

Environmental
Restoration
Contractor

ERC Team

Interoffice Memorandum



033783

0052010

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

TO: F. W. Gustafson, H9-11

DATE: July 12, 1996

COPIES: See Below

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

SUBJECT: **200-UP-1 PUMP AND TREAT PROCESS MONITORING RESULTS, APRIL 1996 THROUGH JUNE 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-UP-1 Field Screening Support Logbook*, EL-1277, Bechtel Hanford, Inc., Richland, Washington.

This data package contains field screening results for process water samples analyzed to monitor the 200-UP-1 Pump and Treat System. The Quality Assurance level for this work corresponds to QA-1 as specified in the reference 1 (BHI 1995a). The samples with HEIS numbers reported in this document were managed under SAF B96-029. Samples reported without HEIS numbers were collected and analyzed to monitor the system but are not a part of SAF B96-029.

Attachment 1 contains Volatile Organic Compound (VOC) and total uranium results for process water samples collected from selected portions of the 200-UP-1 Pump and Treat System. The VOC samples were analyzed using a Photovac 10S Plus portable gas chromatograph operated 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 and EL-1315.

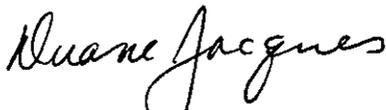
The total uranium samples were analyzed using a ChemChek KPA-11a Kinetic Phosphorescence Analyzer operated in accordance with FSP 1.22, *Kinetic Phosphorescence Analysis of Total Uranium in Water* (BHI 1995b). Information concerning use of the ChemChek KPA-11a as well as

F. W. Gustafson, H9-11

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preparation of VOC calibration standards and samples is contained in the referenced field logbook EL-1277. Sample custody information for all samples reported in this document is also contained in field logbook EL-1277.

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



Duane Jacques, Scientist

QA Review by:



IDJ:idj

Attachments:

- Attachment 1. 200-UP-1 Pump and Treat Process Monitoring, Field Screening Results, April 1996 through June 1996
- Attachment 2. Headspace Gas Chromatography Checklist(s)

Copies:

- R. T. Coffman, H9-11, w/attachment 1 only
- A. Hopkins, H9-11, w/attachment 1 only
- T. D. LeFrancois, H9-03, w/attachment 1 only
- ~~J. A. Lerch, B1-35, w/a~~
- C. D. Wittreich, H9-12, w/attachment 1 only
- BHI Document Control, H4-79, w/a

200-UP-1 Pump and Treat System
Field Screening Results, April 1996 through June 1996
SAF B96-029

Sample Location	HEIS Number	Sample Date	Analysis Date	Chloroform (µg/L)	Carbon TetraCl (µg/L)	TCE (µg/L)	Uranium (µg/L)
Extraction Well		4/4/96	4/4/96	5.2	77	6.3	NA
Pre Treat	B0H7S2	4/2/96	4/8/96	NA	NA	NA	320
Pre Treat	B0H7S4	4/4/96	4/8/96	NA	NA	NA	320
Post Lead	B0H7S3	4/2/96	4/8/96	NA	NA	NA	<0.50
Post Lead	B0H7S5	4/4/96	4/8/96	NA	NA	NA	<0.50
Pre GAC 1	B0H7V4	4/4/96	4/4/96	6.3	74	50	NA
Post GAC 1		4/4/96	4/4/96	6.9	52	<2.0	NA
Post GAC 2	B0H7V5	4/4/96	4/4/96	<4.0	13	<2.0	NA
Injection Well		4/4/96	4/4/96	<4.0	13	<2.0	NA
Extraction Well		4/11/96	4/11/96	4.9	67	6.1	NA
Pre Treat	B0H7S6	4/9/96	4/25/96	NA	NA	NA	308
Pre Treat	B0H7S8	4/11/96	4/25/96	NA	NA	NA	307
Post Lead	B0H7S7	4/9/96	4/25/96	NA	NA	NA	<0.50
Post Lead	B0H7S9	4/11/96	4/25/96	NA	NA	NA	<0.50
Pre Lead GAC	B0H7V6	4/11/96	4/11/96	4.0	67	21	NA
Post Lead GAC		4/11/96	4/11/96	<4.0	14	<2.0	NA
Pre Polish GAC		4/11/96	4/11/96	<4.0	13	<2.0	NA
Post Polish GAC	B0H7V7	4/11/96	4/11/96	<4.0	8.6	<2.0	NA
Injection Well		4/11/96	4/11/96	<4.0	7.8	<2.0	NA
Extraction Well		4/18/96	4/18/96	4.2	62	4.3	NA
Pre Treat	B0H7T0	4/16/96	4/25/96	NA	NA	NA	308
Pre Treat	B0H7T2	4/18/96	4/25/96	NA	NA	NA	302
Post Lead	B0H7T1	4/16/96	4/25/96	NA	NA	NA	<0.50
Post Lead	B0H7T3	4/18/96	4/25/96	NA	NA	NA	<0.50
Pre Lead GAC	B0H7V8	4/18/96	4/18/96	6.5	61	23	NA
Post Lead GAC		4/18/96	4/18/96	<4.0	16	<2.0	NA
Post Polish GAC	B0H7V9	4/18/96	4/18/96	<4.0	11	<2.0	NA
Injection Well		4/18/96	4/18/96	<4.0	8.9	<2.0	NA
Extraction Well		4/25/96	4/25/96	4.2	57	4.3	NA
Pre Treat	B0H7T4	4/23/96	4/25/96	NA	NA	NA	303
Pre Treat	B0H7T6	4/25/96	4/25/96	NA	NA	NA	305
Post Lead	B0H7T5	4/23/96	4/25/96	NA	NA	NA	<0.50
Post Lead	B0H7T7	4/25/96	4/25/96	NA	NA	NA	<0.50
Pre Lead GAC	B0H7W0	4/25/96	4/25/96	6.1	61	7.9	NA
Post Lead GAC		4/25/96	4/25/96	<4.0	20	<2.0	NA
Post Polish GAC	B0H7W1	4/25/96	4/25/96	<4.0	11	<2.0	NA
Injection Well		4/25/96	4/25/96	<4.0	10	<2.0	NA
Extraction Well		5/2/96	5/2/96	6.2	61	3.6	NA
Pre Treat	B0HDY6	5/2/96	5/2/96	NA	NA	NA	328
Post Lead	B0HDY7	5/2/96	5/2/96	NA	NA	NA	<0.50
Pre Lead GAC	B0H7W2	5/2/96	5/2/96	3.7	66	5.6	NA
Post Lead GAC	B0H7W3	5/2/96	5/2/96	<4.0	3.5	<2.0	NA
Injection Well		5/2/96	5/2/96	<4.0	4.5	<2.0	NA
Extraction Well		5/9/96	5/9/96	4.8	67	2.9	NA
Pre Treat	B0HDY8	5/7/96	5/22/96	NA	NA	NA	325
Pre Treat	B0HDZ0	5/9/96	5/22/96	NA	NA	NA	319
Post Lead	B0HDY9	5/7/96	5/22/96	NA	NA	NA	<0.50
Post Lead	B0HDZ1	5/9/96	5/22/96	NA	NA	NA	<0.50
Pre Lead GAC	B0H7W4	5/9/96	5/9/96	4.1	68	58	NA
Post Lead GAC		5/9/96	5/9/96	<4.0	<2.0	<2.0	NA
Post Polish GAC	B0H7W5	5/9/96	5/9/96	<4.0	4.4	<2.0	NA

200-UP-1 Pump and Treat System
Field Screening Results, April 1996 through June 1996
SAF B96-029

Sample Location	HEIS Number	Sample Date	Analysis Date	Chloroform (µg/L)	Carbon TetraCl (µg/L)	TCE (µg/L)	Uranium (µg/L)
Injection Well		5/9/96	5/9/96	<4.0	4.4	<2.0	NA
Extraction Well		5/17/96	5/17/96	<4.0	73	3.4	NA
Pre Treat	BOHDZ2	5/14/96	5/22/96	NA	NA	NA	310
Pre Treat	BOHDZ4	5/16/96	5/22/96	NA	NA	NA	306
Post Lead	BOHDZ3	5/14/96	5/22/96	NA	NA	NA	<0.50
Post Lead	BOHDZ5	5/16/96	5/22/96	NA	NA	NA	<0.50
Pre Lead GAC	BOH7W6	5/17/96	5/17/96	<4.0	82	360	NA
Post Lead GAC		5/17/96	5/17/96	<4.0	2.7	<2.0	NA
Post Polish GAC	BOH7W7	5/17/96	5/17/96	<4.0	4.2	<2.0	NA
Injection Well		5/17/96	5/17/96	<4.0	3.3	<2.0	NA
Extraction Well		5/23/96	5/23/96	<4.0	79	5.0	NA
Pre Treat	BOHDZ6	5/21/96	5/22/96	NA	NA	NA	331
Pre Treat	BOHFZ8	5/23/96	6/11/96	NA	NA	NA	299
Post Lead	BOHDZ7	5/21/96	5/22/96	NA	NA	NA	<0.50
Post Lead	BOHFZ9	5/23/96	6/11/96	NA	NA	NA	0.87
Pre Lead GAC	BOHDZ9	5/23/96	5/23/96	<4.0	71	110	NA
Post Lead GAC		5/23/96	5/23/96	<4.0	4.3	<2.0	NA
Post Polish GAC	BOHDZ8	5/23/96	5/23/96	<4.0	2.7	<2.0	NA
Injection Well		5/23/96	5/23/96	<4.0	2.5	<2.0	NA
Extraction Well		5/30/96	5/30/96	<4.0	81	4.8	NA
Pre Treat	BOHF00	5/28/96	6/11/96	NA	NA	NA	305
Pre Treat	BOHF02	5/30/96	6/11/96	NA	NA	NA	300
Post Lead	BOHF01	5/28/96	6/11/96	NA	NA	NA	<0.50
Post Lead	BOHF03	5/30/96	6/11/96	NA	NA	NA	<0.50
Pre Lead GAC	BOHF01	5/30/96	5/30/96	<4.0	68	350	NA
Post Lead GAC		5/30/96	5/30/96	<4.0	3.2	<2.0	NA
Post Polish GAC	BOHF00	5/30/96	5/30/96	<4.0	11	<2.0	NA
Injection Well		5/30/96	5/30/96	<4.0	3.4	<2.0	NA
Extraction Well		6/6/96	6/6/96	<4.0	86	4.9	NA
Pre Treat	BOHF04	6/4/96	6/11/96	NA	NA	NA	0.89
Pre Treat	BOHF06	6/6/96	6/11/96	NA	NA	NA	272
Post Lead	BOHF05	6/4/96	6/11/96	NA	NA	NA	293
Post Lead	BOHF07	6/6/96	6/11/96	NA	NA	NA	297
Pre Lead GAC	BOHF07	6/6/96	6/6/96	<4.0	77	7.5	NA
Post Lead GAC		6/6/96	6/6/96	<4.0	20	<2.0	NA
Post Polish GAC	BOHF06	6/6/96	6/6/96	<4.0	2.5	<2.0	NA
Injection Well		6/6/96	6/6/96	<4.0	2.8	<2.0	NA
Extraction Well		6/13/96	6/13/96	<4.0	84	5.4	NA
Pre Treat	BOHF08	6/11/96	6/11/96	NA	NA	NA	294
Pre Treat	BOHF10	6/13/96	7/3/96	NA	NA	NA	316
Post Lead	BOHF09	6/11/96	6/11/96	NA	NA	NA	0.95
Post Lead	BOHF11	6/13/96	7/3/96	NA	NA	NA	0.63
Pre Lead GAC	BOHF13	6/13/96	6/13/96	<4.0	88	150	NA
Post Lead GAC		6/13/96	6/13/96	<4.0	24	<2.0	NA
Post Polish GAC	BOHF12	6/13/96	6/13/96	<4.0	3.5	<2.0	NA
Injection Well		6/13/96	6/13/96	<4.0	3.0	<2.0	NA
Extraction Well		6/20/96	6/20/96	<4.0	90	5.1	NA
Pre Treat	BOHF12	6/18/96	7/3/96	NA	NA	NA	307
Pre Treat	BOHF14	6/20/96	7/3/96	NA	NA	NA	308
Post Lead	BOHF13	6/18/96	7/3/96	NA	NA	NA	<0.50
Post Lead	BOHF15	6/20/96	7/3/96	NA	NA	NA	<0.50

200-UP-1 Pump and Treat System
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Sample Location	HEIS Number	Sample Date	Analysis Date	Chloroform (µg/L)	Carbon TetraCl (µg/L)	TCE (µg/L)	Uranium (µg/L)
Pre Lead GAC	BOHF15	6/20/96	6/20/96	<4.0	86	10	NA
Post Lead GAC		6/20/96	6/20/96	<4.0	33	<2.0	NA
Post Polish GAC	BOHF14	6/20/96	6/20/96	<4.0	<2.0	<2.0	NA
Injection Well		6/20/96	6/20/96	<4.0	<2.0	<2.0	NA
Extraction Well		6/28/96	6/28/96	<4.0	96	4.7	NA
Pre Treat	BOHF16	6/25/96	7/3/96	NA	NA	NA	307
Pre Treat	BOHF18	6/27/96	7/3/96	NA	NA	NA	310
Post Lead	BOHF17	6/25/96	7/3/96	NA	NA	NA	<0.50
Post Lead	BOHF19	6/27/96	7/3/96	NA	NA	NA	0.58
Pre Lead GAC	BOHF18	6/28/96	6/28/96	<4.0	96	11	NA
Post Lead GAC		6/28/96	6/28/96	<4.0	46	<2.0	NA
Post Polish GAC	BOHF19	6/28/96	6/28/96	<4.0	<2.0	<2.0	NA
Injection Well		6/28/96	6/28/96	<4.0	<2.0	<2.0	NA

NA - Not Analyzed

j - Value less than practical quantitation limit

Analyst:

D. Jacques 7/12/96
 D. Jacques

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

Method: 5 mL/min HP Air, 11.7 eV lamp, 250 µL injection

Logbook: Photovac Instrument Log, EL-1269 & EL-1315

Uranium Instrument: ChemChek KPA-11a, Serial # 9445050065

Method: Kinetic Phosphorescence

Logbook: 200-UP-1 Project Log, EL-1277

HEADSPACE GAS CHROMATOGRAPHY CHECKLIST

1.	Date: <i>12 July '96</i>	
2.	a. Minimum 3 point calibration curve:	<i>OK - 3 pt curve check via ^{simplest} 3pt.</i>
	b. Date 3 point minimum calibration curve was prepared:	<i>3pt curve prepared 10/25/95</i>
3.	<u>Calibration Check Standard</u>	
	a. Check standard for each analyte:	<i>OK</i>
	b. Date of analysis:	<i>various dates apr., may, June '96</i>
	c. Date of check standard:	<i>check std prepared for each run.</i>
	<u>Calculation Check (One Standard)</u>	
	d. Show calculation:	$\frac{0.80 \times 1400}{0.8 \times 1000} = 37.3$
	e. Agrees with analyst:	<i>analyst - 37 OK</i>
3.	a. Is a sample dilution required?	<i>None</i>
	b. If yes, check calculation.	<i>N/A</i>
4.	If data has been converted from ppm to ppb or vice versa, check conversion.	<i>N/A</i>
5.	<u>Analyte Identification</u>	
	a. Confirmed by MS:	<i>No</i>
	b. Confirmed by second column:	<i>No</i>
6.	Average temperature of laboratory during analysis:	
7.	a. Reviewer's name:	<i>L. Stacey / Claude Stacey</i>
	b. Reviewer's signature:	