



**Environmental
Protection Agency**

John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

October 18, 2012

RE: LORAIN COUNTY
CITY OF NORTH RIDGEVILLE
FRENCH CREEK WWTP
COMPLIANCE EVALUATION INSPECTION
(OH0044512/3PD00043)

Mayor David Gillock
City of North Ridgeville
7307 Abbe Road
North Ridgeville, OH 44054

Dear Mayor Gillock:

On September 18, 2012, an update meeting and Compliance Evaluation Inspection (CEI) were held at the City of North Ridgeville French Creek wastewater treatment plant (WWTP). Present during the meeting/inspection were Messrs. Jeff Armbruster, Lou Cover, Brad Burnett, and Doug Edwards, representing the City of North Ridgeville; Mr. John Sabo of the Lorain County Health Department; and this writer, of the Ohio EPA.

The purpose of the meeting was to be updated on the current status of various City programs (sludge, pretreatment, mercury removal); and to discuss the status of the City's WWTP compliance with its current National Pollutant Discharge Elimination System (NPDES) permit and compliance schedule.

The CEI was conducted to observe the current status of the treatment plant processes. The most recent CEI conducted at the French Creek WWTP was on October 1, 2008.

The following items were discussed during the September 18th inspection:

- 1) Messrs. Cover and Armbruster were presented with the enclosed list of numeric effluent violations. It was indicated that the corresponding dates and violations would be reviewed, and comments made back to Ohio EPA.
- 2) The current status of the sludge operations at the French Creek WWTP was discussed, as was the history of sludge treatment and disposal since the last inspection:
 - a) At the direction of the Ohio EPA, composted sludge piles, which were being stored onsite in 2008, were removed and disposed of in an approved manner.
 - b) In 2009 several violations of the sludge land application rules were noted by Mr. Chris Moody, of the Ohio EPA. The violations, which were for failing to comply with minimum isolation distances on several sludge sites; non posting of required signage; and improper sludge management resulting in discharge of sludge runoff into Waters of the State, have been satisfactorily corrected.

- c) In June 2012 the City was informed that the French Creek WWTP had not developed the appropriate Standard Operating Procedures (SOP) for sludge sample collection, storage, and monitoring analysis procedures. According to Mr. Cover, the SOPs were completed on September 7, 2012, and a copy is to be forwarded to Mr. Moody.
 - d) The WWTP has also begun maintaining appropriate field sludge storage records needed to comply with OAC 3745-40-09(C)(4)(b), as required by Mr. Moody's June 5, 2012 correspondence.
 - e) As per Mr. Moody's June 5, 2012 correspondence, all industrial wastewater received at the WWTP for treatment is no longer placed directly into the aerobic digesters, but placed into the headworks of the WWTP to receive complete treatment.
 - f) The French Creek WWTP currently only accepts industrial wastewater from BFI Landfill leachate, and Akron Dispersions (AD). Samples of the hauled industrial wastewater are collected, sampled, and evaluated prior to being placed in the headworks of the WWTP.
 - g) Sewage sludge from small 'package' WWTPs will be physically screened prior to being pumped directly to the WWTP aerobic digesters.
 - h) Since the last inspection, the City of North Ridgeville entered into an agreement with French Creek Bioenergy (FCB) for processing of sludge. FCB is located on leased property adjacent to the WWTP. FCB received a Permit-To-Install (PTI) for construction of an anaerobic digestion system, while North Ridgeville received a PTI for construction of a gravity belt thickener and associated piping leading to the anaerobic digestion system.
 - i) Due to unanticipated impediments in the contemplated sludge treatment process at FCB, the French Creek WWTP was unable to accept centrate from FCB. However, an agreement was executed between FCB and the City for an approximate one year period, allowing FCB access to utilize two French Creek sludge drying beds for treatment of digested biomass and/or biomass byproducts.
 - j) Quasar Energy Group began operating the FCB digester on the leased property, to process and capture methane on February 28, 2012. Presently, Quasar FCB is processing outside wastewater and food wastes, and is hauling the entire effluent for land application.
 - k) Sludge generated by the French Creek WWTP is currently land applied by Synegro, on sites in Lorain and Erie Counties.
- 3) The current status of the City of North Ridgeville pretreatment program was discussed. In a November 5, 2009 letter to the City, outlining the results of a Pretreatment Program Audit (PAI) conducted by Ms. Donna Kniss, the City was required to develop an acceptance waste profiling/waste acceptance procedure

for waste hauled to the French Creek WWTP for disposal. The procedure was to require the waste generator to precisely describe the process(es) leading to the generation of the waste to be accepted, and provide this information to the City.

As of 2011, the City now requires the generator of any hauled industrial waste to provide all information on the generation process, as well as sample analytical results, of wastes being hauled to the WWTP for disposal.

- 4) Another requirement of the November 5, 2009 PAI letter was for the WWTP to develop a sampling procedure, which was representative of the entire hauled waste stream, which is received at the WWTP.

Previously, the WWTP collection method was to take a sample from the bottom of the tanker, instead of the top of the tanker contents. It was determined by Ohio EPA that this method could result in a sample not totally representative of the tanker contents. The City was therefore required to develop the new hauled waste sample collection procedure, which it did, and began implementation of the procedure in early 2010.

- 5) The WWTP has also implemented a requirement of the industrial waste haulers that they provide a generator certification, stating explicitly that the waste is not a hazardous waste, and is acceptable for treatment at the WWTP.
- 6) Numeric effluent violations reported for mercury in the Spring of 2012 were discussed. Mr. Cover indicated the City has isolated the source of mercury through testing, and it was determined the mercury came into the WWTP via septage hauler.

Septage samples routinely collected from haulers were evaluated by the City, and the source was narrowed down to two different loads brought in from one specific hauler.

It is strongly recommended that the City meet with the haulers who bring septage to the French Creek WWTP for treatment and disposal. As discussed in our meeting, the City needs to further question the haulers as to their septage pickup practices; inform them of the importance of not bringing in loads which may contain materials which could be harmful to the WWTP; and the City should require the haulers to provide copies of all pumping/hauling receipts with identification of the sources from which loads are picked up.

- 7) Operator Certification Requirements were discussed with Messrs. Armbruster and Cover. As contained in Part II, Item A, of the French Creek WWTP NPDES permit (per OAC 3745-7-02 and 04), operation of the WWTP is to be overseen by a licensed Class IV operator.

As also discussed, the current Class IV operator, Mr. Don Daley, is out for an extended amount of time due to a long term illness (>30 days). It was noted that, upon proper justification (such as a long term illness), the Ohio EPA Director may authorize the replacement of the operator of a Class IV treatment works by a backup operator, with a certificate one classification lower than required for the facility.

A written request for temporarily replacing the required Class IV operator, with a Class III backup operator, needs to be submitted to the Northeast District Office in order for the City to receive the temporary reclassification.

- 8) Effluent samples collected for analysis are analyzed by the French Creek WWTP lab and outside contracted labs. In-house samples analyzed include the conventional parameters (pH, temperature, dissolved oxygen, suspended solids, CBOD, ammonia, and fecal coliform). Mercury samples are analyzed by Precision Analytical labs.

Results of the most recent DMRQA Study (No. 32) in July 2012, were all within the acceptable range.

- 9) The North Ridgeville Pretreatment (PT) program is run by Messers. Lou Cover and Doug Edwards.

- 10) The status of NPDES Compliance Schedule items was discussed:

- a) Status report on the ability of French Creek WWTP to meet final E. coli limits: due February 2, 1022. Report submitted December 16, 2010.
- b) Permittee to evaluate adequacy of local industrial user limits for heavy metals and mercury, due February 1, 2011. Technical justification received September 15, 2010.
- c) Permittee to submit a PT program modification request by February 2, 1022. Permit modification received September 15, 2010.
- d) Satellite Sewer Discharge Control Program (SSDCP) reports due annually: 2010 report received September 27, 2010; 2011 report received September 13, 2011; 2012 report received September 18, 2012.
- e) Annual Sanitary Sewer Overflow (SSO) reports due by March 31st in 2010, 2011, and 2012; reports received after the meeting, on October 4, 2012.
- f) Annual Sludge reports due by January 31st for each previous year; 2010 report received February 15, 2011; and 2011 report received February 7, 2012.
- g) By December 1, 2010, a permanent stream bank marker was required at the outfall of the WWTP, with information pertaining to the owner, NPDES permit number, and contact telephone number printed on it. The sign has been installed as required.

During the September 18th inspection, the following observations were made:

- 1) One of two perforated plate preliminary screens was in service, with the other being kept in standby mode. The two units are alternated on a monthly basis, and one unit is capable of providing treatment up to 20 MGD.

- 2) The grit removal system was in operation, with contents being a typical turbid gray.
- 3) Grit and screenings which are collected are sent to the Republic (Former BFI) landfill in Oberlin for disposal. Approximately four 2 C.Y. bins are hauled to the landfill each week.
- 4) The Chemical Storage building contained tanks of ferrous chloride and lime, and a plate and frame filter press. The chemicals are used for (pre)treatment of any Industrial User (IU) wastes, which may be hauled to the French Creek WWTP for treatment. The filter press is used to remove any material precipitated out when chemicals are used during pH adjustment/heavy metals removal.
- 5) There are two Flow Equalization (EQ) tanks available for excess flow storage during high precipitation events. The two EQ tanks have a total storage capacity of approximately 2.50 MGallons, and are put into use when flows to the WWTP are in excess of 18 MGallons.

Should the EQ tanks completely fill during a high precipitation event, there is an EQ tank emergency outlet where flow would combine with the WWTP final effluent (STA 001) prior to discharge to French Creek. Any flow, which would discharge from the EQ tanks, is chlorinated with sodium hypochlorite prior to combining with the final effluent. Flow from the EQ tanks would be sampled before combining with the WWTP final effluent.

- 6) All 3 Complete Mix (CM) Tanks were in operation, and the contents were medium brown in color and were being well aerated. Effluent troughs in the CM tanks were clean, free of solids deposition or algae, and contained a clear effluent. Dissolved oxygen levels in the tanks were 2 to 3 ppm, and Mixed Liquor Suspended Solids (MLSS) concentrations were in the 3400 to 3800 ppm range.
- 7) All 6 rapid sand filters were online and in use, as were the 2 Aqua Disk tertiary filters. The rapid sand filters work in parallel with the Aqua Disk tertiary filters. The Aqua Disk filters backwash on a timed basis, approximately once every 4 hours, or when needed if the pressure head gets too high.
- 8) The Ultra Violet (UV) disinfection system was in operation. The UV system consists of 2 banks, with 2 racks of UV bulbs, totaling 28 bulbs.
- 9) Final treated effluent leaves the WWTP down a cascade falls before entering French Creek. The cascade falls is used for post aeration of the final effluent. The final effluent was clear, free of visual solids or foam, and appeared to have no visual impact upon the muddy looking French Creek.
- 10) Two of three steel aerobic digestion tanks were online and in use. The third tank was in the process of being cleaned. Usual operation is to have all three aerobic digestion tanks online, in various stages of digestion/service.
- 11) Digested sludge is dewatered with a sludge centrifuge. The centrifuge is normally operated 4 days per week, approximately 16 to 20 hours per day. An emulsion polymer is added to the sludge as a dewatering aid. Sludge with a solids content

of approximately 2.4 to 2.8% enters the centrifuge, and exits with a solids content of 21 to 22%.

- 12) Centrifuged sludge is stockpiled in the sludge containment area, where it is collected and hauled for land application by a sludge hauler (Synegro) in Lorain and Erie Counties. The sludge meets classification requirements for a Class B sludge. The sludge containment area contains underdrains which are connected to the head of the WWTP.
- 13) Existing sludge drying beds (22 total) are not used in the normal sludge treatment scheme, but may be used if weather prevents land application for an extended period of time, or when emptying tanks for repair.

A review of the electronic Discharge Monitoring Reports (eDMR's) submitted by the City since the last inspection found the following NPDES Permit numeric effluent limit violations for the French Creek WWTP:

**FRENCH CREEK WWTP
NUMERIC EFFLUENT VIOLATIONS
PERMIT NO. 3PD00043
(Sep. 1, 2008 – Sep. 1, 2012)**

Reporting Period	Parameter	Limit Type	Limit	Reported Value	Violation Date
November 2008	Total Suspended Solids	7D Conc	12.0	36.2666	11/22/2008
November 2008	Total Suspended Solids	7D Qty	511.	751.994	11/22/2008
December 2008	Mercury, Total (Low Level)	30D Conc	0.87	0.874	12/1/2008
December 2008	Nitrogen, Ammonia (NH3-N)	7D Conc	4.0	4.83333	12/22/2008
July 2009	Dissolved Oxygen	1D Conc	6.0	5.9	7/11/2009
April 2010	Total Suspended Solids	7D Conc	12.0	16.56	4/22/2010
September 2010	Mercury, Total (Low Level)	30D Conc	0.870	1.34	9/1/2010
March 2012	Mercury, Total (Low Level)	30D Conc	0.870	0.971	3/1/2012
April 2012	Mercury, Total (Low Level)	30D Conc	0.870	8.51	4/1/2012
April 2012	Mercury, Total (Low Level)	30D Qty	0.0000	0.00014	4/1/2012
May 2012	pH, Minimum	1D Conc	6.5	6.2	5/23/2012

The City of North Ridgeville should continue with all efforts that will enable the French Creek WWTP to consistently meet its NPDES Permit limits. If there are any comments or questions concerning this document, you may contact me at (330) 963-1110.

Respectfully,



Charles E. Allen
Environmental Engineer
Division of Surface Water

CA/cs