FLUOR DANIEL FERNALD

P.O. Box 538704 Cincinnati, Ohio 45253-8704 (513) 648-3000

2238

May 14, 1999

Fernald Environmental Management Project
Letter No. C:C:SWP(ARWWP):99-0015

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

Dear Mr. Winston:

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

Enclosed is the Noncompliance Report for April 1999. A copy of the April 1999 Discharge Monitoring Reports are enclosed to aid your review. If you have any questions please contact Mr. Frank Johnston at (513) 648-5294.

Sincerely,

Jack R Hughes

for David J. Brettschneider, Project Manager
Aquifer Restoration and Wastewater Project

DJB:FLJ
Enclosures

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FLUOR DANIEL FERNALD

c: D.J. Carr, Fluor Daniel Fernald, MS52-2
N. Hallein, EM-42/CLOV
E. H. Henry, Fluor Daniel Fernald, MS52-5
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E. P. Skintik, DOE-FEMP, MS45
C. L. Tabor, Fluor Daniel Fernald, MS90
T. J. Walsh, Fluor Daniel Fernald, MS65-2
AR Coordinator, MS78
EDC File No. 52700

c w/o: L. J. Evans, Fluor Daniel Fernald, MS90
Brenda Hoog, Fluor Daniel Fernald, MS52-2
Donna Metzler, Fluor Daniel Fernald, MS52-5

NONCOMPLIANCE REPORT
NPDES PERMIT NO. 1I000004*ED
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
U.S. DEPARTMENT OF ENERGY

The following table describes the April 1999 noncompliances with the discharge limitations specified in the FEMP NPDES Permit. This table lists 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
April 21, 1999	TSS Concentration	40 mg/l	52.0 mg/l
April 1999	Monthly Avg. TSS Concentration	20 mg/l	32.7 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).

Previous Noncompliance Reports have identified a number of actions that were planned or initiated to address these continuing noncompliances. However, the noncompliance on April 21, 1999 appears to be related to having one of the two secondary clarifiers down for service. A problem developed in the distribution piping to the clarifiers which necessitated one being removed from service to access the necessary piping.

The monthly average noncompliance is a continuation of those issues discussed in previous Noncompliance Reports. This report serves to update previous actions taken and identify any new trends or issues.

1. FDF is continuing to operate 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. Operations personnel have reconfigured the aeration system to incorporate a tapered aeration along the length of the reactor basin. Adjusting the aeration in the reactor basin is an attempt to ensure that formed floc is not being sheared due to over-aeration. This was begun on February 18. It is not clear at this time whether this will mitigate the TSS problems in the clarifiers. However the number of TSS noncompliances have been reduced from past months.

3. Operations staff continue to observe weekly the biomass under a microscope. No microorganisms detrimental to the activated sludge process have been found (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.

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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.

6. Operations staff continue to implement a routine cleaning program to ensure flights, chains, troughs, UV units are clean and not the cause of the TSS problems.

FDF has seen improvement but not to the degree which would indicate the TSS problems have been fully resolved. FDF believes that with the onset of warmer temperatures that operations will improve. FDF will continue to aggressively monitor the situation and implement corrective actions where appropriate.

9002 M 9501 900212
ONTHLY REPORT FORM

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U.S. DEPARTMENT OF ENERGY
Fernald Environmental
Management Project
P.O. Box 538704
Cincinnati, OH 45253-8704 Hamilton

1IO00004001 APR 1999 1 2 03/24/90 OH0009580

4001 PARSHALL FLUME, EFFLUENT TO GREAT MIAMI RIVER

FORM

	1	1	1	3	2	3	3	2	2	2
	999	999	999	1	998	1	1	998	998	998
	CONDUI FLOW MGD	pH (MIN) S.U.	pH (MAX) S.U.	WATER TEMP. C	TOT.SUSP SOLIDS MG/L	DISS. OXYGEN MG/L	O & G TOTAL MG/L	NITRO NH3-N MG/L	NITRO NO2+NO3 MG/L	FLUORID TOTAL MG/L
	50050	00402	00401	00010	00530	00300	00550	00610	00630	00951
01	4.955	7.2	7.4	11	AE					
02	3.120	7.2	7.3	11	AE					
03	4.357	7.2	7.3	11	AE					
04	4.157	7.2	7.4	11	AA	7.8	AA	AA	1.1	0.29
05	4.378	7.2	7.3	11	AA					
06	4.482	7.2	7.3	11	2.8					
07	4.532	7.1	7.3	12	AA					
08	4.489	7.0	7.4	12	2.0					
09	4.283	6.8	7.2	14	AA					
10	4.962	6.8	6.9	12	AA					
11	5.264	6.8	6.8	12	AA					
12	5.488	6.8	6.9	11	AA	8.5	AA	AA	1.3	0.28
13	5.426	6.7	6.8	11	AA					
14	5.084	6.7	6.8	11	AA					
15	5.203	6.7	6.8	11	AA					
16	3.179	6.7	6.8	10	AA					
17	5.277	6.7	6.8	10	AA					
18	5.417	6.7	6.8	10	AA					
19	4.984	6.7	6.8	11	AA					
20	4.478	6.7	6.8	11	AA	9.4	AA	AA	1.4	0.31
21	4.292	6.7	6.8	11	AA					
22	4.369	6.7	6.8	12	AA					
23	4.236	6.8	7.0	12	AA					
24	5.423	6.8	6.9	12	AA					
25	4.938	6.8	6.8	11	AA					
26	5.113	6.8	7.2	11	AA					
27	5.460	6.8	6.9	11	AA					
28	4.012	7.2	7.3	11	AA	7.0	AA	AA	1.7	0.32
29	4.454	6.8	6.9	11	AA					
30	4.888	7.1	7.2	11	AA					
31										
	140.700	N/A	N/A	N/A	56.8	32.7	AA	AA	5.5	1.20
	4.690	N/A	N/A	11	2.0	8.2	AA	AA	1.4	0.30
	5.488	7.2	7.4	14	2.8	9.4	AA	AA	1.7	0.32
	3.120	6.7	6.8	10	AA	7.0	AA	AA	1.1	0.28

AA: 00530 - 2.0 mg/L; 00550 - 5.0 mg/L; 00610 - 0.10 mg/L; 00630 - 0.1 mg/L; 00951 - 0.01mg/L.

AE: 00530 - Administrative error. Samples collected but not analyzed.

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May 14, 1999 Jack R Hughes

ARWWP Project Mgr. FDF

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Management Project
P.O. Box 538704
Cincinnati, OH 45253-8704 Hamilton

1IO00004001 APR 1999 2 2 03/24/90 OH0000580

4001 PARSHALL FLUME, EFFLUENT TO GREAT MIAMI RIVER

FORM

	2	3	2
	998	1	998
	COPPER TOT,REC UG/L	CHROMI HEX-DS UG/L	C-BOD 5 DAY MG/L
	01119	01220	80082
01			
02			
03			
04	4.8	AA	
05			AA
06			
07			
08			
09			
10			
11			
12	6.2	AA	AA
13			
14			
15			
16			
17			
18			
19			
20	4.9	AA	AA
21			
22			
23			
24			
25			
26			
27			
28	4.6	AA	AA
29			
30			
31			
	20.5	AA	AA
	6.2	AA	AA
	6.2	AA	AA
	4.6	AA	AA

AA: 01119 - 1.9 ug/L; 01220 - 6.0 ug/L; 80082 - 2.0 mg/L.

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U.S. DEPARTMENT OF ENERGY 1IO000004002 APR 1999 1 2 03/24/90 OH0009580

Fernald Environmental
Management Project
P.O. Box 538704
Cincinnati, OH 45253-8704 Hamilton

4002 SPILLWAY FROM STORMWATER RETENTION BASIN

FORM

	2 4	3 1	2 4	3 1	2 4	2 4	2 4	2 4	2 4	2 4
	CONDUI FLOW MGD	pH S.U.	TOT.SUSP SOLIDS MG/L	O & G Total MG/L	NITRO NH3-N MG/L	NITRO NO2+NO3 MG/L	PHOS TOTAL MG/L	FLUORI TOTAL MG/L	NICKEL TOT,REC UG/L	SILVER TOT,REC UG/L
	50050	00400	00530	00550	00610	00630	00665	00951	01074	01079
01										
02										
03										
04										
05										
06										
07										
08										
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26										
27										
28										
29										
30										
31										

NO WATER OVERFLOWED FROM THE STORMWATER RETENTION BASIN.

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Fernald Environmental
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P.O. Box 538704
Cincinnati, OH 45253-8704 Hamilton

1IO00004002 APR 1999 2 2 03/24/90 OH0009580

4002 SPILLWAY FROM STORMWATER RETENTION BASIN

FORM

2 4	2 4	3 1	2 4
CHROMI TOT,REC UG/L	COPPER TOT,REC UG/L	CHROMI HEX-DS UG/L	CHLORINE TOT,RESI MG/L
01118	01119	01220	50060

01
02
03
04
05
06
07
08
09
10
11
12
13
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NO WATER OVERFLOWED FROM THE STORMWATER RETENTION BASIN.

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May 14, 1999 Jack R. Hughes

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9005 M 9009 900212

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4589 SEWAGE SLUDGE AFTER DEWATERING

FORM

	3	3	3	3	3	3	3	3
	1	1	1	1	1	1	1	1
	CADMIUM CD,TOT MG/KG	CHROMI CR,TOT MG/KG	COPPER CU,TOT MG/KG	LEAD PB,TOT MG/KG	NICKEL NI,TOT MG/KG	ZINC ZN,TOT MG/KG	SLUDGE WEIGHT D-TONS	MERCURY HG,TOT MG/KG
	01028	01029	01043	01052	01068	01093	70316	71921
01								
02								
03								
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23							0.700	
24								
25								
26								
27								
28								
29								
30								
31								
							0.700	
							0.700	
							0.700	
							0.700	

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U.S. DEPARTMENT OF ENERGY 1IO00004601 APR 1999 1 1 03/24/90 OH0009580

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P.O. Box 538704
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4601 SEWAGE TREATMENT PLANT EFFLUENT

FORM

	1	3	2	2	2
	999	1	998	998	998
	CONDUI FLOW MGD	pH S.U.	C-BOD 5 DAY MG/L	TOT.SUSP SOLIDS MG/L	AMMONI NH3-N MG/L
	50050	00400	80082	00530	00610
01	0.065	6.0			
02	0.022	6.0			
03	0.042	6.1			
04	0.024	6.5			0.19
05	0.066	6.5	6.9	35.2	
06	0.083	6.3			
07	0.088	6.3	6.5	32.4	
08	0.077	6.4			
09	0.092	6.3			
10	0.057	6.4			
11	0.040	6.8			
12	0.073	6.7	6.3	32.4	
13	0.074	6.5			
14	0.074	6.5	6.2	33.0	
15	0.078	6.3			
16	0.063	6.3			
17	0.008	6.4			
18	0.050	6.4			
19	0.096	7.1	6.0	37.0	
20	0.075	6.7			
21	0.107	6.5	12.8	52.0	0.78
22	0.089	6.9			
23	0.060	7.0			
24	0.035	6.5			
25	0.033	6.6			
26	0.065	6.6	5.0	22.0	
27	0.083	6.5			
28	0.102	6.4	4.5	14.0	
29	0.072	6.4			
30	0.038	6.3			
31					
	1.941	N/A	54.1	258.0	0.97
	0.065	N/A	7.0	32.7	0.67
	0.107	7.1	12.8	52.0	0.78
	0.008	6.0	4.5	14.0	0.19

AA: 00530 - 2.0 mg/L; 00610 - 0.10 mg/L; 80082 - 2.0 mg/L.

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