FS0083-Field

0052065 053198

Environmental Restoration Contractor **ERC Team**

Interoffice Memorandum

Job No. 22192
Written Response Required NO
Due Date N/A
Addressee N/A
Closes CCN N/A
OU 300-FF-1
TSD N/A
ERA N/A
Subject Code 8660

NOV 1997 RECEIVED Data Log In

TO: J. A. Lerch, L6-06

DATE: November 20, 1997

COPIES: See Distribution

FROM: I. D. Jacques
Analytical Services
L6-06/373-1674

SUBJECT: **300-FF-1 FIELD SCREENING RESULTS, JUNE THROUGH SEPTEMBER 1997, REV 0**

REF:

1. BHI, 1997, *300-FF-1 Field Sampling Activities Implementation Instructions*, 300-FF-1 DI-03, REV 1, Bechtel Hanford, Inc., Richland, Washington.

2. BHI, 1996, *On-Site Measurements Quality Assurance Plan*, BHI-00852, REV 0, Bechtel Hanford, Inc., Richland, Washington.

3. BHI, 1995b, *Field Screening Procedures*, BHI-EE-05, Bechtel Hanford, Inc., Richland, Washington.

This data package contains field screening results for soil samples analyzed to support the 300-FF-1 Soil Remediation Project. The samples were managed under the following SAFs: B97-120, B97-129, B97-133, B97-136, and B97-160. The results are organized and reported by SAF.

The total-metals results were generated using a Metorex X-Met 920 X-Ray Fluorescence (XRF) analyzer operated in accordance with Field Screening Procedure 1.31, "*X-Met 920 XRF Analyzer*." (BHI 1995b). Information concerning calibration and operation of the XRF analyzer is contained in the instrument logbook EL-1386. The Quality Assurance level for this work corresponds to QA-2 as specified in the reference 1 (BHI 1996).

The total Volatile Organic Compound (VOC) results were generated using a Foxboro Organic Vapor Analyzer (OVA) 128 operated in accordance with the manufacturer's instructions. Information concerning operation of the OVA 128 instrument is contained in the instrument logbook EL-1263. The Quality Assurance level for this work corresponds to QA-1 as specified in the reference 1 (BHI 1996).

Please contact me if you have any questions on this information.

Duane Jacques

Duane Jacques, Scientist

IDJ:idj

Attachments:
Attachment 1. Process Trench Verification/Screening Sample Results, SAF B97-120.
Attachment 2. South Process Pond Verification/Screening Sample Results, SAF B97-129.
Attachment 3. North Process Pond Verification/Screening Sample Results, SAF B97-133.
Attachment 4. Ash Pit/Clean Soil Stockpile Verification/Screening Sample Results, SAF B97-136.
Attachment 5. Anomalous Waste Verification/Screening Sample Results, SAF B97-160.
Attachment 6. Sample Chain of Custody Sheets.

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D. E. Ayres, B1-35, **w/attachments 1, 2, 3, 4, 5, and 6**
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BHI Document Control, H4-79, w/original attachments
300 APT Operating Record, **w/attachments 1, 2, 3, 4, 5, and 6**

Attachment 1

Process Trench Verification/Screening Sample Results
SAF B97-120

Sample Number	Sample Date	Sample Time	Sample Location	Sample Depth (Ft BGS)	As (mg/Kg)	Cd (mg/Kg)	Pb (mg/Kg)	Tl (mg/Kg)	Cu (mg/Kg)	U (mg/Kg)	Zr (mg/Kg)	Total VOC (ppm CH4)
B0L831	6/19/97	10:50	Silica Sand Blank	---	<100	<100	<100	<110	<460	<100	<120	1.0
B0L832	6/19/97	10:55	Silica Sand Blank	---	<100	<100	<100	<110	<460	<100	<120	0.5
B0L833	6/19/97	11:27	APT1-21	11.0	<100	<100	<100	<110	<460	<100	150	1.0
B0L834	6/19/97	11:27	APT1-21	11.0	<100	<100	<100	<110	<460	<100	140	1.0
B0L835	6/19/97	11:45	APT1-21	6.0	<100	<100	<100	<110	<460	<100	140	1.5
B0L836	6/19/97	13:55	APT2-22	4.0	<100	<100	<100	<110	<460	420	460	3.0
B0L842	6/19/97	14:29	APT2-22	9.5	<100	<100	<100	<110	<460	<100	150	2.0
B0L843	6/20/97	9:20	APT4-24	9.0	<100	<100	<100	<110	2500	2900e	2700	3.0
B0L837	6/20/97	9:40	APT4-24	12.5	<100	<100	<100	<110	<460	<100	120	4.0
B0L838	6/20/97	11:05	APT3-23	11.5	<100	<100	<100	<110	<460	170	470	7.0
B0L839	6/20/97	13:25	APT6-26	14.0	<100	<100	<100	<110	<460	<100	150	9.0
B0L840	6/20/97	14:26	APT5-25	13.0	<100	<100	<100	<110	<460	<100	120	12.0
B0L844	6/20/97	14:06	APT5-25	9.5	<100	<100	<100	<110	<460	230	330	1.0
B0L999	8/1/97	7:50	Process Trench	---	<100	<100	<100	<110	<460	<100	<120	1.2
B0L9B0	8/1/97	9:15	Process Trench	---	<100	<100	<100	<110	<460	<100	<120	1.4
B0L9B1	8/1/97	10:10	Process Trench	---	<100	<100	<100	<110	<460	130	290	1.1
B0L9B2	8/1/97	10:55	Process Trench	---	<100	<100	<100	<110	<460	140	270	0.9
B0L9B3	8/1/97	11:35	Process Trench	---	<100	<100	<100	<110	<460	<100	190	1.2
B0L845	8/26/97	16:02	300-10	0.5	<100	<100	<100	<110	<460	<100	<120	0.5
B0L841	8/26/97	16:14	300-10	0.5	<100	<100	<100	<110	<460	<100	130	0.5
B0L857	9/17/97	9:30	North 1/4 Process Trench	2.0	<100	<100	<100	<110	<460	<100	<120	0.0
B0L858	9/17/97	11:30	North 1/4 Process Trench	2.0	<100	<100	<100	<110	<460	<100	<120	0.0
B0L932	9/19/97	9:00	UCL Process Trench	1.0	<100	<100	<100	<110	<460	<100	<120	0.5
B0L933	9/19/97	11:40	UCL Process Trench	1.0	<100	<100	<100	<110	<460	102	230	0.0
B0L846	9/22/97	9:17	300-45	0.5	<100	<100	<100	<110	<460	<100	<120	0.7
B0L847	9/22/97	9:35	300-45	0.5	<100	<100	<100	<110	<460	<100	<120	0.8
B0M134	9/24/97	9:00	North 1/4 Process Trench	3.0	<100	<100	<100	<110	<460	370	930	1.2

NA - Not analyzed

e - Exceeds upper calibration value

Analyst: Duane Jacques 11/20/97

Instrument: Metorex X-Met 920, Serial # 001063
Method: 300 Area Soil Matrix, Cd-109/Am-241 Sources
Logbook: 300-FF-1 Field Screening Log, EL-1386, pgs 1 to 50

Analyst: Duane Jacques 11/20/97

Instrument: Foxboro Organic Vapor Analyzer (OVA) 128, Serial # A52069
Method: Total Vapor in Soil Headspace
Logbook: Foxboro OVA 128 Instrument Logbook, EL-1263, pgs 0073-4 to 0073-22

Prepared 11/20/97

053198

Attachment 2

South Process Pond Verification/Screening Sample Results

SAF B97-129

Sample Number	Sample Date	Sample Time	Sample Location	Sample Depth (Ft BGS)	As (mg/Kg)	Cd (mg/Kg)	Pb (mg/Kg)	Tl (mg/Kg)	Cu (mg/Kg)	U (mg/Kg)	Zr (mg/Kg)	Total VOC (ppm CH4)
B0L9M0	8/18/97	10:16	SPPTT-1, Cell 13	10.5	<100	<100	<100	<110	<460	<100	<120	0.4
B0L5R4	8/20/97	13:40	SPPTT-1, Cell 5	15.0	<100	<100	<100	<110	<460	<100	<120	0.2
B0L5R5	8/27/97	9:25	SPPTT-8, Cell 4	15.0	<100	<100	<100	<110	<460	<100	<120	0.0
B0L5R6	8/28/97	8:57	SPPTT-7, Cell 4	15.0	<100	<100	<100	<110	<460	<100	<120	0.0
B0L5R7	9/8/97	8:45	SPPTT-3, Cell 5(E)	15.0	<100	<100	<100	<110	<460	<100	<120	0.7
B0L5T0	9/11/97	11:23	SPPTT-4, Cell 8E	15.0	<100	<100	<100	<110	<460	<100	<120	1.5
B0L5T1	9/12/97	9:56	SPPTT-2, Cell 4E	15.0	<100	<100	<100	<110	<460	<100	<120	1.4
B0L5R8	9/9/97	11:44	SPPTT-6, Cell 8E	15.0	<100	<100	<100	<110	<460	<100	210	1.5
B0L5R9	9/10/97	10:34	SPPTT-5, Cell 6E	15.0	<100	<100	<100	<110	<460	<100	<120	1.0

NA - Not analyzed

e - Exceeds upper calibration value

Analyst: Duane Jacques 11/20/97

Instrument: Metorex X-Met 920, Serial # 001063
Method: 300 Area Soil Matrix, Cd-109/Am-241 Sources
Logbook: 300-FF-1 Field Screening Log, EL-1386, pgs 1 to 50

Analyst: Duane Jacques 11/20/97

Instrument: Foxboro Organic Vapor Analyzer (OVA) 128, Serial # A52069
Method: Total Vapor in Soil Headspace
Logbook: Foxboro OVA 128 Instrument Logbook, EL-1263, pgs 0073-4 to 0073-22

Prepared 11/20/97

North Process Pond Verification/Screening Sample Results

SAF B97-133

Sample Number	Sample Date	Sample Time	Sample Location	Sample Depth (Ft BGS)	As (mg/Kg)	Cd (mg/Kg)	Pb (mg/Kg)	Tl (mg/Kg)	Cu (mg/Kg)	U (mg/Kg)	Zr (mg/Kg)	Total VOC (ppm CH4)
B0L5X0	6/23/97	8:12	Silica Sand Blank	NA	<100	<100	<100	<110	<460	<100	<120	0.0
B0L5X1	6/23/97	8:05	Silica Sand Blank	---	<100	<100	<100	<110	<460	<100	<120	0.0
B0L5X2	6/24/97	9:05	NPT-7,cell 2C	9.0	<100	<100	<100	<110	<460	<100	<120	9.0
B0L5X4	6/24/97	15:06	NPT-6, cell 2D	8.5	<100	<100	<100	<110	570	<100	140	7.0
B0L620	6/24/97	13:30	NPT-6, cell 4D	11.0	<100	<100	<100	<110	35000e	720	1020	4.0
B0L621	6/25/97	13:45	NPT-1, cell 1C	1.5	<100	<100	<100	<110	34000e	1200	2500	5.0
B0L5X5	6/26/97	14:16	NPT-1, cell 9E	14.5	<100	<100	<100	<110	<460	<100	140	1.0
B0L5X3	6/26/97	9:42	NPT-1, cell 5E	14.0	<100	<100	<100	<110	<460	<100	<120	2.0
B0L624	6/27/97	8:25	NPT-1, cell 11B	5.0	<100	<100	<100	<110	<460	450	180	1.0
B0L623	6/26/97	13:34	NPT-1, cell 5A	1.5	<100	<100	<100	<110	760	908	330	1.0
B0L622	6/26/97	8:40	NPT-1, cell 10B	5.5	<100	<100	<100	<110	<460	106	130	2.0
B0L625	6/30/97	10:21	NPT-2, cell 17A	2.5	<100	<100	<100	<110	2300	1070	300	1.0
B0L628	7/1/97	9:24	NPT-2, cell 9A	2.5	<100	<100	<100	<110	530	506	240	1.0
B0L5X6	7/2/97	14:00	NPT-2, cell 5A	15.0	<100	<100	<100	<110	<460	<100	290	1.0
B0L5X7	7/15/97	8:05	PT, cell 3B	3.0 - 8.0	<100	<100	<100	<110	830	1900	1200	NA
B0L5X8	7/15/97	8:50	PT, cell 3B	3.0 - 8.0	<100	<100	<100	<110	910	1020	610	NA
B0L5X9	7/15/97	9:31	PT, cell 3B	3.0 - 8.0	<100	<100	<100	<110	<460	270	180	NA
B0L5Y0	7/15/97	10:01	PT, cell 3B	3.0 - 8.0	<100	<100	<100	<110	3800	9100e	4500	NA
B0L5Y1	7/15/97	11:05	PT, cell 3B	3.0 - 8.0	<100	<100	<100	<110	<460	370	305	NA
B0L5Y2	7/15/97	11:47	PT, cell 3B	3.0 - 8.0	<100	<100	<100	<110	<460	110	260	NA
B0L8L0	7/21/97	8:10	Hold Pile (E end)	1.0	<100	<100	<100	<110	2200	4800e	3700	8.0
B0L8L1	7/21/97	8:13	Hold Pile (E end)	1.0	<100	<100	<100	<110	550	1200	850	8.4
B0L8L2	7/21/97	8:16	Hold Pile (E end)	1.0	<100	<100	<100	<110	<460	920	660	8.5
B0L8L3	7/21/97	8:19	Hold Pile (E end)	1.0	<100	<100	<100	<110	680	1300	1040	9.0
B0L8L4	7/21/97	8:22	Hold Pile (E end)	1.0	<100	<100	<100	<110	2000	3400e	1900	9.0
B0L8L5	7/21/97	8:25	Hold Pile (E end)	1.0	<100	<100	<100	<110	490	1400	830	9.0
B0L8L6	7/21/97	8:28	Hold Pile (E end)	1.0	<100	<100	<100	<110	<460	730	570	8.5
B0L8L7	7/21/97	8:31	Hold Pile (W end)	1.0	<100	<100	<100	<110	650	1600	850	9.5
B0L8L8	7/21/97	8:34	Hold Pile (W end)	1.0	<100	<100	<100	<110	<460	1200	520	8.6
B0L8L9	7/21/97	8:37	Hold Pile (W end)	1.0	<100	<100	<100	<110	<460	660	530	7.7
B0L615	7/22/97	8:20	Red Brick Anomoly	---	<100	<100	<100	<110	<460	<100	<120	0.5
B0L629	7/22/97	8:25	Yellow Clay Anomoly	---	<100	<100	<100	<110	<460	<100	150	0.5

North Process Pond Verification/Screening Sample Results

SAF B97-133

Sample Number	Sample Date	Sample Time	Sample Location	Sample Depth (Ft BGS)	As (mg/Kg)	Cd (mg/Kg)	Pb (mg/Kg)	Tl (mg/Kg)	Cu (mg/Kg)	U (mg/Kg)	Zr (mg/Kg)	Total VOC (ppm CH4)
B0L627	7/22/97	8:40	Tan Chalk Anomoly	---	<100	<100	<100	<110	<460	<100	<120	0.5
B0L5Y3	7/22/97	9:23	Process Sample	---	<100	<100	<100	<110	<460	490	370	1.0
B0L5Y4	7/22/97	9:53	Process Sample	---	<100	<100	<100	<110	<460	920	580	1.0
B0L5Y5	7/22/97	10:40	Process Sample	---	<100	<100	<100	<110	<460	<100	150	1.0
B0L5Y6	7/22/97	11:32	Process Sample	---	<100	<100	<100	<110	<460	880	500	0.5
B0L5Y7	7/22/97	13:47	Process Sample	---	<100	<100	<100	<110	<460	<100	<120	0.5
B0L5Y9	7/30/97	13:20	NPPTT-3, cell 4E	15.0	<100	<100	<100	<110	<460	<100	<120	1.0
B0L600	7/31/97	13:28	NPPTT-4, cell 3E	15.0	<100	<100	<100	<110	<460	<100	<120	3.0
B0L5Y8	8/8/97	14:27	NPPTT-5, 6E	15.0	<100	<100	<100	<110	<460	<100	<120	0.5
B0L601	8/11/97	11:39	SDA-7	15.0	<100	<100	<100	<110	<460	<100	<120	0.4
B0L602	8/11/97	11:39	SDA-7	15.0	<100	<100	<100	<110	<460	<100	<120	0.6
B0L603	8/11/97	14:24	SDA-5	15.0	<100	<100	<100	<110	<460	<100	<120	0.5
B0L604	8/12/97	8:29	SDA-4	15.0	<100	<100	<100	<110	<460	<100	<120	0.6
B0L605	8/12/97	9:46	SDA-3	15.0	<100	<100	<100	<110	<460	<100	<120	1.0
B0L606	8/12/97	13:20	SDA-1	15.0	<100	<100	<100	<110	<460	<100	<120	1.2
B0L607	8/12/97	14:19	SDA-2	15.0	<100	<100	<100	<110	<460	<100	<120	0.6
B0L608	8/13/97	9:37	SDA-6	15.0	<100	<100	<100	<110	<460	<100	<120	0.5
B0L609	8/13/97	11:44	SDA-8	15.0	<100	<100	<100	<110	<460	<100	<120	0.5

NA - Not analyzed

e - Exceeds upper calibration value

Analyst: Duane Jacques 11/20/97

Instrument: Metorex X-Met 920, Serial # 001063
Method: 300 Area Soil Matrix, Cd-109/Am-241 Sources
Logbook: 300-FF-1 Field Screening Log, EL-1386, pgs 1 to 50

Analyst: Duane Jacques 11/20/97

Instrument: Foxboro Organic Vapor Analyzer (OVA) 128, Serial # A52069
Method: Total Vapor in Soil Headspace
Logbook: Foxboro OVA 128 Instrument Logbook, EL-1263, pgs 0073-4 to 0073-22

Prepared 11/20/97

Attachment 4

Ash Pit/Clean Soil Stockpile Verification/Screening Sample Results

SAF B97-136

Sample Number	Sample Date	Sample Time	Sample Location	Sample Depth (Ft BGS)	As (mg/Kg)	Cd (mg/Kg)	Pb (mg/Kg)	Tl (mg/Kg)	Cu (mg/Kg)	U (mg/Kg)	Zr (mg/Kg)	Total VOC (ppm CH4)
B0L6W5	6/18/97	9:10	Silica Sand Blank	---	<100	<100	<100	<110	<460	<100	<120	NA
B0L6W6	6/18/97	9:20	Silica Sand Blank	---	<100	<100	<100	<110	<460	<100	<120	NA
B0L6W7	6/18/97	9:58	SS1(A)-7	15.0	<100	<100	<100	<110	<460	<100	<120	NA
B0L6W8	6/18/97	9:58	SS1(A)-7	15.0	<100	<100	<100	<110	<460	<100	<120	NA
B0L6W9	6/18/97	11:12	SS2-7	15.0	<100	<100	<100	<110	<460	<100	145	NA
B0L6X0	6/18/97	12:08	SS3-9	15.0	<100	<100	<100	<110	<460	<100	170	NA
B0L6X1	6/18/97	13:54	SS4-10	15.0	<100	<100	<100	<110	<460	<100	<120	NA
B0L6X2	6/18/97	14:42	SS5-11	12.5	<100	<100	<100	<110	<460	<100	<120	NA
B0L6X3	6/19/97	8:26	SS6-12	15.0	<100	<100	<100	<110	<460	<100	<120	NA
B0L6X4	8/13/97	14:22	AP-4	15.0	<100	<100	<100	<110	<460	<100	<120	0.5
B0L6X5	8/14/97	8:52	AP-1	15.0	<100	<100	<100	<110	<460	<100	<120	0.5
B0L6X6	8/14/97	9:40	AP-6	15.0	<100	<100	<100	<110	<460	<100	<120	0.0
B0L6X7	8/14/97	10:49	AP-5	15.0	<100	<100	<100	<110	<460	<100	<120	0.0
B0L6X8	8/14/97	11:30	AP-2	15.0	<100	<100	<100	<110	<460	<100	<120	0.0
B0L6X9	8/14/97	13:37	AP-3	15.0	<100	<100	<100	<110	<460	<100	<120	0.0
B0L739	8/14/97	10:22	AP-5	1.5	<100	<100	<100	<110	<460	<100	<120	0.0

NA - Not analyzed

e - Exceeds upper calibration value

Analyst: Duane Jacques 11/20/97

Instrument: Metorex X-Met 920, Serial # 001063
Method: 300 Area Soil Matrix, Cd-109/Am-241 Sources
Logbook: 300-FF-1 Field Screening Log, EL-1386, pgs 1 to 50

Analyst: Duane Jacques 11/20/97

Instrument: Foxboro Organic Vapor Analyzer (OVA) 128, Serial # A52069
Method: Total Vapor in Soil Headspace
Logbook: Foxboro OVA 128 Instrument Logbook, EL-1263, pgs 0073-4 to 0073-22

Prepared 11/20/97

Attachment 5

Anomalous Waste Verification/Screening Sample Results

SAF B97-160

Sample Number	Sample Date	Sample Time	Sample Location	Sample Depth (Ft BGS)	As (mg/Kg)	Cd (mg/Kg)	Pb (mg/Kg)	Tl (mg/Kg)	Cu (mg/Kg)	U (mg/Kg)	Zr (mg/Kg)	Total VOC (ppm CH4)
B0LW33	9/19/97	14:10	300-44	1.5	<100	<100	<100	<110	<460	<100	<120	0.5
B0LW34	9/22/97	11:10	300-44	1.5	<100	<100	<100	<110	<460	<100	<120	1.2
B0LW35	9/22/97	13:45	300-44	1.5	<100	<100	<100	<110	<460	<100	<120	0.9
B0LW36	9/23/97	10:50	300-44	1.5	<100	<100	<100	<110	<460	<100	<120	0.8
B0M1V4	9/25/97	9:23	300-44	0.5	<100	<100	<100	<110	<460	<100	<120	0.0
B0M1V7	9/25/97	9:38	300-44	0.5	<100	<100	<100	<110	<460	<100	<120	0.0
B0M241	9/26/97	13:30	Chlorine Stand Paint	---	<100	<100	10000e	<110	<460	104	<120	NA

NA - Not analyzed

e - Exceeds upper calibration value

Analyst: Duane Jacquez 11/20/97

Analyst: Duane Jacquez 11/20/97

Instrument: Metorex X-Met 920, Serial # 001063
Method: 300 Area Soil Matrix, Cd-109/Am-241 Sources
Logbook: 300-FF-1 Field Screening Log, EL-1386, pgs 1 to 50

Instrument: Foxboro Organic Vapor Analyzer (OVA) 128, Serial # A52069
Method: Total Vapor in Soil Headspace
Logbook: Foxboro OVA 128 Instrument Logbook, EL-1263, pgs 0073-4 to 0073-22

Prepared 11/20/97

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

B97-129-01 | Page 1 of 1

Collector Doug Bowers/Bob Fahlberg	**Company Contact** Frank Gustafson	**Telephone No.** 373-5904	**Project Coordinator** Koerner, CC
Project Designation 300-FF-1 South Process Pond	**Sampling Location** 300 FF-1		**SAF No.** B97-129
Ice Chest No.	**Field Logbook No.** ~~EFL-1133-4~~ DTB 9-12-97 EL1395		**Method of Shipment** Gov vehicle
Shipped To Field Analysis	**Offsite Property No.**		**Bill of Lading/Air Bill No.**

Data Turnaround Field

POSSIBLE SAMPLE HAZARDS/REMARKS
Possible Radioactive

Special Handling and/or Storage
cool 4C

Preservation	None	Cool 4C										
Type of Container	P	aG										
No. of Container(s)	1	1										
Volume	20ml	120ml										
SAMPLE ANALYSIS	ELEMENTS BY XRF (Arsenic, Thallium)	VOA BY FIELD GC – Chloronated Hydrocarbon										

Sample No.	Matrix *	Sample Date	Sample Time										
BOL5T1	S	9-12-97	0956	X	X		SPPTT #2 4E @ 15'						

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By	Date/Time	Received By	Date/Time
Doug Bowers	9-12-97/1100	D. Jaques / Duane Jaques	1100 9-12-97

SPECIAL INSTRUCTIONS

Matrix *
- S = Soil
- SE = Sediment
- SO = Solid
- SL = Sludge
- W = Water
- O = Oil
- A = Air
- DS = Drum Solids
- DL = Drum Liquids
- T = Tissue
- WI = Wipe
- L = Liquid
- V = Vegetation
- X = Other

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method: VOA sample disposed onsite 9/15/97	Disposed By	Date/Time

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

B97-129-01

Collector Doug Bowers/Bob Fahlberg	**Company Contact** Frank Gustafson	**Telephone No.** 373-5904	**Project Coordinator** Koerner, CC
Data Turnaround Field			
Project Designation 300-FF-1 South Process Pond	**Sampling Location** 300 FF-1		**SAF No.** B97-129
Ice Chest No.	**Field Logbook No.** ~~EFL 1133-4~~ ~~A20 9-11-97~~ EL-1395		**Method of Shipment** Gov vehicle
Shipped To Field Analysis	**Offsite Property No.**		**Bill of Lading/Air Bill No.**

POSSIBLE SAMPLE HAZARDS/REMARKS
Possible Radioactive

Special Handling and/or Storage
cool 4C

Preservation	None	Cool 4C										
Type of Container	P	aG										
No. of Container(s)	1	1										
Volume	20ml	120ml										
SAMPLE ANALYSIS	ELEMENTS BY XRF (Arsenic, Thallium)	VOA BY FIELD GC – Chloronated Hydrocarbon										

Sample No.	Matrix *	Sample Date	Sample Time									
BOL5TO	S	9-11-97	1123	X	X	SPP TT #4	8E @ 15'					

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By	Date/Time	Received By	Date/Time
Doug Bowers	9-11-97/1231	D. Jacques / Duane Jacques	1231 9/11/97

SPECIAL INSTRUCTIONS

Matrix *
- S = Soil
- SE = Sediment
- SO = Solid
- SL = Sludge
- W = Water
- O = Oil
- A = Air
- DS = Drum Solids
- DL = Drum Liquids
- T = Tissue
- WI = Wipe
- L = Liquid
- V = Vegetation
- X = Other

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method: VOA sample disposed onsite 9/15/97	Disposed By	Date/Time

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

B97-129-01

Collector Doug Bowers/Bob Fahlberg	**Company Contact** Frank Gustafson	**Telephone No.** 373-5904	**Project Coordinator** Koerner, CC
Data Turnaround Field			
Project Designation 300-FF-1 South Process Pond	**Sampling Location** 300 FF-1		**SAF No.** B97-129
Ice Chest No.	**Field Logbook No.** ~~EFL-1133-4~~ TJ 9-10-97 EL-1395		**Method of Shipment** Gov vehicle
Shipped To Field Analysis	**Offsite Property No.**		**Bill of Lading/Air Bill No.**

POSSIBLE SAMPLE HAZARDS/REMARKS
Possible Radioactive

Special Handling and/or Storage
cool 4C

Preservation	None	Cool 4C										
Type of Container	P	aG										
No. of Container(s)	1	1										
Volume	20ml	120ml										
SAMPLE ANALYSIS	ELEMENTS BY XRF (Arsenic, Thallium)	VOA BY FIELD GC – Chloronated Hydrocarbon										

Sample No.	Matrix *	Sample Date	Sample Time										
BOL5R9	Soil	9-10-97	1034	X	X		SPP	TT	# 5	6E@	15'		

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By	Date/Time	Received By	Date/Time
Doug Bowers	9-10-97/1552	D. Jacques / Duane Jacques	9/10/97 1550

SPECIAL INSTRUCTIONS

Matrix *
- S = Soil
- SE = Sediment
- SO = Solid
- SL = Sludge
- W = Water
- O = Oil
- A = Air
- DS = Drum Solids
- DL = Drum Liquids
- T = Tissue
- WI = Wipe
- L = Liquid
- V = Vegetation
- X = Other

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method: VOA sample disposed on site 9/15/97	Disposed By	Date/Time

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

B97-129-01 | Page 1 of 1

Collector Doug Bowers/Bob Fahlberg	**Company Contact** Frank Gustafson	**Telephone No.** 373-5904	**Project Coordinator** Koerner, CC
Project Designation 300-FF-1 South Process Pond	**Sampling Location** 300 FF-1		**Data Turnaround** Field
Ice Chest No.	**Field Logbook No.** ~~EFL-1133-4~~ 8 20 9997 EL-1395 JDJ		**SAF No.** B97-129
Shipped To Field Analysis	**Offsite Property No.**		**Method of Shipment** Gov vehicle
			Bill of Lading/Air Bill No.

POSSIBLE SAMPLE HAZARDS/REMARKS
Possible Radioactive

Special Handling and/or Storage
cool 4C

Preservation	None	Cool 4C										
Type of Container	P	aG										
No. of Container(s)	1	1										
Volume	20ml	120ml										
SAMPLE ANALYSIS	ELEMENTS BY XRF (Arsenic, Thallium)	VOA BY FIELD GC – Chloronated Hydrocarbon										

Sample No.	Matrix *	Sample Date	Sample Time										
B0L5R8	S	9-9-97	1144	X	X		SPPTT #6	8E @ 15'					

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By	Date/Time	Received By	Date/Time
Doug Bowers	9-9-97 1519	D. Jacques / Duane Jacques	1530 9/9/97

SPECIAL INSTRUCTIONS

Matrix *
- S = Soil
- SE = Sediment
- SO = Solid
- SL = Sludge
- W = Water
- O = Oil
- A = Air
- DS = Drum Solids
- DL = Drum Liquids
- T = Tissue
- WI = Wipe
- L = Liquid
- V = Vegetation
- X = Other

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method: VOA sample disposed onsite 9/15/97	Disposed By	Date/Time

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

B97-129-01

Collector
Doug Bowers/Bob Fahlberg

Company Contact
Frank Gustafson

Telephone No.
373-5904

Project Coordinator
Koerner, CC

Data Turnaround
Field

Project Designation
300-FF-1 South Process Pond

Sampling Location
300 FF-1

SAF No.
B97-129

Ice Chest No.

Field Logbook No.
~~EFL 1133-4~~ 9-8-97 EL-1395

Method of Shipment
Gov vehicle

Shipped To
Field Analysis

Offsite Property No.

Bill of Lading/Air Bill No.

POSSIBLE SAMPLE HAZARDS/REMARKS
Possible Radioactive

Special Handling and/or Storage
cool 4C

Preservation	None	Cool 4C								
Type of Container	P	aG								
No. of Container(s)	1	1								
Volume	20ml	120ml								
SAMPLE ANALYSIS	ELEMENTS BY XRF (Arsenic, Thallium)	VOA BY FIELD GC -- Chloronated Hydrocarbon								

Sample No.	Matrix *	Sample Date	Sample Time										
BOL5R7	S	9-8-97	0845	X	X		SPOT #3	5F @ 15'					

CHAIN OF POSSESSION

Relinquished By	Date/Time	Received By	Date/Time
Doug Bowers	9-8-97/1240	C. Kramer / C. Kramer	9/8/97 12:40

SPECIAL INSTRUCTIONS

Matrix *

S	=	Soil
SE	=	Sediment
SO	=	Solid
SL	=	Sludge
W	=	Water
O	=	Oil
A	=	Air
DS	=	Drum Solids
DL	=	Drum Liquids
T	=	Tissue
WI	=	Wipe
L	=	Liquid
V	=	Vegetation
X	=	Other

LABORATORY SECTION
Received By | Title | Date/Time

FINAL SAMPLE DISPOSITION
Disposal Method: VOA samples disposed onsite 9/15/97
Disposed By | Date/Time

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

B97-129-01

Collector Doug Bowers/Bob Fahlberg	**Company Contact** Frank Gustafson	**Telephone No.** 373-5904	**Project Coordinator** Koerner, CC
Data Turnaround Field			
Project Designation 300-FF-1 South Process Pond	**Sampling Location** 300 FF-1		**SAF No.** B97-129
Ice Chest No.	**Field Logbook No.** EFL 1133-4		**Method of Shipment** Gov vehicle
Shipped To Field Analysis	**Offsite Property No.**		**Bill of Lading/Air Bill No.**

POSSIBLE SAMPLE HAZARDS/REMARKS
Possible Radioactive

Special Handling and/or Storage
cool 4C

Preservation	None	Cool 4C										
Type of Container	P	aG										
No. of Container(s)	1	1										
Volume	20ml	120ml										
SAMPLE ANALYSIS	ELEMENTS BY XRF (Arsenic, Thallium)	VOA BY FIELD GC -- Chloronated Hydrocarbon										

Sample No.	Matrix *	Sample Date	Sample Time										
BOL5R6	S	8-28-97	0852	X	X		SPP-T #7 coll 4 @ 15'						

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By	Date/Time	Received By	Date/Time
Doug Bowers	8-28-97/1533	D. Jacques / Duane Jacques	1533 / 8/28/97

SPECIAL INSTRUCTIONS

Matrix *
- S = Soil
- SE = Sediment
- SO = Solid
- SL = Sludge
- W = Water
- O = Oil
- A = Air
- DS = Drum Solids
- DL = Drum Liquids
- T = Tissue
- WI = Wipe
- L = Liquid
- V = Vegetation
- X = Other

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method: VOA samples disposed onsite 9/15/97	Disposed By	Date/Time

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

B97-129-01

Collector Doug Bowers/Bob Fahlberg	**Company Contact** Frank Gustafson	**Telephone No.** 373-5904	**Project Coordinator** Koerner, CC	**Data Turnaround** Field
Project Designation 300-FF-1 South Process Pond	**Sampling Location** 300 FF-1		**SAF No.** B97-129	
Ice Chest No.	**Field Logbook No.** EFL 1133-4		**Method of Shipment** Gov vehicle	
Shipped To Field Analysis	**Offsite Property No.**		**Bill of Lading/Air Bill No.**	

POSSIBLE SAMPLE HAZARDS/REMARKS
Possible Radioactive

Special Handling and/or Storage
cool 4C

Preservation	None	Cool 4C									
Type of Container	P	aG									
No. of Container(s)	1	1									
Volume	20ml	120ml									
SAMPLE ANALYSIS	ELEMENTS BY XRF (Arsenic, Thallium)	VOA BY FIELD GC -- Chloronated Hydrocarbon									
Sample No. / Matrix * / Sample Date / Sample Time											
B0L5R5 / S / 8-27-97 / 0925	X	X		SPPTT	#8	coll	4 @ 151				

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By	Date/Time	Received By	Date/Time
L.D. Walker / L.D. Walker	8-27-97/1530	L.D. Jacques / Duane Jacques	1530 8/27/97

SPECIAL INSTRUCTIONS

Matrix *
- S = Soil
- SE = Sediment
- SO = Solid
- SL = Sludge
- W = Water
- O = Oil
- A = Air
- DS = Drum Solids
- DL = Drum Liquids
- T = Tissue
- WI = Wipe
- L = Liquid
- V = Vegetation
- X = Other

LABORATORY SECTION — Received By — Title — Date/Time

FINAL SAMPLE DISPOSITION — Disposal Method: VOA samples disposed onsite 9/15/97 — Disposed By — Date/Time

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

B97-129-01

Collector Doug Bowers/Bob Fahlberg	**Company Contact** Frank Gustafson	**Telephone No.** 373-5904	**Project Coordinator** Koerner, CC
Data Turnaround Field			
Project Designation 300-FF-1 South Process Pond	**Sampling Location** 300 FF-1		**SAF No.** B97-129
Ice Chest No.	**Field Logbook No.** EFL 1133-4		**Method of Shipment** Gov vehicle
Shipped To Field Analysis	**Offsite Property No.**		**Bill of Lading/Air Bill No.**

POSSIBLE SAMPLE HAZARDS/REMARKS
Possible Radioactive

Special Handling and/or Storage
cool 4C

Preservation	None	Cool 4C									
Type of Container	P	aG									
No. of Container(s)	1	1									
Volume	20ml	120ml									
SAMPLE ANALYSIS	ELEMENTS BY XRF (Arsenic, Thallium)	VOA BY FIELD GC – Chloronated Hydrocarbon									

Sample No.	Matrix *	Sample Date	Sample Time										
B0L5R4	S	8-20-97	1340	X	X		SPOT #1		coll 5	15'			

CHAIN OF POSSESSION

Relinquished By	Date/Time	Received By	Date/Time
Doug Bowers	8-20-97/1501	D. Jacques Duane Jacques	1501 8-20-97

SPECIAL INSTRUCTIONS

Matrix *

S	=	Soil
SE	=	Sediment
SO	=	Solid
SL	=	Sludge
W	=	Water
O	=	Oil
A	=	Air
DS	=	Drum Solids
DL	=	Drum Liquids
T	=	Tissue
WI	=	Wipe
L	=	Liquid
V	=	Vegetation
X	=	Other

LABORATORY SECTION Received By | Title | Date/Time

FINAL SAMPLE DISPOSITION Disposal Method: VOA samples disposed on site 8/26/97 | Disposed By | Date/Time

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

B97-129-01

Collector Doug Bowers/Bob Fahlberg	**Company Contact** Frank Gustafson	**Telephone No.** 373-5904	**Project Coordinator** Koerner, CC	**Data Turnaround** Field
Project Designation 300-FF-1 South Process Pond	**Sampling Location** 300 FF-1		**SAF No.** B97-129	
Ice Chest No.	**Field Logbook No.** EFL 1133-4		**Method of Shipment** Gov vehicle	
Shipped To Field Analysis	**Offsite Property No.**		**Bill of Lading/Air Bill No.**	

POSSIBLE SAMPLE HAZARDS/REMARKS
Possible Radioactive

Special Handling and/or Storage
cool 4C

Preservation	None	Cool 4C									
Type of Container	P	aG									
No. of Container(s)	1	1									
Volume	20ml	120ml									
SAMPLE ANALYSIS	ELEMENTS BY XRF (Arsenic, Thallium)	VOA BY FIELD GC -- Chloronated Hydrocarbon									

Sample No.	Matrix *	Sample Date	Sample Time											
B0L9M0	S	8-18-97	1016	X	X									

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By	Date/Time	Received By	Date/Time
Doug Bowers	8-18-97/1507	C.D. Kramer	8/18/97 1507

SPECIAL INSTRUCTIONS

Matrix *

S	=	Soil
SE	=	Sediment
SO	=	Solid
SL	=	Sludge
W	=	Water
O	=	Oil
A	=	Air
DS	=	Drum Solids
DL	=	Drum Liquids
T	=	Tissue
WI	=	Wipe
L	=	Liquid
V	=	Vegetation
X	=	Other

LABORATORY SECTION — Received By — Title — Date/Time

FINAL SAMPLE DISPOSITION — Disposal Method: VOA samples disposed on site 8/26/97 — Disposed By — Date/Time