

F 20021-Field

0052012 034906

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: J. R. Freeman-Pollard, H9-12
J. A. Lerch, B1-35

DATE: July 26, 1996

COPIES: See Below

FROM: Duane Jacques
Analytical Services/Field Services
H9-10/372-9400

46201

SUBJECT: 200-ZP-1 IRM IMPLEMENTATION SAMPLING, GROUNDWATER RESULTS,
JUNE 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-ZP-1 Field Screening Support Logbook*, EL-1273, Bechtel Hanford, Inc., Richland, Washington.

This data package contains field screening results for groundwater samples analyzed to support the 200-ZP-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 B96-135.

Attachment 1 contains Volatile Organic Compound (VOC) results for groundwater samples collected to support the referenced project. The VOC results were produced using a Photovac 10S Plus portable gas chromatograph in accordance with Field Screening Procedure (FSP) 1.1, *Aqueous Headspace Analysis of Volatile Organic Compounds in Water* (BHI 1995). Information concerning operation of the gas chromatograph is contained in the instrument logbook EL-1315. Information concerning preparation of calibration standards and samples is contained in the referenced field logbook EL-1273, pages 31 through 38. Please contact me if you have any questions on this information.

Duane Jacques

Duane Jacques, Scientist

QA Review by: *[Signature]*



J. R. Freeman-Pollard, H9-12

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IDJ:idx

Attachments:

Attachment 1. 200-ZP-1 IRM Implementation Sampling, Groundwater Results, June 1996

Attachment 2. Sample Chain of Custody Sheets

Attachment 3. Headspace Gas Chromatography Checklist(s)

Copies:

A. Hopkins, H9-11, w/attachment 1 only

M. E. Darrach, H9-11, w/a

D. A. Myers, H9-11, w/attachment 1 only

T. D. LeFrancois, H9-03, w/attachment 1 only

K. M. Singleton, H9-11, w/a

BHI Document Control, H4-79, w/a

200-ZP-1 IRM Implementation Sampling
Groundwater Results, June 1996
SAF B96-135

Sample Location	HEIS Number	Sample Date	Analysis Date	Chloroform (µg/L)	Carbon Tetrachloride (µg/L)	Trichloroethylene (µg/L)
299-W11-30	BOHXK5	7/19/96	7/23/96	24	48	11
299-W14-9	BOHXJ3	7/17/96	7/23/96	23	860	11
299-W15-1	BOHXH1	6/21/96	6/26/96	12	2140	<5.0
299-W15-4	BOHXJ4	6/24/96	6/26/96	20	600	<2.0
299-W15-7	BOHXH2	7/16/96	7/23/96	18	3260	<5.0
Duplicate @ 299-W15-7	BOHXL0	7/16/96	7/23/96	23	3210	<5.0
299-W15-10	BOHXH3	7/3/96	7/11/96	22	2290	<5.0
299-W15-11	BOHXH4	7/18/96	7/23/96	20	3930	<5.0
299-W15-15	BOHXJ6	6/20/96	6/21/96	6.2	1060	<2.0
299-W15-16	BOHXK6	6/21/96	6/26/96	37	5170	<5.0
299-W15-18	BOHXK7	6/21/96	6/26/96	13	3880	<5.0
299-W15-19	BOHXJ7	7/16/96	7/23/96	18	1270	<5.0
299-W15-24	BOHXH7	6/20/96	6/21/96	20	270	<2.0
299-W15-25	BOHXH5	7/1/96	7/11/96	70	1000	<5.0
299-W15-30	BOHXH8	7/2/96	7/11/96	180	4640	<5.0
299-W15-31A	BOHXH9	7/2/96	7/11/96	180	3260	<5.0
299-W15-38	BOHXH6	7/1/96	7/11/96	110	510	<5.0
299-W15-39	BOHXJ8	7/1/96	7/11/96	250	1360	<5.0
299-W18-1	BOHXJ9	7/18/96	7/23/96	41	5860	6.0
Duplicate @ 299-W18-1	BOHXL1	7/18/96	7/23/96	47	6420	11
299-W18-21	BOHXK0	7/3/96	7/11/96	<10	1470	<5.0
299-W18-23	BOHXJ0	6/21/96	6/26/96	<4.0	350	<2.0
299-W18-24	BOHXK9	7/3/96	7/11/96	27	1940	<2.0
299-W18-26	BOHXJ1	6/20/96	6/21/96	9.1	36	<2.0
299-W18-27	BOHXK1	7/3/96	7/11/96	<4.0	<2.0	<2.0
299-W18-28	BOHXK2	7/3/96	7/11/96	8.3	22	<2.0
299-W18-30	BOHXK3	7/3/96	7/11/96	10	990	<2.0
299-W18-32	BOHXK4	6/24/96	6/26/96	<4.0	<2.0	<2.0
Trip Blank	BOHXL6	6/20/96	6/21/96	<4.0	<2.0	<2.0
Trip Blank	BOHXM7	6/21/96	6/26/96	<4.0	<2.0	<2.0
Trip Blank	BOHXM6	6/24/96	6/26/96	<4.0	<2.0	<2.0
Trip Blank	BOHXM5	7/1/96	7/11/96	<4.0	<2.0	<2.0
Trip Blank	BOHXM4	7/2/96	7/11/96	<4.0	<2.0	<2.0
Trip Blank	BOHXM3	7/3/96	7/11/96	<4.0	<2.0	<2.0
Trip Blank	BOHXM2	7/16/96	7/23/96	<4.0	<2.0	<2.0
Trip Blank	BOHXM1	7/17/96	7/23/96	<4.0	<2.0	<2.0
Trip Blank	BOHXM0	7/18/96	7/23/96	<4.0	<2.0	<2.0
Trip Blank	BOHXL9	7/19/96	7/23/96	<4.0	<2.0	<2.0

j - Value less than practical quantitation limit

Analyst:

L. D. Jacques 7-26-96
 L. D. Jacques

VOA Instrument: Photovac 10S Plus GC, Serial # BJDG203

Method: 5 mL/min HP Air, 11.7 eV lamp, injection

Logbook: Photovac Instrument Log, EL-1315, pgs 7-10, 14-15, 17-18

Bechtel Hanford, Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Data Turnaround
 Priority
 Normal

Collector <i>A. R. Zzo / m. mehlhorn</i>	Company Contact M. E. Darrach	Telephone (509) 372-9360
Project Designation 200-ZP-1 IRM Initial Groundwater Monitoring	Sampling Location 200 W	SAF No. B96-135
Ice Chest No.	Field Logbook No. <i>ERL-1123</i>	Method of Shipment Hand Delivered
Shipped To Duane Jacques	Offsite Property No. NA	Bill of Lading/Air Bill No. NA

Possible Sample Hazards/Remarks	Preservation	HCl																		
	Type of Container	Gs																		
	No. of Container(s)	1																		
	Special Handling and/or Storage Maintain samples between 2°C and 8°C.	Volume	40mL																	
SAMPLE ANALYSIS		VOA																		

Sample No.	Matrix*	Date Sampled	Time Sampled																	
B04XJ6	W	6-20-96	0942	X																
B04XK6	W	6-20-96	0730	X																
B04XH7	W	6-20-96	1040	X																
B04XJ1	W	6-20-96	1132	X																
B04XJ2	W	6-20-96	1124	X																

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS The samples will be analyzed by Duane Jacques.	Matrix*
Relinquished By <i>M. Mehlhorn</i>	Date/Time <i>6-20-96 1340</i>	Received By <i>ERC</i>	Date/Time <i>1340</i>
Relinquished By <i>M. Mehlhorn</i>	Date/Time <i>1450</i>	Received By <i>B. Whitte</i>	Date/Time <i>6-20-96</i>
Relinquished By <i>B. Whitte</i>	Date/Time <i>6-20-96</i>	Received By <i>J. D. Funch</i>	Date/Time <i>6/20/96</i>
Relinquished By <i>J. D. Funch</i>	Date/Time <i>6/21/96 0916</i>	Received By <i>D. Jacques</i>	Date/Time <i>0916</i>
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

Bechtel Hanford, Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Data Turnaround
 Priority
 Normal

Collector <i>K. Trapp LA-Rizzo</i>	Company Contact M. E. Darrach	Telephone (509) 372-9360
Project Designation 200-ZP-1 IRM Initial Groundwater Monitoring	Sampling Location 200 W	SAF No. B96-135
Ice Chest No.	Field Logbook No. <i>EFL-1183</i>	Method of Shipment Hand Delivered
Shipped To Duane Jacques	Offsite Property No. NA	Bill of Lading/Air Bill No. NA

Possible Sample Hazards/Remarks	Preservation	HCl																		
	Type of Container	Gs																		
	No. of Container(s)	1																		
	Special Handling and/or Storage Maintain samples between 2°C and 6°C.	Volume	40mL																	
SAMPLE ANALYSIS		VOA																		

Sample No.	Matrix*	Date Sampled	Time Sampled																		
BOHXJO	W	6-21-96	0926	X																	
BOHXM7	W	6-21-96	0730	X																	
BOHXK7	W	6-21-96	1010	X																	
BOHXK6	W	6-21-96	1042	X																	
BOHXH1 BOHXM7	W	6-21-96	1330	X																	
KT 6/24/96																					

CHAIN OF POSSESSION	Sign/Print Names		SPECIAL INSTRUCTIONS The samples will be analyzed by Duane Jacques.										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>A.G. Rizzo (ERC)</i>	Date/Time 6-24-96 0730	Received By <i>B. Whitten</i>	Date/Time 6-24-96 0730	<i>K. Trapp is relinquishing for B. Whitten who is absent.</i>										
	Relinquished By <i>K. Trapp</i>	Date/Time 6/26/96 0900	Received By <i>D. Jacques</i>	Date/Time 6/26/96 0905											
	Relinquished By <i>K. Trapp</i>	Date/Time 6/26/96	Received By <i>ERC</i>	Date/Time 6/26/96											
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

Data Turnaround
 Priority
 Normal

Collector <i>K. TRAPP / A. RIZZO</i>	Company Contact M. E. Darrach	Telephone (509) 372-9360
Project Designation 200-ZP-1 IRM Initial Groundwater Monitoring	Sampling Location 200 W	SAF No. B96-135
Ice Chest No.	Field Logbook No. <i>ERL-1123</i>	Method of Shipment Hand Delivered
Shipped To Duane Jacques	Offsite Property No. NA	Bill of Lading/Air Bill No. NA

Possible Sample Hazards/Remarks	Preservation	HCl																
	Type of Container	Gs																
	No. of Container(s)	1																
	Special Handling and/or Storage Maintain samples between 2°C and 6°C.	Volume	40mL															

SAMPLE ANALYSIS		VOA																
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Sample No.	Matrix*	Date Sampled	Time Sampled															
BOHXX4	W	6-24-96	0916	Y														
BOHXM6	W	6-24-96	0730	Y														
BOHXJ4	W	6/24/96	1111	X														
BOHXH2	W	6/24/96																

CHAIN OF POSSESSION	Sign/Print Names		SPECIAL INSTRUCTIONS The samples will be analyzed by Duane Jacques.										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. Trapp / K. Trapp</i>	Date/Time <i>1455 6/24/96</i>	Received By <i>B. Whitten</i>	Date/Time <i>1455 6/24/96</i>	<i>K. Trapp is relinquishing for B. Whitten who is absent.</i>										
	Relinquished By <i>K. Trapp / K. Trapp</i>	Date/Time <i>0900 6/26/96</i>	Received By <i>D. Jacques</i>	Date/Time <i>0900 6/26/96</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

Bechtel Hanford, Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Data Turnaround
 Priority
 Normal

Collector <i>A. Rizzo G. Hamilton</i>	Company Contact M. E. Darrach	Telephone (509) 372-9360
Project Designation 200-ZP-1 IRM Initial Groundwater Monitoring	Sampling Location 200 W	SAF No. B96-135
Ice Chest No.	Field Logbook No. <i>ERC-1123</i>	Method of Shipment Hand Delivered
Shipped To Duane Jacques	Offsite Property No. NA	Bill of Lading/Air Bill No. NA

Possible Sample Hazards/Remarks	Preservation	HCI																	
	Type of Container	Ge																	
	No. of Container(s)	1																	
	Special Handling and/or Storage Maintain samples between 2°C and 6°C.	Volume	40mL																

SAMPLE ANALYSIS

Sample No.	Matrix*	Date Sampled	Time Sampled																
BOHXH5	W	<i>7-196</i>	<i>1015</i>	<i>X</i>															
<i>BOHXH5</i>	<i>W</i>	<i>7-196</i>	<i>0540</i>	<i>6</i>															
<i>BOHXH6</i>	<i>W</i>	<i>7-1-96</i>	<i>1154</i>	<i>Y</i>															
<i>BOHXJ8</i>	<i>W</i>	<i>7-1-96</i>	<i>1300</i>	<i>X</i>															

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS	Matrix*
		The samples will be analyzed by Duane Jacques.	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>ERC</i>	Date/Time <i>7/19/96 1531</i>	Received By <i>ERC</i>	Date/Time <i>1531</i>
Relinquished By <i>ERC</i>	Date/Time <i>7/19/96 1258</i>	Received By <i>ERC</i>	Date/Time <i>7-1-96</i>
Relinquished By <i>ERC</i>	Date/Time <i>7-10-96</i>	Received By <i>Doug Bowers</i>	Date/Time <i>7-10-96/1258</i>
Relinquished By <i>ERC</i>	Date/Time <i>7-1-96/0824</i>	Received By <i>D. Jacques</i>	Date/Time <i>0824</i>
Relinquished By <i>ERC</i>	Date/Time <i>7-1-96/0824</i>	Received By <i>ERC</i>	Date/Time <i>7/1/96</i>

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

Date Turnaround
 Priority
 Normal

Collector <i>A. Rizzo, G. Hamilton</i>	Company Contact M. E. Darrach	Telephone (509) 372-9360
Project Designation 200-ZP-1 IRM Initial Groundwater Monitoring	Sampling Location 200 W	SAF No. B96-135
Ice Chest No.	Field Logbook No. <i>SFL-1123</i>	Method of Shipment Hand Delivered
Shipped To Duane Jacques	Offsite Property No. NA	Bill of Lading/Air Bill No. NA

Possible Sample Hazards/Remarks	Preservation	HCl																		
	Type of Container	Gs																		
	No. of Container(s)	1																		
Special Handling and/or Storage Maintain samples between 2°C and 6°C.	Volume	40mL																		
SAMPLE ANALYSIS		VOA																		

Sample No.	Matrix*	Date Sampled	Time Sampled																		
BOHXH9	W	7-2-96	0940	X																	
<i>BOHXM4</i>	W	7-2-96	0530	X																	
<i>BOHXH8</i>	W	7-2-96	1308	X																	

CHAIN OF POSSESSION	Sign/Print Names		SPECIAL INSTRUCTIONS The samples will be analyzed by Duane Jacques.										Matrix*		
	Relinquished By <i>ERC</i>	Date/Time <i>1500</i>	Received By <i>Erc</i>	Date/Time <i>1500</i>											S - Soil
	<i>Michael B. Hamilton</i>	<i>7/4/96</i>	<i>Michael B. Hamilton</i>	<i>7-2-96</i>											SE - Sediment
	Relinquished By <i>ERC</i>	Date/Time <i>1258</i>	Received By <i>Doug Bowers</i>	Date/Time <i>7-10-96/1258</i>											SO - Solid
Relinquished By <i>ERC</i>	Date/Time <i>7-10-96</i>	Received By <i>D. Jacques</i>	Date/Time <i>7-10-96/1258</i>											SL - Sludge	
Relinquished By <i>ERC</i>	Date/Time <i>7-11-96/0824</i>	Received By <i>D. Jacques</i>	Date/Time <i>7-11-96</i>											W - Water	
Relinquished By <i>ERC</i>	Date/Time <i>7-11-96/0824</i>	Received By <i>D. Jacques</i>	Date/Time <i>7-11-96</i>											O - Oil	
Relinquished By <i>ERC</i>	Date/Time <i>7-11-96/0824</i>	Received By <i>D. Jacques</i>	Date/Time <i>7-11-96</i>											A - Air	
Relinquished By <i>ERC</i>	Date/Time <i>7-11-96/0824</i>	Received By <i>D. Jacques</i>	Date/Time <i>7-11-96</i>											DS - Drum Solids	
Relinquished By <i>ERC</i>	Date/Time <i>7-11-96/0824</i>	Received By <i>D. Jacques</i>	Date/Time <i>7-11-96</i>											DL - Drum Liquids	
Relinquished By <i>ERC</i>	Date/Time <i>7-11-96/0824</i>	Received By <i>D. Jacques</i>	Date/Time <i>7-11-96</i>											T - Tissue	
Relinquished By <i>ERC</i>	Date/Time <i>7-11-96/0824</i>	Received By <i>D. Jacques</i>	Date/Time <i>7-11-96</i>											WL - Wipe	
Relinquished By <i>ERC</i>	Date/Time <i>7-11-96/0824</i>	Received By <i>D. Jacques</i>	Date/Time <i>7-11-96</i>											L - Liquid	
Relinquished By <i>ERC</i>	Date/Time <i>7-11-96/0824</i>	Received By <i>D. Jacques</i>	Date/Time <i>7-11-96</i>											V - Vegetation	
Relinquished By <i>ERC</i>	Date/Time <i>7-11-96/0824</i>	Received By <i>D. Jacques</i>	Date/Time <i>7-11-96</i>											X - Other	

LABORATORY SECTION	Received By	Title	Date/Time
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FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time
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Bechtel Hanford, Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Data Turnaround
 Priority
 Normal

Collector <i>H. P. 1220 / G. Hamilton</i>	Company Contact M. E. Darrach	Telephone (509) 372-9380
Project Designation 200-ZP-1 IRM Initial Groundwater Monitoring	Sampling Location 200 W	SAF No. B96-135
Ice Chest No.	Field Logbook No. <i>ERL-1133</i>	Method of Shipment Hand Delivered
Shipped To Duane Jacques	Offsite Property No. NA	Bill of Lading/Air Bill No. NA

Possible Sample Hazards/Remarks	Preservation	HCl											
	Type of Container	Gs											
	No. of Container(s)	1											
	Special Handling and/or Storage Maintain samples between 2°C and 6°C.	Volume	40mL										
	VOA												

SAMPLE ANALYSIS

Sample No.	Matrix*	Date Sampled	Time Sampled										
BOHXK1	W	7-3-96	0740	X									
BOHXK2	W	7-3-96	0530	X									
BOHXK3	W	7-3-96	0810	X									
BOHXK4	W	7-3-96	0845	X									
BOHXK5	W	7-3-96	0925	X									
BOHXK9	W	7-3-96	1002	X									

CHAIN OF POSSESSION	Sign/Print Names		SPECIAL INSTRUCTIONS The samples will be analyzed by Duane Jacques.										Matrix*		
	Relinquished By <i>A.G. L. R. (ERC)</i>	Date/Time 7-3-96 1500	Received By <i>K. J. Trapp / K. Trapp</i>	Date/Time 7/3/96											S = Soil
	Relinquished By <i>K. J. Trapp</i>	Date/Time 7/9/96 1300	Received By <i>K. J. Trapp</i>	Date/Time 7-8-96											SE = Sediment
	Relinquished By <i>K. J. Trapp</i>	Date/Time 7-10-96 1258	Received By <i>Doug Bonebrake</i>	Date/Time 7-10-96/1258											SO = Solid
	Relinquished By <i>Doug Bonebrake</i>	Date/Time 7-1-96/0824	Received By <i>D. Jacques</i>	Date/Time 7/1/96											SL = Sludge

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

Bechtel Hanford, Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Data Turnaround
 Priority
 Normal

Collector <i>A. Rizzo</i>	Company Contact M. E. Derrach	Telephone (509) 372-9360
Project Designation 200-ZP-1 IRM Initial Groundwater Monitoring	Sampling Location 200 W	SAF No. B96-135
Ice Chest No.	Field Logbook No. <i>SFL-1123</i>	Method of Shipment Hand Delivered
Shipped To Duane Jacques	Offsite Property No. NA	Bill of Lading/Air Bill No. NA

Possible Sample Hazards/Remarks	Preservation	HCl											
	Type of Container	Gs											
Special Handling and/or Storage Maintain samples between 2°C and 6°C.	No. of Container(s)	1											
	Volume	40mL											
SAMPLE ANALYSIS		VOA											

Sample No.	Matrix*	Date Sampled	Time Sampled										
BOHXH3	W	07-03-96	1230	X									

CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS The samples will be analyzed by Duane Jacques.				Matrix*		
Relinquished By <i>A.G. Rizzo</i>	Date/Time 7-3-96 1500	Received By <i>K. Umara</i>	Date/Time 7-3-96					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. Umara</i>	Date/Time 7-9-96 1300	Received By <i>Donna Bowers</i>	Date/Time 7-8-96							
Relinquished By <i>Donna Bowers</i>	Date/Time 7-10-96 1258	Received By <i>Donna Bowers</i>	Date/Time 7-10-96 1258							
Relinquished By <i>Donna Bowers</i>	Date/Time 7-11-96 0824	Received By <i>D. Jacques</i>	Date/Time 7-11-96							
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

Data Turnaround
 Priority
 Normal

Collector <i>A. Rizzo / K. Trapp</i>	Company Contact M. E. Darrach	Telephone (509) 372-9360
Project Designation 200-ZP-1 IRM Initial Groundwater Monitoring	Sampling Location 200 W	SAF No. B96-135
Ice Chest No.	Field Logbook No. <i>EFL-1123</i>	Method of Shipment Hand Delivered
Shipped To Duane Jacques	Offsite Property No. NA	Bill of Lading/Air Bill No. NA

Possible Sample Hazards/Remarks	Preservation	HCl																		
	Type of Container	Gs																		
	No. of Container(s)	1																		
	Special Handling and/or Storage Maintain samples between 2°C and 6°C.	Volume	40mL																	

SAMPLE ANALYSIS

Sample No.	Matrix*	Date Sampled	Time Sampled																	
BOHXH2	W	7-16-96	1135	X																
BOHXH3	W	7-16-96	0530	X																
BOHXH4	W	7-16-96	1135	X																
BOHXH7	W	7-16-96	1230	X																

CHAIN OF POSSESSION	Sign/Print Names		SPECIAL INSTRUCTIONS The samples will be analyzed by Duane Jacques. <i>K. Trapp is relinquishing for B. Whitten who is absent.</i>										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. Trapp / K. Trapp</i>	Date/Time 7/16/96	Received By <i>B. Whitten</i>	Date/Time 7-16-96											
	Relinquished By <i>K. Trapp / K. Trapp</i>	Date/Time 7/23/96	Received By <i>R. Coffman</i>	Date/Time 7/23/96											
	Relinquished By	Date/Time	Received By	Date/Time											

LABORATORY SECTION	Received By	Title	Date/Time
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FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time
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Bechtel Hanford, Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Data Turnaround
 Priority
 Normal

Collector <i>A. Rizzo</i>	Company Contact M. E. Darrach	Telephone (509) 372-9380
Project Designation 200-ZP-1 IRM Initial Groundwater Monitoring	Sampling Location 200 W	SAF No. B96-135
Ice Chest No.	Field Logbook No. <i>E.R. 1123-2</i>	Method of Shipment Hand Delivered
Shipped To Duane Jacques	Offsite Property No. NA	Bill of Lading/Air Bill No. NA

Possible Sample Hazards/Remarks	Preservation	HCI												
	Type of Container	Gs												
	No. of Container(s)	1												
Special Handling and/or Storage Maintain samples between 2°C and 6°C.	Volume	40mL												
SAMPLE ANALYSIS		VOA												

Sample No.	Matrix*	Date Sampled	Time Sampled											
BOHXJ3	W	7/17/96	1415	X										
BOHXMI	W	"	0530	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>K. Trapp</i>	Date/Time 7/17/96	Received By <i>B. Whitten</i>	Date/Time 7-17-96		The samples will be analyzed by Duane Jacques. <i>K. Trapp is relinquishing for B. Whitten who is not available.</i>
	Relinquished By <i>K. Trapp</i>	Date/Time 7/23/96	Received By <i>R. Coffman</i>	Date/Time 7/23/96 08:34		
	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

Data Turnaround

- Priority
- Normal

Collector <i>A. Rizzo</i>	Company Contact M. E. Darrach	Telephone (509) 372-9360
Project Designation 200-ZP-1 IRM Initial Groundwater Monitoring	Sampling Location 200 W	SAF No. B96-135
Ice Chest No.	Field Logbook No. <i>EFZ-11232</i>	Method of Shipment Hand Delivered
Shipped To Duane Jacques	Offsite Property No. NA	Bill of Lading/Air Bill No. NA

Possible Sample Hazards/Remarks	Preservation	HCI																		
	Type of Container	Gas																		
	No. of Container(s)	1																		
	Special Handling and/or Storage Maintain samples between 2°C and 6°C.	Volume	40mL																	

SAMPLE ANALYSIS

Sample No.	Matrix*	Date Sampled	Time Sampled	X																
BOHXJ9	W	7-18-96	0930	X																
BOHXMO	W	7-18-96	0730	Y																
BOHXL1	W	7-18-96	0930	X																
BOHXH4	W	7-18-96	1235	X																

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS The samples will be analyzed by Duane Jacques. <i>K. Trapp is relinquishing to B. Whitten who is not available.</i>	Matrix*
Relinquished By <i>K. Trapp</i>	Date/Time 1325	Received By <i>B. Whitten</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>K. Trapp</i>	Date/Time 0935	Received By <i>R. Coffman</i>	
Relinquished By <i>K. Trapp</i>	Date/Time 7/23/96	Received By <i>K. Trapp</i>	
Relinquished By	Date/Time	Received By	
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

Data Turnaround
 Priority
 Normal

Collector <i>A. Rizzo / G. Hamilton</i>	Company Contact M. E. Darrach	Telephone (509) 372-9360
Project Designation 200-ZP-1 IRM Initial Groundwater Monitoring	Sampling Location 200 W	SAF No. B96-135
Ice Chest No.	Field Logbook No. <i>EFL-1123 -></i>	Method of Shipment Hand Delivered
Shipped To Duane Jacques	Offsite Property No. NA	Bill of Lading/Air Bill No. NA

Possible Sample Hazards/Remarks	Preservation	HCl																		
	Type of Container	Gs																		
	No. of Container(s)	1																		
	Special Handling and/or Storage Maintain samples between 2°C and 8°C.	Volume	40mL																	

SAMPLE ANALYSIS

VOA

Sample No.	Matrix*	Date Sampled	Time Sampled																		
BOHXK5	W	7-19-96	1320	X																	
BOHXK5 <i>7/19/96</i>																					
BOHXK9	W	7-19-96	0730	X																	

CHAIN OF POSSESSION	Sign/Print Names		SPECIAL INSTRUCTIONS The samples will be analyzed by Duane Jacques. <i>K. Trapp is relinquishing for B. Whitten who is not available.</i>										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>ERC</i>	Date/Time <i>7/19/96 1432</i>	Received By <i>B. Whitten</i>	Date/Time <i>7-19-96</i>											
	Relinquished By <i>K. Trapp</i>	Date/Time <i>7/23/96 0835</i>	Received By <i>R. Coffman</i>	Date/Time <i>7/23/96</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

HEADSPACE GAS CHROMATOGRAPHY CHECKLIST

1.	Date: <u>7/26/96</u>	
2.	a. Minimum 3 point calibration curve:	<u>calibration performed Oct 95</u>
	b. Date 3 point minimum calibration curve was prepared:	<u>see 1 pt ccv.</u>
3.	<u>Calibration Check Standard</u>	
	a. Check standard for each analyte:	
	b. Date of analysis:	<u>6/21/96, 6/26/96, 7/11/96, 7/23/96</u>
	c. Date of check standard:	<u>6/21/96, 6/26/96, 7/11/96, 7/23/96</u>
	<u>Calculation Check (One Standard)</u>	
	d. Show calculation:	
	$\frac{6/21/96 \text{ cc1}_3}{30 \text{ ml}} \times \frac{2000 \mu\text{g/ml} \times 9 \mu\text{l} \times 1000}{.030 \text{ l}} = 60 \mu\text{g/l}$ $\frac{\mu\text{g}}{\text{ml}} \times \frac{\text{ml} \times 1000}{\text{ml} \times 1000} = \mu\text{g/l}$	<u>Analyst = 60 $\mu\text{g/l}$</u>
	e. Agrees with analyst:	<u>ok</u>
3.	a. Is a sample dilution required?	<u>No</u>
	b. If yes, check calculation.	
4.	If data has been converted from ppm to ppb or vice versa, check conversion.	<u>No</u>
5.	<u>Analyte Identification</u>	
	a. Confirmed by MS:	<u>No</u>
	b. Confirmed by second column:	<u>No</u>
6.	Average temperature of laboratory during analysis:	
7.	a. Reviewer's name:	<u>Claude Stacey</u>
	b. Reviewer's signature:	<u>Claude Stacey</u>