Ohio EPA
40 years and moving forward

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

December 19, 2012

RE: GEAUGA COUNTY
NPDES PERMIT COMPLIANCE INSPECTIONS
SCRANTON WOODS
NPDES #3PG00155
BERKSHIRE INDUSTRIAL PARKWAY
NPDES #3PG00161

Geauga County Board of Commissioners
470 Center Street, Building #3
Chardon, OH 44024

Dear Commissioners:

On December 18, 2012, inspections were conducted at two wastewater treatment plants (WWTP)s operated and maintained by Geauga County. Mr. Jim Reider of Geauga County Water Resources was interviewed and the facilities were inspected in his presence. The intent of the inspections was to gather information for the renewal of the National Pollutant Discharge Elimination System (NPDES) permit for Scranton Woods. The operations, maintenance, and NPDES permit compliance were reviewed at Berkshire Industrial Parkway.

Discharge monitoring reports from January 1, 2010 through December 1, 2012 were reviewed for compliance with the current NPDES permits at each facility. A violation summary for each treatment system has been attached to this letter. The following is a summary of the inspections conducted at each facility:

SCRANTON WOODS

The current WWTP has an average design flow of 14,000 gpd. According to discharge monitoring report data, the flow reported at the WWTP averaged 12,307 gpd. The WWTP service area includes a residential area.

At the time of the inspection, all WWTP units were operational. The treatment system consists of a trash trap, extended aeration tanks, clarifier, surface sand filters and ultraviolet (UV) disinfection. The plant discharges to an unnamed tributary of the Chagrin River. The NPDES permit for the Scranton Woods WWTP expires June 30, 2013. On December 7, 2012, this office received the renewal application for the NPDES permit.

The treatment system includes a bypass of the sand filters that is used very rarely. It is understood there is some inflow and infiltration (I/I) in the collection system. The WWTP has flooded occasionally due to excessive rains and the final outfall backing up. The County should investigate the I/I in the collection system and ensure the final outfall is cleared of debris routinely.

The aeration tank contained mixed liquor that was a chocolate brown color. The tank was provided with good mixing and there appeared to be adequate air supplied to the tank. The clarifier portion of the plant was in satisfactory condition. The skimmer was set at an adequate level and a minor accumulation of solids was visible on the weirs and baffle. Some solids were noted on the surface of the tank and the tank effluent appeared clear.

The dosing tank and dosing pumps were in satisfactory condition. The surface sand filters were in operation and appeared to be operating satisfactorily. The raked solids and sand were piled on one side of the sand filter beds. It is understood the County hauls these solids to McFarland WWTP for further treatment. It is also understood the solids are removed from the sand beds using a backhoe. As a part of routine maintenance for the sand filter beds, the solids removed from the filter beds must not be piled on the sand beds for an extensive length of time. These solids should be effectively removed from the sand beds so not to interfere with the treatment of the wastewater. The sludge drying beds are no longer in use.

The UV system was not in operation and the UV tank appeared flooded. There was no overflow noted at the time of the inspection. The cause for the flooded UV tank was high flows at the receiving stream. The flooded UV tank was being evaluated by the County at the time of the inspection. The final effluent from the UV tank appeared clear.

The WWTP has reported high ammonia on occasion over the Discharge Monitoring Report (DMR) review period. These elevated levels have caused some NPDES permit violations.

The operator log book was located on site and was reviewed during the inspection. No deficiencies were noted in the log book. The Ohio Revised Code (ORC)'s on file for this WWTP are Jim Iams, Dave Osborn, Jim Reider, and Brandon Willman. It is understood there have been recent staff updates at the County. As such, please be sure to update the ORC list and remove any operators no longer associated with the facility.

BERKSHIRE INDUSTRIAL PARK

The WWTP has an average design flow of 20,000 gpd. According to discharge monitoring report data, the flow to the wastewater plant over the DMR review period averaged 5,183 gpd.

The collection area for this WWTP is primarily industrial and commercial users located in the Berkshire Industrial Parkway. Geauga County has established an informal pretreatment program for this area. The inflow and infiltration for the collection area has been estimated at 400 gpd (based on the current NPDES permit). This is due to older areas in the collection system and Sherman Hills is now discharging to the collection system. It is understood the county is continually working to replace laterals.

At the time of the inspection, the influent to the WWTP was red. This appeared to be a dye and this was confirmed by Mr. Reider. The red coloring did not appear to interfere with the WWTP operations. At the time of the inspection, all treatment units were in satisfactory operation and maintenance condition. The blowers were in operation and providing an acceptable air supply to all treatment units. The trash trap is pumped out when needed which is estimated to be four times a year.

The extended aeration treatment system was in satisfactory condition. The aeration portion of the system was provided with adequate air and rollover within the tank was satisfactory. The

contents of the aeration tanks were a chocolate brown color but appeared to have a thin consistency. The treatment system is under loaded which can pose challenges to maintaining an adequate solids balance within the aeration tanks. The under loading of the WWTP does not appear to be causing significant upsets as the compliance history for this system is satisfactory.

The clarifier portion of the system contained some solids on the surface of the tank and the final effluent from the tank appeared clear. Some solids were noted in the influent baffle and around the effluent weir. The skimmer was visually inspected and appeared to be set at a satisfactory depth in the tank. Some floc particles were noted on the surface of the tank and were getting past the skimmer.

The dosing station was in satisfactory condition and the dosing pumps were in satisfactory operation. The surface sand filters were in operation. The distribution/splitter box to the sand filters was not level and the support structure to box appeared to be eroding. This must be repaired so the box is level and provides uniform distribution when the sand beds are dosed. The sand media within the beds was not level and appeared to be sloping down from the distribution box side of the filter beds. The sand media must be leveled and may need to be replaced, depending on the age of the sand. On average, for a system this size, sand media should be replaced at minimum every 8 to 10 years. It is suggested the County replace this sand media and ensure the media is leveled upon replacement.

The chlorination/dechlorination chamber was not in operation because disinfection season has past. The final effluent from the WWTP appeared satisfactory and was clear. The sludge holding tank was approximately half full and the air circulation within the tank appeared to be satisfactory. The WWTP final outfall is to a pond located within the industrial parkway. The final outfall was under water at the time of the inspection and there was an accumulation of pond debris around the final outfall location. It was not known who maintains the pond. It is recommended the final outfall location be maintained to prevent debris from clogging the final outfall pipe. The overflow from the pond discharges to an unnamed tributary to the Cuyahoga River. The overflow appeared to be in satisfactory condition.

The operator log book was located on site and was reviewed during the inspection. No deficiencies were noted in the log book. The ORC's on file for this WWTP are Dave Osborn and Corey Allen. If any changes have been made to the operator routes, please be sure to update the ORC list and remove any operators no longer associated with the facility.

SUMMARY

In summary, the following items must be completed within the required deadline:

Scranton Woods

1) Evaluate the cause of flooding at the WWTP. Maintain the final outfall at the creek to ensure there are no blockages to the outfall pipe. Complete any repairs and supply this office with a follow up notice no later than January 19, 2013.
2) Investigate any sources of I/I in the collection system and submit the findings to this office no later than March 1, 2013.

Berkshire Industrial Park

1) Evaluate the source of the red color in the influent. This evaluation must include locating the source of the red influent. Conduct sampling of the influent, or evaluate influent

days). Submit any sampling of the influent to this office as soon as possible but no later than January 19, 2013.

2) Complete repairs to the sand filter beds. This includes leveling and updating the influent/distribution box and leveling the filter media in the filter beds. It is recommended the sand media be replaced. These updates must be completed as soon as possible but no later than February 1, 2013.

The renewal NPDES permits for Scranton Woods (NPDES 3PG0015) is being drafted and will be public noticed in the near future. The permit will be public noticed for 30 days. Once the permit is public noticed, you will have 30 days to make any comments. If you have any questions or comments regarding this letter, please contact this office at (330) 963-1299.

Respectfully,

Laura A. Weber, P.E.
Environmental Engineer
Division of Surface Water

LAW/cs

Attachments: Violation summary

cc: Doug Bowen, Jerry Morgan, Jim Reider, Department of Water Resources
Geauga County Health Department

File: Public/Geauga County

SCRANTON WOODS VIOLATION SUMMARY

Scranton Woods Discharge Violations

Reporting Period	Station	Reporting Code	Parameter	Limit Type	Limit	Reported Value	Violation Date
June 2010	001	00300	Dissolved Oxygen	1D Conc	6.0	5.6	6/22/2010
March 2011	001	00530	Total Suspended Solids	30D Qty	0.64	1.7623	3/1/2011
March 2011	001	80082	CBOD 5 day	30D Qty	0.53	.58743	3/1/2011
March 2011	001	00530	Total Suspended Solids	7D Qty	0.95	1.7623	3/15/2011
September 2011	001	00300	Dissolved Oxygen	1D Conc	6.0	5.8	9/12/2011
September 2011	001	00300	Dissolved Oxygen	1D Conc	6.0	5.4	9/13/2011
December 2011	001	00610	Nitrogen, Ammonia (NH3	30D Conc	2.4	6.39333	12/1/2011
December 2011	001	00610	Nitrogen, Ammonia (NH3	30D Qty	0.13	.20736	12/1/2011
December 2011	001	00610	Nitrogen, Ammonia (NH3	7D Conc	3.6	8.23	12/8/2011
December 2011	001	00610	Nitrogen, Ammonia (NH3	7D Qty	0.19	.29282	12/8/2011
December 2011	001	00610	Nitrogen, Ammonia (NH3	7D Conc	3.6	5.475	12/15/2011
January 2012	001	00610	Nitrogen, Ammonia (NH3	30D Conc	2.4	11.52	1/1/2012
January 2012	001	00610	Nitrogen, Ammonia (NH3	7D Conc	3.6	13.2	1/1/2012
January 2012	001	00610	Nitrogen, Ammonia (NH3	30D Qty	0.13	.54699	1/1/2012
January 2012	001	00610	Nitrogen, Ammonia (NH3	7D Qty	0.19	.44966	1/1/2012
January 2012	001	00610	Nitrogen, Ammonia (NH3	7D Conc	3.6	9.84	1/8/2012
January 2012	001	00610	Nitrogen, Ammonia (NH3	7D Qty	0.19	.64433	1/8/2012

Scranton Woods NPDES Reporting Code Violations

Reporting Period	Station	Reporting Code	Parameter	Limit Type	Limit	Reported Value	Violation Date
August 2011	001	50050	Flow Rate			AD	8/12/2011
August 2011	001	50050	Flow Rate			AD	8/13/2011
August 2011	001	50050	Flow Rate			AD	8/14/2011
August 2011	001	50050	Flow Rate			AD	8/15/2011
August 2011	001	50050	Flow Rate			AD	8/16/2011
August 2011	001	50050	Flow Rate			AD	8/17/2011
August 2011	001	50050	Flow Rate			AD	8/18/2011
August 2011	001	50050	Flow Rate			AD	8/19/2011
August 2011	001	50050	Flow Rate			AD	8/20/2011
August 2011	001	50050	Flow Rate			AD	8/21/2011
August 2011	001	50050	Flow Rate			AD	8/22/2011
August 2011	001	50050	Flow Rate			AD	8/23/2011
August 2011	001	50050	Flow Rate			AD	8/24/2011
August 2011	001	50050	Flow Rate			AD	8/25/2011
August 2011	001	50050	Flow Rate			AD	8/26/2011
August 2011	001	50050	Flow Rate			AD	8/27/2011
August 2011	001	50050	Flow Rate			AD	8/28/2011
August 2011	001	50050	Flow Rate			AD	8/29/2011
August 2011	001	50050	Flow Rate			AD	8/30/2011
August 2011	001	50050	Flow Rate			AD	8/31/2011

Scranton Woods Frequency Violations

Reporting Period	Station	Reporting Code	Parameter	Sample Frequency	Expected	Reported	Violation Date
March 2010	001	00530	Total Suspended Solids	1/Month	1	0	3/1/2010
March 2010	001	00610	Nitrogen, Ammonia (NH3	1/Month	1	0	3/1/2010
March 2010	001	80082	CBOD 5 day	1/Month	1	0	3/1/2010

BERKSHIRE INDUSTRIAL PARK VIOLATION SUMMARY

Berkshire Industrial Park Discharge Violations

Reporting Period	Station	Reporting Code	Parameter	Limit Type	Limit	Reported Value	Violation Date
January 2011	601	00610	Nitrogen, Ammonia (NH3	30D Conc	3.0	8.5675	1/1/2011
January 2011	601	00530	Total Suspended Solids	7D Conc	18	24.	1/8/2011
January 2011	601	00610	Nitrogen, Ammonia (NH3	7D Conc	4.5	17.1	1/8/2011
January 2011	601	80082	CBOD 5 day	7D Conc	15	15.1	1/8/2011
January 2011	601	00610	Nitrogen, Ammonia (NH3	7D Conc	4.5	15.5	1/15/2011
April 2011	601	00530	Total Suspended Solids	7D Conc	18	23.	4/8/2011
July 2011	601	00610	Nitrogen, Ammonia (NH3	30D Conc	1.0	1.58	7/1/2011
July 2011	601	00610	Nitrogen, Ammonia (NH3	7D Conc	1.5	1.58	7/15/2011
September 2011	601	00610	Nitrogen, Ammonia (NH3	30D Conc	1.0	2.17	9/1/2011
September 2011	601	00610	Nitrogen, Ammonia (NH3	7D Conc	1.5	2.17	9/8/2011
October 2011	601	31616	Fecal Coliform	7D Conc	2000	3691.07	10/8/2011
December 2011	601	00400	pH	1D Conc	6.5	6.18	12/29/2011

Berkshire Industrial Park Frequency Violations

Reporting Period	Station	Reporting Code	Parameter	Sample Frequency	Expected	Reported	Violation Date
January 2010	601	00083	Color, Severity	1/Day	1	0	1/31/2010
January 2010	601	01330	Odor, Severity	1/Day	1	0	1/31/2010
January 2010	601	01350	Turbidity, Severity	1/Day	1	0	1/31/2010
March 2010	601	00083	Color, Severity	1/Day	1	0	3/8/2010
March 2010	601	00083	Color, Severity	1/Day	1	0	3/10/2010
March 2010	601	00083	Color, Severity	1/Day	1	0	3/17/2010
March 2010	601	01330	Odor, Severity	1/Day	1	0	3/8/2010
March 2010	601	01330	Odor, Severity	1/Day	1	0	3/10/2010
March 2010	601	01330	Odor, Severity	1/Day	1	0	3/17/2010
March 2010	601	01350	Turbidity, Severity	1/Day	1	0	3/8/2010
March 2010	601	01350	Turbidity, Severity	1/Day	1	0	3/10/2010
March 2010	601	01350	Turbidity, Severity	1/Day	1	0	3/17/2010