

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

DATE: April 1, 1996

COPIES: See Below

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

45089

SUBJECT: **200-ZP-1 REMEDIAL ACTION ASSESSMENT SAMPLING, GROUNDWATER RESULTS, MARCH 1996, REV 0**

REFERENCES:

1. BHI, 1995a, *Field Screening (On-Site Measurements) Quality Assurance Plan*, BHI-EE-08, Bechtel Hanford, Inc., Richland, Washington.
2. BHI, 1995b, *Field Screening Procedures*, BHI-EE-05, Bechtel Hanford, Inc., Richland, Washington.
3. BHI, 1995, *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 Remedial Action Assessment sampling program. The Quality Assurance level for this work corresponds to QA-2 as specified in the reference 1 (BHI 1995a). The samples were managed under SAF B96-078.

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 1995b). Information concerning operation of the gas chromatograph is contained in the instrument logbook EL-1269. Information concerning preparation of calibration standards and samples is contained in the referenced field logbook EL-1273, pages 23 through 26. Please contact me if you have any questions on this information.

Duane Jacques

Duane Jacques, Scientist

QA Review by: Paul E. Duerksen 4/2/96

IDJ:ijj



J. R. Freeman-Pollard, H9-12

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Attachments:

Attachment 1. 200-ZP-1 Remedial Action Assessment Sampling, Groundwater Results, March 1996

Attachment 2. Sample Chain of Custody Sheets

Attachment 3. Headspace Gas Chromatography Checklist(s)

Copies:

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

J. A. Lerch, B1-35, w/a

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

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

W. S. Thompson, N1-28, w/attachment 1 only

BHI Document Control, H4-79, w/a

200-ZP-1 Remedial Action Assessment Sampling
Groundwater Results, March 1996
SAF B96-078

Sample Location	HEIS Number	Sample Date	Analysis Date	Chloroform (µg/L)	Carbon Tetrachloride (µg/L)	Trichloroethylene (µg/L)
299-W15-1	BOH7Z5	3/11/96	3/19/96	10	1180	<5.0
299-W15-7	BOH7Z3	3/19/96	3/28/96	27	1240	<5.0
299-W15-10	BOH7Z7	3/11/96	3/19/96	25	1900	<5.0
299-W15-15	BOH7Z8	3/12/96	3/19/96	5.1	941	<5.0
299-W15-18	BOH7Z9	3/13/96	3/19/96	21	3610	<5.0
299-W18-24	BOH802	3/13/96	3/19/96	24	1120	<5.0
299-W18-26	BOH803	3/13/96	3/19/96	6.6	18	<5.0
299-W18-26	BOH804	3/13/96	3/19/96	6.3	18	<5.0
299-W6-5	BOH7Y3	3/26/96	3/28/96	7.2	470	5.6
299-W6-5	BOH7Y4	3/26/96	3/28/96	7.9	509	8.1
Field Blank @ 299-W18-26	BOH805	3/13/96	3/19/96	<5.0	<5.0	<5.0
Trip Blank	BOH808	3/11/96	3/19/96	<5.0	<5.0	<5.0
Trip Blank	BOH809	3/12/96	3/19/96	<5.0	<5.0	<5.0
Trip Blank	BOH810	3/13/96	3/19/96	<5.0	<5.0	<5.0
Trip Blank	BOH7Z4	3/19/96	3/28/96	<5.0	<5.0	<5.0
Equipment Blank	BOH7Y5	3/26/96	3/28/96	<5.0	<5.0	<5.0
Trip Blank	BOH7Y6	3/26/96	3/28/96	<5.0	<5.0	<5.0

u - Value less than practical quantitation limit

Analyst:

Maure Jacques 4/2/96
 I. 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-1269, pgs 30, 31, 33

029248

Data Turnaround
 Priority
 Normal

Collector <i>M. Mehlhorn, A. Rizzo</i>	Company Contact K. M. Singleton	Telephone (509) 372-9276
Project Designation 200-ZP-1 Remedial Action Assessment Wells	Sampling Location 200 W	SAF No. B96-078
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		VOA												

Sample No.	Matrix*	Date Sampled	Time Sampled											
BOH803 <i>Main</i>	W	3-13-96	1000	X										
BOH810 <i>Trip</i>	W	3-13-96	0730	X										
BOH804 <i>Duplicate</i>	W	3-13-96	1000	X										
BOH805 <i>Equipment</i>	W	3-13-96	0905	X										
BOH729	W	3-13-96	1044	X										
BOH802	W	3-13-96	1132	X										

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>M. Mehlhorn</i>	Date/Time <i>3-13-96 1510</i>	Received By <i>K. M. Singleton</i>	Date/Time <i>1510</i>
Relinquished By <i>Eric</i>	Date/Time <i>0855</i>	Received By <i>D. Jacques</i>	Date/Time <i>0855</i>
Relinquished By <i>K. M. Singleton</i>	Date/Time <i>3-19-96</i>	Received By <i>Duane Jacques</i>	Date/Time <i>3-19-96</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

Data Turnaround
 Priority
 Normal

Collector <i>M. Mehlhorn, A. Rizzo</i>	Company Contact K. M. Singleton	Telephone (509) 372-9276
Project Designation 200-ZP-1 Remedial Action Assessment Wells	Sampling Location 200 W	SAF No. B96-078
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		VOA																		

Sample No.	Matrix*	Date Sampled	Time Sampled																	
BOH727	W	3-11-96	1200	t																
BOH808	W	3-11-96	0730	X																
BOH725	W	3-11-96	1425	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 3-13-96	Received By <i>ERL</i>	Date/Time 0800
Relinquished By <i>Walt Mallon</i>	Date/Time 0800	Received By <i>Bill White</i>	Date/Time 3-13-96
Relinquished By <i>Bill White</i>	Date/Time 3-19-96	Received By <i>Duane Jacques</i>	Date/Time ER 3-19-96
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

Data Turnaround
 Priority
 Normal

Collector <i>A. Rizza, M. Mehlhorn</i>	Company Contact K. M. Singleton	Telephone (509) 372-9276
Project Designation 200-ZP-1 Remedial Action Assessment Wells	Sampling Location 200 W	SAF No. B96-078
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		VOA																		

Sample No.	Matrix*	Date Sampled	Time Sampled																		
BOH7Z8	W	3-12-96	1215	X																	
<i>BOH809</i>	<i>W</i>	<i>3-12-96</i>	<i>0730</i>	<i>X</i>																	

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>M. Mehlhorn</i>	Date/Time <i>3-13-96</i>	Received By <i>[Signature]</i>	Date/Time <i>0800</i>		The samples will be analyzed by Duane Jacques.
	Relinquished By <i>[Signature]</i>	Date/Time <i>0800</i>	Received By <i>[Signature]</i>	Date/Time <i>3-13-96</i>		
	Relinquished By <i>[Signature]</i>	Date/Time <i>0855</i>	Received By <i>[Signature]</i>	Date/Time <i>0855</i>		
Relinquished By <i>[Signature]</i>	Date/Time <i>3-19-96</i>	Received By <i>[Signature]</i>	Date/Time <i>3-19-96</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

Data Turnaround
 Priority
 Normal

Collector P. SICKLE (WHC)	Company Contact K. M. Singleton	Telephone (509) 372-9276
Project Designation 200-ZP-1 Remedial Action Assessment Wells	Sampling Location 200 W	SAF No. B96-078
Ice Chest No.	Field Logbook No. EFL-1112-4 PAGE 40	Method of Shipment Hand Delivered Gov. Vehicle
Shipped To 4701-C/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																		
BOH7Z3	W	3-19-94	1202	X																	
BOH7Z4	W	3-19-96	0730	X																	

CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS		Matrix*
Relinquished By T. SICKLE (WHC)	Date/Time 3-17-96 1410	Received By <i>[Signature]</i>	Date/Time 3-19-96	WHC is to deliver the samples to 4701-C. Contact Bill Whitten at 376-1878. 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 K. Trapp	Date/Time 3/23/96 0900	Received By <i>[Signature]</i>	Date/Time 3/23/96	K. Trapp relinquished to Bill Whitten who is in training.		
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

Data Turnaround
 Priority
 Normal

Collector <i>Japp/Almarode</i>	Company Contact K. M. Singleton	Telephone (509) 372-9276
Project Designation 200-ZP-1 Prime Periphery Assessment Wells	Sampling Location 200 W	SAF No. B96-077
Ice Chest No.	Field Logbook No.	Method of Shipment Hand Delivered
Shipped To 4701-C/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																	
BOH7Y3	W	3-26-96	0900	✓																
BOH7Y4	W	3-26-96	0900	✓																
^{pt 3-26-96} BOH7YA5	W	3-26-96	0900	✓																
BOH7Y6	W	3-26-96	0900	✓																

CHAIN OF POSSESSION	Sign/Print Names		SPECIAL INSTRUCTIONS Deliver samples to 4701-C. Contact Bill Whitten at 376-1878. Duane Jacques will analyze the samples.												Matrix*	
Relinquished By <i>Tom K. SAPI</i>	Date/Time 3-26-96 1415	Received By <i>K. Japp / K. Trapp</i>	Date/Time 3/26/96													S = Soil
Relinquished By <i>K. Japp / K. Trapp</i>	Date/Time 3/28/96	Received By <i>D. Jacques</i>	Date/Time 0900													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

HEADSPACE GAS CHROMATOGRAPHY CHECKLIST

1.	Date:	4/2/96
2.	a.	Minimum 3 point calibration curve:
	b.	Date 3 point minimum calibration curve was prepared:
Yes; but quantitation based on single standard		
3.	<u>Calibration Check Standard</u>	
a.	Check standard for each analyte:	Yes
b.	Date of analysis:	3/28/96
c.	Date of check standard:	3/28/96
<u>Calculation Check (One Standard)</u>		
d.	Show calculation:	$0.80 \text{ mL} \times 1400 \mu\text{g/mL} =$ $11.20 \mu\text{g} / 30 \text{ mL} = 0.37 \mu\text{g/mL}$ $= 37 \mu\text{g/L}$ <p style="text-align: center;">TCE</p>
e.	Agrees with analyst:	Yes
3.	a.	Is a sample dilution required?
	b.	If yes, check calculation.
No; cal check is near sample done		
N/A		
4.	If data has been converted from ppm to ppb or vice versa, check conversion.	
N/A		
5.	<u>Analyte Identification</u>	
a.	Confirmed by MS:	not done
b.	Confirmed by second column:	not done
6.	Average temperature of laboratory during analysis:	
73°F		
7.	a.	Reviewer's name:
	b.	Reviewer's signature:
PAUL E DVERKSEN		
Paul E Dverksen		

HEADSPACE GAS CHROMATOGRAPHY CHECKLIST

1.	Date:	4/2/96
2.	a. Minimum 3 point calibration curve:	Yes; but quantitation based on single standard
	b. Date 3 point minimum calibration curve was prepared:	
3.	<u>Calibration Check Standard</u>	
	a. Check standard for each analyte:	3/19/96 Yes
	b. Date of analysis:	3/19/96
	c. Date of check standard:	3/19/96
	<u>Calculation Check (One Standard)</u>	
	d. Show calculation:	CCl_4 $0.75 \mu\text{L} \times 780 \mu\text{g}/\text{mL} =$ $5.85 \mu\text{g} / 30 \text{ mL} =$ $19 \mu\text{g}/\text{L}$
	e. Agrees with analyst:	
3.	a. Is a sample dilution required?	No; cal check is near same
	b. If yes, check calculation.	N/A
4.	If data has been converted from ppm to ppb or vice versa, check conversion.	N/A
5.	<u>Analyte Identification</u>	
	a. Confirmed by MS:	not done
	b. Confirmed by second column:	not done
6.	Average temperature of laboratory during analysis:	71°F
7.	a. Reviewer's name:	PAUL E DUERKSEN
	b. Reviewer's signature:	Paul E Duerksen