #...: D9F170193-002 **Work Order #...:** CX1KL114 **Matrix.....:** WATER
Date Sampled...: 06/15/99 13:00 **Date Received..:** 06/16/99
Prep Date.....: 06/18/99 **Analysis Date..:** 07/01/99
Prep Batch #...: 9169182 **Analysis Time..:** 15:24
Dilution Factor: 1

Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Di-n-butyl phthalate	ND	10	ug/L
3-Methylphenol & 4-Methylphenol	ND	10	ug/L
1,3-Dichlorobenzene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Phenol	ND	10	ug/L
2-Chlorophenol	ND	10	ug/L
bis(2-Chloroethyl)-ether	ND	10	ug/L
bis(2-Chloroethoxy) methane	ND	10	ug/L
1,4-Dichlorobenzene	ND	10	ug/L
1,2-Dichlorobenzene	ND	10	ug/L
2-Methylphenol	ND	10	ug/L
bis(2-Ethylhexyl) phthalate	ND	10	ug/L
o-Toluidine	ND	10	ug/L
2,2'-oxybis(1-Chloropropane)	ND	10	ug/L
N-Nitrosodi-n-propyl-amine	ND	10	ug/L
Hexachloroethane	ND	10	ug/L
Nitrobenzene	ND	10	ug/L
Isophorone	ND	10	ug/L
2-Nitrophenol	ND	10	ug/L
2,4-Dimethylphenol	ND	10	ug/L
2,4-Dichlorophenol	ND	10	ug/L
1,2,4-Trichlorobenzene	ND	10	ug/L
Naphthalene	ND	10	ug/L
4-Chloroaniline	ND	10	ug/L
Hexachlorobutadiene	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
Hexachlorocyclopenta-diene	ND	50	ug/L
2,4,5-Trichlorophenol	ND	10	ug/L
2,4,6-Trichlorophenol	ND	10	ug/L
2-Chloronaphthalene	ND	10	ug/L
Dimethyl phthalate	ND	10	ug/L
Acenaphthene	ND	10	ug/L

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FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: MW-R

GC/MS Semivolatiles

Lot-Sample #...: D9F170193-002 **Work Order #...:** CX1KL114 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
3-Nitroaniline	ND	50	ug/L
2,4-Dinitrophenol	ND	50	ug/L
4-Nitrophenol	ND	50	ug/L
Dibenzofuran	ND	10	ug/L
2,4-Dinitrotoluene	ND	10	ug/L
2,6-Dinitrotoluene	ND	10	ug/L
Diethyl phthalate	ND	10	ug/L
4-Chlorophenyl phenyl ether	ND	10	ug/L
Fluorene	ND	10	ug/L
4-Nitroaniline	ND	50	ug/L
4,6-Dinitro-2-methylphenol	ND	50	ug/L
N-Nitrosodiphenylamine	ND	10	ug/L
4-Bromophenyl phenyl ether	ND	10	ug/L
Hexachlorobenzene	ND	10	ug/L
Pentachlorophenol	ND	50	ug/L
Phenanthrene	ND	10	ug/L
Anthracene	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Pyrene	ND	10	ug/L
Butyl benzyl phthalate	ND	10	ug/L
3,3'-Dichlorobenzidine	ND	50	ug/L
Benzo(a)anthracene	ND	10	ug/L
Chrysene	ND	10	ug/L
Di-n-octyl phthalate	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Dibenz(a,h)anthracene	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
4-Chloro-3-methylphenol	ND	10	ug/L
2-Nitroaniline	ND	50	ug/L
Acetophenone	ND	10	ug/L
2-Acetylaminofluorene	ND	100	ug/L
4-Aminobiphenyl	ND	50	ug/L
Aniline	ND	10	ug/L
Aramite	ND	20	ug/L
Benzyl alcohol	ND	10	ug/L
2-sec-Butyl-4,6-dinitro-phenol	ND	20	ug/L

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FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: MW-R

GC/MS Semivolatiles

Lot-Sample #...: D9F170193-002 **Work Order #...:** CX1KL114 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2,6-Dichlorophenol	ND	10	ug/L
4-Dimethylaminoazobenzene	ND	20	ug/L
7,12-Dimethylbenz(a)-anthracene	ND	20	ug/L
3,3'-Dimethylbenzidine	ND	20	ug/L
alpha,alpha-Dimethylphenethylamine	ND	50	ug/L
1,3-Dinitrobenzene	ND	10	ug/L
Diphenylamine	ND	10	ug/L
Ethyl methanesulfonate	ND	10	ug/L
Hexachlorophene	ND	50	ug/L
Hexachloropropene	ND	100	ug/L
Isosafrole	ND	20	ug/L
Methapyrilene	ND	50	ug/L
3-Methylcholanthrene	ND	20	ug/L
Methyl methanesulfonate	ND	10	ug/L
1,4-Naphthoquinone	ND	50	ug/L
1-Naphthylamine	ND	10	ug/L
2-Naphthylamine	ND	10	ug/L
4-Nitroquinoline-1-oxide	ND	100	ug/L
N-Nitrosodi-n-butylamine	ND	10	ug/L
N-Nitrosodiethylamine	ND	10	ug/L
N-Nitrosodimethylamine	ND	10	ug/L
N-Nitrosomethylethylamine	ND	10	ug/L
N-Nitrosomorpholine	ND	10	ug/L
N-Nitrosopiperidine	ND	10	ug/L
N-Nitrosopyrrolidine	ND	10	ug/L
5-Nitro-o-toluidine	ND	20	ug/L
Pentachlorobenzene	ND	10	ug/L
Pentachloroethane	ND	50	ug/L
Pentachloronitrobenzene	ND	50	ug/L
Phenacetin	ND	20	ug/L
4-Phenylenediamine	ND	100	ug/L
2-Picoline	ND	20	ug/L
Pronamide	ND	20	ug/L
Pyridine	ND	20	ug/L
Safrole	ND	50	ug/L
1,2,4,5-Tetrachlorobenzene	ND	10	ug/L
2,3,4,6-Tetrachlorophenol	ND	50	ug/L
1,3,5-Trinitrobenzene	ND	50	ug/L

(Continued on next page)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: MW-R

GC/MS Semivolatiles

Lot-Sample #...: D9F170193-002 **Work Order #...:** CX1KL114 **Matrix.....:** WATER

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	74	(46 - 98)
Phenol-d5	69	(45 - 103)
Nitrobenzene-d5	74	(51 - 101)
2-Fluorobiphenyl	74	(49 - 106)
2,4,6-Tribromophenol	79	(54 - 107)
Terphenyl-d14	86	(49 - 117)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: MW-X

GC Semivolatiles

Lot-Sample #...: D9F170193-001 **Work Order #...:** CX1KE10X **Matrix.....:** WATER
Date Sampled...: 06/15/99 13:00 **Date Received..:** 06/16/99
Prep Date.....: 06/22/99 **Analysis Date..:** 06/30/99
Prep Batch #...: 9173149 **Analysis Time..:** 13:39
Dilution Factor: 1

Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	0.050	ug/L
alpha-BHC	ND	0.050	ug/L
beta-BHC	ND	0.050	ug/L
delta-BHC	ND	0.050	ug/L
gamma-BHC (Lindane)	ND	0.050	ug/L
Chlordane (technical)	ND	0.50	ug/L
4,4'-DDD	ND	0.050	ug/L
4,4'-DDE	ND	0.050	ug/L
4,4'-DDT	ND	0.050	ug/L
Dieldrin	ND	0.050	ug/L
Endrin	ND	0.050	ug/L
Endrin aldehyde	ND	0.050	ug/L
Endosulfan I	ND	0.050	ug/L
Endosulfan II	ND	0.050	ug/L
Endosulfan sulfate	ND	0.050	ug/L
Heptachlor	ND	0.050	ug/L
Heptachlor epoxide	ND	0.050	ug/L
Methoxychlor	ND	0.10	ug/L
Toxaphene	ND	2.0	ug/L
Diallate	ND	1.0	ug/L
Isodrin	ND	0.10	ug/L
Kepone	ND	1.0	ug/L
Chlorobenzilate	ND	0.10	ug/L
alpha-Chlordane	ND	0.050	ug/L
gamma-Chlordane	ND	0.050	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	101	(51 - 132)
Tetrachloro-m-xylene	101	(56 - 107)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: MW-R

GC Semivolatiles

Lot-Sample #...: D9F170193-002 **Work Order #...:** CX1KL10X **Matrix.....:** WATER
Date Sampled...: 06/15/99 13:00 **Date Received..:** 06/16/99
Prep Date.....: 06/22/99 **Analysis Date..:** 06/30/99
Prep Batch #...: 9173149 **Analysis Time..:** 14:19
Dilution Factor: 1

Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	0.050	ug/L
alpha-BHC	ND	0.050	ug/L
beta-BHC	ND	0.050	ug/L
delta-BHC	ND	0.050	ug/L
gamma-BHC (Lindane)	ND	0.050	ug/L
Chlordane (technical)	ND	0.50	ug/L
4,4'-DDD	ND	0.050	ug/L
4,4'-DDE	ND	0.050	ug/L
4,4'-DDT	ND	0.050	ug/L
Dieldrin	ND	0.050	ug/L
Endrin	ND	0.050	ug/L
Endrin aldehyde	ND	0.050	ug/L
Endosulfan I	ND	0.050	ug/L
Endosulfan II	ND	0.050	ug/L
Endosulfan sulfate	ND	0.050	ug/L
Heptachlor	ND	0.050	ug/L
Heptachlor epoxide	ND	0.050	ug/L
Methoxychlor	ND	0.10	ug/L
Toxaphene	ND	2.0	ug/L
Diallate	ND	1.0	ug/L
Isodrin	ND	0.10	ug/L
Kepone	ND	1.0	ug/L
Chlorobenzilate	ND	0.10	ug/L
alpha-Chlordane	ND	0.050	ug/L
gamma-Chlordane	ND	0.050	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	102	(51 - 132)
Tetrachloro-m-xylene	101	(56 - 107)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: MW-X

GC Semivolatiles

Lot-Sample #...: D9F170193-001 **Work Order #...:** CX1KE10W **Matrix.....:** WATER
Date Sampled...: 06/15/99 13:00 **Date Received..:** 06/16/99
Prep Date.....: 06/22/99 **Analysis Date..:** 07/19/99
Prep Batch #...: 9173151 **Analysis Time..:** 19:01
Dilution Factor: 1

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	1.0	ug/L
Aroclor 1221	ND	1.0	ug/L
Aroclor 1232	ND	1.0	ug/L
Aroclor 1242	ND	1.0	ug/L
Aroclor 1248	ND	1.0	ug/L
Aroclor 1254	ND	1.0	ug/L
Aroclor 1260	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	100	(52 - 129)
Tetrachloro-m-xylene	105	(54 - 113)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: MW-R

GC Semivolatiles

Lot-Sample #...: D9F170193-002 **Work Order #...:** CX1KL10W **Matrix.....:** WATER
Date Sampled...: 06/15/99 13:00 **Date Received..:** 06/16/99
Prep Date.....: 06/22/99 **Analysis Date..:** 07/19/99
Prep Batch #...: 9173151 **Analysis Time..:** 19:29
Dilution Factor: 1

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	1.0	ug/L
Aroclor 1221	ND	1.0	ug/L
Aroclor 1232	ND	1.0	ug/L
Aroclor 1242	ND	1.0	ug/L
Aroclor 1248	ND	1.0	ug/L
Aroclor 1254	ND	1.0	ug/L
Aroclor 1260	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	95	(52 - 129)
Tetrachloro-m-xylene	99	(54 - 113)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: MW-X

GC Semivolatiles

Lot-Sample #...: D9F170193-001 Work Order #...: CX1KE10T Matrix.....: WATER
Date Sampled...: 06/15/99 13:00 Date Received..: 06/16/99
Prep Date.....: 06/22/99 Analysis Date..: 07/13/99
Prep Batch #...: 9173154 Analysis Time..: 22:01
Dilution Factor: 1

Method.....: SW846 8140

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Azinphos-methyl	ND	2.5	ug/L
Bolstar	ND	0.50	ug/L
Chlorpyrifos	ND	0.50	ug/L
Coumaphos	ND	0.50	ug/L
Demeton (total)	ND	0.50	ug/L
Diazinon	ND	0.50	ug/L
Dichlorvos	ND	0.50	ug/L
Thionazin	ND	0.50	ug/L
Dimethoate	ND	0.50	ug/L
Disulfoton	ND	0.50	ug/L
Ethoprop	ND	0.50	ug/L
Famphur	ND	1.0	ug/L
Fensulfothion	ND	2.5	ug/L
Fenthion	ND	0.50	ug/L
Malathion	ND	1.2	ug/L
Merphos	ND	0.50	ug/L
Methyl parathion	ND	0.50	ug/L
Mevinphos	ND	6.2	ug/L
Naled	ND	10	ug/L
Ethyl parathion	ND	0.50	ug/L
Phorate	ND	0.50	ug/L
Ronnel	ND	0.50	ug/L
Sulfotepp	ND	0.50	ug/L
Tokuthion	ND	0.50	ug/L
Trichloronate	ND	0.50	ug/L
O,O,O-Triethylphosphorothioate	ND	0.50	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Ethyl Pirimifos	78	(60 - 123)
Chlormefos	107	(59 - 110)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: MW-R

GC Semivolatiles

Lot-Sample #...: D9F170193-002 Work Order #...: CX1KL10T Matrix.....: WATER
Date Sampled...: 06/15/99 13:00 Date Received..: 06/16/99
Prep Date.....: 06/22/99 Analysis Date..: 07/13/99
Prep Batch #...: 9173154 Analysis Time..: 22:34
Dilution Factor: 1

Method.....: SW846 8140

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Azinphos-methyl	ND	2.5	ug/L
Bolstar	ND	0.50	ug/L
Chlorpyrifos	ND	0.50	ug/L
Coumaphos	ND	0.50	ug/L
Demeton (total)	ND	0.50	ug/L
Diazinon	ND	0.50	ug/L
Dichlorvos	ND	0.50	ug/L
Thionazin	ND	0.50	ug/L
Dimethoate	ND	0.50	ug/L
Disulfoton	ND	0.50	ug/L
Ethoprop	ND	0.50	ug/L
Famphur	ND	1.0	ug/L
Fensulfothion	ND	2.5	ug/L
Fenthion	ND	0.50	ug/L
Malathion	ND	1.2	ug/L
Merphos	ND	0.50	ug/L
Methyl parathion	ND	0.50	ug/L
Mevinphos	ND	6.2	ug/L
Naled	ND	10	ug/L
Ethyl parathion	ND	0.50	ug/L
Phorate	ND	0.50	ug/L
Ronnel	ND	0.50	ug/L
Sulfotepp	ND	0.50	ug/L
Tokuthion	ND	0.50	ug/L
Trichloronate	ND	0.50	ug/L
O,O,O-Triethylphosphoro-thioate	ND	0.50	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Ethyl Pirimifos	97	(60 - 123)
Chlormefos	107	(59 - 110)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: MW-X

GC Semivolatiles

Lot-Sample #...: D9F170193-001 **Work Order #...:** CX1KE10V **Matrix.....:** WATER
Date Sampled...: 06/15/99 13:00 **Date Received..:** 06/16/99
Prep Date.....: 06/22/99 **Analysis Date..:** 07/13/99
Prep Batch #...: 9173146 **Analysis Time..:** 08:04
Dilution Factor: 1

Method.....: SW846 8151A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2,4-D	ND	4.0	ug/L
2,4-DB	ND	4.0	ug/L
2,4,5-TP (Silvex)	ND	1.0	ug/L
2,4,5-T	ND	1.0	ug/L
Dalapon	ND	2.0	ug/L
Dicamba	ND	2.0	ug/L
Dichlorprop	ND	4.0	ug/L
Dinoseb	ND	0.60	ug/L
MCPA	ND	400	ug/L
MCPP	ND	400	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
DCAA	60	(15 - 96)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: MW-R

GC Semivolatiles

Lot-Sample #...: D9F170193-002 **Work Order #...:** CX1KL10V **Matrix.....:** WATER
Date Sampled...: 06/15/99 13:00 **Date Received..:** 06/16/99
Prep Date.....: 06/22/99 **Analysis Date..:** 07/13/99
Prep Batch #...: 9173146 **Analysis Time..:** 08:38
Dilution Factor: 1

Method.....: SW846 8151A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2,4-D	ND	4.0	ug/L
2,4-DB	ND	4.0	ug/L
2,4,5-TP (Silvex)	ND	1.0	ug/L
2,4,5-T	ND	1.0	ug/L
Dalapon	ND	2.0	ug/L
Dicamba	ND	2.0	ug/L
Dichlorprop	ND	4.0	ug/L
Dinoseb	ND	0.60	ug/L
MCPA	ND	400	ug/L
MCPP	ND	400	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
DCAA	66	(15 - 96)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: MW-X

TOTAL Metals

Lot-Sample #...: D9F170193-001 **Matrix.....:** WATER
Date Sampled...: 06/15/99 13:00 **Date Received..:** 06/16/99

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9169315						
Antimony	ND	5.0	ug/L	SW846 6010B	06/19-06/23/99	CX1KE12G
		Dilution Factor: 1		Analysis Time..: 11:40		
Arsenic	ND	10.0	ug/L	SW846 6010B	06/19-06/23/99	CX1KE12H
		Dilution Factor: 1		Analysis Time..: 11:40		
Cadmium	ND	5.0	ug/L	SW846 6010B	06/19-06/23/99	CX1KE12J
		Dilution Factor: 1		Analysis Time..: 11:40		
Lead	**1.0 B**	**3.0**	**ug/L**	**SW846 6010B**	**06/19-06/23/99**	**CX1KE12K**
		Dilution Factor: 1		Analysis Time..: 11:40		
Selenium	**7.5**	**5.0**	**ug/L**	**SW846 6010B**	**06/19-06/23/99**	**CX1KE12L**
		Dilution Factor: 1		Analysis Time..: 11:40		
Silver	ND	10.0	ug/L	SW846 6010B	06/19-06/23/99	CX1KE11W
		Dilution Factor: 1		Analysis Time..: 11:40		
Aluminum	**35.9 B**	**100**	**ug/L**	**SW846 6010B**	**06/19-06/23/99**	**CX1KE11X**
		Dilution Factor: 1		Analysis Time..: 11:40		
Barium	**48.3**	**10.0**	**ug/L**	**SW846 6010B**	**06/19-06/23/99**	**CX1KE120**
		Dilution Factor: 1		Analysis Time..: 11:40		
Beryllium	**1.2 B**	**5.0**	**ug/L**	**SW846 6010B**	**06/19-06/23/99**	**CX1KE121**
		Dilution Factor: 1		Analysis Time..: 11:40		
Calcium	**52400**	**200**	**ug/L**	**SW846 6010B**	**06/19-06/23/99**	**CX1KE122**
		Dilution Factor: 1		Analysis Time..: 11:40		
Cobalt	ND	10.0	ug/L	SW846 6010B	06/19-06/23/99	CX1KE123
		Dilution Factor: 1		Analysis Time..: 11:40		
Chromium	**49.7**	**10.0**	**ug/L**	**SW846 6010B**	**06/19-06/23/99**	**CX1KE124**
		Dilution Factor: 1		Analysis Time..: 11:40		
Copper	**1.4 B**	**10.0**	**ug/L**	**SW846 6010B**	**06/19-06/23/99**	**CX1KE125**
		Dilution Factor: 1		Analysis Time..: 11:40		
Iron	**948**	**100**	**ug/L**	**SW846 6010B**	**06/19-06/21/99**	**CX1KE126**
		Dilution Factor: 1		Analysis Time..: 13:08		

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FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: MW-X

TOTAL Metals

Lot-Sample #...: D9F170193-001 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Potassium	**8420**	**3000**	**ug/L**	**SW846 6010B**	**06/19-06/21/99**	**CX1KE127**
		Dilution Factor: 1		Analysis Time..: 13:08		
Magnesium	**54900**	**200**	**ug/L**	**SW846 6010B**	**06/19-06/23/99**	**CX1KE128**
		Dilution Factor: 1		Analysis Time..: 11:40		
Manganese	**52.6**	**10.0**	**ug/L**	**SW846 6010B**	**06/19-06/23/99**	**CX1KE129**
		Dilution Factor: 1		Analysis Time..: 11:40		
Sodium	**43900**	**5000**	**ug/L**	**SW846 6010B**	**06/19-06/21/99**	**CX1KE12A**
		Dilution Factor: 1		Analysis Time..: 13:08		
Nickel	**353**	**40.0**	**ug/L**	**SW846 6010B**	**06/19-06/23/99**	**CX1KE12C**
		Dilution Factor: 1		Analysis Time..: 11:40		
Tin	ND	100	ug/L	SW846 6010B	06/19-06/23/99	CX1KE12D
		Dilution Factor: 1		Analysis Time..: 11:40		
Vanadium	**12.6**	**10.0**	**ug/L**	**SW846 6010B**	**06/19-06/23/99**	**CX1KE12E**
		Dilution Factor: 1		Analysis Time..: 11:40		
Zinc	ND	20.0	ug/L	SW846 6010B	06/19-06/23/99	CX1KE12F
		Dilution Factor: 1		Analysis Time..: 11:40		
Prep Batch #...: 9172227						
Mercury	ND	0.20	ug/L	SW846 7470A	06/21-06/22/99	CX1KE10R
		Dilution Factor: 1		Analysis Time..: 16:21		

NOTE(S):

B Estimated result. Result is less than RL.

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: MW-R

TOTAL Metals

Lot-Sample #...: D9F170193-002 **Matrix.....:** WATER
Date Sampled...: 06/15/99 13:00 **Date Received..:** 06/16/99

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9169315						
Antimony	ND	5.0	ug/L	SW846 6010B	06/19-06/23/99	CX1KL12G
		Dilution Factor: 1		Analysis Time..: 12:27		
Arsenic	ND	10.0	ug/L	SW846 6010B	06/19-06/23/99	CX1KL12H
		Dilution Factor: 1		Analysis Time..: 12:27		
Cadmium	ND	5.0	ug/L	SW846 6010B	06/19-06/23/99	CX1KL12J
		Dilution Factor: 1		Analysis Time..: 12:27		
Lead	**3.0**	**3.0**	**ug/L**	**SW846 6010B**	**06/19-06/23/99**	**CX1KL12K**
		Dilution Factor: 1		Analysis Time..: 12:27		
Selenium	**9.6**	**5.0**	**ug/L**	**SW846 6010B**	**06/19-06/23/99**	**CX1KL12L**
		Dilution Factor: 1		Analysis Time..: 12:27		
Silver	ND	10.0	ug/L	SW846 6010B	06/19-06/23/99	CX1KL11W
		Dilution Factor: 1		Analysis Time..: 12:27		
Aluminum	**66.9 B**	**100**	**ug/L**	**SW846 6010B**	**06/19-06/23/99**	**CX1KL11X**
		Dilution Factor: 1		Analysis Time..: 12:27		
Barium	**52.0**	**10.0**	**ug/L**	**SW846 6010B**	**06/19-06/23/99**	**CX1KL120**
		Dilution Factor: 1		Analysis Time..: 12:27		
Beryllium	**1.1 B**	**5.0**	**ug/L**	**SW846 6010B**	**06/19-06/23/99**	**CX1KL121**
		Dilution Factor: 1		Analysis Time..: 12:27		
Calcium	**55700**	**200**	**ug/L**	**SW846 6010B**	**06/19-06/23/99**	**CX1KL122**
		Dilution Factor: 1		Analysis Time..: 12:27		
Cobalt	ND	10.0	ug/L	SW846 6010B	06/19-06/23/99	CX1KL123
		Dilution Factor: 1		Analysis Time..: 12:27		
Chromium	**333**	**10.0**	**ug/L**	**SW846 6010B**	**06/19-06/23/99**	**CX1KL124**
		Dilution Factor: 1		Analysis Time..: 12:27		
Copper	**4.9 B**	**10.0**	**ug/L**	**SW846 6010B**	**06/19-06/23/99**	**CX1KL125**
		Dilution Factor: 1		Analysis Time..: 12:27		
Iron	**1480**	**100**	**ug/L**	**SW846 6010B**	**06/19-06/21/99**	**CX1KL126**
		Dilution Factor: 1		Analysis Time..: 13:23		

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FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: MW-R

TOTAL Metals

Lot-Sample #...: D9F170193-002 Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Potassium	8190	3000	ug/L	SW846 6010B	06/19-06/21/99	CX1KL127
		Dilution Factor: 1		Analysis Time..: 13:23		
Magnesium	58200	200	ug/L	SW846 6010B	06/19-06/23/99	CX1KL128
		Dilution Factor: 1		Analysis Time..: 12:27		
Manganese	54.3	10.0	ug/L	SW846 6010B	06/19-06/23/99	CX1KL129
		Dilution Factor: 1		Analysis Time..: 12:27		
Sodium	42400	5000	ug/L	SW846 6010B	06/19-06/21/99	CX1KL12A
		Dilution Factor: 1		Analysis Time..: 13:23		
Nickel	371	40.0	ug/L	SW846 6010B	06/19-06/23/99	CX1KL12C
		Dilution Factor: 1		Analysis Time..: 12:27		
Tin	ND	100	ug/L	SW846 6010B	06/19-06/23/99	CX1KL12D
		Dilution Factor: 1		Analysis Time..: 12:27		
Vanadium	15.2	10.0	ug/L	SW846 6010B	06/19-06/23/99	CX1KL12E
		Dilution Factor: 1		Analysis Time..: 12:27		
Zinc	ND	20.0	ug/L	SW846 6010B	06/19-06/23/99	CX1KL12F
		Dilution Factor: 1		Analysis Time..: 12:27		
Prep Batch #...: 9172227						
Mercury	ND	0.20	ug/L	SW846 7470A	06/21-06/22/99	CX1KL10R
		Dilution Factor: 1		Analysis Time..: 16:23		

NOTE(S):

B Estimated result. Result is less than RL.

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: MW-X

DISSOLVED Metals

Lot-Sample #...: D9F170193-001 **Matrix.....:** WATER
Date Sampled...: 06/15/99 13:00 **Date Received..:** 06/16/99

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9172228						
Mercury	ND	0.20	ug/L	SW846 7470A	06/21-06/22/99	CX1KE11V
		Dilution Factor: 1		Analysis Time..: 15:46		
Prep Batch #...: 9173351						
Silver	ND	10.0	ug/L	SW846 6010B	06/24-06/28/99	CX1KE11A
		Dilution Factor: 1		Analysis Time..: 14:14		
Arsenic	**3.4 B**	**10.0**	**ug/L**	**SW846 6010B**	**06/24-06/28/99**	**CX1KE115**
		Dilution Factor: 1		Analysis Time..: 14:14		
Aluminum	**78.2 B**	**100**	**ug/L**	**SW846 6010B**	**06/24-06/28/99**	**CX1KE11C**
		Dilution Factor: 1		Analysis Time..: 14:14		
Cadmium	ND	5.0	ug/L	SW846 6010B	06/24-06/28/99	CX1KE116
		Dilution Factor: 1		Analysis Time..: 14:14		
Barium	**52.2**	**10.0**	**ug/L**	**SW846 6010B**	**06/24-06/28/99**	**CX1KE11D**
		Dilution Factor: 1		Analysis Time..: 14:14		
Lead	ND	3.0	ug/L	SW846 6010B	06/24-06/28/99	CX1KE117
		Dilution Factor: 1		Analysis Time..: 14:14		
Beryllium	ND	5.0	ug/L	SW846 6010B	06/24-06/28/99	CX1KE11E
		Dilution Factor: 1		Analysis Time..: 14:14		
Antimony	ND	5.0	ug/L	SW846 6010B	06/24-06/28/99	CX1KE118
		Dilution Factor: 1		Analysis Time..: 14:14		
Selenium	**6.8**	**5.0**	**ug/L**	**SW846 6010B**	**06/24-06/28/99**	**CX1KE119**
		Dilution Factor: 1		Analysis Time..: 14:14		
Calcium	**56000**	**200**	**ug/L**	**SW846 6010B**	**06/24-06/28/99**	**CX1KE11F**
		Dilution Factor: 1		Analysis Time..: 14:14		
Cobalt	ND	10.0	ug/L	SW846 6010B	06/24-06/28/99	CX1KE11G
		Dilution Factor: 1		Analysis Time..: 14:14		
Chromium	ND	10.0	ug/L	SW846 6010B	06/24-06/28/99	CX1KE11H
		Dilution Factor: 1		Analysis Time..: 14:14		
Copper	ND	10.0	ug/L	SW846 6010B	06/24-06/28/99	CX1KE11J
		Dilution Factor: 1		Analysis Time..: 14:14		

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FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: MW-X

DISSOLVED Metals

Lot-Sample #...: D9F170193-001 Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Iron	43.7 B	100	ug/L	SW846 6010B	06/24-06/28/99	CX1KE11K
		Dilution Factor: 1		Analysis Time..: 13:47		
Potassium	7610	3000	ug/L	SW846 6010B	06/24-06/28/99	CX1KE11L
		Dilution Factor: 1		Analysis Time..: 13:47		
Magnesium	59400	200	ug/L	SW846 6010B	06/24-06/28/99	CX1KE11M
		Dilution Factor: 1		Analysis Time..: 14:14		
Manganese	51.3	10.0	ug/L	SW846 6010B	06/24-06/28/99	CX1KE11N
		Dilution Factor: 1		Analysis Time..: 14:14		
Sodium	42300	5000	ug/L	SW846 6010B	06/24-06/28/99	CX1KE11P
		Dilution Factor: 1		Analysis Time..: 13:47		
Nickel	322	40.0	ug/L	SW846 6010B	06/24-06/28/99	CX1KE11Q
		Dilution Factor: 1		Analysis Time..: 14:14		
Tin	ND	100	ug/L	SW846 6010B	06/24-06/28/99	CX1KE11R
		Dilution Factor: 1		Analysis Time..: 14:14		
Vanadium	11.2	10.0	ug/L	SW846 6010B	06/24-06/28/99	CX1KE11T
		Dilution Factor: 1		Analysis Time..: 14:14		
Zinc	3.4 B	20.0	ug/L	SW846 6010B	06/24-06/28/99	CX1KE11U
		Dilution Factor: 1		Analysis Time..: 14:14		

NOTE(S):

B Estimated result. Result is less than RL.

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: MW-R

DISSOLVED Metals

Lot-Sample #...: D9F170193-002 **Matrix.....:** WATER
Date Sampled...: 06/15/99 13:00 **Date Received..:** 06/16/99

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9172228						
Mercury	ND	0.20	ug/L	SW846 7470A	06/21-06/22/99	CX1KL11V
		Dilution Factor: 1		Analysis Time..: 15:50		
Prep Batch #...: 9173351						
Silver	ND	10.0	ug/L	SW846 6010B	06/24-06/28/99	CX1KL11A
		Dilution Factor: 1		Analysis Time..: 14:33		
Arsenic	**4.9 B**	**10.0**	**ug/L**	**SW846 6010B**	**06/24-06/28/99**	**CX1KL115**
		Dilution Factor: 1		Analysis Time..: 14:33		
Aluminum	**80.7 B**	**100**	**ug/L**	**SW846 6010B**	**06/24-06/28/99**	**CX1KL11C**
		Dilution Factor: 1		Analysis Time..: 14:33		
Cadmium	**1.1 B**	**5.0**	**ug/L**	**SW846 6010B**	**06/24-06/28/99**	**CX1KL116**
		Dilution Factor: 1		Analysis Time..: 14:33		
Barium	**54.7**	**10.0**	**ug/L**	**SW846 6010B**	**06/24-06/28/99**	**CX1KL11D**
		Dilution Factor: 1		Analysis Time..: 14:33		
Lead	ND	3.0	ug/L	SW846 6010B	06/24-06/28/99	CX1KL117
		Dilution Factor: 1		Analysis Time..: 14:33		
Beryllium	ND	5.0	ug/L	SW846 6010B	06/24-06/28/99	CX1KL11E
		Dilution Factor: 1		Analysis Time..: 14:33		
Antimony	ND	5.0	ug/L	SW846 6010B	06/24-06/28/99	CX1KL118
		Dilution Factor: 1		Analysis Time..: 14:33		
Selenium	**9.6**	**5.0**	**ug/L**	**SW846 6010B**	**06/24-06/28/99**	**CX1KL119**
		Dilution Factor: 1		Analysis Time..: 14:33		
Calcium	**56800**	**200**	**ug/L**	**SW846 6010B**	**06/24-06/28/99**	**CX1KL11F**
		Dilution Factor: 1		Analysis Time..: 14:33		
Cobalt	ND	10.0	ug/L	SW846 6010B	06/24-06/28/99	CX1KL11G
		Dilution Factor: 1		Analysis Time..: 14:33		
Chromium	ND	10.0	ug/L	SW846 6010B	06/24-06/28/99	CX1KL11H
		Dilution Factor: 1		Analysis Time..: 14:33		
Copper	ND	10.0	ug/L	SW846 6010B	06/24-06/28/99	CX1KL11J
		Dilution Factor: 1		Analysis Time..: 14:33		

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FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: MW-R

DISSOLVED Metals

Lot-Sample #...: D9F170193-002 Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Iron	48.0 B	100	ug/L	SW846 6010B	06/24-06/28/99	CX1KL11K
		Dilution Factor: 1		Analysis Time..: 14:02		
Potassium	8030	3000	ug/L	SW846 6010B	06/24-06/28/99	CX1KL11L
		Dilution Factor: 1		Analysis Time..: 14:02		
Magnesium	60300	200	ug/L	SW846 6010B	06/24-06/28/99	CX1KL11M
		Dilution Factor: 1		Analysis Time..: 14:33		
Manganese	46.0	10.0	ug/L	SW846 6010B	06/24-06/28/99	CX1KL11N
		Dilution Factor: 1		Analysis Time..: 14:33		
Sodium	43100	5000	ug/L	SW846 6010B	06/24-06/28/99	CX1KL11P
		Dilution Factor: 1		Analysis Time..: 14:02		
Nickel	302	40.0	ug/L	SW846 6010B	06/24-06/28/99	CX1KL11Q
		Dilution Factor: 1		Analysis Time..: 14:33		
Tin	ND	100	ug/L	SW846 6010B	06/24-06/28/99	CX1KL11R
		Dilution Factor: 1		Analysis Time..: 14:33		
Vanadium	13.0	10.0	ug/L	SW846 6010B	06/24-06/28/99	CX1KL11T
		Dilution Factor: 1		Analysis Time..: 14:33		
Zinc	5.1 B	20.0	ug/L	SW846 6010B	06/24-06/28/99	CX1KL11U
		Dilution Factor: 1		Analysis Time..: 14:33		

NOTE(S):

B Estimated result. Result is less than RL.

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: MW-X

General Chemistry

Lot-Sample #...: D9F170193-001 Work Order #...: CX1KE Matrix.....: WATER
Date Sampled...: 06/15/99 13:00 Date Received..: 06/16/99

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	119 Q	15.0	mg/L	MCAWW 300.0A	06/17/99	9171155
		Dilution Factor: 5		Analysis Time..: 18:43		
Nitrate	5.2	0.50	mg/L	MCAWW 300.0A	06/17/99	9171157
		Dilution Factor: 1		Analysis Time..: 18:29		
Sulfate	133 Q	25.0	mg/L	MCAWW 300.0A	06/17/99	9171156
		Dilution Factor: 5		Analysis Time..: 18:43		
Total Phenols	ND	0.020	mg/L	MCAWW 420.2	07/01/99	9182400
		Dilution Factor: 1		Analysis Time..: 15:24		

NOTE(S):

RL Reporting Limit

Q Elevated reporting limit. The reporting limit is elevated due to high analyte levels.

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: MW-R

General Chemistry

Lot-Sample #...: D9F170193-002 Work Order #...: CX1KL Matrix.....: WATER
Date Sampled...: 06/15/99 13:00 Date Received..: 06/16/99

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	125 Q	15.0	mg/L	MCAWW 300.0A	06/17/99	9171155
		Dilution Factor: 5		Analysis Time..: 19:12		
Nitrate	5.1	0.50	mg/L	MCAWW 300.0A	06/17/99	9171157
		Dilution Factor: 1		Analysis Time..: 18:58		
Sulfate	134 Q	25.0	mg/L	MCAWW 300.0A	06/17/99	9171156
		Dilution Factor: 5		Analysis Time..: 19:12		
Total Phenols	ND	0.020	mg/L	MCAWW 420.2	07/01/99	9182400
		Dilution Factor: 1		Analysis Time..: 15:16		

NOTE(S):

RL Reporting Limit

Q Elevated reporting limit. The reporting limit is elevated due to high analyte levels.

QC DATA ASSOCIATION SUMMARY

D9F170193

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WATER	MCAWW 300.0A		9171155	9182184
	WATER	MCAWW 300.0A		9171156	9182188
	WATER	MCAWW 300.0A		9171157	9182186
	WATER	MCAWW 420.2		9182400	9182174
	WATER	SW846 7470A		9172227	9172104
	WATER	SW846 7470A		9172228	9172105
	WATER	SW846 8082		9173151	
	WATER	SW846 8081A		9173149	
	WATER	SW846 8260B		9180210	9180078
	WATER	SW846 8270C		9169182	
	WATER	SW846 6010B		9169315	9169144
	WATER	SW846 6010B		9173351	9173150
	WATER	SW846 8151A		9173146	
	WATER	SW846 8140		9173154	
002	WATER	MCAWW 300.0A		9171155	9182184
	WATER	MCAWW 300.0A		9171156	9182188
	WATER	MCAWW 300.0A		9171157	9182186
	WATER	MCAWW 420.2		9182400	9182174
	WATER	SW846 7470A		9172227	9172104
	WATER	SW846 7470A		9172228	9172105
	WATER	SW846 8082		9173151	
	WATER	SW846 8081A		9173149	
	WATER	SW846 8260B		9180210	9180078
	WATER	SW846 8270C		9169182	
	WATER	SW846 6010B		9169315	9169144
	WATER	SW846 6010B		9173351	9173150
	WATER	SW846 8151A		9173146	
	WATER	SW846 8140		9173154	
003	WATER	SW846 8260B		9180210	9180078

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: D9F170193 **Work Order #...:** CXG85102 **Matrix.....:** WATER
LCS Lot-Sample#: D9F290000-210
Prep Date.....: 06/25/99 **Analysis Date..:** 06/25/99
Prep Batch #...: 9180210 **Analysis Time..:** 15:14
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
1,1-Dichloroethene	**103**	**(75 - 124)**	**SW846 8260B**
Benzene	**102**	**(82 - 114)**	**SW846 8260B**
Chlorobenzene	**97**	**(86 - 120)**	**SW846 8260B**
Toluene	**98**	**(85 - 115)**	**SW846 8260B**
Trichloroethene	**103**	**(85 - 115)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	106	(86 - 118)
1,2-Dichloroethane-d4	106	(76 - 115)
4-Bromofluorobenzene	99	(85 - 115)
Toluene-d8	97	(85 - 115)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: D9F170193 **Work Order #...:** CXG85102 **Matrix.....:** WATER
LCS Lot-Sample#: D9F290000-210
Prep Date.....: 06/25/99 **Analysis Date..:** 06/25/99
Prep Batch #...: 9180210 **Analysis Time..:** 15:14
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
1,1-Dichloroethene	**10.0**	**10.3**	**ug/L**	**103**	**SW846 8260B**
Benzene	**10.0**	**10.2**	**ug/L**	**102**	**SW846 8260B**
Chlorobenzene	**10.0**	**9.74**	**ug/L**	**97**	**SW846 8260B**
Toluene	**10.0**	**9.80**	**ug/L**	**98**	**SW846 8260B**
Trichloroethene	**10.0**	**10.3**	**ug/L**	**103**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	106	(86 - 118)
1,2-Dichloroethane-d4	106	(76 - 115)
4-Bromofluorobenzene	99	(85 - 115)
Toluene-d8	97	(85 - 115)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: D9F170193 **Work Order #...:** CXG85101 **Matrix.....:** WATER
MB Lot-Sample #: D9F290000-210

Prep Date.....: 06/25/99 **Analysis Time..:** 15:37
Analysis Date..: 06/25/99 **Prep Batch #...:** 9180210
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	**1.6 J**	**10**	**ug/L**	**SW846 8260B**
Acrolein	ND	20	ug/L	SW846 8260B
Acrylonitrile	ND	20	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	2.0	ug/L	SW846 8260B
2-Butanone (MEK)	ND	5.0	ug/L	SW846 8260B
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	2.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	2.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	2.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,4-Dichloro-2-butene	ND	1.0	ug/L	SW846 8260B
1,4-Dioxane	ND	200	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Ethyl methacrylate	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	5.0	ug/L	SW846 8260B
Iodomethane	ND	1.0	ug/L	SW846 8260B
Methylene chloride	**0.34 J**	**1.0**	**ug/L**	**SW846 8260B**
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: D9F170193 **Work Order #...:** CXG85101 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	2.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
Vinyl acetate	ND	2.0	ug/L	SW846 8260B
Vinyl chloride	ND	2.0	ug/L	SW846 8260B
Xylenes (total)	ND	1.0	ug/L	SW846 8260B
Acetonitrile	ND	20	ug/L	SW846 8260B
Allyl chloride	ND	2.0	ug/L	SW846 8260B
Propionitrile	ND	10	ug/L	SW846 8260B
Methacrylonitrile	ND	10	ug/L	SW846 8260B
Methyl methacrylate	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	105	(86 - 118)
1,2-Dichloroethane-d4	107	(76 - 115)
4-Bromofluorobenzene	99	(85 - 115)
Toluene-d8	95	(85 - 115)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: D9F170193 **Work Order #...:** CX1KE15P-MS **Matrix.....:** WATER
MS Lot-Sample #: D9F170193-001 CX1KE15Q-MSD
Date Sampled...: 06/15/99 13:00 **Date Received..:** 06/16/99
Prep Date.....: 06/25/99 **Analysis Date..:** 06/25/99
Prep Batch #...: 9180210 **Analysis Time..:** 16:24
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**102**	**(82 - 114)**			**SW846 8260B**
	101	**(82 - 114)**	**0.36**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**99**	**(86 - 120)**			**SW846 8260B**
	97	**(86 - 120)**	**2.0**	**(0-20)**	**SW846 8260B**
1,1-Dichloroethene	**101**	**(75 - 124)**			**SW846 8260B**
	101	**(75 - 124)**	**0.24**	**(0-20)**	**SW846 8260B**
Toluene	**97**	**(85 - 115)**			**SW846 8260B**
	95	**(85 - 115)**	**2.7**	**(0-20)**	**SW846 8260B**
Trichloroethene	**103**	**(85 - 115)**			**SW846 8260B**
	101	**(85 - 115)**	**2.0**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(86 - 118)
	103	(86 - 118)
1,2-Dichloroethane-d4	106	(76 - 115)
	104	(76 - 115)
4-Bromofluorobenzene	97	(85 - 115)
	97	(85 - 115)
Toluene-d8	93	(85 - 115)
	92	(85 - 115)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: D9F170193 **Work Order #...:** CX1KE15P-MS **Matrix.....:** WATER
MS Lot-Sample #: D9F170193-001 CX1KE15Q-MSD
Date Sampled...: 06/15/99 13:00 **Date Received..:** 06/16/99
Prep Date.....: 06/25/99 **Analysis Date..:** 06/25/99
Prep Batch #...: 9180210 **Analysis Time..:** 16:24
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	**ND**	**10.0**	**10.2**	**ug/L**	**102**		**SW846 8260B**
	ND	**10.0**	**10.1**	**ug/L**	**101**	**0.36**	**SW846 8260B**
Chlorobenzene	**ND**	**10.0**	**9.87**	**ug/L**	**99**		**SW846 8260B**
	ND	**10.0**	**9.67**	**ug/L**	**97**	**2.0**	**SW846 8260B**
1,1-Dichloroethene	**ND**	**10.0**	**10.1**	**ug/L**	**101**		**SW846 8260B**
	ND	**10.0**	**10.1**	**ug/L**	**101**	**0.24**	**SW846 8260B**
Toluene	**ND**	**10.0**	**9.74**	**ug/L**	**97**		**SW846 8260B**
	ND	**10.0**	**9.48**	**ug/L**	**95**	**2.7**	**SW846 8260B**
Trichloroethene	**ND**	**10.0**	**10.3**	**ug/L**	**103**		**SW846 8260B**
	ND	**10.0**	**10.1**	**ug/L**	**101**	**2.0**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(86 - 118)
	103	(86 - 118)
1,2-Dichloroethane-d4	106	(76 - 115)
	104	(76 - 115)
4-Bromofluorobenzene	97	(85 - 115)
	97	(85 - 115)
Toluene-d8	93	(85 - 115)
	92	(85 - 115)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D9F170193 Work Order #...: CX3G2102-LCS Matrix.....: WATER
LCS Lot-Sample#: D9F180000-182 CX3G2103-LCSD
Prep Date.....: 06/18/99 Analysis Date..: 07/01/99
Prep Batch #...: 9169182 Analysis Time..: 13:44
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	72	(48 - 119)			SW846 8270C
	70	(48 - 119)	2.7	(0-20)	SW846 8270C
4-Chloro-3-methylphenol	71	(48 - 110)			SW846 8270C
	72	(48 - 110)	0.92	(0-20)	SW846 8270C
2-Chlorophenol	65	(45 - 108)			SW846 8270C
	70	(45 - 108)	7.4	(0-22)	SW846 8270C
1,4-Dichlorobenzene	61	(46 - 113)			SW846 8270C
	63	(46 - 113)	3.8	(0-27)	SW846 8270C
2,4-Dinitrotoluene	82	(56 - 125)			SW846 8270C
	81	(56 - 125)	1.1	(0-21)	SW846 8270C
4-Nitrophenol	60	(28 - 129)			SW846 8270C
	56	(28 - 129)	5.8	(0-32)	SW846 8270C
N-Nitrosodi-n-propyl-amine	63	(47 - 112)			SW846 8270C
	63	(47 - 112)	0.64	(0-20)	SW846 8270C
Pentachlorophenol	81	(38 - 117)			SW846 8270C
	73	(38 - 117)	11	(0-30)	SW846 8270C
Phenol	58	(40 - 110)			SW846 8270C
	62	(40 - 110)	6.1	(0-20)	SW846 8270C
Pyrene	72	(38 - 141)			SW846 8270C
	71	(38 - 141)	1.3	(0-20)	SW846 8270C
1,2,4-Trichlorobenzene	67	(47 - 116)			SW846 8270C
	67	(47 - 116)	0.33	(0-27)	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	65	(46 - 98)
	72	(46 - 98)
Phenol-d5	65	(45 - 103)
	71	(45 - 103)
Nitrobenzene-d5	70	(51 - 101)
	79	(51 - 101)
2-Fluorobiphenyl	72	(49 - 106)
	74	(49 - 106)
2,4,6-Tribromophenol	81	(54 - 107)
	81	(54 - 107)
Terphenyl-d14	81	(49 - 117)
	83	(49 - 117)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D9F170193 Work Order #...: CX3G2102-LCS Matrix.....: WATER
LCS Lot-Sample#: D9F180000-182 CX3G2103-LCSD
Prep Date.....: 06/18/99 Analysis Date..: 07/01/99
Prep Batch #...: 9169182 Analysis Time..: 13:44
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Acenaphthene	100	72.0	ug/L	72		SW846 8270C
	100	70.1	ug/L	70	2.7	SW846 8270C
4-Chloro-3-methylphenol	150	107	ug/L	71		SW846 8270C
	150	108	ug/L	72	0.92	SW846 8270C
2-Chlorophenol	150	97.2	ug/L	65		SW846 8270C
	150	105	ug/L	70	7.4	SW846 8270C
1,4-Dichlorobenzene	100	60.7	ug/L	61		SW846 8270C
	100	63.1	ug/L	63	3.8	SW846 8270C
2,4-Dinitrotoluene	100	81.7	ug/L	82		SW846 8270C
	100	80.8	ug/L	81	1.1	SW846 8270C
4-Nitrophenol	150	89.8	ug/L	60		SW846 8270C
	150	84.7	ug/L	56	5.8	SW846 8270C
N-Nitrosodi-n-propyl-amine	100	62.9	ug/L	63		SW846 8270C
	100	63.4	ug/L	63	0.64	SW846 8270C
Pentachlorophenol	150	122	ug/L	81		SW846 8270C
	150	110	ug/L	73	11	SW846 8270C
Phenol	150	87.2	ug/L	58		SW846 8270C
	150	92.7	ug/L	62	6.1	SW846 8270C
Pyrene	100	72.4	ug/L	72		SW846 8270C
	100	71.5	ug/L	71	1.3	SW846 8270C
1,2,4-Trichlorobenzene	100	66.7	ug/L	67		SW846 8270C
	100	66.9	ug/L	67	0.33	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	65	(46 - 98)
	72	(46 - 98)
Phenol-d5	65	(45 - 103)
	71	(45 - 103)
Nitrobenzene-d5	70	(51 - 101)
	79	(51 - 101)
2-Fluorobiphenyl	72	(49 - 106)
	74	(49 - 106)
2,4,6-Tribromophenol	81	(54 - 107)
	81	(54 - 107)
Terphenyl-d14	81	(49 - 117)
	83	(49 - 117)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: D9F170193 **Work Order #...:** CX3G2101 **Matrix.....:** WATER
MB Lot-Sample #: D9F180000-182

Prep Date.....: 06/18/99 **Analysis Time..:** 13:11
Analysis Date..: 07/01/99 **Prep Batch #...:** 9169182
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Di-n-butyl phthalate	ND	10	ug/L	SW846 8270C
3-Methylphenol & 4-Methylphenol	ND	10	ug/L	SW846 8270C
1,3-Dichlorobenzene	ND	10	ug/L	SW846 8270C
Acenaphthylene	ND	10	ug/L	SW846 8270C
Phenol	ND	10	ug/L	SW846 8270C
2-Chlorophenol	ND	10	ug/L	SW846 8270C
bis(2-Chloroethyl)-ether	ND	10	ug/L	SW846 8270C
bis(2-Chloroethoxy) methane	ND	10	ug/L	SW846 8270C
1,4-Dichlorobenzene	ND	10	ug/L	SW846 8270C
1,2-Dichlorobenzene	ND	10	ug/L	SW846 8270C
2-Methylphenol	ND	10	ug/L	SW846 8270C
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	SW846 8270C
o-Toluidine	ND	10	ug/L	SW846 8270C
2,2'-oxybis(1-Chloropropa	ND	10	ug/L	SW846 8270C
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	SW846 8270C
Hexachloroethane	ND	10	ug/L	SW846 8270C
Nitrobenzene	ND	10	ug/L	SW846 8270C
Isophorone	ND	10	ug/L	SW846 8270C
2-Nitrophenol	ND	10	ug/L	SW846 8270C
2,4-Dimethylphenol	ND	10	ug/L	SW846 8270C
2,4-Dichlorophenol	ND	10	ug/L	SW846 8270C
1,2,4-Trichlorobenzene	ND	10	ug/L	SW846 8270C
Naphthalene	ND	10	ug/L	SW846 8270C
4-Chloroaniline	ND	10	ug/L	SW846 8270C
Hexachlorobutadiene	ND	10	ug/L	SW846 8270C
2-Methylnaphthalene	ND	10	ug/L	SW846 8270C
Hexachlorocyclopenta-diene	ND	50	ug/L	SW846 8270C
2,4,5-Trichlorophenol	ND	10	ug/L	SW846 8270C
2,4,6-Trichlorophenol	ND	10	ug/L	SW846 8270C
2-Chloronaphthalene	ND	10	ug/L	SW846 8270C
Dimethyl phthalate	ND	10	ug/L	SW846 8270C
Acenaphthene	ND	10	ug/L	SW846 8270C
3-Nitroaniline	ND	50	ug/L	SW846 8270C
2,4-Dinitrophenol	ND	50	ug/L	SW846 8270C
4-Nitrophenol	ND	50	ug/L	SW846 8270C

(Continued on next page)

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: D9F170193 **Work Order #...:** CX3G2101 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Dibenzofuran	ND	10	ug/L	SW846 8270C
2,4-Dinitrotoluene	ND	10	ug/L	SW846 8270C
2,6-Dinitrotoluene	ND	10	ug/L	SW846 8270C
Diethyl phthalate	ND	10	ug/L	SW846 8270C
4-Chlorophenyl phenyl ether	ND	10	ug/L	SW846 8270C
Fluorene	ND	10	ug/L	SW846 8270C
4-Nitroaniline	ND	50	ug/L	SW846 8270C
4,6-Dinitro-2-methylphenol	ND	50	ug/L	SW846 8270C
N-Nitrosodiphenylamine	ND	10	ug/L	SW846 8270C
4-Bromophenyl phenyl ether	ND	10	ug/L	SW846 8270C
Hexachlorobenzene	ND	10	ug/L	SW846 8270C
Pentachlorophenol	ND	50	ug/L	SW846 8270C
Phenanthrene	ND	10	ug/L	SW846 8270C
Anthracene	ND	10	ug/L	SW846 8270C
Fluoranthene	ND	10	ug/L	SW846 8270C
Pyrene	ND	10	ug/L	SW846 8270C
Butyl benzyl phthalate	ND	10	ug/L	SW846 8270C
3,3'-Dichlorobenzidine	ND	50	ug/L	SW846 8270C
Benzo(a)anthracene	ND	10	ug/L	SW846 8270C
Chrysene	ND	10	ug/L	SW846 8270C
Di-n-octyl phthalate	ND	10	ug/L	SW846 8270C
Benzo(b)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(k)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(a)pyrene	ND	10	ug/L	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	SW846 8270C
Dibenz(a,h)anthracene	ND	10	ug/L	SW846 8270C
Benzo(ghi)perylene	ND	10	ug/L	SW846 8270C
4-Chloro-3-methylphenol	ND	10	ug/L	SW846 8270C
2-Nitroaniline	ND	50	ug/L	SW846 8270C
Acetophenone	ND	10	ug/L	SW846 8270C
2-Acetylaminofluorene	ND	100	ug/L	SW846 8270C
4-Aminobiphenyl	ND	50	ug/L	SW846 8270C
Aniline	ND	10	ug/L	SW846 8270C
Aramite	ND	20	ug/L	SW846 8270C
Benzyl alcohol	ND	10	ug/L	SW846 8270C
2-sec-Butyl-4,6-dinitro-phenol	ND	20	ug/L	SW846 8270C
2,6-Dichlorophenol	ND	10	ug/L	SW846 8270C
4-Dimethylaminoazobenzene	ND	20	ug/L	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	ND	20	ug/L	SW846 8270C
3,3'-Dimethylbenzidine	ND	20	ug/L	SW846 8270C

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: D9F170193 **Work Order #...:** CX3G2101 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
alpha,alpha-Dimethylphene	ND	50	ug/L	SW846 8270C
1,3-Dinitrobenzene	ND	10	ug/L	SW846 8270C
Diphenylamine	ND	10	ug/L	SW846 8270C
Ethyl methanesulfonate	ND	10	ug/L	SW846 8270C
Hexachlorophene	ND	50	ug/L	SW846 8270C
Hexachloropropene	ND	100	ug/L	SW846 8270C
Isosafrole	ND	20	ug/L	SW846 8270C
Methapyrilene	ND	50	ug/L	SW846 8270C
3-Methylcholanthrene	ND	20	ug/L	SW846 8270C
Methyl methanesulfonate	ND	10	ug/L	SW846 8270C
1,4-Naphthoquinone	ND	50	ug/L	SW846 8270C
1-Naphthylamine	ND	10	ug/L	SW846 8270C
2-Naphthylamine	ND	10	ug/L	SW846 8270C
4-Nitroquinoline-1-oxide	ND	100	ug/L	SW846 8270C
N-Nitrosodi-n-butylamine	ND	10	ug/L	SW846 8270C
N-Nitrosodiethylamine	ND	10	ug/L	SW846 8270C
N-Nitrosodimethylamine	ND	10	ug/L	SW846 8270C
N-Nitrosomethylethylamine	ND	10	ug/L	SW846 8270C
N-Nitrosomorpholine	ND	10	ug/L	SW846 8270C
N-Nitrosopiperidine	ND	10	ug/L	SW846 8270C
N-Nitrosopyrrolidine	ND	10	ug/L	SW846 8270C
5-Nitro-o-toluidine	ND	20	ug/L	SW846 8270C
Pentachlorobenzene	ND	10	ug/L	SW846 8270C
Pentachloroethane	ND	50	ug/L	SW846 8270C
Pentachloronitrobenzene	ND	50	ug/L	SW846 8270C
Phenacetin	ND	20	ug/L	SW846 8270C
4-Phenylenediamine	ND	100	ug/L	SW846 8270C
2-Picoline	ND	20	ug/L	SW846 8270C
Pronamide	ND	20	ug/L	SW846 8270C
Pyridine	ND	20	ug/L	SW846 8270C
Safrole	ND	50	ug/L	SW846 8270C
1,2,4,5-Tetrachlorobenzene	ND	10	ug/L	SW846 8270C
2,3,4,6-Tetrachlorophenol	ND	50	ug/L	SW846 8270C
1,3,5-Trinitrobenzene	ND	50	ug/L	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	74	(46 - 98)
Phenol-d5	69	(45 - 103)
Nitrobenzene-d5	76	(51 - 101)
2-Fluorobiphenyl	74	(49 - 106)
2,4,6-Tribromophenol	81	(54 - 107)
Terphenyl-d14	79	(49 - 117)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: D9F170193 Work Order #...: CX6KL102-LCS Matrix.....: WATER
LCS Lot-Sample#: D9F220000-149 CX6KL103-LCSD
Prep Date.....: 06/22/99 Analysis Date..: 06/30/99
Prep Batch #...: 9173149 Analysis Time..: 08:20
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
4,4'-DDT	**111**	**(68 - 125)**			**SW846 8081A**
	109	**(68 - 125)**	**1.0**	**(0-15)**	**SW846 8081A**
Aldrin	**98**	**(52 - 114)**			**SW846 8081A**
	101	**(52 - 114)**	**3.1**	**(0-21)**	**SW846 8081A**
Dieldrin	**103**	**(62 - 111)**			**SW846 8081A**
	104	**(62 - 111)**	**1.4**	**(0-18)**	**SW846 8081A**
Endrin	**107**	**(69 - 125)**			**SW846 8081A**
	109	**(69 - 125)**	**1.3**	**(0-19)**	**SW846 8081A**
gamma-BHC (Lindane)	**96**	**(65 - 122)**			**SW846 8081A**
	103	**(65 - 122)**	**6.8**	**(0-19)**	**SW846 8081A**
Heptachlor	**104**	**(60 - 124)**			**SW846 8081A**
	99	**(60 - 124)**	**4.8**	**(0-19)**	**SW846 8081A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	97	(51 - 132)
	94	(51 - 132)
Tetrachloro-m-xylene	97	(56 - 107)
	102	(56 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: D9F170193
LCS Lot-Sample#: D9F220000-149
Prep Date.....: 06/22/99
Prep Batch #...: 9173149
Dilution Factor: 1

Work Order #...: CX6KL102-LCS
CX6KL103-LCSD
Analysis Date..: 06/30/99
Analysis Time..: 08:20

Matrix.....: WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
4,4'-DDT	0.500	0.553	ug/L	111		SW846 8081A
	0.500	0.547	ug/L	109	1.0	SW846 8081A
Aldrin	0.500	0.489	ug/L	98		SW846 8081A
	0.500	0.504	ug/L	101	3.1	SW846 8081A
Dieldrin	0.500	0.514	ug/L	103		SW846 8081A
	0.500	0.521	ug/L	104	1.4	SW846 8081A
Endrin	0.500	0.537	ug/L	107		SW846 8081A
	0.500	0.544	ug/L	109	1.3	SW846 8081A
gamma-BHC (Lindane)	0.500	0.481	ug/L	96		SW846 8081A
	0.500	0.515	ug/L	103	6.8	SW846 8081A
Heptachlor	0.500	0.519	ug/L	104		SW846 8081A
	0.500	0.494	ug/L	99	4.8	SW846 8081A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	97	(51 - 132)
	94	(51 - 132)
Tetrachloro-m-xylene	97	(56 - 107)
	102	(56 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: D9F170193 **Work Order #...:** CX6KL101 **Matrix.....:** WATER
MB Lot-Sample #: D9F220000-149

Prep Date.....: 06/22/99 **Analysis Time..:** 07:40
Analysis Date..: 06/30/99 **Prep Batch #...:** 9173149
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Aldrin	ND	0.050	ug/L	SW846 8081A
alpha-BHC	ND	0.050	ug/L	SW846 8081A
beta-BHC	ND	0.050	ug/L	SW846 8081A
delta-BHC	ND	0.050	ug/L	SW846 8081A
gamma-BHC (Lindane)	ND	0.050	ug/L	SW846 8081A
Chlordane (technical)	ND	0.50	ug/L	SW846 8081A
4,4'-DDD	ND	0.050	ug/L	SW846 8081A
4,4'-DDE	ND	0.050	ug/L	SW846 8081A
4,4'-DDT	ND	0.050	ug/L	SW846 8081A
Dieldrin	ND	0.050	ug/L	SW846 8081A
Endrin	ND	0.050	ug/L	SW846 8081A
Endrin aldehyde	ND	0.050	ug/L	SW846 8081A
Endosulfan I	ND	0.050	ug/L	SW846 8081A
Endosulfan II	ND	0.050	ug/L	SW846 8081A
Endosulfan sulfate	ND	0.050	ug/L	SW846 8081A
Heptachlor	ND	0.050	ug/L	SW846 8081A
Heptachlor epoxide	ND	0.050	ug/L	SW846 8081A
Methoxychlor	ND	0.10	ug/L	SW846 8081A
Toxaphene	ND	2.0	ug/L	SW846 8081A
Diallate	ND	1.0	ug/L	SW846 8081A
Isodrin	ND	0.10	ug/L	SW846 8081A
Kepone	ND	1.0	ug/L	SW846 8081A
Chlorobenzilate	ND	0.10	ug/L	SW846 8081A
alpha-Chlordane	ND	0.050	ug/L	SW846 8081A
gamma-Chlordane	ND	0.050	ug/L	SW846 8081A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	95	(51 - 132)
Tetrachloro-m-xylene	94	(56 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: D9F170193 **Work Order #...:** CX6KV102-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D9F220000-151 CX6KV103-LCSD
Prep Date.....: 06/22/99 **Analysis Date..:** 07/19/99
Prep Batch #...: 9173151 **Analysis Time..:** 18:05
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Aroclor 1016	**100**	**(73 - 123)**			**SW846 8082**
	106	**(73 - 123)**	**5.4**	**(0-20)**	**SW846 8082**
Aroclor 1260	**97**	**(77 - 120)**			**SW846 8082**
	105	**(77 - 120)**	**7.7**	**(0-20)**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	75	(52 - 129)
	78	(52 - 129)
Tetrachloro-m-xylene	103	(54 - 113)
	112	(54 - 113)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: D9F170193 **Work Order #...:** CX6KV102-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D9F220000-151 CX6KV103-LCSD
Prep Date.....: 06/22/99 **Analysis Date..:** 07/19/99
Prep Batch #...: 9173151 **Analysis Time..:** 18:05
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Aroclor 1016	**2.00**	**2.01**	**ug/L**	**100**		**SW846 8082**
	2.00	**2.12**	**ug/L**	**106**	**5.4**	**SW846 8082**
Aroclor 1260	**2.00**	**1.94**	**ug/L**	**97**		**SW846 8082**
	2.00	**2.10**	**ug/L**	**105**	**7.7**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	75	(52 - 129)
	78	(52 - 129)
Tetrachloro-m-xylene	103	(54 - 113)
	112	(54 - 113)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: D9F170193 **Work Order #...:** CX6KV101 **Matrix.....:** WATER
MB Lot-Sample #: D9F220000-151

Prep Date.....: 06/22/99 **Analysis Time..:** 17:37
Analysis Date..: 07/19/99 **Prep Batch #...:** 9173151
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Aroclor 1016	ND	1.0	ug/L	SW846 8082
Aroclor 1221	ND	1.0	ug/L	SW846 8082
Aroclor 1232	ND	1.0	ug/L	SW846 8082
Aroclor 1242	ND	1.0	ug/L	SW846 8082
Aroclor 1248	ND	1.0	ug/L	SW846 8082
Aroclor 1254	ND	1.0	ug/L	SW846 8082
Aroclor 1260	ND	1.0	ug/L	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	103	(52 - 129)
Tetrachloro-m-xylene	107	(54 - 113)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: D9F170193 Work Order #...: CX6L9102-LCS Matrix.....: WATER
LCS Lot-Sample#: D9F220000-154 CX6L9103-LCSD
Prep Date.....: 06/22/99 Analysis Date..: 07/13/99
Prep Batch #...: 9173154 Analysis Time..: 20:56
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Diazinon	**87**	**(68 - 126)**			**SW846 8140**
	91	**(68 - 126)**	**4.7**	**(0-15)**	**SW846 8140**
Ethyl parathion	**90**	**(75 - 131)**			**SW846 8140**
	91	**(75 - 131)**	**1.0**	**(0-15)**	**SW846 8140**
Malathion	**94**	**(69 - 129)**			**SW846 8140**
	91	**(69 - 129)**	**3.3**	**(0-15)**	**SW846 8140**
Methyl parathion	**91**	**(73 - 121)**			**SW846 8140**
	91	**(73 - 121)**	**0.19**	**(0-15)**	**SW846 8140**
Phorate	**87**	**(68 - 115)**			**SW846 8140**
	89	**(68 - 115)**	**3.1**	**(0-15)**	**SW846 8140**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Ethyl Pirimifos	117	(60 - 123)
	300 *	(60 - 123)
Chlormefos	382 *	(59 - 110)
	369 *	(59 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

* Surrogate recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: D9F170193 **Work Order #...:** CX6L9102-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D9F220000-154 CX6L9103-LCSD
Prep Date.....: 06/22/99 **Analysis Date..:** 07/13/99
Prep Batch #...: 9173154 **Analysis Time..:** 20:56
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Diazinon	**5.00**	**4.33**	**ug/L**	**87**		**SW846 8140**
	5.00	**4.54**	**ug/L**	**91**	**4.7**	**SW846 8140**
Ethyl parathion	**5.00**	**4.50**	**ug/L**	**90**		**SW846 8140**
	5.00	**4.55**	**ug/L**	**91**	**1.0**	**SW846 8140**
Malathion	**5.00**	**4.69**	**ug/L**	**94**		**SW846 8140**
	5.00	**4.54**	**ug/L**	**91**	**3.3**	**SW846 8140**
Methyl parathion	**5.00**	**4.56**	**ug/L**	**91**		**SW846 8140**
	5.00	**4.55**	**ug/L**	**91**	**0.19**	**SW846 8140**
Phorate	**5.00**	**4.34**	**ug/L**	**87**		**SW846 8140**
	5.00	**4.47**	**ug/L**	**89**	**3.1**	**SW846 8140**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Ethyl Pirimifos	117	(60 - 123)
	300 *	(60 - 123)
Chlormefos	382 *	(59 - 110)
	369 *	(59 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

* Surrogate recovery is outside stated control limits.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: D9F170193 **Work Order #...:** CX6L9101 **Matrix.....:** WATER
MB Lot-Sample #: D9F220000-154
Prep Date.....: 06/22/99 **Analysis Time..:** 20:23
Analysis Date..: 07/13/99 **Prep Batch #...:** 9173154
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Azinphos-methyl	ND	2.5	ug/L	SW846 8140
Bolstar	ND	0.50	ug/L	SW846 8140
Chlorpyrifos	ND	0.50	ug/L	SW846 8140
Coumaphos	ND	0.50	ug/L	SW846 8140
Demeton (total)	ND	0.50	ug/L	SW846 8140
Diazinon	ND	0.50	ug/L	SW846 8140
Dichlorvos	ND	0.50	ug/L	SW846 8140
Thionazin	ND	0.50	ug/L	SW846 8140
Dimethoate	ND	0.50	ug/L	SW846 8140
Disulfoton	ND	0.50	ug/L	SW846 8140
Ethoprop	ND	0.50	ug/L	SW846 8140
Famphur	ND	1.0	ug/L	SW846 8140
Fensulfothion	ND	2.5	ug/L	SW846 8140
Fenthion	ND	0.50	ug/L	SW846 8140
Malathion	ND	1.2	ug/L	SW846 8140
Merphos	ND	0.50	ug/L	SW846 8140
Methyl parathion	ND	0.50	ug/L	SW846 8140
Mevinphos	ND	6.2	ug/L	SW846 8140
Naled	ND	10	ug/L	SW846 8140
Ethyl parathion	ND	0.50	ug/L	SW846 8140
Phorate	ND	0.50	ug/L	SW846 8140
Ronnel	ND	0.50	ug/L	SW846 8140
Sulfotepp	ND	0.50	ug/L	SW846 8140
Tokuthion	ND	0.50	ug/L	SW846 8140
Trichloronate	ND	0.50	ug/L	SW846 8140
O,O,O-Triethylphosphorothioate	ND	0.50	ug/L	SW846 8140

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Ethyl Pirimifos	85	(60 - 123)
Chlormefos	109	(59 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: D9F170193 Work Order #...: CX6KC102-LCS Matrix.....: WATER
LCS Lot-Sample#: D9F220000-146 CX6KC103-LCSD
Prep Date.....: 06/22/99 Analysis Date..: 07/13/99
Prep Batch #...: 9173146 Analysis Time..: 06:55
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
2,4-D	**57**	**(18 - 92)**			**SW846 8151A**
	54	**(18 - 92)**	**4.4**	**(0-27)**	**SW846 8151A**
2,4,5-TP (Silvex)	**63**	**(37 - 82)**			**SW846 8151A**
	62	**(37 - 82)**	**1.2**	**(0-31)**	**SW846 8151A**
2,4,5-T	**49**	**(28 - 84)**			**SW846 8151A**
	49	**(28 - 84)**	**0.10**	**(0-29)**	**SW846 8151A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
DCAA	76	(15 - 96)
	72	(15 - 96)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: D9F170193 Work Order #...: CX6KC102-LCS Matrix.....: WATER
LCS Lot-Sample#: D9F220000-146 CX6KC103-LCSD
Prep Date.....: 06/22/99 Analysis Date..: 07/13/99
Prep Batch #...: 9173146 Analysis Time..: 06:55
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
2,4-D	16.0	9.10	ug/L	57		SW846 8151A
	16.0	8.70	ug/L	54	4.4	SW846 8151A
2,4,5-TP (Silvex)	4.00	2.50	ug/L	63		SW846 8151A
	4.00	2.47	ug/L	62	1.2	SW846 8151A
2,4,5-T	4.00	1.98	ug/L	49		SW846 8151A
	4.00	1.98	ug/L	49	0.10	SW846 8151A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
DCAA	76	(15 - 96)
	72	(15 - 96)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: D9F170193 **Work Order #...:** CX6KC101 **Matrix.....:** WATER
MB Lot-Sample #: D9F220000-146

Prep Date.....: 06/22/99 **Analysis Time..:** 06:20
Analysis Date..: 07/13/99 **Prep Batch #...:** 9173146
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
2,4-D	ND	4.0	ug/L	SW846 8151A
2,4-DB	ND	4.0	ug/L	SW846 8151A
2,4,5-TP (Silvex)	ND	1.0	ug/L	SW846 8151A
2,4,5-T	ND	1.0	ug/L	SW846 8151A
Dalapon	ND	2.0	ug/L	SW846 8151A
Dicamba	ND	2.0	ug/L	SW846 8151A
Dichlorprop	ND	4.0	ug/L	SW846 8151A
Dinoseb	ND	0.60	ug/L	SW846 8151A
MCPA	ND	400	ug/L	SW846 8151A
MCPP	ND	400	ug/L	SW846 8151A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
DCAA	71	(15 - 96)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Lot-Sample #...: D9F170193 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP-BATCH #
Aluminum	97	(81 - 117)			SW846 6010B	06/19-06/23/99	9169315
	98	(81 - 117)	0.77	(0-10)	SW846 6010B	06/19-06/23/99	9169315
		Dilution Factor: 1					
Antimony	91	(84 - 115)			SW846 6010B	06/19-06/23/99	9169315
	91	(84 - 115)	0.31	(0-10)	SW846 6010B	06/19-06/23/99	9169315
		Dilution Factor: 1					
Arsenic	95	(81 - 113)			SW846 6010B	06/19-06/23/99	9169315
	96	(81 - 113)	0.18	(0-10)	SW846 6010B	06/19-06/23/99	9169315
		Dilution Factor: 1					
Barium	98	(81 - 114)			SW846 6010B	06/19-06/23/99	9169315
	98	(81 - 114)	0.22	(0-10)	SW846 6010B	06/19-06/23/99	9169315
		Dilution Factor: 1					
Beryllium	103	(78 - 117)			SW846 6010B	06/19-06/23/99	9169315
	104	(78 - 117)	0.42	(0-10)	SW846 6010B	06/19-06/23/99	9169315
		Dilution Factor: 1					
Cadmium	100	(90 - 121)			SW846 6010B	06/19-06/23/99	9169315
	100	(90 - 121)	0.33	(0-17)	SW846 6010B	06/19-06/23/99	9169315
		Dilution Factor: 1					
Calcium	98	(83 - 112)			SW846 6010B	06/19-06/23/99	9169315
	98	(83 - 112)	0.01	(0-10)	SW846 6010B	06/19-06/23/99	9169315
		Dilution Factor: 1					
Chromium	98	(78 - 112)			SW846 6010B	06/19-06/23/99	9169315
	98	(78 - 112)	0.42	(0-10)	SW846 6010B	06/19-06/23/99	9169315
		Dilution Factor: 1					
Cobalt	95	(75 - 120)			SW846 6010B	06/19-06/23/99	9169315
	96	(75 - 120)	0.26	(0-10)	SW846 6010B	06/19-06/23/99	9169315
		Dilution Factor: 1					
Copper	97	(79 - 115)			SW846 6010B	06/19-06/23/99	9169315
	98	(79 - 115)	0.39	(0-10)	SW846 6010B	06/19-06/23/99	9169315
		Dilution Factor: 1					

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Lot-Sample #...: D9F170193 Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP-BATCH #
Iron	102	(82 - 117)			SW846 6010B	06/19-06/21/99	9169315
	102	(82 - 117)	0.18	(0-10)	SW846 6010B	06/19-06/21/99	9169315
		Dilution Factor: 1					
Lead	98	(86 - 117)			SW846 6010B	06/19-06/23/99	9169315
	99	(86 - 117)	0.41	(0-15)	SW846 6010B	06/19-06/23/99	9169315
		Dilution Factor: 1					
Magnesium	102	(79 - 114)			SW846 6010B	06/19-06/23/99	9169315
	103	(79 - 114)	0.38	(0-10)	SW846 6010B	06/19-06/23/99	9169315
		Dilution Factor: 1					
Manganese	99	(79 - 113)			SW846 6010B	06/19-06/23/99	9169315
	99	(79 - 113)	0.30	(0-10)	SW846 6010B	06/19-06/23/99	9169315
		Dilution Factor: 1					
Nickel	99	(80 - 112)			SW846 6010B	06/19-06/23/99	9169315
	99	(80 - 112)	0.21	(0-10)	SW846 6010B	06/19-06/23/99	9169315
		Dilution Factor: 1					
Potassium	102	(77 - 111)			SW846 6010B	06/19-06/21/99	9169315
	102	(77 - 111)	0.63	(0-10)	SW846 6010B	06/19-06/21/99	9169315
		Dilution Factor: 1					
Selenium	93	(76 - 114)			SW846 6010B	06/19-06/23/99	9169315
	94	(76 - 114)	0.45	(0-10)	SW846 6010B	06/19-06/23/99	9169315
		Dilution Factor: 1					
Silver	98	(78 - 115)			SW846 6010B	06/19-06/23/99	9169315
	98	(78 - 115)	0.04	(0-10)	SW846 6010B	06/19-06/23/99	9169315
		Dilution Factor: 1					
Sodium	104	(81 - 115)			SW846 6010B	06/19-06/21/99	9169315
	105	(81 - 115)	0.53	(0-10)	SW846 6010B	06/19-06/21/99	9169315
		Dilution Factor: 1					
Tin	96	(81 - 114)			SW846 6010B	06/19-06/23/99	9169315
	96	(81 - 114)	0.09	(0-10)	SW846 6010B	06/19-06/23/99	9169315
		Dilution Factor: 1					

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Lot-Sample #...: D9F170193 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP-BATCH #
Vanadium	98	(80 - 114)			SW846 6010B	06/19-06/23/99	9169315
	98	(80 - 114)	0.16	(0-10)	SW846 6010B	06/19-06/23/99	9169315
		Dilution Factor: 1					
Zinc	102	(77 - 113)			SW846 6010B	06/19-06/23/99	9169315
	96	(77 - 113)	6.0	(0-10)	SW846 6010B	06/19-06/23/99	9169315
		Dilution Factor: 1					
Mercury	101	(77 - 117)			SW846 7470A	06/21-06/22/99	9172227
	101	(77 - 117)	0.0	(0-10)	SW846 7470A	06/21-06/22/99	9172227
		Dilution Factor: 1					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Lot-Sample #...: D9F170193 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Aluminum	2000	1940	ug/L	97		SW846 6010B	06/19-06/23/99	9169315
	2000	1950	ug/L	98	0.77	SW846 6010B	06/19-06/23/99	9169315
			Dilution Factor: 1					
Antimony	500	453	ug/L	91		SW846 6010B	06/19-06/23/99	9169315
	500	454	ug/L	91	0.31	SW846 6010B	06/19-06/23/99	9169315
			Dilution Factor: 1					
Arsenic	2000	1910	ug/L	95		SW846 6010B	06/19-06/23/99	9169315
	2000	1910	ug/L	96	0.18	SW846 6010B	06/19-06/23/99	9169315
			Dilution Factor: 1					
Barium	2000	1960	ug/L	98		SW846 6010B	06/19-06/23/99	9169315
	2000	1970	ug/L	98	0.22	SW846 6010B	06/19-06/23/99	9169315
			Dilution Factor: 1					
Beryllium	50.0	51.6	ug/L	103		SW846 6010B	06/19-06/23/99	9169315
	50.0	51.8	ug/L	104	0.42	SW846 6010B	06/19-06/23/99	9169315
			Dilution Factor: 1					
Cadmium	50.0	50.0	ug/L	100		SW846 6010B	06/19-06/23/99	9169315
	50.0	50.2	ug/L	100	0.33	SW846 6010B	06/19-06/23/99	9169315
			Dilution Factor: 1					
Calcium	50000	49200	ug/L	98		SW846 6010B	06/19-06/23/99	9169315
	50000	49200	ug/L	98	0.01	SW846 6010B	06/19-06/23/99	9169315
			Dilution Factor: 1					
Chromium	200	196	ug/L	98		SW846 6010B	06/19-06/23/99	9169315
	200	197	ug/L	98	0.42	SW846 6010B	06/19-06/23/99	9169315
			Dilution Factor: 1					
Cobalt	500	477	ug/L	95		SW846 6010B	06/19-06/23/99	9169315
	500	479	ug/L	96	0.26	SW846 6010B	06/19-06/23/99	9169315
			Dilution Factor: 1					
Copper	250	243	ug/L	97		SW846 6010B	06/19-06/23/99	9169315
	250	244	ug/L	98	0.39	SW846 6010B	06/19-06/23/99	9169315
			Dilution Factor: 1					

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Lot-Sample #...: D9F170193 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Iron	1000	1020	ug/L	102		SW846 6010B	06/19-06/21/99	9169315
	1000	1020	ug/L	102	0.18	SW846 6010B	06/19-06/21/99	9169315
			Dilution Factor: 1					
Lead	500	492	ug/L	98		SW846 6010B	06/19-06/23/99	9169315
	500	494	ug/L	99	0.41	SW846 6010B	06/19-06/23/99	9169315
			Dilution Factor: 1					
Magnesium	50000	51100	ug/L	102		SW846 6010B	06/19-06/23/99	9169315
	50000	51300	ug/L	103	0.38	SW846 6010B	06/19-06/23/99	9169315
			Dilution Factor: 1					
Manganese	500	495	ug/L	99		SW846 6010B	06/19-06/23/99	9169315
	500	497	ug/L	99	0.30	SW846 6010B	06/19-06/23/99	9169315
			Dilution Factor: 1					
Nickel	500	493	ug/L	99		SW846 6010B	06/19-06/23/99	9169315
	500	494	ug/L	99	0.21	SW846 6010B	06/19-06/23/99	9169315
			Dilution Factor: 1					
Potassium	50000	51100	ug/L	102		SW846 6010B	06/19-06/21/99	9169315
	50000	50800	ug/L	102	0.63	SW846 6010B	06/19-06/21/99	9169315
			Dilution Factor: 1					
Selenium	2000	1870	ug/L	93		SW846 6010B	06/19-06/23/99	9169315
	2000	1880	ug/L	94	0.45	SW846 6010B	06/19-06/23/99	9169315
			Dilution Factor: 1					
Silver	50.0	49.2	ug/L	98		SW846 6010B	06/19-06/23/99	9169315
	50.0	49.2	ug/L	98	0.04	SW846 6010B	06/19-06/23/99	9169315
			Dilution Factor: 1					
Sodium	50000	52000	ug/L	104		SW846 6010B	06/19-06/21/99	9169315
	50000	52300	ug/L	105	0.53	SW846 6010B	06/19-06/21/99	9169315
			Dilution Factor: 1					
Tin	2000	1920	ug/L	96		SW846 6010B	06/19-06/23/99	9169315
	2000	1910	ug/L	96	0.09	SW846 6010B	06/19-06/23/99	9169315
			Dilution Factor: 1					

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Lot-Sample #...: D9F170193 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Vanadium	500	492	ug/L	98		SW846 6010B	06/19-06/23/99	9169315
	500	493	ug/L	98	0.16	SW846 6010B	06/19-06/23/99	9169315
			Dilution Factor: 1					
Zinc	500	511	ug/L	102		SW846 6010B	06/19-06/23/99	9169315
	500	481	ug/L	96	6.0	SW846 6010B	06/19-06/23/99	9169315
			Dilution Factor: 1					
Mercury	5.00	5.04	ug/L	101		SW846 7470A	06/21-06/22/99	9172227
	5.00	5.04	ug/L	101	0.0	SW846 7470A	06/21-06/22/99	9172227
			Dilution Factor: 1					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: D9F170193 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: D9F180000-315 **Prep Batch #...:** 9169315						
Antimony	ND	5.0	ug/L	SW846 6010B	06/19-06/23/99	CX3M0108
		Dilution Factor: 1				
		Analysis Time..: 10:01				
Arsenic	ND	10.0	ug/L	SW846 6010B	06/19-06/23/99	CX3M0109
		Dilution Factor: 1				
		Analysis Time..: 10:01				
Cadmium	ND	5.0	ug/L	SW846 6010B	06/19-06/23/99	CX3M010A
		Dilution Factor: 1				
		Analysis Time..: 10:01				
Lead	ND	3.0	ug/L	SW846 6010B	06/19-06/23/99	CX3M010C
		Dilution Factor: 1				
		Analysis Time..: 10:01				
Selenium	ND	5.0	ug/L	SW846 6010B	06/19-06/23/99	CX3M010D
		Dilution Factor: 1				
		Analysis Time..: 10:01				
Silver	ND	10.0	ug/L	SW846 6010B	06/19-06/23/99	CX3M0101
		Dilution Factor: 1				
		Analysis Time..: 10:01				
Aluminum	**24.2 B**	**100**	**ug/L**	**SW846 6010B**	**06/19-06/23/99**	**CX3M0102**
		Dilution Factor: 1				
		Analysis Time..: 10:01				
Barium	**3.7 B**	**10.0**	**ug/L**	**SW846 6010B**	**06/19-06/23/99**	**CX3M010E**
		Dilution Factor: 1				
		Analysis Time..: 10:01				
Beryllium	ND	5.0	ug/L	SW846 6010B	06/19-06/23/99	CX3M010F
		Dilution Factor: 1				
		Analysis Time..: 10:01				
Calcium	ND	200	ug/L	SW846 6010B	06/19-06/23/99	CX3M010G
		Dilution Factor: 1				
		Analysis Time..: 10:01				
Cobalt	ND	10.0	ug/L	SW846 6010B	06/19-06/23/99	CX3M010H
		Dilution Factor: 1				
		Analysis Time..: 10:01				

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METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: D9F170193 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Chromium	ND	10.0	ug/L	SW846 6010B	06/19-06/23/99	CX3M010J
		Dilution Factor: 1				
		Analysis Time..: 10:01				
Copper	ND	10.0	ug/L	SW846 6010B	06/19-06/23/99	CX3M010K
		Dilution Factor: 1				
		Analysis Time..: 10:01				
Iron	ND	100	ug/L	SW846 6010B	06/19-06/21/99	CX3M010L
		Dilution Factor: 1				
		Analysis Time..: 12:53				
Potassium	ND	3000	ug/L	SW846 6010B	06/19-06/21/99	CX3M010M
		Dilution Factor: 1				
		Analysis Time..: 12:53				
Magnesium	ND	200	ug/L	SW846 6010B	06/19-06/21/99	CX3M010N
		Dilution Factor: 1				
		Analysis Time..: 10:01				
Manganese	ND	10.0	ug/L	SW846 6010B	06/19-06/23/99	CX3M010P
		Dilution Factor: 1				
		Analysis Time..: 10:01				
Sodium	**722 B**	**5000**	**ug/L**	**SW846 6010B**	**06/19-06/21/99**	**CX3M0103**
		Dilution Factor: 1				
		Analysis Time..: 12:53				
Nickel	ND	40.0	ug/L	SW846 6010B	06/19-06/23/99	CX3M0104
		Dilution Factor: 1				
		Analysis Time..: 10:01				
Tin	ND	100	ug/L	SW846 6010B	06/19-06/23/99	CX3M0105
		Dilution Factor: 1				
		Analysis Time..: 10:01				
Vanadium	ND	10.0	ug/L	SW846 6010B	06/19-06/23/99	CX3M0106
		Dilution Factor: 1				
		Analysis Time..: 10:01				
Zinc	ND	20.0	ug/L	SW846 6010B	06/19-06/23/99	CX3M0107
		Dilution Factor: 1				
		Analysis Time..: 10:01				

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METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: D9F170193 Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: D9F210000-227 **Prep Batch #...:** 9172227						
Mercury	ND	0.20	ug/L	SW846 7470A	06/21-06/22/99	CX5H0101
		Dilution Factor: 1				
		Analysis Time..: 15:52				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: D9F170193 **Matrix.....:** WATER
Date Sampled...: 06/15/99 13:00 **Date Received..:** 06/16/99

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: D9F170193-001 **Prep Batch #...:** 9169315							
Antimony	87	(84 - 115)			SW846 6010B	06/19-06/23/99	CX1KE135
	86	(84 - 115)	1.3	(0-10)	SW846 6010B	06/19-06/23/99	CX1KE136
		Dilution Factor: 1					
		Analysis Time..: 11:51					
Arsenic	92	(81 - 113)			SW846 6010B	06/19-06/23/99	CX1KE137
	91	(81 - 113)	1.2	(0-10)	SW846 6010B	06/19-06/23/99	CX1KE138
		Dilution Factor: 1					
		Analysis Time..: 11:51					
Cadmium	94	(90 - 121)			SW846 6010B	06/19-06/23/99	CX1KE139
	93	(90 - 121)	1.1	(0-17)	SW846 6010B	06/19-06/23/99	CX1KE13A
		Dilution Factor: 1					
		Analysis Time..: 11:51					
Lead	92	(86 - 117)			SW846 6010B	06/19-06/23/99	CX1KE13C
	92	(86 - 117)	0.93	(0-15)	SW846 6010B	06/19-06/23/99	CX1KE13D
		Dilution Factor: 1					
		Analysis Time..: 11:51					
Selenium	89	(76 - 114)			SW846 6010B	06/19-06/23/99	CX1KE13E
	88	(76 - 114)	1.1	(0-10)	SW846 6010B	06/19-06/23/99	CX1KE13F
		Dilution Factor: 1					
		Analysis Time..: 11:51					
Silver	94	(78 - 115)			SW846 6010B	06/19-06/23/99	CX1KE12N
	94	(78 - 115)	0.61	(0-10)	SW846 6010B	06/19-06/23/99	CX1KE12P
		Dilution Factor: 1					
		Analysis Time..: 11:51					
Aluminum	93	(81 - 117)			SW846 6010B	06/19-06/23/99	CX1KE12Q
	92	(81 - 117)	1.2	(0-10)	SW846 6010B	06/19-06/23/99	CX1KE12R
		Dilution Factor: 1					
		Analysis Time..: 11:51					
Barium	92	(81 - 114)			SW846 6010B	06/19-06/23/99	CX1KE13G
	91	(81 - 114)	0.96	(0-10)	SW846 6010B	06/19-06/23/99	CX1KE13H
		Dilution Factor: 1					
		Analysis Time..: 11:51					
Beryllium	97	(78 - 117)			SW846 6010B	06/19-06/23/99	CX1KE13J
	96	(78 - 117)	0.82	(0-10)	SW846 6010B	06/19-06/23/99	CX1KE13K
		Dilution Factor: 1					
		Analysis Time..: 11:51					

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MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: D9F170193 **Matrix.....:** WATER
Date Sampled...: 06/15/99 13:00 **Date Received..:** 06/16/99

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Calcium	96	(83 - 112)			SW846 6010B	06/19-06/23/99	CX1KE13L
	94	(83 - 112)	0.99	(0-10)	SW846 6010B	06/19-06/23/99	CX1KE13M
		Dilution Factor: 1					
		Analysis Time..: 11:51					
Cobalt	90	(75 - 120)			SW846 6010B	06/19-06/23/99	CX1KE13N
	89	(75 - 120)	1.2	(0-10)	SW846 6010B	06/19-06/23/99	CX1KE13P
		Dilution Factor: 1					
		Analysis Time..: 11:51					
Chromium	103	(78 - 112)			SW846 6010B	06/19-06/23/99	CX1KE13Q
	99	(78 - 112)	3.6	(0-10)	SW846 6010B	06/19-06/23/99	CX1KE13R
		Dilution Factor: 1					
		Analysis Time..: 11:51					
Copper	94	(79 - 115)			SW846 6010B	06/19-06/23/99	CX1KE13T
	94	(79 - 115)	0.55	(0-10)	SW846 6010B	06/19-06/23/99	CX1KE13U
		Dilution Factor: 1					
		Analysis Time..: 11:51					
Iron	106	(82 - 117)			SW846 6010B	06/19-06/21/99	CX1KE13V
	105	(82 - 117)	0.42	(0-10)	SW846 6010B	06/19-06/21/99	CX1KE13W
		Dilution Factor: 1					
		Analysis Time..: 13:16					
Potassium	104	(77 - 111)			SW846 6010B	06/19-06/21/99	CX1KE13X
	104	(77 - 111)	0.54	(0-10)	SW846 6010B	06/19-06/21/99	CX1KE140
		Dilution Factor: 1					
		Analysis Time..: 13:16					
Magnesium	101	(79 - 114)			SW846 6010B	06/19-06/23/99	CX1KE141
	99	(79 - 114)	1.2	(0-10)	SW846 6010B	06/19-06/23/99	CX1KE142
		Dilution Factor: 1					
		Analysis Time..: 11:51					
Manganese	94	(79 - 113)			SW846 6010B	06/19-06/23/99	CX1KE143
	93	(79 - 113)	1.0	(0-10)	SW846 6010B	06/19-06/23/99	CX1KE144
		Dilution Factor: 1					
		Analysis Time..: 11:51					
Sodium	105	(81 - 115)			SW846 6010B	06/19-06/21/99	CX1KE12T
	103	(81 - 115)	0.64	(0-10)	SW846 6010B	06/19-06/21/99	CX1KE12U
		Dilution Factor: 1					
		Analysis Time..: 13:16					

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MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: D9F170193 **Matrix.....:** WATER
Date Sampled...: 06/15/99 13:00 **Date Received..:** 06/16/99

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Nickel	93	(80 - 112)			SW846 6010B	06/19-06/23/99	CX1KE12V
	91	(80 - 112)	1.2	(0-10)	SW846 6010B	06/19-06/23/99	CX1KE12W
		Dilution Factor: 1					
		Analysis Time..: 11:51					
Tin	90	(81 - 114)			SW846 6010B	06/19-06/23/99	CX1KE12X
	89	(81 - 114)	0.99	(0-10)	SW846 6010B	06/19-06/23/99	CX1KE130
		Dilution Factor: 1					
		Analysis Time..: 11:51					
Vanadium	94	(80 - 114)			SW846 6010B	06/19-06/23/99	CX1KE131
	93	(80 - 114)	0.97	(0-10)	SW846 6010B	06/19-06/23/99	CX1KE132
		Dilution Factor: 1					
		Analysis Time..: 11:51					
Zinc	90	(77 - 113)			SW846 6010B	06/19-06/23/99	CX1KE133
	89	(77 - 113)	1.2	(0-10)	SW846 6010B	06/19-06/23/99	CX1KE134
		Dilution Factor: 1					
		Analysis Time..: 11:51					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: D9F170193 **Matrix.....:** WATER
Date Sampled...: 06/15/99 13:00 **Date Received..:** 06/16/99

MS Lot-Sample #: D9F170193-001 **Prep Batch #...:** 9169315

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Antimony									
	ND	500	435	ug/L	87		SW846 6010B	06/19-06/23/99	CX1KE135
	ND	500	429	ug/L	86	1.3	SW846 6010B	06/19-06/23/99	CX1KE136
				Dilution Factor: 1					
				Analysis Time..: 11:51					
Arsenic									
	ND	2000	1850	ug/L	92		SW846 6010B	06/19-06/23/99	CX1KE137
	ND	2000	1820	ug/L	91	1.2	SW846 6010B	06/19-06/23/99	CX1KE138
				Dilution Factor: 1					
				Analysis Time..: 11:51					
Cadmium									
	ND	50.0	46.9	ug/L	94		SW846 6010B	06/19-06/23/99	CX1KE139
	ND	50.0	46.4	ug/L	93	1.1	SW846 6010B	06/19-06/23/99	CX1KE13A
				Dilution Factor: 1					
				Analysis Time..: 11:51					
Lead									
	1.0	500	464	ug/L	92		SW846 6010B	06/19-06/23/99	CX1KE13C
	1.0	500	459	ug/L	92	0.93	SW846 6010B	06/19-06/23/99	CX1KE13D
				Dilution Factor: 1					
				Analysis Time..: 11:51					
Selenium									
	7.5	2000	1780	ug/L	89		SW846 6010B	06/19-06/23/99	CX1KE13E
	7.5	2000	1760	ug/L	88	1.1	SW846 6010B	06/19-06/23/99	CX1KE13F
				Dilution Factor: 1					
				Analysis Time..: 11:51					
Silver									
	ND	50.0	47.2	ug/L	94		SW846 6010B	06/19-06/23/99	CX1KE12N
	ND	50.0	46.9	ug/L	94	0.61	SW846 6010B	06/19-06/23/99	CX1KE12P
				Dilution Factor: 1					
				Analysis Time..: 11:51					
Aluminum									
	35.9	2000	1890	ug/L	93		SW846 6010B	06/19-06/23/99	CX1KE12Q
	35.9	2000	1870	ug/L	92	1.2	SW846 6010B	06/19-06/23/99	CX1KE12R
				Dilution Factor: 1					
				Analysis Time..: 11:51					

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MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: D9F170193 **Matrix.....:** WATER
Date Sampled...: 06/15/99 13:00 **Date Received..:** 06/16/99

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Barium									
	48.3	2000	1890	ug/L	92		SW846 6010B	06/19-06/23/99	CX1KE13G
	48.3	2000	1870	ug/L	91	0.96	SW846 6010B	06/19-06/23/99	CX1KE13H
				Dilution Factor: 1					
				Analysis Time..: 11:51					
Beryllium									
	1.2	50.0	49.8	ug/L	97		SW846 6010B	06/19-06/23/99	CX1KE13J
	1.2	50.0	49.4	ug/L	96	0.82	SW846 6010B	06/19-06/23/99	CX1KE13K
				Dilution Factor: 1					
				Analysis Time..: 11:51					
Calcium									
	52400	50000	100000	ug/L	96		SW846 6010B	06/19-06/23/99	CX1KE13L
	52400	50000	99300	ug/L	94	0.99	SW846 6010B	06/19-06/23/99	CX1KE13M
				Dilution Factor: 1					
				Analysis Time..: 11:51					
Cobalt									
	ND	500	450	ug/L	90		SW846 6010B	06/19-06/23/99	CX1KE13N
	ND	500	444	ug/L	89	1.2	SW846 6010B	06/19-06/23/99	CX1KE13P
				Dilution Factor: 1					
				Analysis Time..: 11:51					
Chromium									
	49.7	200	256	ug/L	103		SW846 6010B	06/19-06/23/99	CX1KE13Q
	49.7	200	247	ug/L	99	3.6	SW846 6010B	06/19-06/23/99	CX1KE13R
				Dilution Factor: 1					
				Analysis Time..: 11:51					
Copper									
	1.4	250	237	ug/L	94		SW846 6010B	06/19-06/23/99	CX1KE13T
	1.4	250	235	ug/L	94	0.55	SW846 6010B	06/19-06/23/99	CX1KE13U
				Dilution Factor: 1					
				Analysis Time..: 11:51					
Iron									
	948	1000	2010	ug/L	106		SW846 6010B	06/19-06/21/99	CX1KE13V
	948	1000	2000	ug/L	105	0.42	SW846 6010B	06/19-06/21/99	CX1KE13W
				Dilution Factor: 1					
				Analysis Time..: 13:16					
Potassium									
	8420	50000	60300	ug/L	104		SW846 6010B	06/19-06/21/99	CX1KE13X
	8420	50000	60600	ug/L	104	0.54	SW846 6010B	06/19-06/21/99	CX1KE140
				Dilution Factor: 1					
				Analysis Time..: 13:16					

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MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: D9F170193 **Matrix.....:** WATER
Date Sampled...: 06/15/99 13:00 **Date Received..:** 06/16/99

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium									
	54900	50000	106000	ug/L	101		SW846 6010B	06/19-06/23/99	CX1KE141
	54900	50000	104000	ug/L	99	1.2	SW846 6010B	06/19-06/23/99	CX1KE142
			Dilution Factor: 1						
			Analysis Time..: 11:51						
Manganese									
	52.6	500	521	ug/L	94		SW846 6010B	06/19-06/23/99	CX1KE143
	52.6	500	515	ug/L	93	1.0	SW846 6010B	06/19-06/23/99	CX1KE144
			Dilution Factor: 1						
			Analysis Time..: 11:51						
Sodium									
	43900	50000	96300	ug/L	105		SW846 6010B	06/19-06/21/99	CX1KE12T
	43900	50000	95600	ug/L	103	0.64	SW846 6010B	06/19-06/21/99	CX1KE12U
			Dilution Factor: 1						
			Analysis Time..: 13:16						
Nickel									
	353	500	819	ug/L	93		SW846 6010B	06/19-06/23/99	CX1KE12V
	353	500	809	ug/L	91	1.2	SW846 6010B	06/19-06/23/99	CX1KE12W
			Dilution Factor: 1						
			Analysis Time..: 11:51						
Tin									
	ND	2000	1800	ug/L	90		SW846 6010B	06/19-06/23/99	CX1KE12X
	ND	2000	1780	ug/L	89	0.99	SW846 6010B	06/19-06/23/99	CX1KE130
			Dilution Factor: 1						
			Analysis Time..: 11:51						
Vanadium									
	12.6	500	482	ug/L	94		SW846 6010B	06/19-06/23/99	CX1KE131
	12.6	500	477	ug/L	93	0.97	SW846 6010B	06/19-06/23/99	CX1KE132
			Dilution Factor: 1						
			Analysis Time..: 11:51						
Zinc									
	ND	500	448	ug/L	90		SW846 6010B	06/19-06/23/99	CX1KE133
	ND	500	443	ug/L	89	1.2	SW846 6010B	06/19-06/23/99	CX1KE134
			Dilution Factor: 1						
			Analysis Time..: 11:51						

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: D9F170193 **Matrix.....:** WATER
Date Sampled...: 06/15/99 09:15 **Date Received..:** 06/16/99

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: D9F160227-005 **Prep Batch #...:** 9172227							
Mercury	97	(77 - 117)			SW846 7470A	06/21-06/22/99	CX0JE10Q
	100	(77 - 117)	2.6	(0-10)	SW846 7470A	06/21-06/22/99	CX0JE10R

Dilution Factor: 1
Analysis Time..: 16:05

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: D9F170193 **Matrix.....:** WATER
Date Sampled...: 06/15/99 09:15 **Date Received..:** 06/16/99

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: D9F160227-005 **Prep Batch #...:** 9172227									
Mercury									
	ND	5.00	4.85	ug/L	97		SW846 7470A	06/21-06/22/99	CX0JE10Q
	ND	5.00	4.98	ug/L	100	2.6	SW846 7470A	06/21-06/22/99	CX0JE10R

Dilution Factor: 1
Analysis Time..: 16:05

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

DISSOLVED Metals

Lot-Sample #...: D9F170193 Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP-BATCH #
Mercury	103	(77 - 117)			SW846 7470A	06/21-06/22/99	9172228
	101	(77 - 117)	1.6	(0-10)	SW846 7470A	06/21-06/22/99	9172228
		Dilution Factor: 1					
Aluminum	101	(81 - 117)			SW846 6010B	06/24-06/28/99	9173351
	101	(81 - 117)	0.86	(0-10)	SW846 6010B	06/24-06/28/99	9173351
		Dilution Factor: 1					
Antimony	94	(84 - 115)			SW846 6010B	06/24-06/28/99	9173351
	94	(84 - 115)	0.52	(0-10)	SW846 6010B	06/24-06/28/99	9173351
		Dilution Factor: 1					
Arsenic	99	(81 - 113)			SW846 6010B	06/24-06/28/99	9173351
	99	(81 - 113)	0.01	(0-10)	SW846 6010B	06/24-06/28/99	9173351
		Dilution Factor: 1					
Barium	105	(81 - 114)			SW846 6010B	06/24-06/28/99	9173351
	103	(81 - 114)	1.8	(0-10)	SW846 6010B	06/24-06/28/99	9173351
		Dilution Factor: 1					
Beryllium	107	(78 - 117)			SW846 6010B	06/24-06/28/99	9173351
	106	(78 - 117)	0.56	(0-10)	SW846 6010B	06/24-06/28/99	9173351
		Dilution Factor: 1					
Cadmium	103	(90 - 121)			SW846 6010B	06/24-06/28/99	9173351
	102	(90 - 121)	0.93	(0-10)	SW846 6010B	06/24-06/28/99	9173351
		Dilution Factor: 1					
Calcium	104	(83 - 112)			SW846 6010B	06/24-06/28/99	9173351
	103	(83 - 112)	0.74	(0-10)	SW846 6010B	06/24-06/28/99	9173351
		Dilution Factor: 1					
Chromium	102	(78 - 112)			SW846 6010B	06/24-06/28/99	9173351
	101	(78 - 112)	1.5	(0-10)	SW846 6010B	06/24-06/28/99	9173351
		Dilution Factor: 1					
Cobalt	100	(75 - 120)			SW846 6010B	06/24-06/28/99	9173351
	98	(75 - 120)	1.2	(0-10)	SW846 6010B	06/24-06/28/99	9173351
		Dilution Factor: 1					

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

DISSOLVED Metals

Lot-Sample #...: D9F170193 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP-BATCH #
Copper	104	(79 - 115)			SW846 6010B	06/24-06/28/99	9173351
	102	(79 - 115)	1.8	(0-10)	SW846 6010B	06/24-06/28/99	9173351
		Dilution Factor: 1					
Iron	103	(82 - 117)			SW846 6010B	06/24-06/28/99	9173351
	101	(82 - 117)	1.5	(0-10)	SW846 6010B	06/24-06/28/99	9173351
		Dilution Factor: 1					
Lead	101	(86 - 117)			SW846 6010B	06/24-06/28/99	9173351
	100	(86 - 117)	1.0	(0-10)	SW846 6010B	06/24-06/28/99	9173351
		Dilution Factor: 1					
Magnesium	108	(79 - 114)			SW846 6010B	06/24-06/28/99	9173351
	107	(79 - 114)	0.62	(0-10)	SW846 6010B	06/24-06/28/99	9173351
		Dilution Factor: 1					
Manganese	103	(79 - 113)			SW846 6010B	06/24-06/28/99	9173351
	102	(79 - 113)	1.2	(0-10)	SW846 6010B	06/24-06/28/99	9173351
		Dilution Factor: 1					
Nickel	102	(80 - 112)			SW846 6010B	06/24-06/28/99	9173351
	101	(80 - 112)	1.2	(0-10)	SW846 6010B	06/24-06/28/99	9173351
		Dilution Factor: 1					
Potassium	105	(77 - 111)			SW846 6010B	06/24-06/28/99	9173351
	104	(77 - 111)	1.0	(0-10)	SW846 6010B	06/24-06/28/99	9173351
		Dilution Factor: 1					
Selenium	94	(76 - 114)			SW846 6010B	06/24-06/28/99	9173351
	96	(76 - 114)	1.2	(0-10)	SW846 6010B	06/24-06/28/99	9173351
		Dilution Factor: 1					
Silver	96	(78 - 115)			SW846 6010B	06/24-06/28/99	9173351
	94	(78 - 115)	1.2	(0-10)	SW846 6010B	06/24-06/28/99	9173351
		Dilution Factor: 1					
Sodium	105	(81 - 115)			SW846 6010B	06/24-06/28/99	9173351
	104	(81 - 115)	0.47	(0-10)	SW846 6010B	06/24-06/28/99	9173351
		Dilution Factor: 1					

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

DISSOLVED Metals

Lot-Sample #...: D9F170193 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP-BATCH #
Tin	98	(81 - 114)			SW846 6010B	06/24-06/28/99	9173351
	97	(81 - 114)	1.0	(0-10)	SW846 6010B	06/24-06/28/99	9173351
		Dilution Factor: 1					
Vanadium	103	(80 - 114)			SW846 6010B	06/24-06/28/99	9173351
	101	(80 - 114)	1.4	(0-10)	SW846 6010B	06/24-06/28/99	9173351
		Dilution Factor: 1					
Zinc	99	(77 - 113)			SW846 6010B	06/24-06/28/99	9173351
	98	(77 - 113)	0.87	(0-10)	SW846 6010B	06/24-06/28/99	9173351
		Dilution Factor: 1					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

DISSOLVED Metals

Lot-Sample #...: D9F170193 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Mercury	5.00	5.15	ug/L	103		SW846 7470A	06/21-06/22/99	9172228
	5.00	5.07	ug/L	101	1.6	SW846 7470A	06/21-06/22/99	9172228
			Dilution Factor: 1					
Aluminum	2000	2030	ug/L	101		SW846 6010B	06/24-06/28/99	9173351
	2000	2010	ug/L	101	0.86	SW846 6010B	06/24-06/28/99	9173351
			Dilution Factor: 1					
Antimony	500	470	ug/L	94		SW846 6010B	06/24-06/28/99	9173351
	500	468	ug/L	94	0.52	SW846 6010B	06/24-06/28/99	9173351
			Dilution Factor: 1					
Arsenic	2000	1970	ug/L	99		SW846 6010B	06/24-06/28/99	9173351
	2000	1970	ug/L	99	0.01	SW846 6010B	06/24-06/28/99	9173351
			Dilution Factor: 1					
Barium	2000	2090	ug/L	105		SW846 6010B	06/24-06/28/99	9173351
	2000	2050	ug/L	103	1.8	SW846 6010B	06/24-06/28/99	9173351
			Dilution Factor: 1					
Beryllium	50.0	53.4	ug/L	107		SW846 6010B	06/24-06/28/99	9173351
	50.0	53.1	ug/L	106	0.56	SW846 6010B	06/24-06/28/99	9173351
			Dilution Factor: 1					
Cadmium	50.0	51.7	ug/L	103		SW846 6010B	06/24-06/28/99	9173351
	50.0	51.2	ug/L	102	0.93	SW846 6010B	06/24-06/28/99	9173351
			Dilution Factor: 1					
Calcium	50000	52000	ug/L	104		SW846 6010B	06/24-06/28/99	9173351
	50000	51600	ug/L	103	0.74	SW846 6010B	06/24-06/28/99	9173351
			Dilution Factor: 1					
Chromium	200	205	ug/L	102		SW846 6010B	06/24-06/28/99	9173351
	200	202	ug/L	101	1.5	SW846 6010B	06/24-06/28/99	9173351
			Dilution Factor: 1					
Cobalt	500	498	ug/L	100		SW846 6010B	06/24-06/28/99	9173351
	500	492	ug/L	98	1.2	SW846 6010B	06/24-06/28/99	9173351
			Dilution Factor: 1					

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LABORATORY CONTROL SAMPLE DATA REPORT

DISSOLVED Metals

Lot-Sample #...: D9F170193 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Copper	250	259	ug/L	104		SW846 6010B	06/24-06/28/99	9173351
	250	254	ug/L	102	1.8	SW846 6010B	06/24-06/28/99	9173351
			Dilution Factor: 1					
Iron	1000	1030	ug/L	103		SW846 6010B	06/24-06/28/99	9173351
	1000	1010	ug/L	101	1.5	SW846 6010B	06/24-06/28/99	9173351
			Dilution Factor: 1					
Lead	500	507	ug/L	101		SW846 6010B	06/24-06/28/99	9173351
	500	502	ug/L	100	1.0	SW846 6010B	06/24-06/28/99	9173351
			Dilution Factor: 1					
Magnesium	50000	54000	ug/L	108		SW846 6010B	06/24-06/28/99	9173351
	50000	53700	ug/L	107	0.62	SW846 6010B	06/24-06/28/99	9173351
			Dilution Factor: 1					
Manganese	500	516	ug/L	103		SW846 6010B	06/24-06/28/99	9173351
	500	510	ug/L	102	1.2	SW846 6010B	06/24-06/28/99	9173351
			Dilution Factor: 1					
Nickel	500	512	ug/L	102		SW846 6010B	06/24-06/28/99	9173351
	500	506	ug/L	101	1.2	SW846 6010B	06/24-06/28/99	9173351
			Dilution Factor: 1					
Potassium	50000	52500	ug/L	105		SW846 6010B	06/24-06/28/99	9173351
	50000	51900	ug/L	104	1.0	SW846 6010B	06/24-06/28/99	9173351
			Dilution Factor: 1					
Selenium	2000	1890	ug/L	94		SW846 6010B	06/24-06/28/99	9173351
	2000	1910	ug/L	96	1.2	SW846 6010B	06/24-06/28/99	9173351
			Dilution Factor: 1					
Silver	50.0	47.8	ug/L	96		SW846 6010B	06/24-06/28/99	9173351
	50.0	47.2	ug/L	94	1.2	SW846 6010B	06/24-06/28/99	9173351
			Dilution Factor: 1					
Sodium	50000	52400	ug/L	105		SW846 6010B	06/24-06/28/99	9173351
	50000	52100	ug/L	104	0.47	SW846 6010B	06/24-06/28/99	9173351
			Dilution Factor: 1					

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LABORATORY CONTROL SAMPLE DATA REPORT

DISSOLVED Metals

Lot-Sample #...: D9F170193 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Tin	2000	1960	ug/L	98		SW846 6010B	06/24-06/28/99	9173351
	2000	1940	ug/L	97	1.0	SW846 6010B	06/24-06/28/99	9173351
			Dilution Factor: 1					
Vanadium	500	513	ug/L	103		SW846 6010B	06/24-06/28/99	9173351
	500	506	ug/L	101	1.4	SW846 6010B	06/24-06/28/99	9173351
			Dilution Factor: 1					
Zinc	500	496	ug/L	99		SW846 6010B	06/24-06/28/99	9173351
	500	492	ug/L	98	0.87	SW846 6010B	06/24-06/28/99	9173351
			Dilution Factor: 1					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

DISSOLVED Metals

Client Lot #...: D9F170193 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: D9F210000-228 **Prep Batch #...:** 9172228						
Mercury	ND	0.20	ug/L	SW846 7470A	06/21-06/22/99	CX5HA101
		Dilution Factor: 1				
		Analysis Time..: 15:15				
MB Lot-Sample #: D9F220000-351 **Prep Batch #...:** 9173351						
Arsenic	**3.6 B**	**10.0**	**ug/L**	**SW846 6010B**	**06/24-06/28/99**	**CX7ER10K**
		Dilution Factor: 1				
		Analysis Time..: 12:39				
Silver	ND	10.0	ug/L	SW846 6010B	06/24-06/28/99	CX7ER101
		Dilution Factor: 1				
		Analysis Time..: 12:39				
Aluminum	**43.5 B**	**100**	**ug/L**	**SW846 6010B**	**06/24-06/28/99**	**CX7ER102**
		Dilution Factor: 1				
		Analysis Time..: 12:39				
Cadmium	ND	5.0	ug/L	SW846 6010B	06/24-06/28/99	CX7ER10L
		Dilution Factor: 1				
		Analysis Time..: 12:39				
Barium	ND	10.0	ug/L	SW846 6010B	06/24-06/28/99	CX7ER103
		Dilution Factor: 1				
		Analysis Time..: 12:39				
Lead	ND	3.0	ug/L	SW846 6010B	06/24-06/28/99	CX7ER10M
		Dilution Factor: 1				
		Analysis Time..: 12:39				
Antimony	ND	5.0	ug/L	SW846 6010B	06/24-06/28/99	CX7ER10N
		Dilution Factor: 1				
		Analysis Time..: 12:39				
Beryllium	ND	5.0	ug/L	SW846 6010B	06/24-06/28/99	CX7ER104
		Dilution Factor: 1				
		Analysis Time..: 12:39				
Selenium	ND	5.0	ug/L	SW846 6010B	06/24-06/28/99	CX7ER10P
		Dilution Factor: 1				
		Analysis Time..: 12:39				

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METHOD BLANK REPORT

DISSOLVED Metals

Client Lot #...: D9F170193 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Calcium	ND	200	ug/L	SW846 6010B	06/24-06/28/99	CX7ER105
		Dilution Factor: 1				
		Analysis Time..: 12:39				
Cobalt	ND	10.0	ug/L	SW846 6010B	06/24-06/28/99	CX7ER106
		Dilution Factor: 1				
		Analysis Time..: 12:39				
Chromium	ND	10.0	ug/L	SW846 6010B	06/24-06/28/99	CX7ER107
		Dilution Factor: 1				
		Analysis Time..: 12:39				
Copper	ND	10.0	ug/L	SW846 6010B	06/24-06/28/99	CX7ER108
		Dilution Factor: 1				
		Analysis Time..: 12:39				
Iron	**15.5 B**	**100**	**ug/L**	**SW846 6010B**	**06/24-06/28/99**	**CX7ER109**
		Dilution Factor: 1				
		Analysis Time..: 12:38				
Potassium	ND	3000	ug/L	SW846 6010B	06/24-06/28/99	CX7ER10A
		Dilution Factor: 1				
		Analysis Time..: 12:38				
Magnesium	ND	200	ug/L	SW846 6010B	06/24-06/28/99	CX7ER10C
		Dilution Factor: 1				
		Analysis Time..: 12:39				
Manganese	ND	10.0	ug/L	SW846 6010B	06/24-06/28/99	CX7ER10D
		Dilution Factor: 1				
		Analysis Time..: 12:39				
Sodium	ND	5000	ug/L	SW846 6010B	06/24-06/28/99	CX7ER10E
		Dilution Factor: 1				
		Analysis Time..: 12:38				
Nickel	ND	40.0	ug/L	SW846 6010B	06/24-06/28/99	CX7ER10F
		Dilution Factor: 1				
		Analysis Time..: 12:39				
Tin	ND	100	ug/L	SW846 6010B	06/24-06/28/99	CX7ER10G
		Dilution Factor: 1				
		Analysis Time..: 12:39				
Vanadium	ND	10.0	ug/L	SW846 6010B	06/24-06/28/99	CX7ER10H
		Dilution Factor: 1				
		Analysis Time..: 12:39				

(Continued on next page)

METHOD BLANK REPORT

DISSOLVED Metals

Client Lot #...: D9F170193 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Zinc	ND	20.0	ug/L	SW846 6010B	06/24-06/28/99	CX7ER10J

Dilution Factor: 1
Analysis Time..: 12:39

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

MATRIX SPIKE SAMPLE EVALUATION REPORT

DISSOLVED Metals

Client Lot #...: D9F170193 **Matrix.....:** WATER
Date Sampled...: 06/15/99 13:00 **Date Received..:** 06/16/99

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: D9F170193-001 **Prep Batch #...:** 9173351							
Arsenic	95	(81 - 113)			SW846 6010B	06/24-06/28/99	CX1KE15D
	98	(81 - 113)	2.9	(0-10)	SW846 6010B	06/24-06/28/99	CX1KE15E
		Dilution Factor: 1					
		Analysis Time..: 14:23					
Silver	93	(78 - 115)			SW846 6010B	06/24-06/28/99	CX1KE148
	95	(78 - 115)	2.4	(0-10)	SW846 6010B	06/24-06/28/99	CX1KE149
		Dilution Factor: 1					
		Analysis Time..: 14:23					
Aluminum	97	(81 - 117)			SW846 6010B	06/24-06/28/99	CX1KE14A
	100	(81 - 117)	2.6	(0-10)	SW846 6010B	06/24-06/28/99	CX1KE14C
		Dilution Factor: 1					
		Analysis Time..: 14:23					
Cadmium	98	(90 - 121)			SW846 6010B	06/24-06/28/99	CX1KE15F
	100	(90 - 121)	2.2	(0-10)	SW846 6010B	06/24-06/28/99	CX1KE15G
		Dilution Factor: 1					
		Analysis Time..: 14:23					
Barium	102	(81 - 114)			SW846 6010B	06/24-06/28/99	CX1KE14D
	104	(81 - 114)	1.8	(0-10)	SW846 6010B	06/24-06/28/99	CX1KE14E
		Dilution Factor: 1					
		Analysis Time..: 14:23					
Lead	96	(86 - 117)			SW846 6010B	06/24-06/28/99	CX1KE15H
	98	(86 - 117)	2.4	(0-10)	SW846 6010B	06/24-06/28/99	CX1KE15J
		Dilution Factor: 1					
		Analysis Time..: 14:23					
Antimony	91	(84 - 115)			SW846 6010B	06/24-06/28/99	CX1KE15K
	93	(84 - 115)	2.4	(0-10)	SW846 6010B	06/24-06/28/99	CX1KE15L
		Dilution Factor: 1					
		Analysis Time..: 14:23					
Beryllium	102	(78 - 117)			SW846 6010B	06/24-06/28/99	CX1KE14F
	105	(78 - 117)	2.2	(0-10)	SW846 6010B	06/24-06/28/99	CX1KE14G
		Dilution Factor: 1					
		Analysis Time..: 14:23					
Selenium	91	(76 - 114)			SW846 6010B	06/24-06/28/99	CX1KE15M
	95	(76 - 114)	4.4	(0-10)	SW846 6010B	06/24-06/28/99	CX1KE15N
		Dilution Factor: 1					
		Analysis Time..: 14:23					

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MATRIX SPIKE SAMPLE EVALUATION REPORT

DISSOLVED Metals

Client Lot #...: D9F170193 **Matrix.....:** WATER
Date Sampled...: 06/15/99 13:00 **Date Received..:** 06/16/99

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Calcium	99	(83 - 112)			SW846 6010B	06/24-06/28/99	CX1KE14H
	104	(83 - 112)	2.2	(0-10)	SW846 6010B	06/24-06/28/99	CX1KE14J
		Dilution Factor: 1					
		Analysis Time..: 14:23					
Cobalt	94	(75 - 120)			SW846 6010B	06/24-06/28/99	CX1KE14K
	96	(75 - 120)	2.1	(0-10)	SW846 6010B	06/24-06/28/99	CX1KE14L
		Dilution Factor: 1					
		Analysis Time..: 14:23					
Chromium	97	(78 - 112)			SW846 6010B	06/24-06/28/99	CX1KE14M
	99	(78 - 112)	1.7	(0-10)	SW846 6010B	06/24-06/28/99	CX1KE14N
		Dilution Factor: 1					
		Analysis Time..: 14:23					
Copper	104	(79 - 115)			SW846 6010B	06/24-06/28/99	CX1KE14P
	105	(79 - 115)	1.7	(0-10)	SW846 6010B	06/24-06/28/99	CX1KE14Q
		Dilution Factor: 1					
		Analysis Time..: 14:23					
Iron	99	(82 - 117)			SW846 6010B	06/24-06/28/99	CX1KE14R
	101	(82 - 117)	2.0	(0-10)	SW846 6010B	06/24-06/28/99	CX1KE14T
		Dilution Factor: 1					
		Analysis Time..: 13:54					
Potassium	105	(77 - 111)			SW846 6010B	06/24-06/28/99	CX1KE14U
	107	(77 - 111)	1.8	(0-10)	SW846 6010B	06/24-06/28/99	CX1KE14V
		Dilution Factor: 1					
		Analysis Time..: 13:54					
Magnesium	105	(79 - 114)			SW846 6010B	06/24-06/28/99	CX1KE14W
	111	(79 - 114)	2.6	(0-10)	SW846 6010B	06/24-06/28/99	CX1KE14X
		Dilution Factor: 1					
		Analysis Time..: 14:23					
Manganese	97	(79 - 113)			SW846 6010B	06/24-06/28/99	CX1KE150
	99	(79 - 113)	2.0	(0-10)	SW846 6010B	06/24-06/28/99	CX1KE151
		Dilution Factor: 1					
		Analysis Time..: 14:23					
Sodium	105	(81 - 115)			SW846 6010B	06/24-06/28/99	CX1KE152
	107	(81 - 115)	1.4	(0-10)	SW846 6010B	06/24-06/28/99	CX1KE153
		Dilution Factor: 1					
		Analysis Time..: 13:54					

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MATRIX SPIKE SAMPLE EVALUATION REPORT

DISSOLVED Metals

Client Lot #...: D9F170193 **Matrix.....:** WATER
Date Sampled...: 06/15/99 13:00 **Date Received..:** 06/16/99

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Nickel	97	(80 - 112)			SW846 6010B	06/24-06/28/99	CX1KE154
	100	(80 - 112)	2.0	(0-10)	SW846 6010B	06/24-06/28/99	CX1KE155
		Dilution Factor: 1					
		Analysis Time..: 14:23					
Tin	93	(81 - 114)			SW846 6010B	06/24-06/28/99	CX1KE156
	95	(81 - 114)	2.4	(0-10)	SW846 6010B	06/24-06/28/99	CX1KE157
		Dilution Factor: 1					
		Analysis Time..: 14:23					
Vanadium	98	(80 - 114)			SW846 6010B	06/24-06/28/99	CX1KE158
	100	(80 - 114)	1.8	(0-10)	SW846 6010B	06/24-06/28/99	CX1KE159
		Dilution Factor: 1					
		Analysis Time..: 14:23					
Zinc	91	(77 - 113)			SW846 6010B	06/24-06/28/99	CX1KE15A
	93	(77 - 113)	2.7	(0-10)	SW846 6010B	06/24-06/28/99	CX1KE15C
		Dilution Factor: 1					
		Analysis Time..: 14:23					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

DISSOLVED Metals

Client Lot #...: D9F170193 **Matrix.....:** WATER
Date Sampled...: 06/15/99 13:00 **Date Received..:** 06/16/99

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: D9F170193-001 **Prep Batch #...:** 9173351									
Arsenic									
	3.4	2000	1910	ug/L	95		SW846 6010B	06/24-06/28/99	CX1KE15D
	3.4	2000	1970	ug/L	98	2.9	SW846 6010B	06/24-06/28/99	CX1KE15E
				Dilution Factor: 1					
				Analysis Time..: 14:23					
Silver									
	ND	50.0	46.4	ug/L	93		SW846 6010B	06/24-06/28/99	CX1KE148
	ND	50.0	47.5	ug/L	95	2.4	SW846 6010B	06/24-06/28/99	CX1KE149
				Dilution Factor: 1					
				Analysis Time..: 14:23					
Aluminum									
	78.2	2000	2030	ug/L	97		SW846 6010B	06/24-06/28/99	CX1KE14A
	78.2	2000	2080	ug/L	100	2.6	SW846 6010B	06/24-06/28/99	CX1KE14C
				Dilution Factor: 1					
				Analysis Time..: 14:23					
Cadmium									
	ND	50.0	48.9	ug/L	98		SW846 6010B	06/24-06/28/99	CX1KE15F
	ND	50.0	50.0	ug/L	100	2.2	SW846 6010B	06/24-06/28/99	CX1KE15G
				Dilution Factor: 1					
				Analysis Time..: 14:23					
Barium									
	52.2	2000	2100	ug/L	102		SW846 6010B	06/24-06/28/99	CX1KE14D
	52.2	2000	2130	ug/L	104	1.8	SW846 6010B	06/24-06/28/99	CX1KE14E
				Dilution Factor: 1					
				Analysis Time..: 14:23					
Lead									
	ND	500	479	ug/L	96		SW846 6010B	06/24-06/28/99	CX1KE15H
	ND	500	491	ug/L	98	2.4	SW846 6010B	06/24-06/28/99	CX1KE15J
				Dilution Factor: 1					
				Analysis Time..: 14:23					
Antimony									
	ND	500	455	ug/L	91		SW846 6010B	06/24-06/28/99	CX1KE15K
	ND	500	466	ug/L	93	2.4	SW846 6010B	06/24-06/28/99	CX1KE15L
				Dilution Factor: 1					
				Analysis Time..: 14:23					

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MATRIX SPIKE SAMPLE DATA REPORT

DISSOLVED Metals

Client Lot #...: D9F170193 **Matrix.....:** WATER
Date Sampled...: 06/15/99 13:00 **Date Received..:** 06/16/99

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Beryllium									
	ND	50.0	51.1	ug/L	102		SW846 6010B	06/24-06/28/99	CX1KE14F
	ND	50.0	52.3	ug/L	105	2.2	SW846 6010B	06/24-06/28/99	CX1KE14G
			Dilution Factor: 1						
			Analysis Time..: 14:23						
Selenium									
	6.8	2000	1830	ug/L	91		SW846 6010B	06/24-06/28/99	CX1KE15M
	6.8	2000	1910	ug/L	95	4.4	SW846 6010B	06/24-06/28/99	CX1KE15N
			Dilution Factor: 1						
			Analysis Time..: 14:23						
Calcium									
	56000	50000	105000	ug/L	99		SW846 6010B	06/24-06/28/99	CX1KE14H
	56000	50000	108000	ug/L	104	2.2	SW846 6010B	06/24-06/28/99	CX1KE14J
			Dilution Factor: 1						
			Analysis Time..: 14:23						
Cobalt									
	ND	500	469	ug/L	94		SW846 6010B	06/24-06/28/99	CX1KE14K
	ND	500	479	ug/L	96	2.1	SW846 6010B	06/24-06/28/99	CX1KE14L
			Dilution Factor: 1						
			Analysis Time..: 14:23						
Chromium									
	ND	200	195	ug/L	97		SW846 6010B	06/24-06/28/99	CX1KE14M
	ND	200	198	ug/L	99	1.7	SW846 6010B	06/24-06/28/99	CX1KE14N
			Dilution Factor: 1						
			Analysis Time..: 14:23						
Copper									
	ND	250	259	ug/L	104		SW846 6010B	06/24-06/28/99	CX1KE14P
	ND	250	264	ug/L	105	1.7	SW846 6010B	06/24-06/28/99	CX1KE14Q
			Dilution Factor: 1						
			Analysis Time..: 14:23						
Iron									
	43.7	1000	1030	ug/L	99		SW846 6010B	06/24-06/28/99	CX1KE14R
	43.7	1000	1050	ug/L	101	2.0	SW846 6010B	06/24-06/28/99	CX1KE14T
			Dilution Factor: 1						
			Analysis Time..: 13:54						
Potassium									
	7610	50000	60000	ug/L	105		SW846 6010B	06/24-06/28/99	CX1KE14U
	7610	50000	61100	ug/L	107	1.8	SW846 6010B	06/24-06/28/99	CX1KE14V
			Dilution Factor: 1						
			Analysis Time..: 13:54						

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MATRIX SPIKE SAMPLE DATA REPORT

DISSOLVED Metals

Client Lot #...: D9F170193 **Matrix.....:** WATER
Date Sampled...: 06/15/99 13:00 **Date Received..:** 06/16/99

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium									
	59400	50000	112000	ug/L	105		SW846 6010B	06/24-06/28/99	CX1KE14W
	59400	50000	115000	ug/L	111	2.6	SW846 6010B	06/24-06/28/99	CX1KE14X
			Dilution Factor: 1						
			Analysis Time..: 14:23						
Manganese									
	51.3	500	537	ug/L	97		SW846 6010B	06/24-06/28/99	CX1KE150
	51.3	500	548	ug/L	99	2.0	SW846 6010B	06/24-06/28/99	CX1KE151
			Dilution Factor: 1						
			Analysis Time..: 14:23						
Sodium									
	42300	50000	94600	ug/L	105		SW846 6010B	06/24-06/28/99	CX1KE152
	42300	50000	96000	ug/L	107	1.4	SW846 6010B	06/24-06/28/99	CX1KE153
			Dilution Factor: 1						
			Analysis Time..: 13:54						
Nickel									
	322	500	806	ug/L	97		SW846 6010B	06/24-06/28/99	CX1KE154
	322	500	822	ug/L	100	2.0	SW846 6010B	06/24-06/28/99	CX1KE155
			Dilution Factor: 1						
			Analysis Time..: 14:23						
Tin									
	ND	2000	1860	ug/L	93		SW846 6010B	06/24-06/28/99	CX1KE156
	ND	2000	1900	ug/L	95	2.4	SW846 6010B	06/24-06/28/99	CX1KE157
			Dilution Factor: 1						
			Analysis Time..: 14:23						
Vanadium									
	11.2	500	503	ug/L	98		SW846 6010B	06/24-06/28/99	CX1KE158
	11.2	500	512	ug/L	100	1.8	SW846 6010B	06/24-06/28/99	CX1KE159
			Dilution Factor: 1						
			Analysis Time..: 14:23						
Zinc									
	3.4	500	458	ug/L	91		SW846 6010B	06/24-06/28/99	CX1KE15A
	3.4	500	470	ug/L	93	2.7	SW846 6010B	06/24-06/28/99	CX1KE15C
			Dilution Factor: 1						
			Analysis Time..: 14:23						

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

DISSOLVED Metals

Client Lot #...: D9F170193 **Matrix.....:** WATER
Date Sampled...: 06/15/99 15:10 **Date Received..:** 06/16/99

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: D9F160227-002 **Prep Batch #...:** 9172228							
Mercury	103	(77 - 117)			SW846 7470A	06/21-06/22/99	CX0HX10Q
	103	(77 - 117)	0.77	(0-10)	SW846 7470A	06/21-06/22/99	CX0HX10R
		Dilution Factor: 1					
		Analysis Time..: 15:23					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

DISSOLVED Metals

Client Lot #...: D9F170193 **Matrix.....:** WATER
Date Sampled...: 06/15/99 15:10 **Date Received..:** 06/16/99

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: D9F160227-002 **Prep Batch #...:** 9172228									
Mercury									
	ND	5.00	5.17	ug/L	103		SW846 7470A	06/21-06/22/99	CX0HX10Q
	ND	5.00	5.13	ug/L	103	0.77	SW846 7470A	06/21-06/22/99	CX0HX10R

Dilution Factor: 1
Analysis Time..: 15:23

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Lot-Sample #...: D9F170193 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride		WO#:CXLVF102-LCS/CXLVF103-LCSD				LCS Lot-Sample#: D9F200000-155	
	98	(90 - 111)			MCAWW 300.0A	06/17/99	9171155
	96	(90 - 111)	1.2	(0-10)	MCAWW 300.0A	06/17/99	9171155
		Dilution Factor: 1					
Nitrate		WO#:CXLVK102-LCS/CXLVK103-LCSD				LCS Lot-Sample#: D9F200000-157	
	100	(90 - 110)			MCAWW 300.0A	06/17/99	9171157
	98	(90 - 110)	1.2	(0-10)	MCAWW 300.0A	06/17/99	9171157
		Dilution Factor: 1					
Sulfate		WO#:CXLVL102-LCS/CXLVL103-LCSD				LCS Lot-Sample#: D9F200000-156	
	98	(90 - 110)			MCAWW 300.0A	06/17/99	9171156
	97	(90 - 110)	0.90	(0-10)	MCAWW 300.0A	06/17/99	9171156
		Dilution Factor: 1					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Lot-Sample #...: D9F170193 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride			WO#:CXLVF102-LCS/CXLVF103-LCSD			LCS Lot-Sample#: D9F200000-155		
	25.0	24.4	mg/L	98		MCAWW 300.0A	06/17/99	9171155
	25.0	24.1	mg/L	96	1.2	MCAWW 300.0A	06/17/99	9171155
			Dilution Factor: 1					
Nitrate			WO#:CXLVK102-LCS/CXLVK103-LCSD			LCS Lot-Sample#: D9F200000-157		
	5.00	4.98	mg/L	100		MCAWW 300.0A	06/17/99	9171157
	5.00	4.92	mg/L	98	1.2	MCAWW 300.0A	06/17/99	9171157
			Dilution Factor: 1					
Sulfate			WO#:CXLVL102-LCS/CXLVL103-LCSD			LCS Lot-Sample#: D9F200000-156		
	25.0	24.5	mg/L	98		MCAWW 300.0A	06/17/99	9171156
	25.0	24.3	mg/L	97	0.90	MCAWW 300.0A	06/17/99	9171156
			Dilution Factor: 1					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: D9F170193 Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Phenols		Work Order #: CXLQT102	LCS Lot-Sample#: D9G010000-400		
	90	(75 - 107)	MCAWW 420.2	07/01/99	9182400
		Dilution Factor: 1			
		Analysis Time..: 15:14			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Client Lot #...: D9F170193 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Phenols			Work Order #:	CXLQT102	LCS Lot-Sample#:	D9G010000-400	
	0.200	0.181	mg/L	90	MCAWW 420.2	07/01/99	9182400
			Dilution Factor: 1				
			Analysis Time..: 15:14				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: D9F170193 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride		Work Order #: CXLVF101		MB Lot-Sample #:	D9F200000-155	
	ND	3.0	mg/L	MCAWW 300.0A	06/17/99	9171155
		Dilution Factor: 1				
		Analysis Time..: 18:14				
Nitrate		Work Order #: CXLVK101		MB Lot-Sample #:	D9F200000-157	
	ND	0.50	mg/L	MCAWW 300.0A	06/17/99	9171157
		Dilution Factor: 1				
		Analysis Time..: 18:14				
Sulfate		Work Order #: CXLVL101		MB Lot-Sample #:	D9F200000-156	
	ND	5.0	mg/L	MCAWW 300.0A	06/17/99	9171156
		Dilution Factor: 1				
		Analysis Time..: 18:14				
Total Phenols		Work Order #: CXLQT101		MB Lot-Sample #:	D9G010000-400	
	ND	0.020	mg/L	MCAWW 420.2	07/01/99	9182400
		Dilution Factor: 1				
		Analysis Time..: 15:12				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: D9F170193 **Matrix.....:** WATER
Date Sampled...: 06/16/99 09:10 **Date Received..:** 06/17/99

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride			WO#: CX14W10K-MS/CX14W10L-MSD			MS Lot-Sample #: D9F170154-002	
	102	(90 - 111)			MCAWW 300.0A	06/17-06/18/99	9171155
	101	(90 - 111)	0.33	(0-10)	MCAWW 300.0A	06/17-06/18/99	9171155
			Dilution Factor: 1				
			Analysis Time..: 03:07				
Nitrate			WO#: CX14W10M-MS/CX14W10N-MSD			MS Lot-Sample #: D9F170154-002	
	102 I	(90 - 110)			MCAWW 300.0A	06/17-06/18/99	9171157
	102 I	(90 - 110)	0.34	(0-10)	MCAWW 300.0A	06/17-06/18/99	9171157
			Dilution Factor: 1				
			Analysis Time..: 02:10				
Sulfate			WO#: CX14W10P-MS/CX14W10Q-MSD			MS Lot-Sample #: D9F170154-002	
	97	(90 - 110)			MCAWW 300.0A	06/17-06/18/99	9171156
	97	(90 - 110)	0.06	(0-10)	MCAWW 300.0A	06/17-06/18/99	9171156
			Dilution Factor: 1				
			Analysis Time..: 03:22				
Total Phenols			WO#: CX1KL12N-MS/CX1KL12P-MSD			MS Lot-Sample #: D9F170193-002	
	79	(75 - 107)			MCAWW 420.2	07/01/99	9182400
	80	(75 - 107)	1.4	(0-16)	MCAWW 420.2	07/01/99	9182400
			Dilution Factor: 1				
			Analysis Time..: 15:19				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

I Estimated result. Result concentration exceeds the calibration range.

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: D9F170193 **Matrix.....:** WATER
Date Sampled...: 06/16/99 09:10 **Date Received..:** 06/17/99

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride				WO#: CX14W10K-MS/CX14W10L-MSD			MS Lot-Sample #: D9F170154-002		
	251	500	759	mg/L	102		MCAWW 300.0A	06/17-06/18/99	9171155
	251	500	756	mg/L	101	0.33	MCAWW 300.0A	06/17-06/18/99	9171155
				Dilution Factor: 1					
				Analysis Time..: 03:07					
Nitrate				WO#: CX14W10M-MS/CX14W10N-MSD			MS Lot-Sample #: D9F170154-002		
	6.6	5.00	11.7 I	mg/L	102		MCAWW 300.0A	06/17-06/18/99	9171157
	6.6	5.00	11.7 I	mg/L	102	0.34	MCAWW 300.0A	06/17-06/18/99	9171157
				Dilution Factor: 1					
				Analysis Time..: 02:10					
Sulfate				WO#: CX14W10P-MS/CX14W10Q-MSD			MS Lot-Sample #: D9F170154-002		
	96.0	500	581	mg/L	97		MCAWW 300.0A	06/17-06/18/99	9171156
	96.0	500	581	mg/L	97	0.06	MCAWW 300.0A	06/17-06/18/99	9171156
				Dilution Factor: 1					
				Analysis Time..: 03:22					
Total Phenols				WO#: CX1KL12N-MS/CX1KL12P-MSD			MS Lot-Sample #: D9F170193-002		
	ND	0.200	0.158	mg/L	79		MCAWW 420.2	07/01/99	9182400
	ND	0.200	0.161	mg/L	80	1.4	MCAWW 420.2	07/01/99	9182400
				Dilution Factor: 1					
				Analysis Time..: 15:19					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

I Estimated result. Result concentration exceeds the calibration range.

3.6 3.0 27004

D9F170193

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

FEC Foothill Engineering Consultants, Inc. 350 Indiana Street, Suite 415 - Golden, Colorado 80401 - (303) 278-062

Project Name:	CANON AFB, LTM		Carrier:	FED EX
Point-of-Contact	Curtis Carter	(303) 278-0622	Air Bill Number:	
Field Contact			Date Shipped:	15-Jun-99
Sampler Name:	Heidi Otto			

Chain of Custody Number: 8325-001

#1 Relinquished by:	#1 Received by:	#2 Relinquished by:	#2 Received by:	#3 Relinquished by:	#3 Received by:
Signature: [signature]	Signature: [signature]	Signature	Signature	Signature	Signature
Printed Name: Curtis Carter	Printed Name: Jeff Molt	Printed Name	Printed Name	Printed Name	Printed Name
Company: Foothill Engineering	Company: Quanterra	Company	Company	Company	Company
Date: 16-June-99	Date: 6-16-99 16:30	Date	Date	Date	Date

Sample ID	Date Collect	Time Collect	Method	TAT Dys	Matrix	Samp Type	#Jars	Pre-serv.	Fil-ter	Expect Concen.	Remarks
MW-X	06-15-99	1300	420.2	10	WA	N	1	I	U	na	
MW-R	06-15-99	1300	6010B, TOTAL	10	WA	N	1	B	U	na	
MW-R	06-15-99	1300	6010B, DISSOLVED	10	WA	N	1	B	F	na	
~~MW-R~~	~~06-15-99~~	~~1300~~	~~8081~~	~~10~~	~~WA~~	~~N~~	~~1~~	~~F~~	~~U~~	~~na~~	
MW-R	06-15-99	1300	8080/8081	10	WA	N	1	F	U	na	
MW-R	06-15-99	1300	420.2	10	WA	N	1	I	U	na	
MW-R	06-15-99	1300	8051	10	WA	N	1	F	U	C	
MW-R	06-15-99	1300	CHLORIDE	10	WA	N	1	F	U	C	
MW-R	06-15-99	1300	SULFATE	10	WA	N	1	F	U	C	
MW-R	06-15-99	1300	NITRATE	10	WA	N	1	D	U	C	
MW-R	06-15-99	1300	ORGANOPHOSPHATE REST.	10	WA	N	1	F	U	C	
MW-R	06-15-99	1300	ORGANOCHLORINATED PE	10	WA	N	1	F	U	C	
MW-R	06-15-99	1300	8260B	10	WA	N	2	A	U	na	
MW-R	06-15-99	1300	8270B	10	WA	N	1	F	U	na	

ckc

Matrix:
SO - Soil
WA - Water

Preservatives:
A. HCL + Ice
B. HNO3 + Ice
C. NaOH + Ice
D. H2SO4 + Ice
E. Unpreserved
F. Ice Only
G. NaHS04 + Ice
H. ZnAc _ NaOH + Ice
I. Other _____

Filtered/Unfiltered:
F - Filtered
U - Unfiltered
na - not applicable

Expected Concentration:
A. High
B. Medium
C. Low

Quanterra Incorporated Denver Laboratory

Quanterra Incorporated Denver Laboratory

D9F170193

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

FEC Foothill Engineering Consultants, Inc.
350 Indiana Street, Suite 415 - Golden, Colorado 80401 - (303) 278-062

Sample ID	Date Collect	Time Collect	Method	TAT Dys	Matrix	Samp Type	#Jars	Pre-serv.	Fil-ter	Expect Concen.	Remarks
MW-R	06-15-99	1300	8260B	10	WA	N	2	A	U	na	
MW-X	06-15-99	1300	8080/8081	10	WA	N	1	F	U	na	
MW-X	06-15-99	1300	8051	10	WA	N	1	F	U	C	
MW-X	06-15-99	1300	CHLORIDE	10	WA	N	1	F	U	C	
MW-X	06-15-99	1300	SULFATE	10	WA	N	1	F	U	C	
MW-X	06-15-99	1300	NITRATE	10	WA	N	1	D	U	C	
MW-X	06-15-99	1300	ORGANOPHOSPHATE PEST	10	WA	N	1	F	U	C	
MW-X	06-15-99	1300	ORGANOCHLORINATED PE	10	WA	N	1	F	U	C	
MW-X	06-15-99	1300	8260B	10	WA	N	2	A	U	na	
MW-X	06-15-99	1300	8260B	10	WA	N	2	A	U	na	
MW-X	06-15-99	1300	8260B	10	WA	N	2	A	U	na	
MW-X	06-15-99	1300	8270B	10	WA	N	1	F	U	na	
MW-X	06-15-99	1300	6010B, TOTAL	10	WA	N	1	B	U	na	
MW-X	06-15-99	1300	6010B, DISSOLVED	10	WA	N	1	B	F	na	
~~MW-X~~	~~06-15-99~~	~~1300~~	~~8081~~	~~10~~	~~WA~~	~~N~~	~~1~~	~~F~~	~~U~~	~~na~~	
MW-R	06-15-99	1300	8260B	10	WA	N	2	A	U	na	

Special Instructions:

Matrix:	Preservatives:			Filtered/Unfiltered:	Expected Concentration:
SO - Soil WA - Water	A. HCL + Ice B. HNO3 + Ice C. NaOH + Ice	D. H2SO4 + Ice E. Unpreserved F. Ice Only	G. NaHS04 + Ice H. ZnAc _ NaOH + Ice I. Other _____	F - Filtered U - Unfiltered na - not applicable	A. High B. Medium C. Low

Sample Receiving Checklist

Lot #: D9F170193 Date/Time Received: 6-16-99 16:30

Company Name & Sampling Site: Foothill Eng. CANON AFB

*Cooler #(s): 1 2

Temperatures: 3.6 3.0

Unpacking & Labeling Check Points:

N/A	Yes	No		Initials
	☒	☐	1. Cooler seals intact.	JM
	☒	☐	2. Chain of custody present.	
	☐	☒	3. Bottles broken and/or are leaking, comment if yes.	
			PHOTOGRAPH BROKEN BOTTLES	
	☒	☐	4. Containers labeled, comment if no.	
	☒	☐	5. pH of all samples checked and meet requirements, note exceptions.	
	☒	☐	6. Chain of custody includes "received by" and "relinquished" by signatures, dates, and times.	
	☐	☒	7. Receipt date(s) > 48 hours past the collection date(s)? If yes, notify PA/PM.	
	☒	☐	8. Chain of custody agrees with bottle count, comment if no.	
	☒	☐	9. Chain of custody agrees with labels, comment if no.	
☐	☒	☐	10. VOA samples filled completely, comment if no.	
☐	☒	☐	11. VOA bottles preserved, check for labels.	
	☐	☒	12. Did samples require preservation with sodium thiosulfate?	
☒	☐	☐	13. If yes to #12, did the samples contain residual chlorine?	
☐	☐	☒	14. Sediment present in "D," dissolved, bottles.	
	☒	☐	15. Are analyses with short holding times requested?	
☒	☐	☐	16. Is extra sample volume provided for MS, MSD or matrix duplicates?	
	☐	☒	17. Multiphase samples present? If yes, comment below.	
	☐	☒	18. Any subsampling for volatiles? If yes, list samples.	
			PHOTOGRAPH MULTIPHASE SAMPLES	
☒	☐	☐	19. Clear picture taken, labeled, and stapled to project folder.	
☒	☐	☐	20. Subcontract COC signed and sent with samples to bottle prep?	
	☐	☐	21. Was sample labeling double checked by a second person?	

Document any problems or discrepancies and the actions taken to resolve them on a Condition Upon Receipt Anomaly Report (CUR)

Invoice

Quanterra

Quanterra Inc - Denver Co Lab
4955 Yarrow Street
Arvada,CO 80002
Tel: 303 421-6611
Fax: 303 431-7171

Number: 28000046
Date: 22 JUL 99
Quanterra Project Number: D9F170193
Customer Number: 00103878
Terms: NET 30 DAYS

REMIT TO:
Quanterra Incorporated
P.O. Box 2473
Carol Stream, IL 60132-2473

Customer Contact
SAMPLE RECEIVING DATE : 6/17/99
REPORT DATE : 7/21/99
Mr. Ian Broussard

Bill To:
Mr. Ian Broussard
Foothill Engineering Consultants Inc.
350 Indianna Street
Suite 415
Golden,CO 80401

Foothill Engineering Consultants Inc.
350 Indianna Street
Suite 415
Golden,CO 80401

Line No.	Qty.	Matrix Code	Analysis Description	Unit Price	Extended Price
2	WATER	WATER,	6010B/7470A ICP Metals + Hg, Dissolved	150.00	300.00
2	WATER	WATER,	6010B/7470A ICP Metals + Hg, Total	150.00	300.00
2	WATER	WATER,	300.0A, Chloride, IC	15.00	30.00
2	WATER	WATER,	300.0A, Sulfate, IC	15.00	30.00
2	WATER	WATER,	300.0A, Nitrate as N, IC	15.00	30.00
2	WATER	WATER,	420.2, Phenolics	40.00	80.00
2	WATER	WATER,	8082, PCBs	75.00	150.00
2	WATER	WATER,	8081A, Pesticides	100.00	200.00
3	WATER	WATER,	8260B, Volatile Organics, GC/MS	130.00	390.00
2	WATER	WATER,	8270C, Base/Neutrals and Acids	255.00	510.00
2	WATER	WATER,	8151A, Herbicides	150.00	300.00
2	WATER	WATER,	8140, Pesticides, Organophosphorous	160.00	320.00

NOTE: **Applicable samples will be stored at no extra charge for a period of 30 days following the final report. Samples will be properly disposed of after 30 days, unless notified otherwise in writing.**

Please reference Invoice number when remitting.

Customer P.O. Number / Contract Number / Reference

Quanterra Project Manager: Christina Mott
CMM
Salesperson

Sub Total
Tax 2,640.00
Total

ORIGINAL

QUA-4027 (0597)

Federal Tax I.D. # 84-1271186

APPENDIX IV

Data Quality Assessment Summary

APPENDIX IV
DATA QUALITY ASSESSMENT SUMMARY

Groundwater samples were collected during the June 1999 sampling event at Cannon Air Force Base. The samples were collected downgradient of Landfill 25 from Monitoring Well R (MW-R) as part of the long-term monitoring program (LTMP). Sample MW-X is a blind duplicate of MW-R.

Quanterra Environmental Services in Arvada, Colorado performed laboratory analysis of the groundwater samples. Samples were analyzed by the following methods:

- VOCs, SW-846 Method 8260B, with specific target list of Appendix IX compounds
- SVOCs, SW-846 Method 8270C
- Polychlorinated Biphenyls (PCBs), SW-846 Method 8082
- Herbicides, SW-846 Method 8151A
- TAL Metals, SW-846 Method 6010B, and 6020
- Mercury, SW-846 Method 7470A
- Pesticides Organophosphorus SW-846 Method 8140
- Pesticides Organochlorine SW-846 Method 8081
- Common Anions (chlorides, nitrates, sulfates), EPA Method 300.0A
- Total Phenols, EPA Method 420.2

Foothill Engineering Consultants, Inc. (FEC) performed a data review and validation by applying the quality control (QC) limits as defined in the quality assurance project plan (QAPP). The data validation consisted of a review for holding times, method blanks, field blanks, field duplicates, surrogate spikes, matrix spike/matrix spike duplicates (MS/MSDs), laboratory control samples (LCSs), and a case narrative review including sample receipt forms and custody. The validation guidelines are based upon the National Functional Guidelines for Organic Data Review (EPA, 1994a) and the National Functional Guidelines for Inorganic Data Review (EPA, 1994b).

1.1 QUALITY ASSESSMENT SUMMARY

FEC has found that accuracy and precision are in control and are considered acceptable. Samples were collected and analyzed as specified in the QAPP and the sampling and analysis plan (SAP). Sampling procedures and laboratory analytical methods are comparable with previous investigations.

Sample results associated with non-compliant QC data are qualified in accordance with the QAPP. Sample results flagged as estimated (J), and used in accordance with data validation qualifiers, are usable for the intended project purposes. A summary of qualified sample results is presented in Table 1. The results of data validation are presented in the following sections.

1.2 SW8260, VOC

Acetone was detected in the trip blank. Acetone was also detected in all associated field samples at similar concentrations. Acetone results for these samples have been qualified as not detected. A summary of the sample and method blank results is provided in Table 2. These data are fully usable for project purposes.

1.3 SW8081, ORGANOCHLORINE PESTICIDES

None of the organochlorine pesticide sample results are qualified. These data are fully usable for project purposes.

1.4 SW8082, POLYCHLORINATED BIPHENYLS (PCB)

None of the PCB sample results are qualified. These data are fully usable for project purposes.

1.5 SW6010/6020, METALS AND SW7470A MERCURY

Aluminum, barium, sodium, iron, and arsenic were detected in the method blank associated with the dissolved metals results for samples MW-R and MW-X. Due to the blank contamination, aluminum, arsenic and iron results have been qualified as not detected. Barium and sodium results have not been qualified for blank contamination due to the high concentrations of target analytes in the samples. Both barium and sodium are flagged with a "B" to denote the blank contamination association. A summary of the sample and method blank results is provided in Table 2. Laboratory analyses results are usable for project purposes.

1.6 SW7470A, MERCURY

None of the mercury sample results are qualified. These data are fully usable for project purposes.

1.7 SW8140, ORGANOPHOSPHORUS PESTICIDES

None of the organophosphorus pesticide sample results are qualified. These data are fully usable for project purposes.

1.8 SW8150, HERBICIDES

None of the herbicide results are qualified. These data are fully usable for project purposes.

1.9 E300.0, COMMON ANIONS

The holding time for nitrate was exceeded by approximately 6 hours for samples MW-R and MW-X. Results are qualified as estimated detections. These data are fully usable for project purposes.

1.10 BLIND DUPLICATE PRECISION

Field sampling precision was determined from the results of a blind duplicate sample. Sample MW-X is a blind duplicate of MW-R. A summary of the primary and duplicate analyte results is provided in Table 3. Overall, sample matrix precision is in control.

Table 1. Summary of Qualified Sample Results

Field Sample ID	Analytical Method	Analyte	Result	Units	Blank	Holding Time	Final Flag
MW-R	EPA 300.0	Nitrate	5.1	mg/l		J	J
MW-R	SW6010B	Aluminum, D	80.7	µg/l	UB		UB
MW-R	SW6010B	Arsenic, D	4.9	µg/l	UB		UB
MW-R	SW6010B	Iron, D	48	µg/l	UB		UB
MW-R	SW6010B	Barium, T	52	µg/l	B		B
MW-R	SW6010B	Sodium, T	42400	µg/l	B		B
MW-R	SW8260B	Acetone	1.6	µg/l	UB		UB
MW-X	EPA 300.0	Nitrate	5.2	mg/l		J	J
MW-X	SW6010B	Aluminum, D	78.2	µg/l	UB		UB
MW-X	SW6010B	Arsenic, D	3.4	µg/l	UB		UB
MW-X	SW6010B	Iron, D	43.7	µg/l	UB		UB
MW-X	SW6010B	Barium, T	48.3	µg/l	B		B
MW-X	SW6010B	Sodium, T	43900	µg/l	B		B
MW-X	SW8260B	Acetone	2.7	µg/l	UB		UB

µg/l = micrograms per liter
B = Target analyte concentration has contribution from the associated laboratory blank.
D = Dissolved metals
J = The analyte was positively identified, the quantitation is an estimation.
T = Total recoverable metals
UB = The analyte was found in an associated blank, as well as in the sample and qualified as a non-detect concentration based on data validation criteria.

Table 2. Summary of Method Blank Contamination Results

Field Sample ID	Method Name	Units	Analyte	Sample Result	Blank Result	Reporting Limit	Validation Qualifier
MW-R	SW8260B	µg/l	Acetone	1.6	1.6	10	UB
MW-X	SW8260B	µg/l	Acetone	2.7	1.6	10	UB
MW-R	SW6010B	µg/l	Aluminum, T	66.9	24.2	100	UB
MW-R	SW6010B	µg/l	Barium, T	52	3.7	10	B
MW-R	SW6010B	µg/l	Sodium, T	42400	722	5000	B
MW-X	SW6010B	µg/l	Aluminum, T	35.9	24.2	100	UB
MW-X	SW6010B	µg/l	Barium, T	48.3	3.7	10	B
MW-X	SW6010B	µg/l	Sodium, T	43900	722	5000	B
MW-R	SW6010B	µg/l	Aluminum, D	80.7	43.5	100	UB
MW-R	SW6010B	µg/l	Arsenic, D	4.9	3.6	10	UB
MW-R	SW6010B	µg/l	Iron, D	48	15.5	100	UB
MW-X	SW6010B	µg/l	Aluminum, D	78.2	43.5	100	UB
MW-X	SW6010B	µg/l	Arsenic, D	3.4	3.6	10	UB
MW-X	SW6010B	µg/l	Iron, D	43.7	15.5	100	UB

µg/l = micrograms per liter
B = detect result associated with blank contamination
D = Dissolved metals
T = Total recoverable metals
UB = non-detect result associated with blank contamination

Table 3. Summary of Primary and Duplicate Detected Analyte Results

Analyte	Units	MW-R	MW-X (Duplicate)
Aluminum, dissolved	µg/l	80.7UB	78.2UB
Aluminum, total	µg/l	66.9UB	35.9UB
Arsenic, dissolved	µg/l	4.9UB	3.4UB
Barium, dissolved	µg/l	54.7	52.2
Barium, total	µg/l	52B	48.3B
Beryllium, total	µg/l	1.1	1.2
Cadmium, dissolved	µg/l	1.1	ND
Calcium, dissolved	µg/l	56800	56000
Calcium, total	µg/l	55700	52400
Chromium, total	µg/l	333	49.7
Copper, total	µg/l	4.9	1.4
Iron, dissolved	µg/l	48UB	43.7UB
Iron, total	µg/l	1480	948
Lead, total	µg/l	3	1
Magnesium, dissolved	µg/l	60300	59400
Magnesium, total	µg/l	58200	54900
Manganese, dissolved	µg/l	46	51.3
Manganese, total	µg/l	54.3	52.6
Nickel, dissolved	µg/l	302	322
Nickel, total	µg/l	371	353
Potassium, dissolved	µg/l	8030	7610
Potassium, total	µg/l	8190	8420
Selenium, dissolved	µg/l	9.6	6.8
Selenium, total	µg/l	9.6	7.5
Sodium, dissolved	µg/l	43100	42300
Sodium, total	µg/l	42400B	43900B
Vanadium, dissolved	µg/l	13	11.2
Vanadium, total	µg/l	15.2	12.6
Zinc, dissolved	µg/l	5.1	3.4
1,2-Dichloroethane	µg/l	ND	0.21
Acetone	µg/l	1.6	2.7
Chloride	mg/l	125	119
Chloroform	µg/l	0.18	0.18
Nitrate	mg/l	5.1	5.2
Sulfate	mg/l	134	133

µg/l = micrograms per liter
J = estimated detect concentration due to exceeded quality control criteria
Mg/L = milligrams per liter
ND = Not detected
UB = non-detect result associated with blank contamination

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ANNUAL SUMMARY REPORT
ASSESSMENT MONITORING
1998 SAMPLING EVENTS

LONG-TERM MONITORING
LANDFILL NO. 3 (SWMU 105),
LANDFILL NO. (SWMU 104)
AND LANDFILL NO. 25 (SWMU 97)

CANNON AIR FORCE BASE
CLOVIS, NEW MEXICO

September 1999

EXECUTIVE SUMMARY

This report summarizes the data obtained during the 1998 annual sampling events for the long-term monitoring program of monitoring well N (Landfill 4), monitoring well O (Landfill 3) and monitoring well R (Landfill 25) at the Cannon Air Force Base (CAFB) near Clovis, New Mexico (Figure 1). Monitoring wells N, O, and R are located downgradient of their respective landfills (Figure 2). The scope includes an annual sampling event performed in December 1998 for monitoring wells N and O and semi-annual sampling in June and December 1998 for well R.

The wells were sampled using dedicated pumps previously installed in the wells. For the sampling events, one groundwater sample was collected from each well and submitted for chemical analyses. For quality control and quality assurance (QA/QC) purposes, one field duplicate sample and one field split sample was collected during each sampling event (June and December 1998). The split sample was sent to the U.S. Army Corps of Engineers (USACE) Missouri River Laboratory.

Groundwater samples collected from monitoring wells N, O, and R were analyzed for the parameters by the identified analytical methods.

- Appendix IX VOCs, SW-846 Method 8260A
- Appendix IX SVOCs, SW-846 Method 8270B
- PCBs, SW-846 Method 8082
- Herbicides, SW-846 Method 8151A
- TAL Metals, SW-846 Method 6010A and 7470A
- Sulfate, EPA Method 375.4
- Chloride, EPA Method 325.3
- Nitrate, EPA Method 300.0A
- Phenol, EPA Method 420.2
- Pesticides Organophosphorous SW-846 Method 8140
- Pesticides Organochlorinated SW-846 Method 8081A

Wells N and O

No analyzed constituents exceed their respective U.S. Environmental Protection Agency (EPA) Maximum Contaminant Levels (MCL) or the New Mexico State Standards (NMSS).

Except as discussed below and shown in Tables 1 and 2, Appendix IX constituents (SVOCs, organophosphorous pesticides, organochlorine pesticides, herbicides or PCBs), dioxin (TCDD), total phenols, and cyanide were not detected in the groundwater samples collected from wells N and O.

The annual sampling event revealed the presence of several metal analytes at relatively low concentrations. Barium, calcium, magnesium, potassium, selenium, sodium, thallium, and vanadium were detected at concentrations below their respective EPA MCL. Volatile organic compounds detected in well N included methylene chloride and for well O methylene chloride, chloroform and trichloroethene, all at concentrations below EPA MCLs. General chemistry results for nitrate, chloride and sulfate were less than EPA MCLs and NMSS.

In comparison to historical results from December 1997 sampling, well N exhibited fewer detected constituents and well O exhibited similar constituents and concentrations.

Annual sample results for wells N and O are summarized in the appropriate New Mexico Environmental Department (NMED) Annual Summary Report for Assessment Monitoring forms.

Well R

Concentrations of detected analytes are summarized in Tables 3 and 4. As part of the QA/QC program for the semi-annual sampling events, at well R a field duplicate was collected to measure field and analytical precision and accuracy. The June field duplicate sample was identified as CAFB-0698-MWX. The December field duplicate sample was identified as CAFB-MWR-1298-2. For analytes detected above reporting limits, adequate precision was observed in the sample-duplicate pair (CAFB-0698MWR/CAFB-0698MWX) collected during the June 1998 sampling event (see Table 3) and in duplicate pair (CAFB-MWR-1298-1/CAFB-MWR-1298-2) collected during the December 1998 sampling event (see Table 4).

In the June 1998 samples (Table 3), Iron and manganese were detected above the U.S. Environmental Protection Agency (EPA) maximum contaminant level (MCL) and the New Mexico State Standards (NMSS). Nickel was detected above the NMSS. The EPA MCL for nickel has been remanded for further evaluation. Lead was detected in trace concentrations that were below both the EPA action level and NMSS standards. Relatively low concentrations of selenium were also detected.

In the December 1998 samples, chromium, iron and nickel were detected at concentrations greater than the EPA MCL and the NMSS. Manganese was detected above the NMSS, and relatively low concentrations of the other Target Analyte List (TAL) metals were also detected at concentrations less than the EPA MCLs and the NMSSs. Results for other constituents identified in Table 4 were reported as, or qualified as "not detected" (ND), indicating that Appendix IX compounds were not present above laboratory reporting limits in any of the groundwater samples.

Historical results are presented in *Annual Summary Report for Assessment Monitoring, Long-Term Monitoring Landfill No. 25 (SWMU 97), November 1998,* and summarized in Tables 3 and 4. Compared to historical results chromium is at a greater concentration. The other constituents are consistent with historical results.

Following the sampling events, NMED Assessment Monitoring Annual Reports were completed and submitted to USACE, Cannon Air Force Base (CAFB), and Air Combat Command, summarizing the analytical results for each well (see Appendix I). The Assessment Monitoring Annual Report forms for the annual and semi-annual sampling events are presented in Appendix I to facilitate review of the analytical and field data.

Field Forms are provided in Appendix II, Analytical results and associated quality control (QC) data, as reported by Quanterra Environmental Services, are presented in Appendix III, and Data Quality Assessment in Appendix IV.

Table 1. Groundwater Sample Results Summary - December 1998
Annual Groundwater Sampling - Monitoring Well N
Cannon Air Force Base, Clovis, New Mexico

Sample ID/Analyte/ Method of Analysis	Historical Range	Well N December 1998 Results	Well N December 1997 Results	EPA MCL	New Mexico State Standards[3]
TAL Metals (total) SW846 6010A					
Arsenic	ND-0.0043J	ND	0.0043J	0.05	0.1
Barium	0.0596-0.0652	0.0582	0.062	2.0	1.0
Calcium	NA	48.3			
Cadmium	ND	ND	ND	0.005	0.01
Chromium	ND	ND	ND	0.10	0.05
Cobalt	ND-.0054J	ND	0.0054J		0.05
Copper	ND	ND	ND	1.3[1]/1.0[2]	1.0
Iron	NA	ND	NA	0.3[2]	1.0
Lead	ND-0.013	ND	ND	0	0.05
Magnesium	ND	47.9	NA		
Manganese	NA	ND	NA	0.05[2]	0.2
Mercury SW-846 7470A	ND	ND	ND	0.002	0.002
Nickel	ND	ND	ND	0.10	0.2
Potassium	NA	8.020			
Selenium	0.0093-0.012	0.012	0.0063q	0.05	0.05
Sodium	NA	37.8	NA		
Thallium	ND	ND	ND	0.002	
Tin	ND	ND	ND		
Vanadium	0.014J-0.016	0.0232	0.022J		
Zinc	ND-0.0234	ND	ND	5[2]	10.0
Volatile Organic Compounds SW846 8260A					
Methylene Chloride	ND	0.001	ND	0.005	0.100
General Chemistry					
Nitrate EPA 300.0A	ND-2.6	2.3	2.6	10.0	10.0
Chloride EPA 325.3	NA	70.9	NA	250[2]	250
Sulfate- EPA 375.4	NA	148.0	NA	250[2]	600
Other Constituents					
SVOCs-SW-846 8270B	ND	ND	ND		
Herbicides- SW-846 8150	ND	ND	ND		
Organophosphorous Pesticides SW-846 8140	NA	ND	NA		
Organochlorine Pesticides- SW-846 8081A	ND	ND	ND		
Phenols (Total)	NA	ND	NA		
PCBs 8082	ND	ND	NA		
Reporting Units (unless otherwise specified)	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**

[1] MCLG = Maximum Contaminant Level Goal

[2] SMCL = Secondary Maximum Contaminant Level

[3] = New Mexico State Standards – Water Quality Control Commission (November 1996). Title 20, Chapter 6, Part 2, Subpart 3103. Dissolved fraction, requires filtering.

J = Result is detected below reporting limit or is an estimated concentration.

MCL = Maximum Contaminant Level (total fraction, unfiltered)

ND = analyte not detected above reporting limit

q = post-digestion spike recovery fell between 40% and 85% due to matrix interference.

Table 2. Groundwater Sample Results Summary - December 1998
Annual Groundwater Sampling - Monitoring Well O
Cannon Air Force Base, Clovis, New Mexico

Sample ID/ Analyte/Method of Analysis	Historical Range	Well O December 1998 Results	Well O December 1997 Results	EPA MCL	New Mexico State Standards
TAL Metals (total) SW846 6010A					
Arsenic	ND-0.0028J	ND	0.0028J	0.05	0.1
Barium	0.0551-0.0609	0.0451	0.054	2.0	1.0
Calcium	ND	72.1			
Cadmium	ND	ND	ND	0.005	0.1
Chromium	ND	ND	ND	0.10	0.05
Cobalt	ND	ND	ND		0.05
Copper	ND-0.0046J	ND	ND	1.3[1]/1.0[2]	1.0
Iron	NA	ND	ND	0.3	1.0
Lead	ND	ND	ND	0	0.05
Magnesium	NA	66.0	NA		
Manganese	NA	ND	NA	0.05[2]	0.2
Mercury SW-846 7470A	ND	ND	ND	0.002	0.002
Nickel	ND	ND	ND	0.10	0.2
Potassium	NA	8.510	NA		
Selenium	ND-0.0030J	0.0056	0.0030J	0.05	0.05
Sodium	NA	189.0	NA		
Thallium	ND	ND	ND	0.002	
Tin	ND	ND	ND		
Vanadium	0.0095J-0.012	0.0194	0.019		
Zinc	ND-0.016J	ND	ND	5[2]	10.0
Volatile Organic Compounds SW846 8260A					
Carbon Tetrachloride	ND	0.00028 J	0.00051J		
Chloroform	ND	0.00024 J1	0.00039J	0.100	0.100
Methylene Chloride	ND	0.0014	ND	0.005	0.100
Trichloroethene	ND	ND	0.0001J	0.005	0.100
General Chemistry					
Nitrate EPA 300.0A	ND-8.3	0.0084UJ	8.3	10.0	10.0
Chloride EPA 325.3	NA	266.0	NA	250[2]	250
Sulfate- EPA 375.4	NA	145.0	2.4	250[2]	600
Other Constituents					
SVOCs-SW-846 8270B	ND	ND	ND		
Herbicides- SW-846 8151A	ND	ND	ND		
Organophosphorous Pesticides SW-846 8140	NA	ND	NA		
Organochlorine Pesticides- SW-846 8081A	ND	ND	ND		
Phenols (Total)	NA	ND	NA		
PCBs 8082	ND	ND	NA		
Reporting Units (unless otherwise specified)	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**

Table 2. Groundwater Sample Results Summary - December 1998
Annual Groundwater Sampling - Monitoring Well O
Cannon Air Force Base, Clovis, New Mexico (continued)

[1] MCLG	=	Maximum Contaminant Level Goal
[2] SMCL	=	Secondary Maximum Contaminant Level
[3]	=	New Mexico State Standards – Water Quality Control Commission (November 1996). Title 20, Chapter 6, Part 2, Subpart 3103. Dissolved fraction, requires filtering.
J	=	Result is detected below reporting limit or is an estimated concentration.
MCL	=	Maximum Contaminant Level
ND	=	analyte not detected above reporting limit
q	=	post-digestion spike recovery fell between 40% and 85% due to matrix interference.

Table 3. Groundwater Sample Results Summary - June 1998
Semiannual Groundwater Sampling - Monitoring Well R
Cannon Air Force Base, Clovis, New Mexico

Analyte and Method	Historical Results (mg/L)	CAFB-0698-MWR (mg/L)	CAFB-0698-MWX2 (mg/L)	EPA MCLs (mg/L)	New Mexico State Standards (mg/L)
Volatile Organic Compounds SW846 8260					
Chloroform	ND-0.00018J	0.019J1	0.00021J1	0.1	0.1
Methylene Chloride	ND-0.00012J	0.00016 UB	0.00019	0.005	0.1
Trichloroethene	ND-0.00011J	0.00023J1	0.00014J1	0.005	0.1
TAL Metals (total) SW846 6010A					
Barium	0.058-0.091	0.0543	0.0537	2	1
Calcium	NA	NA	NA		
Chromium	ND-0.021	0.0227	0.0223	0.1	0.05
Copper	ND- 0.0053J	NA	NA	1.0[1]	
Iron	NA	**0.594**	**0.647**	0.3[1]	1.0
Lead	ND	0.0014	0.0015	0.015[2]	0.05
Magnesium	NA	NA	NA		
Manganese	NA	**0.0756**	**0.0847**	0.05[1]	0.2
Nickel	0.042-0.52	**0.359**	**0.397**	0.1	0.2
Potassium	NA	NA	NA		
Selenium	ND-0.006	0.005	0.0051	0.05	0.05
Sodium	NA	43.3	43.7		
Vanadium	0.0073J-0.010	0.0107	0.011		
General Chemistry					
Nitrate EPA 300.0A	ND-5.2	4.9	4.9	10	10
Chloride EPA 325.3	NA	119	120	250	250
Sulfate S EPA 375.4	NA	132	130	500	600
Other Constituents					
Semi-Volatile Organic Compounds SW-846 8270B	ND	ND	ND		
Herbicides- SW-846 8150	ND	ND	ND		
Organophosporous Pesticides SW-846 8140	ND	ND	ND		
Organochlorine Pesticides SW-846 8081	ND	ND	ND		
Phenols EPA 420.2	NA	NA	NA		
PCBs SW-846 8082	ND	ND	ND		

Table 3. Groundwater Sample Results Summary - June 1998
Semiannual Groundwater Sampling - Monitoring Well R
Cannon Air Force Base, Clovis, New Mexico

[1] Secondary Maximum Contaminant Level (SMCL)
[2] Maximum Contaminate Level Goal (MCLG)
[3] EPA Action Level

J	=	result is below the reporting limit; value is an estimated quantity
J1	=	estimated concentration detected between method detection limit and reporting limit
MCL	=	maximum contaminant level
mg/L	=	milligrams per Liter
NA	=	not analyzed
ND	=	analytes not detected above reporting limits
UB	=	not detected, result associated with blank contamination

Note: All samples collected on December 8, 1998; see Appendix II for reporting limits and method detection limits for all analytes.

Table 4. Groundwater Sample Results Summary – December 1998
Semiannual Groundwater Sampling - Monitoring Well R
Cannon Air Force Base, Clovis, New Mexico

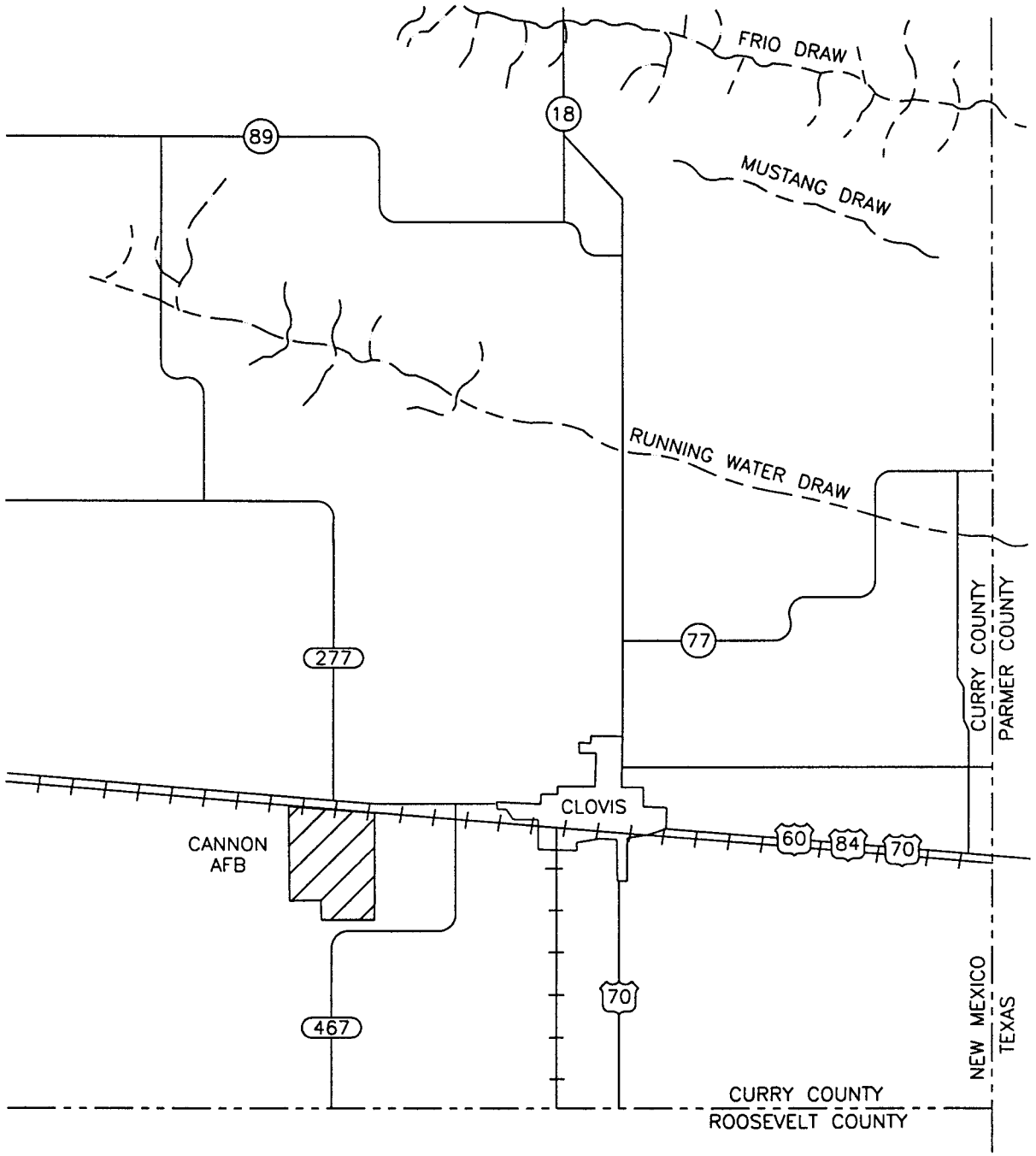
Analyte and Method	Historical Results (mg/L)	CAFB-MWR-1298-1 (mg/L)	CAFB-MWR-1298-2 (mg/L)	EPA MCLs (mg/L)	New Mexico State Standards (mg/L)
Volatile Organic Compounds SW846 8260					
Chloroform	ND-0.00018J	0.00017J1	0.00017J1	0.1	0.1
Methylene Chloride	ND-0.00012J	0.0017	0.0013	0.005	0.1
Trichloroethene	ND-0.00011J	0.00011J1	ND	0.005	0.1
TAL Metals (total) SW846 6010A					
Barium	0.058-0.091	0.0582	0.0572	2	1
Calcium	NA	59.3	58.0		
Chromium	ND-0.021	**0.148**	**0.148**	0.1	0.05
Copper	ND- 0.0053J	0.0033 B	0.0111 B	1.0[1]	
Iron	NA	**0.76**	**1.01**	0.3[1]	1.0
Lead	ND	ND	ND	0.015[2]	0.05
Magnesium	NA	62.9	61.7		
Manganese	NA	**0.0879**	**0.0998**	0.05[1]	0.2
Mercury		**ND**	**ND**	0.002	0.002
Nickel	0.042-0.52	**0.381**	**0.460**	0.1	0.2
Potassium	NA	8.59	8.38		
Selenium	ND-0.006	0.011	0.0099	0.05	0.05
Sodium	NA	43.6	42.9	-----	-----
Vanadium	0.0073J-0.010	0.013	0.0123		
General Chemistry					
Nitrate EPA 300.0A	ND-5.2	4.5 UJ	4.6UJ	10	10
Chloride EPA 325.3	NA	142	124	250	250
Sulfate S EPA 375.4	NA	144	150	500	600
Other Constituents					
Semi-Volatile Organic Compounds SW-846 8270B	ND	ND	ND		
Herbicides- SW-846 8150	ND	ND	ND	------	
Organophosporous Pesticides SW-846 8140	ND	ND	ND	-----	
Organochlorine Pesticides SW-846 8081	ND	ND	ND	-----	-----
Phenols EPA 420.2	NA	ND	ND		----
PCBs SW-846 8082		ND	ND		-----

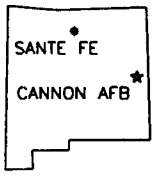
Table 4. Groundwater Sample Results Summary – December 1998
Semiannual Groundwater Sampling - Monitoring Well R
Cannon Air Force Base, Clovis, New Mexico (continued)

[1] Secondary Maximum Contaminant Level (SMCL)
[2] Maximum Contaminate Level Goal (MCLG)
[3] EPA Action Level

J = result is below the reporting limit; value is an estimated quantity
J1 = estimated concentration detected between method detection limit and reporting limit
MCL = maximum contaminant level
mg/L = milligrams per Liter
NA = not analyzed
ND = analytes not detected above reporting limits
UB = not detected, result associated with blank contamination

Note: All samples collected on December 8, 1998; see Appendix II for reporting limits and method detection limits for all analytes.





NEW MEXICO

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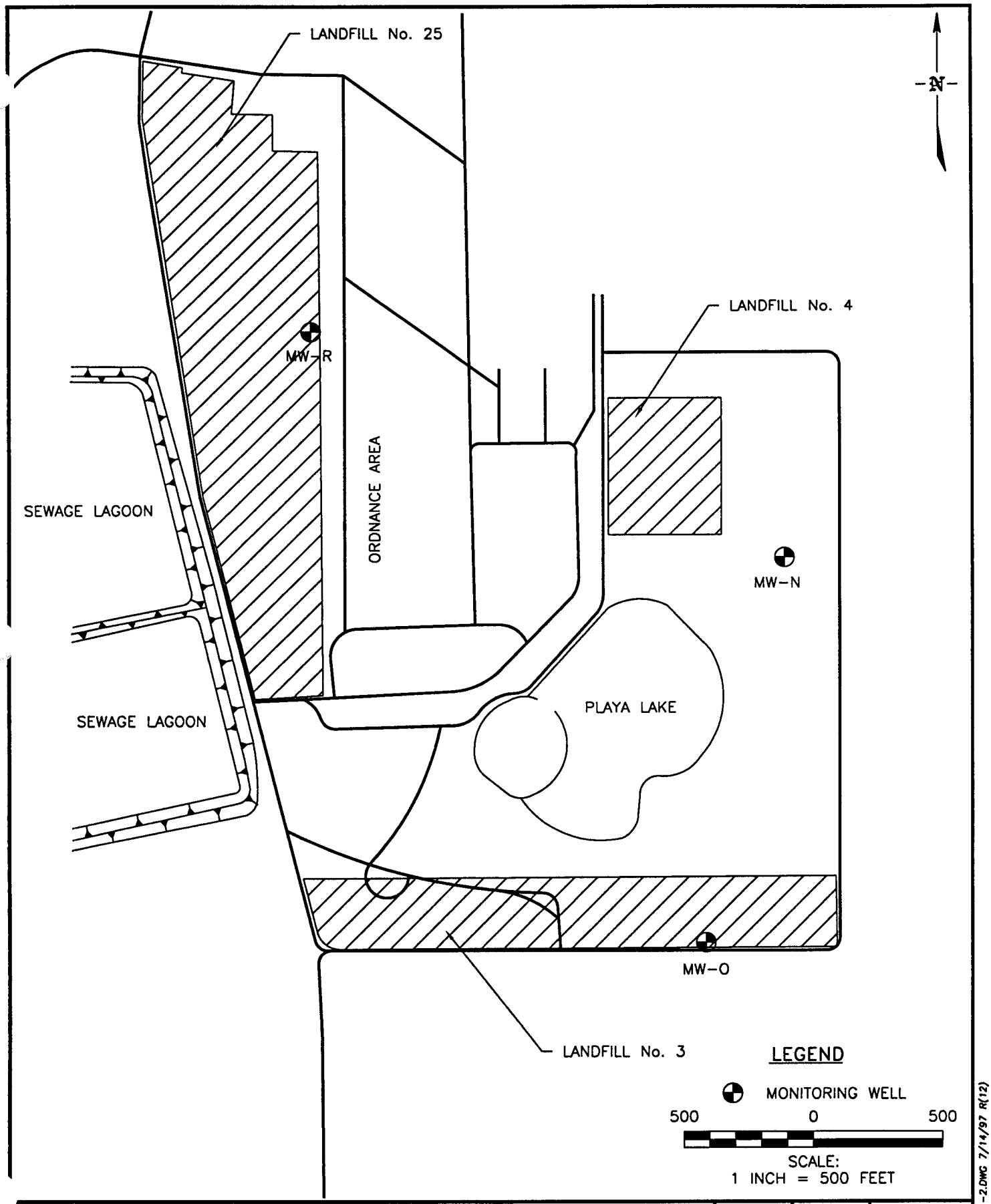
SCALE IN MILES

FEC
FOOTHILL ENGINEERING CONSULTANTS, INC.

FIGURE 1 SITE LOCATION MAP CANNON AIR FORCE BASE	DATE:	SCALE:	DRAWN BY:
	10/98	SHOWN	SHN

96-333\FIGURE1.DWG 10/23/98 R13



FEC
FOOTHILL ENGINEERING CONSULTANTS, INC.

FIGURE 2 MONITORING WELL LOCATION MAP CANNON AIR FORCE BASE	DATE:	SCALE:	DRAWN BY:
	7/97	1"=500'	SHN

96-333\FIGA-1-2.DWG 7/14/97 R(12)

ANNUAL SUMMARY REPORT FOR ASSESSMENT MONITORING

This form is for annual presentation of data by all facilities operating under interim status. 20 NMAC 4.1 Subpart VI Section 2655.93 (f) and 265.94 (b)

NEW MEXICO ENVIRONMENT DEPARTMENT
HAZARDOUS AND RADIOACTIVE MATERIALS BUREAU
525 CAMINO DE LOS MARQUEZ, SUITE 4
SANTA FE, NEW MEXICO 87502

FACILITY NAME **Cannon Air Force Base**

EPA I.D. NUMBER **NM7572124454**

WELL NUMBER **MW-N**

		SAMPLE DATES			
		12/08/98	12/09/97	6/5/97	
PARAMETERS	UNITS	VALUE			
Elev. of G. Water	ft.	3985.77	3992.3	3993.2	
pH (Avg.)	S.U.	8.02	7.73	7.46	
Spec Cond (Avg.)	umhos/cm	0.879	0.741	0.812	
Chloride	mg/l	70.9	NA	NA	NA
Iron	mg/l	ND	NA	NA	NA
Manganese	mg/l	ND	NA	NA	NA
Phenols	mg/l	ND	ND	ND	ND
Sodium	mg/l	37.8	NA	NA	NA
Sulfate	mg/l	148	NA	NA	NA
Turbidity	NTU	O(F)	-10(f)		

NA = not analyzed ND = not detected J = estimated concentration

Annual Summary Report for Assessment Monitoring (continued)

Well Number: **MW-N** Facility **Cannon Air Force Base**

APPENDIX IX PARAMETERS

PARAMETERS	UNITS	SAMPLE DATES 12/08/98	12/29/97		
		VALUE			
Arsenic	mg/l	**NA**	**0.0043J**		
Barium	mg/l	**0.058**	**0.062**		
Chromium	mg/l	**ND**	**ND**		
Cobalt	mg/l	**ND**	**0.0054J**		
Lead	mg/l	**NA**	**ND**		
Mercury	mg/l	**ND**	**ND**		
Nickel	mg/l	**ND**	**ND**		
Selenium	mg/l	**NA**	**0.0063q**		
Thallium	mg/l	**ND**	**ND**		
Tin	mg/l	**ND**	**ND**		
Vanadium	mg/l	**0.0232**	**0.022**		
Zinc	mg/l	**ND**	**ND**		
bis-2-ethylhexylphthalate	µg/l	**ND**	**ND**		

ND = analyte not detected above reporting limit

ANNUAL SUMMARY REPORT FOR ASSESSMENT MONITORING

This form is for annual presentation of data by all facilities operating under interim status. 20 NMAC 4.1 Subpart VI Section 2655.93 (f) and 265.94 (b)

NEW MEXICO ENVIRONMENT DEPARTMENT
HAZARDOUS AND RADIOACTIVE MATERIALS BUREAU
525 CAMINO DE LOS MARQUEZ, SUITE 4
SANTA FE, NEW MEXICO 87502

FACILITY NAME **Cannon Air Force Base**

EPA I.D. NUMBER **NM7572124454**

WELL NUMBER **MW-O**

		SAMPLE DATES			
		12/08/98	12/9/97		
PARAMETERS	UNITS	VALUE			
Elev. of G. Water	ft.	3980.73	3987.96		
pH (Avg.)	S.U.	7.48	6.92		
Spec Cond (Avg.)	umhos/cm	1.57	2.06		
Chloride	mg/l	266	NA		
Iron	mg/l	ND	NA		
Manganese	mg/l	ND	NA		
Phenols	mg/l	ND	ND		
Sodium	mg/l	189	NA		
Sulfate	mg/l	145	NA		
Turbidity	NTU	1.0	-10(f)		

NA = not analyzed ND = not detected J = estimated concentration

Annual Summary Report for Assessment Monitoring (continued)

Well Number: **MW-O** Facility **Cannon Air Force Base**

APPENDIX IX PARAMETERS

		SAMPLE DATES			
		12/08/98	**12/11/97**		
PARAMETERS	UNITS	VALUE			
Arsenic	mg/l	**NA**	**0.0028J**		
Barium	mg/l	**0.045**	**0.054**		
Chromium	mg/l	**ND**	**ND**		
Cobalt	mg/l	**ND**	**ND**		
Lead	mg/l	**NA**	**ND**		
Mercury	mg/l	**ND**	**ND**		
Nickel	mg/l	**ND**	**ND**		
Selenium	mg/l	**NA**	**0.0030J**		
Thallium	mg/l	**ND**	**ND**		
Tin	mg/l	**ND**	**ND**		
Vanadium	mg/l	**0.0194**	**0.019**		
Zinc	mg/l	**ND**	**ND**		
bis-2-ethylhexylphthalate	µg/l	**ND**	**ND**		

ND = analyte not detected above reporting limit

ANNUAL SUMMARY REPORT FOR ASSESSMENT MONITORING

This form is for annual presentation of data by all facilities operating under interim status. 20 NMAC 4.1 Subpart VI Section 2655.93 (f) and 265.94 (b)

NEW MEXICO ENVIRONMENT DEPARTMENT
HAZARDOUS AND RADIOACTIVE MATERIALS BUREAU
525 CAMINO DE LOS MARQUEZ, SUITE 4
SANTA FE, NEW MEXICO 87502

FACILITY NAME **Cannon Air Force Base**

EPA I.D. NUMBER **NM7572124454**

WELL NUMBER **MW-R**

		SAMPLE DATES			
		06/09/98	12/08/98		
PARAMETERS	UNITS	VALUE			
Elev. of G. Water	ft.	3993.09	3998.52		
pH (Avg.)	S.U.	7.57	7.76		
Spec Cond (Avg.)	umhos/cm	0.64	0.90		
T.O.X. (Avg.)	µg/l	NA	NA		
T.O.C. (Avg.)	mg/l	NA	NA		
Chloride	mg/l	119	142		
Iron	mg/l	0.594	0.76		
Manganese	mg/l	0.0756	0.0879		
Phenols	mg/l	NA	ND		
Sodium	mg/l	43.3	43.6		
Sulfate	mg/l	132	144		
Turbidity	NTU	19.8	0.8		

NA = not analyzed ND = not detected J = estimated concentration

Annual Summary Report for Assessment Monitoring (continued)

Well Number: **MW-R** Facility **Cannon Air Force Base**

APPENDIX IX PARAMETERS

		SAMPLE DATES			
		06/09/98	12/08/98		
PARAMETERS	UNITS	VALUE			
Arsenic	mg/l	**ND**	**ND**		
Barium	mg/l	**0.0543**	**0.0582**		
Chromium	mg/l	**0.0227**	**0.148**		
Cobalt	mg/l	**ND**	**ND**		
Lead	Mg/l	**0.0014**	**ND**		
Mercury	Mg/l	**NA**	**NA**		
Nickel	Mg/l	**0.359**	**0.381**		
Selenium	Mg/l	**0.005**	**0.011**		
Thallium	Mg/l	**ND**	**ND**		
Tin	Mg/l	**0.0657**	**ND**		
Vanadium	Mg/l	**0.011**	**0.013**		
Zinc	Mg/l	**ND**	**ND**		
bis-2-ethylhexylphthalate	µg/l	**ND**	**ND**		

J = Result is detected below reporting limit or is an estimated concentration.
ND = analyte not detected above reporting limit
q = post-digestion spike recovery fell between 40% and 85% due to matrix interference.

APPENDIX I

NMED Assessment Monitoring Reports

Well N
December 1998

Annual Report

ASSESSMENT MONITORING ANNUAL REPORT

NEW MEXICO ENVIRONMENT DEPARTMENT
HAZARDOUS & RADIOACTIVE MATERIALS BUREAU
525 CAMINO DE LOS MARQUEZ, SUITE 4
SANTA FE, NM 87502

This set of data sheets is for use by all facilities in assessment monitoring (20 NMAC 4.1, Subpart VI, Section 265.93(D) (4), (5) and (7) (e) and (f), and Section 265.94 (b).

FACILITY NAME **Cannon Air Force Base** EPA I.D.# **NM 7572124454**

WELL NUMBER **MW-N** SAMPLE COLLECTION BY **Foothill Engineering Consultants, Inc.**

LABORATORY NAME **Quanterra Inc.** DATE SAMPLED **12/08/98**

TIME SAMPLED **1200** DATE RECEIVED BY LAB **12/09/98**

PARAMETERS	STORET CODE	UNITS	VALUE	DATE ANALYZED
Elevation of G. Water	71993	ft.	3985.77	12/08/98
Well Depth	N/A	ft.	297.5	12/08/98
Well Casing Volume	N/A	gal.	10.5	12/08/98
Pump Rate	N/A	gal/min	1/3	12/08/98
Pump Period	72004	min.	61	12/08/98
Volume Evacuated	73675	gal.	31.8	12/08/98
Sampler Material	N/A	N/A	TEFLN	12/08/98
Well Sampling Method:	PSPMP			

Assessment Monitoring Annual Report (continued)

Well Number: MW-N Facility Name Cannon Air Force Base

INDICATOR PARAMETERS

PARAMETERS	STORET CODE	UNITS	VALUE	DETECTION LIMIT	DATE ANALYZED	METHOD USED
pH	00400	S.U.	8.09 (f)	N/A	12/08/98	
	00400	S.U.	8.05 (f)	N/A	12/08/98	Field Probe
	00400	S.U.	8.02 (f)	N/A	12/08/98	
	00400	S.U.	8.01 (f)	N/A	12/08/98	
Specific Conductivity	00095	umhos/cm	0.859 (f)	N/A	12/08/98	
	00095	umhos/cm	0.863 (f)	N/A	12/08/98	Field Probe
	00095	umhos/cm	0.871 (f)	N/A	12/08/98	
	00095	umhos/cm	0.887 (f)	N/A	12/08/98	
TOX	70354	µg/L	ND	30.0	12/08/98	
	70354	mg/L	N/A	N/A	N/A	SW846-9020
	70354	mg/L	N/A	N/A	N/A	
	70354	mg/L	N/A	N/A	N/A	
TOC	00680	mg/L	1.2	1.0	12/08/98	
	00680	mg/L	N/A	N/A	N/A	SW846-9060
	00680	mg/L	N/A	N/A	N/A	
	00680	mg/L	N/A	N/A	N/A	

Assessment Monitoring Annual Report (continued)

Well Number: MW-N Facility Name Cannon Air Force Base

INDICATOR PARAMETERS

PARAMETERS	STORET CODE	UNITS	VALUE	DETECTION LIMIT	DATE ANALYZED	METHOD USED
Chloride	00940	mg/L	70.9	30	12/30/98	325.3
Iron	01045	mg/L	ND	0.1	12/23/98	6010a
Manganese	71883	mg/L	ND	0.01	12/23/98	6010A
Phenols	32730	mg/L	ND	0.20	12/31/98	420.2
Sodium	00929	mg/L	37.8	5	12/22/98	6010A
Sulfate	00945	mg/L	148	15	12/28/98	375.4
Turbidity		TU	0(f)	N/A	12/08/98	Horiba-U10

Date Of This Report: 5/20/99

Signature:

Name (Printed): KAREN HOLLIWAY

Assessment Monitoring Annual Report (continued)

Well Number: MW-N Facility Name Cannon Air Force Base

MONITORING WELL APPENDIX IX DATA FOR FACILITIES IN ASSESSMENT

Under assessment monitoring, per 20 NMAC 4.1 Subpart VI Section 265.93 (d) (4), (5), and (7) and per 42 Federal Register, 25942 (July 9, 1987), please list values for the Appendix IX parameters which were found in your Appendix IX scan.

PARAMETER	STORET CODE	VALUE	UNITS	DETECTION LIMIT	DATE EXTRACTED	DATE ANALYZED	METHOD USED
Barium		0.0582	mg/L	0.010	12/21/98	12/23/98	-6010A
Nickel		ND	mg/L	0.040	12/21/98	12/23/98	6010A
Vanadium		0.0232	mg/L	0.010	12/21/98	12/23/98	6010A
TOC		NA	mg/L	NA	NA	NA	SW846 9060
TOX		NA	mg/L	NA	NA	NA	SW846-9020

Well O
December 1998

Annual Report

ASSESSMENT MONITORING ANNUAL REPORT

NEW MEXICO ENVIRONMENT DEPARTMENT
HAZARDOUS & RADIOACTIVE MATERIALS BUREAU
525 CAMINO DE LOS MARQUEZ, SUITE 4
SANTA FE, NM 87502

This set of data sheets is for use by all facilities in assessment monitoring (20 NMAC 4.1, Subpart VI, Section 265.93(D) (4), (5) and (7) (e) and (f), and Section 265.94 (b).

FACILITY NAME **Cannon Air Force Base** EPA I.D.# **NM 7572124454**

WELL NUMBER **MW-O** SAMPLE COLLECTION BY **Foothill Engineering Consultants, Inc.**

LABORATORY NAME **Quanterra Inc.** DATE SAMPLED **12/08/98**

TIME SAMPLED **1150** DATE RECEIVED BY LAB **12/09/98**

PARAMETERS	STORET CODE	UNITS	VALUE	DATE ANALYZED
Elevation of G. Water	71993	ft.	3980.73	12/08/98
Well Depth	N/A	ft.	303.9	12/08/98
Well Casing Volume	N/A	gal.	9.32	12/08/98
Pump Rate	N/A	gal/min	½	12/08/98
Pump Period	72004	min.	50	12/08/98
Volume Evacuated	73675	gal.	28	12/08/98
Sampler Material	N/A	N/A	TEFLN	
Well Sampling Method:	PSPMP			

Assessment Monitoring Annual Report (continued)

Well Number: MW-O Facility Name Cannon Air Force Base

INDICATOR PARAMETERS

PARAMETERS	STORET CODE	UNITS	VALUE	DETECTION LIMIT	DATE ANALYZED	METHOD USED
pH	00400	S.U.	7.44 (f)	N/A	12/08/98	
	00400	S.U.	7.45 (f)	N/A	12/08/98	Field Probe
	00400	S.U.	7.49 (f)	N/A	12/08/98	
	00400	S.U.	7.48 (f)	N/A	12/08/98	
Specific Conductivity	00095	Umhos/cm	1.81 (f)	N/A	12/08/98	
	00095	Umhos/cm	1.65 (f)	N/A	12/08/98	Field Probe
	00095	Umhos/cm	1.58 (f)	N/A	12/08/98	
	00095	Umhos/cm	1.56 (f)	N/A	12/08/98	
TOX	70354	µg/L				
	70354	mg/L	N/A	N/A	N/A	SW846-9020
	70354	mg/L	N/A	N/A	N/A	
	70354	mg/L	N/A	N/A	N/A	
TOC	00680	mg/L				
	00680	mg/L	N/A	N/A	N/A	SW846-9060
	00680	mg/L	N/A	N/A	N/A	
	00680	mg/L	N/A	N/A	N/A	

Assessment Monitoring Annual Report (continued)

Well Number: MW-O Facility Name Cannon Air Force Base

INDICATOR PARAMETERS

PARAMETERS	STORET CODE	UNITS	VALUE	DETECTION LIMIT	DATE ANALYZED	METHOD USED
Chloride	00940	mg/L	266	30	12/30/98	325.3
Iron	01045	mg/L	ND	1	12/22/98	6010A
Manganese	71883	mg/L	ND	0.010	12/23/98	6010A
Phenols	32730	mg/L	ND	0.020	12/31/98	420.2
Sodium	00929	mg/L	189	5	12/22/98	6010A
Sulfate	00945	mg/L	145	15	12/28/98	375.4
Turbidity		TU	0(f)	N/A	12/08/98	Horiba-U10

Date Of This Report: 5/20/99

Signature:

Name (Printed): KAREN HOLLIWAY

Assessment Monitoring Annual Report (continued)

Well Number: MW-O Facility Name Cannon Air Force Base

MONITORING WELL APPENDIX IX DATA FOR FACILITIES IN ASSESSMENT

Under assessment monitoring, per 20 NMAC 4.1 Subpart VI Section 265.93 (d) (4), (5), and (7) and per 42 Federal Register, 25942 (July 9, 1987), please list values for the Appendix IX parameters which were found in your Appendix IX scan.

PARAMETER	STORET CODE	VALUE	UNITS	DETECTION LIMIT	DATE EXTRACTED	DATE ANALYZED	METHOD USED
Barium		0.0451	mg/L	0.010	12/21/98	12/23/98	6010A
Nickel		ND	mg/L	0.040	12/21/98	12/23/98	6010A
Vanadium		0.0194	mg/L	0.010	12/21/98	12/23/98	6010A
TOC		NA	mg/L	1.0			SW846-9060
TOX		NA	mg/L	0.030	N/A		SW846-9020

Well R
June 1998

Sample Event
(corrected Semi-annual report)

ASSESSMENT MONITORING SEMI-ANNUAL REPORT
(corrected May 1999)

NEW MEXICO ENVIRONMENT DEPARTMENT
HAZARDOUS & RADIOACTIVE MATERIALS BUREAU
525 CAMINO DE LOS MARQUEZ, SUITE 4
SANTA FE, NM 87502

This set of data sheets is for use by all facilities in assessment monitoring (20 NMAC 4.1, Subpart VI, Section 265.93(D) (4), (5) and (7) (e) and (f), and Section 265.94 (b).

FACILITY NAME **Cannon Air Force Base** EPA I.D.# **NM 7572124454**

WELL NUMBER **MW-R** SAMPLE COLLECTION BY **Foothill Engineering Consultants, Inc.**

LABORATORY NAME **Quanterra Inc.** DATE SAMPLED **6/09/98**

TIME SAMPLED **1105** DATE RECEIVED BY LAB **6/10/98**

PARAMETERS	STORET CODE	UNITS	VALUE	DATE ANALYZED
Elevation of G. Water	71993	ft.	3993.09	6/09/98
Well Depth	N/A	ft.	307.5	6/09/98
Well Casing Volume	N/A	gal.	34.9	6/09/98
Pump Rate	N/A	gal/min	1	6/09/98
Pump Period	72004	min.	120	6/09/98
Volume Evacuated	73675	gal.	105	6/09/98
Sampler Material	N/A	N/A	TEFLN	6/09/98
Well Sampling Method:	PSPMP			

ASSESSMENT MONITORING SEMI-ANNUAL REPORT (continued)

Well Number: **MW-R** Facility Name **Cannon Air Force Base**

INDICATOR PARAMETERS

PARAMETERS	STORET CODE	UNITS	VALUE	DETECTION LIMIT	DATE ANALYZED	METHOD USED
pH	00400	S.U.	7.37 (f)	N/A	6/09/98	
	00400	S.U.	7.55(f)	N/A	6/09/98	Field Probe
	00400	S.U.	7.61 (f)	N/A	6/09/98	
	00400	S.U.	7.73 (f)	N/A	6/09/98	
Specific Conductivity	00095	umhos/cm	0.640 (f)	N/A	6/09/98	
	00095	umhos/cm	0.640 (f)	N/A	6/09/98	Field Probe
	00095	umhos/cm	0.641 (f)	N/A	6/09/98	
	00095	umhos/cm	0.641 (f)	N/A	6/09/98	
TOX	70354	µg/L	N/A	N/A	N/A	
	70354	mg/L	N/A	N/A	N/A	N/A
	70354	mg/L	N/A	N/A	N/A	
	70354	mg/L	N/A	N/A	N/A	
TOC	00680	mg/L	N/A	N/A	N/A	
	00680	mg/L	N/A	N/A	N/A	N/A
	00680	mg/L	N/A	N/A	N/A	
	00680	mg/L	N/A	N/A	N/A	

ASSESSMENT MONITORING SEMI-ANNUAL REPORT (continued)

Well Number: **MW-R** Facility Name **Cannon Air Force Base**

INDICATOR PARAMETERS

PARAMETERS	STORET CODE	UNITS	VALUE	DETECTION LIMIT	DATE ANALYZED	METHOD USED
Chloride	00940	mg/L	119	30	6/10/98	EPA 300.0
Iron	01045	mg/L	0.594	100	7/06/98	SW6010
Manganese	71883	mg/L	0.0756	0.010	7/06/98	SW6010
Phenols	32730	mg/L	N/A	N/A	N/A	EPA 420.2
Sodium	00929	mg/L	43.3	5.0	7/06/98	SW6010
Sulfate	00945	mg/L	132	50	6/11/98	SW375.4
Turbidity		NTU	19.8 (f)	N/A	6/09/98	Horiba-U10

Date Of This Report: 10/08/98

Signature: _____

Name (Printed): Ian Broussard

ASSESSMENT MONITORING SEMI-ANNUAL REPORT (continued)

Well Number: **MW-R** Facility Name **Cannon Air Force Base**

MONITORING WELL APPENDIX IX DATA FOR FACILITIES IN ASSESSMENT

Under assessment monitoring, per 20 NMAC 4.1 Subpart VI Section 265.93 (d) (4), (5), and (7) and per 42 Federal Register, 25942 (July 9, 1987), please list values for the Appendix IX parameters which were found in your Appendix IX scan.

PARAMETER	STORET CODE	VALUE	UNITS	DETECTION LIMIT	DATE EXTRACTED	DATE ANALYZED	METHOD USED
Barium		0.0543		0.010	6/22/98	7/06/98	SW846-6010A
Chromium		0.0227	µg/l	0.010	6/22/98	7/06/98	SW846-6010A
Lead		0.0014	mg/L	0.05	6/24/98	6/29/98	SW846-7421
Nickel		0.359	µg/l	0.040	6/22/98	7/06/98	SW846-6010A
Nitrate		4.9	mg/L	0.50	6/10/98	6/11/98	EPA 300.0A
Selenium		0.0050	µg/l	0.0050	6/24/98	6/29/98	SW846-7740
Vanadium		0.0107	µg/l	0.010	6/22/98	7/06/98	SW846-6010A

Well R
December 1998

Semi-Annual Report

ASSESSMENT MONITORING SEMI-ANNUAL REPORT

NEW MEXICO ENVIRONMENT DEPARTMENT
HAZARDOUS & RADIOACTIVE MATERIALS BUREAU
525 CAMINO DE LOS MARQUEZ, SUITE 4
SANTA FE, NM 87502

This set of data sheets is for use by all facilities in assessment monitoring (20 NMAC 4.1, Subpart VI, Section 265.93(D) (4), (5) and (7) (e) and (f), and Section 265.94 (b).

FACILITY NAME **Cannon Air Force Base** EPA I.D.# **NM 7572124454**

WELL NUMBER **MW-R** SAMPLE COLLECTION BY **Foothill Engineering Consultants, Inc.**

LABORATORY NAME **Quanterra Inc.** DATE SAMPLED **12/08/98**

TIME SAMPLED **1315** DATE RECEIVED BY LAB **12/09/98**

PARAMETERS	UNITS	VALUE	DATE ANALYZED
Elevation of G. Water	ft.	3998.52	12/08/98
Well Depth	ft.	307.5	12/08/98
Well Casing Volume	Gal.	31.22	12/08/98
Pump Rate	Gal/min	0.66	12/08/98
Pump Period	Min.	150	12/08/98
Volume Evacuated	Gal.	93.6	12/08/98
Sampler Material	N/A	TEFLN	12/08/98
Well Sampling Method:		PSPMP	

ASSESSMENT MONITORING SEMI-ANNUAL REPORT (continued)

Well Number: MW-R Facility Name Cannon Air Force Base

INDICATOR PARAMETERS

PARAMETERS	UNITS	VALUE	DETECTION LIMIT	DATE ANALYZED	METHOD USED
pH	S.U.	7.96 (f)	N/A	12/08/98	Field Probe
	S.U.	7.87 (f)	N/A	12/08/98	
	S.U.	7.87 (f)	N/A	12/08/98	
	S.U.	7.93 (f)	N/A	12/08/98	
	S.U.	7.92 (f)	N/A	12/08/98	
	S.U.	7.0 (f)	N/A	12/08/98	
Specific Conductivity	umhos/cm	1.11(f)	N/A	12/08/98	Field Probe
	umhos/cm	0.861(f)	N/A	12/08/98	
	umhos/cm	0.863 (f)	N/A	12/08/98	
	umhos/cm	0.864 (f)	N/A	12/08/98	
	umhos/cm	0.858 (f)	N/A	12/08/98	
	umhos/cm	0.860 (f)	N/A	12/08/98	

ASSESSMENT MONITORING SEMI-ANNUAL REPORT (continued)

Well Number: MW-R Facility Name Cannon Air Force Base

MONITORING WELL APPENDIX IX DATA FOR FACILITIES IN ASSESSMENT

Under assessment monitoring, per 20 NMAC 4.1 Subpart VI Section 265.93 (d) (4), (5), and (7) and per 42 Federal Register, 25942 (July 9, 1987), please list values for the Appendix IX parameters which were found in your Appendix IX scan.

PARAMETER	STORET CODE	VALUE	UNITS	DETECTION LIMIT	DATE EXTRACTED	DATE ANALYZED	METHOD USED
Arsenic		ND	mg/L	0.0010	12/22/98	12/22/98	SW846-7060A
Barium		0.058	mg/L	0.010	12/22/98	12/22/98	SW846-6010
Chromium		0.148	mg/L	0.010	12/22/98	12/22/98	SW846-6010
Nickel		0.381	mg/L	0.040	12/22/98	12/22/98	SW846-6010
Selenium		0.011	mg/L	0.0050	12/22/98	12/22/98	SW846-7740
Tin		ND	mg/L	0.10	12/22/98	12/22/98	SW846-6010
Vanadium		0.013	mg/L	0.010	12/22/98	12/22/98	SW846-6010

ASSESSMENT MONITORING SEMI-ANNUAL REPORT (continued)

Well Number: MW-R Facility Name Cannon Air Force Base

INDICATOR PARAMETERS

PARAMETERS	STORET CODE	UNITS	VALUE	DETECTION LIMIT	DATE ANALYZED	METHOD USED
Chloride	00940	mg/L	142	0.030	12/23/98	EPA 325.3
Iron	01045	mg/L	0.76	0.10	12/22/98	SW846-6010A
Manganese	71883	mg/L	0.0879	0.010	12/23/98	SW846-6010A
Phenols	32730	mg/L	ND		12/23/98	EPA 420.2
Sodium	00929	mg/L	43.6	5	12/22/98	SW846-6010A
Sulfate	00945	mg/L	144	15	12/23/98	EPA 375.4
Turbidity		TU	0.8	N/A	N/A	N/A

Date Of This Report: _____

Signature: _____

Name (Printed): _____

APPENDIX II

Field Forms

June 1998
Sample Event

Well Purge Data Sheet for June 9, 1998 - Clovis, New Mexico

Water Column = (_____) feet X 0 .655 = Bore Volume = _____

Groundwater Quality Parameters - MW N, 9 Jun. 1998 TD=297.5 (-) DTW= = WC =						
Bore Volumes	pH	Conductivity	Turbidity	Dissolved Oxygen	Temperature	Salinity
½ = _____						
1 = _____						
1½ = _____						
2 = _____						
2½ = _____						
3 = _____						

Water Column = (_____) feet X 0 .655 = Bore Volume = _____

Groundwater Quality Parameters - MW O, 9 Jun. 1998 TD= 303.9 (-) DTW= = WC =						
Bore Volumes	pH	Conductivity	Turbidity	Dissolved Oxygen	Temperature	Salinity
½ = _____						
1 = _____						
1½ = _____						
2 = _____						
2½ = _____						
3 = _____						

Water Column = (23.3) feet X 1.469 = Bore Volume = 34.9 gal

Time	Groundwater Quality Parameters - MW R, 9 Jun. 1998 TD= 307.5 (-) DTW=283.7 = WC = 23.3						
	Bore Volumes	pH	Conductivity	Turbidity	Dissolved Oxygen	Temperature	Salinity
914	½ = 17.5	7.37	640 mS/cm	69 ntu	612 mg/l	17.9 C	0.021
936	1 = 35.0	7.55	.642	27	5.78	18.3	0.02
956	1½ = 52.5	7.73	.640	27	6.51	18.4	0.02
1016	2 = 70.	7.61	.638	21	5.87	19.1	0.02
1035	2½ = 87.5	7.71	.646	20	5.62	19.2	0.02
1101	3 = 105	7.73	.641	20	5.51	19.1	0.02
0656	initial Amt removed	7.30	.637	198	10.77	17.6	0.02

* 1052 - 1057 stop purging to change Nitrogen cylinder

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DAILY QUALITY CONTROL REPORT

PROJECT: LTMP LANDFILL No 25 - MWR Date: 6/9/99

LOCATION: CANNON AFB Clovis, NM Weather: Sunny/ Partly Cloudy

97-336 Temp: 75°

Wind: North - 5 mph

Humidity: low - med

PERSONNEL

Name	Position	Hours Worked
Curtis Carter	FTL/Geologist	
JENNIFER HUSSEY	Geologist	

FIELD INSTALLATIONS

ID No(s).			
Drilled:			
from			
to		NA	
Footage			
Casing Set			
Screen			
Riser			

EQUIPMENT

	Serial #	Calibrated to
OVA		
O_2/LEL		
pH/Conductivity/Temp.	13861	4.0 = pH
Other		4.49 mS/cm = conductivity
		Auto = turbidity

Hach U-10

Hours Drilling
Hours Installing
Hours Decon NA
Hours Development
Hours Sampling
Hours Shut Down
# of Samples Type

SAMPLING SUMMARY:

Sample ID	Media	QC
CAFB06098MWR	GW	
CAFB06098MWX		(Duplicate)
CAFB06098MWR-S		(Field split)

Analytes: VOC, RCB/Organochlorinated Pest, ~~RCRA~~ CAC Metals + Nickel, Chlorinated Herbicides/Herbic, Organophosphate Pesticides, Phenol, Chloride, Sulfate, Nitrate, SVOC

Description of work performed: 0735 - FTC on base pick up vehicle pass key to Env Flight to pick up nitrogen bottles & supplies & well key. 0835 - prep for sampling MWR at landfill 25 and calibrated Hach U-10. Purged and sampled MWR - Purged a total of 105 gal (3 casing volumes). Parameters were stable. LOG - packed samples to FedEx to MRD. 1325 - FTC off site. Dropped off samples to MRD at FEDEX pick-up point - will hand deliver investigative & duplicate samples to Quanterra lab tomorrow morning. 1430 - head back to Denver

Health and Safety Levels: Level D Summary of Monitoring Activities:

Problems encountered/Corrective Actions: NONE

Any changes from work plan? NONE

Signature:

December 1998
Sample Event

Well Purge Data Sheet for Dec 8, 1998 - Clovis, New Mexico

Water Column = (16.07) feet X 0 .655 = Bore Volume = 10.5

1100

Groundwater Quality Parameters - MW ~~N~~ STET, 8 Dec. 1998 TD=297.5 (-) DTW= ~~297.67~~ 281.43 = WC = 16.07						
Bore Volumes	pH	Conductivity	Turbidity	Dissolved Oxygen	Temperature	Salinity
½= ~~7.5.3~~	~~8.09~~ ~~7.44~~	~~1.859~~ ~~1.81~~	~~0.5~~ ~~8.6~~	~~7.51~~ 8.13	~~14.2~~ 16.3	~~0.68~~ 0.03
1= 10.6	8.05	.863	0	8.68	16.8	0.03
1½= 15.9	8.02	.871	0	9.58	17.4	0.03
2= 21.2	8.02	.887	0	9.83	17.2	0.03
2½= 26.5	8.01	.878	0	9.76	17.2	0.03
3= 31.8	8.01	.883	0	9.51	17.2	0.03

1201

Water Column = (14.23) feet X 0 .655 = Bore Volume = 9.32

0915

Groundwater Quality Parameters - MW ~~O~~ STET, 8 Dec. 1998 TD= 303.9 (-) DTW= 289.67 = WC = 14.23						
Bore Volumes	pH	Conductivity	Turbidity	Dissolved Oxygen	Temperature	Salinity
½= 4.7	7.44	1.81	8.6	7.51	14.2	0.06
1= 9.3	7.45	1.65	0.1	7.15	14.9	0.07
1½= 14	7.49	1.58	4.4	7.66	14.8	0.07
2= 18.6	7.48	1.57	0	7.65	15.0	0.07
2½= 23.3	7.49	1.56	1.0	7.49	14.9	0.07
3= 28	7.47	1.57	0	7.48	14.7	0.07

1025

Water Column = (21.25) feet X 1.469 = Bore Volume = 31.22

1230

Groundwater Quality Parameters - MW R, 8 Dec. 1998 TD= 307.5 (-) DTW= ~~286.25~~ = WC = 21.25						
Bore Volumes	pH	Conductivity	Turbidity	Dissolved Oxygen	Temperature	Salinity
½= ~~31.2~~ 15.6	7.96	1.11	6.9	7.48	17.2	0.03
1= ~~62.4~~ 31.2	7.87	.861	2.9	8.80	17.3	0.04
1½= ~~62.4~~ 46.8	7.87	.863	7.9	8.87	17.2	0.03
2= 62.4	7.93	.864	0.8	9.39	17.3	0.03
1.5 2½= 78	7.93	.858	0.8	9.40	17.3	0.03
2 3= 93.6	7.92	0.860	1.0	9.33	17.2	0.03
1500 4 gallons	8.75	1.11	50	9.05	15.7	0.03

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APPENDIX III
Analytical Results/Quality Control Data

June 1998
Analytical Data

Quanterra

ANALYTICAL REPORT

FEC: Cannon AFB

Lot #: D8F100189

Mr. Ian Broussard

Foothill Engineering Consultan

QUANTERRA INCORPORATED

Patrick Brown
Project Manager

August 6, 1998

Facsimile Transmittal

Quanterra Incorporated
4955 Yarrow Street
Arvada, CO 80002
Phone: (303)421-6611
Fax: (303)431-7171
www.quanterra.com

Quanterra®

Date: October 5, 1998

Deliver To: Mr. Ian Broussard

Company: Foothills Engineering

Fax Number: (303)278-0624

From: Ellen La Riviere

Number of Pages Including This Page: 1 *(If you did not receive all pages, please call (303) 421-6611.)*

Comments:

Ian,

I called our Sacramento laboratory to inquire about the method used for 2,3,7,8-TCDD on Quanterra's project number RMAL-059376. You mentioned during our telephone conversation that the invoice references EPA-IFB as the method. The Sacramento laboratory indicated they run Method 8280 for all the low-resolution dioxins. The EPA-IFB method reference seems to be an artifact of the old LIMS system.

I hope this straightens things out for you. If you have any other questions, please do not hesitate to call me.

Ellen

Visit Quanterra's new web site at: http://www.quanterra.com

Did You Know?...

In addition to providing routine chemical testing, Quanterra provides a wide variety of specialty services including:

- Low Level CLP Organics and Inorganics
- Ambient Air Testing (Including TO-14)
- Dioxins/Furans by Methods 8280, 8290, and 1613
- Explosives by Method 8330
- Trial Burn Testing
- High Resolution Mass Spec PCBs
- Endocrine Disrupters
- Mixed Waste Analysis
- On-Site Analytical Services
- Mobile Laboratories

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• Lot Sample Summary		
• Analytical Results by Sample		
• QC Data Association Summary		
• Chain-of-Custody		
Supporting Documentation		
[Please Note: A one-page "Description of Supporting Documentation" is provided in the Supporting Documentation section(s).]		
Volatile GC/MS	B	
Semivolatile GC/MS	C	
Volatile GC	D	
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EXECUTIVE SUMMARY - Detection Highlights

D8F100189

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
CAFB0698MWR 06/09/98 11:05 001				
Barium	54.3	10.0	ug/L	SW846 6010A
Calcium	58400	200	ug/L	SW846 6010A
Chromium	22.7	10.0	ug/L	SW846 6010A
Iron	594	100	ug/L	SW846 6010A
Potassium	7960	5000	ug/L	SW846 6010A
Magnesium	59800	200	ug/L	SW846 6010A
Manganese	75.6	10.0	ug/L	SW846 6010A
Sodium	43300	5000	ug/L	SW846 6010A
Nickel	359	40.0	ug/L	SW846 6010A
Tin	71.0 B	100	ug/L	SW846 6010A
Vanadium	10.7	10.0	ug/L	SW846 6010A
Lead	0.0014	0.0050	mg/L	SW846 7421
	Qualifiers: B,Wa			
Selenium	0.0050 Wa	0.0050	mg/L	SW846 7740
Thallium	0.029 B	1.0	ug/L	SW846 6020
Chloroform	0.19 J	1.0	ug/L	SW846 8260A
Methylene chloride	0.16 J	1.0	ug/L	SW846 8260A
Trichloroethene	0.23 J	1.0	ug/L	SW846 8260A
Chloride	119 Q	30.0	mg/L	MCAWW 300.0A
Sulfate	132 Q	50.0	mg/L	MCAWW 300.0A
Nitrate	4.9 H	0.50	mg/L	MCAWW 300.0A
CAFB0698MWX 06/09/98 12:05 002				
Barium	53.7	10.0	ug/L	SW846 6010A
Calcium	58800	200	ug/L	SW846 6010A
Chromium	22.3	10.0	ug/L	SW846 6010A
Iron	647	100	ug/L	SW846 6010A
Potassium	7660	5000	ug/L	SW846 6010A
Magnesium	59400	200	ug/L	SW846 6010A
Manganese	84.7	10.0	ug/L	SW846 6010A
Sodium	43700	5000	ug/L	SW846 6010A
Nickel	397	40.0	ug/L	SW846 6010A
Tin	65.7 B	100	ug/L	SW846 6010A
Vanadium	11.1	10.0	ug/L	SW846 6010A
Lead	0.0015	0.0050	mg/L	SW846 7421
	Qualifiers: B,Wa			
Selenium	0.0051 Wa	0.0050	mg/L	SW846 7740
Thallium	0.030 B	1.0	ug/L	SW846 6020
Chloroform	0.21 J	1.0	ug/L	SW846 8260A
Methylene chloride	0.19 J	1.0	ug/L	SW846 8260A
Trichloroethene	0.14 J	1.0	ug/L	SW846 8260A
Chloride	120 Q	30.0	mg/L	MCAWW 300.0A

(Continued on next page)

Quanterra

EXECUTIVE SUMMARY - Detection Highlights

D8F100189

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
CAFB0698MWX 06/09/98 12:05 002				
Sulfate	130 Q	50.0	mg/L	MCAWW 300.0A
Nitrate	4.9 H	0.50	mg/L	MCAWW 300.0A
TB02 06/09/98 003				
Methylene chloride	0.36 J	1.0	ug/L	SW846 8260A

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ANALYTICAL METHODS SUMMARY

D8F100189

PARAMETER	ANALYTICAL METHOD
Arsenic (AA, Furnace Technique)	SW846 7060A
Chloride	MCAWW 300.0A
Chlorinated Herbicides by GC	SW846 8150B
Inductively Coupled Plasma (ICP) Metals	SW846 6010A
ICP-MS (6020)	SW846 6020
Lead (AA, Furnace Technique)	SW846 7421
Mercury in Liquid Waste (Manual Cold-Vapor)	SW846 7470A
Nitrate as N	MCAWW 300.0A
Organochlorine Pesticides and PCBs	SW846 8080A
Organophosphorous Pesticides by GC	SW846 8140
Selenium (AA, Furnace Technique)	SW846 7740
Sulfate	MCAWW 300.0A
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010A
Volatile Organics by GC/MS	SW846 8260A

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

Quanterra

METHOD / ANALYST SUMMARY

D8F100189

ANALYTICAL METHOD	ANALYST	ANALYST ID
MCAWW 300.0A	Patty Jungk	002008
SW846 6010A	William G. Logan	002179
SW846 6020	Dave B. Roberts	002871
SW846 7060A	Robin M. Proctor	003220
SW846 7421	Robin M. Proctor	003220
SW846 7470A	Greg T. Brott	008463
SW846 7470A	Greg T. Brott	8463
SW846 7740	Robin M. Proctor	003220
SW846 8080A	Joseph Jamero	002001
SW846 8140	Bret Collins	001397
SW846 8150B	Houa Vue	003295
SW846 8260A	Mike G. Hoffman	001880

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

Quanterra

SAMPLE SUMMARY

D8F100189

WO #	SAMPLE#	CLIENT SAMPLE ID	DATE	TIME
CHWGH	001	CAFB0698MWR	06/09/98	11:05
CHWJ6	002	CAFB0698MWX	06/09/98	12:05
CHWJ9	003	TB02	06/09/98	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Quanterra

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB0698MWR

GC/MS Volatiles

Lot-Sample #...: D8F100189-001 **Work Order #...:** CHWGH101 **Matrix.....:** WG
Date Sampled...: 06/09/98 11:05 **Date Received..:** 06/10/98
Prep Date.....: 06/19/98 **Analysis Date..:** 06/19/98
Prep Batch #...: 8174330 **Analysis Time..:** 18:56
Dilution Factor: 1 **Method.....:** SW846 8260A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Acetonitrile	ND	20	ug/L
Acrolein	ND	20	ug/L
Acrylonitrile	ND	20	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroprene	ND	1.0	ug/L
Chloroform	**0.19 J**	**1.0**	**ug/L**
Allyl chloride	ND	2.0	ug/L
Chloromethane	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Dibromomethane	ND	1.0	ug/L
Dichlorodifluoromethane	ND	2.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,2-Dichloroethene (total)	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,4-Dichloro-2-butene	ND	1.0	ug/L
Ethyl methacrylate	ND	1.0	ug/L
1,4-Dioxane	ND	200	ug/L
2-Hexanone	ND	5.0	ug/L
Iodomethane	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Isobutyl alcohol	ND	50	ug/L
Methacrylonitrile	ND	1.0	ug/L
Methylene chloride	**0.16 J**	**1.0**	**ug/L**
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L

(Continued on next page)

Quanterra

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB0698MWR

GC/MS Volatiles

Lot-Sample #...: D8F100189-001 Work Order #...: CHWGH101 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Methyl methacrylate	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
Propionitrile	ND	4.0	ug/L
Styrene	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	**0.23 J**	**1.0**	**ug/L**
Trichlorofluoromethane	ND	2.0	ug/L
Vinyl chloride	ND	2.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
Vinyl acetate	ND	2.0	ug/L
Xylenes (total)	ND	1.0	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L
1,2-Dibromoethane (EDB)	ND	1.0	ug/L
2-Butanone (MEK)	ND	5.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	89	(78 - 113)
4-Bromofluorobenzene	102	(88 - 113)
Toluene-d8	100	(90 - 108)

NOTE(S):

J Estimated result. Result is less than RL.

Quanterra

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB0698MWX

GC/MS Volatiles

Lot-Sample #...: D8F100189-002 **Work Order #...:** CHWJ6101 **Matrix.....:** WG
Date Sampled...: 06/09/98 12:05 **Date Received..:** 06/10/98
Prep Date.....: 06/19/98 **Analysis Date..:** 06/19/98
Prep Batch #...: 8174330 **Analysis Time..:** 19:19
Dilution Factor: 1 **Method.....:** SW846 8260A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Acetonitrile	ND	20	ug/L
Acrolein	ND	20	ug/L
Acrylonitrile	ND	20	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroprene	ND	1.0	ug/L
Chloroform	**0.21 J**	**1.0**	**ug/L**
Allyl chloride	ND	2.0	ug/L
Chloromethane	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Dibromomethane	ND	1.0	ug/L
Dichlorodifluoromethane	ND	2.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,2-Dichloroethene (total)	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,4-Dichloro-2-butene	ND	1.0	ug/L
Ethyl methacrylate	ND	1.0	ug/L
1,4-Dioxane	ND	200	ug/L
2-Hexanone	ND	5.0	ug/L
Iodomethane	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Isobutyl alcohol	ND	50	ug/L
Methacrylonitrile	ND	1.0	ug/L
Methylene chloride	**0.19 J**	**1.0**	**ug/L**
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L

(Continued on next page)

Quanterra

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB0698MWX

GC/MS Volatiles

Lot-Sample #...: D8F100189-002 Work Order #...: CHWJ6101 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Methyl methacrylate	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
Propionitrile	ND	4.0	ug/L
Styrene	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	**0.14 J**	**1.0**	**ug/L**
Trichlorofluoromethane	ND	2.0	ug/L
Vinyl chloride	ND	2.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
Vinyl acetate	ND	2.0	ug/L
Xylenes (total)	ND	1.0	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L
1,2-Dibromoethane (EDB)	ND	1.0	ug/L
2-Butanone (MEK)	ND	5.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	90	(78 - 113)
4-Bromofluorobenzene	103	(88 - 113)
Toluene-d8	103	(90 - 108)

NOTE(S):

J Estimated result. Result is less than RL.

Quanterra

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: TB02

GC/MS Volatiles

Lot-Sample #...: D8F100189-003 **Work Order #...:** CHWJ9101 **Matrix.....:** WG
Date Sampled...: 06/09/98 **Date Received..:** 06/10/98
Prep Date.....: 06/19/98 **Analysis Date..:** 06/19/98
Prep Batch #...: 8174330 **Analysis Time..:** 19:41
Dilution Factor: 1 **Method.....:** SW846 8260A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Acetonitrile	ND	20	ug/L
Acrolein	ND	20	ug/L
Acrylonitrile	ND	20	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroprene	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Allyl chloride	ND	2.0	ug/L
Chloromethane	ND	2.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Dibromomethane	ND	1.0	ug/L
Dichlorodifluoromethane	ND	2.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,2-Dichloroethene (total)	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,4-Dichloro-2-butene	ND	1.0	ug/L
Ethyl methacrylate	ND	1.0	ug/L
1,4-Dioxane	ND	200	ug/L
2-Hexanone	ND	5.0	ug/L
Iodomethane	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Isobutyl alcohol	ND	50	ug/L
Methacrylonitrile	ND	1.0	ug/L
Methylene chloride	**0.36 J**	**1.0**	**ug/L**
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L

(Continued on next page)

Quanterra

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: TB02

GC/MS Volatiles

Lot-Sample #...: D8F100189-003 Work Order #...: CHWJ9101 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Methyl methacrylate	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
Propionitrile	ND	4.0	ug/L
Styrene	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	2.0	ug/L
Vinyl chloride	ND	2.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
Vinyl acetate	ND	2.0	ug/L
Xylenes (total)	ND	1.0	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L
1,2-Dibromoethane (EDB)	ND	1.0	ug/L
2-Butanone (MEK)	ND	5.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	88	(78 - 113)
4-Bromofluorobenzene	102	(88 - 113)
Toluene-d8	102	(90 - 108)

NOTE(S):

J Estimated result. Result is less than RL.

Quanterra

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB0698MWR

GC Semivolatiles

Lot-Sample #...: D8F100189-001 Work Order #...: CHWGH10R Matrix.....: WG
Date Sampled...: 06/09/98 11:05 Date Received..: 06/10/98
Prep Date.....: 06/16/98 Analysis Date..: 06/20/98
Prep Batch #...: 8167231 Analysis Time..: 13:08
Dilution Factor: 1 Method.....: SW846 8080A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	0.050	ug/L
alpha-BHC	ND	0.050	ug/L
beta-BHC	ND	0.050	ug/L
delta-BHC	ND	0.050	ug/L
gamma-BHC (Lindane)	ND	0.050	ug/L
Chlordane (technical)	ND	0.50	ug/L
alpha-Chlordane	ND	0.050	ug/L
gamma-Chlordane	ND	0.050	ug/L
Chlorobenzilate	ND	1.0	ug/L
4,4'-DDD	ND	0.10	ug/L
4,4'-DDE	ND	0.10	ug/L
4,4'-DDT	ND	0.10	ug/L
Diallate	ND	1.0	ug/L
Dieldrin	ND	0.10	ug/L
Endosulfan I	ND	0.050	ug/L
Endosulfan II	ND	0.10	ug/L
Endosulfan sulfate	ND	0.10	ug/L
Endrin	ND	0.10	ug/L
Endrin aldehyde	ND	0.10	ug/L
Endrin ketone	ND	0.10	ug/L
Heptachlor	ND	0.050	ug/L
Heptachlor epoxide	ND	0.050	ug/L
Isodrin	ND	0.10	ug/L
Kepone	ND	2.5	ug/L
Methoxychlor	ND	0.50	ug/L
Aroclor 1016	ND	1.0	ug/L
Aroclor 1221	ND	1.0	ug/L
Aroclor 1232	ND	1.0	ug/L
Aroclor 1242	ND	1.0	ug/L
Aroclor 1248	ND	1.0	ug/L
Aroclor 1254	ND	1.0	ug/L
Aroclor 1260	ND	1.0	ug/L
Toxaphene	ND	5.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	91	(51 - 132)
Tetrachloro-m-xylene	81	(56 - 107)

Quanterra

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB0698MWX

GC Semivolatiles

Lot-Sample #...: D8F100189-002 Work Order #...: CHWJ610R Matrix.....: WG
Date Sampled...: 06/09/98 12:05 Date Received..: 06/10/98
Prep Date.....: 06/16/98 Analysis Date..: 06/20/98
Prep Batch #...: 8167231 Analysis Time..: 13:44
Dilution Factor: 1 Method.....: SW846 8080A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	0.050	ug/L
alpha-BHC	ND	0.050	ug/L
beta-BHC	ND	0.050	ug/L
delta-BHC	ND	0.050	ug/L
gamma-BHC (Lindane)	ND	0.050	ug/L
Chlordane (technical)	ND	0.50	ug/L
alpha-Chlordane	ND	0.050	ug/L
gamma-Chlordane	ND	0.050	ug/L
Chlorobenzilate	ND	1.0	ug/L
4,4'-DDD	ND	0.10	ug/L
4,4'-DDE	ND	0.10	ug/L
4,4'-DDT	ND	0.10	ug/L
Diallate	ND	1.0	ug/L
Dieldrin	ND	0.10	ug/L
Endosulfan I	ND	0.050	ug/L
Endosulfan II	ND	0.10	ug/L
Endosulfan sulfate	ND	0.10	ug/L
Endrin	ND	0.10	ug/L
Endrin aldehyde	ND	0.10	ug/L
Endrin ketone	ND	0.10	ug/L
Heptachlor	ND	0.050	ug/L
Heptachlor epoxide	ND	0.050	ug/L
Isodrin	ND	0.10	ug/L
Kepone	ND	2.5	ug/L
Methoxychlor	ND	0.50	ug/L
Aroclor 1016	ND	1.0	ug/L
Aroclor 1221	ND	1.0	ug/L
Aroclor 1232	ND	1.0	ug/L
Aroclor 1242	ND	1.0	ug/L
Aroclor 1248	ND	1.0	ug/L
Aroclor 1254	ND	1.0	ug/L
Aroclor 1260	ND	1.0	ug/L
Toxaphene	ND	5.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	86	(51 - 132)
Tetrachloro-m-xylene	77	(56 - 107)

Quanterra

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB0698MWR

GC Semivolatiles

Lot-Sample #...: D8F100189-001 **Work Order #...:** CHWGH10M **Matrix.....:** WG
Date Sampled...: 06/09/98 11:05 **Date Received..:** 06/10/98
Prep Date.....: 06/15/98 **Analysis Date..:** 07/23/98
Prep Batch #...: 8205256 **Analysis Time..:** 01:32
Dilution Factor: 1 **Method.....:** SW846 8140

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Azinphos-methyl	ND	2.5	ug/L
Bolstar	ND	0.50	ug/L
Chlorpyrifos	ND	0.50	ug/L
Coumaphos	ND	0.50	ug/L
Demeton (total)	ND	0.50	ug/L
Diazinon	ND	0.50	ug/L
Dichlorvos	ND	0.50	ug/L
Dimethoate	ND	0.50	ug/L
Disulfoton	ND	0.50	ug/L
Ethoprop	ND	0.50	ug/L
Ethyl parathion	ND	0.50	ug/L
Fensulfothion	ND	2.5	ug/L
Fenthion	ND	0.50	ug/L
Malathion	ND	1.2	ug/L
Merphos	ND	0.50	ug/L
Methyl parathion	ND	0.50	ug/L
Mevinphos	ND	6.2	ug/L
Naled	ND	10	ug/L
Phorate	ND	0.50	ug/L
Ronnel	ND	0.50	ug/L
Sulfotepp	ND	0.50	ug/L
Tokuthion	ND	0.50	ug/L
Trichloronate	ND	0.50	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Ethyl Pirimifos	86	(60 - 123)
Chlormefos	90	(59 - 110)

Quanterra

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB0698MWX

GC Semivolatiles

Lot-Sample #...:	D8F100189-002	**Work Order #...:**	CHWJ610M	**Matrix.....:**	WG
Date Sampled...:	06/09/98 12:05	**Date Received..:**	06/10/98		
Prep Date.....:	06/15/98	**Analysis Date..:**	07/23/98		
Prep Batch #...:	8205256	**Analysis Time..:**	02:08		
Dilution Factor:	1	**Method.....:**	SW846 8140		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Azinphos-methyl	ND	2.5	ug/L
Bolstar	ND	0.50	ug/L
Chlorpyrifos	ND	0.50	ug/L
Coumaphos	ND	0.50	ug/L
Demeton (total)	ND	0.50	ug/L
Diazinon	ND	0.50	ug/L
Dichlorvos	ND	0.50	ug/L
Dimethoate	ND	0.50	ug/L
Disulfoton	ND	0.50	ug/L
Ethoprop	ND	0.50	ug/L
Ethyl parathion	ND	0.50	ug/L
Fensulfothion	ND	2.5	ug/L
Fenthion	ND	0.50	ug/L
Malathion	ND	1.2	ug/L
Merphos	ND	0.50	ug/L
Methyl parathion	ND	0.50	ug/L
Mevinphos	ND	6.2	ug/L
Naled	ND	10	ug/L
Phorate	ND	0.50	ug/L
Ronnel	ND	0.50	ug/L
Sulfotepp	ND	0.50	ug/L
Tokuthion	ND	0.50	ug/L
Trichloronate	ND	0.50	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Ethyl Pirimifos	90	(60 - 123)
Chlormefos	89	(59 - 110)

Quanterra

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB0698MWR

GC Semivolatiles

Lot-Sample #...:	D8F100189-001	Work Order #...:	CHWGH10L	Matrix.....:	WG
Date Sampled...:	06/09/98 11:05	Date Received..:	06/10/98		
Prep Date.....:	06/11/98	Analysis Date..:	06/16/98		
Prep Batch #...:	8162224	Analysis Time..:	22:23		
Dilution Factor:	1	Method.....:	SW846 8150B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2,4-D	ND	2.0	ug/L
2,4,5-T	ND	0.50	ug/L
2,4,5-TP (Silvex)	ND	0.50	ug/L
Dinoseb	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
DCAA	88	(44 - 107)

Quanterra

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB0698MWR

GC Semivolatiles

Lot-Sample #...: D8F100189-001 **Work Order #...:** CHWGH20L **Matrix.....:** WG
Date Sampled...: 06/09/98 11:05 **Date Received..:** 06/10/98
Prep Date.....: 06/26/98 **Analysis Date..:** 07/07/98
Prep Batch #...: 8177241 **Analysis Time..:** 18:15
Dilution Factor: 1 **Method.....:** SW846 8150B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2,4-D	ND	2.0	ug/L
2,4,5-T	ND	0.50	ug/L
2,4,5-TP (Silvex)	ND	0.50	ug/L
Dinoseb	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
DCAA	62	(44 - 107)

Quanterra

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB0698MWX

GC Semivolatiles

Lot-Sample #...:	D8F100189-002	**Work Order #...:**	CHWJ610L	**Matrix.....:**	WG
Date Sampled...:	06/09/98 12:05	**Date Received..:**	06/10/98		
Prep Date.....:	06/11/98	**Analysis Date..:**	06/16/98		
Prep Batch #...:	8162224	**Analysis Time..:**	22:49		
Dilution Factor:	1	**Method.....:**	SW846 8150B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2,4-D	ND	2.0	ug/L
2,4,5-T	ND	0.50	ug/L
2,4,5-TP (Silvex)	ND	0.50	ug/L
Dinoseb	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
DCAA	91	(44 - 107)

Quanterra

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB0698MWX

GC Semivolatiles

Lot-Sample #...:	D8F100189-002	Work Order #...:	CHWJ620L	Matrix.....:	WG
Date Sampled...:	06/09/98 12:05	Date Received..:	06/10/98		
Prep Date.....:	06/26/98	Analysis Date..:	07/07/98		
Prep Batch #...:	8177241	Analysis Time..:	18:41		
Dilution Factor:	1	Method.....:	SW846 8150B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2,4-D	ND	2.0	ug/L
2,4,5-T	ND	0.50	ug/L
2,4,5-TP (Silvex)	ND	0.50	ug/L
Dinoseb	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
DCAA	104	(44 - 107)

Quanterra

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB0698MWR

TOTAL Metals

Lot-Sample #...: D8F100189-001 Matrix.....: WG
Date Sampled...: 06/09/98 11:05 Date Received..: 06/10/98

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 8173213						
Silver	ND	10.0	ug/L	SW846 6010A	06/22-07/06/98	CHWGH104
		Dilution Factor: 1		Analysis Time..: 15:22		
Aluminum	ND	100	ug/L	SW846 6010A	06/22-07/06/98	CHWGH105
		Dilution Factor: 1		Analysis Time..: 15:22		
Cadmium	ND	5.0	ug/L	SW846 6010A	06/22-07/07/98	CHWGH111
		Dilution Factor: 1		Analysis Time..: 15:18		
Barium	54.3	10.0	ug/L	SW846 6010A	06/22-07/06/98	CHWGH106
		Dilution Factor: 1		Analysis Time..: 15:22		
Antimony	ND	10.0	ug/L	SW846 6010A	06/22-07/07/98	CHWGH112
		Dilution Factor: 1		Analysis Time..: 15:18		
Calcium	58400	200	ug/L	SW846 6010A	06/22-07/06/98	CHWGH107
		Dilution Factor: 1		Analysis Time..: 15:22		
Thallium	ND	10.0	ug/L	SW846 6010A	06/22-07/07/98	CHWGH113
		Dilution Factor: 1		Analysis Time..: 15:18		
Cobalt	ND	10.0	ug/L	SW846 6010A	06/22-07/06/98	CHWGH108
		Dilution Factor: 1		Analysis Time..: 15:22		
Chromium	22.7	10.0	ug/L	SW846 6010A	06/22-07/06/98	CHWGH109
		Dilution Factor: 1		Analysis Time..: 15:22		
Copper	ND	20.0	ug/L	SW846 6010A	06/22-07/06/98	CHWGH10A
		Dilution Factor: 1		Analysis Time..: 15:22		
Iron	594	100	ug/L	SW846 6010A	06/22-07/06/98	CHWGH10C
		Dilution Factor: 1		Analysis Time..: 15:22		
Potassium	7960	5000	ug/L	SW846 6010A	06/22-07/06/98	CHWGH10D
		Dilution Factor: 1		Analysis Time..: 15:22		
Magnesium	59800	200	ug/L	SW846 6010A	06/22-07/06/98	CHWGH10E
		Dilution Factor: 1		Analysis Time..: 15:22		
Manganese	75.6	10.0	ug/L	SW846 6010A	06/22-07/06/98	CHWGH10T
		Dilution Factor: 1		Analysis Time..: 15:22		

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Quanterra

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB0698MWR

TOTAL Metals

Lot-Sample #...: D8F100189-001 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Sodium	43300	5000	ug/L	SW846 6010A	06/22-07/06/98	CHWGH10U
		Dilution Factor: 1		Analysis Time..: 15:22		
Nickel	359	40.0	ug/L	SW846 6010A	06/22-07/06/98	CHWGH10V
		Dilution Factor: 1		Analysis Time..: 15:22		
Tin	71.0 B	100	ug/L	SW846 6010A	06/22-07/08/98	CHWGH10W
		Dilution Factor: 1		Analysis Time..: 12:13		
Vanadium	10.7	10.0	ug/L	SW846 6010A	06/22-07/06/98	CHWGH10X
		Dilution Factor: 1		Analysis Time..: 15:22		
Zinc	ND	20.0	ug/L	SW846 6010A	06/22-07/06/98	CHWGH110
		Dilution Factor: 1		Analysis Time..: 15:22		
Prep Batch #...: 8175206						
Selenium	0.0050 Wa	0.0050	mg/L	SW846 7740	06/24-06/29/98	CHWGH
		Dilution Factor: 1		Analysis Time..: 12:11		
Arsenic	ND Wa	0.0050	mg/L	SW846 7060A	06/24-06/29/98	CHWGH10H
		Dilution Factor: 1		Analysis Time..: 09:19		
Prep Batch #...: 8175216						
Lead	0.0014 B,Wa	0.0050	mg/L	SW846 7421	06/24-06/26/98	CHWGH10J
		Dilution Factor: 1		Analysis Time..: 14:28		
Prep Batch #...: 8178121						
Mercury	ND	0.20	ug/L	SW846 7470A	06/27-06/30/98	CHWGH10G
		Dilution Factor: 1		Analysis Time..: 01:01		
Prep Batch #...: 8195211						
Thallium	0.029 B	1.0	ug/L	SW846 6020	07/14-07/17/98	CHWGH10F
		Dilution Factor: 1		Analysis Time..: 11:45		

NOTE(S):

B Estimated result. Result is less than RL.

Wa Post digestion spike recovery fell between 40-85% due to matrix interference.

Quanterra

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB0698MWX

TOTAL Metals

Lot-Sample #...: D8F100189-002 Matrix.....: WG
Date Sampled...: 06/09/98 12:05 Date Received..: 06/10/98

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 8173213						
Silver	ND	10.0	ug/L	SW846 6010A	06/22-07/06/98	CHWJ6104
		Dilution Factor: 1		Analysis Time..: 15:30		
Aluminum	ND	100	ug/L	SW846 6010A	06/22-07/06/98	CHWJ6105
		Dilution Factor: 1		Analysis Time..: 15:30		
Cadmium	ND	5.0	ug/L	SW846 6010A	06/22-07/07/98	CHWJ6111
		Dilution Factor: 1		Analysis Time..: 15:28		
Barium	**53.7**	**10.0**	**ug/L**	**SW846 6010A**	**06/22-07/06/98**	**CHWJ6106**
		Dilution Factor: 1		Analysis Time..: 15:30		
Antimony	ND	10.0	ug/L	SW846 6010A	06/22-07/07/98	CHWJ6112
		Dilution Factor: 1		Analysis Time..: 15:28		
Calcium	**58800**	**200**	**ug/L**	**SW846 6010A**	**06/22-07/06/98**	**CHWJ6107**
		Dilution Factor: 1		Analysis Time..: 15:30		
Thallium	ND	10.0	ug/L	SW846 6010A	06/22-07/07/98	CHWJ6113
		Dilution Factor: 1		Analysis Time..: 15:28		
Cobalt	ND	10.0	ug/L	SW846 6010A	06/22-07/06/98	CHWJ6108
		Dilution Factor: 1		Analysis Time..: 15:30		
Chromium	**22.3**	**10.0**	**ug/L**	**SW846 6010A**	**06/22-07/06/98**	**CHWJ6109**
		Dilution Factor: 1		Analysis Time..: 15:30		
Copper	ND	20.0	ug/L	SW846 6010A	06/22-07/06/98	CHWJ610A
		Dilution Factor: 1		Analysis Time..: 15:30		
Iron	**647**	**100**	**ug/L**	**SW846 6010A**	**06/22-07/06/98**	**CHWJ610C**
		Dilution Factor: 1		Analysis Time..: 15:30		
Potassium	**7660**	**5000**	**ug/L**	**SW846 6010A**	**06/22-07/06/98**	**CHWJ610D**
		Dilution Factor: 1		Analysis Time..: 15:30		
Magnesium	**59400**	**200**	**ug/L**	**SW846 6010A**	**06/22-07/06/98**	**CHWJ610E**
		Dilution Factor: 1		Analysis Time..: 15:30		
Manganese	**84.7**	**10.0**	**ug/L**	**SW846 6010A**	**06/22-07/06/98**	**CHWJ610T**
		Dilution Factor: 1		Analysis Time..: 15:30		

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Quanterra

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB0698MWX

TOTAL Metals

Lot-Sample #...: D8F100189-002 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Sodium	43700	5000	ug/L	SW846 6010A	06/22-07/06/98	CHWJ610U
		Dilution Factor: 1		Analysis Time..: 15:30		
Nickel	397	40.0	ug/L	SW846 6010A	06/22-07/06/98	CHWJ610V
		Dilution Factor: 1		Analysis Time..: 15:30		
Tin	65.7 B	100	ug/L	SW846 6010A	06/22-07/08/98	CHWJ610W
		Dilution Factor: 1		Analysis Time..: 12:16		
Vanadium	11.1	10.0	ug/L	SW846 6010A	06/22-07/06/98	CHWJ610X
		Dilution Factor: 1		Analysis Time..: 15:30		
Zinc	ND	20.0	ug/L	SW846 6010A	06/22-07/06/98	CHWJ6110
		Dilution Factor: 1		Analysis Time..: 15:30		
Prep Batch #...: 8175206						
Selenium	0.0051 Wa	0.0050	mg/L	SW846 7740	06/24-06/29/98	CHWJ6
		Dilution Factor: 1		Analysis Time..: 12:14		
Arsenic	ND Wa	0.0050	mg/L	SW846 7060A	06/24-06/29/98	CHWJ610H
		Dilution Factor: 1		Analysis Time..: 09:25		
Prep Batch #...: 8175216						
Lead	0.0015 B,Wa	0.0050	mg/L	SW846 7421	06/24-06/26/98	CHWJ610J
		Dilution Factor: 1		Analysis Time..: 14:31		
Prep Batch #...: 8178121						
Mercury	ND	0.20	ug/L	SW846 7470A	06/27-06/30/98	CHWJ610G
		Dilution Factor: 1		Analysis Time..: 01:03		
Prep Batch #...: 8195211						
Thallium	0.030 B	1.0	ug/L	SW846 6020	07/14-07/17/98	CHWJ610F
		Dilution Factor: 1		Analysis Time..: 12:07		

NOTE(S):

B Estimated result. Result is less than RL.

Wa Post digestion spike recovery fell between 40-85% due to matrix interference.

Quanterra

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB0698MWR

General Chemistry

Lot-Sample #...: D8F100189-001 Work Order #...: CHWGH Matrix.....: WG
Date Sampled...: 06/09/98 11:05 Date Received..: 06/10/98

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	119 Q	30.0	mg/L	MCAWW 300.0A	06/10-06/11/98	8165150
		Dilution Factor: 10		Analysis Time..: 00:09		
Nitrate	4.9 H	0.50	mg/L	MCAWW 300.0A	06/10-06/11/98	8165153
		Dilution Factor: 1		Analysis Time..: 00:90		
Sulfate	132 Q	50.0	mg/L	MCAWW 300.0A	06/10-06/11/98	8165151
		Dilution Factor: 10		Analysis Time..: 00:09		

NOTE(S):

RL Reporting Limit

Q Elevated reporting limit. The reporting limit is elevated due to high analyte levels.

Quanterra

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB0698MWX

General Chemistry

Lot-Sample #...: D8F100189-002 Work Order #...: CHWJ6 Matrix.....: WG
Date Sampled...: 06/09/98 12:05 Date Received..: 06/10/98

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	120 Q	30.0	mg/L	MCAWW 300.0A	06/10-06/11/98	8165150
		Dilution Factor: 10		Analysis Time..: 00:09		
Nitrate	4.9 H	0.50	mg/L	MCAWW 300.0A	06/10-06/11/98	8165153
		Dilution Factor: 1		Analysis Time..: 00:90		
Sulfate	130 Q	50.0	mg/L	MCAWW 300.0A	06/10-06/11/98	8165151
		Dilution Factor: 10		Analysis Time..: 00:09		

NOTE(S):

RL Reporting Limit

Q Elevated reporting limit. The reporting limit is elevated due to high analyte levels.

Quanterra

QC DATA ASSOCIATION SUMMARY

D8F100189

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WG	MCAWW 300.0A		8165150	8165043
	WG	MCAWW 300.0A		8165151	8165044
	WG	MCAWW 300.0A		8165153	8165046
	WG	SW846 6010A		8173213	8173086
	WG	SW846 7421		8175216	8175093
	WG	SW846 7740		8175206	8204165
	WG	SW846 6020		8195211	8195082
	WG	SW846 8260A		8174330	8174163
	WG	SW846 8080A		8167231	
	WG	SW846 8150B		8162224	
	WG	SW846 8150B		8177241	
	WG	SW846 7060A		8175206	8204165
	WG	SW846 7470A		8178121	8178018
	WG	SW846 8140		8205256	
002	WG	MCAWW 300.0A		8165150	8165043
	WG	MCAWW 300.0A		8165151	8165044
	WG	MCAWW 300.0A		8165153	8165046
	WG	SW846 6010A		8173213	8173086
	WG	SW846 7421		8175216	8175093
	WG	SW846 7740		8175206	8204165
	WG	SW846 6020		8195211	8195082
	WG	SW846 8260A		8174330	8174163
	WG	SW846 8080A		8167231	
	WG	SW846 8150B		8162224	
	WG	SW846 8150B		8177241	
	WG	SW846 7060A		8175206	8204165
	WG	SW846 7470A		8178121	8178018
	WG	SW846 8140		8205256	
003	WG	SW846 8260A		8174330	8174163

Quanterra

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: D8F100189 **Work Order #...:** CJ909102-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D8F230000-330 CJ909103-LCSD
Prep Date.....: 06/19/98 **Analysis Date..:** 06/19/98
Prep Batch #...: 8174330 **Analysis Time..:** 11:33
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	**10.0**	**10.0**	**ug/L**	**100**		**SW846 8260A**
	10.0	**10.0**	**ug/L**	**100**	**0.050**	**SW846 8260A**
Chlorobenzene	**10.0**	**9.93**	**ug/L**	**99**		**SW846 8260A**
	10.0	**10.1**	**ug/L**	**101**	**1.6**	**SW846 8260A**
1,1-Dichloroethene	**10.0**	**9.37**	**ug/L**	**94**		**SW846 8260A**
	10.0	**10.1**	**ug/L**	**101**	**7.4**	**SW846 8260A**
Toluene	**10.0**	**10.1**	**ug/L**	**101**		**SW846 8260A**
	10.0	**10.3**	**ug/L**	**103**	**1.1**	**SW846 8260A**
Trichloroethene	**10.0**	**9.79**	**ug/L**	**98**		**SW846 8260A**
	10.0	**9.97**	**ug/L**	**100**	**1.8**	**SW846 8260A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	96	(78 - 113)
	95	(78 - 113)
4-Bromofluorobenzene	103	(88 - 113)
	102	(88 - 113)
Toluene-d8	102	(90 - 108)
	103	(90 - 108)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Quanterra

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: D8F100189 **Work Order #...:** CJ909102-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D8F230000-330 CJ909103-LCSD
Prep Date.....: 06/19/98 **Analysis Date..:** 06/19/98
Prep Batch #...: 8174330 **Analysis Time..:** 11:33
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**100**	**(85 - 115)**			**SW846 8260A**
	100	**(85 - 115)**	**0.050**	**(0-20)**	**SW846 8260A**
Chlorobenzene	**99**	**(91 - 112)**			**SW846 8260A**
	101	**(91 - 112)**	**1.6**	**(0-20)**	**SW846 8260A**
1,1-Dichloroethene	**94**	**(69 - 126)**			**SW846 8260A**
	101	**(69 - 126)**	**7.4**	**(0-20)**	**SW846 8260A**
Toluene	**101**	**(89 - 112)**			**SW846 8260A**
	103	**(89 - 112)**	**1.1**	**(0-20)**	**SW846 8260A**
Trichloroethene	**98**	**(85 - 111)**			**SW846 8260A**
	100	**(85 - 111)**	**1.8**	**(0-20)**	**SW846 8260A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	96	(78 - 113)
	95	(78 - 113)
4-Bromofluorobenzene	103	(88 - 113)
	102	(88 - 113)
Toluene-d8	102	(90 - 108)
	103	(90 - 108)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Quanterra

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: D8F100189 **Work Order #...:** CJ909101 **Matrix.....:** WATER
MB Lot-Sample #: D8F230000-330

Prep Date.....: 06/19/98 **Analysis Time..:** 12:18
Analysis Date..: 06/19/98 **Prep Batch #...:** 8174330
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	10	ug/L	SW846 8260A
Acetonitrile	ND	20	ug/L	SW846 8260A
Acrolein	ND	20	ug/L	SW846 8260A
Acrylonitrile	ND	20	ug/L	SW846 8260A
Benzene	ND	1.0	ug/L	SW846 8260A
Bromodichloromethane	ND	1.0	ug/L	SW846 8260A
Bromoform	ND	1.0	ug/L	SW846 8260A
Bromomethane	ND	2.0	ug/L	SW846 8260A
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260A
Carbon disulfide	ND	1.0	ug/L	SW846 8260A
Chlorobenzene	ND	1.0	ug/L	SW846 8260A
Chloroethane	ND	2.0	ug/L	SW846 8260A
Chloroprene	ND	1.0	ug/L	SW846 8260A
Chloroform	ND	1.0	ug/L	SW846 8260A
Allyl chloride	ND	2.0	ug/L	SW846 8260A
Chloromethane	ND	2.0	ug/L	SW846 8260A
Dibromochloromethane	ND	1.0	ug/L	SW846 8260A
Dibromomethane	ND	1.0	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	2.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260A
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260A
trans-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260A
1,2-Dichloroethene (total)	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260A
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
trans-1,4-Dichloro-2-butene	ND	1.0	ug/L	SW846 8260A
Ethyl methacrylate	ND	1.0	ug/L	SW846 8260A
1,4-Dioxane	ND	200	ug/L	SW846 8260A
2-Hexanone	ND	5.0	ug/L	SW846 8260A
Iodomethane	ND	1.0	ug/L	SW846 8260A
Ethylbenzene	ND	1.0	ug/L	SW846 8260A
Isobutyl alcohol	ND	50	ug/L	SW846 8260A
Methylene chloride	ND	1.0	ug/L	SW846 8260A
Methacrylonitrile	ND	1.0	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260A
Methyl methacrylate	ND	1.0	ug/L	SW846 8260A
Tetrachloroethene	ND	1.0	ug/L	SW846 8260A

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: D8F100189 **Work Order #...:** CJ909101 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846 8260A
Toluene	ND	1.0	ug/L	SW846 8260A
Propionitrile	ND	4.0	ug/L	SW846 8260A
Styrene	ND	1.0	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260A
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
Trichlorofluoromethane	ND	2.0	ug/L	SW846 8260A
Vinyl chloride	ND	2.0	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260A
Vinyl acetate	ND	2.0	ug/L	SW846 8260A
Xylenes (total)	ND	1.0	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	SW846 8260A
2-Butanone (MEK)	ND	5.0	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	95	(78 - 113)
4-Bromofluorobenzene	102	(88 - 113)
Toluene-d8	103	(90 - 108)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: D8F100189 **Work Order #...:** CJ2M7102-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D8F160000-231 CJ2M7103-LCSD
Prep Date.....: 06/16/98 **Analysis Date..:** 06/20/98
Prep Batch #...: 8167231 **Analysis Time..:** 10:46
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Aldrin	**0.200**	**0.142**	**ug/L**	**71**		**SW846 8080A**
	0.200	**0.157**	**ug/L**	**78**	**10**	**SW846 8080A**
gamma-BHC (Lindane)	**0.200**	**0.160**	**ug/L**	**80**		**SW846 8080A**
	0.200	**0.169**	**ug/L**	**84**	**5.5**	**SW846 8080A**
4,4'-DDT	**0.500**	**0.427**	**ug/L**	**85**		**SW846 8080A**
	0.500	**0.460**	**ug/L**	**92**	**7.4**	**SW846 8080A**
Dieldrin	**0.500**	**0.365**	**ug/L**	**73**		**SW846 8080A**
	0.500	**0.391**	**ug/L**	**78**	**6.9**	**SW846 8080A**
Endrin	**0.500**	**0.404**	**ug/L**	**81**		**SW846 8080A**
	0.500	**0.431**	**ug/L**	**86**	**6.5**	**SW846 8080A**
Heptachlor	**0.200**	**0.160**	**ug/L**	**80**		**SW846 8080A**
	0.200	**0.172**	**ug/L**	**86**	**7.2**	**SW846 8080A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	90	(51 - 132)
	96	(51 - 132)
Tetrachloro-m-xylene	76	(56 - 107)
	82	(56 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Quanterra

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: D8F100189 **Work Order #...:** CJ2M7102-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D8F160000-231 CJ2M7103-LCSD
Prep Date.....: 06/16/98 **Analysis Date..:** 06/20/98
Prep Batch #...: 8167231 **Analysis Time..:** 10:46
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Aldrin	**71**	**(52 - 114)**			**SW846 8080A**
	78	**(52 - 114)**	**10**	**(0-21)**	**SW846 8080A**
gamma-BHC (Lindane)	**80**	**(65 - 122)**			**SW846 8080A**
	84	**(65 - 122)**	**5.5**	**(0-19)**	**SW846 8080A**
4,4'-DDT	**85**	**(68 - 125)**			**SW846 8080A**
	92	**(68 - 125)**	**7.4**	**(0-15)**	**SW846 8080A**
Dieldrin	**73**	**(62 - 111)**			**SW846 8080A**
	78	**(62 - 111)**	**6.9**	**(0-18)**	**SW846 8080A**
Endrin	**81**	**(69 - 125)**			**SW846 8080A**
	86	**(69 - 125)**	**6.5**	**(0-19)**	**SW846 8080A**
Heptachlor	**80**	**(60 - 124)**			**SW846 8080A**
	86	**(60 - 124)**	**7.2**	**(0-19)**	**SW846 8080A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	90	(51 - 132)
	96	(51 - 132)
Tetrachloro-m-xylene	76	(56 - 107)
	82	(56 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Quanterra

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: D8F100189
MB Lot-Sample #: D8F160000-231
Work Order #...: CJ2M7101
Matrix.....: WATER
Prep Date.....: 06/16/98
Analysis Time..: 10:11
Analysis Date..: 06/20/98
Prep Batch #...: 8167231
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Aldrin	ND	0.050	ug/L	SW846 8080A
alpha-BHC	ND	0.050	ug/L	SW846 8080A
beta-BHC	ND	0.050	ug/L	SW846 8080A
delta-BHC	ND	0.050	ug/L	SW846 8080A
gamma-BHC (Lindane)	ND	0.050	ug/L	SW846 8080A
Chlordane (technical)	ND	0.50	ug/L	SW846 8080A
alpha-Chlordane	ND	0.050	ug/L	SW846 8080A
gamma-Chlordane	ND	0.050	ug/L	SW846 8080A
Chlorobenzilate	ND	1.0	ug/L	SW846 8080A
4,4'-DDD	ND	0.10	ug/L	SW846 8080A
4,4'-DDE	ND	0.10	ug/L	SW846 8080A
4,4'-DDT	ND	0.10	ug/L	SW846 8080A
Diallate	ND	1.0	ug/L	SW846 8080A
Dieldrin	ND	0.10	ug/L	SW846 8080A
Endosulfan I	ND	0.050	ug/L	SW846 8080A
Endosulfan II	ND	0.10	ug/L	SW846 8080A
Endosulfan sulfate	ND	0.10	ug/L	SW846 8080A
Endrin	ND	0.10	ug/L	SW846 8080A
Endrin aldehyde	ND	0.10	ug/L	SW846 8080A
Endrin ketone	ND	0.10	ug/L	SW846 8080A
Heptachlor	ND	0.050	ug/L	SW846 8080A
Heptachlor epoxide	ND	0.050	ug/L	SW846 8080A
Isodrin	ND	0.10	ug/L	SW846 8080A
Kepone	ND	2.5	ug/L	SW846 8080A
Methoxychlor	ND	0.50	ug/L	SW846 8080A
Aroclor 1016	ND	1.0	ug/L	SW846 8080A
Aroclor 1221	ND	1.0	ug/L	SW846 8080A
Aroclor 1232	ND	1.0	ug/L	SW846 8080A
Aroclor 1242	ND	1.0	ug/L	SW846 8080A
Aroclor 1248	ND	1.0	ug/L	SW846 8080A
Aroclor 1254	ND	1.0	ug/L	SW846 8080A
Aroclor 1260	ND	1.0	ug/L	SW846 8080A
Toxaphene	ND	5.0	ug/L	SW846 8080A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	88	(51 - 132)
Tetrachloro-m-xylene	75	(56 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: D8F100189 **Work Order #...:** CK31Q102-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D8G240000-256 CK31Q103-LCSD
Prep Date.....: 06/15/98 **Analysis Date..:** 07/23/98
Prep Batch #...: 8205256 **Analysis Time..:** 00:20
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Diazinon	**1.00**	**1.01**	**ug/L**	**101**		**SW846 8140**
	1.00	**1.07**	**ug/L**	**107**	**5.8**	**SW846 8140**
Ethyl parathion	**1.00**	**0.731 a**	**ug/L**	**73**		**SW846 8140**
	1.00	**0.761**	**ug/L**	**76**	**4.0**	**SW846 8140**
Malathion	**1.00**	**0.458 a**	**ug/L**	**46**		**SW846 8140**
	1.00	**0.546 a,p**	**g/L**	**55**	**18**	**SW846 8140**
Methyl parathion	**1.00**	**0.960**	**ug/L**	**96**		**SW846 8140**
	1.00	**1.09**	**ug/L**	**109**	**13**	**SW846 8140**
Phorate	**1.00**	**0.910**	**ug/L**	**91**		**SW846 8140**
	1.00	**0.865**	**ug/L**	**86**	**5.1**	**SW846 8140**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Ethyl Pirimifos	95	(60 - 123)
	96	(60 - 123)
Chlormefos	94	(59 - 110)
	98	(59 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

Quanterra

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: D8F100189 **Work Order #...:** CK31Q102-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D8G240000-256 CK31Q103-LCSD
Prep Date.....: 06/15/98 **Analysis Date..:** 07/23/98
Prep Batch #...: 8205256 **Analysis Time..:** 00:20
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Diazinon	**101**	**(68 - 126)**			**SW846 8140**
	107	**(68 - 126)**	**5.8**	**(0-15)**	**SW846 8140**
Ethyl parathion	**73 a**	**(75 - 131)**			**SW846 8140**
	76	**(75 - 131)**	**4.0**	**(0-15)**	**SW846 8140**
Malathion	**46 a**	**(69 - 129)**			**SW846 8140**
	55 a,p	**(69 - 129)**	**18**	**(0-15)**	**SW846 8140**
Methyl parathion	**96**	**(73 - 121)**			**SW846 8140**
	109	**(73 - 121)**	**13**	**(0-15)**	**SW846 8140**
Phorate	**91**	**(68 - 115)**			**SW846 8140**
	86	**(68 - 115)**	**5.1**	**(0-15)**	**SW846 8140**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Ethyl Pirimifos	95	(60 - 123)
	96	(60 - 123)
Chlormefos	94	(59 - 110)
	98	(59 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

Quanterra

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: D8F100189
MB Lot-Sample #: D8G240000-256
Work Order #...: CK31Q101
Matrix.....: WATER
Prep Date.....: 06/15/98
Analysis Time..: 23:44
Analysis Date..: 07/22/98
Prep Batch #...: 8205256
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Azinphos-methyl	ND	2.5	ug/L	SW846 8140
Bolstar	ND	0.50	ug/L	SW846 8140
Chlorpyrifos	ND	0.50	ug/L	SW846 8140
Coumaphos	ND	0.50	ug/L	SW846 8140
Demeton (total)	ND	0.50	ug/L	SW846 8140
Diazinon	ND	0.50	ug/L	SW846 8140
Dichlorvos	ND	0.50	ug/L	SW846 8140
Dimethoate	ND	0.50	ug/L	SW846 8140
Disulfoton	ND	0.50	ug/L	SW846 8140
Ethoprop	ND	0.50	ug/L	SW846 8140
Ethyl parathion	ND	0.50	ug/L	SW846 8140
Fensulfothion	ND	2.5	ug/L	SW846 8140
Fenthion	ND	0.50	ug/L	SW846 8140
Malathion	ND	1.2	ug/L	SW846 8140
Merphos	ND	0.50	ug/L	SW846 8140
Methyl parathion	ND	0.50	ug/L	SW846 8140
Mevinphos	ND	6.2	ug/L	SW846 8140
Naled	ND	10	ug/L	SW846 8140
Phorate	ND	0.50	ug/L	SW846 8140
Ronnel	ND	0.50	ug/L	SW846 8140
Sulfotepp	ND	0.50	ug/L	SW846 8140
Tokuthion	ND	0.50	ug/L	SW846 8140
Trichloronate	ND	0.50	ug/L	SW846 8140

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Ethyl Pirimifos	88	(60 - 123)
Chlormefos	90	(59 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: D8F100189 **Work Order #...:** CHX5H102-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D8F110000-224 CHX5H103-LCSD
Prep Date.....: 06/11/98 **Analysis Date..:** 06/16/98
Prep Batch #...: 8162224 **Analysis Time..:** 21:07
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
2,4-D	**2.50**	**1.48**	**ug/L**	**59**		**SW846 8150B**
	2.50	**1.46**	**ug/L**	**58**	**1.4**	**SW846 8150B**
2,4,5-T	**0.500**	**0.215**	**ug/L**	**43**		**SW846 8150B**
	0.500	**0.216**	**ug/L**	**43**	**0.46**	**SW846 8150B**
2,4,5-TP (Silvex)	**0.500**	**0.272**	**ug/L**	**54**		**SW846 8150B**
	0.500	**0.272**	**ug/L**	**54**	**0.0**	**SW846 8150B**
Dinoseb	1.25	a	ug/L	9.9		SW846 8150B
	1.25	a	ug/L	10	4.7	SW846 8150B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
DCAA	61	(44 - 107)
	61	(44 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

Quanterra

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: D8F100189 **Work Order #...:** CHX5H102-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D8F110000-224 CHX5H103-LCSD
Prep Date.....: 06/11/98 **Analysis Date..:** 06/16/98
Prep Batch #...: 8162224 **Analysis Time..:** 21:07
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
2,4-D	**59**	**(35 - 92)**			**SW846 8150B**
	58	**(35 - 92)**	**1.4**	**(0-27)**	**SW846 8150B**
2,4,5-T	**43**	**(21 - 97)**			**SW846 8150B**
	43	**(21 - 97)**	**0.46**	**(0-29)**	**SW846 8150B**
2,4,5-TP (Silvex)	**54**	**(26 - 115)**			**SW846 8150B**
	54	**(26 - 115)**	**0.0**	**(0-31)**	**SW846 8150B**
Dinoseb	9.9 a	(13 - 97)			SW846 8150B
	10 a	(13 - 97)	4.7	(0-30)	SW846 8150B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
DCAA	61	(44 - 107)
	61	(44 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

Quanterra

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: D8F100189 **Work Order #...:** CJD4D102-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D8F260000-241 CJD4D103-LCSD
Prep Date.....: 06/26/98 **Analysis Date..:** 07/07/98
Prep Batch #...: 8177241 **Analysis Time..:** 17:24
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
2,4-D	**65**	**(35 - 92)**			**SW846 8150B**
	64	**(35 - 92)**	**1.2**	**(0-27)**	**SW846 8150B**
2,4,5-T	**53**	**(21 - 97)**			**SW846 8150B**
	52	**(21 - 97)**	**1.1**	**(0-29)**	**SW846 8150B**
2,4,5-TP (Silvex)	**69**	**(26 - 115)**			**SW846 8150B**
	68	**(26 - 115)**	**1.2**	**(0-31)**	**SW846 8150B**
Dinoseb	81	(13 - 97)			SW846 8150B
	81	(13 - 97)	0.0	(0-30)	SW846 8150B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
DCAA	84	(44 - 107)
	83	(44 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Quanterra

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: D8F100189 **Work Order #...:** CHX5H101 **Matrix.....:** WATER
MB Lot-Sample #: D8F110000-224
Prep Date.....: 06/11/98 **Analysis Time..:** 20:41
Analysis Date..: 06/16/98 **Prep Batch #...:** 8162224
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
2,4-D	ND	2.0	ug/L	SW846 8150B
2,4,5-T	ND	0.50	ug/L	SW846 8150B
2,4,5-TP (Silvex)	ND	0.50	ug/L	SW846 8150B
Dinoseb	ND	1.0	ug/L	SW846 8150B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
DCAA	71	(44 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results

Quanterra

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: D8F100189 **Work Order #...:** CJD4D102-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D8F260000-241 CJD4D103-LCSD
Prep Date.....: 06/26/98 **Analysis Date..:** 07/07/98
Prep Batch #...: 8177241 **Analysis Time..:** 17:24
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
2,4-D	**2.50**	**1.63**	**ug/L**	**65**		**SW846 8150B**
	2.50	**1.61**	**ug/L**	**64**	**1.2**	**SW846 8150B**
2,4,5-T	**0.500**	**0.263**	**ug/L**	**53**		**SW846 8150B**
	0.500	**0.260**	**ug/L**	**52**	**1.1**	**SW846 8150B**
2,4,5-TP (Silvex)	**0.500**	**0.345**	**ug/L**	**69**		**SW846 8150B**
	0.500	**0.341**	**ug/L**	**68**	**1.2**	**SW846 8150B**
Dinoseb	1.25	1.01	ug/L	81		SW846 8150B
	1.25	1.01	ug/L	81	0.0	SW846 8150B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
DCAA	84	(44 - 107)
	83	(44 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Quanterra

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: D8F100189 **Work Order #...:** CHX5H101 **Matrix.....:** WATER
MB Lot-Sample #: D8F110000-224

Prep Date.....: 06/11/98 **Analysis Time..:** 20:41
Analysis Date..: 06/16/98 **Prep Batch #...:** 8162224
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
2,4-D	ND	2.0	ug/L	SW846 8150B
2,4,5-T	ND	0.50	ug/L	SW846 8150B
2,4,5-TP (Silvex)	ND	0.50	ug/L	SW846 8150B
Dinoseb	ND	1.0	ug/L	SW846 8150B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
DCAA	71	(44 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results

Quanterra

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: D8F100189
MB Lot-Sample #: D8F260000-241
Analysis Date..: 07/07/98
Dilution Factor: 1

Work Order #...: CJD4D101
Prep Date.....: 06/26/98
Prep Batch #...: 8177241

Matrix.....: WATER
Analysis Time..: 16:58

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
2,4-D	ND	2.0	ug/L	SW846 8150B
2,4,5-T	ND	0.50	ug/L	SW846 8150B
2,4,5-TP (Silvex)	ND	0.50	ug/L	SW846 8150B
Dinoseb	ND	1.0	ug/L	SW846 8150B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
DCAA	93	(44 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: D8F100189 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: D8F220000-213 Prep Batch #...: 8173213							
Silver	50.0	46.1	ug/L	92	SW846 6010A	06/22-07/06/98	CJ77D11N
			Dilution Factor: 1				
			Analysis Time..: 14:26				
Aluminum	2000	2030	ug/L	101	SW846 6010A	06/22-07/06/98	CJ77D11Q
			Dilution Factor: 1				
			Analysis Time..: 14:26				
Cadmium	50.0	56.4	ug/L	113	SW846 6010A	06/22-07/07/98	CJ77D133
			Dilution Factor: 1				
			Analysis Time..: 14:17				
Barium	2000	2020	ug/L	101	SW846 6010A	06/22-07/06/98	CJ77D11T
			Dilution Factor: 1				
			Analysis Time..: 14:26				
Antimony	500	558	ug/L	112	SW846 6010A	06/22-07/07/98	CJ77D135
			Dilution Factor: 1				
			Analysis Time..: 14:17				
Thallium	2000	2000	ug/L	100	SW846 6010A	06/22-07/07/98	CJ77D11L
			Dilution Factor: 1				
			Analysis Time..: 14:17				
Calcium	50000	53300	ug/L	107	SW846 6010A	06/22-07/06/98	CJ77D11X
			Dilution Factor: 1				
			Analysis Time..: 14:26				
Cobalt	500	520	ug/L	104	SW846 6010A	06/22-07/06/98	CJ77D123
			Dilution Factor: 1				
			Analysis Time..: 14:26				
Chromium	200	195	ug/L	98	SW846 6010A	06/22-07/06/98	CJ77D125
			Dilution Factor: 1				
			Analysis Time..: 14:26				
Copper	250	249	ug/L	100	SW846 6010A	06/22-07/06/98	CJ77D10Q
			Dilution Factor: 1				
			Analysis Time..: 14:26				

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: D8F100189 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: D8F220000-213 **Prep Batch #...:** 8173213					
Silver	92	(83 - 115)	SW846 6010A Dilution Factor: 1 Analysis Time..: 14:26	06/22-07/06/98	CJ77D11N
Aluminum	101	(86 - 117)	SW846 6010A Dilution Factor: 1 Analysis Time..: 14:26	06/22-07/06/98	CJ77D11Q
Cadmium	113	(95 - 121)	SW846 6010A Dilution Factor: 1 Analysis Time..: 14:17	06/22-07/07/98	CJ77D133
Barium	101	(86 - 114)	SW846 6010A Dilution Factor: 1 Analysis Time..: 14:26	06/22-07/06/98	CJ77D11T
Antimony	112	(89 - 115)	SW846 6010A Dilution Factor: 1 Analysis Time... 14:17	06/22-07/07/98	CJ77D135
Thallium	100	(90 - 119)	SW846 6010A Dilution Factor: 1 Analysis Time..: 14:17	06/22-07/07/98	CJ77D11L
Calcium	107	(88 - 112)	SW846 6010A Dilution Factor: 1 Analysis Time..: 14:26	06/22-07/06/98	CJ77D11X
Cobalt	104	(80 - 120)	SW846 6010A Dilution Factor: 1 Analysis Time..: 14:26	06/22-07/06/98	CJ77D123
Chromium	98	(83 - 112)	SW846 6010A Dilution Factor: 1 Analysis Time..: 14:26	06/22-07/06/98	CJ77D125
Copper	100	(84 - 115)	SW846 6010A Dilution Factor: 1 Analysis Time..: 14:26	06/22-07/06/98	CJ77D10Q

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LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: D8F100189 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Iron	1000	1020	ug/L	102	SW846 6010A	06/22-07/06/98	CJ77D10T
			Dilution Factor: 1				
			Analysis Time..: 14:26				
Potassium	50000	51400	ug/L	103	SW846 6010A	06/22-07/06/98	CJ77D10V
			Dilution Factor: 1				
			Analysis Time..: 14:26				
Magnesium	50000	52800	ug/L	106	SW846 6010A	06/22-07/06/98	CJ77D10X
			Dilution Factor: 1				
			Analysis Time..: 14:26				
Manganese	500	500	ug/L	100	SW846 6010A	06/22-07/06/98	CJ77D111
			Dilution Factor: 1				
			Analysis Time..: 14:26				
Sodium	50000	51000	ug/L	102	SW846 6010A	06/22-07/06/98	CJ77D113
			Dilution Factor: 1				
			Analysis Time..: 14:26				
Nickel	500	497	ug/L	99	SW846 6010A	06/22-07/06/98	CJ77D115
			Dilution Factor: 1				
			Analysis Time..: 14:26				
Tin	2000	1980	ug/L	99	SW846 6010A	06/22-07/08/98	CJ77D131
			Dilution Factor: 1				
			Analysis Time..: 11:52				
Vanadium	500	498	ug/L	100	SW846 6010A	06/22-07/06/98	CJ77D119
			Dilution Factor: 1				
			Analysis Time..: 14:26				
Zinc	500	505	ug/L	101	SW846 6010A	06/22-07/06/98	CJ77D11C
			Dilution Factor: 1				
			Analysis Time..: 14:26				

LCS Lot-Sample#: D8F240000-206 **Prep Batch #...:** 8175206

Selenium	0.0400	0.0375	mg/L	94	SW846 7740	06/24-06/29/98	CJ9FE105
			Dilution Factor: 1				
			Analysis Time..: 11:28				
Arsenic	0.0400	0.0356	mg/L	89	SW846 7060A	06/24-06/29/98	CJ9FE103
			Dilution Factor: 1				
			Analysis Time..: 09:01				

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: D8F100189 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Iron	102	(87 - 117)	SW846 6010A Dilution Factor: 1 Analysis Time..: 14:26	06/22-07/06/98	CJ77D10T
Potassium	103	(82 - 111)	SW846 6010A Dilution Factor: 1 Analysis Time..: 14:26	06/22-07/06/98	CJ77D10V
Magnesium	106	(84 - 114)	SW846 6010A Dilution Factor: 1 Analysis Time..: 14:26	06/22-07/06/98	CJ77D10X
Manganese	100	(84 - 113)	SW846 6010A Dilution Factor: 1 Analysis Time..: 14:26	06/22-07/06/98	CJ77D111
Sodium	102	(86 - 115)	SW846 6010A Dilution Factor: 1 Analysis Time..: 14:26	06/22-07/06/98	CJ77D113
Nickel	99	(85 - 112)	SW846 6010A Dilution Factor: 1 Analysis Time..: 14:26	06/22-07/06/98	CJ77D115
Tin	99	(86 - 114)	SW846 6010A Dilution Factor: 1 Analysis Time..: 11:52	06/22-07/08/98	CJ77D131
Vanadium	100	(85 - 114)	SW846 6010A Dilution Factor: 1 Analysis Time..: 14:26	06/22-07/06/98	CJ77D119
Zinc	101	(82 - 113)	SW846 6010A Dilution Factor: 1 Analysis Time..: 14:26	06/22-07/06/98	CJ77D11C
LCS Lot-Sample#: D8F240000-206 **Prep Batch #...:** 8175206					
Selenium	94	(80 - 118)	SW846 7740 Dilution Factor: 1 Analysis Time..: 11:28	06/24-06/29/98	CJ9FE105
Arsenic	89	(85 - 114)	SW846 7060A Dilution Factor: 1 Analysis Time..: 09:01	06/24-06/29/98	CJ9FE103

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LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: D8F100189 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: D8F240000-216 **Prep Batch #...:** 8175216							
Lead	0.0400	0.0472	mg/L	118	SW846 7421	06/24-06/26/98	CJ9HK102
			Dilution Factor: 1				
			Analysis Time..: 15:14				
LCS Lot-Sample#: D8F270000-121 **Prep Batch #...:** 8178121							
Mercury	5.00	5.21	ug/L	104	SW846 7470A	06/27-06/30/98	CJDTW102
			Dilution Factor: 1				
			Analysis Time..: 00:29				
LCS Lot-Sample#: D8G140000-211 **Prep Batch #...:** 8195211							
Thallium	200	198	ug/L	99	SW846 6020	07/14-07/17/98	CJQKD102
			Dilution Factor: 1				
			Analysis Time..: 11:37				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: D8F100189 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#:	D8F240000-216	**Prep Batch #...:** 8175216			
Lead	118	(84 - 124)	SW846 7421	06/24-06/26/98	CJ9HK102
		Dilution Factor: 1			
		Analysis Time..: 15:14			
LCS Lot-Sample#:	D8F270000-121	**Prep Batch #...:** 8178121			
Mercury	104	(77 - 117)	SW846 7470A	06/27-06/30/98	CJDTW102
		Dilution Factor: 1			
		Analysis Time..: 00:29			
LCS Lot-Sample#:	D8G140000-211	**Prep Batch #...:** 8195211			
Thallium	99	(70 - 130)	SW846 6020	07/14-07/17/98	CJQKD102
		Dilution Factor: 1			
		Analysis Time..: 11:37			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: D8F100189 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: D8F270000-121 **Prep Batch #...:** 8178121						
Mercury	ND	0.20	ug/L	SW846 7470A	06/27-06/30/98	CJDTW101
		Dilution Factor: 1				
		Analysis Time..: 00:27				
MB Lot-Sample #: D8G140000-211 **Prep Batch #...:** 8195211						
Thallium	ND	1.0	ug/L	SW846 6020	07/14-07/17/98	CJQKD101
		Dilution Factor: 1				
		Analysis Time..: 11:33				
MB Lot-Sample #: D8F220000-213 **Prep Batch #...:** 8173213						
Silver	ND	10.0	ug/L	SW846 6010A	06/22-07/06/98	CJ77D10G
		Dilution Factor: 1				
		Analysis Time..: 14:24				
Aluminum	ND	100	ug/L	SW846 6010A	06/22-07/06/98	CJ77D1
		Dilution Factor: 1				
		Analysis Time..: 14:24				
Cadmium	ND	5.0	ug/L	SW846 6010A	06/22-07/07/98	CJ77D12G
		Dilution Factor: 1				
		Analysis Time..: 14:14				
Antimony	ND	10.0	ug/L	SW846 6010A	06/22-07/07/98	CJ77D12H
		Dilution Factor: 1				
		Analysis Time..: 14:14				
Barium	ND	10.0	ug/L	SW846 6010A	06/22-07/06/98	CJ77D10J
		Dilution Factor: 1				
		Analysis Time..: 14:24				
Calcium	ND	200	ug/L	SW846 6010A	06/22-07/06/98	CJ77D10L
		Dilution Factor: 1				
		Analysis Time..: 14:24				
Thallium	ND	10.0	ug/L	SW846 6010A	06/22-07/07/98	CJ77D10F
		Dilution Factor: 1				
		Analysis Time..: 14:14				
Cobalt	ND	10.0	ug/L	SW846 6010A	06/22-07/06/98	CJ77D10N
		Dilution Factor: 1				
		Analysis Time..: 14:24				

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METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: D8F100189 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Chromium	ND	10.0	ug/L	SW846 6010A	06/22-07/06/98	CJ77D10P
		Dilution Factor: 1				
		Analysis Time..: 14:24				
Copper	ND	20.0	ug/L	SW846 6010A	06/22-07/06/98	CJ77D101
		Dilution Factor: 1				
		Analysis Time..: 14:24				
Iron	ND	100	ug/L	SW846 6010A	06/22-07/06/98	CJ77D102
		Dilution Factor: 1				
		Analysis Time..: 14:24				
Potassium	ND	5000	ug/L	SW846 6010A	06/22-07/06/98	CJ77D103
		Dilution Factor: 1				
		Analysis Time..: 14:24				
Magnesium	ND	200	ug/L	SW846 6010A	06/22-07/06/98	CJ77D104
		Dilution Factor: 1				
		Analysis Time..: 14:24				
Manganese	ND	10.0	ug/L	SW846 6010A	06/22-07/06/98	CJ77D105
		Dilution Factor: 1				
		Analysis Time..: 14:24				
Sodium	ND	5000	ug/L	SW846 6010A	06/22-07/06/98	CJ77D106
		Dilution Factor: 1				
		Analysis Time..: 14:24				
Nickel	ND	40.0	ug/L	SW846 6010A	06/22-07/06/98	CJ77D107
		Dilution Factor: 1				
		Analysis Time..: 14:24				
Tin	**34.1 B**	**100**	**ug/L**	**SW846 6010A**	**06/22-07/08/98**	**CJ77D12F**
		Dilution Factor: 1				
		Analysis Time..: 11:49				
Vanadium	ND	10.0	ug/L	SW846 6010A	06/22-07/06/98	CJ77D109
		Dilution Factor: 1				
		Analysis Time..: 14:24				
Zinc	ND	20.0	ug/L	SW846 6010A	06/22-07/06/98	CJ77D10A
		Dilution Factor: 1				
		Analysis Time..: 14:24				

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METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: D8F100189 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: D8F240000-206 **Prep Batch #...:** 8175206						
Selenium	ND	0.0050	mg/L	SW846 7740	06/24-06/29/98	CJ9FE102
		Dilution Factor: 1				
		Analysis Time..: 11:24				
Arsenic	ND	0.0050	mg/L	SW846 7060A	06/24-06/29/98	CJ9FE101
		Dilution Factor: 1				
		Analysis Time..: 08:45				
MB Lot-Sample #: D8F240000-216 **Prep Batch #...:** 8175216						
Lead	ND	0.0050	mg/L	SW846 7421	06/24-06/26/98	CJ9HK101
		Dilution Factor: 1				
		Analysis Time..: 14:09				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

Quanterra

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: D8F100189 **Matrix.....:** WATER
Date Sampled...: 06/03/98 10:43 **Date Received..:** 06/03/98

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: D8F040172-014 **Prep Batch #...:** 8173213									
Silver									
	ND	50.0	45.8	ug/L	92		SW846 6010A	06/22-07/06/98	CHQ1H129
	ND	50.0	46.8	ug/L	94	2.3	SW846 6010A	06/22-07/06/98	CHQ1H12A
				Dilution Factor: 1					
				Analysis Time..: 14:41					
Aluminum									
	ND	2000	2100	ug/L	105		SW846 6010A	06/22-07/06/98	CHQ1H12C
	ND	2000	2160	ug/L	108	2.9	SW846 6010A	06/22-07/06/98	CHQ1H12D
				Dilution Factor: 1					
				Analysis Time..: 14:41					
Cadmium									
	ND	50.0	54.1	ug/L	108		SW846 6010A	06/22-07/07/98	CHQ1H13M
	ND	50.0	55.3	ug/L	111	2.2	SW846 6010A	06/22-07/07/98	CHQ1H13N
				Dilution Factor: 1					
				Analysis Time..: 14:32					
Antimony									
	ND	500	553	ug/L	111		SW846 6010A	06/22-07/07/98	CHQ1H13Q
	ND	500	565	ug/L	113	2.2	SW846 6010A	06/22-07/07/98	CHQ1H13R
				Dilution Factor: 1					
				Analysis Time..: 14:32					
Barium									
	106	2000	2120	ug/L	101		SW846 6010A	06/22-07/06/98	CHQ1H12E
	106	2000	2160	ug/L	103	1.6	SW846 6010A	06/22-07/06/98	CHQ1H12F
				Dilution Factor: 1					
				Analysis Time..: 14:41					
Calcium									
	259000	50000	307000	ug/L	97		SW846 6010A	06/22-07/06/98	CHQ1H12J
	259000	50000	307000	ug/L	97	0.07	SW846 6010A	06/22-07/06/98	CHQ1H12K
				Dilution Factor: 1					
				Analysis Time..: 14:41					
Thallium									
	ND	2000	1940	ug/L	97		SW846 6010A	06/22-07/07/98	CHQ1H127
	ND	2000	1980	ug/L	99	1.8	SW846 6010A	06/22-07/07/98	CHQ1H128
				Dilution Factor: 1					
				Analysis Time..: 14:32					

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Quanterra

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: D8F100189 **Matrix.....:** WATER
Date Sampled...: 06/03/98 10:43 **Date Received..:** 06/03/98

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Cobalt									
	ND	500	511	ug/L	102		SW846 6010A	06/22-07/06/98	CHQ1H12
	ND	500	512	ug/L	102	0.18	SW846 6010A	06/22-07/06/98	CHQ1H12
			Dilution Factor: 1						
			Analysis Time..: 14:41						
Chromium									
	ND	200	193	ug/L	97		SW846 6010A	06/22-07/06/98	CHQ1H12
	ND	200	193	ug/L	97	0.04	SW846 6010A	06/22-07/06/98	CHQ1H12
			Dilution Factor: 1						
			Analysis Time..: 14:41						
Copper									
	2.6	250	254	ug/L	101		SW846 6010A	06/22-07/06/98	CHQ1H11
	2.6	250	259	ug/L	103	1.9	SW846 6010A	06/22-07/06/98	CHQ1H11
			Dilution Factor: 1						
			Analysis Time..: 14:41						
Iron									
	36.9	1000	1060	ug/L	102		SW846 6010A	06/22-07/06/98	CHQ1H11
	36.9	1000	1050	ug/L	101	0.68	SW846 6010A	06/22-07/06/98	CHQ1H11
			Dilution Factor: 1						
			Analysis Time..: 14:41						
Potassium									
	2990	50000	55300	ug/L	105		SW846 6010A	06/22-07/06/98	CHQ1H11
	2990	50000	57400	ug/L	109	3.6	SW846 6010A	06/22-07/06/98	CHQ1H11
			Dilution Factor: 1						
			Analysis Time..: 14:41						
Magnesium									
	106000	50000	158000	ug/L	105		SW846 6010A	06/22-07/06/98	CHQ1H11
	106000	50000	161000	ug/L	110	1.4	SW846 6010A	06/22-07/06/98	CHQ1H11
			Dilution Factor: 1						
			Analysis Time..: 14:41						
Manganese									
	4.8	500	501	ug/L	99		SW846 6010A	06/22-07/06/98	CHQ1H11
	4.8	500	501	ug/L	99	0.06	SW846 6010A	06/22-07/06/98	CHQ1H11
			Dilution Factor: 1						
			Analysis Time..: 14:41						
Sodium									
	153000	50000	203000	ug/L	99		SW846 6010A	06/22-07/06/98	CHQ1H11
	153000	50000	207000	ug/L	108	2.0	SW846 6010A	06/22-07/06/98	CHQ1H11
			Dilution Factor: 1						
			Analysis Time..: 14:41						

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Quanterra

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: D8F100189 **Matrix.....:** WATER
Date Sampled...: 06/03/98 10:43 **Date Received..:** 06/03/98

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Nickel									
	ND	500	490	ug/L	98		SW846 6010A	06/22-07/06/98	CHQ1H11Q
	ND	500	506	ug/L	101	3.3	SW846 6010A	06/22-07/06/98	CHQ1H11R
			Dilution Factor: 1						
			Analysis Time..: 14:41						
Tin									
	150	2000	2020	ug/L	93		SW846 6010A	06/22-07/08/98	CHQ1H13J
	150	2000	1990	ug/L	92	1.1	SW846 6010A	06/22-07/08/98	CHQ1H13K
			Dilution Factor: 1						
			Analysis Time..: 12:06						
Vanadium									
	ND	500	502	ug/L	100		SW846 6010A	06/22-07/06/98	CHQ1H11V
	ND	500	502	ug/L	100	0.11	SW846 6010A	06/22-07/06/98	CHQ1H11W
			Dilution Factor: 1						
			Analysis Time..: 14:41						
Zinc									
	ND	500	504	ug/L	101		SW846 6010A	06/22-07/06/98	CHQ1H11X
	ND	500	503	ug/L	101	0.26	SW846 6010A	06/22-07/06/98	CHQ1H12C
			Dilution Factor: 1						
			Analysis Time..: 14:41						

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: D8F100189 **Matrix.....:** WATER
Date Sampled...: 06/03/98 10:43 **Date Received..:** 06/03/98

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: D8F040172-014 **Prep Batch #...:** 8173213							
Silver	92	(83 - 115)			SW846 6010A	06/22-07/06/98	CHQ1H129
	94	(83 - 115)	2.3	(0-10)	SW846 6010A	06/22-07/06/98	CHQ1H12A
		Dilution Factor: 1					
		Analysis Time..: 14:41					
Aluminum	105	(86 - 117)			SW846 6010A	06/22-07/06/98	CHQ1H12C
	108	(86 - 117)	2.9	(0-10)	SW846 6010A	06/22-07/06/98	CHQ1H12D
		Dilution Factor: 1					
		Analysis Time..: 14:41					
Cadmium	108	(95 - 121)			SW846 6010A	06/22-07/07/98	CHQ1H13M
	111	(95 - 121)	2.2	(0-10)	SW846 6010A	06/22-07/07/98	CHQ1H13N
		Dilution Factor: 1					
		Analysis Time..: 14:32					
Antimony	111	(89 - 115)			SW846 6010A	06/22-07/07/98	CHQ1H13Q
	113	(89 - 115)	2.2	(0-10)	SW846 6010A	06/22-07/07/98	CHQ1H13R
		Dilution Factor: 1					
		Analysis Time. : 14:32					
Barium	101	(86 - 114)			SW846 6010A	06/22-07/06/98	CHQ1H12E
	103	(86 - 114)	1.6	(0-10)	SW846 6010A	06/22-07/06/98	CHQ1H12F
		Dilution Factor: 1					
		Analysis Time..: 14:41					
Calcium	97	(88 - 112)			SW846 6010A	06/22-07/06/98	CHQ1H12J
	97	(88 - 112)	0.07	(0-10)	SW846 6010A	06/22-07/06/98	CHQ1H12K
		Dilution Factor: 1					
		Analysis Time..: 14:41					
Thallium	97	(90 - 119)			SW846 6010A	06/22-07/07/98	CHQ1H127
	99	(90 - 119)	1.8	(0-10)	SW846 6010A	06/22-07/07/98	CHQ1H128
		Dilution Factor: 1					
		Analysis Time..: 14:32					
Cobalt	102	(80 - 120)			SW846 6010A	06/22-07/06/98	CHQ1H12N
	102	(80 - 120)	0.18	(0-10)	SW846 6010A	06/22-07/06/98	CHQ1H12P
		Dilution Factor: 1					
		Analysis Time..: 14:41					
Chromium	97	(83 - 112)			SW846 6010A	06/22-07/06/98	CHQ1H12Q
	97	(83 - 112)	0.04	(0-10)	SW846 6010A	06/22-07/06/98	CHQ1H12R
		Dilution Factor: 1					
		Analysis Time..: 14:41					

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Quanterra

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: D8F100189 **Matrix.....:** WATER
Date Sampled...: 06/03/98 10:43 **Date Received..:** 06/03/98

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Copper	101	(84 - 115)			SW846 6010A	06/22-07/06/98	CHQ1H11C
	103	(84 - 115)	1.9	(0-10)	SW846 6010A	06/22-07/06/98	CHQ1H11D
		Dilution Factor: 1					
		Analysis Time..: 14:41					
Iron	102	(87 - 117)			SW846 6010A	06/22-07/06/98	CHQ1H11E
	101	(87 - 117)	0.68	(0-10)	SW846 6010A	06/22-07/06/98	CHQ1H11F
		Dilution Factor: 1					
		Analysis Time..: 14:41					
Potassium	105	(82 - 111)			SW846 6010A	06/22-07/06/98	CHQ1H11G
	109	(82 - 111)	3.6	(0-10)	SW846 6010A	06/22-07/06/98	CHQ1H11H
		Dilution Factor: 1					
		Analysis Time..: 14:41					
Magnesium	105	(84 - 114)			SW846 6010A	06/22-07/06/98	CHQ1H11J
	110	(84 - 114)	1.4	(0-10)	SW846 6010A	06/22-07/06/98	CHQ1H11K
		Dilution Factor: 1					
		Analysis Time..: 14:41					
Manganese	99	(84 - 113)			SW846 6010A	06/22-07/06/98	CHQ1H11L
	99	(84 - 113)	0.06	(0-10)	SW846 6010A	06/22-07/06/98	CHQ1H11M
		Dilution Factor: 1					
		Analysis Time..: 14.41					
Sodium	99	(86 - 115)			SW846 6010A	06/22-07/06/98	CHQ1H11N
	108	(86 - 115)	2.0	(0-10)	SW846 6010A	06/22-07/06/98	CHQ1H11P
		Dilution Factor: 1					
		Analysis Time .: 14:41					
Nickel	98	(85 - 112)			SW846 6010A	06/22-07/06/98	CHQ1H11Q
	101	(85 - 112)	3.3	(0-10)	SW846 6010A	06/22-07/06/98	CHQ1H11R
		Dilution Factor: 1					
		Analysis Time..: 14:41					
Tin	93	(86 - 114)			SW846 6010A	06/22-07/08/98	CHQ1H13J
	92	(86 - 114)	1.1	(0-10)	SW846 6010A	06/22-07/08/98	CHQ1H13K
		Dilution Factor: 1					
		Analysis Time..: 12:06					
Vanadium	100	(85 - 114)			SW846 6010A	06/22-07/06/98	CHQ1H11V
	100	(85 - 114)	0.11	(0-10)	SW846 6010A	06/22-07/06/98	CHQ1H11W
		Dilution Factor: 1					
		Analysis Time..: 14:41					

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Quanterra

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: D8F100189 **Matrix.....:** WATER
Date Sampled...: 06/03/98 10:43 **Date Received..:** 06/03/98

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Zinc	101	(82 - 113)			SW846 6010A	06/22-07/06/98	CHQ1H11X
	101	(82 - 113)	0.26	(0-10)	SW846 6010A	06/22-07/06/98	CHQ1H120

Dilution Factor: 1
Analysis Time..: 14:41

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: D8F100189 **Matrix.....:** WATER
Date Sampled...: 06/02/98 07:34 **Date Received..:** 06/11/98

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: D8F110188-006 **Prep Batch #...:** 8175206									
Selenium									
	ND	0.040	0.0369	mg/L	92		SW846 7740	06/24-06/29/98	CHXMF10(
	ND	0.040	0.0363	mg/L	91	1.6	SW846 7740	06/24-06/29/98	CHXMF10I
			Dilution Factor: 1						
			Analysis Time..: 11:01						
Arsenic									
	ND	0.040	0.0319 N	mg/L	80		SW846 7060A	06/24-06/29/98	CHXMF10S
	ND	0.040	0.0313 N	mg/L	78	1.9	SW846 7060A	06/24-06/29/98	CHXMF10A
			Dilution Factor: 1						
			Analysis Time..: 08:45						

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

Quanterra

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: D8F100189 **Matrix.....:** WATER
Date Sampled...: 06/02/98 07:34 **Date Received..:** 06/11/98

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: D8F110188-006 **Prep Batch #...:** 8175206							
Selenium	92	(80 - 118)			SW846 7740	06/24-06/29/98	CHXMF10C
	91	(80 - 118)	1.6	(0-10)	SW846 7740	06/24-06/29/98	CHXMF10D
		Dilution Factor: 1					
		Analysis Time..: 11:01					
Arsenic	80 N	(85 - 114)			SW846 7060A	06/24-06/29/98	CHXMF109
	78 N	(85 - 114)	1.9	(0-10)	SW846 7060A	06/24-06/29/98	CHXMF10A
		Dilution Factor: 1					
		Analysis Time..: 08:45					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

Quanterra

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: D8F100189 **Matrix.....:** WATER
Date Sampled...: 06/02/98 09:50 **Date Received..:** 06/11/98

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT		UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: D8F110188-007 **Prep Batch #...:** 8175216										
Lead										
	0.0037	0.040	0.0236	N	mg/L	50		SW846 7421	06/24-06/26/98	CHXMG10
	0.0037	0.040	0.0224	N	mg/L	47	5.2	SW846 7421	06/24-06/26/98	CHXMG10

Dilution Factor: 1
Analysis Time...: 08:55

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

Quanterra

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: D8F100189 **Matrix.....:** WATER
Date Sampled...: 06/02/98 09:50 **Date Received..:** 06/11/98

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: D8F110188-007 **Prep Batch #...:** 8175216							
Lead	50 N	(84 - 124)			SW846 7421	06/24-06/26/98	CHXMG109
	47 N	(84 - 124)	5.2	(0-10)	SW846 7421	06/24-06/26/98	CHXMG10A

Dilution Factor: 1
Analysis Time..: 08:55

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

Quanterra

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: D8F100189 **Matrix.....:** WATER
Date Sampled...: 06/07/98 13:25 **Date Received..:** 06/09/98

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: D8F090165-009 **Prep Batch #...:** 8178121									
Mercury									
	ND	5.00	5.35	ug/L	107		SW846 7470A	06/27-06/29/98	CHVGL14
	ND	5.00	5.35	ug/L	107	0.03	SW846 7470A	06/27-06/29/98	CHVGL14

Dilution Factor: 1
Analysis Time..: 00:39

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: D8F100189 **Matrix.....:** WATER
Date Sampled...: 06/07/98 13:25 **Date Received..:** 06/09/98

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: D8F090165-009 **Prep Batch #...:** 8178121							
Mercury	107	(77 - 117)			SW846 7470A	06/27-06/29/98	CHVGL142
	107	(77 - 117)	0.03	(0-10)	SW846 7470A	06/27-06/29/98	CHVGL143

Dilution Factor: 1
Analysis Time..: 00:39

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: D8F100189 **Matrix.....:** WG
Date Sampled...: 06/09/98 11:05 **Date Received..:** 06/10/98

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: D8F100189-001 **Prep Batch #...:** 8195211									
Thallium									
	0.029	200	196	ug/L	98		SW846 6020	07/14-07/17/98	CHWGH114
	0.029	200	198	ug/L	99	0.94	SW846 6020	07/14-07/17/98	CHWGH115

Dilution Factor: 1
Analysis Time..: 11:58

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: D8F100189 **Matrix.....:** WG
Date Sampled...: 06/09/98 11:05 **Date Received..:** 06/10/98

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: D8F100189-001 **Prep Batch #...:** 8195211							
Thallium	98	(70 - 130)			SW846 6020	07/14-07/17/98	CHWGH114
	99	(70 - 130)	0.94	(0-20)	SW846 6020	07/14-07/17/98	CHWGH115

Dilution Factor: 1
Analysis Time..: 11:58

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Lot-Sample #...: D8F100189 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride			WO#:CJ1KC102-LCS/CJ1KC103-LCSD			LCS Lot-Sample#: D8F140000-150		
	25.0	23.9	mg/L	95		MCAWW 300.0A	06/10/98	8165150
	25.0	23.9	mg/L	96	0.16	MCAWW 300.0A	06/10/98	8165150
			Dilution Factor: 1					
Nitrate			WO#:CJ1KF102-LCS/CJ1KF103-LCSD			LCS Lot-Sample#: D8F140000-153		
	5.00	4.77	mg/L	95		MCAWW 300.0A	06/10/98	8165153
	5.00	4.78	mg/L	96	0.31	MCAWW 300.0A	06/10/98	8165153
			Dilution Factor: 1					
Sulfate			WO#:CJ1KD102-LCS/CJ1KD103-LCSD			LCS Lot-Sample#: D8F140000-151		
	25.0	23.7	mg/L	95		MCAWW 300.0A	06/10/98	8165151
	25.0	23.7	mg/L	95	0.16	MCAWW 300.0A	06/10/98	8165151
			Dilution Factor: 1					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Lot-Sample #...: D8F100189 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride		WO#:CJ1KC102-LCS/CJ1KC103-LCSD				LCS Lot-Sample#: D8F140000-150	
	95	(92 - 112)			MCAWW 300.0A	06/10/98	8165150
	96	(92 - 112)	0.16	(0-10)	MCAWW 300.0A	06/10/98	8165150
		Dilution Factor: 1					
Nitrate		WO#:CJ1KF102-LCS/CJ1KF103-LCSD				LCS Lot-Sample#: D8F140000-153	
	95	(90 - 110)			MCAWW 300.0A	06/10/98	8165153
	96	(90 - 110)	0.31	(0-10)	MCAWW 300.0A	06/10/98	8165153
		Dilution Factor: 1					
Sulfate		WO#:CJ1KD102-LCS/CJ1KD103-LCSD				LCS Lot-Sample#: D8F140000-151	
	95	(92 - 112)			MCAWW 300.0A	06/10/98	8165151
	95	(92 - 112)	0.16	(0-10)	MCAWW 300.0A	06/10/98	8165151
		Dilution Factor: 1					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quanterra uanterra

METHOD BLANK REPORT

General Chemistry

D8F100189 Matrix.....: WATER ix.....: WATER

RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #	PREPARATION-ANALYSIS DATE	PREP BATCH #
	Work Order #: CJ1KC101		MB Lot-Sample #:	D8F140000-150		nple #: D8F100130-001	
ND	3.0	mg/L	MCAWW 300.0A	06/10/98	8165150	06/10-06/11/98	816515C
	Dilution Factor: 1					06/10-06/11/98	816515C
	Analysis Time..: 22:34						
	Work Order #: CJ1KF101		MB Lot-Sample #:	D8F140000-153			
ND	0.50	mg/L	MCAWW 300.0A	06/10/98	8165153		
	Dilution Factor: 1					nple #: D8F100130-001	
	Analysis Time..: 22:34					06/10/98	8165153
						06/10/98	8165153
	Work Order #: CJ1KD101		MB Lot-Sample #:	D8F140000-151			
ND	5.0	mg/L	MCAWW 300.0A	06/10-06/11/98	8165151		
	Dilution Factor: 1					nple #: D8F100130-001	
	Analysis Time..: 00:09					06/10-06/11/98	8165151
						06/10-06/11/98	8165151

rounding to avoid round-off errors in calculated results.

Quanterra

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: D8F100189 **Matrix.....:** WATER
Date Sampled...: 06/09/98 14:10 **Date Received..:** 06/10/98

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride		WO#: CHVXK10E-MS/CHVXK10F-MSD MS Lot-Sample #: D8F100130-001					
	94	(92 - 112)			MCAWW 300.0A	06/10-06/11/98	8165150
	92	(92 - 112)	1.8	(0-10)	MCAWW 300.0A	06/10-06/11/98	8165150
		Dilution Factor: 1					
		Analysis Time..: 00:09					
Nitrate		WO#: CHVXK10L-MS/CHVXK10M-MSD MS Lot-Sample #: D8F100130-001					
	95	(90 - 110)			MCAWW 300.0A	06/10/98	8165153
	94	(90 - 110)	0.30	(0-10)	MCAWW 300.0A	06/10/98	8165153
		Dilution Factor: 1					
		Analysis Time..: 22:34					
Sulfate		WO#: CHVXK10G-MS/CHVXK10H-MSD MS Lot-Sample #: D8F100130-001					
	97	(92 - 112)			MCAWW 300.0A	06/10-06/11/98	8165151
	97	(92 - 112)	0.66	(0-10)	MCAWW 300.0A	06/10-06/11/98	8165151
		Dilution Factor: 1					
		Analysis Time..: 00:90					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

December 1998
Analytical Data

Quanterra

Quanterra Incorporated
4955 Yarrow Street
Arvada, Colorado 80002

303 421-6611 Telephone
303 431-7171 Fax

February 17, 1999

Mr. Doug Scott
Foothill Engineering Consultants
350 Indiana Street, Suite 415
Golden, CO 80401

Dear Mr. Scott:

Enclosed please find the reissued Method 8081A and metals data sheets and quality control data associated with the Canon AFB project, Quanterra lot number D8L090208.

At your request, alpha and gamma chlordane have been added to the compound list for Method 8081A and arsenic, lead and selenium have been added to the metals list.

Also enclosed is a disk containing three files. The file labeled D8L09208_ADD.mbd contains only the data for the added compounds. We have also included D8L09208_FULL.mbd, that contains the full list of compounds, and D8L09208-ORIG.mdb, which is the original file, submitted to you. We do not anticipate your needing the last two files.

We regret any inconvenience this omission may have caused. Please call if you have any questions.

Sincerely,

Ellen LaRiviere

Ellen La Riviere
Program Manager

Enclosures

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWR-1298-2

GC Semivolatiles

Lot-Sample #...: D8L090208-001 **Work Order #...:** CP5JQ110 **Matrix.....:** WATER
Date Sampled...: 12/08/98 15:40 **Date Received..:** 12/09/98
Prep Date.....: 12/14/98 **Analysis Date..:** 01/06/99
Prep Batch #...: 8348158 **Analysis Time..:** 07:21
Dilution Factor: 1

Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	0.050	ug/L
alpha-BHC	ND	0.050	ug/L
beta-BHC	ND	0.050	ug/L
delta-BHC	ND	0.050	ug/L
gamma-BHC (Lindane)	ND	0.050	ug/L
Chlordane (technical)	ND	0.50	ug/L
4,4'-DDD	**0.046 J**	**0.050**	**ug/L**
4,4'-DDE	ND	0.050	ug/L
4,4'-DDT	ND	0.050	ug/L
Dieldrin	ND	0.050	ug/L
Endrin	ND	0.050	ug/L
Endrin aldehyde	ND	0.050	ug/L
Endosulfan I	ND	0.050	ug/L
Endosulfan II	ND	0.050	ug/L
Endosulfan sulfate	ND	0.050	ug/L
Heptachlor	ND	0.050	ug/L
Heptachlor epoxide	ND	0.050	ug/L
Methoxychlor	ND	0.10	ug/L
Toxaphene	ND	2.0	ug/L
alpha-Chlordane	ND	0.050	ug/L
gamma-Chlordane	ND	0.050	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	111	(51 - 132)
Tetrachloro-m-xylene	91	(56 - 107)

NOTE(S):

J Estimated result. Result is less than RL.

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWR-1298-1

GC Semivolatiles

Lot-Sample #...: D8L090208-002 **Work Order #...:** CP5JW110 **Matrix.....:** WATER
Date Sampled...: 12/08/98 15:40 **Date Received..:** 12/09/98
Prep Date.....: 12/14/98 **Analysis Date..:** 01/06/99
Prep Batch #...: 8348158 **Analysis Time..:** 07:55
Dilution Factor: 1

Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	0.050	ug/L
alpha-BHC	ND	0.050	ug/L
beta-BHC	ND	0.050	ug/L
delta-BHC	ND	0.050	ug/L
gamma-BHC (Lindane)	ND	0.050	ug/L
Chlordane (technical)	ND	0.50	ug/L
4,4'-DDD	ND	0.050	ug/L
4,4'-DDE	ND	0.050	ug/L
4,4'-DDT	ND	0.050	ug/L
Dieldrin	ND	0.050	ug/L
Endrin	ND	0.050	ug/L
Endrin aldehyde	ND	0.050	ug/L
Endosulfan I	ND	0.050	ug/L
Endosulfan II	ND	0.050	ug/L
Endosulfan sulfate	ND	0.050	ug/L
Heptachlor	ND	0.050	ug/L
Heptachlor epoxide	ND	0.050	ug/L
Methoxychlor	ND	0.10	ug/L
Toxaphene	ND	2.0	ug/L
alpha-Chlordane	ND	0.050	ug/L
gamma-Chlordane	ND	0.050	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	109	(51 - 132)
Tetrachloro-m-xylene	96	(56 - 107)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWO-1298-1

GC Semivolatiles

Lot-Sample #...: D8L090208-003 **Work Order #...:** CP5K5110 **Matrix.....:** WATER
Date Sampled...: 12/08/98 16:10 **Date Received..:** 12/09/98
Prep Date.....: 12/14/98 **Analysis Date..:** 01/06/99
Prep Batch #...: 8348158 **Analysis Time..:** 08:30
Dilution Factor: 1

Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	0.050	ug/L
alpha-BHC	ND	0.050	ug/L
beta-BHC	ND	0.050	ug/L
delta-BHC	ND	0.050	ug/L
gamma-BHC (Lindane)	ND	0.050	ug/L
Chlordane (technical)	ND	0.50	ug/L
4,4'-DDD	ND	0.050	ug/L
4,4'-DDE	ND	0.050	ug/L
4,4'-DDT	ND	0.050	ug/L
Dieldrin	ND	0.050	ug/L
Endrin	ND	0.050	ug/L
Endrin aldehyde	ND	0.050	ug/L
Endosulfan I	ND	0.050	ug/L
Endosulfan II	ND	0.050	ug/L
Endosulfan sulfate	ND	0.050	ug/L
Heptachlor	ND	0.050	ug/L
Heptachlor epoxide	ND	0.050	ug/L
Methoxychlor	ND	0.10	ug/L
Toxaphene	ND	2.0	ug/L
alpha-Chlordane	ND	0.050	ug/L
gamma-Chlordane	ND	0.050	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	102	(51 - 132)
Tetrachloro-m-xylene	88	(56 - 107)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWN-1298-1

GC Semivolatiles

Lot-Sample #...: D8L090208-004 **Work Order #...:** CP5K7110 **Matrix.....:** WATER
Date Sampled...: 12/08/98 16:35 **Date Received..:** 12/09/98
Prep Date.....: 12/14/98 **Analysis Date..:** 01/06/99
Prep Batch #...: 8348158 **Analysis Time..:** 09:04
Dilution Factor: 1

Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	0.050	ug/L
alpha-BHC	ND	0.050	ug/L
beta-BHC	ND	0.050	ug/L
delta-BHC	ND	0.050	ug/L
gamma-BHC (Lindane)	ND	0.050	ug/L
Chlordane (technical)	ND	0.50	ug/L
4,4'-DDD	ND	0.050	ug/L
4,4'-DDE	ND	0.050	ug/L
4,4'-DDT	ND	0.050	ug/L
Dieldrin	ND	0.050	ug/L
Endrin	ND	0.050	ug/L
Endrin aldehyde	ND	0.050	ug/L
Endosulfan I	ND	0.050	ug/L
Endosulfan II	ND	0.050	ug/L
Endosulfan sulfate	ND	0.050	ug/L
Heptachlor	ND	0.050	ug/L
Heptachlor epoxide	ND	0.050	ug/L
Methoxychlor	ND	0.10	ug/L
Toxaphene	ND	2.0	ug/L
alpha-Chlordane	ND	0.050	ug/L
gamma-Chlordane	ND	0.050	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	100	(51 - 132)
Tetrachloro-m-xylene	95	(56 - 107)

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: D8L090208 **Work Order #...:** CP9H5104 **Matrix.....:** WATER
MB Lot-Sample #: D8L140000-158

Prep Date.....: 12/14/98 **Analysis Time..:** 05:38
Analysis Date..: 01/06/99 **Prep Batch #...:** 8348158
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Aldrin	ND	0.050	ug/L	SW846 8081A
alpha-BHC	ND	0.050	ug/L	SW846 8081A
beta-BHC	ND	0.050	ug/L	SW846 8081A
delta-BHC	ND	0.050	ug/L	SW846 8081A
gamma-BHC (Lindane)	ND	0.050	ug/L	SW846 8081A
Chlordane (technical)	ND	0.50	ug/L	SW846 8081A
4,4'-DDD	ND	0.050	ug/L	SW846 8081A
4,4'-DDE	ND	0.050	ug/L	SW846 8081A
4,4'-DDT	ND	0.050	ug/L	SW846 8081A
Dieldrin	ND	0.050	ug/L	SW846 8081A
Endrin	ND	0.050	ug/L	SW846 8081A
Endrin aldehyde	ND	0.050	ug/L	SW846 8081A
Endosulfan I	ND	0.050	ug/L	SW846 8081A
Endosulfan II	ND	0.050	ug/L	SW846 8081A
Endosulfan sulfate	ND	0.050	ug/L	SW846 8081A
Heptachlor	ND	0.050	ug/L	SW846 8081A
Heptachlor epoxide	ND	0.050	ug/L	SW846 8081A
Methoxychlor	ND	0.10	ug/L	SW846 8081A
Toxaphene	ND	2.0	ug/L	SW846 8081A
alpha-Chlordane	ND	0.050	ug/L	SW846 8081A
gamma-Chlordane	ND	0.050	ug/L	SW846 8081A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	105	(51 - 132)
Tetrachloro-m-xylene	84	(56 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWR-1298-2

TOTAL Metals

Lot-Sample #...: D8L090208-001 Matrix.....: WATER
Date Sampled...: 12/08/98 15:40 Date Received..: 12/09/98

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 8355177						
Silver	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5JQ105
		Dilution Factor: 1		Analysis Time..: 19:44		
Aluminum	ND	100	ug/L	SW846 6010A	12/21-12/23/98	CP5JQ106
		Dilution Factor: 1		Analysis Time..: 19:44		
Cadmium	ND	5.0	ug/L	SW846 6010A	12/21-12/23/98	CP5JQ102
		Dilution Factor: 1		Analysis Time..: 19:44		
Arsenic	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5JQ114
		Dilution Factor: 1		Analysis Time..: 19:44		
Barium	**57.2**	**10.0**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5JQ107**
		Dilution Factor: 1		Analysis Time..: 19:44		
Antimony	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5JQ103
		Dilution Factor: 1		Analysis Time..: 19:44		
Calcium	**58000**	**200**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5JQ108**
		Dilution Factor: 1		Analysis Time..: 19:44		
Thallium	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5JQ104
		Dilution Factor: 1		Analysis Time..: 19:44		
Cobalt	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5JQ109
		Dilution Factor: 1		Analysis Time..: 19:44		
Chromium	**148**	**10.0**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5JQ10A**
		Dilution Factor: 1		Analysis Time..: 19:44		
Copper	**11.1 B**	**20.0**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5JQ10C**
		Dilution Factor: 1		Analysis Time..: 19:44		
Iron	**1010**	**100**	**ug/L**	**SW846 6010A**	**12/21-12/22/98**	**CP5JQ10D**
		Dilution Factor: 1		Analysis Time..: 13:49		
Potassium	**8380**	**5000**	**ug/L**	**SW846 6010A**	**12/21-12/22/98**	**CP5JQ10E**
		Dilution Factor: 1		Analysis Time..: 13:49		
Magnesium	**61700**	**200**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5JQ10F**
		Dilution Factor: 1		Analysis Time..: 19:44		

(Continued on next page)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWR-1298-2

TOTAL Metals

Lot-Sample #...: D8L090208-001 Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Manganese	**99.8**	**10.0**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5JQ10G**
		Dilution Factor: 1		Analysis Time..: 19:44		
Sodium	**42900**	**5000**	**ug/L**	**SW846 6010A**	**12/21-12/22/98**	**CP5JQ10H**
		Dilution Factor: 1		Analysis Time..: 13:49		
Nickel	**460**	**40.0**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5JQ10J**
		Dilution Factor: 1		Analysis Time..: 19:44		
Lead	ND	3.0	ug/L	SW846 6010A	12/21-12/23/98	CP5JQ116
		Dilution Factor: 1		Analysis Time..: 19:44		
Selenium	**9.9**	**5.0**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5JQ118**
		Dilution Factor: 1		Analysis Time..: 19:44		
Tin	ND	100	ug/L	SW846 6010A	12/21-12/23/98	CP5JQ10K
		Dilution Factor: 1		Analysis Time..: 19:44		
Vanadium	**12.3**	**10.0**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5JQ10L**
		Dilution Factor: 1		Analysis Time..: 19:44		
Zinc	ND	20.0	ug/L	SW846 6010A	12/21-12/23/98	CP5JQ10M
		Dilution Factor: 1		Analysis Time..: 19:44		
Prep Batch #...: 8357267						
Mercury	ND	0.20	ug/L	SW846 7470A	12/31-01/04/99	CP5JQ10N
		Dilution Factor: 1		Analysis Time..: 14:53		

NOTE(S):

B Estimated result. Result is less than RL.

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWR-1298-1

TOTAL Metals

Lot-Sample #...: D8L090208-002 Matrix.....: WATER
Date Sampled...: 12/08/98 15:40 Date Received..: 12/09/98

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 8355177						
Silver	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5JW105
		Dilution Factor: 1		Analysis Time..: 19:48		
Aluminum	ND	100	ug/L	SW846 6010A	12/21-12/23/98	CP5JW106
		Dilution Factor: 1		Analysis Time..: 19:48		
Cadmium	ND	5.0	ug/L	SW846 6010A	12/21-12/23/98	CP5JW102
		Dilution Factor: 1		Analysis Time..: 19:48		
Arsenic	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5JW114
		Dilution Factor: 1		Analysis Time..: 19:48		
Barium	**58.2**	**10.0**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5JW107**
		Dilution Factor: 1		Analysis Time..: 19:48		
Antimony	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5JW103
		Dilution Factor: 1		Analysis Time..: 19:48		
Calcium	**59300**	**200**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5JW108**
		Dilution Factor: 1		Analysis Time..: 19:48		
Thallium	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5JW104
		Dilution Factor: 1		Analysis Time..: 19:48		
Cobalt	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5JW109
		Dilution Factor: 1		Analysis Time..: 19:48		
Chromium	**148**	**10.0**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5JW10A**
		Dilution Factor: 1		Analysis Time..: 19:48		
Copper	**3.3 B**	**20.0**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5JW10C**
		Dilution Factor: 1		Analysis Time..: 19:48		
Iron	**755**	**100**	**ug/L**	**SW846 6010A**	**12/21-12/22/98**	**CP5JW10D**
		Dilution Factor: 1		Analysis Time..: 13:53		
Potassium	**8590**	**5000**	**ug/L**	**SW846 6010A**	**12/21-12/22/98**	**CP5JW10E**
		Dilution Factor: 1		Analysis Time..: 13:53		
Magnesium	**62900**	**200**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5JW10F**
		Dilution Factor: 1		Analysis Time..: 19:48		

(Continued on next page)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWR-1298-1

TOTAL Metals

Lot-Sample #...: D8L090208-002 Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Manganese	**87.9**	**10.0**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5JW10G**
		Dilution Factor: 1		Analysis Time..: 19:48		
Sodium	**43600**	**5000**	**ug/L**	**SW846 6010A**	**12/21-12/22/98**	**CP5JW10H**
		Dilution Factor: 1		Analysis Time..: 13:53		
Nickel	**381**	**40.0**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5JW10J**
		Dilution Factor: 1		Analysis Time..: 19:48		
Lead	ND	3.0	ug/L	SW846 6010A	12/21-12/23/98	CP5JW116
		Dilution Factor: 1		Analysis Time..: 19:48		
Selenium	**11.4**	**5.0**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5JW118**
		Dilution Factor: 1		Analysis Time..: 19:48		
Tin	ND	100	ug/L	SW846 6010A	12/21-12/23/98	CP5JW10K
		Dilution Factor: 1		Analysis Time..: 19:48		
Vanadium	**13.1**	**10.0**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5JW10L**
		Dilution Factor: 1		Analysis Time..: 19:48		
Zinc	ND	20.0	ug/L	SW846 6010A	12/21-12/23/98	CP5JW10M
		Dilution Factor: 1		Analysis Time..: 19:48		
Prep Batch #...: 8357267						
Mercury	ND	0.20	ug/L	SW846 7470A	12/31-01/04/99	CP5JW10N
		Dilution Factor: 1		Analysis Time..: 14:55		

NOTE(S):

B Estimated result. Result is less than RL.

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWO-1298-1

TOTAL Metals

Lot-Sample #...: D8L090208-003 **Matrix.....:** WATER
Date Sampled...: 12/08/98 16:10 **Date Received..:** 12/09/98

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 8355177						
Silver	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K5105
		Dilution Factor: 1		Analysis Time..: 19:52		
Aluminum	ND	100	ug/L	SW846 6010A	12/21-12/23/98	CP5K5106
		Dilution Factor: 1		Analysis Time..: 19:52		
Cadmium	ND	5.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K5102
		Dilution Factor: 1		Analysis Time..: 19:52		
Arsenic	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K5114
		Dilution Factor: 1		Analysis Time..: 19:52		
Barium	**45.1**	**10.0**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5K5107**
		Dilution Factor: 1		Analysis Time..: 19:52		
ntimony	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K5103
		Dilution Factor: 1		Analysis Time..: 19:52		
Calcium	**72100**	**200**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5K5108**
		Dilution Factor: 1		Analysis Time..: 19:52		
Thallium	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K5104
		Dilution Factor: 1		Analysis Time..: 19:52		
Cobalt	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K5109
		Dilution Factor: 1		Analysis Time..: 19:52		
Chromium	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K510A
		Dilution Factor: 1		Analysis Time..: 19:52		
Copper	ND	20.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K510C
		Dilution Factor: 1		Analysis Time..: 19:52		
Iron	ND	100	ug/L	SW846 6010A	12/21-12/22/98	CP5K510D
		Dilution Factor: 1		Analysis Time..: 13:56		
Potassium	**8510**	**5000**	**ug/L**	**SW846 6010A**	**12/21-12/22/98**	**CP5K510E**
		Dilution Factor: 1		Analysis Time..: 13:56		
Magnesium	**66000**	**200**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5K510F**
		Dilution Factor: 1		Analysis Time..: 19:52		

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FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWO-1298-1

TOTAL Metals

Lot-Sample #...: D8L090208-003 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Manganese	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K510G
		Dilution Factor: 1		Analysis Time..: 19:52		
Sodium	**189000**	**5000**	**ug/L**	**SW846 6010A**	**12/21-12/22/98**	**CP5K510H**
		Dilution Factor: 1		Analysis Time..: 13:56		
Nickel	ND	40.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K510J
		Dilution Factor: 1		Analysis Time..: 19:52		
Lead	ND	3.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K5116
		Dilution Factor: 1		Analysis Time..: 19:52		
Selenium	**5.6**	**5.0**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5K5118**
		Dilution Factor: 1		Analysis Time..: 19:52		
Tin	ND	100	ug/L	SW846 6010A	12/21-12/23/98	CP5K510K
		Dilution Factor: 1		Analysis Time..: 19:52		
Vanadium	**19.4**	**10.0**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5K510L**
		Dilution Factor: 1		Analysis Time..: 19:52		
Zinc	ND	20.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K510M
		Dilution Factor: 1		Analysis Time..: 19:52		

Prep Batch #...: 8357267

Mercury	ND	0.20	ug/L	SW846 7470A	12/31-01/04/99	CP5K510N
		Dilution Factor: 1		Analysis Time..: 14:57		

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWN-1298-1

TOTAL Metals

Lot-Sample #...: D8L090208-004 Matrix.....: WATER
Date Sampled...: 12/08/98 16:35 Date Received..: 12/09/98

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 8355177						
Silver	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K7105
		Dilution Factor: 1		Analysis Time..: 19:56		
Aluminum	ND	100	ug/L	SW846 6010A	12/21-12/23/98	CP5K7106
		Dilution Factor: 1		Analysis Time..: 19:56		
Cadmium	ND	5.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K7102
		Dilution Factor: 1		Analysis Time..: 19:56		
Arsenic	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K7118
		Dilution Factor: 1		Analysis Time..: 19:56		
Barium	**58.2**	**10.0**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5K7107**
		Dilution Factor: 1		Analysis Time..: 19:56		
Antimony	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K7103
		Dilution Factor: 1		Analysis Time..: 19:56		
Calcium	**48300**	**200**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5K7108**
		Dilution Factor: 1		Analysis Time..: 19:56		
Thallium	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K7104
		Dilution Factor: 1		Analysis Time..: 19:56		
Cobalt	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K7109
		Dilution Factor: 1		Analysis Time..: 19:56		
Chromium	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K710A
		Dilution Factor: 1		Analysis Time..: 19:56		
Copper	ND	20.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K710C
		Dilution Factor: 1		Analysis Time..: 19:56		
Iron	ND	100	ug/L	SW846 6010A	12/21-12/22/98	CP5K710D
		Dilution Factor: 1		Analysis Time..: 13:59		
Potassium	**8020**	**5000**	**ug/L**	**SW846 6010A**	**12/21-12/22/98**	**CP5K710E**
		Dilution Factor: 1		Analysis Time..: 13:59		
Magnesium	**47900**	**200**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5K710F**
		Dilution Factor: 1		Analysis Time..: 19:56		

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FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWN-1298-1

TOTAL Metals

Lot-Sample #...: D8L090208-004 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Manganese	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K710G
		Dilution Factor: 1		Analysis Time..: 19:56		
Sodium	**37800**	**5000**	**ug/L**	**SW846 6010A**	**12/21-12/22/98**	**CP5K710H**
		Dilution Factor: 1		Analysis Time..: 13:59		
Nickel	ND	40.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K710J
		Dilution Factor: 1		Analysis Time..: 19:56		
Lead	ND	3.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K711A
		Dilution Factor: 1		Analysis Time..: 19:56		
Selenium	**12.2**	**5.0**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5K711D**
		Dilution Factor: 1		Analysis Time..: 19:56		
Tin	ND	100	ug/L	SW846 6010A	12/21-12/23/98	CP5K710K
		Dilution Factor: 1		Analysis Time..: 19:56		
Vanadium	**23.2**	**10.0**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5K71**
		Dilution Factor: 1		Analysis Time..: 19:56		
Zinc	ND	20.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K710M
		Dilution Factor: 1		Analysis Time..: 19:56		

Prep Batch #...: 8357267

Mercury	ND	0.20	ug/L	SW846 7470A	12/31-01/04/99	CP5K710N
		Dilution Factor: 1		Analysis Time..: 14:59		

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Lot-Sample #...: D8L090208 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP-BATCH #
Aluminum	105	(81 - 117)			SW846 6010A	12/21-12/23/98	8355177
	104	(81 - 117)	0.96	(0-10)	SW846 6010A	12/21-12/23/98	8355177
		Dilution Factor: 1					
Antimony	92	(84 - 115)			SW846 6010A	12/21-12/23/98	8355177
	91	(84 - 115)	0.80	(0-10)	SW846 6010A	12/21-12/23/98	8355177
		Dilution Factor: 1					
Arsenic	96	(81 - 113)			SW846 6010A	12/21-12/23/98	8355177
	95	(81 - 113)	1.1	(0-10)	SW846 6010A	12/21-12/23/98	8355177
		Dilution Factor: 1					
Barium	104	(81 - 114)			SW846 6010A	12/21-12/23/98	8355177
	103	(81 - 114)	0.60	(0-10)	SW846 6010A	12/21-12/23/98	8355177
		Dilution Factor: 1					
Cadmium	99	(90 - 121)			SW846 6010A	12/21-12/23/98	8355177
	98	(90 - 121)	0.60	(0-10)	SW846 6010A	12/21-12/23/98	8355177
		Dilution Factor: 1					
Calcium	99	(83 - 112)			SW846 6010A	12/21-12/23/98	8355177
	98	(83 - 112)	1.0	(0-10)	SW846 6010A	12/21-12/23/98	8355177
		Dilution Factor: 1					
Chromium	100	(78 - 112)			SW846 6010A	12/21-12/23/98	8355177
	99	(78 - 112)	1.1	(0-10)	SW846 6010A	12/21-12/23/98	8355177
		Dilution Factor: 1					
Cobalt	99	(75 - 120)			SW846 6010A	12/21-12/23/98	8355177
	98	(75 - 120)	1.1	(0-10)	SW846 6010A	12/21-12/23/98	8355177
		Dilution Factor: 1					
Copper	100	(79 - 115)			SW846 6010A	12/21-12/23/98	8355177
	99	(79 - 115)	1.0	(0-10)	SW846 6010A	12/21-12/23/98	8355177
		Dilution Factor: 1					
Iron	99	(82 - 117)			SW846 6010A	12/21-12/22/98	8355177
	103	(82 - 117)	3.5	(0-10)	SW846 6010A	12/21-12/22/98	8355177
		Dilution Factor: 1					

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Lot-Sample #...: D8L090208 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP-BATCH #
Lead	100	(86 - 117)			SW846 6010A	12/21-12/23/98	8355177
	98	(86 - 117)	1.2	(0-10)	SW846 6010A	12/21-12/23/98	8355177
		Dilution Factor: 1					
Magnesium	100	(79 - 114)			SW846 6010A	12/21-12/23/98	8355177
	99	(79 - 114)	1.3	(0-10)	SW846 6010A	12/21-12/23/98	8355177
		Dilution Factor: 1					
Manganese	101	(79 - 113)			SW846 6010A	12/21-12/23/98	8355177
	100	(79 - 113)	1.1	(0-10)	SW846 6010A	12/21-12/23/98	8355177
		Dilution Factor: 1					
Nickel	99	(80 - 112)			SW846 6010A	12/21-12/23/98	8355177
	98	(80 - 112)	0.87	(0-10)	SW846 6010A	12/21-12/23/98	8355177
		Dilution Factor: 1					
Potassium	100	(77 - 111)			SW846 6010A	12/21-12/22/98	8355177
	101	(77 - 111)	0.92	(0-10)	SW846 6010A	12/21-12/22/98	8355177
		Dilution Factor: 1					
Selenium	96	(76 - 114)			SW846 6010A	12/21-12/23/98	8355177
	94	(76 - 114)	1.2	(0-10)	SW846 6010A	12/21-12/23/98	8355177
		Dilution Factor: 1					
Silver	105	(78 - 115)			SW846 6010A	12/21-12/23/98	8355177
	105	(78 - 115)	0.0	(0-10)	SW846 6010A	12/21-12/23/98	8355177
		Dilution Factor: 1					
Sodium	99	(81 - 115)			SW846 6010A	12/21-12/22/98	8355177
	99	(81 - 115)	0.03	(0-10)	SW846 6010A	12/21-12/22/98	8355177
		Dilution Factor: 1					
Thallium	99	(85 - 119)			SW846 6010A	12/21-12/23/98	8355177
	98	(85 - 119)	1.2	(0-10)	SW846 6010A	12/21-12/23/98	8355177
		Dilution Factor: 1					
Tin	92	(81 - 114)			SW846 6010A	12/21-12/23/98	8355177
	91	(81 - 114)	1.3	(0-10)	SW846 6010A	12/21-12/23/98	8355177
		Dilution Factor: 1					

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Lot-Sample #...: D8L090208 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP-BATCH #
Vanadium	100	(80 - 114)			SW846 6010A	12/21-12/23/98	8355177
	99	(80 - 114)	1.1	(0-10)	SW846 6010A	12/21-12/23/98	8355177
		Dilution Factor: 1					
Zinc	98	(77 - 113)			SW846 6010A	12/21-12/23/98	8355177
	96	(77 - 113)	1.3	(0-10)	SW846 6010A	12/21-12/23/98	8355177
		Dilution Factor: 1					
Mercury	98	(77 - 117)			SW846 7470A	12/31-01/04/99	8357267
	99	(77 - 117)	1.7	(0-10)	SW846 7470A	12/31-01/04/99	8357267
		Dilution Factor: 1					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Lot-Sample #...: D8L090208 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Aluminum	2000	2090	ug/L	105		SW846 6010A	12/21-12/23/98	8355177
	2000	2070	ug/L	104	0.96	SW846 6010A	12/21-12/23/98	8355177
			Dilution Factor: 1					
Antimony	500	459	ug/L	92		SW846 6010A	12/21-12/23/98	8355177
	500	455	ug/L	91	0.80	SW846 6010A	12/21-12/23/98	8355177
			Dilution Factor: 1					
Arsenic	2000	1920	ug/L	96		SW846 6010A	12/21-12/23/98	8355177
	2000	1900	ug/L	95	1.1	SW846 6010A	12/21-12/23/98	8355177
			Dilution Factor: 1					
Barium	2000	2080	ug/L	104		SW846 6010A	12/21-12/23/98	8355177
	2000	2060	ug/L	103	0.60	SW846 6010A	12/21-12/23/98	8355177
			Dilution Factor: 1					
Cadmium	50.0	49.4	ug/L	99		SW846 6010A	12/21-12/23/98	8355177
	50.0	49.1	ug/L	98	0.60	SW846 6010A	12/21-12/23/98	8355177
			Dilution Factor: 1					
Calcium	50000	49600	ug/L	99		SW846 6010A	12/21-12/23/98	8355177
	50000	49100	ug/L	98	1.0	SW846 6010A	12/21-12/23/98	8355177
			Dilution Factor: 1					
Chromium	200	201	ug/L	100		SW846 6010A	12/21-12/23/98	8355177
	200	198	ug/L	99	1.1	SW846 6010A	12/21-12/23/98	8355177
			Dilution Factor: 1					
Cobalt	500	497	ug/L	99		SW846 6010A	12/21-12/23/98	8355177
	500	491	ug/L	98	1.1	SW846 6010A	12/21-12/23/98	8355177
			Dilution Factor: 1					
Copper	250	250	ug/L	100		SW846 6010A	12/21-12/23/98	8355177
	250	248	ug/L	99	1.0	SW846 6010A	12/21-12/23/98	8355177
			Dilution Factor: 1					
Iron	1000	993	ug/L	99		SW846 6010A	12/21-12/22/98	8355177
	1000	1030	ug/L	103	3.5	SW846 6010A	12/21-12/22/98	8355177
			Dilution Factor: 1					

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LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Lot-Sample #...: D8L090208 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Lead	500	498	ug/L	100		SW846 6010A	12/21-12/23/98	8355177
	500	492	ug/L	98	1.2	SW846 6010A	12/21-12/23/98	8355177
			Dilution Factor: 1					
Magnesium	50000	50000	ug/L	100		SW846 6010A	12/21-12/23/98	8355177
	50000	49300	ug/L	99	1.3	SW846 6010A	12/21-12/23/98	8355177
			Dilution Factor: 1					
Manganese	500	506	ug/L	101		SW846 6010A	12/21-12/23/98	8355177
	500	500	ug/L	100	1.1	SW846 6010A	12/21-12/23/98	8355177
			Dilution Factor: 1					
Nickel	500	494	ug/L	99		SW846 6010A	12/21-12/23/98	8355177
	500	490	ug/L	98	0.87	SW846 6010A	12/21-12/23/98	8355177
			Dilution Factor: 1					
Potassium	50000	50000	ug/L	100		SW846 6010A	12/21-12/22/98	8355177
	50000	50500	ug/L	101	0.92	SW846 6010A	12/21-12/22/98	835517
			Dilution Factor: 1					
Selenium	2000	1910	ug/L	96		SW846 6010A	12/21-12/23/98	8355177
	2000	1890	ug/L	94	1.2	SW846 6010A	12/21-12/23/98	8355177
			Dilution Factor: 1					
Silver	39.4	41.6	ug/L	105		SW846 6010A	12/21-12/23/98	8355177
	39.4	41.6	ug/L	105	0.0	SW846 6010A	12/21-12/23/98	8355177
			Dilution Factor: 1					
Sodium	50000	49400	ug/L	99		SW846 6010A	12/21-12/22/98	8355177
	50000	49400	ug/L	99	0.03	SW846 6010A	12/21-12/22/98	8355177
			Dilution Factor: 1					
Thallium	2000	1980	ug/L	99		SW846 6010A	12/21-12/23/98	8355177
	2000	1960	ug/L	98	1.2	SW846 6010A	12/21-12/23/98	8355177
			Dilution Factor: 1					
Tin	2000	1840	ug/L	92		SW846 6010A	12/21-12/23/98	8355177
	2000	1820	ug/L	91	1.3	SW846 6010A	12/21-12/23/98	8355177
			Dilution Factor: 1					

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LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Lot-Sample #...: D8L090208 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Vanadium	500	502	ug/L	100		SW846 6010A	12/21-12/23/98	8355177
	500	497	ug/L	99	1.1	SW846 6010A	12/21-12/23/98	8355177
			Dilution Factor: 1					
Zinc	500	488	ug/L	98		SW846 6010A	12/21-12/23/98	8355177
	500	482	ug/L	96	1.3	SW846 6010A	12/21-12/23/98	8355177
			Dilution Factor: 1					
Mercury	5.00	4.88	ug/L	98		SW846 7470A	12/31-01/04/99	8357267
	5.00	4.96	ug/L	99	1.7	SW846 7470A	12/31-01/04/99	8357267
			Dilution Factor: 1					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: D8L090208 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: D8L210000-177 **Prep Batch #...:** 8355177						
Silver	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CPGNG110
		Dilution Factor: 1				
		Analysis Time..: 18:05				
Aluminum	ND	100	ug/L	SW846 6010A	12/21-12/23/98	CPGNG111
		Dilution Factor: 1				
		Analysis Time..: 18:05				
Cadmium	ND	5.0	ug/L	SW846 6010A	12/21-12/23/98	CPGNG10V
		Dilution Factor: 1				
		Analysis Time..: 18:05				
Arsenic	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CPGNG13P
		Dilution Factor: 1				
		Analysis Time..: 18:05				
Antimony	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CPGNG10W
		Dilution Factor: 1				
		Analysis Time..: 18:05				
Barium	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CPGNG112
		Dilution Factor: 1				
		Analysis Time..: 18:05				
Calcium	ND	200	ug/L	SW846 6010A	12/21-12/23/98	CPGNG113
		Dilution Factor: 1				
		Analysis Time..: 18:05				
Thallium	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CPGNG10X
		Dilution Factor: 1				
		Analysis Time..: 18:05				
Cobalt	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CPGNG114
		Dilution Factor: 1				
		Analysis Time..: 18:05				
Chromium	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CPGNG10H
		Dilution Factor: 1				
		Analysis Time..: 18:05				
Copper	ND	20.0	ug/L	SW846 6010A	12/21-12/23/98	CPGNG10J
		Dilution Factor: 1				
		Analysis Time..: 18:05				

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METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: D8L090208 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Iron	ND	100	ug/L	SW846 6010A	12/21-12/22/98	CPGNG10K
		Dilution Factor: 1				
		Analysis Time..: 13:00				
Potassium	**518 B**	**5000**	**ug/L**	**SW846 6010A**	**12/21-12/22/98**	**CPGNG10L**
		Dilution Factor: 1				
		Analysis Time..: 13:00				
Magnesium	ND	200	ug/L	SW846 6010A	12/21-12/23/98	CPGNG10M
		Dilution Factor: 1				
		Analysis Time..: 18:05				
Manganese	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CPGNG10N
		Dilution Factor: 1				
		Analysis Time..: 18:05				
Sodium	**1390 B**	**5000**	**ug/L**	**SW846 6010A**	**12/21-12/22/98**	**CPGNG10P**
		Dilution Factor: 1				
		Analysis Time..: 13:00				
Nickel	ND	40.0	ug/L	SW846 6010A	12/21-12/23/98	CPGNG10Q
		Dilution Factor: 1				
		Analysis Time..: 18:05				
Lead	ND	3.0	ug/L	SW846 6010A	12/21-12/23/98	CPGNG13Q
		Dilution Factor: 1				
		Analysis Time..: 18:05				
Selenium	ND	5.0	ug/L	SW846 6010A	12/21-12/23/98	CPGNG13R
		Dilution Factor: 1				
		Analysis Time..: 18:05				
Tin	ND	100	ug/L	SW846 6010A	12/21-12/23/98	CPGNG10R
		Dilution Factor: 1				
		Analysis Time..: 18:05				
Vanadium	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CPGNG10T
		Dilution Factor: 1				
		Analysis Time..: 18:05				
Zinc	ND	20.0	ug/L	SW846 6010A	12/21-12/23/98	CPGNG10U
		Dilution Factor: 1				
		Analysis Time..: 18:05				

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METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: D8L090208 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: D8L230000-267 **Prep Batch #...:** 8357267						
Mercury	ND	0.20	ug/L	SW846 7470A	12/31-01/04/99	CPLTF101
		Dilution Factor: 1				
		Analysis Time..: 13:59				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: D8L090208 **Matrix.....:** WATER
Date Sampled...: 12/02/98 09:20 **Date Received..:** 12/04/98

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: D8L040134-002 **Prep Batch #...:** 8355177							
Aluminum	NC,MSB	(81 - 117)			SW846 6010A	12/21-12/23/98	CP0Q612M
	NC,MSB	(81 - 117)		(0-10)	SW846 6010A	12/21-12/23/98	CP0Q612N
		Dilution Factor: 1					
		Analysis Time..: 18:58					
Antimony	92	(84 - 115)			SW846 6010A	12/21-12/23/98	CP0Q612C
	93	(84 - 115)	1.2	(0-10)	SW846 6010A	12/21-12/23/98	CP0Q612D
		Dilution Factor: 1					
		Analysis Time..: 18:58					
Arsenic	98	(81 - 113)			SW846 6010A	12/21-12/23/98	CP0Q614C
	98	(81 - 113)	0.65	(0-10)	SW846 6010A	12/21-12/23/98	CP0Q614D
		Dilution Factor: 1					
		Analysis Time..: 18:58					
Barium	104	(81 - 114)			SW846 6010A	12/21-12/23/98	CP0Q612Q
	104	(81 - 114)	0.55	(0-10)	SW846 6010A	12/21-12/23/98	CP0Q612R
		Dilution Factor: 1					
		Analysis Time..: 18:58					
Cadmium	96	(90 - 121)			SW846 6010A	12/21-12/23/98	CP0Q6128
	98	(90 - 121)	1.4	(0-10)	SW846 6010A	12/21-12/23/98	CP0Q6129
		Dilution Factor: 1					
		Analysis Time..: 18:58					
Calcium	108	(83 - 112)			SW846 6010A	12/21-12/23/98	CP0Q612U
	125 N	(83 - 112)	4.0	(0-10)	SW846 6010A	12/21-12/23/98	CP0Q612V
		Dilution Factor: 1					
		Analysis Time..: 18:58					
Chromium	104	(78 - 112)			SW846 6010A	12/21-12/23/98	CP0Q6115
	103	(78 - 112)	0.85	(0-10)	SW846 6010A	12/21-12/23/98	CP0Q6116
		Dilution Factor: 1					
		Analysis Time..: 18:58					
Cobalt	98	(75 - 120)			SW846 6010A	12/21-12/23/98	CP0Q612X
	98	(75 - 120)	1.0	(0-10)	SW846 6010A	12/21-12/23/98	CP0Q6130
		Dilution Factor: 1					
		Analysis Time..: 18:58					
Copper	101	(79 - 115)			SW846 6010A	12/21-12/23/98	CP0Q6118
	103	(79 - 115)	1.2	(0-10)	SW846 6010A	12/21-12/23/98	CP0Q6119
		Dilution Factor: 1					
		Analysis Time..: 18:58					

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: D8L090208 **Matrix.....:** WATER
Date Sampled...: 12/02/98 09:20 **Date Received..:** 12/04/98

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Iron	NC,MSB	(82 - 117)			SW846 6010A	12/21-12/22/98	CP0Q611C
	NC,MSB	(82 - 117)		(0-10)	SW846 6010A	12/21-12/22/98	CP0Q611D
		Dilution Factor: 1					
		Analysis Time..: 13:43					
Lead	98	(86 - 117)			SW846 6010A	12/21-12/23/98	CP0Q614F
	100	(86 - 117)	1.8	(0-10)	SW846 6010A	12/21-12/23/98	CP0Q614G
		Dilution Factor: 1					
		Analysis Time..: 18:58					
Magnesium	98	(79 - 114)			SW846 6010A	12/21-12/23/98	CP0Q611J
	100	(79 - 114)	1.2	(0-10)	SW846 6010A	12/21-12/23/98	CP0Q611K
		Dilution Factor: 1					
		Analysis Time..: 18:58					
Manganese	108	(79 - 113)			SW846 6010A	12/21-12/23/98	CP0Q611M
	119 N	(79 - 113)	3.1	(0-10)	SW846 6010A	12/21-12/23/98	CP0Q611N
		Dilution Factor: 1					
		Analysis Time..: 18:58					
Nickel	97	(80 - 112)			SW846 6010A	12/21-12/23/98	CP0Q611U
	98	(80 - 112)	1.2	(0-10)	SW846 6010A	12/21-12/23/98	CP0Q611V
		Dilution Factor: 1					
		Analysis Time..: 18:58					
Potassium	105	(77 - 111)			SW846 6010A	12/21-12/22/98	CP0Q611F
	107	(77 - 111)	1.2	(0-10)	SW846 6010A	12/21-12/22/98	CP0Q611G
		Dilution Factor: 1					
		Analysis Time..: 13:43					
Selenium	95	(76 - 114)			SW846 6010A	12/21-12/23/98	CP0Q614J
	96	(76 - 114)	0.99	(0-10)	SW846 6010A	12/21-12/23/98	CP0Q614K
		Dilution Factor: 1					
		Analysis Time..: 18:58					
Silver	105	(78 - 115)			SW846 6010A	12/21-12/23/98	CP0Q612J
	109	(78 - 115)	2.8	(0-10)	SW846 6010A	12/21-12/23/98	CP0Q612K
		Dilution Factor: 1					
		Analysis Time..: 18:58					
Sodium	99	(81 - 115)			SW846 6010A	12/21-12/22/98	CP0Q611Q
	105	(81 - 115)	1.3	(0-10)	SW846 6010A	12/21-12/22/98	CP0Q611R
		Dilution Factor: 1					
		Analysis Time..: 13:43					

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: D8L090208 **Matrix.....:** WATER
Date Sampled...: 12/02/98 09:20 **Date Received..:** 12/04/98

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Thallium	95	(85 - 119)			SW846 6010A	12/21-12/23/98	CP0Q612F
	97	(85 - 119)	1.5	(0-10)	SW846 6010A	12/21-12/23/98	CP0Q612G
		Dilution Factor: 1					
		Analysis Time..: 18:58					
Tin	91	(81 - 114)			SW846 6010A	12/21-12/23/98	CP0Q611X
	91	(81 - 114)	0.87	(0-10)	SW846 6010A	12/21-12/23/98	CP0Q6120
		Dilution Factor: 1					
		Analysis Time..: 18:58					
Vanadium	100	(80 - 114)			SW846 6010A	12/21-12/23/98	CP0Q6122
	102	(80 - 114)	0.97	(0-10)	SW846 6010A	12/21-12/23/98	CP0Q6123
		Dilution Factor: 1					
		Analysis Time..: 18:58					
Zinc	96	(77 - 113)			SW846 6010A	12/21-12/23/98	CP0Q6125
	98	(77 - 113)	1.9	(0-10)	SW846 6010A	12/21-12/23/98	CP0Q6126
		Dilution Factor: 1					
		Analysis Time..: 18:58					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

NC The recovery and/or RPD were not calculated.

MSB The recovery and RPD were not calculated because the sample amount was greater than four times the spike amount.

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: D8L090208 **Matrix.....:** WATER
Date Sampled...: 12/02/98 09:20 **Date Received..:** 12/04/98

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: D8L040134-002 **Prep Batch #...:** 8355177									
Aluminum									
	12000	2000	20300	ug/L			SW846 6010A	12/21-12/23/98	CP0Q612M
			Qualifiers: NC,MSB						
	12000	2000	20400	ug/L			SW846 6010A	12/21-12/23/98	CP0Q612N
			Qualifiers: NC,MSB						
			Dilution Factor: 1						
			Analysis Time..: 18:58						
Antimony									
	ND	500	459	ug/L	92		SW846 6010A	12/21-12/23/98	CP0Q612C
	ND	500	464	ug/L	93	1.2	SW846 6010A	12/21-12/23/98	CP0Q612D
			Dilution Factor: 1						
			Analysis Time..: 18:58						
Arsenic									
	11.6	2000	1970	ug/L	98		SW846 6010A	12/21-12/23/98	CP0Q614C
	11.6	2000	1980	ug/L	98	0.65	SW846 6010A	12/21-12/23/98	CP0Q614D
			Dilution Factor: 1						
			Analysis Time..: 18:58						
Barium									
	188	2000	2260	ug/L	104		SW846 6010A	12/21-12/23/98	CP0Q612Q
	188	2000	2270	ug/L	104	0.55	SW846 6010A	12/21-12/23/98	CP0Q612R
			Dilution Factor: 1						
			Analysis Time..: 18:58						
Cadmium									
	ND	50.0	48.1	ug/L	96		SW846 6010A	12/21-12/23/98	CP0Q6128
	ND	50.0	48.8	ug/L	98	1.4	SW846 6010A	12/21-12/23/98	CP0Q6129
			Dilution Factor: 1						
			Analysis Time..: 18:58						
Calcium									
	156000	50000	210000	ug/L	108		SW846 6010A	12/21-12/23/98	CP0Q612U
	156000	50000	218000 N	ug/L	125	4.0	SW846 6010A	12/21-12/23/98	CP0Q612V
			Dilution Factor: 1						
			Analysis Time..: 18:58						
Chromium									
	16.1	200	223	ug/L	104		SW846 6010A	12/21-12/23/98	CP0Q6115
	16.1	200	222	ug/L	103	0.85	SW846 6010A	12/21-12/23/98	CP0Q6116
			Dilution Factor: 1						
			Analysis Time..: 18:58						

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: D8L090208 **Matrix.....:** WATER
Date Sampled...: 12/02/98 09:20 **Date Received..:** 12/04/98

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Cobalt									
	5.3	500	493	ug/L	98		SW846 6010A	12/21-12/23/98	CP0Q612X
	5.3	500	498	ug/L	98	1.0	SW846 6010A	12/21-12/23/98	CP0Q613C
			Dilution Factor: 1						
			Analysis Time..: 18:58						
Copper									
	11.6	250	265	ug/L	101		SW846 6010A	12/21-12/23/98	CP0Q611E
	11.6	250	268	ug/L	103	1.2	SW846 6010A	12/21-12/23/98	CP0Q611F
			Dilution Factor: 1						
			Analysis Time..: 18:58						
Iron									
	9360	1000	12400	ug/L			SW846 6010A	12/21-12/22/98	CP0Q611C
			Qualifiers: NC,MSB						
	9360	1000	12700	ug/L			SW846 6010A	12/21-12/22/98	CP0Q611D
			Qualifiers: NC,MSB						
			Dilution Factor: 1						
			Analysis Time..: 13:43						
Lead									
	15.0	500	505	ug/L	98		SW846 6010A	12/21-12/23/98	CP0Q614F
	15.0	500	514	ug/L	100	1.8	SW846 6010A	12/21-12/23/98	CP0Q614G
			Dilution Factor: 1						
			Analysis Time..: 18:58						
Magnesium									
	52700	50000	101000	ug/L	98		SW846 6010A	12/21-12/23/98	CP0Q611J
	52700	50000	103000	ug/L	100	1.2	SW846 6010A	12/21-12/23/98	CP0Q611K
			Dilution Factor: 1						
			Analysis Time..: 18:58						
Manganese									
	1130	500	1670	ug/L	108		SW846 6010A	12/21-12/23/98	CP0Q611M
	1130	500	1730 N	ug/L	119	3.1	SW846 6010A	12/21-12/23/98	CP0Q611N
			Dilution Factor: 1						
			Analysis Time..: 18:58						
Nickel									
	22.4	500	506	ug/L	97		SW846 6010A	12/21-12/23/98	CP0Q611U
	22.4	500	512	ug/L	98	1.2	SW846 6010A	12/21-12/23/98	CP0Q611V
			Dilution Factor: 1						
			Analysis Time..: 18:58						

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: D8L090208 **Matrix.....:** WATER
Date Sampled...: 12/02/98 09:20 **Date Received..:** 12/04/98

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Potassium									
	10000	50000	62700	ug/L	105		SW846 6010A	12/21-12/22/98	CP0Q611F
	10000	50000	63400	ug/L	107	1.2	SW846 6010A	12/21-12/22/98	CP0Q611G
			Dilution Factor: 1						
			Analysis Time..: 13:43						
Selenium									
	ND	2000	1910	ug/L	95		SW846 6010A	12/21-12/23/98	CP0Q614J
	ND	2000	1920	ug/L	96	0.99	SW846 6010A	12/21-12/23/98	CP0Q614K
			Dilution Factor: 1						
			Analysis Time..: 18:58						
Silver									
	ND	39.4	41.6	ug/L	105		SW846 6010A	12/21-12/23/98	CP0Q612J
	ND	39.4	42.8	ug/L	109	2.8	SW846 6010A	12/21-12/23/98	CP0Q612K
			Dilution Factor: 1						
			Analysis Time..: 18:58						
Sodium									
	177000	50000	227000	ug/L	99		SW846 6010A	12/21-12/22/98	CP0Q611Q
	177000	50000	230000	ug/L	105	1.3	SW846 6010A	12/21-12/22/98	CP0Q611R
			Dilution Factor: 1						
			Analysis Time..: 13:43						
Thallium									
	ND	2000	1910	ug/L	95		SW846 6010A	12/21-12/23/98	CP0Q612F
	ND	2000	1940	ug/L	97	1.5	SW846 6010A	12/21-12/23/98	CP0Q612G
			Dilution Factor: 1						
			Analysis Time..: 18:58						
Tin									
	ND	2000	1810	ug/L	91		SW846 6010A	12/21-12/23/98	CP0Q611X
	ND	2000	1830	ug/L	91	0.87	SW846 6010A	12/21-12/23/98	CP0Q6120
			Dilution Factor: 1						
			Analysis Time..: 18:58						
Vanadium									
	61.1	500	563	ug/L	100		SW846 6010A	12/21-12/23/98	CP0Q6122
	61.1	500	569	ug/L	102	0.97	SW846 6010A	12/21-12/23/98	CP0Q6123
			Dilution Factor: 1						
			Analysis Time..: 18:58						
Zinc									
	43.8	500	523	ug/L	96		SW846 6010A	12/21-12/23/98	CP0Q6125
	43.8	500	533	ug/L	98	1.9	SW846 6010A	12/21-12/23/98	CP0Q6126
			Dilution Factor: 1						
			Analysis Time..: 18:58						

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: D8L090208 Matrix.....: WATER
Date Sampled...: 12/02/98 09:20 Date Received..: 12/04/98

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

NC The recovery and/or RPD were not calculated.

MSB The recovery and RPD were not calculated because the sample amount was greater than four times the spike amount.

N Spiked analyte recovery is outside stated control limits.

Quanterra Incorporated
4955 Yarrow Street
Arvada, Colorado 80002

303 421-6611 Telephone
303 431-7171 Fax

ANALYTICAL REPORT

Cannon AFB

Lot #: D8L090208

Ian Broussard

Foothill Engineering Consultants

QUANTERRA INCORPORATED

Ellen La Riviere
Project Manager

January 21, 1999

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Project Narrative

(Lot #L090208)

GC/MS Semi-Volatiles

Due to instrument failure, the extraction holding time was missed for samples D8L090208-001 through –004. The client was contacted on December 16, 1998 and requested the laboratory proceed with the extraction outside of holding time.

Organophosphorous Pesticides

The Method 8140 surrogate, ethyl pirimifos was recovered below the lower control limits in samples D8L090208-001 through –004. The surrogate, chlormefos, was recovered within the control limits for all the samples. Because the surrogates were within acceptable limits in the LCS/LCSD and the method blank, a matrix effect is indicated and the laboratory took no further action.

The initial calibration associated with the Method 8140 samples in this project included only a single point for the surrogate compounds, although the method requires a five-point calibration curve for all compounds. The client was contacted on January 7, 1999 and approved acceptance of the data.

Herbicides

In the LCS/LCSD associated with the samples in this project, 2,4-D was recovered above the upper control limit. Because this would indicate a high bias to the data, and no target compounds were detected in the samples, no further action was required.

General Chemistry

Due to instrument failure, the analytical holding times for nitrate were missed by one day. The client was contacted on December 14, 1998 and requested the laboratory report the data.

With any exceptions noted above or on the data sheets, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. All laboratory QC samples analyzed in conjunction with the samples in this project were within established control limits.

EXECUTIVE SUMMARY - Detection Highlights

D8L090208

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
CAFB-MWR-1298-2 12/08/98 15:40 001				
4,4'-DDD	0.046 J	0.050	ug/L	SW846 8081A
Barium	57.2	10.0	ug/L	SW846 6010A
Calcium	58000	200	ug/L	SW846 6010A
Chromium	148	10.0	ug/L	SW846 6010A
Copper	11.1 B	20.0	ug/L	SW846 6010A
Iron	1010	100	ug/L	SW846 6010A
Potassium	8380	5000	ug/L	SW846 6010A
Magnesium	61700	200	ug/L	SW846 6010A
Manganese	99.8	10.0	ug/L	SW846 6010A
Sodium	42900	5000	ug/L	SW846 6010A
Nickel	460	40.0	ug/L	SW846 6010A
Vanadium	12.3	10.0	ug/L	SW846 6010A
Chloroform	0.17 J	1.0	ug/L	SW846 8260A
Methylene chloride	1.3	1.0	ug/L	SW846 8260A
Nitrate	4.6	0.50	mg/L	MCAWW 300.0A
Chloride	124	30.0	mg/L	MCAWW 325.3
Sulfate	150	15.0	mg/L	MCAWW 375.4
CAFB-MWR-1298-1 12/08/98 15:40 002				
Barium	58.2	10.0	ug/L	SW846 6010A
Calcium	59300	200	ug/L	SW846 6010A
Chromium	148	10.0	ug/L	SW846 6010A
Copper	3.3 B	20.0	ug/L	SW846 6010A
Iron	755	100	ug/L	SW846 6010A
Potassium	8590	5000	ug/L	SW846 6010A
Magnesium	62900	200	ug/L	SW846 6010A
Manganese	87.9	10.0	ug/L	SW846 6010A
Sodium	43600	5000	ug/L	SW846 6010A
Nickel	381	40.0	ug/L	SW846 6010A
Vanadium	13.1	10.0	ug/L	SW846 6010A
Chloroform	0.17 J	1.0	ug/L	SW846 8260A
Methylene chloride	1.7	1.0	ug/L	SW846 8260A
Trichloroethene	0.11 J	1.0	ug/L	SW846 8260A
Nitrate	4.5	0.50	mg/L	MCAWW 300.0A
Chloride	142	30.0	mg/L	MCAWW 325.3
Sulfate	144	15.0	mg/L	MCAWW 375.4
CAFB-MWO-1298-1 12/08/98 16:10 003				
Barium	45.1	10.0	ug/L	SW846 6010A
Calcium	72100	200	ug/L	SW846 6010A
Potassium	8510	5000	ug/L	SW846 6010A

(Continued on next page)

ANALYTICAL METHODS SUMMARY

D8L090208

PARAMETER	ANALYTICAL METHOD
Chloride (Titrimetric, Mercuric Nitrate)	MCAWW 325.3
Chlorinated Herbicides by GC	SW846 8151A
Inductively Coupled Plasma (ICP) Metals	SW846 6010A
Mercury in Liquid Waste (Manual Cold-Vapor)	SW846 7470A
Nitrate as N	MCAWW 300.0A
Organochlorine Pesticides	SW846 8081A
Organophosphorous Pesticides by GC	SW846 8140
Phenolics	MCAWW 420.2
PCBs	SW846 8082
Semivolatile Organic Compounds by GC/MS	SW846 8270B
Sulfate	MCAWW 375.4
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010A
Volatile Organics by GC/MS	SW846 8260A

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

METHOD / ANALYST SUMMARY

D8L090208

ANALYTICAL METHOD	ANALYST	ANALYST ID
MCAWW 300.0A	Patty Jungk	002008
MCAWW 325.3	Chris Stevenson	004564
MCAWW 375.4	Andrea Sporleder	001971
MCAWW 420.2	Cheryl E. Jones	002000
SW846 6010A	Jennifer Oxelson	002720
SW846 6010A	William G. Logan	002179
SW846 7470A	Jeff Somers	008217
SW846 8081A	Joseph Jamero	002001
SW846 8082	Andy Burcham	001197
SW846 8140	Matthew Graves	001801
SW846 8151A	Andy Burcham	001197
SW846 8260A	Mike G. Hoffman	001880
SW846 8270B	Robert P. Guthrie	001593

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

D8L090208

WO #	SAMPLE#	CLIENT SAMPLE ID	DATE	TIME
CP5JQ	001	CAFB-MWR-1298-2	12/08/98	15:4
CP5JW	002	CAFB-MWR-1298-1	12/08/98	15:4
CP5K5	003	CAFB-MWO-1298-1	12/08/98	16:1
CP5K7	004	CAFB-MWN-1298-1	12/08/98	16:3
CP5KD	005	TRIP BLANK	12/08/98	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWR-1298-2

GC/MS Volatiles

Lot-Sample #...: D8L090208-001 **Work Order #...:** CP5JQ101 **Matrix.....:** WATER
Date Sampled...: 12/08/98 15:40 **Date Received..:** 12/09/98
Prep Date.....: 12/19/98 **Analysis Date..:** 12/19/98
Prep Batch #...: 8354144 **Analysis Time..:** 18:02
Dilution Factor: 1

Method.....: SW846 8260A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Acetonitrile	ND	20	ug/L
Acrolein	ND	20	ug/L
Acrylonitrile	ND	20	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroprene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	**0.17 J**	**1.0**	**ug/L**
Chloromethane	ND	2.0	ug/L
Allyl chloride	ND	2.0	ug/L
Dibromomethane	ND	1.0	ug/L
trans-1,4-Dichloro-2-butene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	2.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,2-Dichloroethene (total)	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
1,4-Dioxane	ND	200	ug/L
Ethylbenzene	ND	1.0	ug/L
Ethyl methacrylate	ND	1.0	ug/L
Trichlorofluoromethane	ND	2.0	ug/L
2-Hexanone	ND	5.0	ug/L
Iodomethane	ND	1.0	ug/L
Isobutyl alcohol	ND	50	ug/L
Methacrylonitrile	ND	1.0	ug/L

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FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWR-1298-2

GC/MS Volatiles

Lot-Sample #...: D8L090208-001 **Work Order #...:** CP5JQ101 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Methylene chloride	**1.3**	**1.0**	**ug/L**
Methyl methacrylate	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Propionitrile	ND	4.0	ug/L
Styrene	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
Vinyl acetate	ND	2.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Xylenes (total)	ND	1.0	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L
1,2-Dibromoethane (EDB)	ND	1.0	ug/L
2-Butanone (MEK)	ND	5.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	100	(76 - 115)
4-Bromofluorobenzene	100	(85 - 115)
Toluene-d8	93	(85 - 115)

NOTE(S):

J Estimated result. Result is less than RL.

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWR-1298-1

GC/MS Volatiles

Lot-Sample #...: D8L090208-002 **Work Order #...:** CP5JW101 **Matrix.....:** WATER
Date Sampled...: 12/08/98 15:40 **Date Received..:** 12/09/98
Prep Date.....: 12/19/98 **Analysis Date..:** 12/19/98
Prep Batch #...: 8354144 **Analysis Time..:** 18:25
Dilution Factor: 1

Method.....: SW846 8260A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Acetonitrile	ND	20	ug/L
Acrolein	ND	20	ug/L
Acrylonitrile	ND	20	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroprene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	**0.17 J**	**1.0**	**ug/L**
Chloromethane	ND	2.0	ug/L
Allyl chloride	ND	2.0	ug/L
Dibromomethane	ND	1.0	ug/L
trans-1,4-Dichloro-2-butene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	2.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,2-Dichloroethene (total)	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
1,4-Dioxane	ND	200	ug/L
Ethylbenzene	ND	1.0	ug/L
Ethyl methacrylate	ND	1.0	ug/L
Trichlorofluoromethane	ND	2.0	ug/L
2-Hexanone	ND	5.0	ug/L
Iodomethane	ND	1.0	ug/L
Isobutyl alcohol	ND	50	ug/L
Methacrylonitrile	ND	1.0	ug/L

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FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWR-1298-1

GC/MS Volatiles

Lot-Sample #...: D8L090208-002 **Work Order #...:** CP5JW101 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Methylene chloride	**1.7**	**1.0**	**ug/L**
Methyl methacrylate	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Propionitrile	ND	4.0	ug/L
Styrene	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	**0.11 J**	**1.0**	**ug/L**
1,2,3-Trichloropropane	ND	1.0	ug/L
Vinyl acetate	ND	2.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Xylenes (total)	ND	1.0	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L
1,2-Dibromoethane (EDB)	ND	1.0	ug/L
2-Butanone (MEK)	ND	5.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	98	(76 - 115)
4-Bromofluorobenzene	100	(85 - 115)
Toluene-d8	93	(85 - 115)

NOTE(S):

J Estimated result. Result is less than RL.

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWO-1298-1

GC/MS Volatiles

Lot-Sample #...: D8L090208-003 **Work Order #...:** CP5K5101 **Matrix.....:** WATER
Date Sampled...: 12/08/98 16:10 **Date Received..:** 12/09/98
Prep Date.....: 12/19/98 **Analysis Date..:** 12/19/98
Prep Batch #...: 8354144 **Analysis Time..:** 18:48
Dilution Factor: 1

Method.....: SW846 8260A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Acetonitrile	ND	20	ug/L
Acrolein	ND	20	ug/L
Acrylonitrile	ND	20	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	**0.28 J**	**1.0**	**ug/L**
Chlorobenzene	ND	1.0	ug/L
Chloroprene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	**0.24 J**	**1.0**	**ug/L**
Chloromethane	ND	2.0	ug/L
Allyl chloride	ND	2.0	ug/L
Dibromomethane	ND	1.0	ug/L
trans-1,4-Dichloro-2-butene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	2.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,2-Dichloroethene (total)	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
1,4-Dioxane	ND	200	ug/L
Ethylbenzene	ND	1.0	ug/L
Ethyl methacrylate	ND	1.0	ug/L
Trichlorofluoromethane	ND	2.0	ug/L
2-Hexanone	ND	5.0	ug/L
Iodomethane	ND	1.0	ug/L
Isobutyl alcohol	ND	50	ug/L
Methacrylonitrile	ND	1.0	ug/L

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FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWO-1298-1

GC/MS Volatiles

Lot-Sample #...: D8L090208-003 **Work Order #...:** CP5K5101 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Methylene chloride	**1.4**	**1.0**	**ug/L**
Methyl methacrylate	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Propionitrile	ND	4.0	ug/L
Styrene	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
Vinyl acetate	ND	2.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Xylenes (total)	ND	1.0	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L
1,2-Dibromoethane (EDB)	ND	1.0	ug/L
2-Butanone (MEK)	ND	5.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	98	(76 - 115)
4-Bromofluorobenzene	99	(85 - 115)
Toluene-d8	91	(85 - 115)

NOTE(S):

J Estimated result. Result is less than RL.

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWN-1298-1

GC/MS Volatiles

Lot-Sample #...: D8L090208-004 **Work Order #...:** CP5K7101 **Matrix.....:** WATER
Date Sampled...: 12/08/98 16:35 **Date Received..:** 12/09/98
Prep Date.....: 12/19/98 **Analysis Date..:** 12/19/98
Prep Batch #...: 8354144 **Analysis Time..:** 19:11
Dilution Factor: 1

Method.....: SW846 8260A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Acetonitrile	ND	20	ug/L
Acrolein	ND	20	ug/L
Acrylonitrile	ND	20	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroprene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
Allyl chloride	ND	2.0	ug/L
Dibromomethane	ND	1.0	ug/L
trans-1,4-Dichloro-2-butene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	2.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,2-Dichloroethene (total)	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
1,4-Dioxane	ND	200	ug/L
Ethylbenzene	ND	1.0	ug/L
Ethyl methacrylate	ND	1.0	ug/L
Trichlorofluoromethane	ND	2.0	ug/L
2-Hexanone	ND	5.0	ug/L
Iodomethane	ND	1.0	ug/L
Isobutyl alcohol	ND	50	ug/L
Methacrylonitrile	ND	1.0	ug/L

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FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWN-1298-1

GC/MS Volatiles

Lot-Sample #...: D8L090208-004 **Work Order #...:** CP5K7101 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Methylene chloride	**1.0**	**1.0**	**ug/L**
Methyl methacrylate	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Propionitrile	ND	4.0	ug/L
Styrene	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
Vinyl acetate	ND	2.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Xylenes (total)	ND	1.0	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L
1,2-Dibromoethane (EDB)	ND	1.0	ug/L
2-Butanone (MEK)	ND	5.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	100	(76 - 115)
4-Bromofluorobenzene	99	(85 - 115)
Toluene-d8	91	(85 - 115)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #...: D8L090208-005 **Work Order #...:** CP5KD101 **Matrix.....:** WATER
Date Sampled...: 12/08/98 **Date Received..:** 12/09/98
Prep Date.....: 12/19/98 **Analysis Date..:** 12/19/98
Prep Batch #...: 8354144 **Analysis Time..:** 19:35
Dilution Factor: 1

Method.....: SW846 8260A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Acetonitrile	ND	20	ug/L
Acrolein	ND	20	ug/L
Acrylonitrile	ND	20	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	2.0	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroprene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chloroethane	ND	2.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
Allyl chloride	ND	2.0	ug/L
Dibromomethane	ND	1.0	ug/L
trans-1,4-Dichloro-2-butene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	2.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	0.50	ug/L
1,2-Dichloroethene (total)	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
1,4-Dioxane	ND	200	ug/L
Ethylbenzene	ND	1.0	ug/L
Ethyl methacrylate	ND	1.0	ug/L
Trichlorofluoromethane	ND	2.0	ug/L
2-Hexanone	ND	5.0	ug/L
Iodomethane	ND	1.0	ug/L
Isobutyl alcohol	ND	50	ug/L
Methacrylonitrile	ND	1.0	ug/L

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FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #...: D8L090208-005 **Work Order #...:** CP5KD101 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Methylene chloride	**1.2**	**1.0**	**ug/L**
Methyl methacrylate	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Propionitrile	ND	4.0	ug/L
Styrene	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
Vinyl acetate	ND	2.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Xylenes (total)	ND	1.0	ug/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L
1,2-Dibromoethane (EDB)	ND	1.0	ug/L
2-Butanone (MEK)	ND	5.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	100	(76 - 115)
4-Bromofluorobenzene	100	(85 - 115)
Toluene-d8	91	(85 - 115)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWR-1298-2

GC/MS Semivolatiles

Lot-Sample #...: D8L090208-001 **Work Order #...:** CP5JQ10V **Matrix.....:** WATER
Date Sampled...: 12/08/98 15:40 **Date Received..:** 12/09/98
Prep Date.....: 12/16/98 **Analysis Date..:** 01/14/99
Prep Batch #...: 8349313 **Analysis Time..:** 18:44
Dilution Factor: 1

Method.....: SW846 8270B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acetophenone	ND	10	ug/L
2-Acetylaminofluorene	ND	100	ug/L
4-Aminobiphenyl	ND	50	ug/L
Aniline	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzyl alcohol	ND	10	ug/L
bis(2-Chloroethoxy) methane	ND	10	ug/L
bis(2-Chloroethyl) ether	ND	10	ug/L
bis(2-Ethylhexyl) phthalate	ND	10	ug/L
4-Bromophenyl phenyl ether	ND	10	ug/L
Butyl benzyl phthalate	ND	10	ug/L
4-Chloroaniline	ND	10	ug/L
4-Chloro-3-methylphenol	ND	10	ug/L
2-Chloronaphthalene	ND	10	ug/L
2-Chlorophenol	ND	10	ug/L
4-Chlorophenyl phenyl ether	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenz(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Di-n-butyl phthalate	ND	10	ug/L
1,2-Dichlorobenzene	ND	10	ug/L
1,3-Dichlorobenzene	ND	10	ug/L
1,4-Dichlorobenzene	ND	10	ug/L
3,3'-Dichlorobenzidine	ND	50	ug/L
2,4-Dichlorophenol	ND	10	ug/L
2,6-Dichlorophenol	ND	10	ug/L
Diethyl phthalate	ND	10	ug/L

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FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWR-1298-2

GC/MS Semivolatiles

Lot-Sample #...: D8L090208-001 Work Order #...: CP5JQ10V Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Thionazin	ND	50	ug/L
Dimethoate	ND	20	ug/L
p-Dimethylaminoazobenzene	ND	20	ug/L
7,12-Dimethylbenz(a)-anthracene	ND	20	ug/L
3,3'-Dimethylbenzidine	ND	50	ug/L
2,4-Dimethylphenol	ND	10	ug/L
Dimethyl phthalate	ND	10	ug/L
Di-n-octyl phthalate	ND	10	ug/L
1,3-Dinitrobenzene	ND	10	ug/L
4,6-Dinitro-2-methylphenol	ND	50	ug/L
2,4-Dinitrophenol	ND	50	ug/L
2,4-Dinitrotoluene	ND	10	ug/L
2,6-Dinitrotoluene	ND	10	ug/L
2-sec-Butyl-4,6-dinitro-phenol	ND	20	ug/L
Diphenylamine	ND	10	ug/L
Disulfoton	ND	50	ug/L
Ethyl methanesulfonate	ND	10	ug/L
Famphur	ND		ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Hexachlorobenzene	ND	10	ug/L
Hexachlorobutadiene	ND	10	ug/L
Hexachlorocyclopentadiene	ND	50	ug/L
Hexachloroethane	ND	10	ug/L
Hexachlorophene	ND		ug/L
Hexachloropropene	ND	100	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Isophorone	ND	10	ug/L
Isosafrole	ND	20	ug/L
Methapyrilene	ND	50	ug/L
o-Toluidine	ND	10	ug/L
3-Methylcholanthrene	ND	20	ug/L
Methyl methanesulfonate	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
Methyl parathion	ND	50	ug/L
2-Methylphenol	ND	10	ug/L
Naphthalene	ND	10	ug/L
1,4-Naphthoquinone	ND	50	ug/L
1-Naphthylamine	ND	10	ug/L
2-Naphthylamine	ND	10	ug/L

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FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWR-1298-2

GC/MS Semivolatiles

Lot-Sample #...: D8L090208-001 Work Order #...: CP5JQ10V Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2-Nitroaniline	ND	50	ug/L
3-Nitroaniline	ND	50	ug/L
4-Nitroaniline	ND	50	ug/L
Nitrobenzene	ND	10	ug/L
2-Nitrophenol	ND	10	ug/L
4-Nitrophenol	ND	50	ug/L
4-Nitroquinoline-1-oxide	ND	100	ug/L
N-Nitrosodi-n-butylamine	ND	10	ug/L
N-Nitrosodiethylamine	ND	10	ug/L
N-Nitrosodimethylamine	ND	10	ug/L
N-Nitrosodi-n-propylamine	ND	10	ug/L
N-Nitrosodiphenylamine	ND	10	ug/L
N-Nitrosomethylethylamine	ND	10	ug/L
N-Nitrosomorpholine	ND	10	ug/L
N-Nitrosopiperidine	ND	10	ug/L
N-Nitrosopyrrolidine	ND	10	ug/L
5-Nitro-o-toluidine	ND	20	ug/L
Parathion	ND	50	ug/L
Pentachlorobenzene	ND	10	ug/L
Pentachloroethane	ND	50	ug/L
Pentachloronitrobenzene	ND	50	ug/L
Pentachlorophenol	ND	50	ug/L
Phenacetin	ND	20	ug/L
Phenanthrene	ND	10	ug/L
Phenol	ND	10	ug/L
p-Phenylene diamine	ND	100	ug/L
Phorate	ND	50	ug/L
2-Picoline	ND	20	ug/L
Pronamide	ND	20	ug/L
Pyrene	ND	10	ug/L
Pyridine	ND	20	ug/L
Safrole	ND	20	ug/L
1,2,4,5-Tetrachloro-benzene	ND	10	ug/L
2,3,4,6-Tetrachlorophenol	ND	50	ug/L
Sulfotepp	ND	50	ug/L
1,2,4-Trichlorobenzene	ND	10	ug/L
2,4,5-Trichlorophenol	ND	10	ug/L
2,4,6-Trichlorophenol	ND	10	ug/L
O,O,O-Triethylphosphoro-thioate	ND	50	ug/L
1,3,5-Trinitrobenzene	ND	50	ug/L

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FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWR-1298-2

GC/MS Semivolatiles

Lot-Sample #...: D8L090208-001 **Work Order #...:** CP5JQ10V **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
3-Methylphenol & 4-Methylphenol	ND	10	ug/L
a,a-Dimethylphenethyl-amine	ND	50	ug/L
Aramite	ND	20	ug/L
2,2'-oxybis(1-Chloropropane)	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	67	(54 - 110)
Phenol-d5	71	(49 - 131)
Nitrobenzene-d5	77	(54 - 116)
2-Fluorobiphenyl	62	(49 - 102)
2,4,6-Tribromophenol	65	(46 - 127)
Terphenyl-d14	72	(57 - 117)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWR-1298-1

GC/MS Semivolatiles

Lot-Sample #...: D8L090208-002 Work Order #...: CP5JW10V Matrix.....: WATER
Date Sampled...: 12/08/98 15:40 Date Received..: 12/09/98
Prep Date.....: 12/16/98 Analysis Date..: 01/14/99
Prep Batch #...: 8349313 Analysis Time..: 19:16
Dilution Factor: 1

Method.....: SW846 8270B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acetophenone	ND	10	ug/L
2-Acetylaminofluorene	ND	100	ug/L
4-Aminobiphenyl	ND	50	ug/L
Aniline	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzyl alcohol	ND	10	ug/L
bis(2-Chloroethoxy) methane	ND	10	ug/L
bis(2-Chloroethyl) ether	ND	10	ug/L
bis(2-Ethylhexyl) phthalate	ND	10	ug/L
4-Bromophenyl phenyl ether	ND	10	ug/L
Butyl benzyl phthalate	ND	10	ug/L
4-Chloroaniline	ND	10	ug/L
4-Chloro-3-methylphenol	ND	10	ug/L
2-Chloronaphthalene	ND	10	ug/L
2-Chlorophenol	ND	10	ug/L
4-Chlorophenyl phenyl ether	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenz(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Di-n-butyl phthalate	ND	10	ug/L
1,2-Dichlorobenzene	ND	10	ug/L
1,3-Dichlorobenzene	ND	10	ug/L
1,4-Dichlorobenzene	ND	10	ug/L
3,3'-Dichlorobenzidine	ND	50	ug/L
2,4-Dichlorophenol	ND	10	ug/L
2,6-Dichlorophenol	ND	10	ug/L
Diethyl phthalate	ND	10	ug/L

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FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWR-1298-1

GC/MS Semivolatiles

Lot-Sample #...: D8L090208-002 **Work Order #...:** CP5JW10V **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Thionazin	ND	50	ug/L
Dimethoate	ND	20	ug/L
p-Dimethylaminoazobenzene	ND	20	ug/L
7,12-Dimethylbenz(a)-anthracene	ND	20	ug/L
3,3'-Dimethylbenzidine	ND	50	ug/L
2,4-Dimethylphenol	ND	10	ug/L
Dimethyl phthalate	ND	10	ug/L
Di-n-octyl phthalate	ND	10	ug/L
1,3-Dinitrobenzene	ND	10	ug/L
4,6-Dinitro-2-methylphenol	ND	50	ug/L
2,4-Dinitrophenol	ND	50	ug/L
2,4-Dinitrotoluene	ND	10	ug/L
2,6-Dinitrotoluene	ND	10	ug/L
2-sec-Butyl-4,6-dinitro-phenol	ND	20	ug/L
Diphenylamine	ND	10	ug/L
Disulfoton	ND	50	ug/L
Ethyl methanesulfonate	ND	10	ug/L
Famphur	ND		ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Hexachlorobenzene	ND	10	ug/L
Hexachlorobutadiene	ND	10	ug/L
Hexachlorocyclopentadiene	ND	50	ug/L
Hexachloroethane	ND	10	ug/L
Hexachlorophene	ND		ug/L
Hexachloropropene	ND	100	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Isophorone	ND	10	ug/L
Isosafrole	ND	20	ug/L
Methapyrilene	ND	50	ug/L
o-Toluidine	ND	10	ug/L
3-Methylcholanthrene	ND	20	ug/L
Methyl methanesulfonate	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
Methyl parathion	ND	50	ug/L
2-Methylphenol	ND	10	ug/L
Naphthalene	ND	10	ug/L
1,4-Naphthoquinone	ND	50	ug/L
1-Naphthylamine	ND	10	ug/L
2-Naphthylamine	ND	10	ug/L

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FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWR-1298-1

GC/MS Semivolatiles

Lot-Sample #...: D8L090208-002 **Work Order #...:** CP5JW10V **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2-Nitroaniline	ND	50	ug/L
3-Nitroaniline	ND	50	ug/L
4-Nitroaniline	ND	50	ug/L
Nitrobenzene	ND	10	ug/L
2-Nitrophenol	ND	10	ug/L
4-Nitrophenol	ND	50	ug/L
4-Nitroquinoline-1-oxide	ND	100	ug/L
N-Nitrosodi-n-butylamine	ND	10	ug/L
N-Nitrosodiethylamine	ND	10	ug/L
N-Nitrosodimethylamine	ND	10	ug/L
N-Nitrosodi-n-propylamine	ND	10	ug/L
N-Nitrosodiphenylamine	ND	10	ug/L
N-Nitrosomethylethylamine	ND	10	ug/L
N-Nitrosomorpholine	ND	10	ug/L
N-Nitrosopiperidine	ND	10	ug/L
N-Nitrosopyrrolidine	ND	10	ug/L
5-Nitro-o-toluidine	ND	20	ug/L
Parathion	ND	50	ug/L
Pentachlorobenzene	ND	10	ug/L
Pentachloroethane	ND	50	ug/L
Pentachloronitrobenzene	ND	50	ug/L
Pentachlorophenol	ND	50	ug/L
Phenacetin	ND	20	ug/L
Phenanthrene	ND	10	ug/L
Phenol	ND	10	ug/L
p-Phenylene diamine	ND	100	ug/L
Phorate	ND	50	ug/L
2-Picoline	ND	20	ug/L
Pronamide	ND	20	ug/L
Pyrene	ND	10	ug/L
Pyridine	ND	20	ug/L
Safrole	ND	20	ug/L
1,2,4,5-Tetrachloro-benzene	ND	10	ug/L
2,3,4,6-Tetrachlorophenol	ND	50	ug/L
Sulfotepp	ND	50	ug/L
1,2,4-Trichlorobenzene	ND	10	ug/L
2,4,5-Trichlorophenol	ND	10	ug/L
2,4,6-Trichlorophenol	ND	10	ug/L
O,O,O-Triethylphosphoro-thioate	ND	50	ug/L
1,3,5-Trinitrobenzene	ND	50	ug/L

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FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWR-1298-1

GC/MS Semivolatiles

Lot-Sample #...: D8L090208-002 **Work Order #...:** CP5JW10V **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
3-Methylphenol & 4-Methylphenol	ND	10	ug/L
a,a-Dimethylphenethyl-amine	ND	50	ug/L
Aramite	ND	20	ug/L
2,2'-oxybis(1-Chloropropane)	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	71	(54 - 110)
Phenol-d5	73	(49 - 131)
Nitrobenzene-d5	77	(54 - 116)
2-Fluorobiphenyl	74	(49 - 102)
2,4,6-Tribromophenol	62	(46 - 127)
Terphenyl-d14	74	(57 - 117)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWO-1298-1

GC/MS Semivolatiles

Lot-Sample #...: D8L090208-003 **Work Order #...:** CP5K510V **Matrix.....:** WATER
Date Sampled...: 12/08/98 16:10 **Date Received..:** 12/09/98
Prep Date.....: 12/16/98 **Analysis Date..:** 01/14/99
Prep Batch #...: 8349313 **Analysis Time..:** 19:49
Dilution Factor: 1

Method.....: SW846 8270B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acetophenone	ND	10	ug/L
2-Acetylaminofluorene	ND	100	ug/L
4-Aminobiphenyl	ND	50	ug/L
Aniline	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzyl alcohol	ND	10	ug/L
bis(2-Chloroethoxy) methane	ND	10	ug/L
bis(2-Chloroethyl) ether	ND	10	ug/L
bis(2-Ethylhexyl) phthalate	ND	10	ug/L
4-Bromophenyl phenyl ether	ND	10	ug/L
Butyl benzyl phthalate	ND	10	ug/L
4-Chloroaniline	ND	10	ug/L
4-Chloro-3-methylphenol	ND	10	ug/L
2-Chloronaphthalene	ND	10	ug/L
2-Chlorophenol	ND	10	ug/L
4-Chlorophenyl phenyl ether	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenz(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Di-n-butyl phthalate	ND	10	ug/L
1,2-Dichlorobenzene	ND	10	ug/L
1,3-Dichlorobenzene	ND	10	ug/L
1,4-Dichlorobenzene	ND	10	ug/L
3,3'-Dichlorobenzidine	ND	50	ug/L
2,4-Dichlorophenol	ND	10	ug/L
2,6-Dichlorophenol	ND	10	ug/L
Diethyl phthalate	ND	10	ug/L

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FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWO-1298-1

GC/MS Semivolatiles

Lot-Sample #...: D8L090208-003 Work Order #...: CP5K510V Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Thionazin	ND	50	ug/L
Dimethoate	ND	20	ug/L
p-Dimethylaminoazobenzene	ND	20	ug/L
7,12-Dimethylbenz(a)-anthracene	ND	20	ug/L
3,3'-Dimethylbenzidine	ND	50	ug/L
2,4-Dimethylphenol	ND	10	ug/L
Dimethyl phthalate	ND	10	ug/L
Di-n-octyl phthalate	ND	10	ug/L
1,3-Dinitrobenzene	ND	10	ug/L
4,6-Dinitro-2-methylphenol	ND	50	ug/L
2,4-Dinitrophenol	ND	50	ug/L
2,4-Dinitrotoluene	ND	10	ug/L
2,6-Dinitrotoluene	ND	10	ug/L
2-sec-Butyl-4,6-dinitro-phenol	ND	20	ug/L
Diphenylamine	ND	10	ug/L
Disulfoton	ND	50	ug/L
Ethyl methanesulfonate	ND	10	ug/L
Famphur	ND		ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Hexachlorobenzene	ND	10	ug/L
Hexachlorobutadiene	ND	10	ug/L
Hexachlorocyclopentadiene	ND	50	ug/L
Hexachloroethane	ND	10	ug/L
Hexachlorophene	ND		ug/L
Hexachloropropene	ND	100	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Isophorone	ND	10	ug/L
Isosafrole	ND	20	ug/L
Methapyrilene	ND	50	ug/L
o-Toluidine	ND	10	ug/L
3-Methylcholanthrene	ND	20	ug/L
Methyl methanesulfonate	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
Methyl parathion	ND	50	ug/L
2-Methylphenol	ND	10	ug/L
Naphthalene	ND	10	ug/L
1,4-Naphthoquinone	ND	50	ug/L
1-Naphthylamine	ND	10	ug/L
2-Naphthylamine	ND	10	ug/L

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FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWO-1298-1

GC/MS Semivolatiles

Lot-Sample #...: D8L090208-003 Work Order #...: CP5K510V Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2-Nitroaniline	ND	50	ug/L
3-Nitroaniline	ND	50	ug/L
4-Nitroaniline	ND	50	ug/L
Nitrobenzene	ND	10	ug/L
2-Nitrophenol	ND	10	ug/L
4-Nitrophenol	ND	50	ug/L
4-Nitroquinoline-1-oxide	ND	100	ug/L
N-Nitrosodi-n-butylamine	ND	10	ug/L
N-Nitrosodiethylamine	ND	10	ug/L
N-Nitrosodimethylamine	ND	10	ug/L
N-Nitrosodi-n-propylamine	ND	10	ug/L
N-Nitrosodiphenylamine	ND	10	ug/L
N-Nitrosomethylethylamine	ND	10	ug/L
N-Nitrosomorpholine	ND	10	ug/L
N-Nitrosopiperidine	ND	10	ug/L
N-Nitrosopyrrolidine	ND	10	ug/L
5-Nitro-o-toluidine	ND	20	ug/L
Parathion	ND	50	ug/L
Pentachlorobenzene	ND	10	ug/L
Pentachloroethane	ND	50	ug/L
Pentachloronitrobenzene	ND	50	ug/L
Pentachlorophenol	ND	50	ug/L
Phenacetin	ND	20	ug/L
Phenanthrene	ND	10	ug/L
Phenol	ND	10	ug/L
p-Phenylene diamine	ND	100	ug/L
Phorate	ND	50	ug/L
2-Picoline	ND	20	ug/L
Pronamide	ND	20	ug/L
Pyrene	ND	10	ug/L
Pyridine	ND	20	ug/L
Safrole	ND	20	ug/L
1,2,4,5-Tetrachloro-benzene	ND	10	ug/L
2,3,4,6-Tetrachlorophenol	ND	50	ug/L
Sulfotepp	ND	50	ug/L
1,2,4-Trichlorobenzene	ND	10	ug/L
2,4,5-Trichlorophenol	ND	10	ug/L
2,4,6-Trichlorophenol	ND	10	ug/L
O,O,O-Triethylphosphoro-thioate	ND	50	ug/L
1,3,5-Trinitrobenzene	ND	50	ug/L

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FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWO-1298-1

GC/MS Semivolatiles

Lot-Sample #...: D8L090208-003 **Work Order #...:** CP5K510V **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
3-Methylphenol & 4-Methylphenol	ND	10	ug/L
a,a-Dimethylphenethylamine	ND	50	ug/L
Aramite	ND	20	ug/L
2,2'-oxybis(1-Chloropropane)	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	74	(54 - 110)
Phenol-d5	80	(49 - 131)
Nitrobenzene-d5	82	(54 - 116)
2-Fluorobiphenyl	76	(49 - 102)
2,4,6-Tribromophenol	74	(46 - 127)
Terphenyl-d14	83	(57 - 117)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWN-1298-1

GC/MS Semivolatiles

Lot-Sample #...: D8L090208-004 **Work Order #...:** CP5K710V **Matrix.....:** WATER
Date Sampled...: 12/08/98 16:35 **Date Received..:** 12/09/98
Prep Date.....: 12/16/98 **Analysis Date..:** 01/14/99
Prep Batch #...: 8349313 **Analysis Time..:** 20:21
Dilution Factor: 1

Method.....: SW846 8270B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
Acetophenone	ND	10	ug/L
2-Acetylaminofluorene	ND	100	ug/L
4-Aminobiphenyl	ND	50	ug/L
Aniline	ND	10	ug/L
Anthracene	ND	10	ug/L
Benzo(a)anthracene	ND	10	ug/L
Benzo(b)fluoranthene	ND	10	ug/L
Benzo(k)fluoranthene	ND	10	ug/L
Benzo(ghi)perylene	ND	10	ug/L
Benzo(a)pyrene	ND	10	ug/L
Benzyl alcohol	ND	10	ug/L
bis(2-Chloroethoxy) methane	ND	10	ug/L
bis(2-Chloroethyl) ether	ND	10	ug/L
bis(2-Ethylhexyl) phthalate	ND	10	ug/L
4-Bromophenyl phenyl ether	ND	10	ug/L
Butyl benzyl phthalate	ND	10	ug/L
4-Chloroaniline	ND	10	ug/L
4-Chloro-3-methylphenol	ND	10	ug/L
2-Chloronaphthalene	ND	10	ug/L
2-Chlorophenol	ND	10	ug/L
4-Chlorophenyl phenyl ether	ND	10	ug/L
Chrysene	ND	10	ug/L
Dibenz(a,h)anthracene	ND	10	ug/L
Dibenzofuran	ND	10	ug/L
Di-n-butyl phthalate	ND	10	ug/L
1,2-Dichlorobenzene	ND	10	ug/L
1,3-Dichlorobenzene	ND	10	ug/L
1,4-Dichlorobenzene	ND	10	ug/L
3,3'-Dichlorobenzidine	ND	50	ug/L
2,4-Dichlorophenol	ND	10	ug/L
2,6-Dichlorophenol	ND	10	ug/L
Diethyl phthalate	ND	10	ug/L

(Continued on next page)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWN-1298-1

GC/MS Semivolatiles

Lot-Sample #...: D8L090208-004 Work Order #...: CP5K710V Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Thionazin	ND	50	ug/L
Dimethoate	ND	20	ug/L
p-Dimethylaminoazobenzene	ND	20	ug/L
7,12-Dimethylbenz(a)-anthracene	ND	20	ug/L
3,3'-Dimethylbenzidine	ND	50	ug/L
2,4-Dimethylphenol	ND	10	ug/L
Dimethyl phthalate	ND	10	ug/L
Di-n-octyl phthalate	ND	10	ug/L
1,3-Dinitrobenzene	ND	10	ug/L
4,6-Dinitro-2-methylphenol	ND	50	ug/L
2,4-Dinitrophenol	ND	50	ug/L
2,4-Dinitrotoluene	ND	10	ug/L
2,6-Dinitrotoluene	ND	10	ug/L
2-sec-Butyl-4,6-dinitro-phenol	ND	20	ug/L
Diphenylamine	ND	10	ug/L
Disulfoton	ND	50	ug/L
Ethyl methanesulfonate	ND	10	ug/L
Famphur	ND		ug/L
Fluoranthene	ND	10	ug/L
Fluorene	ND	10	ug/L
Hexachlorobenzene	ND	10	ug/L
Hexachlorobutadiene	ND	10	ug/L
Hexachlorocyclopentadiene	ND	50	ug/L
Hexachloroethane	ND	10	ug/L
Hexachlorophene	ND		ug/L
Hexachloropropene	ND	100	ug/L
Indeno(1,2,3-cd)pyrene	ND	10	ug/L
Isophorone	ND	10	ug/L
Isosafrole	ND	20	ug/L
Methapyrilene	ND	50	ug/L
o-Toluidine	ND	10	ug/L
3-Methylcholanthrene	ND	20	ug/L
Methyl methanesulfonate	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
Methyl parathion	ND	50	ug/L
2-Methylphenol	ND	10	ug/L
Naphthalene	ND	10	ug/L
1,4-Naphthoquinone	ND	50	ug/L
1-Naphthylamine	ND	10	ug/L
2-Naphthylamine	ND	10	ug/L

(Continued on next page)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWN-1298-1

GC/MS Semivolatiles

Lot-Sample #...: D8L090208-004 Work Order #...: CP5K710V Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2-Nitroaniline	ND	50	ug/L
3-Nitroaniline	ND	50	ug/L
4-Nitroaniline	ND	50	ug/L
Nitrobenzene	ND	10	ug/L
2-Nitrophenol	ND	10	ug/L
4-Nitrophenol	ND	50	ug/L
4-Nitroquinoline-1-oxide	ND	100	ug/L
N-Nitrosodi-n-butylamine	ND	10	ug/L
N-Nitrosodiethylamine	ND	10	ug/L
N-Nitrosodimethylamine	ND	10	ug/L
N-Nitrosodi-n-propylamine	ND	10	ug/L
N-Nitrosodiphenylamine	ND	10	ug/L
N-Nitrosomethylethylamine	ND	10	ug/L
N-Nitrosomorpholine	ND	10	ug/L
N-Nitrosopiperidine	ND	10	ug/L
N-Nitrosopyrrolidine	ND	10	ug/L
5-Nitro-o-toluidine	ND	20	ug/L
Parathion	ND	50	ug/L
Pentachlorobenzene	ND	10	ug/L
Pentachloroethane	ND	50	ug/L
Pentachloronitrobenzene	ND	50	ug/L
Pentachlorophenol	ND	50	ug/L
Phenacetin	ND	20	ug/L
Phenanthrene	ND	10	ug/L
Phenol	ND	10	ug/L
p-Phenylene diamine	ND	100	ug/L
Phorate	ND	50	ug/L
2-Picoline	ND	20	ug/L
Pronamide	ND	20	ug/L
Pyrene	ND	10	ug/L
Pyridine	ND	20	ug/L
Safrole	ND	20	ug/L
1,2,4,5-Tetrachlorobenzene	ND	10	ug/L
2,3,4,6-Tetrachlorophenol	ND	50	ug/L
Sulfotepp	ND	50	ug/L
1,2,4-Trichlorobenzene	ND	10	ug/L
2,4,5-Trichlorophenol	ND	10	ug/L
2,4,6-Trichlorophenol	ND	10	ug/L
O,O,O-Triethylphosphorothioate	ND	50	ug/L
1,3,5-Trinitrobenzene	ND	50	ug/L

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FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWN-1298-1

GC/MS Semivolatiles

Lot-Sample #...: D8L090208-004 **Work Order #...:** CP5K710V **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
3-Methylphenol & 4-Methylphenol	ND	10	ug/L
a,a-Dimethylphenethyl-amine	ND	50	ug/L
Aramite	ND	20	ug/L
2,2'-oxybis(1-Chloropropane)	ND	10	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	73	(54 - 110)
Phenol-d5	77	(49 - 131)
Nitrobenzene-d5	80	(54 - 116)
2-Fluorobiphenyl	75	(49 - 102)
2,4,6-Tribromophenol	68	(46 - 127)
Terphenyl-d14	82	(57 - 117)

Laboratory Non-Conformance Memo (NCM)

Quanterra Environmental Services

NCM Log Number 14649

QUA-4187

Project ID/Client	Sample Numbers	NCM Initiated by/Date	Project Manager
D3LC9C208 (CANNON AFB)	01-04	MRE 12/16/98	E. LARIVIERE

Analyst/Team: ORGANIC PREP

Tests: 8270D

Analytical Area (check appropriate box)

- [ ] Sample control
- [x] Organic preparation
- [ ] Inorganic preparation
- [ ] GC
- [ ] HPLC
- [ ] GC/MS
- [ ] Wet chemistry
- [ ] Metals
- [ ] Reporting
- [ ] Data review
- [ ] Radiochemistry
- [ ] _____

Non-Conformance (check appropriate box) To be completed by analyst

Holding Time Violation (exceeded by 1 days)

Category I: Laboratory Independent

- [ ] 1. Holding time expired in transit
- [ ] 2. Sample received > 48 hours or 1/2 holding time has expired
- [ ] 3. Test added by client after expiration

Category II: Laboratory Dependent

- [x] 4. Instrument failure
- [ ] 5. Analyst error
- [ ] 6. Log-in error
- [ ] 7. Miscommunication
- [ ] 8. Other (explanation required)

Category III: Analysis Reruns (QA/QC)

- [ ] 9. Surrogates
- [ ] 10. Internal standards
- [ ] 11. Spike recoveries
- [ ] 12. Blank contamination

Category IV: Analysis Reruns (Confirmation)

- [ ] 13. Second column
- [ ] 14. Contamination check
- [ ] 15. Confirmation of matrix effects
- [ ] 16. Other (explanation required) _____

Quality Assurance/Quality Control

- [ ] 17. QC data reported outside of controls
- [ ] 18. Incorrect procedure used
- [ ] 19. SOP intentionally modified with QA and tech approval
- [ ] 20. Invalid instrument calibration
- [ ] 21. Received insuffient sample for proper analysis

Incorrect or Incomplete Client Deliverable

- [ ] 22. Hardcopy deliverable error
- [ ] 23. Electronic deliverable error

Reported Detection Limits Elevated Due to:

- [ ] 24. Sample matrix: Does not include high analyte content
- [ ] 25. Insufficient sample volume
- [ ] 26. Other (explanation required)

Miscellaneous

- [ ] 27. Instrument Tag-out
- [ ] 28. Other (explanation required) _____

Notification (check appropriate box) To be completed by project manager

[x] **Required** [ ] **Not Required** CONFIRMED REPREP 1DAY OUT OF HT IS DESIRED. PJR 12/16

Client notified by - Name	Date	
DOUG SCOTT	12/16/98	[ ] In writing [x] By telephone [ ] By facsimile [ ] Other (explain)

Client's name and response	
PATTI ROACH	[ ] Process "as is" [ ] On hold until _____ [ ] Re-sample [x] Other (explain) Reprep

Project manager signature	Date
Patti Roach	12/16/98

Laboratory Non-Conformance Memo (NCM)

Quanterra Environmental Services

NCM Log Number 14649

QUA-4187

Corrective Action (To be completed and reviewed by all associates involved)

Problem Description/Root Cause

Chiller broke down causing extracts to turn up. during original prep.

Author's initials and date MRE 12/16/98

Corrective Actions (Short Term)

Reprep samples out of hold.

Author's initials and date MRE 12/16/98

Corrective Actions to Prevent Reoccurence (Long Term)

N/A

Corrective Action approved by (Supervisor/Group Leader) and date Michael R. Eduardo 12/16/98

onal Comments

Chiller was repaired immediately

Corrective Action to be completed by (if other than Supervisor/Group Leader)

Date Corrective Action is to be completed

Quality Assurance Review (To be completed by a QA associate)

Log ID ☐ Anomaly ☒ Deficiency ☐ Notified Ops/Sys Manager (Initials)

☐ Further action required

☐ Further action assigned to

QA signature [signature] Date 12/17/98

Corrective Action Verification (To be completed by a QA associate)

☐ Verification not required or requested ☐ Verified/CA completed on _____ by _____

☐ Cannot verifiy (specify reason)

ed by Date

Nonconformance Memo Closure

QA signature [signature] Date 12/17/98

The office of Quality Assurance maintains a copy of this NCM indicating its final status.

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWR-1298-2

GC Semivolatiles

Lot-Sample #...: D8L090208-001 Work Order #...: CP5JQ110 Matrix.....: WATER
Date Sampled...: 12/08/98 15:40 Date Received..: 12/09/98
Prep Date.....: 12/14/98 Analysis Date..: 01/06/99
Prep Batch #...: 8348158 Analysis Time..: 07:21
Dilution Factor: 1

Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	0.050	ug/L
alpha-BHC	ND	0.050	ug/L
beta-BHC	ND	0.050	ug/L
delta-BHC	ND	0.050	ug/L
gamma-BHC (Lindane)	ND	0.050	ug/L
Chlordane (technical)	ND	0.50	ug/L
4,4'-DDD	**0.046 J**	**0.050**	**ug/L**
4,4'-DDE	ND	0.050	ug/L
4,4'-DDT	ND	0.050	ug/L
Dieldrin	ND	0.050	ug/L
Endrin	ND	0.050	ug/L
Endrin aldehyde	ND	0.050	ug/L
Endosulfan I	ND	0.050	ug/L
Endosulfan II	ND	0.050	ug/L
Endosulfan sulfate	ND	0.050	ug/L
Heptachlor	ND	0.050	ug/L
Heptachlor epoxide	ND	0.050	ug/L
Methoxychlor	ND	0.10	ug/L
Toxaphene	ND	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	111	(51 - 132)
Tetrachloro-m-xylene	91	(56 - 107)

NOTE(S):

J Estimated result. Result is less than RL.

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWR-1298-2

GC Semivolatiles

Lot-Sample #...: D8L090208-001 **Work Order #...:** CP5JQ10X **Matrix.....:** WATER
Date Sampled...: 12/08/98 15:40 **Date Received..:** 12/09/98
Prep Date.....: 12/14/98 **Analysis Date..:** 01/04/99
Prep Batch #...: 8348159 **Analysis Time..:** 21:33
Dilution Factor: 1

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	1.0	ug/L
Aroclor 1221	ND	1.0	ug/L
Aroclor 1232	ND	1.0	ug/L
Aroclor 1242	ND	1.0	ug/L
Aroclor 1248	ND	1.0	ug/L
Aroclor 1254	ND	1.0	ug/L
Aroclor 1260	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	78	(65 - 137)
Decachlorobiphenyl	93	(66 - 151)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWR-1298-1

GC Semivolatiles

Lot-Sample #...: D8L090208-002 **Work Order #...:** CP5JW110 **Matrix.....:** WATER
Date Sampled...: 12/08/98 15:40 **Date Received..:** 12/09/98
Prep Date.....: 12/14/98 **Analysis Date..:** 01/06/99
Prep Batch #...: 8348158 **Analysis Time..:** 07:55
Dilution Factor: 1
Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	0.050	ug/L
alpha-BHC	ND	0.050	ug/L
beta-BHC	ND	0.050	ug/L
delta-BHC	ND	0.050	ug/L
gamma-BHC (Lindane)	ND	0.050	ug/L
Chlordane (technical)	ND	0.50	ug/L
4,4'-DDD	ND	0.050	ug/L
4,4'-DDE	ND	0.050	ug/L
4,4'-DDT	ND	0.050	ug/L
Dieldrin	ND	0.050	ug/L
Endrin	ND	0.050	ug/L
Endrin aldehyde	ND	0.050	ug/L
Endosulfan I	ND	0.050	ug/L
Endosulfan II	ND	0.050	ug/L
Endosulfan sulfate	ND	0.050	ug/L
Heptachlor	ND	0.050	ug/L
Heptachlor epoxide	ND	0.050	ug/L
Methoxychlor	ND	0.10	ug/L
Toxaphene	ND	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	109	(51 - 132)
Tetrachloro-m-xylene	96	(56 - 107)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWR-1298-1

GC Semivolatiles

Lot-Sample #...: D8L090208-002 Work Order #...: CP5JW10X Matrix.....: WATER
Date Sampled...: 12/08/98 15:40 Date Received..: 12/09/98
Prep Date.....: 12/14/98 Analysis Date..: 01/04/99
Prep Batch #...: 8348159 Analysis Time..: 22:01
Dilution Factor: 1

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	1.0	ug/L
Aroclor 1221	ND	1.0	ug/L
Aroclor 1232	ND	1.0	ug/L
Aroclor 1242	ND	1.0	ug/L
Aroclor 1248	ND	1.0	ug/L
Aroclor 1254	ND	1.0	ug/L
Aroclor 1260	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	77	(65 - 137)
Decachlorobiphenyl	96	(66 - 151)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWO-1298-1

GC Semivolatiles

Lot-Sample #...: D8L090208-003 **Work Order #...:** CP5K5110 **Matrix.....:** WATER
Date Sampled...: 12/08/98 16:10 **Date Received..:** 12/09/98
Prep Date.....: 12/14/98 **Analysis Date..:** 01/06/99
Prep Batch #...: 8348158 **Analysis Time..:** 08:30
Dilution Factor: 1

Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	0.050	ug/L
alpha-BHC	ND	0.050	ug/L
beta-BHC	ND	0.050	ug/L
delta-BHC	ND	0.050	ug/L
gamma-BHC (Lindane)	ND	0.050	ug/L
Chlordane (technical)	ND	0.50	ug/L
4,4'-DDD	ND	0.050	ug/L
4,4'-DDE	ND	0.050	ug/L
4,4'-DDT	ND	0.050	ug/L
Dieldrin	ND	0.050	ug/L
Endrin	ND	0.050	ug/L
Endrin aldehyde	ND	0.050	ug/L
Endosulfan I	ND	0.050	ug/L
Endosulfan II	ND	0.050	ug/L
Endosulfan sulfate	ND	0.050	ug/L
Heptachlor	ND	0.050	ug/L
Heptachlor epoxide	ND	0.050	ug/L
Methoxychlor	ND	0.10	ug/L
Toxaphene	ND	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	102	(51 - 132)
Tetrachloro-m-xylene	88	(56 - 107)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWO-1298-1

GC Semivolatiles

Lot-Sample #...: D8L090208-003 **Work Order #...:** CP5K510X **Matrix.....:** WATER
Date Sampled...: 12/08/98 16:10 **Date Received..:** 12/09/98
Prep Date.....: 12/14/98 **Analysis Date..:** 01/04/99
Prep Batch #...: 8348159 **Analysis Time..:** 22:29
Dilution Factor: 1

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	1.0	ug/L
Aroclor 1221	ND	1.0	ug/L
Aroclor 1232	ND	1.0	ug/L
Aroclor 1242	ND	1.0	ug/L
Aroclor 1248	ND	1.0	ug/L
Aroclor 1254	ND	1.0	ug/L
Aroclor 1260	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	78	(65 - 137)
Decachlorobiphenyl	101	(66 - 151)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWN-1298-1

GC Semivolatiles

Lot-Sample #...: D8L090208-004 **Work Order #...:** CP5K7110 **Matrix.....:** WATER
Date Sampled...: 12/08/98 16:35 **Date Received..:** 12/09/98
Prep Date.....: 12/14/98 **Analysis Date..:** 01/06/99
Prep Batch #...: 8348158 **Analysis Time..:** 09:04
Dilution Factor: 1

Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aldrin	ND	0.050	ug/L
alpha-BHC	ND	0.050	ug/L
beta-BHC	ND	0.050	ug/L
delta-BHC	ND	0.050	ug/L
gamma-BHC (Lindane)	ND	0.050	ug/L
Chlordane (technical)	ND	0.50	ug/L
4,4'-DDD	ND	0.050	ug/L
4,4'-DDE	ND	0.050	ug/L
4,4'-DDT	ND	0.050	ug/L
Dieldrin	ND	0.050	ug/L
Endrin	ND	0.050	ug/L
Endrin aldehyde	ND	0.050	ug/L
Endosulfan I	ND	0.050	ug/L
Endosulfan II	ND	0.050	ug/L
Endosulfan sulfate	ND	0.050	ug/L
Heptachlor	ND	0.050	ug/L
Heptachlor epoxide	ND	0.050	ug/L
Methoxychlor	ND	0.10	ug/L
Toxaphene	ND	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	100	(51 - 132)
Tetrachloro-m-xylene	95	(56 - 107)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWN-1298-1

GC Semivolatiles

Lot-Sample #...: D8L090208-004 **Work Order #...:** CP5K710X **Matrix.....:** WATER
Date Sampled...: 12/08/98 16:35 **Date Received..:** 12/09/98
Prep Date.....: 12/14/98 **Analysis Date..:** 01/04/99
Prep Batch #...: 8348159 **Analysis Time..:** 22:57
Dilution Factor: 1

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	1.0	ug/L
Aroclor 1221	ND	1.0	ug/L
Aroclor 1232	ND	1.0	ug/L
Aroclor 1242	ND	1.0	ug/L
Aroclor 1248	ND	1.0	ug/L
Aroclor 1254	ND	1.0	ug/L
Aroclor 1260	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	85	(65 - 137)
Decachlorobiphenyl	96	(66 - 151)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWR-1298-2

GC Semivolatiles

Lot-Sample #...: D8L090208-001 Work Order #...: CP5JQ10P Matrix.....: WATER
Date Sampled...: 12/08/98 15:40 Date Received..: 12/09/98
Prep Date.....: 12/14/98 Analysis Date..: 01/07/99
Prep Batch #...: 8348140 Analysis Time..: 09:23
Dilution Factor: 1

Method.....: SW846 8140

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Azinphos-methyl	ND	2.5	ug/L
Bolstar	ND	0.50	ug/L
Chlorpyrifos	ND	0.50	ug/L
Coumaphos	ND	0.50	ug/L
Demeton (total)	ND	0.50	ug/L
Diazinon	ND	0.50	ug/L
Dichlorvos	ND	0.50	ug/L
Dimethoate	ND	0.50	ug/L
Disulfoton	ND	0.50	ug/L
Ethoprop	ND	0.50	ug/L
Ethyl parathion	ND	0.50	ug/L
Famphur	ND	1.0	ug/L
Fensulfothion	ND	2.5	ug/L
Fenthion	ND	0.50	ug/L
Malathion	ND	1.2	ug/L
Merphos	ND	0.50	ug/L
Methyl parathion	ND	0.50	ug/L
Mevinphos	ND	6.2	ug/L
Naled	ND	10	ug/L
O,O,O-Triethylphosphorothioate	ND	0.50	ug/L
Phorate	ND	0.50	ug/L
Ronnel	ND	0.50	ug/L
Sulfotepp	ND	0.50	ug/L
Thionazin	ND	0.50	ug/L
Tokuthion	ND	0.50	ug/L
Trichloronate	ND	0.50	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Ethyl Pirimifos	49 *	(60 - 123)
Chlormefos	59	(59 - 110)

NOTE(S):

* Surrogate recovery is outside stated control limits.

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWR-1298-1

GC Semivolatiles

Lot-Sample #...: D8L090208-002 **Work Order #...:** CP5JW10P **Matrix.....:** WATER
Date Sampled...: 12/08/98 15:40 **Date Received..:** 12/09/98
Prep Date.....: 12/14/98 **Analysis Date..:** 01/07/99
Prep Batch #...: 8348140 **Analysis Time..:** 10:04
Dilution Factor: 1

Method.....: SW846 8140

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Azinphos-methyl	ND	2.5	ug/L
Bolstar	ND	0.50	ug/L
Chlorpyrifos	ND	0.50	ug/L
Coumaphos	ND	0.50	ug/L
Demeton (total)	ND	0.50	ug/L
Diazinon	ND	0.50	ug/L
Dichlorvos	ND	0.50	ug/L
Dimethoate	ND	0.50	ug/L
Disulfoton	ND	0.50	ug/L
Ethoprop	ND	0.50	ug/L
Ethyl parathion	ND	0.50	ug/L
Famphur	ND	1.0	ug/L
Fensulfothion	ND	2.5	ug/L
Fenthion	ND	0.50	ug/L
Malathion	ND	1.2	ug/L
Merphos	ND	0.50	ug/L
Methyl parathion	ND	0.50	ug/L
Mevinphos	ND	6.2	ug/L
Naled	ND	10	ug/L
O,O,O-Triethylphosphoro-thioate	ND	0.50	ug/L
Phorate	ND	0.50	ug/L
Ronnel	ND	0.50	ug/L
Sulfotepp	ND	0.50	ug/L
Thionazin	ND	0.50	ug/L
Tokuthion	ND	0.50	ug/L
Trichloronate	ND	0.50	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Ethyl Pirimifos	57 *	(60 - 123)
Chlormefos	63	(59 - 110)

NOTE(S):

* Surrogate recovery is outside stated control limits.

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWO-1298-1

GC Semivolatiles

Lot-Sample #...: D8L090208-003 **Work Order #...:** CP5K510P **Matrix.....:** WATER
Date Sampled...: 12/08/98 16:10 **Date Received..:** 12/09/98
Prep Date.....: 12/14/98 **Analysis Date..:** 01/07/99
Prep Batch #...: 8348140 **Analysis Time..:** 10:37
Dilution Factor: 1

Method.....: SW846 8140

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Azinphos-methyl	ND	2.5	ug/L
Bolstar	ND	0.50	ug/L
Chlorpyrifos	ND	0.50	ug/L
Coumaphos	ND	0.50	ug/L
Demeton (total)	ND	0.50	ug/L
Diazinon	ND	0.50	ug/L
Dichlorvos	ND	0.50	ug/L
Dimethoate	ND	0.50	ug/L
Disulfoton	ND	0.50	ug/L
Ethoprop	ND	0.50	ug/L
Ethyl parathion	ND	0.50	ug/L
Famphur	ND	1.0	ug/L
Fensulfothion	ND	2.5	ug/L
Fenthion	ND	0.50	ug/L
Malathion	ND	1.2	ug/L
Merphos	ND	0.50	ug/L
Methyl parathion	ND	0.50	ug/L
Mevinphos	ND	6.2	ug/L
Naled	ND	10	ug/L
O,O,O-Triethylphosphorothioate	ND	0.50	ug/L
Phorate	ND	0.50	ug/L
Ronnel	ND	0.50	ug/L
Sulfotepp	ND	0.50	ug/L
Thionazin	ND	0.50	ug/L
Tokuthion	ND	0.50	ug/L
Trichloronate	ND	0.50	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Ethyl Pirimifos	59 *	(60 - 123)
Chlormefos	66	(59 - 110)

NOTE(S):

* Surrogate recovery is outside stated control limits.

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWN-1298-1

GC Semivolatiles

Lot-Sample #...: D8L090208-004 Work Order #...: CP5K710P Matrix.....: WATER
Date Sampled...: 12/08/98 16:35 Date Received..: 12/09/98
Prep Date.....: 12/14/98 Analysis Date..: 01/07/99
Prep Batch #...: 8348140 Analysis Time..: 12:15
Dilution Factor: 1

Method.....: SW846 8140

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Azinphos-methyl	ND	2.5	ug/L
Bolstar	ND	0.50	ug/L
Chlorpyrifos	ND	0.50	ug/L
Coumaphos	ND	0.50	ug/L
Demeton (total)	ND	0.50	ug/L
Diazinon	ND	0.50	ug/L
Dichlorvos	ND	0.50	ug/L
Dimethoate	ND	0.50	ug/L
Disulfoton	ND	0.50	ug/L
Ethoprop	ND	0.50	ug/L
Ethyl parathion	ND	0.50	ug/L
Famphur	ND	1.0	ug/L
Fensulfothion	ND	2.5	ug/L
Fenthion	ND	0.50	ug/L
Malathion	ND	1.2	ug/L
Merphos	ND	0.50	ug/L
Methyl parathion	ND	0.50	ug/L
Mevinphos	ND	6.2	ug/L
Naled	ND	10	ug/L
O,O,O-Triethylphosphorothioate	ND	0.50	ug/L
Phorate	ND	0.50	ug/L
Ronnel	ND	0.50	ug/L
Sulfotepp	ND	0.50	ug/L
Thionazin	ND	0.50	ug/L
Tokuthion	ND	0.50	ug/L
Trichloronate	ND	0.50	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Ethyl Pirimifos	59 *	(60 - 123)
Chlormefos	71	(59 - 110)

NOTE(S):

* Surrogate recovery is outside stated control limits.

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWR-1298-2

GC Semivolatiles

Lot-Sample #...: D8L090208-001 Work Order #...: CP5JQ10W Matrix.....: WATER
Date Sampled...: 12/08/98 15:40 Date Received..: 12/09/98
Prep Date.....: 12/15/98 Analysis Date..: 12/30/98
Prep Batch #...: 8349244 Analysis Time..: 19:21
Dilution Factor: 1
Method.....: SW846 8151A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2,4-D	ND	4.0	ug/L
2,4-DB	ND	4.0	ug/L
2,4,5-TP (Silvex)	ND	1.0	ug/L
2,4,5-T	ND	1.0	ug/L
Dalapon	ND	2.0	ug/L
Dicamba	ND	2.0	ug/L
Dichlorprop	ND	4.0	ug/L
Dinoseb	ND	0.60	ug/L
MCPA	ND	400	ug/L
MCPP	ND	400	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
DCAA	99	(44 - 107)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWR-1298-1

GC Semivolatiles

Lot-Sample #...: D8L090208-002 Work Order #...: CP5JW10W Matrix.....: WATER
Date Sampled...: 12/08/98 15:40 Date Received..: 12/09/98
Prep Date.....: 12/15/98 Analysis Date..: 01/04/99
Prep Batch #...: 8349244 Analysis Time..: 20:29
Dilution Factor: 1

Method.....: SW846 8151A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2,4-D	ND	4.0	ug/L
2,4-DB	ND	4.0	ug/L
2,4,5-TP (Silvex)	ND	1.0	ug/L
2,4,5-T	ND	1.0	ug/L
Dalapon	ND	2.0	ug/L
Dicamba	ND	2.0	ug/L
Dichlorprop	ND	4.0	ug/L
Dinoseb	ND	0.60	ug/L
MCPA	ND	400	ug/L
MCPP	ND	400	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
DCAA	90	(44 - 107)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWO-1298-1

GC Semivolatiles

Lot-Sample #...: D8L090208-003 **Work Order #...:** CP5K510W **Matrix.....:** WATER
Date Sampled...: 12/08/98 16:10 **Date Received..:** 12/09/98
Prep Date.....: 12/15/98 **Analysis Date..:** 12/30/98
Prep Batch #...: 8349244 **Analysis Time..:** 21:39
Dilution Factor: 1

Method.....: SW846 8151A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2,4-D	ND	4.0	ug/L
2,4-DB	ND	4.0	ug/L
2,4,5-TP (Silvex)	ND	1.0	ug/L
2,4,5-T	ND	1.0	ug/L
Dalapon	ND	2.0	ug/L
Dicamba	ND	2.0	ug/L
Dichlorprop	ND	4.0	ug/L
Dinoseb	ND	0.60	ug/L
MCPA	ND	400	ug/L
MCPP	ND	400	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
DCAA	77	(44 - 107)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWN-1298-1

GC Semivolatiles

Lot-Sample #...: D8L090208-004 **Work Order #...:** CP5K710W **Matrix.....:** WATER
Date Sampled...: 12/08/98 16:35 **Date Received..:** 12/09/98
Prep Date.....: 12/15/98 **Analysis Date..:** 12/30/98
Prep Batch #...: 8349244 **Analysis Time..:** 22:13
Dilution Factor: 1

Method.....: SW846 8151A

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2,4-D	ND	4.0	ug/L
2,4-DB	ND	4.0	ug/L
2,4,5-TP (Silvex)	ND	1.0	ug/L
2,4,5-T	ND	1.0	ug/L
Dalapon	ND	2.0	ug/L
Dicamba	ND	2.0	ug/L
Dichlorprop	ND	4.0	ug/L
Dinoseb	ND	0.60	ug/L
MCPA	ND	400	ug/L
MCPP	ND	400	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
DCAA	66	(44 - 107)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWR-1298-2

TOTAL Metals

Lot-Sample #...: D8L090208-001 Matrix.....: WATER
Date Sampled...: 12/08/98 15:40 Date Received..: 12/09/98

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 8355177						
Silver	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5JQ105
		Dilution Factor: 1		Analysis Time..: 19:44		
Aluminum	ND	100	ug/L	SW846 6010A	12/21-12/23/98	CP5JQ106
		Dilution Factor: 1		Analysis Time..: 19:44		
Cadmium	ND	5.0	ug/L	SW846 6010A	12/21-12/23/98	CP5JQ102
		Dilution Factor: 1		Analysis Time..: 19:44		
Barium	**57.2**	**10.0**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5JQ107**
		Dilution Factor: 1		Analysis Time..: 19:44		
Antimony	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5JQ103
		Dilution Factor: 1		Analysis Time..: 19:44		
Calcium	**58000**	**200**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5JQ1**
		Dilution Factor: 1		Analysis Time..: 19:44		
Thallium	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5JQ104
		Dilution Factor: 1		Analysis Time..: 19:44		
Cobalt	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5JQ109
		Dilution Factor: 1		Analysis Time..: 19:44		
Chromium	**148**	**10.0**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5JQ10A**
		Dilution Factor: 1		Analysis Time..: 19:44		
Copper	**11.1 B**	**20.0**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5JQ10C**
		Dilution Factor: 1		Analysis Time..: 19:44		
Iron	**1010**	**100**	**ug/L**	**SW846 6010A**	**12/21-12/22/98**	**CP5JQ10D**
		Dilution Factor: 1		Analysis Time..: 13:49		
Potassium	**8380**	**5000**	**ug/L**	**SW846 6010A**	**12/21-12/22/98**	**CP5JQ10E**
		Dilution Factor: 1		Analysis Time..: 13:49		
Magnesium	**61700**	**200**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5JQ10F**
		Dilution Factor: 1		Analysis Time..: 19:44		
Manganese	**99.8**	**10.0**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5JQ10G**
		Dilution Factor: 1		Analysis Time..: 19:44		

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FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWR-1298-2

TOTAL Metals

Lot-Sample #...: D8L090208-001 Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Sodium	42900	5000	ug/L	SW846 6010A	12/21-12/22/98	CP5JQ10E
		Dilution Factor: 1		Analysis Time..: 13:49		
Nickel	460	40.0	ug/L	SW846 6010A	12/21-12/23/98	CP5JQ10J
		Dilution Factor: 1		Analysis Time..: 19:44		
Tin	ND	100	ug/L	SW846 6010A	12/21-12/23/98	CP5JQ10K
		Dilution Factor: 1		Analysis Time..: 19:44		
Vanadium	12.3	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5JQ10L
		Dilution Factor: 1		Analysis Time..: 19:44		
Zinc	ND	20.0	ug/L	SW846 6010A	12/21-12/23/98	CP5JQ10M
		Dilution Factor: 1		Analysis Time..: 19:44		
Prep Batch #...: 8357267						
Mercury	ND	0.20	ug/L	SW846 7470A	12/31-01/04/99	CP5JQ10N
		Dilution Factor: 1		Analysis Time..: 14:53		

NOTE(S):

B Estimated result. Result is less than RL.

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWR-1298-1

TOTAL Metals

Lot-Sample #...: D8L090208-002 Matrix.....: WATER
Date Sampled...: 12/08/98 15:40 Date Received..: 12/09/98

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 8355177						
Silver	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5JW105
		Dilution Factor: 1		Analysis Time..: 19:48		
Aluminum	ND	100	ug/L	SW846 6010A	12/21-12/23/98	CP5JW106
		Dilution Factor: 1		Analysis Time..: 19:48		
Cadmium	ND	5.0	ug/L	SW846 6010A	12/21-12/23/98	CP5JW102
		Dilution Factor: 1		Analysis Time..: 19:48		
Barium	**58.2**	**10.0**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5JW107**
		Dilution Factor: 1		Analysis Time..: 19:48		
Antimony	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5JW103
		Dilution Factor: 1		Analysis Time..: 19:48		
Calcium	**59300**	**200**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5JW**
		Dilution Factor: 1		Analysis Time..: 19:48		
Thallium	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5JW104
		Dilution Factor: 1		Analysis Time..: 19:48		
Cobalt	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5JW109
		Dilution Factor: 1		Analysis Time..: 19:48		
Chromium	**148**	**10.0**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5JW10A**
		Dilution Factor: 1		Analysis Time..: 19:48		
Copper	**3.3 B**	**20.0**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5JW10C**
		Dilution Factor: 1		Analysis Time..: 19:48		
Iron	**755**	**100**	**ug/L**	**SW846 6010A**	**12/21-12/22/98**	**CP5JW10D**
		Dilution Factor: 1		Analysis Time..: 13:53		
Potassium	**8590**	**5000**	**ug/L**	**SW846 6010A**	**12/21-12/22/98**	**CP5JW10E**
		Dilution Factor: 1		Analysis Time..: 13:53		
Magnesium	**62900**	**200**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5JW10F**
		Dilution Factor: 1		Analysis Time..: 19:48		
Manganese	**87.9**	**10.0**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5JW10G**
		Dilution Factor: 1		Analysis Time..: 19:48		

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FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWR-1298-1

TOTAL Metals

Lot-Sample #...: D8L090208-002 Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Sodium	43600	5000	ug/L	SW846 6010A	12/21-12/22/98	CP5JW10H
		Dilution Factor: 1		Analysis Time..: 13:53		
Nickel	381	40.0	ug/L	SW846 6010A	12/21-12/23/98	CP5JW10J
		Dilution Factor: 1		Analysis Time..: 19:48		
Tin	ND	100	ug/L	SW846 6010A	12/21-12/23/98	CP5JW10K
		Dilution Factor: 1		Analysis Time..: 19:48		
Vanadium	13.1	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5JW10L
		Dilution Factor: 1		Analysis Time..: 19:48		
Zinc	ND	20.0	ug/L	SW846 6010A	12/21-12/23/98	CP5JW10M
		Dilution Factor: 1		Analysis Time..: 19:48		
Prep Batch #...: 8357267						
Mercury	ND	0.20	ug/L	SW846 7470A	12/31-01/04/99	CP5JW10N
		Dilution Factor: 1		Analysis Time..: 14:55		

NOTE(S):

B Estimated result. Result is less than RL.

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWO-1298-1

TOTAL Metals

Lot-Sample #...: D8L090208-003 **Matrix.....:** WATER
Date Sampled...: 12/08/98 16:10 **Date Received..:** 12/09/98

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 8355177						
Silver	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K5105
		Dilution Factor: 1		Analysis Time..: 19:52		
Aluminum	ND	100	ug/L	SW846 6010A	12/21-12/23/98	CP5K5106
		Dilution Factor: 1		Analysis Time..: 19:52		
Cadmium	ND	5.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K5102
		Dilution Factor: 1		Analysis Time..: 19:52		
Barium	**45.1**	**10.0**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5K5107**
		Dilution Factor: 1		Analysis Time..: 19:52		
Antimony	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K5103
		Dilution Factor: 1		Analysis Time..: 19:52		
Calcium	**72100**	**200**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5K5**
		Dilution Factor: 1		Analysis Time..: 19:52		
Thallium	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K5104
		Dilution Factor: 1		Analysis Time..: 19:52		
Cobalt	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K5109
		Dilution Factor: 1		Analysis Time..: 19:52		
Chromium	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K510A
		Dilution Factor: 1		Analysis Time..: 19:52		
Copper	ND	20.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K510C
		Dilution Factor: 1		Analysis Time..: 19:52		
Iron	ND	100	ug/L	SW846 6010A	12/21-12/22/98	CP5K510D
		Dilution Factor: 1		Analysis Time..: 13:56		
Potassium	**8510**	**5000**	**ug/L**	**SW846 6010A**	**12/21-12/22/98**	**CP5K510E**
		Dilution Factor: 1		Analysis Time..: 13:56		
Magnesium	**66000**	**200**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5K510F**
		Dilution Factor: 1		Analysis Time..: 19:52		
Manganese	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K510G
		Dilution Factor: 1		Analysis Time..: 19:52		

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FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWO-1298-1

TOTAL Metals

Lot-Sample #...: D8L090208-003 Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Sodium	**189000**	**5000**	**ug/L**	**SW846 6010A**	**12/21-12/22/98**	**CP5K510I**
		Dilution Factor: 1		Analysis Time..: 13:56		
Nickel	ND	40.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K510J
		Dilution Factor: 1		Analysis Time..: 19:52		
Tin	ND	100	ug/L	SW846 6010A	12/21-12/23/98	CP5K510P
		Dilution Factor: 1		Analysis Time..: 19:52		
Vanadium	**19.4**	**10.0**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5K510I**
		Dilution Factor: 1		Analysis Time..: 19:52		
Zinc	ND	20.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K510N
		Dilution Factor: 1		Analysis Time..: 19:52		
Prep Batch #...: 8357267						
Mercury	ND	0.20	ug/L	SW846 7470A	12/31-01/04/99	CP5K510N
		Dilution Factor: 1		Analysis Time..: 14:57		

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWN-1298-1

TOTAL Metals

Lot-Sample #...: D8L090208-004 Matrix.....: WATER
Date Sampled...: 12/08/98 16:35 Date Received..: 12/09/98

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 8355177						
Silver	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K7105
		Dilution Factor: 1		Analysis Time..: 19:56		
Aluminum	ND	100	ug/L	SW846 6010A	12/21-12/23/98	CP5K7106
		Dilution Factor: 1		Analysis Time..: 19:56		
Cadmium	ND	5.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K7102
		Dilution Factor: 1		Analysis Time..: 19:56		
Barium	**58.2**	**10.0**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5K7107**
		Dilution Factor: 1		Analysis Time..: 19:56		
Antimony	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K7103
		Dilution Factor: 1		Analysis Time..: 19:56		
Calcium	**48300**	**200**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5K7**
		Dilution Factor: 1		Analysis Time..: 19:56		
Thallium	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K7104
		Dilution Factor: 1		Analysis Time..: 19:56		
Cobalt	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K7109
		Dilution Factor: 1		Analysis Time..: 19:56		
Chromium	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K710A
		Dilution Factor: 1		Analysis Time..: 19:56		
Copper	ND	20.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K710C
		Dilution Factor: 1		Analysis Time..: 19:56		
Iron	ND	100	ug/L	SW846 6010A	12/21-12/22/98	CP5K710D
		Dilution Factor: 1		Analysis Time..: 13:59		
Potassium	**8020**	**5000**	**ug/L**	**SW846 6010A**	**12/21-12/22/98**	**CP5K710E**
		Dilution Factor: 1		Analysis Time..: 13:59		
Magnesium	**47900**	**200**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5K710F**
		Dilution Factor: 1		Analysis Time..: 19:56		
Manganese	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K710G
		Dilution Factor: 1		Analysis Time..: 19:56		

(Continued on next page)

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWN-1298-1

TOTAL Metals

Lot-Sample #...: D8L090208-004 Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Sodium	**37800**	**5000**	**ug/L**	**SW846 6010A**	**12/21-12/22/98**	**CP5K710H**
		Dilution Factor: 1		Analysis Time..: 13:59		
Nickel	ND	40.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K710J
		Dilution Factor: 1		Analysis Time..: 19:56		
Tin	ND	100	ug/L	SW846 6010A	12/21-12/23/98	CP5K710K
		Dilution Factor: 1		Analysis Time..: 19:56		
Vanadium	**23.2**	**10.0**	**ug/L**	**SW846 6010A**	**12/21-12/23/98**	**CP5K710L**
		Dilution Factor: 1		Analysis Time..: 19:56		
Zinc	ND	20.0	ug/L	SW846 6010A	12/21-12/23/98	CP5K710M
		Dilution Factor: 1		Analysis Time..: 19:56		

Prep Batch #...: 8357267

Mercury	ND	0.20	ug/L	SW846 7470A	12/31-01/04/99	CP5K710N
		Dilution Factor: 1		Analysis Time..: 14:59		

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWR-1298-2

General Chemistry

Lot-Sample #...: D8L090208-001 Work Order #...: CP5JQ Matrix.....: WATER
Date Sampled...: 12/08/98 15:40 Date Received..: 12/09/98

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	124	30.0	mg/L	MCAWW 325.3	12/30/98	8364264
		Dilution Factor: 10		Analysis Time..: 00:00		
Nitrate	4.6	0.50	mg/L	MCAWW 300.0A	12/10-12/11/98	8346198
		Dilution Factor: 1		Analysis Time..: 09:06		
Sulfate	150	15.0	mg/L	MCAWW 375.4	12/28/98	8363291
		Dilution Factor: 3		Analysis Time..: 00:00		
Total Phenols	ND	0.020	mg/L	MCAWW 420.2	12/30-12/31/98	9007224
		Dilution Factor: 1		Analysis Time..: 14:25		

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWO-1298-1

General Chemistry

Lot-Sample #...: D8L090208-003 Work Order #...: CP5K5 Matrix.....: WATER
Date Sampled...: 12/08/98 16:10 Date Received..: 12/09/98

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	266	30.0	mg/L	MCAWW 325.3	12/30/98	8364264
		Dilution Factor: 10		Analysis Time..: 00:00		
Nitrate	8.4	0.50	mg/L	MCAWW 300.0A	12/10-12/11/98	8346198
		Dilution Factor: 1		Analysis Time..: 16:19		
Sulfate	145	15.0	mg/L	MCAWW 375.4	12/28/98	8363291
		Dilution Factor: 3		Analysis Time..: 00:00		
Total Phenols	ND	0.020	mg/L	MCAWW 420.2	12/30-12/31/98	9007224
		Dilution Factor: 1		Analysis Time..: 14:25		

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWR-1298-1

General Chemistry

Lot-Sample #...: D8L090208-002 Work Order #...: CP5JW Matrix.....: WATER
Date Sampled...: 12/08/98 15:40 Date Received..: 12/09/98

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	142	30.0	mg/L	MCAWW 325.3	12/30/98	8364264
		Dilution Factor: 10		Analysis Time..: 00:00		
Nitrate	4.5	0.50	mg/L	MCAWW 300.0A	12/10-12/11/98	8346198
		Dilution Factor: 1		Analysis Time..: 09:29		
Sulfate	144	15.0	mg/L	MCAWW 375.4	12/28/98	8363291
		Dilution Factor: 3		Analysis Time..: 00:00		
Total Phenols	ND	0.020	mg/L	MCAWW 420.2	12/30-12/31/98	9007224
		Dilution Factor: 1		Analysis Time..: 14:25		

FOOTHILL ENGINEERING CONSULTANTS INC.

Client Sample ID: CAFB-MWN-1298-1

General Chemistry

Lot-Sample #...: D8L090208-004 Work Order #...: CP5K7 Matrix.....: WATER
Date Sampled...: 12/08/98 16:35 Date Received..: 12/09/98

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	70.9	30.0	mg/L	MCAWW 325.3	12/30/98	8364264
		Dilution Factor: 10		Analysis Time..: 00:00		
Nitrate	2.3	0.50	mg/L	MCAWW 300.0A	12/10-12/11/98	8346198
		Dilution Factor: 1		Analysis Time..: 16:42		
Sulfate	148	15.0	mg/L	MCAWW 375.4	12/28/98	8363291
		Dilution Factor: 3		Analysis Time..: 00:00		
Total Phenols	ND	0.020	mg/L	MCAWW 420.2	12/30-12/31/98	9007224
		Dilution Factor: 1		Analysis Time..: 14:25		

Laboratory Non-Conformance Memo (NCM)

Quanterra Environmental Services

NCM Log Number 15784

QUA-4187

Project ID/Client	Sample Numbers	NCM Initiated by/Date	Project Manager
D8L090208 / Foothills Eng.	01, 02, 03, 04	[illegible] 12-11-98	E Lariviere

Analyst/Team: [illegible]

Tests: IC-NO3

Analytical Area (check appropriate box)

- ☐ Sample control
- ☐ Organic preparation
- ☐ Inorganic preparation
- ☐ GC
- ☐ HPLC
- ☐ GC/MS
- ☑ Wet chemistry
- ☐ Metals
- ☐ Reporting
- ☐ Data review
- ☐ Radiochemistry
- ☐ _____

Non-Conformance (check appropriate box) To be completed by analyst

Holding Time Violation (exceeded by _____ days)

Category I: Laboratory Independent

- ☐ 1. Holding time expired in transit
- ☐ 2. Sample received > 48 hours or 1/2 holding time has expired
- ☐ 3. Test added by client after expiration

Category II: Laboratory Dependent

- ☑ 4. Instrument failure
- ☐ 5. Analyst error
- ☑ 6. Log-in error
- ☐ 7. Miscommunication
- ☐ 8. Other (explanation required)

Category III: Analysis Reruns (QA/QC)

- ☐ 9. Surrogates
- ☐ 10. Internal standards
- ☐ 11. Spike recoveries
- ☐ 12. Blank contamination

Category IV: Analysis Reruns (Confirmation)

- ☐ 13. Second column
- ☐ 14. Contamination check
- ☐ 15. Confirmation of matrix effects
- ☐ 16. Other (explanation required) _____

Quality Assurance/Quality Control

- ☐ 17. QC data reported outside of controls
- ☐ 18. Incorrect procedure used
- ☐ 19. SOP intentionally modified with QA and tech approval
- ☐ 20. Invalid instrument calibration
- ☐ 21. Received insuffient sample for proper analysis

Incorrect or Incomplete Client Deliverable

- ☐ 22. Hardcopy deliverable error
- ☐ 23. Electronic deliverable error

Reported Detection Limits Elevated Due to:

- ☐ 24. Sample matrix: Does not include high analyte content
- ☐ 25. Insufficient sample volume
- ☐ 26. Other (explanation required)

Miscellaneous

- ☐ 27. Instrument Tag-out
- ☐ 28. Other (explanation required) _____

Notification (check appropriate box) To be completed by project manager

☒ **Required** ☐ **Not Required**

Client notified by - Name	Date	
Ellen LaRiviere	12/14/98	☐ In writing ☐ By telephone ☒ By facsimile ☐ Other (explain) _____

Client's name and response	
Ian Broussard	☒ Process "as is" ☐ On hold until _____ ☐ Re-sample ☐ Other (explain) _____

Project manager signature: Ellen LaRiviere — Date: 12/14/98

Laboratory Non-Conformance Memo (NCM)

Quanterra Environmental Services

NCM Log Number 15784

.-4187

Corrective Action (To be completed and reviewed by all associates involved)

Problem Description/Root Cause

Samples were collected 12/08/98 @ 15:40 to 16:35, received at Quanterra on 12/09/9 @ 17:00. Samples were not received in Wetchem until 12/10/98 @ 11:00 by which time there was <5hrs left on holding time. Due to an instrument failure, the samples were not analyzed until early 12/11/98.

Author's initials and date: RT 12-11-98

Corrective Actions (Short Term)

Author's initials and date

Corrective Actions to Prevent Reoccurence (Long Term)

Corrective Action approved by (Supervisor/Group Leader) and date

Additional Comments

Corrective Action to be completed by (if other than Supervisor/Group Leader)

Date Corrective Action is to be completed

Quality Assurance Review (To be completed by a QA associate)

Log ID ☐ Anomaly ☒ Deficiency ☐ Notified Ops/Sys Manager (Initials)

☐ Further action required

☐ Further action assigned to

QA signature Thomas Schumann Date 12/15/98

Corrective Action Verification (To be completed by a QA associate)

☐ Verification not required or requested ☐ Verified/CA completed on _____ by _____

☐ Cannot verifiy (specify reason)

d by Date

Nonconformance Memo Closure

QA signature Thomas Schumann Date 12/15/98

The office of Quality Assurance maintains a copy of this NCM indicating its final status.

QC DATA ASSOCIATION SUMMARY

D8L090208

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WATER	MCAWW 300.0A		8346198	8354025
	WATER	MCAWW 420.2		9007224	9007068
	WATER	SW846 6010A		8355177	8355047
	WATER	SW846 8270B		8349313	8350115
	WATER	SW846 8260A		8354144	8354041
	WATER	SW846 7470A		8357267	8362091
	WATER	SW846 8082		8348159	
	WATER	SW846 8081A		8348158	
	WATER	SW846 8151A		8349244	
	WATER	MCAWW 325.3		8364264	
	WATER	MCAWW 375.4		8363291	8363123
	WATER	SW846 8140		8348140	
002	WATER	MCAWW 300.0A		8346198	8354025
	WATER	MCAWW 420.2		9007224	9007068
	WATER	SW846 6010A		8355177	8355047
	WATER	SW846 8270B		8349313	8350115
	WATER	SW846 8260A		8354144	8354041
	WATER	SW846 7470A		8357267	8362091
	WATER	SW846 8082		8348159	
	WATER	SW846 8081A		8348158	
	WATER	SW846 8151A		8349244	
	WATER	MCAWW 325.3		8364264	
	WATER	MCAWW 375.4		8363291	8363123
	WATER	SW846 8140		8348140	
003	WATER	MCAWW 300.0A		8346198	8354025
	WATER	MCAWW 420.2		9007224	9007068
	WATER	SW846 6010A		8355177	8355047
	WATER	SW846 8270B		8349313	8350115
	WATER	SW846 8260A		8354144	8354041
	WATER	SW846 7470A		8357267	8362091
	WATER	SW846 8082		8348159	
	WATER	SW846 8081A		8348158	
	WATER	SW846 8151A		8349244	
	WATER	MCAWW 325.3		8364264	
	WATER	MCAWW 375.4		8363291	8363123
	WATER	SW846 8140		8348140	
004	WATER	MCAWW 300.0A		8346198	8354025
	WATER	MCAWW 420.2		9007224	9007068
	WATER	SW846 6010A		8355177	8355047
	WATER	SW846 8270B		8349313	8350115
	WATER	SW846 8260A		8354144	8354041

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QC DATA ASSOCIATION SUMMARY

D8L090208

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
004	WATER	SW846 7470A		8357267	8362091
	WATER	SW846 8082		8348159	
	WATER	SW846 8081A		8348158	
	WATER	SW846 8151A		8349244	
	WATER	MCAWW 325.3		8364264	
	WATER	MCAWW 375.4		8363291	8363123
	WATER	SW846 8140		8348140	
005	WATER	SW846 8260A		8354144	8354041

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: D8L090208 Work Order #...: CPGD7102-LCS Matrix.....: WATER
LCS Lot-Sample#: D8L200000-144 CPGD7103-LCSD
Prep Date.....: 12/19/98 Analysis Date..: 12/19/98
Prep Batch #...: 8354144 Analysis Time..: 10:59
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	100	(75 - 124)			SW846 8260A
	99	(75 - 124)	0.83	(0-20)	SW846 8260A
Benzene	98	(82 - 114)			SW846 8260A
	97	(82 - 114)	1.1	(0-20)	SW846 8260A
Chlorobenzene	95	(86 - 120)			SW846 8260A
	95	(86 - 120)	0.75	(0-20)	SW846 8260A
Toluene	93	(85 - 115)			SW846 8260A
	91	(85 - 115)	1.7	(0-20)	SW846 8260A
Trichloroethene	100	(85 - 115)			SW846 8260A
	100	(85 - 115)	0.45	(0-20)	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	97	(76 - 115)
	99	(76 - 115)
4-Bromofluorobenzene	99	(85 - 115)
	99	(85 - 115)
Toluene-d8	94	(85 - 115)
	92	(85 - 115)
Dibromofluoromethane	104	(86 - 118)
	104	(86 - 118)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: D8L090208 Work Order #...: CPGD7102-LCS Matrix.....: WATER
LCS Lot-Sample#: D8L200000-144 CPGD7103-LCSD
Prep Date.....: 12/19/98 Analysis Date..: 12/19/98
Prep Batch #...: 8354144 Analysis Time..: 10:59
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
1,1-Dichloroethene	10.0	9.98	ug/L	100		SW846 8260A
	10.0	9.90	ug/L	99	0.83	SW846 8260A
Benzene	10.0	9.80	ug/L	98		SW846 8260A
	10.0	9.69	ug/L	97	1.1	SW846 8260A
Chlorobenzene	10.0	9.53	ug/L	95		SW846 8260A
	10.0	9.46	ug/L	95	0.75	SW846 8260A
Toluene	10.0	9.27	ug/L	93		SW846 8260A
	10.0	9.11	ug/L	91	1.7	SW846 8260A
Trichloroethene	10.0	10.0	ug/L	100		SW846 8260A
	10.0	9.96	ug/L	100	0.45	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	97	(76 - 115)
	99	(76 - 115)
4-Bromofluorobenzene	99	(85 - 115)
	99	(85 - 115)
Toluene-d8	94	(85 - 115)
	92	(85 - 115)
Dibromofluoromethane	104	(86 - 118)
	104	(86 - 118)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: D8L090208 **Work Order #...:** CPGD7101 **Matrix.....:** WATER
MB Lot-Sample #: D8L200000-144

Prep Date.....: 12/19/98 **Analysis Time..:** 11:46

Analysis Date..: 12/19/98 **Prep Batch #...:** 8354144
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	10	ug/L	SW846 8260A
Acetonitrile	ND	20	ug/L	SW846 8260A
Acrolein	ND	20	ug/L	SW846 8260A
Acrylonitrile	ND	20	ug/L	SW846 8260A
Benzene	ND	1.0	ug/L	SW846 8260A
Bromodichloromethane	ND	1.0	ug/L	SW846 8260A
Bromoform	ND	1.0	ug/L	SW846 8260A
Bromomethane	ND	2.0	ug/L	SW846 8260A
Carbon disulfide	ND	1.0	ug/L	SW846 8260A
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260A
Chlorobenzene	ND	1.0	ug/L	SW846 8260A
Chloroprene	ND	1.0	ug/L	SW846 8260A
Dibromochloromethane	ND	1.0	ug/L	SW846 8260A
Chloroethane	ND	2.0	ug/L	SW846 8260A
Chloroform	ND	1.0	ug/L	SW846 8260A
Chloromethane	ND	2.0	ug/L	SW846 8260A
Allyl chloride	ND	2.0	ug/L	SW846 8260A
Dibromomethane	ND	1.0	ug/L	SW846 8260A
trans-1,4-Dichloro-2-butene	ND	1.0	ug/L	SW846 8260A
Dichlorodifluoromethane	ND	2.0	ug/L	SW846 8260A
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260A
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260A
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260A
trans-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260A
1,2-Dichloroethene (total)	ND	1.0	ug/L	SW846 8260A
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260A
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260A
1,4-Dioxane	ND	200	ug/L	SW846 8260A
Ethylbenzene	ND	1.0	ug/L	SW846 8260A
Ethyl methacrylate	ND	1.0	ug/L	SW846 8260A
Trichlorofluoromethane	ND	2.0	ug/L	SW846 8260A
2-Hexanone	ND	5.0	ug/L	SW846 8260A
Iodomethane	ND	1.0	ug/L	SW846 8260A
Isobutyl alcohol	ND	50	ug/L	SW846 8260A
Methacrylonitrile	ND	1.0	ug/L	SW846 8260A
Methylene chloride	ND	1.0	ug/L	SW846 8260A
Methyl methacrylate	ND	1.0	ug/L	SW846 8260A
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846 8260A

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: D8L090208 **Work Order #...:** CPGD7101 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Propionitrile	ND	4.0	ug/L	SW846 8260A
Styrene	ND	1.0	ug/L	SW846 8260A
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260A
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260A
Tetrachloroethene	ND	1.0	ug/L	SW846 8260A
Toluene	ND	1.0	ug/L	SW846 8260A
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260A
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260A
Trichloroethene	ND	1.0	ug/L	SW846 8260A
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260A
Vinyl acetate	ND	2.0	ug/L	SW846 8260A
Vinyl chloride	ND	2.0	ug/L	SW846 8260A
Xylenes (total)	ND	1.0	ug/L	SW846 8260A
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	ug/L	SW846 8260A
1,2-Dibromoethane (EDB)	ND	1.0	ug/L	SW846 8260A
2-Butanone (MEK)	ND	5.0	ug/L	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	100	(76 - 115)
4-Bromofluorobenzene	99	(85 - 115)
Toluene-d8	92	(85 - 115)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: D8L090208 Work Order #...: CP5A7110-MS Matrix.....: WATER
MS Lot-Sample #: D8L090182-001 CP5A7111-MSD
Date Sampled...: 12/08/98 10:15 Date Received..: 12/09/98
Prep Date.....: 12/19/98 Analysis Date..: 12/19/98
Prep Batch #...: 8354144 Analysis Time..: 16:51
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	100	(75 - 124)			SW846 8260A
	100	(75 - 124)	0.18	(0-20)	SW846 8260A
Benzene	97	(82 - 114)			SW846 8260A
	97	(82 - 114)	0.17	(0-20)	SW846 8260A
Chlorobenzene	94	(86 - 120)			SW846 8260A
	94	(86 - 120)	0.29	(0-20)	SW846 8260A
Toluene	87	(85 - 115)			SW846 8260A
	86	(85 - 115)	0.74	(0-20)	SW846 8260A
Trichloroethene	99	(85 - 115)			SW846 8260A
	100	(85 - 115)	0.63	(0-20)	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	111	(76 - 115)
	109	(76 - 115)
4-Bromofluorobenzene	102	(85 - 115)
	100	(85 - 115)
Toluene-d8	89	(85 - 115)
	88	(85 - 115)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: D8L090208 Work Order #...: CP5A7110-MS Matrix.....: WATER
MS Lot-Sample #: D8L090182-001 CP5A7111-MSD
Date Sampled...: 12/08/98 10:15 Date Received..: 12/09/98
Prep Date.....: 12/19/98 Analysis Date..: 12/19/98
Prep Batch #...: 8354144 Analysis Time..: 16:51
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
1,1-Dichloroethene	0.15	10.0	10.2	ug/L	100		SW846 8260A
	0.15	10.0	10.2	ug/L	100	0.18	SW846 8260A
Benzene	0.13	10.0	9.79	ug/L	97		SW846 8260A
	0.13	10.0	9.81	ug/L	97	0.17	SW846 8260A
Chlorobenzene	ND	10.0	9.40	ug/L	94		SW846 8260A
	ND	10.0	9.43	ug/L	94	0.29	SW846 8260A
Toluene	3.2	10.0	11.9	ug/L	87		SW846 8260A
	3.2	10.0	11.8	ug/L	86	0.74	SW846 8260A
Trichloroethene	0.14	10.0	10.1	ug/L	99		SW846 8260A
	0.14	10.0	10.1	ug/L	100	0.63	SW846 8260A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	111	(76 - 115)
	109	(76 - 115)
4-Bromofluorobenzene	102	(85 - 115)
	100	(85 - 115)
Toluene-d8	89	(85 - 115)
	88	(85 - 115)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D8L090208 Work Order #...: CPAR1102-LCS Matrix.....: WATER
LCS Lot-Sample#: D8L150000-313 CPAR1103-LCSD
Prep Date.....: 12/16/98 Analysis Date..: 01/06/99
Prep Batch #...: 8349313 Analysis Time..: 12:01
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	73	(63 - 110)			SW846 8270B
	79	(63 - 110)	7.4	(0-20)	SW846 8270B
4-Chloro-3-methylphenol	73	(53 - 112)			SW846 8270B
	81	(53 - 112)	11	(0-20)	SW846 8270B
2-Chlorophenol	71	(59 - 105)			SW846 8270B
	78	(59 - 105)	8.4	(0-22)	SW846 8270B
1,4-Dichlorobenzene	72	(55 - 108)			SW846 8270B
	78	(55 - 108)	8.2	(0-27)	SW846 8270B
2,4-Dinitrotoluene	73	(69 - 124)			SW846 8270B
	80	(69 - 124)	9.7	(0-21)	SW846 8270B
4-Nitrophenol	55	(22 - 133)			SW846 8270B
	65	(22 - 133)	16	(0-32)	SW846 8270B
N-Nitrosodi-n-propylamine	71	(52 - 125)			SW846 8270B
	77	(52 - 125)	9.1	(0-20)	SW846 8270B
Pentachlorophenol	79	(49 - 112)			SW846 8270B
	84	(49 - 112)	7.0	(0-30)	SW846 8270B
Phenol	64	(46 - 107)			SW846 8270B
	72	(46 - 107)	11	(0-20)	SW846 8270B
Pyrene	70	(52 - 140)			SW846 8270B
	79	(52 - 140)	12	(0-20)	SW846 8270B
1,2,4-Trichlorobenzene	76	(55 - 112)			SW846 8270B
	83	(55 - 112)	8.2	(0-27)	SW846 8270B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	76	(54 - 110)
	78	(54 - 110)
Phenol-d5	71	(49 - 131)
	76	(49 - 131)
Nitrobenzene-d5	79	(54 - 116)
	83	(54 - 116)
2-Fluorobiphenyl	75	(49 - 102)
	76	(49 - 102)
2,4,6-Tribromophenol	85	(46 - 127)
	91	(46 - 127)
Terphenyl-d14	80	(57 - 117)
	86	(57 - 117)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D8L090208 Work Order #...: CPAR1102-LCS Matrix.....: WATER
LCS Lot-Sample#: D8L150000-313 CPAR1103-LCSD
Prep Date.....: 12/16/98 Analysis Date..: 01/06/99
Prep Batch #...: 8349313 Analysis Time..: 12:01
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Acenaphthene	100	73.0	ug/L	73		SW846 8270B
	100	78.6	ug/L	79	7.4	SW846 8270B
4-Chloro-3-methylphenol	150	109	ug/L	73		SW846 8270B
	150	122	ug/L	81	11	SW846 8270B
2-Chlorophenol	150	107	ug/L	71		SW846 8270B
	150	116	ug/L	78	8.4	SW846 8270B
1,4-Dichlorobenzene	100	71.8	ug/L	72		SW846 8270B
	100	78.0	ug/L	78	8.2	SW846 8270B
2,4-Dinitrotoluene	100	72.5	ug/L	73		SW846 8270B
	100	79.9	ug/L	80	9.7	SW846 8270B
4-Nitrophenol	150	82.7	ug/L	55		SW846 8270B
	150	97.1	ug/L	65	16	SW846 8270B
N-Nitrosodi-n-propylamine	100	70.7	ug/L	71		SW846 8270B
	100	77.5	ug/L	77	9.1	SW846 8270B
Pentachlorophenol	150	118	ug/L	79		SW846 8270B
	150	126	ug/L	84	7.0	SW846 8270B
Phenol	150	96.3	ug/L	64		SW846 8270B
	150	108	ug/L	72	11	SW846 8270B
Pyrene	100	70.2	ug/L	70		SW846 8270B
	100	78.9	ug/L	79	12	SW846 8270B
1,2,4-Trichlorobenzene	100	76.4	ug/L	76		SW846 8270B
	100	83.0	ug/L	83	8.2	SW846 8270B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	76	(54 - 110)
	78	(54 - 110)
Phenol-d5	71	(49 - 131)
	76	(49 - 131)
Nitrobenzene-d5	79	(54 - 116)
	83	(54 - 116)
2-Fluorobiphenyl	75	(49 - 102)
	76	(49 - 102)
2,4,6-Tribromophenol	85	(46 - 127)
	91	(46 - 127)
Terphenyl-d14	80	(57 - 117)
	86	(57 - 117)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: D8L090208
MB Lot-Sample #: D8L150000-313

Work Order #...: CPAR1101

Matrix.....: WATER

Prep Date.....: 12/16/98

Analysis Time..: 11:29

Analysis Date..: 01/06/99
Prep Batch #...: 8349313
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	10	ug/L	SW846 8270B
Acenaphthylene	ND	10	ug/L	SW846 8270B
Acetophenone	ND	10	ug/L	SW846 8270B
2-Acetylaminofluorene	ND	100	ug/L	SW846 8270B
4-Aminobiphenyl	ND	50	ug/L	SW846 8270B
Aniline	ND	10	ug/L	SW846 8270B
Anthracene	ND	10	ug/L	SW846 8270B
Benzo(a)anthracene	ND	10	ug/L	SW846 8270B
Benzo(b)fluoranthene	ND	10	ug/L	SW846 8270B
Benzo(k)fluoranthene	ND	10	ug/L	SW846 8270B
Benzo(ghi)perylene	ND	10	ug/L	SW846 8270B
Benzo(a)pyrene	ND	10	ug/L	SW846 8270B
Benzyl alcohol	ND	10	ug/L	SW846 8270B
bis(2-Chloroethoxy) methane	ND	10	ug/L	SW846 8270B
bis(2-Chloroethyl) ether	ND	10	ug/L	SW846 8270B
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	SW846 8270B
4-Bromophenyl phenyl ether	ND	10	ug/L	SW846 8270B
Butyl benzyl phthalate	ND	10	ug/L	SW846 8270B
4-Chloroaniline	ND	10	ug/L	SW846 8270B
4-Chloro-3-methylphenol	ND	10	ug/L	SW846 8270B
2-Chloronaphthalene	ND	10	ug/L	SW846 8270B
2-Chlorophenol	ND	10	ug/L	SW846 8270B
4-Chlorophenyl phenyl ether	ND	10	ug/L	SW846 8270B
Chrysene	ND	10	ug/L	SW846 8270B
Dibenz(a,h)anthracene	ND	10	ug/L	SW846 8270B
Dibenzofuran	ND	10	ug/L	SW846 8270B
Di-n-butyl phthalate	ND	10	ug/L	SW846 8270B
1,2-Dichlorobenzene	ND	10	ug/L	SW846 8270B
1,3-Dichlorobenzene	ND	10	ug/L	SW846 8270B
1,4-Dichlorobenzene	ND	10	ug/L	SW846 8270B
3,3'-Dichlorobenzidine	ND	50	ug/L	SW846 8270B
2,4-Dichlorophenol	ND	10	ug/L	SW846 8270B
2,6-Dichlorophenol	ND	10	ug/L	SW846 8270B
Diethyl phthalate	**15**	**10**	**ug/L**	**SW846 8270B**
Thionazin	ND	50	ug/L	SW846 8270B
Dimethoate	ND	20	ug/L	SW846 8270B
p-Dimethylaminoazobenzene	ND	20	ug/L	SW846 8270B

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: D8L090208 Work Order #...: CPAR1101 Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
7,12-Dimethylbenz(a)-anthracene	ND	20	ug/L	SW846 8270B
3,3'-Dimethylbenzidine	ND	50	ug/L	SW846 8270B
2,4-Dimethylphenol	ND	10	ug/L	SW846 8270B
Dimethyl phthalate	ND	10	ug/L	SW846 8270B
Di-n-octyl phthalate	ND	10	ug/L	SW846 8270B
1,3-Dinitrobenzene	ND	10	ug/L	SW846 8270B
4,6-Dinitro-2-methylphenol	ND	50	ug/L	SW846 8270B
2,4-Dinitrophenol	ND	50	ug/L	SW846 8270B
2,4-Dinitrotoluene	ND	10	ug/L	SW846 8270B
2,6-Dinitrotoluene	ND	10	ug/L	SW846 8270B
2-sec-Butyl-4,6-dinitro-phenol	ND	20	ug/L	SW846 8270B
Diphenylamine	ND	10	ug/L	SW846 8270B
Disulfoton	ND	50	ug/L	SW846 8270B
Ethyl methanesulfonate	ND	10	ug/L	SW846 8270B
Famphur	ND	--	ug/L	SW846 8270B
Fluoranthene	ND	10	ug/L	SW846 8270B
Fluorene	ND	10	ug/L	SW846 8270B
Hexachlorobenzene	ND	10	ug/L	SW846 8270B
Hexachlorobutadiene	ND	10	ug/L	SW846 8270B
Hexachlorocyclopentadiene	ND	50	ug/L	SW846 8270B
Hexachloroethane	ND	10	ug/L	SW846 8270B
Hexachlorophene	ND	--	ug/L	SW846 8270B
Hexachloropropene	ND	100	ug/L	SW846 8270B
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	SW846 8270B
Isophorone	ND	10	ug/L	SW846 8270B
Isosafrole	ND	20	ug/L	SW846 8270B
Methapyrilene	ND	50	ug/L	SW846 8270B
o-Toluidine	ND	10	ug/L	SW846 8270B
3-Methylcholanthrene	ND	20	ug/L	SW846 8270B
Methyl methanesulfonate	ND	10	ug/L	SW846 8270B
2-Methylnaphthalene	ND	10	ug/L	SW846 8270B
Methyl parathion	ND	50	ug/L	SW846 8270B
2-Methylphenol	ND	10	ug/L	SW846 8270B
Naphthalene	ND	10	ug/L	SW846 8270B
1,4-Naphthoquinone	ND	50	ug/L	SW846 8270B
1-Naphthylamine	ND	10	ug/L	SW846 8270B
2-Naphthylamine	ND	10	ug/L	SW846 8270B
2-Nitroaniline	ND	50	ug/L	SW846 8270B
3-Nitroaniline	ND	50	ug/L	SW846 8270B
4-Nitroaniline	ND	50	ug/L	SW846 8270B
Nitrobenzene	ND	10	ug/L	SW846 8270B
2-Nitrophenol	ND	10	ug/L	SW846 8270B

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: D8L090208 **Work Order #...:** CPAR1101 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
4-Nitrophenol	ND	50	ug/L	SW846 8270B
4-Nitroquinoline-1-oxide	ND	100	ug/L	SW846 8270B
N-Nitrosodi-n-butylamine	ND	10	ug/L	SW846 8270B
N-Nitrosodiethylamine	ND	10	ug/L	SW846 8270B
N-Nitrosodimethylamine	ND	10	ug/L	SW846 8270B
N-Nitrosodi-n-propylamine	ND	10	ug/L	SW846 8270B
N-Nitrosodiphenylamine	ND	10	ug/L	SW846 8270B
N-Nitrosomethylethylamine	ND	10	ug/L	SW846 8270B
N-Nitrosomorpholine	ND	10	ug/L	SW846 8270B
N-Nitrosopiperidine	ND	10	ug/L	SW846 8270B
N-Nitrosopyrrolidine	ND	10	ug/L	SW846 8270B
5-Nitro-o-toluidine	ND	20	ug/L	SW846 8270B
Parathion	ND	50	ug/L	SW846 8270B
Pentachlorobenzene	ND	10	ug/L	SW846 8270B
Pentachloroethane	ND	50	ug/L	SW846 8270B
Pentachloronitrobenzene	ND	50	ug/L	SW846 8270B
Pentachlorophenol	ND	50	ug/L	SW846 8270B
Phenacetin	ND	20	ug/L	SW846 8270B
Phenanthrene	ND	10	ug/L	SW846 8270B
Phenol	ND	10	ug/L	SW846 8270B
p-Phenylene diamine	ND	100	ug/L	SW846 8270B
Phorate	ND	50	ug/L	SW846 8270B
2-Picoline	ND	20	ug/L	SW846 8270B
Pronamide	ND	20	ug/L	SW846 8270B
Pyrene	ND	10	ug/L	SW846 8270B
Pyridine	ND	20	ug/L	SW846 8270B
Safrole	ND	20	ug/L	SW846 8270B
1,2,4,5-Tetrachloro-benzene	ND	10	ug/L	SW846 8270B
2,3,4,6-Tetrachlorophenol	ND	50	ug/L	SW846 8270B
Sulfotepp	ND	50	ug/L	SW846 8270B
1,2,4-Trichlorobenzene	ND	10	ug/L	SW846 8270B
2,4,5-Trichlorophenol	ND	10	ug/L	SW846 8270B
2,4,6-Trichlorophenol	ND	10	ug/L	SW846 8270B
O,O,O-Triethylphosphoro-thioate	ND	50	ug/L	SW846 8270B
1,3,5-Trinitrobenzene	ND	50	ug/L	SW846 8270B
3-Methylphenol & 4-Methylphenol	ND	10	ug/L	SW846 8270B
a,a-Dimethylphenethyl-amine	ND	50	ug/L	SW846 8270B
Aramite	ND	20	ug/L	SW846 8270B
2,2'-oxybis(1-Chloropropa	ND	10	ug/L	SW846 8270B

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: D8L090208 **Work Order #...:** CPAR1101 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	88	(54 - 110)
Phenol-d5	82	(49 - 131)
Nitrobenzene-d5	84	(54 - 116)
2-Fluorobiphenyl	77	(49 - 102)
2,4,6-Tribromophenol	86	(46 - 127)
Terphenyl-d14	87	(57 - 117)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D8L090208 Work Order #...: CP6CC106-MS Matrix.....: WATER
MS Lot-Sample #: D8L100172-004 CP6CC107-MSD
Date Sampled...: 12/09/98 22:40 Date Received..: 12/10/98
Prep Date.....: 12/16/98 Analysis Date..: 01/07/99
Prep Batch #...: 8349313 Analysis Time..: 13:44
Dilution Factor: 20

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	68 DIL	(63 - 110)			SW846 8270B
	75 DIL	(63 - 110)	9.8	(0-20)	SW846 8270B
4-Chloro-3-methylphenol	69 DIL	(53 - 112)			SW846 8270B
	70 DIL	(53 - 112)	1.5	(0-20)	SW846 8270B
2-Chlorophenol	124 DIL,a	(59 - 105)			SW846 8270B
	90 DIL,p	(59 - 105)	32	(0-22)	SW846 8270B
1,4-Dichlorobenzene	65 DIL	(55 - 108)			SW846 8270B
	76 DIL	(55 - 108)	15	(0-27)	SW846 8270B
2,4-Dinitrotoluene	54 DIL,a	(69 - 124)			SW846 8270B
	64 DIL,a	(69 - 124)	16	(0-21)	SW846 8270B
N-Nitrosodi-n-propylamine	0.0 DIL,a	(52 - 125)			SW846 8270B
	22 DIL,a,	(52 - 125)	200	(0-20)	SW846 8270B
4-Nitrophenol	0.0 DIL,a	(22 - 133)			SW846 8270B
	0.0 DIL,a	(22 - 133)	0.0	(0-32)	SW846 8270B
Pentachlorophenol	53 DIL	(49 - 112)			SW846 8270B
	51 DIL	(49 - 112)	2.5	(0-30)	SW846 8270B
Phenol	106 DIL	(46 - 107)			SW846 8270B
	99 DIL	(46 - 107)	1.5	(0-20)	SW846 8270B
Pyrene	46 DIL,a	(52 - 140)			SW846 8270B
	66 DIL,p	(52 - 140)	36	(0-20)	SW846 8270B
1,2,4-Trichlorobenzene	66 DIL	(55 - 112)			SW846 8270B
	78 DIL	(55 - 112)	17	(0-27)	SW846 8270B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	0.0	(54 - 110)
	Qualifiers: DIL,NC	
	0.0	(54 - 110)
	Qualifiers: DIL,NC	
Phenol-d5	0.0	(49 - 131)
	Qualifiers: DIL,NC	
	0.0	(49 - 131)
	Qualifiers: DIL,NC	
Nitrobenzene-d5	0.0	(54 - 116)
	Qualifiers: DIL,NC	
	0.0	(54 - 116)
	Qualifiers: DIL,NC	
2-Fluorobiphenyl	0.0	(49 - 102)
	Qualifiers: DIL,NC	
	0.0	(49 - 102)
	Qualifiers: DIL,NC	

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: D8L090208 **Work Order #...:** CP6CC106-MS **Matrix.....:** WATER
MS Lot-Sample #: D8L100172-004 CP6CC107-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2,4,6-Tribromophenol	0.0	(46 - 127)
	Qualifiers: DIL,NC	
	0.0	(46 - 127)
	Qualifiers: DIL,NC	
Terphenyl-d14	0.0	(57 - 117)
	Qualifiers: DIL,NC	
	0.0	(57 - 117)
	Qualifiers: DIL,NC	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

p Relative percent difference (RPD) is outside stated control limits.

a Spiked analyte recovery is outside stated control limits.

NC The recovery and/or RPD were not calculated.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D8L090208 Work Order #...: CP6CC106-MS Matrix.....: WATER
MS Lot-Sample #: D8L100172-004 CP6CC107-MSD
Date Sampled...: 12/09/98 22:40 Date Received..: 12/10/98
Prep Date.....: 12/16/98 Analysis Date..: 01/07/99
Prep Batch #...: 8349313 Analysis Time..: 13:44
Dilution Factor: 20

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Acenaphthene	ND	112	76.9 DI	ug/L	68		SW846 8270B
	ND	112	84.8 DI	ug/L	75	9.8	SW846 8270B
4-Chloro-3-methylphenol	ND	169	117 DIL	ug/L	69		SW846 8270B
	ND	169	118 DIL	ug/L	70	1.5	SW846 8270B
2-Chlorophenol	ND	112	139	ug/L	124		SW846 8270B
		Qualifiers: DIL,a					
	ND	169	151	ug/L	90	32	SW846 8270B
		Qualifiers: DIL,p					
1,4-Dichlorobenzene	ND	112	DIL	ug/L	65		SW846 8270B
	ND	112	85.4 DI	ug/L	76	15	SW846 8270B
2,4-Dinitrotoluene	ND	112	60.9	ug/L	54		SW846 8270B
		Qualifiers: DIL,a					
	ND	112	71.5	ug/L	64	16	SW846 8270B
		Qualifiers: DIL,a					
N-Nitrosodi-n-propylamine	ND	112	0.0	ug/L	0.0		SW846 8270B
		Qualifiers: DIL,a					
	ND	112	DIL,a,p	ug/L	22	200	SW846 8270B
4-Nitrophenol	ND	169	0.0	ug/L	0.0		SW846 8270B
		Qualifiers: DIL,a					
	ND	169	0.0	ug/L	0.0	0.0	SW846 8270B
		Qualifiers: DIL,a					
Pentachlorophenol	ND	169	DIL	ug/L	53		SW846 8270B
	ND	169	DIL	ug/L	51	2.5	SW846 8270B
Phenol	690	169	868 DIL	ug/L	106		SW846 8270B
	690	169	856 DIL	ug/L	99	1.5	SW846 8270B
Pyrene	ND	112	51.7	ug/L	46		SW846 8270B
		Qualifiers: DIL,a					
	ND	112	74.5	ug/L	66	36	SW846 8270B
		Qualifiers: DIL,p					
1,2,4-Trichlorobenzene	ND	112	DIL	ug/L	66		SW846 8270B
	ND	112	87.9 DI	ug/L	78	17	SW846 8270B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	0.0	(54 - 110)
	Qualifiers: DIL,NC	
	0.0	(54 - 110)
	Qualifiers: DIL,NC	
Phenol-d5	0.0	(49 - 131)
	Qualifiers: DIL,NC	
	0.0	(49 - 131)
	Qualifiers: DIL,NC	

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D8L090208 **Work Order #...:** CP6CC106-MS **Matrix.....:** WATER
MS Lot-Sample #: D8L100172-004 CP6CC107-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	0.0	(54 - 116)
	Qualifiers: DIL,NC	
	0.0	(54 - 116)
	Qualifiers: DIL,NC	
2-Fluorobiphenyl	0.0	(49 - 102)
	Qualifiers: DIL,NC	
	0.0	(49 - 102)
	Qualifiers: DIL,NC	
2,4,6-Tribromophenol	0.0	(46 - 127)
	Qualifiers: DIL,NC	
	0.0	(46 - 127)
	Qualifiers: DIL,NC	
Terphenyl-d14	0.0	(57 - 117)
	Qualifiers: DIL,NC	
	0.0	(57 - 117)
	Qualifiers: DIL,NC	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

p Relative percent difference (RPD) is outside stated control limits.

a Spiked analyte recovery is outside stated control limits.

NC The recovery and/or RPD were not calculated.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: D8L090208 Work Order #...: CP9H5102-LCS Matrix.....: WATER
LCS Lot-Sample#: D8L140000-158 CP9H5103-LCSD
Prep Date.....: 12/14/98 Analysis Date..: 01/06/99
Prep Batch #...: 8348158 Analysis Time..: 06:12
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
4,4'-DDT	**101**	**(68 - 125)**			**SW846 8081A**
	108	**(68 - 125)**	**6.8**	**(0-15)**	**SW846 8081A**
Aldrin	**101**	**(52 - 114)**			**SW846 8081A**
	109	**(52 - 114)**	**7.8**	**(0-21)**	**SW846 8081A**
Dieldrin	**91**	**(62 - 111)**			**SW846 8081A**
	97	**(62 - 111)**	**6.6**	**(0-18)**	**SW846 8081A**
Endrin	**99**	**(69 - 125)**			**SW846 8081A**
	101	**(69 - 125)**	**2.2**	**(0-19)**	**SW846 8081A**
gamma-BHC (Lindane)	**105**	**(65 - 122)**			**SW846 8081A**
	112	**(65 - 122)**	**7.0**	**(0-19)**	**SW846 8081A**
Heptachlor	**95**	**(60 - 124)**			**SW846 8081A**
	98	**(60 - 124)**	**3.6**	**(0-19)**	**SW846 8081A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	117	(51 - 132)
	109	(51 - 132)
Tetrachloro-m-xylene	95	(56 - 107)
	99	(56 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

NC The recovery and/or RPD were not calculated.

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: D8L090208 Work Order #...: CP9H5102-LCS Matrix.....: WATER
LCS Lot-Sample#: D8L140000-158 CP9H5103-LCSD
Prep Date.....: 12/14/98 Analysis Date..: 01/06/99
Prep Batch #...: 8348158 Analysis Time..: 06:12
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
4,4'-DDT	**0.500**	**0.504**	**ug/L**	**101**		**SW846 8081A**
	0.500	**0.540**	**ug/L**	**108**	**6.8**	**SW846 8081A**
Aldrin	**0.200**	**0.202**	**ug/L**	**101**		**SW846 8081A**
	0.200	**0.219**	**ug/L**	**109**	**7.8**	**SW846 8081A**
Dieldrin	**0.500**	**0.453**	**ug/L**	**91**		**SW846 8081A**
	0.500	**0.485**	**ug/L**	**97**	**6.6**	**SW846 8081A**
Endrin	**0.500**	**0.494**	**ug/L**	**99**		**SW846 8081A**
	0.500	**0.505**	**ug/L**	**101**	**2.2**	**SW846 8081A**
gamma-BHC (Lindane)	**0.200**	**0.210**	**ug/L**	**105**		**SW846 8081A**
	0.200	**0.225**	**ug/L**	**112**	**7.0**	**SW846 8081A**
Heptachlor	**0.200**	**0.189**	**ug/L**	**95**		**SW846 8081A**
	0.200	**0.196**	**ug/L**	**98**	**3.6**	**SW846 8081A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	117	(51 - 132)
	109	(51 - 132)
Tetrachloro-m-xylene	95	(56 - 107)
	99	(56 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

NC The recovery and/or RPD were not calculated.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: D8L090208 **Work Order #...:** CP9H7102-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D8L140000-159 CP9H7103-LCSD
Prep Date.....: 12/14/98 **Analysis Date..:** 01/04/99
Prep Batch #...: 8348159 **Analysis Time..:** 20:08
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Aroclor 1016	**103**	**(71 - 119)**			**SW846 8082**
	97	**(71 - 119)**	**5.8**	**(0-15)**	**SW846 8082**
Aroclor 1260	**101**	**(59 - 116)**			**SW846 8082**
	97	**(59 - 116)**	**4.3**	**(0-15)**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	84	(65 - 137)
	85	(65 - 137)
Decachlorobiphenyl	93	(66 - 151)
	92	(66 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: D8L090208 Work Order #...: CP9H7102-LCS Matrix.....: WATER
LCS Lot-Sample#: D8L140000-159 CP9H7103-LCSD
Prep Date.....: 12/14/98 Analysis Date..: 01/04/99
Prep Batch #...: 8348159 Analysis Time..: 20:08
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Aroclor 1016	2.00	2.06	ug/L	103		SW846 8082
	2.00	1.94	ug/L	97	5.8	SW846 8082
Aroclor 1260	2.00	2.02	ug/L	101		SW846 8082
	2.00	1.94	ug/L	97	4.3	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	84	(65 - 137)
	85	(65 - 137)
Decachlorobiphenyl	93	(66 - 151)
	92	(66 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: D8L090208 **Work Order #...:** CP9H5101 **Matrix.....:** WATER
MB Lot-Sample #: D8L140000-158

Prep Date.....: 12/14/98 **Analysis Time..:** 05:38

Analysis Date..: 01/06/99 **Prep Batch #...:** 8348158
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Aldrin	ND	0.050	ug/L	SW846 8081A
alpha-BHC	ND	0.050	ug/L	SW846 8081A
beta-BHC	ND	0.050	ug/L	SW846 8081A
delta-BHC	ND	0.050	ug/L	SW846 8081A
gamma-BHC (Lindane)	ND	0.050	ug/L	SW846 8081A
Chlordane (technical)	ND	0.50	ug/L	SW846 8081A
4,4'-DDD	ND	0.050	ug/L	SW846 8081A
4,4'-DDE	ND	0.050	ug/L	SW846 8081A
4,4'-DDT	ND	0.050	ug/L	SW846 8081A
Dieldrin	ND	0.050	ug/L	SW846 8081A
Endrin	ND	0.050	ug/L	SW846 8081A
Endrin aldehyde	ND	0.050	ug/L	SW846 8081A
Endosulfan I	ND	0.050	ug/L	SW846 8081A
Endosulfan II	ND	0.050	ug/L	SW846 8081A
Endosulfan sulfate	ND	0.050	ug/L	SW846 8081A
Heptachlor	ND	0.050	ug/L	SW846 8081A
Heptachlor epoxide	ND	0.050	ug/L	SW846 8081A
Methoxychlor	ND	0.10	ug/L	SW846 8081A
Toxaphene	ND	2.0	ug/L	SW846 8081A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	105	(51 - 132)
Tetrachloro-m-xylene	84	(56 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: D8L090208
MB Lot-Sample #: D8L140000-159

Work Order #...: CP9H7101

Matrix.....: WATER

Prep Date.....: 12/14/98
Prep Batch #...: 8348159

Analysis Date..: 01/04/99
Dilution Factor: 1

Analysis Time..: 19:40

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Aroclor 1016	ND	1.0	ug/L	SW846 8082
Aroclor 1221	ND	1.0	ug/L	SW846 8082
Aroclor 1232	ND	1.0	ug/L	SW846 8082
Aroclor 1242	ND	1.0	ug/L	SW846 8082
Aroclor 1248	ND	1.0	ug/L	SW846 8082
Aroclor 1254	ND	1.0	ug/L	SW846 8082
Aroclor 1260	ND	1.0	ug/L	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	74	(65 - 137)
Decachlorobiphenyl	90	(66 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: D8L090208 Work Order #...: CP9GK102-LCS Matrix.....: WATER
LCS Lot-Sample#: D8L140000-140 CP9GK103-LCSD
Prep Date.....: 12/14/98 Analysis Date..: 01/06/99
Prep Batch #...: 8348140 Analysis Time..: 23:32
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Diazinon	**143 a**	**(68 - 126)**			**SW846 8140**
	136 a	**(68 - 126)**	**4.8**	**(0-15)**	**SW846 8140**
Ethyl parathion	**118**	**(75 - 131)**			**SW846 8140**
	112	**(75 - 131)**	**4.9**	**(0-15)**	**SW846 8140**
Malathion	**115**	**(69 - 129)**			**SW846 8140**
	110	**(69 - 129)**	**4.2**	**(0-15)**	**SW846 8140**
Methyl parathion	**120**	**(73 - 121)**			**SW846 8140**
	115	**(73 - 121)**	**4.5**	**(0-15)**	**SW846 8140**
Phorate	**148 a**	**(68 - 115)**			**SW846 8140**
	142 a	**(68 - 115)**	**4.3**	**(0-15)**	**SW846 8140**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Ethyl Pirimifos	60	(60 - 123)
	61	(60 - 123)
Chlormefos	82	(59 - 110)
	78	(59 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: D8L090208 Work Order #...: CP9GK102-LCS Matrix.....: WATER
LCS Lot-Sample#: D8L140000-140 CP9GK103-LCSD
Prep Date.....: 12/14/98 Analysis Date..: 01/06/99
Prep Batch #...: 8348140 Analysis Time..: 23:32
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Diazinon	5.00	7.15 a	ug/L	143		SW846 8140
	5.00	6.81 a	ug/L	136	4.8	SW846 8140
Ethyl parathion	5.00	5.88	ug/L	118		SW846 8140
	5.00	5.59	ug/L	112	4.9	SW846 8140
Malathion	5.00	5.76	ug/L	115		SW846 8140
	5.00	5.52	ug/L	110	4.2	SW846 8140
Methyl parathion	5.00	6.01	ug/L	120		SW846 8140
	5.00	5.75	ug/L	115	4.5	SW846 8140
Phorate	5.00	7.42 a	ug/L	148		SW846 8140
	5.00	7.10 a	ug/L	142	4.3	SW846 8140

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Ethyl Pirimifos	60	(60 - 123)
	61	(60 - 123)
Chlormefos	82	(59 - 110)
	78	(59 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: D8L090208 **Work Order #...:** CP9GK101 **Matrix.....:** WATER
MB Lot-Sample #: D8L140000-140

Prep Date.....: 12/14/98 **Analysis Time..:** 23:00

Analysis Date..: 01/06/99 **Prep Batch #...:** 8348140
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Azinphos-methyl	ND	2.5	ug/L	SW846 8140
Bolstar	ND	0.50	ug/L	SW846 8140
Chlorpyrifos	ND	0.50	ug/L	SW846 8140
Coumaphos	ND	0.50	ug/L	SW846 8140
Demeton (total)	ND	0.50	ug/L	SW846 8140
Diazinon	ND	0.50	ug/L	SW846 8140
Dichlorvos	ND	0.50	ug/L	SW846 8140
Dimethoate	ND	0.50	ug/L	SW846 8140
Disulfoton	ND	0.50	ug/L	SW846 8140
Ethoprop	ND	0.50	ug/L	SW846 8140
Ethyl parathion	ND	0.50	ug/L	SW846 8140
Famphur	ND	1.0	ug/L	SW846 8140
Fensulfothion	ND	2.5	ug/L	SW846 8140
Fenthion	ND	0.50	ug/L	SW846 8140
Malathion	ND	1.2	ug/L	SW846 8140
Merphos	ND	0.50	ug/L	SW846 8140
Methyl parathion	ND	0.50	ug/L	SW846 8140
Mevinphos	ND	6.2	ug/L	SW846 8140
Naled	ND	10	ug/L	SW846 8140
O,O,O-Triethylphosphorothioate	ND	0.50	ug/L	SW846 8140
Phorate	ND	0.50	ug/L	SW846 8140
Ronnel	ND	0.50	ug/L	SW846 8140
Sulfotepp	ND	0.50	ug/L	SW846 8140
Thionazin	ND	0.50	ug/L	SW846 8140
Tokuthion	ND	0.50	ug/L	SW846 8140
Trichloronate	ND	0.50	ug/L	SW846 8140

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Ethyl Pirimifos	102	(60 - 123)
Chlormefos	61	(59 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Laboratory Non-Conformance Memo (NCM)

Quanterra Environmental Services

NCM Log Number: 15874

QUA-4187 8348140, 8349248

Project ID/Client	Sample Numbers	NCM Initiated by/Date	Project Manager
D8L080170, D8L090122, D8L090208	01-03, 01-03-05,06-06,09,11-15 GHM	MM 01/12/99	Mark Hopkins, Ellen LeRiviere

Analyst/Team: GC-SVOA

Tests: 8140

Analytical Area (check appropriate box)

- [ ] Sample control
- [ ] Organic preparation
- [ ] Inorganic preparation
- [x] GC
- [ ] HPLC
- [ ] GC/MS
- [ ] Wet chemistry
- [ ] Metals
- [ ] Reporting
- [ ] Data review
- [ ] Radiochemistry
- [ ] _____

Non-Conformance (check appropriate box) To be completed by analyst

Holding Time Violation (exceeded by _____ days)

Category I: Laboratory Independent

- [ ] 1. Holding time expired in transit
- [ ] 2. Sample received > 48 hours or 1/2 holding time has expired
- [ ] 3. Test added by client after expiration

Category II: Laboratory Dependent

- [ ] 4. Instrument failure
- [ ] 5. Analyst error
- [ ] 6. Log-in error
- [ ] 7. Miscommunication
- [ ] 8. Other (explanation required)

Category III: Analysis Reruns (QA/QC)

- [ ] 9. Surrogates
- [ ] 10. Internal standards
- [ ] 11. Spike recoveries
- [ ] 12. Blank contamination

Category IV: Analysis Reruns (Confirmation)

- [ ] 13. Second column
- [ ] 14. Contamination check
- [ ] 15. Confirmation of matrix effects
- [ ] 16. Other (explanation required) _____

Quality Assurance/Quality Control

- [ ] 17. QC data reported outside of controls
- [x] 18. Incorrect procedure used
- [ ] 19. SOP intentionally modified with QA and tech approval
- [ ] 20. Invalid instrument calibration
- [ ] 21. Received insuffient sample for proper analysis

Incorrect or Incomplete Client Deliverable

- [ ] 22. Hardcopy deliverable error
- [ ] 23. Electronic deliverable error

Reported Detection Limits Elevated Due to:

- [ ] 24. Sample matrix: Does not include high analyte content
- [ ] 25. Insufficient sample volume
- [ ] 26. Other (explanation required)

Miscellaneous

- [ ] 27. Instrument Tag-out
- [ ] 28. Other (explanation required) _____

Notification (check appropriate box) To be completed by project manager

- [ ] Required
- [x] Not Required

NOTED

Client notified by · Name	Date	
Ellen LeRiviere	1/7/99	[ ] In writing [x] By telephone [ ] By facsimile [ ] Other (explain) _____

Client's name and response	
Doug Scott	[x] Process "as is" [ ] On hold until _____ [ ] Re-sample [ ] Other (explain) _____

Project manager signature: [signature] Ellen LeRiviere — Date: 1-12-99

[redacted]

Laboratory Non-Conformance Memo (NCM)

Quanterra Environmental Services

NCM Log Number 15874

QUA-4187

Corrective Action (To be completed and reviewed by all associates involved)

Problem Description/Root Cause: Only a single point calibration was analyzed for the surrogates.

Author's initials and date: MH 01/12/99

Corrective Actions (Short Term): The affected PM's were notified and accepted the data. The I-cal was remade for all future analysis.

Author's initials and date: MH 01/12/99

Corrective Actions to Prevent Reoccurence (Long Term): None

Corrective Action approved by (Supervisor/Group Leader) and date: Matthew W. Hawk 01/12/99

Additional Comments

Corrective Action to be completed by (if other than Supervisor/Group Leader)

Date Corrective Action is to be completed

Quality Assurance Review (To be completed by a QA associate)

Log ID

☐ Anomaly ☒ Deficiency ☐ Notified Ops/Sys Manager (Initials)

☐ Further action required

☐ Further action assigned to

QA signature: [signature] Date: 1/15/99

Corrective Action Verification (To be completed by a QA associate)

☐ Verification not required or requested ☐ Verified/CA completed on _____ by _____

☐ Cannot verifiy (specify reason)

Verified by

Date

Nonconformance Memo Closure

QA signature: [signature] Date: 1/15/99

The office of Quality Assurance maintains a copy of this NCM indicating its final status.

Laboratory Non-Conformance Memo (NCM)

Quanterra Environmental Services

OUA-4187

NCM Log Number: 15881

Project ID/Client	Sample Numbers	NCM Initiated by/Date	Project Manager
08L080170, 08L090122, 08L090208	(01-03)(02,03,15,16,08,09,11-15)(01-01)	01/13/99	Mark Hopkins, Ellen Lebui

Analyst/Team: GC-SVOA

Tests: 8140-A

Analytical Area (check appropriate box)

- [ ] Sample control
- [ ] Organic preparation
- [ ] Inorganic preparation
- [x] GC
- [ ] HPLC
- [ ] GC/MS
- [ ] Wet chemistry
- [ ] Metals
- [ ] Reporting
- [ ] Data review
- [ ] Radiochemistry
- [ ] _____

Non-Conformance (check appropriate box) To be completed by analyst

Holding Time Violation (exceeded by _____ days)

Category I: Laboratory Independent

- [ ] 1. Holding time expired in transit
- [ ] 2. Sample received > 48 hours or 1/2 holding time has expired
- [ ] 3. Test added by client after expiration

Category II: Laboratory Dependent

- [ ] 4. Instrument failure
- [ ] 5. Analyst error
- [ ] 6. Log-in error
- [ ] 7. Miscommunication
- [ ] 8. Other (explanation required)

Category III: Analysis Reruns (QA/QC)

- [ ] 9. Surrogates
- [ ] 10. Internal standards
- [ ] 11. Spike recoveries
- [ ] 12. Blank contamination

Category IV: Analysis Reruns (Confirmation)

- [ ] 13. Second column
- [ ] 14. Contamination check
- [ ] 15. Confirmation of matrix effects
- [ ] 16. Other (explanation required) _____

Quality Assurance/Quality Control

- [x] 17. QC data reported outside of controls
- [ ] 18. Incorrect procedure used
- [ ] 19. SOP intentionally modified with QA and tech approval
- [ ] 20. Invalid instrument calibration
- [ ] 21. Received insuffient sample for proper analysis

Incorrect or Incomplete Client Deliverable

- [ ] 22. Hardcopy deliverable error
- [ ] 23. Electronic deliverable error

Reported Detection Limits Elevated Due to:

- [ ] 24. Sample matrix: Does not include high analyte content
- [ ] 25. Insufficient sample volume
- [ ] 26. Other (explanation required)

Miscellaneous

- [ ] 27. Instrument Tag-out
- [ ] 28. Other (explanation required) _____

Notification (check appropriate box) To be completed by project manager

- [x] Required
- [ ] Not Required

NARRATE

Client notified by - Name: PATTI ROACH

Date: 1/13/99

- [x] In writing
- [ ] By telephone
- [ ] By facsimile
- [ ] Other (explain) _____

Client's name and response

- [x] Process "as is"
- [ ] On hold until _____
- [ ] Re-sample
- [ ] Other (explain) _____

Project manager signature: Patti Roach FOR ELLEN

Date: 1/13/99. 1/14/99

Laboratory Non-Conformance Memo (NCM)

Quanterra Environmental Services

NCM Log Number 15881

OUA-4187

Corrective Action (To be completed and reviewed by all associates involved)

Problem Description/Root Cause: The % recovery for Diazinon = 143% and 136% in the LCS & LCSD Respectively QC Limit = 68-1
The % recovery for Phorate = 148% and 142% in the LCS & LCSD Respectively QC Limit: 68-1

Author's initials and date: MH 01/13/99

Corrective Actions (Short Term): The RPD's for these compounds are in control and there are no hits in the samples for these analytes so the data was accepted

Author's initials and date: MH 01/13/99

Corrective Actions to Prevent Reoccurence (Long Term): Update QC Limits

Corrective Action approved by (Supervisor/Group Leader) and date: Mitchell R. Shaver 01/13/99

Additional Comments

Corrective Action to be completed by (if other than Supervisor/Group Leader)

Date Corrective Action is to be completed

Quality Assurance Review (To be completed by a QA associate)

Log ID

☐ Anomaly ☒ Deficiency ☐ Notified Ops/Sys Manager (Initials)

☐ Further action required

☐ Further action assigned to

QA signature: Thom Schumann

Date: 1/15/99

Corrective Action Verification (To be completed by a QA associate)

☐ Verification not required or requested ☐ Verified/CA completed on _____ by _____

☐ Cannot verifiy (specify reason)

Verified by

Date

Nonconformance Memo Closure

QA signature: Thom Schumann

Date: 1/15/99

The office of Quality Assurance maintains a copy of this NCM indicating its final status.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: D8L090208 Work Order #...: CPAH2102-LCS Matrix.....: WATER
LCS Lot-Sample#: D8L150000-244 CPAH2103-LCSD
Prep Date.....: 12/15/98 Analysis Date..: 12/30/98
Prep Batch #...: 8349244 Analysis Time..: 18:11
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
2,4-D	105 a	(35 - 92)			SW846 8151A
	105 a	(35 - 92)	0.0	(0-27)	SW846 8151A
2,4,5-TP (Silvex)	75	(26 - 115)			SW846 8151A
	75	(26 - 115)	0.83	(0-31)	SW846 8151A
2,4,5-T	83	(21 - 97)			SW846 8151A
	84	(21 - 97)	0.96	(0-29)	SW846 8151A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
DCAA	54	(44 - 107)
	46	(44 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: D8L090208 **Work Order #...:** CPAH2102-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D8L150000-244 CPAH2103-LCSD
Prep Date.....: 12/15/98 **Analysis Date..:** 12/30/98
Prep Batch #...: 8349244 **Analysis Time..:** 18:11
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
2,4-D	**16.0**	**16.8 a**	**ug/L**	**105**		**SW846 8151A**
	16.0	**16.8 a**	**ug/L**	**105**	**0.0**	**SW846 8151A**
2,4,5-TP (Silvex)	**4.00**	**2.98**	**ug/L**	**75**		**SW846 8151A**
	4.00	**3.01**	**ug/L**	**75**	**0.83**	**SW846 8151A**
2,4,5-T	**4.00**	**3.31**	**ug/L**	**83**		**SW846 8151A**
	4.00	**3.34**	**ug/L**	**84**	**0.96**	**SW846 8151A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
DCAA	54	(44 - 107)
	46	(44 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

Laboratory Non-Conformance Memo (NCM)

Quanterra Environmental Services

NCM Log Number: 15868

QUA-4187 Batch # 8349244

Project ID/Client	Sample Numbers	NCM Initiated by/Date	Project Manager
D8L090208 Foothill Eng	1-4	AB 1-5	E. LaRiviere

Analyst/Team: Cannon ~~[illegible]~~ APB

Tests: 8151

Analytical Area (check appropriate box)

- [ ] Sample control
- [ ] Organic preparation
- [ ] Inorganic preparation
- [x] GC
- [ ] HPLC
- [ ] GC/MS
- [ ] Wet chemistry
- [ ] Metals
- [ ] Reporting
- [ ] Data review
- [ ] Radiochemistry
- [ ] _____

Non-Conformance (check appropriate box) To be completed by analyst

Holding Time Violation (exceeded by_____ days)

Category I: Laboratory Independent

- [ ] 1. Holding time expired in transit
- [ ] 2. Sample received > 48 hours or 1/2 holding time has expired
- [ ] 3. Test added by client after expiration

Category II: Laboratory Dependent

- [ ] 4. Instrument failure
- [ ] 5. Analyst error
- [ ] 6. Log-in error
- [ ] 7. Miscommunication
- [ ] 8. Other (explanation required)

Category III: Analysis Reruns (QA/QC)

- [ ] 9. Surrogates
- [ ] 10. Internal standards
- [ ] 11. Spike recoveries
- [ ] 12. Blank contamination

Category IV: Analysis Reruns (Confirmation)

- [ ] 13. Second column
- [ ] 14. Contamination check
- [ ] 15. Confirmation of matrix effects
- [ ] 16. Other (explanation required) _____

Quality Assurance/Quality Control

- [x] 17. QC data reported outside of controls
- [ ] 18. Incorrect procedure used
- [ ] 19. SOP intentionally modified with QA and tech approval
- [ ] 20. Invalid instrument calibration
- [ ] 21. Received insuffient sample for proper analysis

Incorrect or Incomplete Client Deliverable

- [ ] 22. Hardcopy deliverable error
- [ ] 23. Electronic deliverable error

Reported Detection Limits Elevated Due to:

- [ ] 24. Sample matrix: Does not include high analyte content
- [ ] 25. Insufficient sample volume
- [ ] 26. Other (explanation required)

Miscellaneous

- [ ] 27. Instrument Tag-out
- [ ] 28. Other (explanation required) _____

Notification (check appropriate box) To be completed by project manager

- [ ] Required
- [x] Not Required

Client notified by - Name	Date	In writing	By telephone	By facsimile	Other (explain)

Client's name and response	Process "as is"	On hold until _____	Re-sample	Other (explain)

Project manager signature: Ellen LaRiviere

Date: 1/5/99

98

Laboratory Non-Conformance Memo (NCM)

Quanterra Environmental Services

NCM Log Number 15868

OUA-4187

Corrective Action *(To be completed and reviewed by all associates involved)*

Problem Description/Root Cause: Spike compound, 2,4-D was recovered in the LCS and LCSD above the control limit. The control window is 35-92%. and 2,4-D was recovered at 105% in both QC samples. The other 2 spike compounds were recovered within controls. Surrogates are in control in all QC and samples. All the samples are non detect for the target compounds.

Author's initials and date: AB 1/5/99

Corrective Actions (Short Term)

Author's initials and date

Corrective Actions to Prevent Reoccurence (Long Term)

Corrective Action Approved by (Supervisor/Group Leader) and date: Martha W. Hughes 01/05/99

Additional Comments

Corrective Action to be completed by (if other than Supervisor/Group Leader)

Date Corrective Action is to be completed

Quality Assurance Review *(To be completed by a QA associate)*

Log ID ☐ Anomaly ☒ Deficiency ☐ Notified Ops/Sys Manager (Initials)

☐ Further action required

☐ Further action assigned to

QA signature: Thom Schumann Date: 1/6/99

Corrective Action Verification *(To be completed by a QA associate)*

☐ Verification not required or requested ☐ Verified/CA completed on _____ by _____

☐ Cannot verifiy (specify reason)

Verified by

Date

Nonconformance Memo Closure

QA signature: Thom Schumann Date: 1/6/99

The office of Quality Assurance maintains a copy of this NCM indicating its final status.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: D8L090208
MB Lot-Sample #: D8L150000-244
Work Order #...: CPAH2101
Matrix.....: WATER
Prep Date.....: 12/15/98
Analysis Time..: 17:36
Analysis Date..: 12/30/98
Prep Batch #...: 8349244
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
2,4-D	ND	4.0	ug/L	SW846 8151A
2,4-DB	ND	4.0	ug/L	SW846 8151A
2,4,5-TP (Silvex)	ND	1.0	ug/L	SW846 8151A
2,4,5-T	ND	1.0	ug/L	SW846 8151A
Dalapon	ND	2.0	ug/L	SW846 8151A
Dicamba	ND	2.0	ug/L	SW846 8151A
Dichlorprop	ND	4.0	ug/L	SW846 8151A
Dinoseb	ND	0.60	ug/L	SW846 8151A
MCPA	ND	400	ug/L	SW846 8151A
MCPP	ND	400	ug/L	SW846 8151A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
CAA	47	(44 - 107)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Lot-Sample #...: D8L090208 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP-BATCH #
Aluminum	105	(81 - 117)			SW846 6010A	12/21-12/23/98	8355177
	104	(81 - 117)	0.96	(0-10)	SW846 6010A	12/21-12/23/98	8355177
		Dilution Factor: 1					
Antimony	92	(84 - 115)			SW846 6010A	12/21-12/23/98	8355177
	91	(84 - 115)	0.80	(0-10)	SW846 6010A	12/21-12/23/98	8355177
		Dilution Factor: 1					
Barium	104	(81 - 114)			SW846 6010A	12/21-12/23/98	8355177
	103	(81 - 114)	0.60	(0-10)	SW846 6010A	12/21-12/23/98	8355177
		Dilution Factor: 1					
Cadmium	99	(90 - 121)			SW846 6010A	12/21-12/23/98	8355177
	98	(90 - 121)	0.60	(0-10)	SW846 6010A	12/21-12/23/98	8355177
		Dilution Factor: 1					
Calcium	99	(83 - 112)			SW846 6010A	12/21-12/23/98	8355177
	98	(83 - 112)	1.0	(0-10)	SW846 6010A	12/21-12/23/98	8355177
		Dilution Factor: 1					
Chromium	100	(78 - 112)			SW846 6010A	12/21-12/23/98	8355177
	99	(78 - 112)	1.1	(0-10)	SW846 6010A	12/21-12/23/98	8355177
		Dilution Factor: 1					
Cobalt	99	(75 - 120)			SW846 6010A	12/21-12/23/98	8355177
	98	(75 - 120)	1.1	(0-10)	SW846 6010A	12/21-12/23/98	8355177
		Dilution Factor: 1					
Copper	100	(79 - 115)			SW846 6010A	12/21-12/23/98	8355177
	99	(79 - 115)	1.0	(0-10)	SW846 6010A	12/21-12/23/98	8355177
		Dilution Factor: 1					
Iron	99	(82 - 117)			SW846 6010A	12/21-12/22/98	8355177
	103	(82 - 117)	3.5	(0-10)	SW846 6010A	12/21-12/22/98	8355177
		Dilution Factor: 1					
Magnesium	100	(79 - 114)			SW846 6010A	12/21-12/23/98	8355177
	99	(79 - 114)	1.3	(0-10)	SW846 6010A	12/21-12/23/98	8355177
		Dilution Factor: 1					

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Lot-Sample #...: D8L090208 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP-BATCH #
Manganese	101	(79 - 113)			SW846 6010A	12/21-12/23/98	8355177
	100	(79 - 113)	1.1	(0-10)	SW846 6010A	12/21-12/23/98	8355177
		Dilution Factor: 1					
Nickel	99	(80 - 112)			SW846 6010A	12/21-12/23/98	8355177
	98	(80 - 112)	0.87	(0-10)	SW846 6010A	12/21-12/23/98	8355177
		Dilution Factor: 1					
Potassium	100	(77 - 111)			SW846 6010A	12/21-12/22/98	8355177
	101	(77 - 111)	0.92	(0-10)	SW846 6010A	12/21-12/22/98	8355177
		Dilution Factor: 1					
Silver	105	(78 - 115)			SW846 6010A	12/21-12/23/98	8355177
	105	(78 - 115)	0.0	(0-10)	SW846 6010A	12/21-12/23/98	8355177
		Dilution Factor: 1					
Sodium	99	(81 - 115)			SW846 6010A	12/21-12/22/98	8355177
	99	(81 - 115)	0.03	(0-10)	SW846 6010A	12/21-12/22/98	8355177
		Dilution Factor: 1					
Thallium	99	(85 - 119)			SW846 6010A	12/21-12/23/98	8355177
	98	(85 - 119)	1.2	(0-10)	SW846 6010A	12/21-12/23/98	8355177
		Dilution Factor: 1					
Tin	92	(81 - 114)			SW846 6010A	12/21-12/23/98	8355177
	91	(81 - 114)	1.3	(0-10)	SW846 6010A	12/21-12/23/98	8355177
		Dilution Factor: 1					
Vanadium	100	(80 - 114)			SW846 6010A	12/21-12/23/98	8355177
	99	(80 - 114)	1.1	(0-10)	SW846 6010A	12/21-12/23/98	8355177
		Dilution Factor: 1					
Zinc	98	(77 - 113)			SW846 6010A	12/21-12/23/98	8355177
	96	(77 - 113)	1.3	(0-10)	SW846 6010A	12/21-12/23/98	8355177
		Dilution Factor: 1					
Mercury	98	(77 - 117)			SW846 7470A	12/31-01/04/99	8357267
	99	(77 - 117)	1.7	(0-10)	SW846 7470A	12/31-01/04/99	8357267
		Dilution Factor: 1					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Lot-Sample #...: D8L090208 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Aluminum	2000	2090	ug/L	105		SW846 6010A	12/21-12/23/98	8355177
	2000	2070	ug/L	104	0.96	SW846 6010A	12/21-12/23/98	8355177
			Dilution Factor: 1					
Antimony	500	459	ug/L	92		SW846 6010A	12/21-12/23/98	8355177
	500	455	ug/L	91	0.80	SW846 6010A	12/21-12/23/98	8355177
			Dilution Factor: 1					
Barium	2000	2080	ug/L	104		SW846 6010A	12/21-12/23/98	8355177
	2000	2060	ug/L	103	0.60	SW846 6010A	12/21-12/23/98	8355177
			Dilution Factor: 1					
Cadmium	50.0	49.4	ug/L	99		SW846 6010A	12/21-12/23/98	8355177
	50.0	49.1	ug/L	98	0.60	SW846 6010A	12/21-12/23/98	8355177
			Dilution Factor: 1					
Calcium	50000	49600	ug/L	99		SW846 6010A	12/21-12/23/98	8355177
	50000	49100	ug/L	98	1.0	SW846 6010A	12/21-12/23/98	835517
			Dilution Factor: 1					
Chromium	200	201	ug/L	100		SW846 6010A	12/21-12/23/98	8355177
	200	198	ug/L	99	1.1	SW846 6010A	12/21-12/23/98	8355177
			Dilution Factor: 1					
Cobalt	500	497	ug/L	99		SW846 6010A	12/21-12/23/98	8355177
	500	491	ug/L	98	1.1	SW846 6010A	12/21-12/23/98	8355177
			Dilution Factor: 1					
Copper	250	250	ug/L	100		SW846 6010A	12/21-12/23/98	8355177
	250	248	ug/L	99	1.0	SW846 6010A	12/21-12/23/98	8355177
			Dilution Factor: 1					
Iron	1000	993	ug/L	99		SW846 6010A	12/21-12/22/98	8355177
	1000	1030	ug/L	103	3.5	SW846 6010A	12/21-12/22/98	8355177
			Dilution Factor: 1					
Magnesium	50000	50000	ug/L	100		SW846 6010A	12/21-12/23/98	8355177
	50000	49300	ug/L	99	1.3	SW846 6010A	12/21-12/23/98	8355177
			Dilution Factor: 1					

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LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Lot-Sample #...: D8L090208 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Manganese	500	506	ug/L	101		SW846 6010A	12/21-12/23/98	8355177
	500	500	ug/L	100	1.1	SW846 6010A	12/21-12/23/98	8355177
			Dilution Factor: 1					
Nickel	500	494	ug/L	99		SW846 6010A	12/21-12/23/98	8355177
	500	490	ug/L	98	0.87	SW846 6010A	12/21-12/23/98	8355177
			Dilution Factor: 1					
Potassium	50000	50000	ug/L	100		SW846 6010A	12/21-12/22/98	8355177
	50000	50500	ug/L	101	0.92	SW846 6010A	12/21-12/22/98	8355177
			Dilution Factor: 1					
Silver	39.4	41.6	ug/L	105		SW846 6010A	12/21-12/23/98	8355177
	39.4	41.6	ug/L	105	0.0	SW846 6010A	12/21-12/23/98	8355177
			Dilution Factor: 1					
Sodium	50000	49400	ug/L	99		SW846 6010A	12/21-12/22/98	8355177
	50000	49400	ug/L	99	0.03	SW846 6010A	12/21-12/22/98	8355177
			Dilution Factor: 1					
Thallium	2000	1980	ug/L	99		SW846 6010A	12/21-12/23/98	8355177
	2000	1960	ug/L	98	1.2	SW846 6010A	12/21-12/23/98	8355177
			Dilution Factor: 1					
Tin	2000	1840	ug/L	92		SW846 6010A	12/21-12/23/98	8355177
	2000	1820	ug/L	91	1.3	SW846 6010A	12/21-12/23/98	8355177
			Dilution Factor: 1					
Vanadium	500	502	ug/L	100		SW846 6010A	12/21-12/23/98	8355177
	500	497	ug/L	99	1.1	SW846 6010A	12/21-12/23/98	8355177
			Dilution Factor: 1					
Zinc	500	488	ug/L	98		SW846 6010A	12/21-12/23/98	8355177
	500	482	ug/L	96	1.3	SW846 6010A	12/21-12/23/98	8355177
			Dilution Factor: 1					
Mercury	5.00	4.88	ug/L	98		SW846 7470A	12/31-01/04/99	8357267
	5.00	4.96	ug/L	99	1.7	SW846 7470A	12/31-01/04/99	8357267
			Dilution Factor: 1					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: D8L090208 **Matrix.....:** WATER

MB Lot-Sample #: D8L210000-177 **Prep Batch #...:** 8355177

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Silver	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CPGNG110
		Dilution Factor: 1				
		Analysis Time..: 18:05				
Aluminum	ND	100	ug/L	SW846 6010A	12/21-12/23/98	CPGNG111
		Dilution Factor: 1				
		Analysis Time..: 18:05				
Cadmium	ND	5.0	ug/L	SW846 6010A	12/21-12/23/98	CPGNG10V
		Dilution Factor: 1				
		Analysis Time..: 18:05				
Antimony	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CPGNG10W
		Dilution Factor: 1				
		Analysis Time..: 18:05				
Barium	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CPGNG1
		Dilution Factor: 1				
		Analysis Time..: 18:05				
Calcium	ND	200	ug/L	SW846 6010A	12/21-12/23/98	CPGNG113
		Dilution Factor: 1				
		Analysis Time..: 18:05				
Thallium	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CPGNG10X
		Dilution Factor: 1				
		Analysis Time..: 18:05				
Cobalt	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CPGNG114
		Dilution Factor: 1				
		Analysis Time..: 18:05				
Chromium	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CPGNG10H
		Dilution Factor: 1				
		Analysis Time..: 18:05				
Copper	ND	20.0	ug/L	SW846 6010A	12/21-12/23/98	CPGNG10J
		Dilution Factor: 1				
		Analysis Time..: 18:05				
Iron	ND	100	ug/L	SW846 6010A	12/21-12/22/98	CPGNG10K
		Dilution Factor: 1				
		Analysis Time..: 13:00				

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METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: D8L090208 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Potassium	**518 B**	**5000**	**ug/L**	**SW846 6010A**	**12/21-12/22/98**	**CPGNG10L**
		Dilution Factor: 1				
		Analysis Time..: 13:00				
Magnesium	ND	200	ug/L	SW846 6010A	12/21-12/23/98	CPGNG10M
		Dilution Factor: 1				
		Analysis Time..: 18:05				
Manganese	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CPGNG10N
		Dilution Factor: 1				
		Analysis Time..: 18:05				
Sodium	**1390 B**	**5000**	**ug/L**	**SW846 6010A**	**12/21-12/22/98**	**CPGNG10P**
		Dilution Factor: 1				
		Analysis Time..: 13:00				
Nickel	ND	40.0	ug/L	SW846 6010A	12/21-12/23/98	CPGNG10Q
		Dilution Factor: 1				
		Analysis Time..: 18:05				
Tin	ND	100	ug/L	SW846 6010A	12/21-12/23/98	CPGNG10R
		Dilution Factor: 1				
		Analysis Time..: 18:05				
Vanadium	ND	10.0	ug/L	SW846 6010A	12/21-12/23/98	CPGNG10T
		Dilution Factor: 1				
		Analysis Time..: 18:05				
Zinc	ND	20.0	ug/L	SW846 6010A	12/21-12/23/98	CPGNG10U
		Dilution Factor: 1				
		Analysis Time..: 18:05				

MB Lot-Sample #: D8L230000-267 **Prep Batch #...:** 8357267

Mercury	ND	0.20	ug/L	SW846 7470A	12/31-01/04/99	CPLTF101
		Dilution Factor: 1				
		Analysis Time..: 13:59				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: D8L090208 **Matrix.....:** WATER
Date Sampled...: 12/14/98 09:30 **Date Received..:** 12/15/98

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: D8L150137-002 **Prep Batch #...:** 8357267							
Mercury	87	(77 - 117)			SW846 7470A	12/31-01/04/99	CPAEP125
	87	(77 - 117)	0.18	(0-10)	SW846 7470A	12/31-01/04/99	CPAEP126

Dilution Factor: 1
Analysis Time..: 14:18

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: D8L090208 **Matrix.....:** WATER
Date Sampled...: 12/14/98 09:30 **Date Received..:** 12/15/98

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: D8L150137-002 **Prep Batch #...:** 8357267									
Mercury									
	ND	5.00	4.36	ug/L	87		SW846 7470A	12/31-01/04/99	CPAEP12
	ND	5.00	4.35	ug/L	87	0.18	SW846 7470A	12/31-01/04/99	CPAEP12

Dilution Factor: 1
Analysis Time..: 14:18

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: D8L090208 **Matrix.....:** WATER
Date Sampled...: 12/02/98 09:20 **Date Received..:** 12/04/98

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: D8L040134-002 **Prep Batch #...:** 8355177							
Aluminum	NC,MSB	(81 - 117)			SW846 6010A	12/21-12/23/98	CP0Q612M
	NC,MSB	(81 - 117)		(0-10)	SW846 6010A	12/21-12/23/98	CP0Q612N
		Dilution Factor: 1					
		Analysis Time..: 18:58					
Antimony	92	(84 - 115)			SW846 6010A	12/21-12/23/98	CP0Q612C
	93	(84 - 115)	1.2	(0-10)	SW846 6010A	12/21-12/23/98	CP0Q612D
		Dilution Factor: 1					
		Analysis Time..: 18:58					
Barium	104	(81 - 114)			SW846 6010A	12/21-12/23/98	CP0Q612Q
	104	(81 - 114)	0.55	(0-10)	SW846 6010A	12/21-12/23/98	CP0Q612R
		Dilution Factor: 1					
		Analysis Time..: 18:58					
Cadmium	96	(90 - 121)			SW846 6010A	12/21-12/23/98	CP0Q6128
	98	(90 - 121)	1.4	(0-10)	SW846 6010A	12/21-12/23/98	CP0Q6129
		Dilution Factor: 1					
		Analysis Time..: 18:58					
Calcium	108	(83 - 112)			SW846 6010A	12/21-12/23/98	CP0Q612U
	125 N	(83 - 112)	4.0	(0-10)	SW846 6010A	12/21-12/23/98	CP0Q612V
		Dilution Factor: 1					
		Analysis Time..: 18:58					
Chromium	104	(78 - 112)			SW846 6010A	12/21-12/23/98	CP0Q6115
	103	(78 - 112)	0.85	(0-10)	SW846 6010A	12/21-12/23/98	CP0Q6116
		Dilution Factor: 1					
		Analysis Time..: 18:58					
Cobalt	98	(75 - 120)			SW846 6010A	12/21-12/23/98	CP0Q612X
	98	(75 - 120)	1.0	(0-10)	SW846 6010A	12/21-12/23/98	CP0Q6130
		Dilution Factor: 1					
		Analysis Time..: 18:58					
Copper	101	(79 - 115)			SW846 6010A	12/21-12/23/98	CP0Q6118
	103	(79 - 115)	1.2	(0-10)	SW846 6010A	12/21-12/23/98	CP0Q6119
		Dilution Factor: 1					
		Analysis Time..: 18:58					
Iron	NC,MSB	(82 - 117)			SW846 6010A	12/21-12/22/98	CP0Q611C
	NC,MSB	(82 - 117)		(0-10)	SW846 6010A	12/21-12/22/98	CP0Q611D
		Dilution Factor: 1					
		Analysis Time..: 13:43					

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: D8L090208 **Matrix.....:** WATER
Date Sampled...: 12/02/98 09:20 **Date Received..:** 12/04/98

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	98	(79 - 114)			SW846 6010A	12/21-12/23/98	CP0Q611J
	100	(79 - 114)	1.2	(0-10)	SW846 6010A	12/21-12/23/98	CP0Q611K
		Dilution Factor: 1					
		Analysis Time..: 18:58					
Manganese	108	(79 - 113)			SW846 6010A	12/21-12/23/98	CP0Q611M
	119 N	(79 - 113)	3.1	(0-10)	SW846 6010A	12/21-12/23/98	CP0Q611N
		Dilution Factor: 1					
		Analysis Time..: 18:58					
Nickel	97	(80 - 112)			SW846 6010A	12/21-12/23/98	CP0Q611U
	98	(80 - 112)	1.2	(0-10)	SW846 6010A	12/21-12/23/98	CP0Q611V
		Dilution Factor: 1					
		Analysis Time..: 18:58					
Potassium	105	(77 - 111)			SW846 6010A	12/21-12/22/98	CP0Q611F
	107	(77 - 111)	1.2	(0-10)	SW846 6010A	12/21-12/22/98	CP0Q611G
		Dilution Factor: 1					
		Analysis Time..: 13:43					
Silver	105	(78 - 115)			SW846 6010A	12/21-12/23/98	CP0Q612J
	109	(78 - 115)	2.8	(0-10)	SW846 6010A	12/21-12/23/98	CP0Q612K
		Dilution Factor: 1					
		Analysis Time..: 18:58					
Sodium	99	(81 - 115)			SW846 6010A	12/21-12/22/98	CP0Q611Q
	105	(81 - 115)	1.3	(0-10)	SW846 6010A	12/21-12/22/98	CP0Q611R
		Dilution Factor: 1					
		Analysis Time..: 13:43					
Thallium	95	(85 - 119)			SW846 6010A	12/21-12/23/98	CP0Q612F
	97	(85 - 119)	1.5	(0-10)	SW846 6010A	12/21-12/23/98	CP0Q612G
		Dilution Factor: 1					
		Analysis Time..: 18:58					
Tin	91	(81 - 114)			SW846 6010A	12/21-12/23/98	CP0Q611X
	91	(81 - 114)	0.87	(0-10)	SW846 6010A	12/21-12/23/98	CP0Q6120
		Dilution Factor: 1					
		Analysis Time..: 18:58					
Vanadium	100	(80 - 114)			SW846 6010A	12/21-12/23/98	CP0Q6122
	102	(80 - 114)	0.97	(0-10)	SW846 6010A	12/21-12/23/98	CP0Q6123
		Dilution Factor: 1					
		Analysis Time..: 18:58					

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: D8L090208 **Matrix.....:** WATER
Date Sampled...: 12/02/98 09:20 **Date Received..:** 12/04/98

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Zinc	96	(77 - 113)			SW846 6010A	12/21-12/23/98	CP0Q6125
	98	(77 - 113)	1.9	(0-10)	SW846 6010A	12/21-12/23/98	CP0Q6126

Dilution Factor: 1
Analysis Time..: 18:58

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

NC The recovery and/or RPD were not calculated.

MSB The recovery and RPD were not calculated because the sample amount was greater than four times the spike amount.

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: D8L090208 **Matrix.....:** WATER
Date Sampled...: 12/02/98 09:20 **Date Received..:** 12/04/98

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: D8L040134-002 **Prep Batch #...:** 8355177									
Aluminum									
	12000	2000	20300	ug/L			SW846 6010A	12/21-12/23/98	CP0Q612M
			Qualifiers: NC,MSB						
	12000	2000	20400	ug/L			SW846 6010A	12/21-12/23/98	CP0Q612N
			Qualifiers: NC,MSB						
			Dilution Factor: 1						
			Analysis Time..: 18:58						
Antimony									
	ND	500	459	ug/L	92		SW846 6010A	12/21-12/23/98	CP0Q612C
	ND	500	464	ug/L	93	1.2	SW846 6010A	12/21-12/23/98	CP0Q612D
			Dilution Factor: 1						
			Analysis Time..: 18:58						
Barium									
	188	2000	2260	ug/L	104		SW846 6010A	12/21-12/23/98	CP0Q612Q
	188	2000	2270	ug/L	104	0.55	SW846 6010A	12/21-12/23/98	CP0Q612R
			Dilution Factor: 1						
			Analysis Time..: 18:58						
Cadmium									
	ND	50.0	48.1	ug/L	96		SW846 6010A	12/21-12/23/98	CP0Q6128
	ND	50.0	48.8	ug/L	98	1.4	SW846 6010A	12/21-12/23/98	CP0Q6129
			Dilution Factor: 1						
			Analysis Time..: 18:58						
Calcium									
	156000	50000	210000	ug/L	108		SW846 6010A	12/21-12/23/98	CP0Q612U
	156000	50000	218000 N	ug/L	125	4.0	SW846 6010A	12/21-12/23/98	CP0Q612V
			Dilution Factor: 1						
			Analysis Time..: 18:58						
Chromium									
	16.1	200	223	ug/L	104		SW846 6010A	12/21-12/23/98	CP0Q6115
	16.1	200	222	ug/L	103	0.85	SW846 6010A	12/21-12/23/98	CP0Q6116
			Dilution Factor: 1						
			Analysis Time..: 18:58						
Cobalt									
	5.3	500	493	ug/L	98		SW846 6010A	12/21-12/23/98	CP0Q612X
	5.3	500	498	ug/L	98	1.0	SW846 6010A	12/21-12/23/98	CP0Q6130
			Dilution Factor: 1						
			Analysis Time..: 18:58						

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: D8L090208 **Matrix.....:** WATER
Date Sampled...: 12/02/98 09:20 **Date Received..:** 12/04/98

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Copper									
	11.6	250	265	ug/L	101		SW846 6010A	12/21-12/23/98	CP0Q6118
	11.6	250	268	ug/L	103	1.2	SW846 6010A	12/21-12/23/98	CP0Q6119
				Dilution Factor: 1					
				Analysis Time..: 18:58					
Iron									
	9360	1000	12400	ug/L			SW846 6010A	12/21-12/22/98	CP0Q611C
				Qualifiers: NC,MSB					
	9360	1000	12700	ug/L			SW846 6010A	12/21-12/22/98	CP0Q611D
				Qualifiers: NC,MSB					
				Dilution Factor: 1					
				Analysis Time..: 13:43					
Magnesium									
	52700	50000	101000	ug/L	98		SW846 6010A	12/21-12/23/98	CP0Q611J
	52700	50000	103000	ug/L	100	1.2	SW846 6010A	12/21-12/23/98	CP0Q611K
				Dilution Factor: 1					
				Analysis Time..: 18:58					
Manganese									
	1130	500	1670	ug/L	108		SW846 6010A	12/21-12/23/98	CP0Q611M
	1130	500	1730 N	ug/L	119	3.1	SW846 6010A	12/21-12/23/98	CP0Q611N
				Dilution Factor: 1					
				Analysis Time..: 18:58					
Nickel									
	22.4	500	506	ug/L	97		SW846 6010A	12/21-12/23/98	CP0Q611U
	22.4	500	512	ug/L	98	1.2	SW846 6010A	12/21-12/23/98	CP0Q611V
				Dilution Factor: 1					
				Analysis Time..: 18:58					
Potassium									
	10000	50000	62700	ug/L	105		SW846 6010A	12/21-12/22/98	CP0Q611F
	10000	50000	63400	ug/L	107	1.2	SW846 6010A	12/21-12/22/98	CP0Q611G
				Dilution Factor: 1					
				Analysis Time..: 13:43					
Silver									
	ND	39.4	41.6	ug/L	105		SW846 6010A	12/21-12/23/98	CP0Q612J
	ND	39.4	42.8	ug/L	109	2.8	SW846 6010A	12/21-12/23/98	CP0Q612K
				Dilution Factor: 1					
				Analysis Time..: 18:58					

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MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: D8L090208 **Matrix.....:** WATER
Date Sampled...: 12/02/98 09:20 **Date Received..:** 12/04/98

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Sodium									
	177000	50000	227000	ug/L	99		SW846 6010A	12/21-12/22/98	CP0Q611(
	177000	50000	230000	ug/L	105	1.3	SW846 6010A	12/21-12/22/98	CP0Q611F
			Dilution Factor: 1						
			Analysis Time..: 13:43						
Thallium									
	ND	2000	1910	ug/L	95		SW846 6010A	12/21-12/23/98	CP0Q612F
	ND	2000	1940	ug/L	97	1.5	SW846 6010A	12/21-12/23/98	CP0Q612(
			Dilution Factor: 1						
			Analysis Time..: 18:58						
Tin									
	ND	2000	1810	ug/L	91		SW846 6010A	12/21-12/23/98	CP0Q611X
	ND	2000	1830	ug/L	91	0.87	SW846 6010A	12/21-12/23/98	CP0Q612(
			Dilution Factor: 1						
			Analysis Time..: 18:58						
anadium									
	61.1	500	563	ug/L	100		SW846 6010A	12/21-12/23/98	CP0Q6122
	61.1	500	569	ug/L	102	0.97	SW846 6010A	12/21-12/23/98	CP0Q6123
			Dilution Factor: 1						
			Analysis Time..: 18:58						
Zinc									
	43.8	500	523	ug/L	96		SW846 6010A	12/21-12/23/98	CP0Q6125
	43.8	500	533	ug/L	98	1.9	SW846 6010A	12/21-12/23/98	CP0Q6126
			Dilution Factor: 1						
			Analysis Time..: 18:58						

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

NC The recovery and/or RPD were not calculated.

MSB The recovery and RPD were not calculated because the sample amount was greater than four times the spike amount.

N Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Lot-Sample #...: D8L090208 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride		WO#:CPN8W102-LCS/CPN8W103-LCSD				LCS Lot-Sample#: D8L300000-264	
	103	(92 - 109)			MCAWW 325.3	12/30/98	8364264
	103	(92 - 109)	0.0	(0-10)	MCAWW 325.3	12/30/98	8364264
		Dilution Factor: 1					
Nitrate		WO#:CPGCN102-LCS/CPGCN103-LCSD				LCS Lot-Sample#: D8L120000-198	
	94	(90 - 110)			MCAWW 300.0A	12/10-12/11/98	8346198
	94	(90 - 110)	0.06	(0-10)	MCAWW 300.0A	12/10-12/11/98	8346198
		Dilution Factor: 1					
Sulfate		WO#:CPML6102-LCS/CPML6103-LCSD				LCS Lot-Sample#: D8L290000-291	
	108	(88 - 110)			MCAWW 375.4	12/28/98	8363291
	106	(88 - 110)	2.1	(0-11)	MCAWW 375.4	12/28/98	8363291
		Dilution Factor: 1					
Total Phenols		WO#:CPRJE102-LCS/CPRJE103-LCSD				LCS Lot-Sample#: D9A070000-224	
	94	(75 - 107)			MCAWW 420.2	12/30-12/31/98	9007224
	94	(75 - 107)	0.85	(0-16)	MCAWW 420.2	12/30-12/31/98	9007224
		Dilution Factor: 1					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Lot-Sample #...: D8L090208 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride			WO#:CPN8W102-LCS/CPN8W103-LCSD			LCS Lot-Sample#: D8L300000-264		
	100	103	mg/L	103		MCAWW 325.3	12/30/98	8364264
	100	103	mg/L	103	0.0	MCAWW 325.3	12/30/98	8364264
			Dilution Factor: 1					
Nitrate			WO#:CPGCN102-LCS/CPGCN103-LCSD			LCS Lot-Sample#: D8L120000-198		
	5.00	4.68	mg/L	94		MCAWW 300.0A	12/10-12/11/98	8346198
	5.00	4.69	mg/L	94	0.06	MCAWW 300.0A	12/10-12/11/98	8346198
			Dilution Factor: 1					
Sulfate			WO#:CPML6102-LCS/CPML6103-LCSD			LCS Lot-Sample#: D8L290000-291		
	25.0	27.0	mg/L	108		MCAWW 375.4	12/28/98	8363291
	25.0	26.4	mg/L	106	2.1	MCAWW 375.4	12/28/98	8363291
			Dilution Factor: 1					
Total Phenols			WO#:CPRJE102-LCS/CPRJE103-LCSD			LCS Lot-Sample#: D9A070000-224		
	0.200	0.187	mg/L	94		MCAWW 420.2	12/30-12/31/98	9007224
	0.200	0.189	mg/L	94	0.85	MCAWW 420.2	12/30-12/31/98	9007224
			Dilution Factor: 1					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: D8L090208 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride		Work Order #: CPN8W101		MB Lot-Sample #:	D8L300000-264	
	ND	3.0	mg/L	MCAWW 325.3	12/30/98	8364264
		Dilution Factor: 1				
		Analysis Time..: 00:00				
Nitrate		Work Order #: CPGCN101		MB Lot-Sample #:	D8L120000-198	
	ND	0.50	mg/L	MCAWW 300.0A	12/10-12/11/98	8346198
		Dilution Factor: 1				
		Analysis Time..: 06:35				
Sulfate		Work Order #: CPML6101		MB Lot-Sample #:	D8L290000-291	
	2.6	**5.0**	**mg/L**	**MCAWW 375.4**	**12/28/98**	**8363291**
		Dilution Factor: 1				
		Analysis Time..: 00:00				
Total Phenols		Work Order #: CPRJE101		MB Lot-Sample #:	D9A070000-224	
	ND	0.020	mg/L	MCAWW 420.2	12/30-12/31/98	9007224
		Dilution Factor: 1				
		Analysis Time..: 14:25				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: D8L090208 **Matrix.....:** WATER
Date Sampled...: 12/16/98 11:15 **Date Received..:** 12/17/98

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate		WO#: CP5K7114-MS/CP5K7115-MSD				MS Lot-Sample #: D8L090208-004	
	95	(90 - 110)			MCAWW 300.0A	12/10-12/11/98	8346198
	96	(90 - 110)	0.82	(0-10)	MCAWW 300.0A	12/10-12/11/98	8346198
		Dilution Factor: 1					
		Analysis Time..: 17:06					
Sulfate		WO#: CPE0010L-MS/CPE0010M-MSD				MS Lot-Sample #: D8L170196-002	
	146 N	(88 - 110)			MCAWW 375.4	12/28/98	8363291
	175 N	(88 - 110)	0.37	(0-11)	MCAWW 375.4	12/28/98	8363291
		Dilution Factor: 1					
		Analysis Time..: 00:00					
Total Phenols		WO#: CP5K7116-MS/CP5K7117-MSD				MS Lot-Sample #: D8L090208-004	
	87	(75 - 107)			MCAWW 420.2	12/30-12/31/98	9007224
	90	(75 - 107)	3.3	(0-16)	MCAWW 420.2	12/30-12/31/98	9007224
		Dilution Factor: 1					
		Analysis Time..: 14:25					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: D8L090208 **Matrix.....:** WATER
Date Sampled...: 12/16/98 11:15 **Date Received..:** 12/17/98

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate			WO#: CP5K7114-MS/CP5K7115-MSD				MS Lot-Sample #: D8L090208-004		
	2.3	25.0	26.1	mg/L	95		MCAWW 300.0A	12/10-12/11/98	8346198
	2.3	25.0	26.4	mg/L	96	0.82	MCAWW 300.0A	12/10-12/11/98	8346198
			Dilution Factor: 1						
			Analysis Time..: 17:06						
Sulfate			WO#: CPE0010L-MS/CPE0010M-MSD				MS Lot-Sample #: D8L170196-002		
	1930	25.0	1960 N	mg/L	146		MCAWW 375.4	12/28/98	8363291
	1930	25.0	1970 N	mg/L	175	0.37	MCAWW 375.4	12/28/98	8363291
			Dilution Factor: 1						
			Analysis Time..: 00:00						
Total Phenols			WO#: CP5K7116-MS/CP5K7117-MSD				MS Lot-Sample #: D8L090208-004		
	ND	0.200	0.174	mg/L	87		MCAWW 420.2	12/30-12/31/98	9007224
	ND	0.200	0.180	mg/L	90	3.3	MCAWW 420.2	12/30-12/31/98	9007224
			Dilution Factor: 1						
			Analysis Time..: 14:25						

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

Chain of Custody Record

D8L0 10208

Quanterra

QUA-4124 0797

Client	Project Manager	Date	Chain of Custody Number
Foothill Engineering Consultants	Ian Broussard	12/8/98	20429
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	
350 Indiana St. STE 415	(303) 278-0622		Page 1 of 1
City / State / Zip Code	**Site Contact / Lab Contact**		
Golden / CO / 80401	Sanford Hutsell		
Project Name	**Carrier/Waybill Number**		
Cannon AFB - LTM			
Contract/Purchase Order/Quote No.			

Analysis (Attach list if more space is needed)

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNOS	HCl	NaOH	ZnAc/NaOH	HNO3	API UST 5260	PCB 8082	Organochlorinated Pest 8081A	Nitrate/Nitrite 353.2	Phenol 420.2	Sulfate/Chloride 375.4 / 325.3	TAL Metals	Organophosphate Pest. 8141	API IX SVOC 8270B	HEBS 8150	Phenol 420.2			Special Instructions/ Conditions of Receipt
CAFB-MWR-1298-2	12/8/98	1540 H								X					X												~~API IX VOC 8260~~
							X								X												~~PCB 8082~~
							X										1										~~Organochlorinated Pest 8081A~~
								X										1									~~353.2 420.2~~ ~~Nitrate/Nitrite~~
							X												1								~~375.4 325.3~~ Sulfate/Chloride
													X							1							~~TAL Metals~~
							X														1						~~Organophosphate Pest. 8141~~
							X															2					~~API IX SVOC 8270B~~
							X																2				~~HEBS 8150~~
										X				2													
								X											1								

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other_____

QC Requirements (Specify)

Relinquished By	Date	Time	Received By	Date	Time
1. Ian Broussard	12/9/98	1610	1. [signature]	12-9-98	1610
2.			2.		
3.			3.		

Comments
Nitrates must be analyzed immediately

Hand delivered

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

Chain of Custody Record

Quanterra

QUA-4124 0797

Client	Project Manager	Date	Chain of Custody Number
Foothill Engineering Consultants	Ian Broussard	12/8/98	20133
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 2**
350 Indiana St. STE 415	(303) 530-5562		

City	State	Zip Code	Site Contact	Lab Contact
Golden	CO	80401	Sanford Hutsell	

Project Name: Cannon AFB LTM

Carrier/Waybill Number:

Contract/Purchase Order/Quote No.:

Analysis (Attach list if more space is needed)

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNOS	HCl	NaOH	ZnAc/NaOH	HNO3	API IX 8 VOC 8260	PCB 8082	Organochlorine Pest 8081	375.4 NITRATE/Nitrite	TAL Metals	Organophosphate Pest. 8141	API IX Spec 8270	HERB 8150	375.4 Sulfate/Chloride				Special Instructions/ Conditions of Receipt
CAFB-MWR-1298-1	12/8/98	1540 PK	X							X				3												
↓	↓		↓				X								2											
							X									1										
								X									1									
													X					1								
							X												1							
							X													2						
							X														2					
							X															1				
Trip blank										X				2												
CAFB-MWN-1298-1										X				3												
~~CAFB-MWR-1298-1~~										X				3												
~~CAFB-MWR-1298-2~~										X				3												

Missing VOA vials

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By: Ian Broussard	12/9/98	1610	1. Received By: [signature]	12-9-98	1610
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments: Nitrates must be analyzed immediately

Hand delivered

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

Chain of Custody Record

Quanterra

QUA-4124 0797

Client	Project Manager	Date	Chain of Custody Number
Foothill Engineering Consultants	Ian Broussard	12/8/98	20434
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
350 Indiana ST STE 415	(303) 278-0622		

City	State	Zip Code	Site Contact	Lab Contact
Golden	CO	80401	Sanford Hutsell	

Project Name	Carrier/Waybill Number
Cannon AFB LTM	

Contract/Purchase Order/Quote No.

Analysis (Attach list if more space is needed)

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	HNO3	ATE 1625 8260	PCB 8082	Cons. Nonconsolidated Pest 8081	Nitrate/Phosphate	Sulfate/Chloride	TAL Metals	Cyanide Phosphate Pest 8141	APTV SVOC 8270	HERBS 8150	Phenol 420.2			Special Instructions/ Conditions of Receipt
CAFB-MWO-1248-1	12/8/98	1610	X							X																
							X								2											
							X									1										
								X									1									
							X											1								
													X						1							
																				1						
							X														2					
							X															2				
~~Trip blank~~ I.B									~~X~~					~~2~~												
								X															1			

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other_____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: Ian Broussard	12/9/98	1610	1. Received By: [signature]	12-9-98	1610
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments: Nitrate must be ANALYZED immediately

Hand Delivered

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

Chain of Custody Record

Quanterra

QUA-4124 0797

Client	Project Manager	Date	Chain of Custody Number
Foothill Engineering Consultants	Ian Broussard	12/8/98	20430

Address	Telephone Number (Area Code)/Fax Number	Lab Number	Page 1 of 1
350 Indiana St. STE 415	303 278-0622		

City	State	Zip Code	Site Contact	Lab Contact
Golden	CO	80401	Sanford Hubell	

Project Name	Carrier/Waybill Number
CANNON LTM	

Contract/Purchase Order/Quote No.

Analysis (Attach list if more space is needed)

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNOS	HCl	NaOH	ZnAc/NaOH	HNO3	~~Li~~ ~~APIX VOC 8260~~	RCB 8010	Organic Chlorinated Pest 8081A	~~Pesticides~~ NITRATE 353.2	325.3 Sulfate/Chloride	TAL Metals	Organic Phosphate Pest 8141	APIX SVOC 8270B	HERBS 8150	Phenol 420.2			Special Instructions/ Conditions of Receipt
4 CAFB-MWN-1298-1	12/8/98	1635	X						X																
						X								2											
						X									1										
							X									1									
						X											1								
												X						1							
						X													1						
						X														2					
						X															2				
~~Trip blank~~ I.B									~~X~~				~~X~~												
							X															1			

Possible Hazard Identification: ☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☑ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

Relinquished By	Date	Time	Received By	Date	Time
1. Ian Broussard	12/9/98	1610	1. [illegible]	12-9-98	1610
2.			2.		
3.			3.		

Comments: Nitrate must be ANALYZED immediately — Hand delivery

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

Chain of Custody Record

Quanterra

QUA-4124 0797

Client: Foothill Engineering Consultants	Project Manager: Ian Broussard	Date: 12/8/98	Chain of Custody Number: 20431
Address: 350 Indiana St. STE 45	Telephone Number (Area Code)/Fax Number: (303) 278-0622	Lab Number:	Page 2 of 2
City: Golden; State: CO; Zip Code: 80401	Site Contact: Sanford Hutsell	Lab Contact:	
Project Name: Cannon AFB-CTM	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.: 97-336			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)		Date	Time	Matrix: Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNOS	HCl	NaOH	ZnAc/NaOH	Phenol 420.2	AP IX VOC 8260	Special Instructions/ Conditions of Receipt
CAFB-MWR-1298-1	2	12/8/98	1540	X					X					1		
CAFB-MWO-1298-1	3	↓	1610								X				3	
CAFB-MWN-1298-1	4	↓	1635								X				3	
CAFB-MWR-1298-2	1		1540								X				3	
TRIP BLANK		—														

Analysis (Attach list if more space is needed)

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other_____

QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By: Ian Broussard	12/8/98	1610	1. Received By: [signature]	12-9-98	1610
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments: Hand delivered

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

Lot #: D8L090208 Date/Time Received: 12/9/98 0900

Company Name & Sampling Site: FOOTHILLS

*Cooler #(s): 4

Temperatures: 27 29 5.0 24

Unpacking & Labeling Check Points:

N/A	Yes	No		
	☑	☐	1. Radiation checked, record if reading > 0.5 mR/hr. (mR/hr)	
	☑	☐	2. Cooler seals intact.	
	☑	☐	3. Chain of custody present.	
	☐	☑	4. Bottles broken and/or are leaking, comment if yes.	
			PHOTOGRAPH BROKEN BOTTLES	
	☑	☐	5. Containers labeled, comment if no.	
	☑	☐	6. pH of all samples checked and meet requirements, note exceptions.	
	☑	☐	7. Chain of custody includes "received by" and "relinquished" by signatures, dates, and times.	
	☑	☐	8. Receipt date(s) > 48 hours past the collection date(s)? If yes, notify PA/PM.	
	☑	☐	9. Chain of custody agrees with bottle count, comment if no.	
	☑	☐	10. Chain of custody agrees with labels, comment if no.	
☐	☑	☐	11. VOA samples filled completely, comment if no.	
☐	☑	☐	12. VOA bottles preserved, check for labels.	
	☐	☑	13. Did samples require preservation with sodium thiosulfate?	
☐	☐	☑	14. If yes to #12, did the samples contain residual chlorine?	
☐	☐	☑	15. Sediment present in "D," dissolved, bottles.	
	☐	☑	16. Are analyses with short holding times requested?	
☐	☐	☑	17. Is extra sample volume provided for MS, MSD or matrix duplicates?	
	☐	☑	18. Multiphase samples present? If yes, comment below.	
	☐	☑	19. Any subsampling for volatiles? If yes, list samples.	
			PHOTOGRAPH MULTIPHASE SAMPLES	
☐	☐	☐	20. Clear picture taken, labeled, and stapled to project folder.	
☐	☐	☐	21. Subcontract COC signed and sent with samples to bottle prep?	
	☐	☐	22. Was sample labeling double checked?	

Comments: Include action taken to resolve discrepancies/problems. Include a hard copy of e-mail or use extra paper if more space is needed.

Initials:

Revision 4 6/26/98

APPENDIX IV
Data Quality Assessment

1.0 DATA QUALITY ASSESSMENT SUMMARY

Groundwater samples were collected during the June and December 1998 sampling events at Cannon Air Force base. Samples were collected from the following monitoring wells as part of the Long-term Monitoring Program (LTMP).

Well Designation	Locative Downgradient of Landfill	Frequency
N	3	Annual[1]
O	4	Annual[1]
R	25	Semi-Annual[2]

[1] Annual - December
[2] Semi-Annual – June and December

Quanterra Environmental Services in Arvada, Colorado performed the laboratory analysis of groundwater samples. Each of the three samples were analyzed by the following methods as identified in the quality assurance project plan (QAPP)

- SW8260A, volatile organic compounds (VOCs)
- SW8270B, semi-volatile organic compounds (SVOCs)
- SW8151A, herbicides
- SW8081A, organochlorine pesticides
- SW8082, polychlorinated biphenyls (PCBs)
- SW8140, organophosphorus pesticides
- SW6010A/6020, metals
- SW7470, mercury
- EPA 300.0A, nitrate
- EPA 420.2, phenols
- EPA 375.4, sulfate
- EPA 325.3, chloride

FEC performed a data review and validation by applying the quality control (QC) limits as defined in the QAPP. The data validation consisted of a review holding times, method blanks, field blanks, field duplicates, surrogate spikes, matrix spike/matrix spike duplicate (MS/MSD), laboratory control samples (LCS), and a case narrative review including sample receipt forms and custody. The validation guidelines from the National Functional Guidelines for Organic Data Review (EPA, 1994a) and the National Functional Guidelines for Inorganic Data Review (EPA, 1994b) were used as a reference to define the validation criteria.

1.1 QUALITY ASSESSMENT SUMMARY

Accuracy and precision are in control and are considered acceptable. Samples were collected and analyzed as specified in the QAPP and the SAP. Sampling procedures and laboratory analytical methods are comparable with previous investigations performed by FEC.

Sample results associated with non-compliant QC data are qualified in accordance with the QAPP. Sample results flagged as estimated (UJ, or J1), and used in accordance with the data validation qualifiers applied are usable for the intended project purposes. Data flags used in the data validation are defined in Table 1. A summary of qualified sample results are presented in Table 2. Results of data validation are presented in the following sections.

1.2 SW8260, VOC

There were no problems encountered during the sample analyses for VOCs. These data are fully usable for project purposes.

1.3 SW8270, SVOC

Due to an instrument failure, the extraction holding time for all samples was exceeded by one day. All targets compounds in each sample have been qualified as estimated concentrations. Results are fully usable for the project purposes.

Diethyl phthalate was detected in the method blank associated to the samples. However, there was no diethyl phthalate detected in the sample results and therefore, no impact to the data.

1.4 SW8081A, ORGANOCHLORINE PESTICIDES

There were no problems encountered during the sample analyses for organochlorine pesticides. Data are fully usable for project purposes.

1.5 SW8140, ORGANOPHOSPHORUS PESTICIDES

Phorate and diazinon LCS concentrations were higher than the upper control limit. Because all results in the samples were non-detections for these compounds, and the out-of-control LCS represents a high bias condition, no results were qualified. Data are fully usable for project purposes.

One of the two surrogates for each sample was slightly out-of-control with a low bias. Because the additional surrogate was in control, no results were qualified. Data are fully usable for project purposes.

1.6 SW8151A, HERBICIDES

2,4-D LCS concentrations were higher than the upper control limit. Because all results in the samples were non-detections for 2,4-D, and the out-of-control LCS represents a high bias condition, no results were qualified. Data are fully usable for project purposes.

1.7 SW8082, PCB

There were no problems encountered during the sample analyses for PCB's. Data are fully usable for project purposes.

1.8 SW6010A/6020 METALS AND SW7470A MERCURY

Sodium and potasium were detected the method blank associated with samples at trace level concentrations. Sample concentrations of soduim and potasium are significantly greater than the blank concentration and have not been qualified. Method blank contamination did not impact the sample results. Data are usable for project purposes.

1.9 EPA 300.0A, 375.4, 325.3 AND 420.2

Due to an instrument failure, the holding time for nitrate in all samples was exceeded by one day. Each sample has been qualified as an estimated concentration. Results are fully usable for the project purposes.

1.10 BLIND DUPLICATE PRECISION

Field sampling precision was determined from the results of a blind duplicate sample. Sample CAFB-MWR-1298-2 is a blind duplicate of CAFB-MWR-1298-1. Overall field duplicate precision is in control. A summary of the field duplicate results is provided in Table 3.

Table 1. Data Flag Definition

Qualifier	Description
J1	The analyte was positively identified and the associated numerical value is greater than the MDL but less than the PRL. The result is considered to be qualitative.
UJ<	The compound was analyzed but not detected at or above the MDL. The associated numerical value is an estimation with a low bias.

Table 2. Summary of Qualified Sample Results

Field Sample ID	Method	Analyte	Result	Units	Holding Time Exceedence
CAFB-MWN-1298-1	E300	Nitrate	2.3 UJ<	MG/L	UJ<
CAFB-MWN-1298-1	SW8270	All Analytes	ND	UG/L	UJ<
CAFB-MWO-1298-1	E300	Nitrate	8.4 UJ<	MG/L	UJ<
CAFB-MWO-1298-1	SW8270	All Analytes	ND	UG/L	UJ<
CAFB-MWR-1298-1	E300	Nitrate	4.5 UJ<	MG/L	UJ<
CAFB-MWR-1298-1	SW8270	All Analytes	ND	UG/L	UJ<
CAFB-MWR-1298-2	E300	Nitrate	4.6 UJ<	MG/L	UJ<
CAFB-MWR-1298-2	SW8270	All Analytes	ND	UG/L	UJ<
CAFB-MWO-1298-1	SW8260	Carbon Tetrachloride	0.28 J1	UG/L	J1
CAFB-MWO-1298-1	SW8260	Chloroform	0.24 J1	UG/L	J1
CAFB-MWR-1298-1	SW6010	Copper	3.3 J1	UG/L	J1
CAFB-MWR-1298-1	SW8260	Trichloroethene	0.11 J1	UG/L	J1
CAFB-MWR-1298-1	SW8260	Chloroform	0.17 J1	UG/L	J1
CAFB-MWR-1298-2	SW6010	Copper	11.1 J1	UG/L	J1
CAFB-MWR-1298-2	SW8081A	4,4'-DDD	0.046 J1	UG/L	J1
CAFB-MWR-1298-2	SW8260	Chloroform	0.17 J1	UG/L	J1

J1 = estimated qualitative detection between the MDL and RL
ND = not detected
UG/L = micrograms per liter
UJ< = estimated non-detected concentration with a low bias due to exceeded quality control criteria

Table 3. Summary of Primary and Duplicate Detected Analyte Results

Analyte	Primary Sample CAFB-MWR-1298-1	Duplicate Sample CAFB-MWR-1298-2	Relative Percent Difference
4,4'-DDD	ND	0.046	Not Calculated
Barium	58.2	57.2	1.2
Calcium	59300	58000	1.5
Chloride	142	124	8.8
Chloroform	0.17	0.17	0
Chromium	148	148	0
Copper	3.3	11.1	88
Iron	755	1010	20
Magnesium	62900	61700	1.3
Manganese	87.9	99.8	8.6
Methylene Chloride	1.7	1.3	17
Nickel	381	460	13
Nitrate	4.5	4.6	1.5
Potassium	8590	8380	1.6
Sodium	43600	42900	1.1
Sulfate	144	150	2.7
Trichloroethene	0.11	ND	Not Calculated
Vanadium	13.1	12.3	4.2

ND = not detected