FRONTIER
ANALYTICAL LABORATORY

September 3, 2003

Mr. Bruce Lewis
ERM West
2525 Natomas Park Drive, Suite 350
Sacramento, CA 95833

Dear Mr. Lewis,

Enclosed are the results for Frontier Analytical Laboratory project **2199.** This corresponds to your work order number **1120**. The four soil samples received on 8/20/03 were extracted and analyzed by EPA Method 8290 for tetra through octa chlorinated dibenzo dioxins and furans. ERM West requested a turnaround time of ten (10) business days for project **2199**. Frontier Analytical Laboratory successfully fulfilled this request.

The following report consists of an Analytical Data section, a Sample Receipt section, a Laboratory Raw Data section, and an Instrument Raw Data section. The Analytical Data section contains the project-sample tracking log, a qualifier reference guide, ML/MDL reference form and the analytical results. The Sample Receipt section contains your original chain of custody, the sample login form and a sample photo. The Laboratory Raw Data section contains all of the bench paperwork; project request sheet, percent solids determination sheet, extraction bench sheet, and the cleanup bench sheet. The Instrument Raw Data section contains two subsections; Initial Calibration Results and the Continuing Calibration Results. The Initial Calibration Results consists of all quantitation results, run logs, resolution checks, and chromatograms for the calibration curve. The Continuing Calibration Results consists of all the quantitation results, run logs, resolution checks, and chromatograms for every beginning and ending calibration standard. We have also included a compact disk (CD) that contains all of the above information in PDF.

Thank you for choosing Frontier Analytical Laboratory for your analytical needs. If you have any questions regarding this project, please feel free to contact me at (916) 934-0900.

Sincerely,

Bradley B. Silverbush
Director of Operations

FRONTIER ANALYTICAL LABORATORY
5172 Hillsdale Circle • El Dorado Hills, CA 95762
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Frontier Analytical Laboratory

Sample Tracking Log

FAL Project ID: **2199**

Received on: **08/20/2003** Project Due: **09/04/2003** Storage: **R1**

FAL Sample ID	Dup	Client Project ID	Client Sample ID	Requested Method	Matrix	Sampling Date	Sampling Time	Hold Time Due Date
2199-001-SA	0	Aerojet	C4-SNS03	EPA 8290 D/F	Soil	08/20/2003	10:25 am	09/19/2003
2199-002-SA	0	Aerojet	C4-SNS04	EPA 8290 D/F	Soil	08/20/2003	10:40 am	09/19/2003
2199-003-SA	0	Aerojet	C4-SNS05	EPA 8290 D/F	Soil	08/20/2003	10:50 am	09/19/2003
2199-004-SA	0	Aerojet	C4-SNS06	EPA 8290 D/F	Soil	08/20/2003	11:00 am	09/19/2003

FRONTIER ANALYTICAL LABORATORY

Qualifier Reference Guide

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J‡	Analyte concentration is below calibration range
M	Maximum possible concentration
NP	Not Provided
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection
-	Analyte Not Detected

‡ "J" values are equivalent to DNQ (detected but not qualified) for California Toxics Rule (CTR)/National Pollutant Discharge Elimination System (NPDES) samples

EPA Method 1613/8290 Solid MDL
(Sox/SDS Extraction)

FRONTIER ANALYTICAL LABORATORY

Analyte	ML	MDL
2,3,7,8-TCDD	0.500	0.132
1,2,3,7,8-PeCDD	2.50	0.223
1,2,3,4,7,8-HxCDD	2.50	0.346
1,2,3,6,7,8-HxCDD	2.50	0.381
1,2,3,7,8,9-HxCDD	2.50	0.343
1,2,3,4,6,7,8-HpCDD	2.50	0.318
OCDD	5.00	1.20
2,3,7,8-TCDF	0.500	0.100
1,2,3,7,8-PeCDF	2.50	0.232
2,3,4,7,8-PeCDF	2.50	0.217
1,2,3,4,7,8-HxCDF	2.50	0.114
1,2,3,6,7,8-HxCDF	2.50	0.106
1,2,3,7,8,9-HxCDF	2.50	0.117
2,3,4,6,7,8-HxCDF	2.50	0.147
1,2,3,4,6,7,8-HpCDF	2.50	0.140
1,2,3,4,7,8,9-HpCDF	2.50	0.155
OCDF	5.00	0.498

Project **1370**, Extracted 11/04/02; analyzed 11/08/02. Based on 10g sample, pg/g.

EPA Method 8290
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 2199-001-MB | Date Extracted: 8/25/03 | ICal: PCDDFAL1-6-13 | Acquired: 2-SEP-03
Client ID: Method Blank | Date Received: NA | GC Column: DB5
Matrix: Soil | Amount: 10.00 g | Units: pg/g | WHO TEQ: 0.00
Batch No.: 0079 | % Solids: NA

Compound	Conc	DL	Qual	WHO Tox	Compound	Conc	DL	Qual	#Hom
2,3,7,8-TCDD	-	0.158		-					
1,2,3,7,8-PeCDD	-	0.229		-					
1,2,3,4,7,8-HxCDD	-	0.376		-					
1,2,3,6,7,8-HxCDD	-	0.412		-	Total Tetra-Dioxins	-	0.158		0
1,2,3,7,8,9-HxCDD	-	0.374		-	Total Penta-Dioxins	-	0.844		0
1,2,3,4,6,7,8-HpCDD	-	0.327		-	Total Hexa-Dioxins	-	0.412		0
OCDD	-	0.781		-	Total Hepta-Dioxins	-	0.327		0
2,3,7,8-TCDF	-	0.112		-					
1,2,3,7,8-PeCDF	-	0.249		-					
2,3,4,7,8-PeCDF	-	0.265		-					
1,2,3,4,7,8-HxCDF	-	0.145		-					
1,2,3,6,7,8-HxCDF	-	0.169		-					
2,3,4,6,7,8-HxCDF	-	0.204		-					
1,2,3,7,8,9-HxCDF	-	0.233		-	Total Tetra-Furans	-	0.112		0
1,2,3,4,6,7,8-HpCDF	-	0.162		-	Total Penta-Furans	-	0.413		0
1,2,3,4,7,8,9-HpCDF	-	0.152		-	Total Hexa-Furans	-	0.233		0
OCDF	-	0.471		-	Total Hepta-Furans	-	0.162		0

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	119	40.0 - 135	
13C-1,2,3,7,8-PeCDD	125	40.0 - 135	
13C-1,2,3,4,7,8-HxCDD	101	40.0 - 135	
13C-1,2,3,6,7,8-HxCDD	104	40.0 - 135	
13C-1,2,3,4,6,7,8-HpCDD	110	40.0 - 135	
13C-OCDD	102	40.0 - 135	
13C-2,3,7,8-TCDF	120	40.0 - 135	
13C-1,2,3,7,8-PeCDF	119	40.0 - 135	
13C-2,3,4,7,8-PeCDF	117	40.0 - 135	
13C-1,2,3,4,7,8-HxCDF	102	40.0 - 135	
13C-1,2,3,6,7,8-HxCDF	104	40.0 - 135	
13C-2,3,4,6,7,8-HxCDF	103	40.0 - 135	
13C-1,2,3,7,8,9-HxCDF	116	40.0 - 135	
13C-1,2,3,4,6,7,8-HpCDF	107	40.0 - 135	
13C-1,2,3,4,7,8,9-HpCDF	135	40.0 - 135	
13C-OCDF	108	40.0 - 135	

Cleanup Surrogate		
37Cl-2,3,7,8-TCDD	105	40.0 - 135

Analyst: _____
Date: 9/3/03

Reviewed by: _____
Date: 9/3/03

EPA Method 8290
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 2199-001-OPR | Date Extracted: 8/25/03 | ICal: PCDDFAL1-6-13 | Acquired: 2-SEP-03
Client ID: OPR | Date Received: NA | GC Column: DB5
Matrix: Soil | Amount: 10.00 g | Units: ng/mL | WHO TEQ: NA
Batch No.: 0079

Compound	Conc	QC Limits
2,3,7,8-TCDD	7.86	7.00 - 13.0
1,2,3,7,8-PeCDD	43.5	35.0 - 65.0
1,2,3,4,7,8-HxCDD	42.9	35.0 - 65.0
1,2,3,6,7,8-HxCDD	43.0	35.0 - 65.0
1,2,3,7,8,9-HxCDD	44.1	35.0 - 65.0
1,2,3,4,6,7,8-HpCDD	40.9	35.0 - 65.0
OCDD	84.5	70.0 - 130
2,3,7,8-TCDF	7.78	7.00 - 13.0
1,2,3,7,8-PeCDF	43.4	35.0 - 65.0
2,3,4,7,8-PeCDF	43.8	35.0 - 65.0
1,2,3,4,7,8-HxCDF	43.9	35.0 - 65.0
1,2,3,6,7,8-HxCDF	45.7	35.0 - 65.0
2,3,4,6,7,8-HxCDF	45.8	35.0 - 65.0
1,2,3,7,8,9-HxCDF	44.9	35.0 - 65.0
1,2,3,4,6,7,8-HpCDF	46.2	35.0 - 65.0
1,2,3,4,7,8,9-HpCDF	47.6	35.0 - 65.0
OCDF	91.8	70.0 - 130

Internal Standards	% Rec	QC Limits
13C-2,3,7,8-TCDD	118	40.0 - 135
13C-1,2,3,7,8-PeCDD	117	40.0 - 135
13C-1,2,3,4,7,8-HxCDD	97.2	40.0 - 135
13C-1,2,3,6,7,8-HxCDD	101	40.0 - 135
13C-1,2,3,4,6,7,8-HpCDD	107	40.0 - 135
13C-OCDD	101	40.0 - 135
13C-2,3,7,8-TCDF	114	40.0 - 135
13C-1,2,3,7,8-PeCDF	110	40.0 - 135
13C-2,3,4,7,8-PeCDF	108	40.0 - 135
13C-1,2,3,4,7,8-HxCDF	100.0	40.0 - 135
13C-1,2,3,6,7,8-HxCDF	101	40.0 - 135
13C-2,3,4,6,7,8-HxCDF	98.5	40.0 - 135
13C-1,2,3,7,8,9-HxCDF	112	40.0 - 135
13C-1,2,3,4,6,7,8-HpCDF	100	40.0 - 135
13C-1,2,3,4,7,8,9-HpCDF	133	40.0 - 135
13C-OCDF	104	40.0 - 135

Cleanup Surrogate		
37Cl-2,3,7,8-TCDD	108	40.0 - 135

Analyst: _____
Date: 9/3/03

Reviewed by: _____
Date: 9/3/03

EPA Method 8290
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 2199-001-SA | Date Extracted: 8/25/03 | ICal: PCDDFAL1-6-13 | Acquired: 2-SEP-03
Client ID: C4-SNS03 | Date Received: 8/20/03 | GC Column: DB5
Matrix: Soil | Amount: 10.07 g | Units: pg/g | WHO TEQ: 0.144
Batch No.: 0079 | % Solids: 99.2

Compound	Conc	DL	Qual	WHO Tox	Compound	Conc	DL	Qual	#Hom
2,3,7,8-TCDD	-	0.114		-					
1,2,3,7,8-PeCDD	-	0.215		-					
1,2,3,4,7,8-HxCDD	-	0.288		-					
1,2,3,6,7,8-HxCDD	-	0.560		-	Total Tetra-Dioxins	-	0.139		0
1,2,3,7,8,9-HxCDD	-	0.509		-	Total Penta-Dioxins	-	0.549		0
1,2,3,4,6,7,8-HpCDD	9.71	-		0.0971	Total Hexa-Dioxins	2.13	-	J	2
OCDD	82.1	-		0.00821	Total Hepta-Dioxins	18.3	-		2
2,3,7,8-TCDF	-	0.104		-					
1,2,3,7,8-PeCDF	-	0.201		-					
2,3,4,7,8-PeCDF	-	0.213		-					
1,2,3,4,7,8-HxCDF	-	0.119		-					
1,2,3,6,7,8-HxCDF	-	0.157		-					
2,3,4,6,7,8-HxCDF	-	0.163		-					
1,2,3,7,8,9-HxCDF	-	0.101		-	Total Tetra-Furans	-	0.118		0
1,2,3,4,6,7,8-HpCDF	3.80	-		0.0380	Total Penta-Furans	0.407	-	J	1
1,2,3,4,7,8,9-HpCDF	-	0.330		-	Total Hexa-Furans	2.69	-		3
OCDF	10.9	-		0.00109	Total Hepta-Furans	10.3	-		2

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	116	40.0 - 135	
13C-1,2,3,7,8-PeCDD	121	40.0 - 135	
13C-1,2,3,4,7,8-HxCDD	101	40.0 - 135	
13C-1,2,3,6,7,8-HxCDD	104	40.0 - 135	
13C-1,2,3,4,6,7,8-HpCDD	111	40.0 - 135	
13C-OCDD	97.5	40.0 - 135	
13C-2,3,7,8-TCDF	112	40.0 - 135	
13C-1,2,3,7,8-PeCDF	116	40.0 - 135	
13C-2,3,4,7,8-PeCDF	111	40.0 - 135	
13C-1,2,3,4,7,8-HxCDF	102	40.0 - 135	
13C-1,2,3,6,7,8-HxCDF	100	40.0 - 135	
13C-2,3,4,6,7,8-HxCDF	103	40.0 - 135	
13C-1,2,3,7,8,9-HxCDF	107	40.0 - 135	
13C-1,2,3,4,6,7,8-HpCDF	103	40.0 - 135	
13C-1,2,3,4,7,8,9-HpCDF	133	40.0 - 135	
13C-OCDF	100	40.0 - 135	

Cleanup Surrogate		
37Cl-2,3,7,8-TCDD	107	40.0 - 135

Analyst: _____
Date: 9/3/03

Reviewed by: _____
Date: 9/3/03

EPA Method 8290
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 2199-002-SA | Date Extracted: 8/25/03 | ICal: PCDDFAL1-6-13 | Acquired: 2-SEP-03
Client ID: C4-SNS04 | Date Received: 8/20/03 | GC Column: DB5
Matrix: Soil | Amount: 10.03 g | Units: pg/g | WHO TEQ: 0.0582
Batch No.: 0079 | % Solids: 99.1

Compound	Conc	DL	Qual	WHO Tox	Compound	Conc	DL	Qual	#Hom
2,3,7,8-TCDD	-	0.139		-					
1,2,3,7,8-PeCDD	-	0.205		-					
1,2,3,4,7,8-HxCDD	-	0.375		-					
1,2,3,6,7,8-HxCDD	-	0.413		-	Total Tetra-Dioxins	-	0.139		0
1,2,3,7,8,9-HxCDD	-	0.374		-	Total Penta-Dioxins	-	0.589		0
1,2,3,4,6,7,8-HpCDD	3.60	-		0.0360	Total Hexa-Dioxins	-	0.594		0
OCDD	23.3	-		0.00233	Total Hepta-Dioxins	6.83	-		2
2,3,7,8-TCDF	-	0.127		-					
1,2,3,7,8-PeCDF	-	0.241		-					
2,3,4,7,8-PeCDF	-	0.252		-					
1,2,3,4,7,8-HxCDF	-	0.0960		-					
1,2,3,6,7,8-HxCDF	-	0.126		-					
2,3,4,6,7,8-HxCDF	-	0.142		-					
1,2,3,7,8,9-HxCDF	-	0.173		-	Total Tetra-Furans	-	0.127		0
1,2,3,4,6,7,8-HpCDF	1.94	-	J	0.0194	Total Penta-Furans	-	0.405		0
1,2,3,4,7,8,9-HpCDF	-	0.154		-	Total Hexa-Furans	0.855	-	J	2
OCDF	4.69	-	J	0.000469	Total Hepta-Furans	4.61	-		2

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	112	40.0 - 135	
13C-1,2,3,7,8-PeCDD	123	40.0 - 135	
13C-1,2,3,4,7,8-HxCDD	98.1	40.0 - 135	
13C-1,2,3,6,7,8-HxCDD	102	40.0 - 135	
13C-1,2,3,4,6,7,8-HpCDD	107	40.0 - 135	
13C-OCDD	95.9	40.0 - 135	
13C-2,3,7,8-TCDF	111	40.0 - 135	
13C-1,2,3,7,8-PeCDF	111	40.0 - 135	
13C-2,3,4,7,8-PeCDF	109	40.0 - 135	
13C-1,2,3,4,7,8-HxCDF	98.1	40.0 - 135	
13C-1,2,3,6,7,8-HxCDF	103	40.0 - 135	
13C-2,3,4,6,7,8-HxCDF	101	40.0 - 135	
13C-1,2,3,7,8,9-HxCDF	112	40.0 - 135	
13C-1,2,3,4,6,7,8-HpCDF	104	40.0 - 135	
13C-1,2,3,4,7,8,9-HpCDF	131	40.0 - 135	
13C-OCDF	98.5	40.0 - 135	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	100	40.0 - 135	

Analyst: _____
Date: 9/3/03

Reviewed by: _____
Date: 9/3/03

EPA Method 8290
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 2199-003-SA | Date Extracted: 8/25/03 | ICal: PCDDFAL1-6-13 | Acquired: 2-SEP-03
Client ID: C4-SNS05 | Date Received: 8/20/03 | GC Column: DB5
Matrix: Soil | Amount: 10.02 g | Units: pg/g | WHO TEQ: 0.236
Batch No.: 0079 | % Solids: 96.0

Compound	Conc	DL	Qual	WHO Tox	Compound	Conc	DL	Qual	#Hom
2,3,7,8-TCDD	-	0.149		-					
1,2,3,7,8-PeCDD	-	0.265		-					
1,2,3,4,7,8-HxCDD	-	0.287		-					
1,2,3,6,7,8-HxCDD	0.646	-	J	0.0646	Total Tetra-Dioxins	-	0.149		0
1,2,3,7,8,9-HxCDD	-	0.356		-	Total Penta-Dioxins	-	0.614		0
1,2,3,4,6,7,8-HpCDD	10.8	-		0.108	Total Hexa-Dioxins	3.38	-		3
OCDD	58.9	-		0.00589	Total Hepta-Dioxins	18.6	-		2
2,3,7,8-TCDF	-	0.165		-					
1,2,3,7,8-PeCDF	-	0.391		-					
2,3,4,7,8-PeCDF	-	0.394		-					
1,2,3,4,7,8-HxCDF	-	0.201	*	-					
1,2,3,6,7,8-HxCDF	-	0.255	*	-					
2,3,4,6,7,8-HxCDF	0.447	-	J	0.0447					
1,2,3,7,8,9-HxCDF	-	0.122		-	Total Tetra-Furans	1.13	-		3
1,2,3,4,6,7,8-HpCDF	1.24	-	J	0.0124	Total Penta-Furans	2.22	-	J	3
1,2,3,4,7,8,9-HpCDF	-	0.0991		-	Total Hexa-Furans	4.40	-	J,*	3
OCDF	1.33	-	J	0.000133	Total Hepta-Furans	2.44	-	J	2

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	118	40.0 - 135	
13C-1,2,3,7,8-PeCDD	129	40.0 - 135	
13C-1,2,3,4,7,8-HxCDD	89.7	40.0 - 135	
13C-1,2,3,6,7,8-HxCDD	99.4	40.0 - 135	
13C-1,2,3,4,6,7,8-HpCDD	103	40.0 - 135	
13C-OCDD	92.4	40.0 - 135	
13C-2,3,7,8-TCDF	118	40.0 - 135	
13C-1,2,3,7,8-PeCDF	121	40.0 - 135	
13C-2,3,4,7,8-PeCDF	120	40.0 - 135	
13C-1,2,3,4,7,8-HxCDF	117	40.0 - 135	*
13C-1,2,3,6,7,8-HxCDF	120	40.0 - 135	*
13C-2,3,4,6,7,8-HxCDF	89.7	40.0 - 135	
13C-1,2,3,7,8,9-HxCDF	108	40.0 - 135	
13C-1,2,3,4,6,7,8-HpCDF	94.1	40.0 - 135	
13C-1,2,3,4,7,8,9-HpCDF	134	40.0 - 135	
13C-OCDF	99.5	40.0 - 135	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	107	40.0 - 135	

Analyst: _____ Date: 9/3/03

Reviewed by: _____ Date: 9/8/03

EPA Method 8290
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 2199-004-SA | Date Extracted: 8/25/03 | ICal: PCDDFAL1-6-13 | Acquired: 2-SEP-03
Client ID: C4-SNS06 | Date Received: 8/20/03 | GC Column: DB5
Matrix: Soil | Amount: 10.06 g | Units: pg/g | WHO TEQ: 0.459
Batch No.: 0079 | % Solids: 98.9

Compound	Conc	DL	Qual	WHO Tox	Compound	Conc	DL	Qual	#Hom
2,3,7,8-TCDD	-	0.154		-					
1,2,3,7,8-PeCDD	-	0.359		-					
1,2,3,4,7,8-HxCDD	-	0.377		-					
1,2,3,6,7,8-HxCDD	0.893	-	J	0.0893	Total Tetra-Dioxins	-	0.154		0
1,2,3,7,8,9-HxCDD	0.641	-	J	0.0641	Total Penta-Dioxins	-	0.828		0
1,2,3,4,6,7,8-HpCDD	17.4	-		0.174	Total Hexa-Dioxins	5.70	-		4
OCDD	142	-		0.0142	Total Hepta-Dioxins	35.7	-		2
2,3,7,8-TCDF	-	0.165		-					
1,2,3,7,8-PeCDF	-	0.254		-					
2,3,4,7,8-PeCDF	-	0.356		-					
1,2,3,4,7,8-HxCDF	-	0.162		-					
1,2,3,6,7,8-HxCDF	-	0.180		-					
2,3,4,6,7,8-HxCDF	0.558	-	J	0.0558					
1,2,3,7,8,9-HxCDF	-	0.263		-	Total Tetra-Furans	1.75	-		3
1,2,3,4,6,7,8-HpCDF	5.89	-		0.0589	Total Penta-Furans	4.22	-		4
1,2,3,4,7,8,9-HpCDF	-	0.213		-	Total Hexa-Furans	6.87	-		4
OCDF	18.9	-		0.00189	Total Hepta-Furans	16.1	-		2

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	109	40.0 - 135	
13C-1,2,3,7,8-PeCDD	118	40.0 - 135	
13C-1,2,3,4,7,8-HxCDD	95.6	40.0 - 135	
13C-1,2,3,6,7,8-HxCDD	99.5	40.0 - 135	
13C-1,2,3,4,6,7,8-HpCDD	107	40.0 - 135	
13C-OCDD	102	40.0 - 135	
13C-2,3,7,8-TCDF	112	40.0 - 135	
13C-1,2,3,7,8-PeCDF	109	40.0 - 135	
13C-2,3,4,7,8-PeCDF	113	40.0 - 135	
13C-1,2,3,4,7,8-HxCDF	98.0	40.0 - 135	
13C-1,2,3,6,7,8-HxCDF	101	40.0 - 135	
13C-2,3,4,6,7,8-HxCDF	103	40.0 - 135	
13C-1,2,3,7,8,9-HxCDF	108	40.0 - 135	
13C-1,2,3,4,6,7,8-HpCDF	106	40.0 - 135	
13C-1,2,3,4,7,8,9-HpCDF	135	40.0 - 135	
13C-OCDF	106	40.0 - 135	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	100.0	40.0 - 135	

Analyst: _____
Date: 9/3/03

Reviewed by: _____
Date: 9/3/03

2199 / 3°C

GENCORP AEROJET

Chain of Custody Record

№ 1120

E.T.R. NO:	WORK ORDER NO:
SOURCE SITE NO:	AUGER HOLE NO:
SAMPLERS (SIGNATURE)	

COC SAMPLE ID	FIELD SAMPLE NO.	DEPTH (FT.)	DATE MM/DD/YY	TIME	TYPE OF CONTAINER	# OF SAMPLE CONTAINERS	SOIL TYPE (USCS CODE)	VOLATILE ORGANICS EPA 8240	BNA's EPA 8270	METALS EPA 6010	PERCHLORATE EDL-SW-006	DIOXINS (8290)	FURANS				LABORATORY QA/QC	REMARKS
1120 A	C4-SNS03	~~0.5~~	08/20/03	1025	2"x3" BRASS	1						X	X					
1120 B	C4-SNS04	~~0~~	08/20/03	1040	X	1						X	X					
1120 C	C4-SNS05	~~0~~	08/20/03	1050	"	1						X	X					
1120 D	C4-SNS06	~~0~~	08/20/03	1100	"	1						X	X					
1120 E			/ /															
1120 F			/ /															
1120 G			/ /															
1120 H			/ /															
1120 I			/ /															
1120 J			/ /															
1120 K			/ /															
1120 L			/ /															
1120 M			/ /															
1120 N			/ /															
1120 O			/ /															
1120 P			/ /															
1120 Q			/ /															
TOTALS																		

RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	TOTAL NO. OF SAMPLE CONTAINERS:
	8/20/03 1602	Dan Vickers (Dan Vickers) 8/20/03 1602	4
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	METHOD OF SHIPMENT: HAND DELIVERY
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY LABORATORY BY: (SIGNATURE)	LABORATORY DELIVERED TO: FRONTIER ANALYTICAL EL DORADO HILLS, CA

COMMENTS:

ORIGINAL – ENVIRONMENTAL OPERATIONS: *WHITE* 2ND COPY – LABORATORY: *YELLOW* 3RD COPY – SAMPLER: *PINK*

7.67.35 v. 4

Frontier Analytical Laboratory

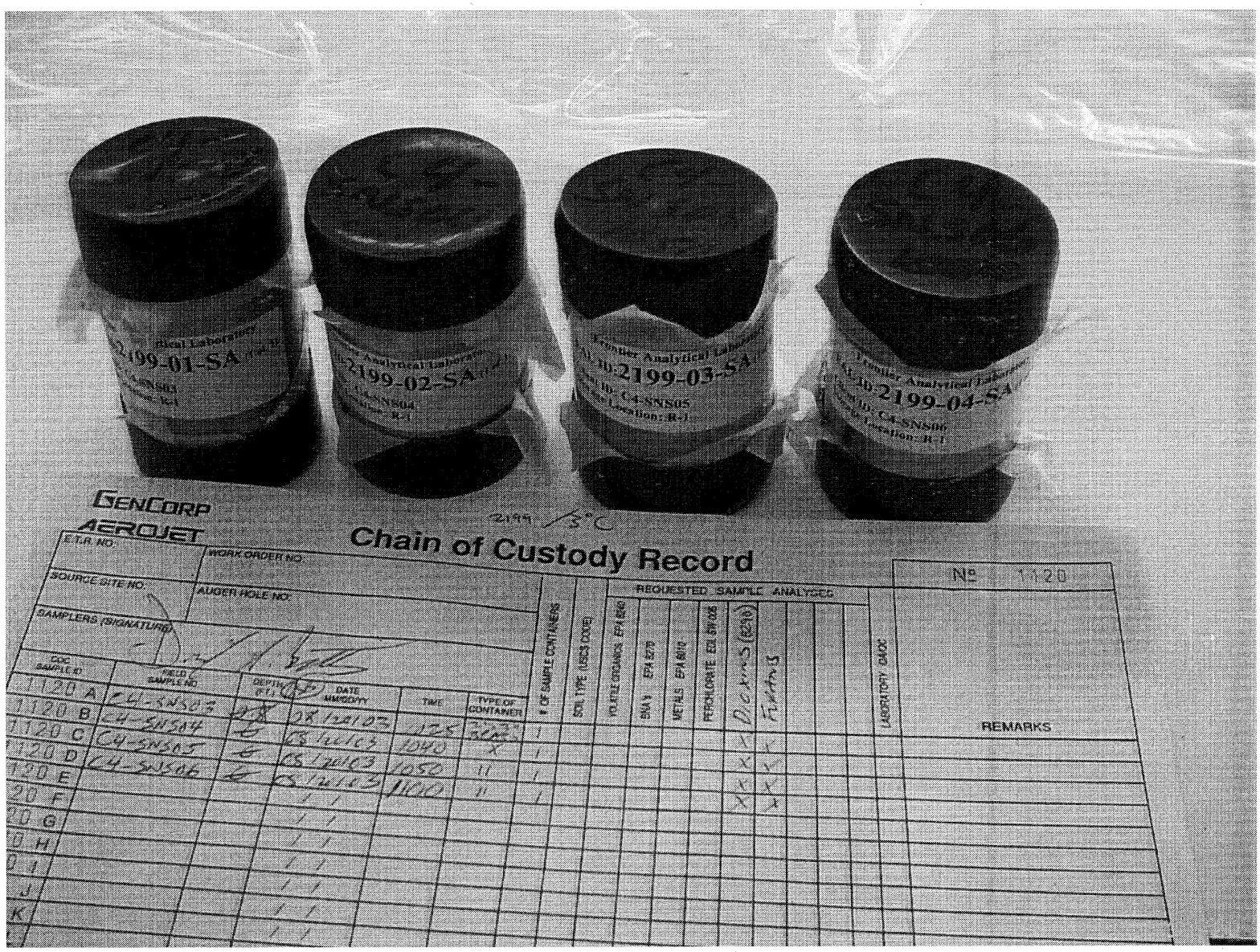
Sample Login Form

FAL Project ID: **2199**

Client:	ERM West
Client Project ID:	Aerojet
Date Received:	08/20/2003
Time Received:	04:02 pm
Received By:	DV
# of Samples Received:	4
Duplicates:	0
Storage Location:	R1

Method of Delivery:	Courier
Tracking Number:	
Shipping Container Received Intact	Yes
Custody seals(s) present?	No
Custody seals(s) intact?	No
Sample Arrival Temperature (C)	3
Cooling Method	Blue Ice
Chain Of Custody Present?	Yes
Return Shipping Container To Client	Yes
Test for residual Chlorine	No
Thiosulfate Added	No
Earliest Sample Hold Time Expiration	09/19/2003
Adequate Sample Volume	Yes
Anomalies or additional comments:	

FRONTIER
ANALYTICAL LABORATORY



CDC SAMPLE ID	FIELD SAMPLE NO.	DEPTH (FT.)	DATE MM/DD/YY	TIME	TYPE OF CONTAINER	# OF SAMPLE CONTAINERS	SOIL TYPE (USCS CODE)	VOLATILE ORGANICS EPA 8240	BNA's EPA 8270	METALS EPA 6010	PERCHLORATE EOL SW-006	Dioxins (8290)	Furans				LABORATORY QA/QC	REMARKS
1120 A	C4-SNS03		08/20/03	1025	2 x 2 x 3	1						X	X					
1120 B	C4-SNS04		08/20/03	1040	X	1						X	X					
1120 C	C4-SNS05		08/20/03	1050	"	1						X	X					
1120 D	C4-SNS06		08/20/03	1100	"	1						X	X					
1120 E			/ /															
1120 F			/ /															
1120 G			/ /															
1120 H			/ /															
1120 I			/ /															
1120 J			/ /															
1120 K			/ /															