



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

June 12, 1998

Fernald Environmental Management Project
Letter No. C:SWP(ARWWP):98-0031

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

Dear Mr. Winston:

**NEW SEWAGE TREATMENT PLANT START-UP REPORT AND NONCOMPLIANCE REPORT -
MAY 1998 - NPDES PERMIT NUMBER 11000004*ED - FERNALD ENVIRONMENTAL
MANAGEMENT PROJECT**

Reference: Letter no. C:SWP(ARWWP):98-0011, David J. Brett schneider to Thomas A. Winston, "Fernald Environmental Management Project - Startup of the New Sewage Treatment Plant - NPDES Permit Number 11000004*ED," dated March 3, 1998

This letter serves to provide information on the start-up of the new site Sewage Treatment Plant (STP) which was brought on-line in May 1998 and a report on the noncompliance which occurred as a result of chlorine disinfection at the existing sewage plant. The FEMP Start-Up Plan and request to use chlorine disinfection was provided to your office on March 3, 1998 (See above reference letter). The May 1998 Discharge Monitoring reports are enclosed to aid your review of the report.

A Standard Start-Up Review was completed and the new STP was ready to operate on May 8, 1998. Seed material for the new STP consisting of 14,000 gallons of activated sludge was obtained from the City of Fairfield, OH. Diversion of sanitary wastewater from the old STP to the new STP began on May 12, 1998. The initial discharge from the new STP was 3,275 gallons on May 12, 1998. The split of sanitary wastewater to both the old and new plants continued until May 23, 1998, when all sanitary wastewater was diverted to the new STP. The following table lists the pertinent sample results from the new STP:

SAMPLE RESULTS FROM THE NEW STP

| <u>Date</u> | <u>Flow</u> | <u>pH</u> | <u>CBOD</u> | <u>TSS</u> | <u>Fecal</u> |
|-------------|-------------|-----------|-------------|------------|--------------|
| 5/12 | 0.003 | 7.2 | | 2.4 | |
| 5/13 | 0.008 | 7.1 | < 2 | 3.2 | |
| 5/14 | 0.027 | 7.1 | | | |
| 5/15 | 0.038 | 7.1 | | | |
| 5/16 | 0.016 | 7.1 | | | |
| 5/17 | 0.015 | 7.1 | | | |



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SAMPLE RESULTS FROM THE NEW STP (CONTINUED)

| <u>Date</u> | <u>Flow</u> | <u>pH</u> | <u>CBOD</u> | <u>TSS</u> | <u>Fecal</u> |
|-------------|-------------|-----------|-------------|------------|--------------|
| 5/18 | 0.019 | 7.1 | 4.12 | 24.4 | < 20 |
| 5/19 | 0.009 | 7.1 | | | |
| 5/20 | 0.043 | 7.2 | 3.34 | 38.8 | |
| 5/21 | 0.047 | 6.7 | | | |
| 5/22 | 0.036 | 6.6 | | | |

In January, 1998, the ultraviolet (UV) light disinfecting system was removed from the existing STP for installation in the new STP. During the time period of May 1 to May 23, chlorine contact was the method used for disinfection at the existing STP. Pursuant to the April 24, 1998 letter from Maureen Ware of your staff, the use of chlorine was approved. Ms. Ware indicated that a residual chlorine limitation of 0.038 mg/l should be applied at Outfall 4001. She also directed that samples for residual chlorine be conducted three times per week. The following table lists the results of the chlorine sampling efforts:

OUTFALL (NAME AND NUMBER): PARSHALL FLUME - 4001

| <u>Date</u> | <u>Parameter</u> | <u>Permit Limit</u> | <u>Actual Measurement</u> |
|--------------|-------------------|-------------------------|-------------------------------|
| May 1, 1998 | Residual Chlorine | 0.038 mg/l | 0.034 mg/l |
| May 4, 1998 | Residual Chlorine | 0.038 mg/l | 0.028 mg/l |
| May 6, 1998 | Residual Chlorine | 0.038 mg/l | 0.032 mg/l |
| May 8, 1998 | Residual Chlorine | 0.038 mg/l | 0.037 mg/l |
| May 11, 1998 | Residual Chlorine | 0.038 mg/l | 0.038 mg/l |
| May 13, 1998 | Residual Chlorine | 0.038 mg/l | 0.040 mg/l |
| May 15, 1998 | Residual Chlorine | 0.038 mg/l | 0.041 mg/l |
| May 18, 1998 | Residual Chlorine | 0.038 mg/l | 0.034 mg/l |
| May 20, 1998 | Residual Chlorine | 0.038 mg/l | 0.026 mg/l |
| May 22, 1998 | Residual Chlorine | 0.038 mg/l | 0.030 mg/l |



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The noncompliance is directly related to the chlorine disinfecting efforts at the existing STP. The Total Chlorine concentration at the Parshall Flume May 13 and May 15 were 0.040 and 0.041 mg/l, respectively. No definitive cause of this slight increase in residual chlorine levels has been identified. No further chlorination is planned at the former STP nor the new STP. Therefore, at this time, there are no specific corrective actions identified.

If you have any questions, please contact Marlene M. Landrum at (513) 648-4197.

Sincerely,

A handwritten signature in black ink, appearing to read "David J. Brett Schneider".

David J. Brett Schneider, Project Manager
 AWWT & Wastewater Project

MML
 Enclosures

c: S. M. Beckman, Fluor Daniel Fernald, MS 52-3
 D. J. Carr, Fluor Daniel Fernald, MS 52-2
 K. A. Chaney, EM-423, QO
 L. C. Goidell, Fluor Daniel Fernald, MS 65-2
 E. H. Henry, Fluor Daniel Fernald, MS 52-5
 W. A. Hertel, Fluor Daniel Fernald, MS 52-5
 R. J. Janke, DOE-FEMP, MS 45
 F. L. Johnston, Fluor Daniel Fernald, MS 52-2
 J. D. Kappa, DOE-FEMP, MS 45
 M. M. Landrum, Fluor Daniel Fernald, MS 52-5
 C. G. Siefert, Fluor Daniel Fernald, MS 52-2
 E. P. Skintik, DOE-FEMP, MS 45
 T. J. Walsh, Fluor Daniel Fernald, MS 65-2
 AR Coordinator, MS 78
 EDC File No. 52700