FLUOR DANIEL FERNALD

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February 12, 1998

Fernald Environmental Management Project
Letter No. C:C:SWP(ARWWP):99-0007

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

Dear Mr. Winston:

NONCOMPLIANCE REPORT - JANUARY 1999 - NPDES PERMIT NUMBER 1IO00004*ED - FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Enclosed is the Noncompliance Report for January, 1999. In addition, the January 1999 Discharge Monitoring Reports are enclosed to aid your review. If you have any questions, please contact Marlene M. Landrum at (513) 648-4197.

Sincerely,

for

David J. Brettschneider, Project Manager
AWWT & Wastewater Project

MML
Enclosures

FLUOR DANIEL FERNALD

c: D. J. Carr, Fluor Daniel Fernald, MS 52-5
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AR Coordinator, MS 78
EDC File No. 52700

c w/o: Larry Evans, Fluor Daniel Fernald, MS 90
Brenda Hoog, Fluor Daniel Fernald, MS 52-2
Donna Metzler, Fluor Daniel Fernald, MS 52-5

NONCOMPLIANCE REPORT
NPDES PERMIT NO. 1IO00004*ED
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
U.S. DEPARTMENT OF ENERGY

The following table describes the January 1999 noncompliances with the discharge limitations specified in the FEMP NPDES Permit. This tables list the affected outfall, dates of the noncompliances, parameter, permit limits, and measured effluent concentrations.

SEWAGE TREATMENT PLANT (STP) - OUTFALL *4601			
DATE	PARAMETER	PERMIT LIMIT	ACTUAL MEASUREMENT
January 18, 1999	TSS Concentration	40 mg/l	41.0 mg/l
January 27, 1999	TSS Concentration	40 mg/l	51.0 mg/l
January 1999	Monthly Avg. Concentration	20 mg/l	24.6 mg/l

The noncompliances at the sewage treatment plant are related to the continuing problems associated with suspended solids control. These noncompliances have not had a detrimental impact on TSS limits at the outfall to the Great Miami River (Outfall 4001).

The December 1998 Noncompliance report identified low organic loading as the likely cause of these violations and are continuing to takes steps towards correcting this problem. A number of actions were identified in the December 1998 Noncompliance Report. This report serves to update previous actions taken and identify any new trends or issues.

1. FDF has been operating the system with one reactor basin (aeration basin) followed by two secondary clarifiers. This has allowed the use of the second reactor basin to be used as an equalization tank accepting large flows and then bleeding these flows back into the reactor basin. This has mitigated difficulties during periods of high flow rates but has not alleviated the TSS problems.

2. Aeration time has been adjusted in the reactor basin in the past given the possibility that perhaps a shearing of the floc was being experienced. However, this initial attempt at turning off and on the aeration has not alleviated the TSS problem. Operations personnel are now evaluating tapered aeration whereby the amount of aeration near the influent to the reactor basin is relatively high with the amount of aeration being reduced along the path toward the effluent end of the reactor basin.

3. Operations staff have observed and continue to observe weekly the biomass under a microscope. No microorganisms detrimental to the activated sludge process are present (e.g. norcardia). Filaments have been observed but not in excess that would lead to a bulking floc.

4. Operations staff continue to provide a biomass supplement (dog food) on Fridays, Saturdays, and Sunday evenings in an attempt to increase mixed liquor volatile suspended solids. As reported in the December 1998 noncompliance report, this was begun December 28 and had raised MLVSS from approximately 200 mg/l to 600 mg/l. This continued supplement has raised the MLVSS to an average of approximately 700 mg/l. The range during January 1999 was from a low of 520 to a high of 970. Additionally, sludge return and sludge wasting is being monitored and adjusted to increase the food/microorganisms ratio and reduce sludge age.

5. Operations staff have eliminated the return of scum collected from the secondary clarifier to the aeration basin. Scum can potentially be a source of certain species detrimental to the activated sludge process. Systems to remove and manage scum are being upgraded. Operators continue to perform visual inspections and manually remove scum when deemed necessary.

FDF is continuing to monitor the performance of the sewage treatment plant. Operations personnel are in the process of revising process control logs to better target control parameters.