FS0057-Field 044718

0052043

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

APR 1997 RECEIVED Data Log In

TO: M. A. Buckmaster, H4-80
M. J. Galgoul, H9-12

DATE: April 21, 1997

COPIES: See Below

FROM: R. T. Coffman
Onsite Measurement Services
H9-11/372-9373

SUBJECT: **200-ZP-1 PHASE II PUMP AND TREAT PROCESS MONITORING, FIELD SCREENING RESULTS, JANUARY 1997 THROUGH MARCH 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, 1995, *200-ZP-1 Field Screening Support Logbook*, EL-1273, Bechtel Hanford, Inc., Richland, Washington.

4. BHI, 1997, *200-ZP-1 Field Screening Support Logbook*, EL-1359, Bechtel Hanford, Inc., Richland, Washington.

This data package contains field screening results for process water samples analyzed to monitor the 200-ZP-1 Phase II Pump and Treat System during the second quarter of FY 1997. The Quality Assurance level for this work corresponds to QC-1 as specified in the reference 1 (BHI 1997). Samples collected and analyzed during this reporting period were managed under SAF B97-002.

Attachment 1 contains Volatile Organic Compound (VOC) results for process water and process air samples collected from specified locations of the to support the referenced project. The VOC analysis results were generated using the Hewlett - Packard 5890 gas chromatograph with a headspace autosampler, with the exception of the analysis results reported on 3/5 and 3/13. These results were generated using a Photovac 10S plus portable gas chromatograph. It was necessary to utilize the Photovac 10S plus portable gas chromatograph when on 3/4, the Hewlett Packard 5890 support computer hard drive failed. The computer was replaced and has been restored to normal operation. The Hewlett - Packard 5890 was operated in accordance with Field Screening Procedure (FSP) 1.29, *Aqueous Headspace Analysis of Volatile Organic Compounds in Water Using Hewlett Packard 5890 Gas Chromatagraph* (BHI 1997). The Photovac 10S plus was operated in accordance with Field Screening Procedure (FSP) 1.1, *Aqueous Headspace Analysis of Volatile Organic Compounds in Water* (BHI 1995).

Information concerning operation and calibration of the gas chromatographs is contained in instrument logbooks EL-1329 (HP 5890) and EL-1332 (Photovac 10S). Please contact me if you have any questions on this information.

The VOC results for the process air samples were generated using a Bruel & Kjaer 1301 Fourier Transform Infrared (FTIR) gas analyzer, operated in accordance with FSP 1.6 (BHI 1995b). Information concerning calibration and operation of the FTIR gas analyzer is contained in field logbook EL-1333. Sample custody information for all samples reported in this document is contained in field logbooks EL-1273 and EL-1359.

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

R. T. Coffman

R. T. Coffman, Engineer/Analyst

RTC:rtc

Attachments:
200-ZP-1 IRM Phase II Pump and Treat Process Monitoring, Field Screening Results, January 1997 through March 1997, Rev 0.

Copies:
D. E. Ayres, B1-35, w/attachment
B. H. Ford, H0-02, w/attachment
I. D. Jacques, H9-10, w/attachment
R.B. Kerkow, H9-10, w/attchment
J. E. Hodgson, T7-12, w/attchment
S. A. Strope, T7-12, w/attachment
L. C. Swanson, H9-11, w/attachment
BHI Document Control, H4-79, w/original attachments

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Data
Log In

200-ZP-1 Phase II Pump and Treat Process Monitoring

Field Screening Results, January 1997 through March 1997

SAF B97-002

			WATER ANALYSES			AIR ANALYSES		
Sample Location	*HEIS Number*	*Sample/ Analysis Date*	*Chloroform (ug/L)*	*Carbon Tetrachloride (ug/L)*	*Trichloroethylene (ug/L)*	*Chloroform (ppmv)*	*Carbon Tetrachloride (ppmv)*	*Trichloroethylene (ppmv)*
Post Tank T-02-01	B0JN62	1/3/97	<2.0	2.2	<2.0			
Post Tank T-02-02 Dupe	B0JN63	1/3/97	<2.0	<2.0	<2.0			
Post Valve V-01-01	B0JN64	1/3/97	<2.0	<2.0	<2.0			
Post Tank T-01	B0JN65	1/3/97	32	2100	4.3			
Extraction Well #1	B0JN66	1/3/97	30	5000	10			
Extraction Well #2	B0JN67	1/3/97	22	2700	9			
Extraction Well #3	B0JN68	1/3/97	21	3800	5.3			
Post Chiller Air	B0JDG1	1/3/97				<1.0	7	<2.0
Post Tank T-02-01	B0JN69	1/8/97	<2.0	3.8	<2.0			
Post Tank T-02-02 Dupe	B0JN70	1/8/97	<2.0	4.0	<2.0			
Post Tank T-02-03	B0JN76	1/8/97	<2.0	3.0	<2.0			
Post Valve V-01-01	B0JN71	1/8/97	<2.0	4.1	<2.0			
Post Valve V-01-02	B0JN77	1/8/97	<2.0	3.5	<2.0			
Post Tank T-01	B0JN72	1/8/97	15	3400	6.8			
Extraction Well #1	B0JN73	1/8/97	21	4800	8.9			
Extraction Well #2	B0JN74	1/8/97	13	2600	9.7			
Extraction Well #3	B0JN75	1/8/97	16	3400	4.3			
Post Chiller Air	B0JDG2	1/8/97				<1.0	14	<2.0
Post Tank T-02-01	B0JN78	1/15/97	<2.0	<2.0	<2.0			
Post Tank T-02-02 Dupe	B0JN79	1/15/97	<2.0	<2.0	<2.0			
Post Valve V-01-01	B0JNL0	1/15/97	<2.0	<2.0	<2.0			
Post Tank T-01	B0JNL1	1/15/97	15	3200	5.8			
Extraction Well #1	B0JNL2	1/15/97	21	4600	7.8			
Extraction Well #2	B0JNL3	1/15/97	13	2800	9.3			
Extraction Well #3	B0JNL4	1/15/97	15	3300	3.4			
Post Chiller Air	B0JDG3	1/15/97				<1.0	13	<2.0
Post Tank T-02-01	B0JNL5	1/22/97	<2.0	8.8	<2.0			
Post Tank T-02-02	B0JNM2	1/22/97	<2.0	2.0	<2.0			
Post Valve V-01-01	B0JNL6	1/22/97	<2.0	5.5	<2.0			
Post Valve V-01-02	B0JNM3	1/22/97	<2.0	<2.0	<2.0			
Post Tank T-01-01	B0JNL7	1/22/97	16	3000	6.3			
Post Tank T-01-02 Dupe	B0JNL8	1/22/97	17	3100	6.5			
Extraction Well #1	B0JNL9	1/22/97	23	4200	8.3			
Extraction Well #2	B0JNM0	1/22/97	13	2300	9.3			
Extraction Well #3	B0JNM1	1/22/97	18	3200	3.9			
Post Chiller Air	B0JDG4	1/22/97				<1.0	13	<2.0
Post Tank T-02-01	B0JNM4	1/29/97	<2.0	3.2	<2.0			
Post Tank T-02-02	B0JNN1	1/29/97	<2.0	8.2	<2.0			
Post Valve V-01-01	B0JNM5	1/29/97	<2.0	3.4	<2.0			
Post Valve V-01-02	B0JNN2	1/29/97	<2.0	5.2	<2.0			
Post Tank T-01-01	B0JNM6	1/29/97	16	3500	6.5			
Post Tank T-01-02 Dupe	B0JNM7	1/29/97	16	3400	6.5			
Extraction Well #1	B0JNM8	1/29/97	23	4800	8.5			
Extraction Well #2	B0JNM9	1/29/97	14	2900	11			
Extraction Well #3	B0JNN0	1/29/97	19	3200	3.7			
Post Chiller Air	B0JDG5	1/29/97				<1.0	13	<2.0

200-ZP-1 Phase II Pump and Treat Process Monitoring

Field Screening Results, January 1997 through March 1997

SAF B97-002

			WATER ANALYSES			AIR ANALYSES		
Sample Location	*HEIS Number*	*Sample/ Analysis Date*	*Chloroform (ug/L)*	*Carbon Tetrachloride (ug/L)*	*Trichloroethylene (ug/L)*	*Chloroform (ppmv)*	*Carbon Tetrachloride (ppmv)*	*Trichloroethylene (ppmv)*
Post Tank T-02-01	B0JNN3	1/30/97	<2.0	<2.0	<2.0			
Post Valve V-01-01	B0JNN4	1/30/97	<2.0	<2.0	<2.0			
Post Tank T-02-01	B0JNN5	2/5/97	<2.0	4.6	<2.0			
Post Tank T-02-02 Dupe	B0JNN6	2/5/97	<2.0	4.5	<2.0			
Post Tank T-02-03	B0JNP2	2/5/97	<2.0	4.8	<2.0			
Post Valve V-01-01	B0JNN7	2/5/97	<2.0	4.8	<2.0			
Post Valve V-01-02	B0JNP3	2/5/97	<2.0	5.3	<2.0			
Post Tank T-01	B0JNN8	2/5/97	17	3900	8			
Extraction Well #1	B0JNN9	2/5/97	24	5500	11			
Extraction Well #2	B0JNP0	2/5/97	14	3300	12			
Extraction Well #3	B0JNP1	2/5/97	16	3700	5.1			
Post Chiller Air	B0JDG6	2/5/97				<1.0	14	<2.0
Post Tank T-02-01	B0JNP4	2/6/97	<2.0	2.2	<2.0			
Post Valve V-01-01	B0JNP5	2//6/97	<2.0	2.5	<2.0			
Post Tank T-02-01	B0JNP6	2/12/97	<2.0	<2.0	<2.0			
Post Valve V-01-01	B0JNP7	2/12/97	<2.0	<2.0	<2.0			
Post Tank T-01-01	B0JNP8	2/12/97	18	3200	7.6			
Extraction Well #1	B0JNP9	2/12/97	26	5100	10			
Extraction Well #2	B0JNQ0	2/12/97	16	2600	12			
Extraction Well #3	B0JNQ1	2/12/97	18	3100	4.4			
Post Chiller Air	B0JDG7	2/12/97				<1.0	14	<2.0
Post Tank T-02-01	B0JNQ2	2/18/97	<2.0	4.1	<2.0			
Post Tank T-02-02	B0JNQ9	2/18/97	<2.0	3.9	<2.0			
Post Valve V-01-01	B0JNQ3	2/18/97	<2.0	4.0	<2.0			
Post Valve V-01-02	B0JNR0	2/18/97	<2.0	4.5	<2.0			
Post Tank T-01-01	B0JNQ4	2/18/97	19	3600	7.4			
Post Tank T-01-02 Dupe	B0JNQ5	2/18/97	19	3800	8.0			
Extraction Well #1	B0JNQ6	2/18/97	28	5200	11			
Extraction Well #2	B0JNQ7	2/18/97	18	3000	12			
Extraction Well #3	B0JNQ8	2/18/97	19	3100	3.7			
Post Chiller Air	B0JDG8	2/18/97				<1.0	14	<2.0
Post Tank T-02-01	B0JNR1	2/25/97	<2.0	2.8	<2.0			
Post Tank T-02-02	B0JNR8	2/25/97	<2.0	<2.0	<2.0			
Post Valve V-01-01	B0JNR2	2/25/97	<2.0	3.0	<2.0			
Post Valve V-01-02	B0JNR9	2/25/97	<2.0	2.0	<2.0			
Post Tank T-01-01	B0JNR3	2/25/97	19	3600	8.0			
Extraction Well #1	B0JNR4	2/25/97	25	4600	10			
Extraction Well #1 Dupe	B0JNR5	2/25/97	24	4600	9.7			
Extraction Well #2	B0JNR6	2/25/97	15	2500	11			
Extraction Well #3	B0JNR7	2/25/97	18	3100	4.2			
Post Chiller Air	B0JDG9	2/25/97				<1.0	14	<2.0

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200-ZP-1 Phase II Pump and Treat Process Monitoring

Field Screening Results, January 1997 through March 1997

SAF B97-002

			WATER ANALYSES			AIR ANALYSES		
Sample Location	*HEIS Number*	*Sample/ Analysis Date*	*Chloroform (ug/L)*	*Carbon Tetrachloride (ug/L)*	*Trichloroethylene (ug/L)*	*Chloroform (ppmv)*	*Carbon Tetrachloride (ppmv)*	*Trichloroethylene (ppmv)*
Post Tank T-02-01	B0JNS0	3/5/97	<4.0	<2.0	<2.0			
Post Valve V-01-01	B0JNS1	3/5/97	<4.0	<2.0	<2.0			
Post Tank T-01-01	B0JNS2	3/5/97	13	2800	3.7			
Post Tank T-01-01 Dupe	B0JNS3	3/5/97	15	2800	3.9			
Extraction Well #1	B0JNS4	3/5/97	22	4200	4.1			
Extraction Well #2	B0JNS5	3/5/97	11	2400	5.8			
Extraction Well #3	B0JNS6	3/5/97	16	2900	<2.0			
Post Chiller Air	B0JDH0	3/5/97				<1.0	16	<2.0
Post Tank T-02-01	B0JNS7	3/13/97	<4.0	<2.0	<2.0			
Post Valve V-01-01	B0JNS8	3/13/97	<4.0	<2.0	<2.0			
Post Tank T-01-01	B0JNS9	3/13/97	12	2900	2.0			
Extraction Well #1	B0JNT0	3/13/97	15	4100	3.0			
Extraction Well #1 Dupe	B0JNT1	3/13/97	14	4000	3.0			
Extraction Well #2	B0JNT2	3/13/97	10	2500	5.2			
Extraction Well #3	B0JNT3	3/13/97	14	2600	<2.0			
Post Chiller Air	B0JDH1	3/13/97				<1.0	16	<2.0
Post Tank T-02-01	B0JNT4	3/19/97	<2.0	2.4	<2.0			
Post Valve V-01-01	B0JNT5	3/19/97	<2.0	4.4	<2.0			
Post Tank T-01-01	B0JNT6	3/19/97	15	3800	6.6			
Extraction Well #1	B0JNT7	3/19/97	24	6600	10			
Extraction Well #2	B0JNT8	3/19/97	12	3100	10			
Extraction Well #2 Dupe	B0JNT9	3/19/97	12	3100	9.8			
Extraction Well #3	B0JNV0	3/19/97	16	4000	3.9			
Post Chiller Air	B0JDH2	3/19/97				<1.0	16	<2.0
Post Tank T-02-01	B0JNV1	3/26/97	<2.0	4.5	<2.0			
Post Tank T-02-02	B0JNV8	3/26/97	<2.0	<2.0	<2.0			
Post Valve V-01-01	B0JNV2	3/26/97	<2.0	3.5	<2.0			
Post Valve V-01-02	B0JNV9	3/26/97	<2.0	<2.0	<2.0			
Post Tank T-01-01	B0JNV3	3/26/97	20	3700	7.9			
Extraction Well #1	B0JNV4	3/26/97	30	5500	12			
Extraction Well #2	B0JNV5	3/26/97	17	3000	12			
Extraction Well #3	B0JNV6	3/26/97	20	3400	3.9			
Extraction Well #3 Dupe	B0JNV7	3/26/97	20	3500	4.1			
Post Chiller Air	B0JDH3	3/26/97				<1.0	17	<2.0

j - Value less than practical quantitation limit

VOA Instrument (water analysis): Hewlett Packard 5890 GC, Serial # 3235A47685
Method: Dual DB-VRX columns, ECD/FID, 1 mL headspace injection
Logbook: 200-ZP-1 Field Logbook, EL-1273 pgs 122 to 152, and EL-1359 pgs 1 to 5

VOA Instrument (water analysis): Photovac 10S Plus GC, Serial # BLDG203
Method: 5 mL/min HP Air, 11.7 eV lamp, 250 uL headspace injection
Logbook: 200-ZP-1 Field Logbook, EL-1273, pgs 146 to 149

VOA Instrument (air analysis): Bruel & Kjaer 1301 FTIR Serial # 1715168
Method: Factory Calibrations, 10 Scans, Sample Loop
Logbook: 200-ZP-1 Field Logbook, EL-1273 pgs 122 to 152, and EL-1359 pgs 1 to 5

Analyst: R.T. Coffman 4-21-97
R.T. Coffman

0447.18