

Fluor Fernald, Inc.
P.O. Box 538704
Cincinnati, OH 45253-8704

4059

(513)648-3000

FLUOR GLOBAL SERVICES

December 19, 2001

Fernald Environmental Management Project
Letter No. C: ARP(ARWWP):2001-0018

Mr. Thomas A. Winston, District Chief
Ohio Environmental Protection Agency
Southwest District Office
401 East Fifth Street
Dayton, Ohio 45402-2911

Dear Mr. Winston:

**NONCOMPLIANCE REPORT – NOVEMBER 2001 - NPDES PERMIT NUMBER 11000004*FD
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)**

Enclosed is the November 2001 Noncompliance Report. If you have any questions, please contact Mr. Frank Johnston at (513) 648-5294.

Sincerely,



David J. Brettschneider, Project Manager
Aquifer Restoration/Wastewater Project

DJB:FLJ
Enclosure

Mr. Thomas A. Winston, District Chief
Letter No. C:ARP(ARWWP):2001-0018
Page 2

c: Joe Bartoszek, OEPA-SWDO
N. Hallein, EM-42/CLOV
Ev Henry, Fluor Fernald, MS52-5
Bill Hertel, Fluor Fernald, MS52-5
Rob Janke, DOE-FEMP, MS45
Marc Jewett, Fluor Fernald, MS52-5
Donna Metzler, Fluor Fernald, MS52-5
Tim Poff, Fluor Fernald, MS65-2
Ed Skintik, DOE-FEMP, MS45
Tom Schneider, OEPA-SWDO
ECDC, Fluor Fernald, MS52-7
AR Coordinator, MS78

File Record Subject: NPDES Permit
Project Number 52700

NONCOMPLIANCE REPORT
 NPDES PERMIT NO. 11000004*FD
 FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
 U.S. DEPARTMENT OF ENERGY

4059

The following table describes the November 2001 noncompliances with the discharge limitations specified in the FEMP NPDES Permit. This table lists the affected outfall, dates of the noncompliance, parameter, permit limits, and measured effluent concentrations.

PARSHALL FLUME – OUTFALL *4001			
DATE	PARAMETER	PERMIT LIMIT	ACTUAL MEASUREMENT
November 25, 2001	Oil & Grease Concentration	10 mg/l	41.14 mg/l
November 25, 2001	Oil & Grease Mass Loading	105 kg/day	771.8 kg/day
November 28, 2001	Oil & Grease Concentration	10 mg/l	137 mg/l
November 28, 2001	Oil & Grease Mass Loading	105 kg/day	2863.2 kg/day
November	Oil & Grease Concentration Monthly Average	10 mg/l	25.0 mg/l
November	Oil & Grease Mass Loading Monthly Average	105 kg/day	537.1 kg/day
SEWAGE TREATMENT PLANT EFFLUENT – OUTFALL *4601			
November	TSS Monthly Average Concentration	20 mg/l	23.4 mg/l

The six noncompliances for oil and grease at Outfall 4001 are the result of two anomalous concentration results on November 25 and 28, 2001. These two oil and grease results have been investigated and the FEMP has concluded there is considerable doubt as to the validity of these sample results. The primary suspicion is that of sample contamination or, more likely, laboratory error in the analysis of the oil and grease samples on these days.

An investigation into the events that occurred on site on these days do not indicate that oil and grease would have been discharged at these levels. A review of Assistant Emergency Duty Officer (AEDO) logs revealed that no spills of petroleum or petroleum products occurred anywhere on site on the days in question. (AEDO logs are used to notify and respond to any abnormal events on site.)

There were no treatment system upsets, malfunctions, or maintenance activities on the days in question. The FEMP effluents that combined at the parshall flume on these days include:

- Treated groundwater from the Advanced Wastewater Treatment (AWWT) expansion facility
- Treated groundwater from the South Plume Interim Treatment System and Interim AWWT facility

- Treated storm water and/or groundwater from AWWT Phase 1
- Treated groundwater and/or wastewater from AWWT Phase 2
- Treated sewage treatment plant effluent

There were no untreated effluents discharged on these days except for extracted groundwater, which would not be a source of O&G. The unit operations within the FEMP treatment systems are effective in removing any trace oil & grease contamination that may be present.

Oil & Grease is not a contaminant commonly discharged in appreciable quantities in FEMP effluents. Since the effective date of the current NPDES permit until the first anomalous measurement on November 25, 2001 the FEMP has recorded 164 measurements for oil and grease; 160 (98%) of which have been less than the detection limit of 5.0 mg/l. The four detections during this time prior to November 25, 2001 ranged from 5.6 mg/l to 8.7 mg/l.

The FEMP Analytical Laboratory analyzes oil and grease samples required under the NPDES Permit. The FEMP Analytical Laboratory participates in external quality assurance programs including the monthly Water Pollution Study and the annual Discharge Monitoring Report Quality Assurance program. Recently, two such QA sample analyses failed. The sample analyzed under the DMR-QA Study Program (analyzed in July 2001 and reported in September 2001) and a monthly WP study sample in October were deemed not acceptable as they were both biased high.

The oil and grease results are being reported as noncompliances as there has been no specific evidence found to date that indicates laboratory error. Given the current methodology used, reanalysis was not possible as all the sample material is used during the procedure. However, given the configuration of our treatment systems, no past information indicating oil and grease to be a concern, no known malfunctions, upsets or spills, the conclusion the FEMP has reached is these results can only be deemed anomalous. The FEMP Analytical Laboratory will continue to investigate the oil and grease analysis issue.

The noncompliance at the sewage treatment plant was for a monthly average for TSS concentration. Problems with effluent TSS levels appear to be temperature related and November is a transition month with longer, colder nights and shorter periods of daylight. These factors lead to a reduction in bug activity and thus settleability.

In addition, both clarifiers were taken out of service during the month for routine draining and cleaning. The east clarifier was off-line beginning November 2, 2001 and was returned to service on November 6, 2001. The west clarifier was off-line beginning November 9, 2001 and was returned to service on November 27, 2001. Therefore, only one clarifier was in service for the majority of the month.

The colder temperatures and essentially one clarifier in operation contributed to the elevated TSS measurements resulting in the monthly average noncompliance. The FEMP believes we are prepared for the colder temperatures with the completion of the preventative maintenance and have made adjustments to increase the mean cell residence time. The FEMP will continue to monitor the performance of the STP relative to TSS and will make the appropriate adjustments as conditions warrant.