

F 30070-Field

0052053 049923

**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, H0-19
M. J. Galgoul, H9-03

DATE: July 17, 1997

COPIES: See Below

FROM: R. T. Coffman
Sampling and Analytical Services
X7-02/531-0661

SUBJECT: 200-ZP-1 PHASE II PERFORMANCE MONITORING, GROUNDWATER RESULTS, MAY 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 May 1997 were managed under SAF C97-015 (Group2), and C97-018 (Group 3).

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). Analysis of sample B0K5C9 (299-W14-9) revealed a higher concentration of chloroform than usually seen. A second analysis was performed as a verification of the first set of results. The results of the second analysis were the same as the original analysis. Analysis results can be found on Attachment 1 of this report. Chloroform concentrations have risen from 22 µg/L to 126 µg/L, and carbon tetrachloride concentrations have dropped from 420 µg/L to 50 µg/L at this well since November 1996. 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.



M. A. Buckmaster, H0-19

Page 2



R. T. Coffman, Engineer/Analyst

RTC:rtc

Attachments:

- Attachment 1. 200-ZP-1 IRM Phase II Performance Monitoring, Groundwater Results, May 1997
- Attachment 2. Sample Chain of Custody Sheets

Copies:

~~D. E. Ayres, B1-31, w/attachments 1 and 2~~

- J. V. Borghese, H9-03, w/attachment 1 only
- R. T. Coffman, X7-02, w/attachments 1 and 2
- C. W. Denslow, H9-03, w/attachment 1 only
- B. H. Ford, H0-02, w/attachment 1 only
- J. D. Isaacs, H0-19, w/attachment 1 only
- I. D. Jacques, L6-06, w/attachment 1 only
- R. B. Kerkow, X7-02, 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, H9-02, w/attachment 1 only
- BHI Document Control, H4-79, w/original attachments



200-ZP-1 Phase II Performance Monitoring
Groundwater Results, May 1997
SAF C97-015(Group 2) and C97-018(Group 3)

Sample Location	HEIS Number	Sample Date	Analysis Date	Chloroform (µg/L)	Carbon Tetrachloride (µg/L)	Trichloroethylene (µg/L)
299-W14-9	BOK5C9	5/21/97	5/28/97	122	50	2.9
299-W14-9(analysis #2)	BOK5C9	5/21/97	5/28/97	126	50	2.9
299-W15-4	BOK5D5	5/19/97	5/20/97	10	400	<2.0
299-W15-15	BOK5D1	5/22/97	5/28/97	8.4	930	<2.0
299-W15-19	BOK5D2	5/21/97	5/28/97	3.4	220	<2.0
Duplicate @ 299-W15-19	BOK5D3	5/21/97	5/28/97	3.3	230	<2.0
299-W15-30	BOK5C3	5/21/97	5/28/97	50	4000	5.8
299-W15-31A	BOK5C4	5/21/97	5/28/97	15	3700	5.9
299-W15-39	BOK5D4	5/19/97	5/20/97	17	930	<2.0
299-W18-1	BOK5D6	5/22/97	5/28/97	13	1100	<2.0
299-W18-4	BOK5F3	5/20/97	5/28/97	31	81	<2.0
299-W18-21	BOK5D7	5/21/97	5/28/97	4.5	530	<2.0
299-W18-23	BOK5C5	5/22/97	5/28/97	<2.0	230	<2.0
299-W18-26	BOK5C6	5/21/97	5/28/97	20	52	<2.0
299-W18-27	BOK5D8	5/21/97	5/28/97	<2.0	330	<2.0
299-W18-28	BOK5D9	5/22/97	5/28/97	6.6	11	<2.0
299-W18-30	BOK5F0	5/21/97	5/28/97	14	830	2.3
299-W18-32	BOK5F1	5/21/97	5/28/97	<2.0	<2.0	<2.0
699-39-79	BOK5C7	5/22/97	5/28/97	<2.0	33	<2.0
Duplicate @ 699-39-79	BOK5C8	5/22/97	5/28/97	<2.0	34	<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 7-17-97
 R.T. Coffman

Collector RZ STEFFLER (AFS)	Company Contact JH Kessner	Telephone No. (509) 372-9538	Project Coordinator Stewart, DL	Data Turnaround Field
Project Designation 200-ZP-1 IRM (Group 3) Groundwater Sampling FY1997	Sampling Location 200W	SAF No. C97-018		
Ice Chest No. SMK-561	Field Logbook No. WHC-N-205 #64	Method of Shipment GOVT. VEHICLE		
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																	
B0K5C9	Water	5-21-97	1245	X																

CHAIN OF POSSESSION	<table style="width:100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center;">Sign/Print Names</th> </tr> <tr> <td style="width:50%; padding: 5px;">Relinquished By <i>RZ Steffler</i> RZ STEFFLER (AFS)</td> <td style="width:50%; padding: 5px;">Received By <i>RT Coffman</i> RT COFFMAN</td> </tr> <tr> <td style="padding: 5px;">Date/Time 5-22-97</td> <td style="padding: 5px;">Date/Time 5/22/97</td> </tr> <tr> <td style="padding: 5px;">Relinquished By</td> <td style="padding: 5px;">Received By</td> </tr> <tr> <td style="padding: 5px;">Date/Time</td> <td style="padding: 5px;">Date/Time</td> </tr> <tr> <td style="padding: 5px;">Relinquished By</td> <td style="padding: 5px;">Received By</td> </tr> <tr> <td style="padding: 5px;">Date/Time</td> <td style="padding: 5px;">Date/Time</td> </tr> </table>	Sign/Print Names		Relinquished By <i>RZ Steffler</i> RZ STEFFLER (AFS)	Received By <i>RT Coffman</i> RT COFFMAN	Date/Time 5-22-97	Date/Time 5/22/97	Relinquished By	Received By	Date/Time	Date/Time	Relinquished By	Received By	Date/Time	Date/Time	SPECIAL INSTRUCTIONS ** Total Activity Results Required**	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
Sign/Print Names																	
Relinquished By <i>RZ Steffler</i> RZ STEFFLER (AFS)	Received By <i>RT Coffman</i> RT COFFMAN																
Date/Time 5-22-97	Date/Time 5/22/97																
Relinquished By	Received By																
Date/Time	Date/Time																
Relinquished By	Received By																
Date/Time	Date/Time																
LABORATORY SECTION	Received By	Title	Date/Time														
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time														

Collector: **D.R. BREWINGTON (RFS)** Company Contact: **JH Kessner** Telephone No.: **(509) 372-9538** Project Coordinator: **Stewart, DL** Data Turnaround: **Field**

Project Designation: **200-ZP-1 IRM (Group 3) Groundwater Sampling FY1997** Sampling Location: **200W** SAF No.: **C97-018**

Ice Chest No.: **SML # 268** Field Logbook No.: **WAC-N-205 #63** Method of Shipment: **GOVT. VEHICLE**

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											
B0K5D5	Water	5/19/97	1246	✓										

CHAIN OF POSSESSION	Sign/Print Names		SPECIAL INSTRUCTIONS ** Total Activity Exempt.**										Matrix *	
Relinquished By: D.R. BREWINGTON (RFS) <i>D.R. Brewington</i>	Date/Time: 5/19/97 1310	Received By: RT Coffman / et Coffman <i>RT Coffman</i>	Date/Time: 5/19/97											S = Soil
Relinquished By:	Date/Time:	Received By:	Date/Time:											SE = Sediment
Relinquished By:	Date/Time:	Received By:	Date/Time:											SO = Solid
Relinquished By:	Date/Time:	Received By:	Date/Time:											SL = Sludge
Relinquished By:	Date/Time:	Received By:	Date/Time:											W = Water
Relinquished By:	Date/Time:	Received By:	Date/Time:											O = Oil
Relinquished By:	Date/Time:	Received By:	Date/Time:											A = Air
Relinquished By:	Date/Time:	Received By:	Date/Time:											DS = Drum Solids
Relinquished By:	Date/Time:	Received By:	Date/Time:											DL = Drum Liquids
Relinquished By:	Date/Time:	Received By:	Date/Time:											T = Tissue
Relinquished By:	Date/Time:	Received By:	Date/Time:											WI = Wipe
Relinquished By:	Date/Time:	Received By:	Date/Time:											L = Liquid
Relinquished By:	Date/Time:	Received By:	Date/Time:											V = Vegetation
Relinquished By:	Date/Time:	Received By:	Date/Time:											X = Other

LABORATORY SECTION: Received By: _____ Title: _____ Date/Time: _____

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

Collector <i>K. Young</i>	Company Contact JH Kessner	Telephone No. (509) 372-9538	Project Coordinator Stewart, DL	Data Turnaround Field
Project Designation 200-ZP-1 IRM (Group 3) Groundwater Sampling FY1997	Sampling Location 200W	SAF No. C97-018		
Ice Chest No.	Field Logbook No. <i>WHC-N-205 #65</i>	Method of Shipment GOVT. VEHICLE		
Shipped To Mobile Laboratory	Offsite Property No. <i>NA</i>	Bill of Lading/Air Bill No. <i>NA</i>		

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																	
B0K5D1	Water	<i>5-22-97</i>	<i>1001</i>	<i>X</i>																

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS ** Total Activity Exempt.**		Matrix *
Relinquished By <i>K. Young</i>	Date/Time <i>5-22-97 1335</i>	Received By <i>R. Coffman</i>	Date/Time <i>5/22/97 1335</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	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: **RT SICKLE (RFS)** Company Contact: **JH Kessner** Telephone No.: **(509) 372-9538** Project Coordinator: **Stewart, DL** Data Turnaround: **Field**

Project Designation: **200-ZP-1 IRM (Group 3) Groundwater Sampling FY1997** Sampling Location: **200W** SAF No.: **C97-018**

Ice Chest No.: **SML #268** Field Logbook No.: **WHL-N-205 #63** Method of Shipment: **GOVT. VEHICLE**

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										
BOK5D2	Water	5/21/97	1241	✓									

CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS								Matrix *	
Relinquished By: <i>[Signature]</i> Date/Time: 5/21/97 13:45		Received By: <i>[Signature]</i> Date/Time: 5/21/97 13:45		** 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: _____ 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 RT SICKLE (RFS)	Company Contact JH Kessner	Telephone No. (509) 372-9538	Project Coordinator Stewart, DL	Data Turnaround Field
Project Designation 200-ZP-1 IRM (Group 3) Groundwater Sampling FY1997	Sampling Location 200W	SAF No. C97-018		
Ice Chest No. SML # 268	Field Logbook No. WHC-N-205 #63	Method of Shipment GOVT. VEHICLE		
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																	
BOK5D3	Water	5/21/97	1241	✓																

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 (RFS)	Date/Time 5/21/97 13:45	Received By RT COFFMAN / RT C/ma	Date/Time 5/21/97 13:45													
	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 **RZ STEFFLER (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 2) Groundwater Sampling--FY 1997** Sampling Location **200-W** SAF No. **C97-015**

Ice Chest No. **SM2-561** Field Logbook No. **WHC-N-205 #64** Method of Shipment **GOVT. VEHICLE**

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												
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Sample No.	Matrix *	Sample Date	Sample Time										
B0K5C3	Water	MAY 21 1997	0910	X									

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 <i>RZ Steffler</i>	Date/Time <i>1335 5-22-97</i>	Received By <i>RT Coffman / RT Coffman</i>	Date/Time <i>1335 5/22/97</i>											
	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 RZ STEFFLER (RFS)	Company Contact J.H. KESSNER	Telephone No. (509) 372-9538	Project Coordinator Stewart D.	Data Turnaround Field
Project Designation 200-ZP-1 IRM (Group 2) Groundwater Sampling--FY1997	Sampling Location 200-W	SAF No. C97-015		
Ice Chest No. SMIL-561	Field Logbook No. WHC-N-205 #64	Method of Shipment GOVT. VEHICLE		
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																	
B0K5C4	Water	MAY 21 1997	1020	X																

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 <i>RZ STEFFLER (RFS)</i>	Date/Time 5-22-97	Received By <i>RT COFFMAN/RT Coffman</i>	Date/Time 5/22/97											
	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 **JH Kessner** Telephone No. **(509) 372-9538** Project Coordinator **Stewart. DL** Data Turnaround **Field**

Project Designation **200-ZP-1 IRM (Group 3) Groundwater Sampling FY1997** Sampling Location **200W** SAF No. **C97-018**

Ice Chest No. **Sub 493** Field Logbook No. **WHC-N-205 64 PAGE 51** 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 N/A	Preservation	HCl to pH <2 Cooled to 4C																	
	Type of Container	Gs*																	
	No. of Container(s)	1																	

Special Handling and/or Storage **200/40C** Volume **40ml**

SAMPLE ANALYSIS	VOA BY FIELD GC -- Chlorinated Hydrocarbon																		

Sample No.	Matrix *	Sample Date	Sample Time																
B0K5D4	Water	MAY 19 1997	1352	L															

CHAIN OF POSSESSION	Sign/Print Names				SPECIAL INSTRUCTIONS ** Total Activity Results Required**	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 1413	Received By RTCOFFMAN/RTCOFFMAN	Date/Time 1413		
		5-19-97		5-19-97		
	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 <i>K. Young</i>	Company Contact JH Kessner	Telephone No. (509) 372-9538	Project Coordinator Stewart, DL	Data Turnaround Field
Project Designation 200-ZP-1 IRM (Group 3) Groundwater Sampling FY1997	Sampling Location 200W	SAF No. C97-018		
Ice Chest No. <i>1982</i>	Field Logbook No. <i>WAC-NI-205 # 65</i>	Method of Shipment GOVT. VEHICLE		
Shipped To Mobile Laboratory	Offsite Property No. <i>NA</i>	Bill of Lading/Air Bill No. <i>NA</i>		

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																		
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Sample No.	Matrix *	Sample Date	Sample Time																	
BOK5D6	Water	5-22-97	1056	X																

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 <i>K. Young</i>	Date/Time <i>5-22-97 1335</i>	Received By <i>RT Coffman / RT Laffine</i>	Date/Time <i>5/22/97 1335</i>											
	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 3) Groundwater Sampling FY1997** Sampling Location **200W** SAF No. **C97-018**

Ice Chest No. **SML 493** Field Logbook No. **WHC-N-205 64 PAGES 53/64** 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 N/A	Preservation	HCl to pH <2 Cooled to 4C																	
	Type of Container	Gs*																	
	No. of Container(s)	1																	

Special Handling and/or Storage **000/ 4°C** Volume **40ml**

SAMPLE ANALYSIS VOA BY FIELD GC -- Chlorinated Hydrocarbon

Sample No.	Matrix *	Sample Date	Sample Time																
BOK5F3	Water	MAY 20 1997	12 51	✓															

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 1408 5-20-97	Received By RT Coffman / RT Coffman	Date/Time 1408 5/20/97											
	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 RT SICKLE (RFS)	Company Contact JH Kessner	Telephone No. (509) 372-9538	Project Coordinator Stewart, DL	Data Turnaround Field
Project Designation 200-ZP-1 IRM (Group 3) Groundwater Sampling FY 1997	Sampling Location 200W	SAF No. C97-018		
Ice Chest No. SMI # 268	Field Logbook No. WHC-N-205 #63	Method of Shipment GOVT. VEHICLE		
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																		
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Sample No.	Matrix *	Sample Date	Sample Time																		
BOK5D7	Water	5/21/97	1041	✓																	

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 (RFS)	Date/Time 5/21/97 13:45	Received By RT COFFMAN / RT Coffman	Date/Time 5/21/97 13:45											
	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 *K. Young* Company Contact J.H. KESSNER Telephone No. (509) 372-9538 Project Coordinator Stewart, DL Data Turnaround Field

Project Designation 200-ZP-1 IRM (Group 2) Groundwater Sampling--FY1997 Sampling Location 200-W SAF No. C97-015

Ice Chest No. *1982* Field Logbook No. *WHC-N-205 #65* Method of Shipment GOVT. VEHICLE

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																
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Sample No.	Matrix *	Sample Date	Sample Time															
B0K5C5	Water	<i>5-22-97</i>	<i>0841</i>	<i>X</i>														

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 W1 = Wipe L = Liquid V = Vegetation X = Other		
	Relinquished By <i>K. Young</i>	Date/Time <i>1335</i>	Received By <i>RT Coffman</i>	Date/Time <i>1335</i>											
	Relinquished By <i>K. Young</i>	Date/Time <i>5-22-97</i>	Received By <i>RT Coffman</i>	Date/Time <i>5/22/97</i>											
	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 **RT SICKLE (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 2) Groundwater Sampling--FY1997** Sampling Location **200-W** SAF No. **C97-015**

Ice Chest No. **SML #2108** Field Logbook No. **WHC-N-205 #63** Method of Shipment **GOVT. VEHICLE**

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												
BOK5C6	Water	5/21/97	1130	✓											

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT	Matrix *
Relinquished By: RT SICKLE (RFS) <i>[Signature]</i>	Date/Time: 13:45 5/21/97	Received By: RT Coffman/RT Coffman <i>[Signature]</i>	Date/Time: 13:45 5/21/97
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:

- 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

Collector RT SICKLE (RFS)	Company Contact JH Kessner	Telephone No. (509) 372-9538	Project Coordinator Stewart, DI.	Data Turnaround Field
Project Designation 200-ZP-1 IRM (Group 3) Groundwater Sampling FY1997	Sampling Location 200W	SAF No. C97-018		
Ice Chest No. SML # 182	Field Logbook No. WHC-N-205 #63	Method of Shipment GOVT. VEHICLE		
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																		
BOK5D8	Water	5/21/97	1001	✓																	

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 <i>RT SICKLE (RFS)</i>	Date/Time 5/21/97 13:45	Received By <i>RT COFFMAN / RT Coffman</i>	Date/Time 5/21/97 13:45											
	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 <i>K. Young</i>	Company Contact JH Kessner	Telephone No. (509) 372-9538	Project Coordinator Stewart, DL	Data Turnaround Field
Project Designation 200-ZP-1 IRM (Group 3) Groundwater Sampling FY 1997	Sampling Location 200W	SAF No. C97-018		
Ice Chest No. <i>1982</i>	Field Logbook No. <i>WHC-N-205 # 65</i>	Method of Shipment GOVT. VEHICLE		
Shipped To Mobile Laboratory	Offsite Property No. <i>NA</i>	Bill of Lading/Air Bill No. <i>NA</i>		

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											
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Sample No.	Matrix *	Sample Date	Sample Time										
B0K5D9	Water	<i>5-22-97</i>	<i>0910</i>	<i>X</i>									

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 <i>K. Young</i>	Date/Time <i>1335</i>	Received By <i>RT Coffman</i>	Date/Time <i>1335</i>											
	Relinquished By <i>K. Young</i>	Date/Time <i>5-22-97</i>	Received By <i>RT Coffman</i>	Date/Time <i>5/22/97</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

Collector **RT SICKLE (RFS)** Company Contact **JH Kessner** Telephone No. **(509) 372-9538** Project Coordinator **Stewart, DL** Data Turnaround **Field**

Project Designation **200-ZP-1 IRM (Group 3) Groundwater Sampling FY1997** Sampling Location **200W** SAF No. **C97-018**

Ice Chest No. **SML# 182** Field Logbook No. **WTC-N-205 #63** Method of Shipment **GOVT. VEHICLE**

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																			
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Sample No.	Matrix *	Sample Date	Sample Time																		
BOK5FO	Water	5/21/97	0926	✓																	

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS ** Total Activity Exempt. **	Matrix *	
Relinquished By <i>[Signature]</i> RT SICKLE (RFS)	Date/Time 5/21/97 13:45	Received By <i>[Signature]</i> RT COFFMAN/RTG/ma	<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	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 RT SICKLE (RFS)	Company Contact JH Kessner	Telephone No. (509) 372-9538	Project Coordinator Stewart, DL	Data Turnaround Field
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Project Designation 200-ZP-1 IRM (Group 3) Groundwater Sampling FY1997	Sampling Location 200W	SAF No. C97-018
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Ice Chest No. <i>N 117</i>	Field Logbook No. <i>W HC - N-205 # 6T</i>	Method of Shipment GOVT. VEHICLE
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Shipped To Mobile Laboratory	Offsite Property No. <i>N 119</i>	Bill of Lading/Air Bill No. <i>N 117</i>
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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																		
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SAMPLE ANALYSIS	VOA BY FIELD GC -- Chlorinated Hydrocarbon																			
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Sample No.	Matrix *	Sample Date	Sample Time	HCl to pH <2 Cooled to 4C																
BOK5F1	Water	5-21-97	0835	✓																

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS ** Total Activity Exempt.**	Matrix *
Relinquished By <i>RT SICKLE (RFS)</i>	Date/Time <i>5/21/97 1345</i>	Received By <i>RT Coffman / RT G/...</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	Date/Time	Received By	
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

Collector <i>K. Young</i>	Company Contact J.H. KESSNER	Telephone No. (509) 372-9538	Project Coordinator Stewart, DL	Data Turnaround Field
Project Designation 200-ZP-1 IRM (Group 2) Groundwater Sampling--FY1997	Sampling Location 200-W	SAF No. C97-015		
Ice Chest No. <i>1987</i>	Field Logbook No. <i>WHC-N-205 # 65</i>	Method of Shipment GOVT. VEHICLE		
Shipped To Mobile Laboratory	Offsite Property No. <i>NA</i>	Bill of Lading/Air Bill No. <i>NA</i>		

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																		
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Sample No.	Matrix *	Sample Date	Sample Time																	
BOK5C7	Water	5-22-97	1127	X																

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 = Waste L = Liquid V = Vegetation X = Other		
	Relinquished By <i>K. Young</i>	Date/Time 5-22-97	Received By <i>RT COFFMAN</i>	Date/Time 5/22/97											
	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 <i>K. Young</i>	Company Contact J.H. KESSNER	Telephone No. (509) 372-9538	Project Coordinator Stewart, DL	Data Turnaround Field
Project Designation 200-ZP-1 IRM (Group 2) Groundwater Sampling--FY1997	Sampling Location 200-W	SAF No. C97-015		
Ice Chest No. <i>1987</i>	Field Logbook No. <i>WHC-N-205 #65</i>	Method of Shipment GOVT. VEHICLE		
Shipped To Mobile Laboratory	Offsite Property No. <i>NA</i>	Bill of Lading/Air Bill No. <i>NA</i>		

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																	
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Sample No.	Matrix *	Sample Date	Sample Time																
B0K5C8	Water	5-22-97	1127	X															

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT		Matrix *
Relinquished By <i>K. Young</i>	Date/Time <i>1335</i> <i>5-22-97</i>	Received By <i>RT COFFMAN/RT Coffman</i>	Date/Time <i>1335</i> <i>5/22/97</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	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