

Environmental
Restoration
Contractor

ERC Team

Interoffice Memorandum



040649
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Job No. 22192
Written Response Required? NO
Closes CCN: N/A
OU: 200-UP-1
TSD: N/A
ERA: N/A
Subject Code: 8630

TO: C. D. Wittreich, H9-12
J. A. Lerch, B1-35

DATE: December 13, 1996

COPIES: See Below

FROM: R. T. Coffman
Onsite Measurement Services
H9-11/372-9373

SUBJECT: **200-UP-1 IRM IMPLEMENTATION SAMPLING, MONTHLY GROUNDWATER RESULTS, NOVEMBER 1996, REV 0**

REFERENCES:

1. BHI, 1996, *On-Site Measurements Quality Assurance Plan*, BHI-00852, REV 0, Bechtel Hanford, Inc., Richland, Washington.
2. BHI, 1995, *Field Screening Procedures*, BHI-EE-05, Bechtel Hanford, Inc., Richland, Washington.
3. BHI, 1995a, *200-UP-1 Field Screening Support Logbook*, EL-1334, Bechtel Hanford, Inc., Richland, Washington.

This data package contains field screening results for groundwater samples analyzed to support the 200-UP-1 IRM Implementation Sampling program. The Quality Assurance level for this work corresponds to QA-1 as specified in the reference 1 (BHI 1996). The samples were managed under SAF B97-044.

Attachment 1 contains Volatile Organic Compound (VOC), total uranium, and technetium-99 results for groundwater samples collected to support the referenced project. The VOC results were generated using a Hewlett Packard 5890 gas chromatograph with a headspace autosampler operated in accordance with Field Screening Procedure (FSP) 1.1, *Aqueous Headspace Analysis of Volatile Organic Compounds in Water* (BHI 1995). Information concerning operation and calibration of the gas chromatograph is contained in the instrument logbook EL-1329.

The total uranium results were generated using a ChemChek KPA-11a Kinetic Phosphorescence Analyzer operated in accordance with FSP 1.22, *Kinetic Phosphorescence Analysis of Total Uranium in Water* (BHI 1995). Information concerning operation and calibration of the ChemChek KPA-11a is contained in 200-UP-1 field logbook EL-1335.

C. D. Wittreich, H9-12

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The technetium-99 analyses were conducted at the 222-S Laboratory. The results are included in this data package for information only. Questions concerning the analyses and results should be directed to the laboratory.

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



R. T. Coffman, Analyst

RTC:rtc

Attachments:

Attachment 1. 200-UP-1 IRM Implementation Sampling, Monthly Groundwater Results, October 1996

Attachment 2. Sample Chain of Custody Sheets

Copies:

C.W. Denslow, H9-02, w/attachment 1 only
G.W. Green, H9-10, w/attachment 1 only
A.M. Hopkins, H9-11, w/attachment 1 only
I. D. Jacques, H9-10, w/attachment 1 only
R.B. Kerkow, H9-10, w/attachment 1 only
T.D. LeFrancois, H9-03, w/attachment 1 only
D.A. Myers, H9-11, w/attachment 1 only
R.O. Mahood, H9-11, w/attachment 1 only
L.C. Swanson, H9-11, w/attachment 1 only
BHI Document Control, H4-79, w/original attachments

200-UP-1 IRM Implementation Sampling
Monthly Groundwater Results, November, 1996
SAF B97-044

Sample Location	HEIS Number	Sample Date	Analysis Date (VOA)	Chloroform (µg/L)	Carbon TetraCl (µg/L)	TCE (µg/L)	Uranium (µg/L)	Technetium-99 (pCi/L)
299-W19-20	BOJKQ8	12/3/96	NA	NA	NA	NA	NA	9490
299-W19-20	BOJKQ9	12/3/96	12/5/96	5.6	260	8.2	1510	NA
299-W19-24	BOJKT9	12/3/96	NA	NA	NA	NA	NA	11,500
299-W19-24	BOJKV0	12/3/96	12/5/96	<2.0	130	2.8	2830	NA
299-W19-28	BOJKV3	11/22/96	NA	NA	NA	NA	NA	2020
299-W19-28	BOJKW0	11/22/96	12/4/96	<2.0	<2.0	<2.0	315	NA
299-W19-29	BOJKW1	11/22/96	NA	NA	NA	NA	NA	86
299-W19-29	BOJKW2	11/22/96	12/4/96	<2.0	10	<2.0	28	NA
299-W19-30	BOJKW3	11/22/96	NA	NA	NA	NA	NA	3030
299-W19-30	BOJKW4	11/22/96	12/4/96	<2.0	21	<2.0	560	NA
299-W19-34A	BOJKW5	11/22/96	NA	NA	NA	NA	NA	310
299-W19-34A	BOJKW6	11/22/96	12/4/96	7.0	91	3.0	2.4	NA
299-W19-35	BOJKW7	12/3/96	NA	NA	NA	NA	NA	570
299-W19-35	BOJKW8	12/3/96	12/5/96	<2.0	160	12	32.0	NA
299-W19-37	BOJKW9	12/3/96	NA	NA	NA	NA	NA	2670
Duplicate @ 299-W19-37	BOJKX1	12/3/96	NA	NA	NA	NA	NA	3350
Field Blank @ 299-W19-37	BOJKX3	12/3/96	NA	NA	NA	NA	NA	<138
299-W19-37	BOJKX0	12/3/96	12/5/96	<2.0	29	<2.0	1040	NA
Duplicate @ 299-W19-37	BOJKX2	12/3/96	12/5/96	<2.0	29	<2.0	1040	NA
Field Blank @ 299-W19-37	BOJKX4	12/3/96	12/5/96	<2.0	<2.0	<2.0	<1.0	NA
299-W19-38	BOJKX5	11/26/96	NA	NA	NA	NA	NA	1700
299-W19-38	BOJKX6	11/26/96	12/5/96	4.9	96	<2.0	185	NA
299-W19-40	BOJKX7	12/3/96	NA	NA	NA	NA	NA	644
299-W19-40	BOJKX8	12/3/96	12/5/96	5.9	38	<2.0	125	NA
Trip Blank	BOJKY1	11/22/96	12/4/96	<2.0	<2.0	<2.0	NA	NA
Trip Blank	BOJKY0	11/26/96	12/5/96	<2.0	<2.0	<2.0	NA	NA
Trip Blank	BOJKY2	12/3/96	12/5/96	<2.0	<2.0	<2.0	NA	NA
Trip Blank	BOJKY3	12/3/96	12/5/96	<2.0	<2.0	<2.0	NA	NA

NA - Not Analyzed

j - Value less than practical quantitation limit

Analyst: R. B. Kerkow
R.B. Kerkow

Analyst: R. T. Coffman
R.T. Coffman

VOA Instrument: Hewlett Packard 5890 GC, Serial # 3235A47685
Method: Dual DB-VRX columns, ECD/FID, 1mL headspace injection
Logbook: 200-UP-1 Field Logbook, EL-1334, pgs. 21 to 24

Uranium Instrument: ChemChek KPA-11a, Serial # 9445050065
Method: Kinetic Phosphorescence
Logbook: 200-UP-1 Field Logbook, EL-1334, pgs. 23 to 25

Bechtel Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

B97-044-54

Collector <i>A. Rizzo / D. Bowers</i>	Company Contact C.D. Wittreich	Telephone No. (509) 372-9315	Project Coordinator Koerner, CC	Data Turnaround Field
Project Designation 200-UP-1 IRM Performance - 1st Quarter FY 1997	Sampling Location 200-UP-1	SAF No. B97-044		
Ice Chest No.	Field Logbook No. <i>EL-1134</i>	Method of Shipment Hand Delivered		
Shipped To Mobile Laboratory	Offsite Property No. NA	Bill of Lading/Air Bill No. NA		

POSSIBLE SAMPLE HAZARDS/REMARKS None	Preservation	None	HCl to pH <2 Cooled to 4C																
	Type of Container		P	Gs*															
	No. of Container(s)		1	1															
	Special Handling and/or Storage Maintain samples between 2 degrees C and 6 degrees C.	Volume	20ml	40ml															

SAMPLE ANALYSIS

URANIUM TOTAL
See item (1) in Special Instructions.

Sample No.	Matrix *	Sample Date	Sample Time																
<i>1122196 (10)</i>																			
BOJK00 BOJKWY	Water	11/22/96	1007	X	X														
BOJKY1	Water	11/22/96	0740		X														
BOJKW0	W	11-22-96	1057	X	X														
BOJKW2	W	11-22-96	1133	X	X														
BOJKW6	W	11-22-96	1209	X	X														

CHAIN OF POSSESSION		Sign/Print Names	
Relinquished By <i>Doug Bowers</i>	Date/Time 11-22-96/1437	Received By <i>[Signature]</i>	Date/Time 11-22-96
Relinquished By <i>[Signature]</i>	Date/Time 0830	Received By <i>[Signature]</i>	Date/Time
Relinquished By <i>[Signature]</i>	Date/Time 12-4-96	Received By <i>[Signature]</i>	Date/Time 12-4-96
Relinquished By	Date/Time	Received By	Date/Time

SPECIAL INSTRUCTIONS	Matrix *
(1) VOA BY FIELD GC -- Chlorinated Hydrocarbon (Carbon tetrachloride)	<ul style="list-style-type: none"> 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	Disposed By	Date/Time

Bechtel Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

B97-044-65

Page 1 of 1

Collector <i>M. Mehlhorn, A. Rizzo</i>	Company Contact C.D. Wittreich	Telephone No. (509) 372-9315	Project Coordinator Koerner, CC	Data Turnaround Field
Project Designation 200-UP-1 IRM Performance - 1st Quarter FY 1997	Sampling Location 200-UP-1	SAF No. B97-044		
Ice Chest No.	Field Logbook No. <i>EFL-1134</i>	Method of Shipment Hand Delivered		
Shipped To Mobile Laboratory	Offsite Property No. NA	Bill of Lading/Air Bill No. NA		

POSSIBLE SAMPLE HAZARDS/REMARKS None	Preservation	None	HCl to pH <2 Cooled to 4C																
	Type of Container	P	Gs*																
	No. of Container(s)	1	1																
Special Handling and/or Storage Maintain samples between 2 degrees C and 6 degrees C.	Volume	20ml	40ml																

SAMPLE ANALYSIS			URANIUM TOTAL	See item (1) in Special Instructions.															
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Sample No.	Matrix *	Sample Date	Sample Time																
B0JKX6	Water	11-26-96	1053	X	X														
B0JKYO	Water	11-26-96	0920		X														

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS	Matrix *
Relinquished By <i>Monty Mehlhorn</i> Date/Time <i>11/26/96 1300</i>	Received By <i>[Signature]</i> Date/Time <i>1300</i>	(1) VOA BY FIELD GC -- Chlorinated Hydrocarbon (Carbon tetrachloride)	S - Soil
Relinquished By <i>Monty Mehlhorn</i> Date/Time <i>1300</i>	Received By <i>B. Whitten</i> Date/Time <i>11-26-96</i>		SE - Sediment
Relinquished By <i>[Signature]</i> Date/Time <i>0830</i>	Received By <i>[Signature]</i> Date/Time <i>0830</i>		SO - Solid
Relinquished By <i>[Signature]</i> Date/Time <i>12-4-96</i>	Received By <i>R.T. Coffman</i> Date/Time <i>12-4-96</i>		SL - Sludge
Relinquished By	Date/Time		W - Water
Relinquished By	Date/Time		O - Oil
Relinquished By	Date/Time		A - Air
Relinquished By	Date/Time		DS - Drum Solids
Relinquished By	Date/Time		DL - Drum Liquids
Relinquished By	Date/Time		T - Tissue
Relinquished By	Date/Time		WI - Wipe
Relinquished By	Date/Time		L - Liquid
Relinquished By	Date/Time		V - Vegetation
Relinquished By	Date/Time		X - Other

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

Bechtel Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

B97-044-62

Collector <i>A. R. Zzo, D. Bowen</i>	Company Contact C.D. Wittreich	Telephone No. (509) 372-9315	Project Coordinator Koerner, CC	Data Turnaround Field
Project Designation 200-UP-1 IRM Performance - 1st Quarter FY 1997	Sampling Location 200-UP-1	SAF No. B97-044		
Ice Chest No.	Field Logbook No. <i>EL-1134</i>	Method of Shipment Hand Delivered		
Shipped To Mobile Laboratory	Offsite Property No. NA	Bill of Lading/Air Bill No. NA		

POSSIBLE SAMPLE HAZARDS/REMARKS None	Preservation	None	HCl to pH <2 Cooled to 4C											
	Type of Container	P	Gs*											
	No. of Container(s)	1	1											
Special Handling and/or Storage Maintain samples between 2 degrees C and 6 degrees C.	Volume	20ml	40ml											

SAMPLE ANALYSIS		URANIUM TOTAL	See item (1) in Special Instructions.											

Sample No.	Matrix *	Sample Date	Sample Time											
BOJKX0	Water	12-3-96	1001	X	X									
BOJKY4	W	12-3-96	1004	X	X									
BOJKY2 ✓	W	12-3-96	1001	X	X									
BOJKV0	W	12-3-96	1043	X	X									
BOJKY8	W	12-3-96	1155	X	X									
BOJKY3	W	12-3-96	0740		X									

CHAIN OF POSSESSION	Sign/Print Names		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		
	Relinquished By <i>AGL Zzo</i>	Date/Time 12-3-96	Received By <i>Eric</i>	Date/Time 12-3-96	(1) VOA BY FIELD GC - Chloronated Hydrocarbon {Carbon tetrachloride}										
	Relinquished By <i>Eric</i>	Date/Time 0830	Received By <i>Beckwith</i>	Date/Time 12-3-96											
	Relinquished By <i>Eric</i>	Date/Time 12-4-96	Received By <i>RT Coffman</i>	Date/Time 12-4-96											
Relinquished By	Date/Time	Received By	Date/Time												
Relinquished By	Date/Time	Received By	Date/Time												
LABORATORY SECTION	Received By	Title										Date/Time			
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By										Date/Time			

Bechtel Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

B97-044-54

Collector <i>Robert Ellberg</i>	Company Contact C.D. Wittreich	Telephone No. (509) 372-9315	Project Coordinator Koerner, CC	Data Turnaround Field
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Project Designation 200-UP-1 IRM Performance - 1st Quarter FY 1997	Sampling Location 200-UP-1	SAF No. B97-044
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Ice Chest No.	Field Logbook No. <i>FL-1309</i>	Method of Shipment Hand Delivered
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Shipped To Mobile Laboratory	Offsite Property No. NA	Bill of Lading/Air Bill No. NA
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POSSIBLE SAMPLE HAZARDS/REMARKS None	Preservation	None	HCl to pH <2 Cooled to 4C															
	Type of Container	P	Gs*															
	No. of Container(s)	1	1															

Special Handling and/or Storage Maintain samples between 2 degrees C and 6 degrees C.	Volume	20ml	40ml															
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SAMPLE ANALYSIS				URANIUM TOTAL	See item (1) in Special Instructions.													
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Sample No.	Matrix *	Sample Date	Sample Time															
B0JKQ9	Water	12-3-96	11:17	X	X													
<i>B0JKY2</i>	Water	12-3-96	0740		X													
<i>B0JKW8</i>	Water	12-3-96	10:17	X	X													

CHAIN OF POSSESSION	Sign/Print Names		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		
	Relinquished By <i>R. Ellberg</i>	Date/Time 1400	Received By <i>R. Ellberg</i>	Date/Time 1400	(1) VOA BY FIELD GC - Chlorinated Hydrocarbon (Carbon tetrachloride)										
	Relinquished By <i>R. Ellberg</i>	Date/Time 12-3-96	Received By <i>R. J. Coffman</i>	Date/Time 12-3-96											
	Relinquished By <i>R. J. Coffman</i>	Date/Time 12-4-96	Received By <i>R. J. Coffman</i>	Date/Time 12-4-96											

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time