



Environmental
Protection Agency

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

May 20, 2011

RE: CUYAHOGA COUNTY
VILLAGE OF CHAGRIN FALLS
CHAGRIN FALLS WWTP
NPDES PERMIT NO. OH002174
OHIO EPA PERMIT NO. 3PD00038

Mr. Benjamin T. Himes, CAO
Chagrin Falls Village Hall
21 West Washington Street
Chagrin Falls, OH 44022

Dear Mr. Himes:

On April 14, 2011, an inspection of the wastewater treatment plant (WWTP) serving the Village of Chagrin Falls was conducted by the undersigned. The facility was represented by Mr. Glenn Elliott, Superintendent. The purpose of the inspection was to obtain and review information in anticipation of renewal of the facility's National Pollutant Discharge Elimination System (NPDES) discharge permit. During the course of the inspection, evaluations were conducted of the treatment processes, effluent discharge quality, laboratory, and biosolids management.

NPDES Permit Status

The NPDES permit for this facility will expire on May 31, 2011. Receipt of a timely renewal application by Ohio EPA on December 29, 2010 authorizes the facility to discharge beyond the expiration date.

Facility Description

The current NPDES permit authorizes an average daily discharge of 1.0 MGD from the facility to the Chagrin River. The treatment process consists of a bar screen, influent lift station, grit removal, comminutor, primary settling, tanks, activated sludge aeration tanks, final clarifiers, rapid sand filters and chlorination/dechlorination.

Sludge handling consists of aerobic digestion and mechanical dewatering using a filter press. The dewatered sludge is presently hauled to the PPG Lime Reclamation site in Barberton, Ohio.

Bypass of treatment may occur during wet weather events when flow in the collection system is diverted to the equalization tank located on Solon Road. At least two overflow events have been reported this year. Please be advised that the diverting or bypassing

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of wastewater from any portion of the treatment facility is generally prohibited. All such events must be reported as an unauthorized discharge in accordance with Part III, Items 11 and 12, of your NPDES permit. This includes notification by email/telephone and confirmation in writing.

Inspection Findings/Compliance Status

At the time of the inspection the following items were noted and discussed with Mr. Elliott:

1. The general operation and maintenance of the treatment processes and equipment appeared to be satisfactory. It was noted that repairs were being made to sand filter #3. A visual observation of the plant effluent revealed no signs of floating debris, oil & grease, or foam in the discharge. Additionally, no adverse impact was evident within the mixing zone and downstream segments of the Chagrin River.
2. Mr. Elliott noted that the flow meter and recorder had been recently calibrated by an outside contractor. However, there were no calibration stickers on the equipment. Please provide this office with the calibration date(s).
3. The review of the plant laboratory noted that the following permit parameters are currently being analyzed in-house: DO, pH, Temperature, Chlorine, cBOD, Suspended Solids, Fecal Coliform, Ammonia, and Phosphorus. The balance of the permit parameters are analyzed by Ream and Haager, New Philadelphia, Ohio. The following highlights were noted during the limited review:
 - The analysis of duplicate samples was not being routinely performed. General laboratory procedures require that spiked and duplicate samples should be run with each batch of samples. Quality control charts should be developed from the results of standards, duplicates, and spikes.
 - In the CBOD procedure, effluent samples that are collected after disinfection must be "seeded". Additionally, a glucose-glutamic acid (GGA) standard should be analyzed with each batch of tests.
 - The facility must develop a comparability study between distilled and un-distilled Ammonia-N samples. Manual distillation is not required if the data shows a difference of less than 10 %. The study may be coordinated with an external laboratory.

- It appears that the method detection limits (MDLs) being used for the analyses of the following parameters may need to be revised in order to demonstrate consistent compliance with the downstream Water Quality Standards (WQS):

Parameter	Chagrin River WQS	Reported MDL
Cadmium	3.3 ug/l	10 ug/l
Copper	13 ug/l	10 ug/l
Free Cyanide	22 ug/l	20 ug/l

Discharge Monitoring Reports (DMR)

Discharge monitoring reports (DMR) received by Ohio EPA for the period January 2006 through March 2011 were reviewed. A summary of the Outfall 001 discharge data is listed in Attachment A. Additionally, the effluent data was reviewed for compliance with the final effluent limitations and monitoring requirements of the NPDES permit for the period, January 2009 – March 2011. A summary of the specific violations are cited in Attachment B.

Please be advised that any violations referenced herein are subject to appropriate enforcement actions pursuant to Chapter 6111 of the Ohio Revised Code. Such actions can result in the imposition of fines of up to \$10,000 per day of violation.

Anticipated NPDES Permit Changes

Based on recent rule revisions, the following changes will be incorporated into the renewal permit:

- As of March 15, 2010, the Fecal Coliform water quality standard was replaced by an *Escherichia (E.) coli* standard. Based on the new Class A Primary Contact Recreation standard, the projected *E. coli* effluent limitations for the facility will be 126/100 ml (30-day average) and 284/100 ml (7-day average). Mr. Elliott indicated that the facility should be able to meet the limitation without the need for a "Schedule of Compliance".
- As of November 2010, the use of mixing zones to determine applicable effluent limitations for bioaccumulative chemicals of concern (BCCs), such as mercury, is no longer allowed. This means that the water quality standard for Mercury must be met with no allowances for stream dilution after November 2010. The current 30-day average water quality standard for Mercury is 1.3 ng/l. To date, the facility has not experienced any issues with mercury.

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- POTWs with a design flow of 1.0 MGD or greater are required to perform an annual Whole Effluent Biological Toxicity (WET) Test.

Additional requirements may be placed in the permit once modeling calculations are finalized. A draft copy of the renewal permit will be sent under separate cover. Any comments regarding the draft permit must be submitted in writing during the public notice period.

If you should have any questions, please contact this office at (330) 963-1196.

Respectfully,



Ermelindo Gomes
Environmental Engineer
Division of Surface Water

EG/mt

cc: Chagrin Falls WWTP

File: Public/Permit/Compliance

Attachment B: Chagrin Falls WWTP Numeric Effluent Violations (1/2009 - 3/2011)

Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
May 2009	001	Chlorine, Total Residu	1D Conc	0.038	.48	5/25/2009
May 2009	001	Chlorine, Total Residu	1D Conc	0.038	.12	5/27/2009
October 2009	001	Nitrogen, Ammonia (NH3	30D Conc	2.5	13.1204	10/1/2009
October 2009	001	Nitrogen, Ammonia (NH3	30D Qty	9.5	18.6633	10/1/2009
October 2009	001	Nitrogen, Ammonia (NH3	7D Conc	3.75	14.67	10/8/2009
October 2009	001	Nitrogen, Ammonia (NH3	7D Conc	3.75	21.6285	10/15/2009
October 2009	001	Nitrogen, Ammonia (NH3	7D Conc	3.75	14.8333	10/22/2009
October 2009	001	Nitrogen, Ammonia (NH3	7D Qty	14.2	18.4879	10/8/2009
October 2009	001	Nitrogen, Ammonia (NH3	7D Qty	14.2	29.2337	10/15/2009
October 2009	001	Nitrogen, Ammonia (NH3	7D Qty	14.2	23.6595	10/22/2009
June 2010	001	Phosphorus, Total (P)	30D Conc	1.0	1.08846	6/1/2010
February 2009	001	Phosphorus, Total (P)	7D Conc	1.5	2.34667	2/15/2009
June 2010	001	Phosphorus, Total (P)	7D Conc	1.5	1.54667	6/15/2010
January 2011	001	Phosphorus, Total (P)	7D Conc	1.5	1.51333	1/8/2011
February 2009	001	Phosphorus, Total (P)	7D Qty	5.7	8.06884	2/15/2009
February 2009	001	Total Suspended Solids	30D Qty	45.4	50.2561	2/1/2009
February 2009	001	Total Suspended Solids	7D Qty	68.1	109.192	2/8/2009
March 2010	001	Total Suspended Solids	7D Qty	68.1	74.2041	3/8/2010
March 2011	001	Total Suspended Solids	7D Qty	68.1	71.1832	3/8/2011