FOSTER WHEELER ENVIRONMENTAL CORPORATION

February 18, 1998
File #: 1284-0018-98-0091

Commanding Officer
Northern Division
Naval Facilities Engineering Command
10 Industrial Highway, Mail Stop #82
Lester, PA 19113
Attn.: Code 4023 (S. Lehman)

Subject: US NAVY CONTRACT NO. N62472-94-D-0398
DELIVERY ORDER NO. 0018-06, NAWC WARMINSTER, PA
January, 1998 GROUNDWATER PUMP & TREAT SYSTEM MONTHLY REPORT

Dear Mr. Lehman:

This letter report provides the results of the January, 1998 sampling and the activities performed during the reporting period from January 1, 1998 through January 31, 1998. The groundwater treatment plant operated 83.6% of the reporting period.

As of January 31, 1998 (2400 hours) a total of 964,741 gallons of groundwater had been treated during the period from January 1, 1998 through January 31, 1998. This brings the total amount of water treated to 25,167,950 gallons (January 31, 1998). During January, 1998 the average effluent flowrate was 25.8 gpm.

The process water was sampled on January 19, 1998, the results of this sampling are presented in the attached table. This data shows that no discharge limits were exceeded during the January, 1998 reporting period.

During the reporting period there was one emergency shutdown and one operator induced shutdown. The following provides details of both shutdowns:

01/02/98 - 1430 hrs: Foster Wheeler's operator received an emergency page from the CMCS, indicating a high Area C Transfer Sump level. Upon arriving on-site, Foster Wheeler's operator found Brown and Root personnel, Mr. Paul Davis and Mr. Stavros Patselas pumping water into the Area C Transfer Sump through the top manhole. The water was being discharged directly onto the Drexelbrook level transducer and low voltage junction box. The transfer sump pump P39 was running due to the high level signal, however, the sump was dry. The "false" high level signal was due to the transducer being doused with water. Foster Wheeler's operator attempted to fix the CMCS and remove the false signal, however, was unable to do so. The plant was shutdown at 2300 hours, and a confined space entry was scheduled to remove the level transducer and perform repairs. Details of confined space entry (1/7/98) are provided below under maintenance.

01/26/98 - 0900 hrs: Operator induced shutdown, for the upgrade of the CMCS computer hardware and software.

The following maintenance was performed on the groundwater treatment system during January, 1998

01/07/98 - 0800-1640 hrs: Foster Wheeler's operators performed confined space entry at Area "C" Transfer Sump to repair Drexelbrook level transducer. Upon inspection, the sensor housing was full of water. Housing was drained, dried and resealed. Upon completion the system was operating normally.

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D. Ostrauskas (USEPA)
A. Wills (Bucks Co. Dept. of Health)
D. Fennimore (Earth Data Inc.)
A. Holcomb (FWENC)
File

Foster Wheeler Environmental Corporation
NAWC, Warminster Groundwater Pump and Treatment Plant
Operator Schedule for March, 1998

Monday, March 2, 1998
Wednesday, March 4, 1998
Monday, March 9, 1998
Wednesday, March 11, 1998
Monday, March 16, 1998
Wednesday, March 18, 1998
Monday, March 23, 1998
Wednesday, March 25, 1998
Monday, March 30, 1998

FOSTER WHEELER ENVIRONMENTAL CORPORATION
NAWC, WARMINSTER - GROUNDWATER PUMP AND TREAT PLANT
SAMPLING RESULTS - JANUARY, 1998

FWENC - Sample ID		DO-0018-06-001	DO-0018-06-02	DO-0018-06-003	DO-0018-06-004	DO-0018-06-05	DO-0018-06-06	DO-0018-06-007	
Sample Location		Area C Influent	Equalization Tank Effluent	Inclined Plate Separator Effluent	Sand Filter Effluent	Air Stripper Effluent	Lead Carbon Unit Effluent	Treatment Plant Effluent	Discharge Limits
Sample Date	Method	19-Jan-98	19-Jan-98	19-Jan-98	19-Jan-98	19-Jan-98	19-Jan-98	19-Jan-98	Instantaneous Maximum
Total Discharge (gal.) thru 1/31/98								964,741	
Average Discharge Flowrate (gpm) for January, 1998								25.8	
pH	EPA 150.1	6.9	7.2	N/A	7.3	N/A	N/A	7.4	6.0-9.0
Total Suspended Solids (mg/l)	EPA 160.2	1	<1	1	1	N/A	N/A	1	75 mg/l
Total Organic Carbon (mg/l)	415.1/EPA600	N/A	BDL	N/A	N/A	N/A	BDL	BDL	-
Carbon Tetrachloride	EPA 8260A	N/A	BDL	N/A	N/A	BDL	BDL	BDL	4.2 ug/l
Tetrachloroethene	EPA 8260A	N/A	5.2	N/A	N/A	BDL	BDL	BDL	10.0 ug/l
Trichloroethene	EPA 8260A	N/A	BDL	N/A	N/A	BDL	BDL	BDL	42.5 ug/l
Vinyl Chloride	EPA 8260A	N/A	BDL	N/A	N/A	BDL	BDL	BDL	0.27 ug/l
1,1-Dichloroethene	EPA 8260A	N/A	BDL	N/A	N/A	BDL	BDL	BDL	0.85 ug/l
Cadmium	SW846	N/A	BDL	N/A	BDL	N/A	N/A	BDL	4.0 ug/l
Copper	SW846	N/A	BDL	N/A	BDL	N/A	N/A	BDL	24.0 ug/l
Lead	SW846	N/A	BDL	N/A	BDL	N/A	N/A	BDL	11.0 ug/l
Zinc	SW846	N/A	45.6	N/A	28.1	N/A	N/A	28.5	157 ug/l
Arsenic	SW846	N/A	BDL	N/A	BDL	N/A	N/A	BDL	0.27 ug/l
Aluminum	SW846	N/A	BDL	N/A	BDL	N/A	N/A	BDL	1875 ug/l
Total Iron	SW846	N/A	217	N/A	278	N/A	N/A	147	3600 ug/l
Total Manganese	SW846	N/A	BDL	N/A	BDL	N/A	N/A	BDL	3750 ug/l
Mercury	SW846	N/A	BDL	N/A	BDL	N/A	N/A	BDL	0.045 ug/l
Total Cyanide (mg/l)	SW846 9010A	N/A	<0.02	N/A	<0.02	N/A	N/A	<0.02	-
Chromium (+6) - (mg/l)	SW846 7196	N/A	<0.01	N/A	<0.01	N/A	N/A	<0.01	23.2 ug/l

NOTES:

1 - All concentrations are in ug/l unless otherwise noted.
N/A - indicates compound was not analyzed for.
BDL - Below Detection Limits

01/26/98 - 1050-1700 hrs: CMCS control system vendor CPS on-site to upgrade Comark computer to Pentium,133 with 32 megabytes of RAM, and to install Windows 95 and Genesis 3.5 software.

01/27/98 - 1400-1600 hrs: Installed PC Anywhere software in CMCS and operator's laptop computer. Analog signal in CMCS determined to be incorrect. CPS to correct remotely.

01/29/98 - 1420-1426 hrs: Analog signals have been corrected, and recovery wells restarted. System operating normally.

Additional maintenance items performed:

1. Ran all chemical feed systems with water. (Chemicals are currently not being used in the treatment system).
2. Ran sludge transfer pumps.

The Tetrachloroethene concentration in the groundwater influent to the system was 5.2 ug/l, with a total of 0.042 pounds of Tetrachloroethene removed during the January, 1998 reporting period. The total amount of Tetrachloroethene removed through January 31, 1998 is 2.138 pounds.

Calculation:
Average PCE concentration = 5.2 ug/l
Average water flowrate for month of December, 1997 = 25.8 gpm
Pounds of PCE removed = (25.8 gpm)(37324 min)(5.2 ug/l)(3.785 l/gal) (1 g / 1,000,000 ug)(1 lb / 454 g) = 0.042 lbs PCE

The scheduled dates which Foster Wheeler Environmental's operator will be on-site during the month of February, 1998 are presented in the attached schedule.

If you should have any questions or comments regarding the December, 1997 reporting period, please feel free to contact either me at 215-702-4007 or Dave DiCesare at 215-702-4074.

Sincerely,

John F. Magee, P.E.
Project Manager

David S. DiCesare
Project Engineer