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# FLUOR

April 17, 2003

Fernald Closure Project  
Letter No. C:ARWWP:2003-0010

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 – MARCH 2003 - NPDES PERMIT NUMBER 11000004\*FD  
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)**

Enclosed is the March 2003 Noncompliance Report. If you have any questions, please contact me at (513) 648-5294.

Sincerely,



Frank Johnston, Environmental Compliance  
Aquifer Restoration/Wastewater Project

FLJ  
Enclosure

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File Record Subject NPDES Permit  
Project Number 52700

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

The following table describes the March 2003 noncompliances with the discharge limits specified in the Fernald Closure Project (FCP) NPDES Permit. This table lists the affected outfall, dates of the noncompliance, parameter, permit limits, and measured effluent concentrations.

DATE	LOCATION	PARAMETER	EFFLUENT LIMIT	ACTUAL MEASUREMENT
March 17, 2003	001	Oil & Grease (Daily Max.)	10 mg/L	10.6 mg/L
March 17, 2003	001	Oil & Grease (Daily Max.)	105 kg/D	208.8 kg/D
March 2003	601	Total Suspended Solids (Monthly Avg.)	20 mg/L	27.0 mg/L

There is no definitive cause for the elevated oil and grease (O&G) concentration experienced on March 17. The FCP effluents that combined at the Parshall Flume (001) on this day 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 groundwater from AWWT Phase 1
- A blend of treated groundwater and treated wastewater from the bio-surge lagoon from AWWT Phase 2
- Treated sewage treatment plant effluent
- Untreated groundwater discharged in accordance with the FCP groundwater remediation outlined in the "Operations and Maintenance Master Plan" (United States Department of Energy, Fernald Environmental Management Project, December 1999).

There were no untreated effluents discharged on these days except for extracted groundwater. Groundwater is not a source of O&G contamination.

A review of Assistant Emergency Duty Officer (AEDO) logs revealed no spills of petroleum or related products on March 17, 2003. (AEDO logs are used to notify and respond to any abnormal events on site including and abnormal releases.)

An investigation into sources of O&G and treatment capabilities has determined that emulsified oils in sufficient quantities may not be effectively removed by AWWT unit operations. There is now an attempt to identify any sources of emulsified oils. Oil present as a sheen has not been observed in the head-works to the treatment systems (Storm Water Retention Basin for AWWT Phase 1 and the bio-surge lagoon for Phase 2) nor has a sheen been observed in the clarifiers located at the front of both Phases 1 and 2. An analysis of potential routes of entry of oil contamination into either groundwater pumping discharge piping or the effluent line down stream of FCP treatment systems has determined that oil could potentially be introduced via a pump motor failure. However, this has been determined to be improbable, and in any event, no such motor failure occurred on or about the date and time of sample collection. The FCP will continue to monitor this situation.

The monthly average exceedance for Total Suspended Solids (TSS) at the sewage treatment plant effluent was due to a series of elevated, albeit compliant, TSS concentrations from March 11 through March 19. Based on investigations by the plant's operators it would appear that the extended duration of the high TSS measurements were due to fluctuating ambient temperatures. All unit operations were operating during March 2003 including both clarifiers.

The situation did not have an adverse impact on TSS discharges at Outfall 001. Fluor Fernald will continue to monitor the performance of the sewage treatment plant and make adjustments as necessary to maintain an acceptable level of performance.