F30032-Field
037177

0052020

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

Environmental Restoration Contractor **ERC Team**

Interoffice Memorandum

OCT 1996

TO: J. W. Green Jr, H9-10
J. A. Lerch, B1-35

DATE: October 8, 1996

COPIES: See Below

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

46829

SUBJECT: **200-UP-1 PUMP AND TREAT PROCESS MONITORING FIELD SCREENING RESULTS, JULY 1996 THROUGH SEPTEMBER 1996, REV 0**

REFERENCES:

1. BHI, 1996, *On-Site Measurements Quality Assurance Plan*, BHI-00852, REV 0, 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 during the fourth quarter of FY 1996. The Quality Assurance level for this work corresponds to QA-1 as specified in the reference 1. 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 specified portions of the 200-UP-1 Pump and Treat System. The VOC results for July 4 through August 1 and the week of August 23 were generated 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 calibration and operation of the gas chromatograph is contained in instrument logbook EL-1315.

The remainder of the VOC results for August and all of September were generated using a Hewlett Packard 5890 gas chromatograph with a headspace autosampler operated in accordance with FSP 1.1 (BHI 1995b). Information concerning calibration and operation of the gas chromatograph is contained in instrument logbook EL-1329.

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 operation and calibration of the ChemChek KPA-11a is contained in 200-UP-1 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

Duane Jacques, Scientist

IDJ:idj

Attachments:

200-UP-1 Pump and Treat Process Monitoring, Field Screening Results, July 1996 through September 1996

Copies:

M. A. Buckmaster, H4-80, w/attachment
R. T. Coffman, H9-11, w/attachment
F. W. Gustafson, H9-11, w/attachment
A. Hopkins, H9-11, w/attachment
T. D. LeFrancois, H9-03, w/attachment
W. S. Thompson, N1-28, w/attachment
C. D. Wittreich, H9-12, w/attachment
BHI Document Control, H4-79, w/original attachment

Attachment 1

200-UP-1 Pump and Treat Process Monitoring
Field Screening Results, July 1996 through September 1996
SAF B96-029

Sample Location	*HEIS Number*	*Sample Date*	*Analysis Date*	*Chloroform (ug/L)*	*Carbon Tetrachloride (ug/L)*	*Trichloroethylene (ug/L)*	*Total Uranium (ug/L)*
Injection Well		7/4/96	7/4/96	<4.0	2.1	<2.0	NA
Post Polish GAC	B0HZJ8	7/4/96	7/4/96	<4.0	2.1	<2.0	NA
Post Lead GAC		7/4/96	7/4/96	4.4	49	<2.0	NA
Pre Lead GAC	B0HZJ7	7/4/96	7/4/96	5.0	92	4.3	NA
Extraction Well		7/4/96	7/4/96	4.8	88	3.0	NA
Post Lead	B0HF21	7/2/96	7/3/96	NA	NA	NA	<0.50
Pre Treat	B0HF20	7/2/96	7/3/96	NA	NA	NA	280
Injection Well		7/11/96	7/11/96	<4.0	2.5	<2.0	NA
Post Polish GAC	B0HZK0	7/11/96	7/11/96	<4.0	2.4	<2.0	NA
Post Lead GAC		7/11/96	7/11/96	6.6	80	<2.0	NA
Pre Lead GAC	B0HZJ9	7/11/96	7/11/96	8.0	140	8.3	NA
Extraction Well		7/11/96	7/11/96	7.1	130	6.6	NA
Post Lead	B0HF23	7/8/96	8/7/96	NA	NA	NA	1.3
Post Lead	B0HF25	7/11/96	8/7/96	NA	NA	NA	0.81
Pre Treat	B0HF22	7/8/96	8/7/96	NA	NA	NA	270
Pre Treat	B0HF24	7/11/96	8/7/96	NA	NA	NA	270
Injection Well		7/18/96	7/18/96	<4.0	2.1	<2.0	NA
Post Polish GAC	B0HZK2	7/18/96	7/18/96	<4.0	2.3	<2.0	NA
Post Lead GAC		7/18/96	7/18/96	5.7	84	<2.0	NA
Pre Lead GAC	B0HZK1	7/18/96	7/18/96	5.8	130	6.7	NA
Extraction Well		7/18/96	7/18/96	6.3	120	5.7	NA
Post Lead	B0HF27	7/16/96	8/7/96	NA	NA	NA	0.72
Post Lead	B0HF29	7/18/96	8/7/96	NA	NA	NA	1.1
Pre Treat	B0HF26	7/16/96	8/7/96	NA	NA	NA	270
Pre Treat	B0HF28	7/18/96	8/7/96	NA	NA	NA	270
Injection Well		7/25/96	7/25/96	<4.0	<2.0	<2.0	NA
Post Polish GAC	B0HZK4	7/25/96	7/25/96	<4.0	<2.0	<2.0	NA
Post Lead GAC		7/25/96	7/25/96	4.6	73	<2.0	NA
Pre Lead GAC	B0HZK3	7/25/96	7/25/96	5.3	102	37	NA
Extraction Well		7/25/96	7/25/96	5.3	94	4.8	NA
Post Lead	B0HF31	7/22/96	8/7/96	NA	NA	NA	1.8
Post Lead	B0HF33	7/25/96	8/7/96	NA	NA	NA	1.2
Pre Treat	B0HF30	7/22/96	8/7/96	NA	NA	NA	280
Pre Treat	B0HF32	7/25/96	8/7/96	NA	NA	NA	260

037177

Attachment 1

200-UP-1 Pump and Treat Process Monitoring

Field Screening Results, July 1996 through September 1996

SAF B96-029

Sample Location	*HEIS Number*	*Sample Date*	*Analysis Date*	*Chloroform (ug/L)*	*Carbon Tetrachloride (ug/L)*	*Trichloroethylene (ug/L)*	*Total Uranium (ug/L)*
Injection Well		8/1/96	8/1/96	<4.0	<2.0	<2.0	NA
Post Polish GAC	B0HZK6	8/1/96	8/1/96	<4.0	<2.0	<2.0	NA
Post Lead GAC		8/1/96	8/1/96	<4.0	24	<2.0	NA
Pre Lead GAC	B0HZK5	8/1/96	8/1/96	5.5	74	110	NA
Extraction Well		8/1/96	8/1/96	5.1	84	3.5	NA
Post Lead	B0HF35	7/30/96	8/7/96	NA	NA	NA	0.99
Post Lead	B0HYG2	8/1/96	8/7/96	NA	NA	NA	0.99
Pre Treat	B0HF34	7/30/96	8/7/96	NA	NA	NA	230
Pre Treat	B0HYG1	8/1/96	8/7/96	NA	NA	NA	250
Injection Well		8/8/96	8/8/96	<2.0	<2.0	<2.0	NA
Post Polish GAC	B0HZK8	8/8/96	8/8/96	<2.0	<2.0	<2.0	NA
Post Lead GAC		8/8/96	8/8/96	<2.0	49	<2.0	NA
Pre Lead GAC	B0HZK7	8/8/96	8/8/96	3.0	140	<2.0	NA
Extraction Well		8/8/96	8/8/96	3.0	130	3.8	NA
Post Lead	B0HYG4	8/6/96	8/7/96	NA	NA	NA	1.0
Post Lead	B0HYG6	8/8/96	9/6/96	NA	NA	NA	1.2
Pre Treat	B0HYG3	8/6/96	8/7/96	NA	NA	NA	160
Pre Treat	B0HYG5	8/8/96	9/6/96	NA	NA	NA	220
Injection Well		8/16/96	8/16/96	<2.0	2.8	<2.0	NA
Post Polish GAC	B0HZL0	8/16/96	8/16/96	<2.0	3.2	<2.0	NA
Post Lead GAC		8/16/96	8/16/96	3.0	42	<2.0	NA
Pre Lead GAC	B0HZK9	8/16/96	8/16/96	6.4	150	6.0	NA
Extraction Well		8/16/96	8/16/96	6.3	150	5.9	NA
Post Lead	B0HYG8	8/13/96	9/6/96	NA	NA	NA	1.2
Post Lead	B0HYH0	8/15/96	9/6/96	NA	NA	NA	0.85
Pre Treat	B0HYG7	8/13/96	9/6/96	NA	NA	NA	180
Pre Treat	B0HYG9	8/15/96	9/6/96	NA	NA	NA	220
Injection Well		8/22/96	8/22/96	<4.0	1.6	<2.0	NA
Post Polish GAC	B0HZL2	8/22/96	8/22/96	<4.0	2.0	<2.0	NA
Post Lead GAC		8/22/96	8/22/96	<4.0	32	<2.0	NA
Pre Lead GAC	B0HZL1	8/22/96	8/22/96	<4.0	107	130	NA
Extraction Well		8/22/96	8/22/96	6.0	103	3.6	NA
Post Lead	B0HYH2	8/20/96	9/6/96	NA	NA	NA	1.1
Post Lead	B0HYH4	8/22/96	9/6/96	NA	NA	NA	0.85
Pre Treat	B0HYH1	8/20/96	9/6/96	NA	NA	NA	220
Pre Treat	B0HYH3	8/22/96	9/6/96	NA	NA	NA	206

Attachment 1

200-UP-1 Pump and Treat Process Monitoring

Field Screening Results, July 1996 through September 1996

SAF B96-029

Sample Location	*HEIS Number*	*Sample Date*	*Analysis Date*	*Chloroform (ug/L)*	*Carbon Tetrachloride (ug/L)*	*Trichloroethylene (ug/L)*	*Total Uranium (ug/L)*
Injection Well		8/29/96	8/29/96	4.4	3.9	<2.0	NA
Post Polish GAC	B0HZL4	8/29/96	8/29/96	4.5	4.2	<2.0	NA
Post Lead GAC		8/29/96	8/29/96	5.0	59	<2.0	NA
Pre Lead GAC	B0HZL3	8/29/96	8/29/96	8.4	150	7.7	NA
Extraction Well		8/29/96	8/29/96	8.2	130	7.2	NA
Post Lead	B0HYH6	8/27/96	9/6/96	NA	NA	NA	0.59
Post Lead	B0HYH8	8/29/96	9/6/96	NA	NA	NA	0.88
Pre Treat	B0HYH5	8/27/96	9/6/96	NA	NA	NA	170
Pre Treat	B0HYH7	8/29/96	9/6/96	NA	NA	NA	200
Injection Well		9/5/96	9/5/96	4.7	4.2	<2.0	NA
Post Lead GAC	B0HZL6	9/5/96	9/5/96	5.1	4.7	<2.0	NA
Pre Lead GAC	B0HZL5	9/5/96	9/5/96	7.8	160	6.9	NA
Extraction Well		9/5/96	9/5/96	7.7	160	7.1	NA
Post Lead	B0HYJ0	9/3/96	9/6/96	NA	NA	NA	2.3
Post Lead	B0HYJ2	9/5/96	9/6/96	NA	NA	NA	0.93
Pre Treat	B0HYH9	9/3/96	9/6/96	NA	NA	NA	190
Pre Treat	B0HYJ1	9/5/96	9/6/96	NA	NA	NA	220
Injection Well		9/12/96	9/12/96	<2.0	<2.0	<2.0	NA
Post Polish GAC	B0HZL8	9/12/96	9/12/96	<2.0	<2.0	<2.0	NA
Post Lead GAC		9/12/96	9/12/96	8.3	6.8	<2.0	NA
Pre Lead GAC	B0HZL7	9/12/96	9/12/96	11	180	9.8	NA
Extraction Well		9/12/96	9/12/96	11	210	10	NA
Post Lead	B0HYJ4	9/10/96	9/19/96	NA	NA	NA	<1.0
Post Lead	B0HYJ6	9/12/96	9/19/96	NA	NA	NA	<1.0
Pre Treat	B0HYJ3	9/10/96	9/19/96	NA	NA	NA	260
Pre Treat	B0HYJ5	9/12/96	9/19/96	NA	NA	NA	250
Injection Well		9/19/96	9/19/96	<2.0	<2.0	<2.0	NA
Post Polish GAC	B0HZM0	9/19/96	9/19/96	<2.0	<2.0	<2.0	NA
Post Lead GAC		9/19/96	9/19/96	4.2	6.1	<2.0	NA
Pre Lead GAC	B0HZL9	9/19/96	9/19/96	5.3	97	4.8	NA
Extraction Well		9/19/96	9/19/96	5.7	130	6.1	NA
Post Lead	B0HYJ8	9/17/96	9/19/96	NA	NA	NA	<1.0
Post Lead	B0HYK0	9/19/96	9/19/96	NA	NA	NA	<1.0
Pre Treat	B0HYJ7	9/17/96	9/19/96	NA	NA	NA	270
Pre Treat	B0HYJ9	9/19/96	9/19/96	NA	NA	NA	280

037177

Attachment 1

200-UP-1 Pump and Treat Process Monitoring

Field Screening Results, July 1996 through September 1996

SAF B96-029

Sample Location	*HEIS Number*	*Sample Date*	*Analysis Date*	*Chloroform (ug/L)*	*Carbon Tetrachloride (ug/L)*	*Trichloroethylene (ug/L)*	*Total Uranium (ug/L)*
Injection Well		9/26/96	9/26/96	<2.0	<2.0	<2.0	NA
Post Polish GAC	B0HZM2	9/26/96	9/26/96	<2.0	<2.0	<2.0	NA
Post Lead GAC		9/26/96	9/26/96	5.5	14	<2.0	NA
Pre Lead GAC	B0HZM1	9/26/96	9/26/96	6.5	200	6.5	NA
Extraction Well		9/26/96	9/26/96	6.6	200	6.5	NA
Post Lead	B0HYK2	9/24/96	9/27/96	NA	NA	NA	<1.0
Post Lead	B0HYK3	9/26/96	9/27/96	NA	NA	NA	<1.0
Pre Treat	B0HYK1	9/24/96	9/27/96	NA	NA	NA	280
Pre Treat	B0HYK4	9/26/96	9/27/96	NA	NA	NA	270

NA - Not Analyzed

j - Value less than practical quantitation limit

Analyst: R. T. Coffman 10-8-96
R. T. Coffman

I. D. Jacques 10-8-96
I. D. Jacques

VOA Instrument: Photovac 10S Plus GC, Serial # BJDG203
Method: 5 mL/min HP Air, 11.7 eV lamp, 250 uL injection
Logbook: 200-UP-1 Field Logbook, EL-1277

VOA Instrument: Hewlett Packard 5890 GC, Serial # 3235A47685
Method: Dual DB-VRX columns, ECD/FID, 1mL headspace injection
Logbook: 200-UP-1 Field Logbook, EL-1277

Uranium Instrument: ChemChek KPA-11a, Serial # 9445050065
Method: Kinetic Phosphorescence
Logbook: 200-UP-1 Field Logbook, EL-1277

037177