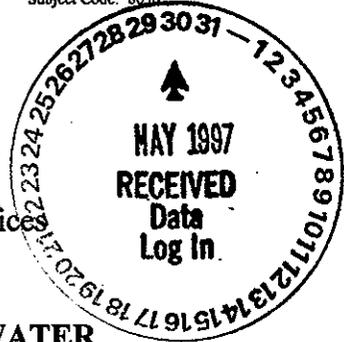


Environmental Restoration Contractor **ERC Team**
Interoffice Memorandum

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



TO: M. A. Buckmaster, H4-80
M. J. Galgoul, H9-12

DATE: May 13, 1997

COPIES: See Below

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

SUBJECT: **200-ZP-1 PHASE II PERFORMANCE MONITORING, GROUNDWATER RESULTS, APRIL 1997, REV 0**

REFERENCES:

1. BHI, 1997, *On-Site Measurements Quality Assurance Plan*, BHI-QA-03, Plan 5.2, REV 1, Bechtel Hanford, Inc., Richland, Washington.
2. BHI, 1995, *Field Screening Procedures*, BHI-EE-05, Bechtel Hanford, Inc., Richland, Washington.
3. BHI, 1997, *200-ZP-1 Field Screening Support Logbook*, EL-1359, Bechtel Hanford, Inc., Richland, Washington.

This data package contains field screening results for groundwater samples analyzed to support 200-ZP-1 IRM Phase II performance monitoring. The Quality Assurance level for this work corresponds to QC-1 as specified in reference 1 (BHI 1997). Samples collected and analyzed during April 1997 were managed under SAF C97-014, and C97-025

Attachment 1 contains Volatile Organic Compound (VOC) 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) 1.29, *Aqueous Headspace Analysis of Volatile Organic Compounds in Water Using Hewlett Packard 5890 Gas Chromatograph* (BHI 1997). Information concerning operation and calibration of the gas chromatograph is contained in the instrument logbook EL-1329. Please contact me if you have any questions on this information.

R. T. Coffman, Engineer/Analyst

R. T. Coffman
RTC:rtc

Attachments:

M. A. Buckmaster, H4-80

Page 2

Attachment 1. 200-ZP-1 IRM Phase II Performance Monitoring, Groundwater Results,
April 1997

Attachment 2. Sample Chain of Custody Sheets

Copies:

~~D. E. Ayres, B1-35, w/attachments 1 and 2~~
B. H. Ford, H0-02, w/attachment 1 only
J. D. Isaacs, H0-19, w/attachment 1 only
I. D. Jacques, H9-10, w/attachment 1 only
R. B. Kerkow, H9-10, w/attachment 1 only
S. A. Strobe, T7-12, w/attachment 1 only
D. A. St John, N1-28, w/attachment 1 only
L. C. Swanson, H9-11, w/attachment 1 only
BHI Document Control, H4-79, w/original attachments



200-ZP-1 Phase II Performance Monitoring
Groundwater Results, April 1997
SAF C97-014, and C97-025

<i>Sample Location</i>	<i>HEIS Number</i>	<i>Sample Date</i>	<i>Analysis Date</i>	<i>Chloroform (µg/L)</i>	<i>Carbon Tetrachloride (µg/L)</i>	<i>Trichloroethylene (µg/L)</i>
299-W15-1	BOKOW3	4/22/97	4/29/97	20	2300	11
299-W15-7	BOKOV4	4/21/97	4/23/97	32	2000	16
299-W15-10	BOKOV7	4/21/97	4/23/97	28	2700	13
299-W15-11	BOKOV8	4/21/97	4/23/97	21	2100	5.1
Duplicate @ 299-W15-11	BOKOV9	4/21/97	4/23/97	21	2100	4.9
299-W15-16	BOKBV7	4/22/97	4/23/97	36	5000	7.0
299-W15-18	BOKBV8	4/22/97	4/23/97	22	2000	2.4
299-W15-38	BOKOWO	4/23/97	4/29/97	24	2300	<2.0
299-W18-24	BOKBV9	4/22/97	4/23/97	21	1000	<2.0

j - Value less than practical quantitation limit

VOA Instrument: Hewlett Packard 5890 GC, Serial # 3235A47685
 Method: Dual DB-VRX columns, ECD/FID, 1 mL headspace injection
 Logbook: 200-ZP-1 Field Logbook EL-1359

Analyst:


 R.T. Coffman

Collector RT SICKLE (RFS)	Company Contact	Telephone No.	Project Coordinator Stewart, DL	Data Turnaround Field
Project Designation 200-ZP-1 IRM (Group 1 & 5) Groundwater Sampling FY1997	Sampling Location 200 W	SAF No. C97-014		
Ice Chest No. NA	Field Logbook No. WEC-N-205	Method of Shipment GOV. VEH.		
Shipped To Mobile Laboratory	Offsite Property No. N/A	Bill of Lading/Air Bill No. NA		

POSSIBLE SAMPLE HAZARDS/REMARKS	Preservation	HCl to pH <2 Cooled to 4C																		
	Type of Container	Gs*																		
	No. of Container(s)	1																		
Special Handling and/or Storage	Volume	40ml																		
SAMPLE ANALYSIS		VOA BY FIELD GC -- Chlorinated Hydrocarbon																		

Sample No.	Matrix *	Sample Date	Sample Time																		
BOKOW3	Water	4/22/97	1205	✓																	

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 RT SICKLE (RFS)	Date/Time 4/22/97 1402	Received By RT COFFMAN/RT Coffman	Date/Time 4/23/97 1402											
	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

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Collector **AG RIZZO (RFS)** Company Contact **J.H. KESSNER** Telephone No. **(509) 372-9538** Project Coordinator **Stewart, DL** Data Turnaround **Field**

Project Designation **200-ZP-1 IRM (Group 1 & 5) Groundwater Sampling FY1997** Sampling Location **200-W** SAF No. **C97-014**

Ice Chest No. **BONE HEAD** Field Logbook No. **WAL-N-205 PAGE 27** Method of Shipment **Gov. Vehicle**

Shipped To **Mobile Laboratory** Offsite Property No. **N/A** Bill of Lading/Air Bill No. **N/A**

POSSIBLE SAMPLE HAZARDS/REMARKS	Preservation	HCl to pH <2 Cooled to 4C												
	N/A	Type of Container	Gs*											
		No. of Container(s)	1											

Special Handling and/or Storage **COOL 4°C** Volume **40ml**

SAMPLE ANALYSIS VOA BY FIELD GC -- Chlorinated Hydrocarbon

Sample No.	Matrix *	Sample Date	Sample Time										
BOKOV4	Water	APR 21 1997	1027	L									

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS	Matrix *
Relinquished By AG RIZZO (RFS) Date/Time 1500 4-21-97	Received By JG HOGAN / JH HOGAN Date/Time 1500 4-21-97	TOTAL ACTIVITY EXEMPT	<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
Relinquished By JG HOGAN / JH HOGAN Date/Time 1210 4-22-97	Received By RT COFFMAN / RT COFFMAN Date/Time 1210 4/22/97		
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 _____

Collector **AG RIZZO (RFS)** Company Contact **J.H. KESSNER** Telephone No. **(509) 372-9538** Project Coordinator **Stewart, DL** Data Turnaround Field

Project Designation **200-ZP-1 IRM (Group 1 & 5) Groundwater Sampling FY1997** Sampling Location **200-W** SAF No. **C97-014**

Ice Chest No. **Bone Head** Field Logbook No. **WHC - N - 205 64 PAGE 27** Method of Shipment **COU-Vehicle**

Shipped To **Mobile Laboratory** Offsite Property No. **N/A** Bill of Lading/Air Bill No. **N/A**

POSSIBLE SAMPLE HAZARDS/REMARKS	Preservation	HCl to pH <2 Cooled to 4C												
	N/A	Type of Container	Gs*											
		No. of Container(s)	1											

Special Handling and/or Storage **Cool 4°C** Volume **40ml**

SAMPLE ANALYSIS		VOA BY FIELD GC -- Chlorinated Hydrocarbon											

Sample No.	Matrix *	Sample Date	Sample Time										
B0K0V7	Water	APR 21 1997	1124	✓									

CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT				Matrix *	
Relinquished By AG RIZZO (RFS)	Date/Time 1500 4-21-97	Received By JG HOGAN	Date/Time 1500 4-21-97					S	- Soil
Relinquished By JG HOGAN	Date/Time 1210 4-22-97	Received By RT COFFMAN	Date/Time 1210 4/22/97					SE	- Sediment
Relinquished By	Date/Time	Received By	Date/Time					SO	- Solid
Relinquished By	Date/Time	Received By	Date/Time					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 _____

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Collector AG RIZZO (RFS)	Company Contact J.H. KESSNER	Telephone No. (509) 372-9538	Project Coordinator Stewart, DL	Data Turnaround Field
Project Designation 200-ZP-1 IRM (Group 1 & 5) Groundwater Sampling FY1997	Sampling Location 200-W	SAF No. C97-014		
Ice Chest No. TSOL-EMERD	Field Logbook No. WHC-VN-205 64 PAGE 27:8	Method of Shipment GOV-VEHICLE		
Shipped To Mobile Laboratory	Offsite Property No. N/A	Bill of Lading/Air Bill No. N/A		

POSSIBLE SAMPLE HAZARDS/REMARKS N/A	Preservation	HCl to pH <2 Cooled to 4C																		
	Type of Container	Gs*																		
	No. of Container(s)	1																		
Special Handling and/or Storage COOL 40C	Volume	40ml																		
SAMPLE ANALYSIS		VOA BY FIELD GC -- Chlorinated Hydrocarbon																		

Sample No.	Matrix *	Sample Date	Sample Time																	
BOKOV8	Water	APR 21 1997	1240	←																

CHAIN OF POSSESSION	Sign/Print Names		SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT										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 AG RIZZO (RFS)	Date/Time 1300 4-21-97	Received By JG HOGAN	Date/Time 1500 4-21-97											
	Relinquished By JG HOGAN	Date/Time 1210 4-22-97	Received By PT COFFMAN	Date/Time 1210 4/22/97											
	Relinquished By	Date/Time	Received By	Date/Time											

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

Collector AG RIZZO (RFS)	Company Contact J.H. KESSNER	Telephone No. (509) 372-9538	Project Coordinator Stewart, DL	Data Turnaround Field
Project Designation 200-ZP-1 IRM (Group 1 & 5) Groundwater Sampling FY1997	Sampling Location 200-W	SAF No. C97-014		
Ice Chest No. <i>Rome Head</i>	Field Logbook No. <i>WHC-N-205 G1 PAGE 27 & 8</i>	Method of Shipment <i>Gov. Vehicle</i>		
Shipped To Mobile Laboratory	Offsite Property No. <i>N/A</i>	Bill of Lading/Air Bill No. <i>N/A</i>		

POSSIBLE SAMPLE HAZARDS/REMARKS	Preservation	HCl to pH <2 Cooled to 4C								
	<i>N/A</i>	Type of Container	Gs*							
		No. of Container(s)	1							
Special Handling and/or Storage <i>cool 4°C</i>	Volume	40ml								
SAMPLE ANALYSIS		VOA BY FIELD GC-- Chlorinated Hydrocarbon								

Sample No.	Matrix *	Sample Date	Sample Time						
B0K0V9	Water	APR 21 1997	<i>1240</i>	<input checked="" type="checkbox"/>					

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT	Matrix *
Relinquished By <i>AG RIZZO (RFS)</i>	Date/Time <i>1500 4-21-97</i>	Received By <i>JG HOGAN</i>	<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
Relinquished By <i>JG HOGAN</i>	Date/Time <i>1210 4-22-97</i>	Received By <i>R. COFFMAN</i>	
Relinquished By	Date/Time	Received By	
Relinquished By	Date/Time	Received By	

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

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Collector AG RIZZO (RFS)	Company Contact JH KESSNER	Telephone No. (509) 372-9538	Project Coordinator Stewart, DL	Data Turnaround Field
Project Designation 200-ZP-1 IRM (Group 4) Groundwater Sampling FY1997	Sampling Location 200-W	SAF No. C97-025		
Ice Chest No. <i>BOWHEAD</i>	Field Logbook No. <i>WHC-M-205 64 PAGE 29</i>	Method of Shipment GOVT. VEHICLE		
Shipped To Mobile Laboratory	Offsite Property No. <i>N/A</i>	Bill of Lading/Air Bill No. <i>N/A</i>		

POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>	Preservation	HCl to pH <2 Cooled to 4C																		
	Type of Container	Gs*																		
	No. of Container(s)	1																		
Special Handling and/or Storage <i>cool 4°C</i>	Volume	40ml																		
SAMPLE ANALYSIS		VOA BY FIELD GC - Chlorinated Hydrocarbon																		

Sample No.	Matrix *	Sample Date	Sample Time																		
BOKBV7	Water	APR 22 1997	0908	✓																	

CHAIN OF POSSESSION	Sign/Print Names				SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPTION APPLIES												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>AG RIZZO (RFS)</i>	Date/Time <i>1210 4-22-97</i>	Received By <i>R. Coffman / R. Coffman</i>	Date/Time <i>1210 4/22/97</i>														
	Relinquished By	Date/Time	Received By	Date/Time														
	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

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Collector **AG RIZZO (RFS)** Company Contact **JH KESSNER** Telephone No. **(509) 372-9538** Project Coordinator **Stewart, DL** Data Turnaround **Field**

Project Designation **200-ZP-1 IRM (Group 4) Groundwater Sampling FY1997** Sampling Location **200-W** SAF No. **C97-025**

Ice Chest No. **BOWFHEU1** Field Logbook No. **LWHC-N-205 64 PAGE 29** Method of Shipment **GOVT. VEHICLE**

Shipped To **Mobile Laboratory** Offsite Property No. **N/A** Bill of Lading/Air Bill No. **N/A**

POSSIBLE SAMPLE HAZARDS/REMARKS	Preservation	HCl to pH <2 Cooled to 4C												
	N/A	Type of Container	Gs*											
		No. of Container(s)	1											

Special Handling and/or Storage **COOL/4°C** Volume **40ml**

SAMPLE ANALYSIS VOA BY FIELD GC -- Chlorinated Hydrocarbon

Sample No.	Matrix *	Sample Date	Sample Time										
BOKBV8	Water	APR 22 1997	1027	✓									

CHAIN OF POSSESSION	Sign/Print Names				SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPTION APPLIES	Matrix *
	Relinquished By	Date/Time	Received By	Date/Time		
	AG RIZZO (RFS)	1210 # - 22 97	R. COFFMAN	1210 4/22/97		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 _____

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Collector RT SICKLE (AFS)	Company Contact J.H. KESSNER	Telephone No. (509) 372-9538	Project Coordinator Stewart, DL	Data Turnaround Field
Project Designation 200-ZP-1 IRM (Group 1 & 5) Groundwater Sampling FY1997	Sampling Location 200-W	SAF No. C97-014		
Ice Chest No. NA	Field Logbook No. WHC-N-205 #63	Method of Shipment Cool. Vc H.		
Shipped To Mobile Laboratory	Offsite Property No. NA	Bill of Lading/Air Bill No. NA		

POSSIBLE SAMPLE HAZARDS/REMARKS	Preservation	HCl to pH <2 Cooled to 4C											
	Type of Container	Gs*											
	No. of Container(s)	1											
Special Handling and/or Storage	Volume	40ml											
SAMPLE ANALYSIS		VOA BY FIELD GC -- Chlorinated Hydrocarbon											

Sample No.	Matrix *	Sample Date	Sample Time										
BOKOWO	Water	4/23/97	1022	✓									

CHAIN OF POSSESSION	Sign/Print Names		SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT										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 RT SICKLE (AFS)	Date/Time 4.24.97 1345	Received By RT Coffman / RT Coffman	Date/Time 4/24/97											
	Relinquished By	Date/Time	Received By	Date/Time											
	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

Collector **AG RIZZO (RFS)** Company Contact **JH KESSNER** Telephone No. **(509) 372-9538** Project Coordinator **Stewart, DL** Data Turnaround **Field**

Project Designation **200-ZP-1 IRM (Group 4) Groundwater Sampling FY1997** Sampling Location **200-W** SAF No. **C97-025**

Ice Chest No. **BURHEAD** Field Logbook No. **WHC-1-205 G1 PAGE 25** Method of Shipment **GOVT. VEHICLE**

Shipped To **Mobile Laboratory** Offsite Property No. **N/A** Bill of Lading/Air Bill No. **N/A**

POSSIBLE SAMPLE HAZARDS/REMARKS	Preservation	HCl to pH <2 Cooled to 4C												
	N/A	Type of Container	Gs*											
		No. of Container(s)	1											

Special Handling and/or Storage **cool 4°C** Volume **40ml**

SAMPLE ANALYSIS VOA BY FIELD GC -- Chlorinated Hydrocarbon

Sample No.	Matrix *	Sample Date	Sample Time										
BOKBV9	Water	APR 22 1997	0951	✓									

CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPTION APPLIES				Matrix *	
Relinquished By	Date/Time	Received By	Date/Time					S	= Soil
AG RIZZO (RFS)	4-22-97 1210	RT Coffman / RT Coffman	4/22/97 1210					SE	= Sediment
Relinquished By	Date/Time	Received By	Date/Time					SO	= Solid
								SL	= Sludge
Relinquished By	Date/Time	Received By	Date/Time					W	= Water
								O	= Oil
Relinquished By	Date/Time	Received By	Date/Time					A	= Air
								DS	= Drum Solids
Relinquished By	Date/Time	Received By	Date/Time					DL	= Drum Liquids
								T	= Tissue
Relinquished By	Date/Time	Received By	Date/Time					WI	= Wipe
								L	= Liquid
								V	= Vegetation
								X	= Other

LABORATORY SECTION Received By _____ Title _____ Date/Time _____

FINAL SAMPLE DISPOSITION Disposal Method _____ Disposed By _____ Date/Time _____