

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

March 9, 2012

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STATE OF ILLINOIS
Pollution Control Board

DeKalb Sanitary District)
)
Petitioner,)
)
v.)
)
ILLINOIS ENVIRONMENTAL)
PROTECTION AGENCY,)
)
Respondent.)

IEPA - 12-06
(Provisional Variance-Water)

Re: Provisional Variance From Discharge Limits Contained in NPDES Permit
IL0023027

Dear Mr. Olsen:

The Illinois Environmental Protection Agency (Agency) has completed its technical review of the attached provisional variance request, dated March 5, 2012 (Attachment A) for the DeKalb Sanitary District (District). The District is seeking a 40-day provisional variance while it repairs the Rotary Distributor of the #2 Trickling Filter. The repairs for this unit should be completed within the next three to four weeks. Additional time, however, is required to ensure proper re- growth on the filter media.

Based on its review, the Agency GRANTS the District a provisional variance subject to the specific conditions set forth below.

Background

The DeKalb Sanitary District is the Designated Management Authority for planning, collection and treatment of wastewater in its FPA which includes DeKalb Township, Afton Township and parts of Cortland Township. The District currently serves approximately 55,286 P.E. of residential and non-residential users. The District receives and treats all wastewater at its Main Wastewater Treatment Plant with has a Design Average Flow of 8.63 MGD and Design Maximum Flow of 18.13 MGD.

All influent flows receive mechanical screening, grit removal and raw sewage pumping. Flow from the raw sewage pump station is received by a diversion structure. Flows less than 18.13 MGD are tributary to the treatment process; while flows over 18.13 MGD are treated by excess flow facilities.

The Agency has reviewed the requested provisional variance and has concluded the following:

1. Any environmental impact from the requested relief shall be closely monitored and the Agency shall be immediately notified of any adverse impacts.
2. No reasonable alternatives appear available;
3. No public water supplies should be affected;
4. No federal regulations will preclude the granting of this request; and
5. The District will face an arbitrary and unreasonable hardship if the request is not granted.

Conditions

The Agency hereby GRANTS the District a provisional variance from the CBOD₅, Ammonia Nitrogen, and Flows (MGD) required in NPDES Permit IL0023027 subject to the following conditions:

- A. The provisional variance shall begin on March 5, 2012, and shall end no later than April 13, 2012.
- B. The District shall provide the best operation of its treatment plant to produce the best effluent possible at all times. At no times shall limits exceed the following:

	Monthly Average	Weekly Average	
CBOD ₅	20 mg/l		40 mg/l
Ammonia Nitrogen	4 mg/l		6 mg/l
Design Maximum Flow	18.13mgd		11.2mgd

- C. The District shall closely monitor the Kishwaukee River, and immediately notify the Agency of any adverse environmental impacts as a result of this discharge.
- D. The District shall notify Roger Callaway of the Agency by telephone at 217/782-9720 when the repairs specified in this provisional variance are completed and the facility returns to normal operation. Written confirmation shall be sent within five days to the following address:

Illinois Environmental Protection Agency
Bureau of Water - Water Pollution Control
Attention: Roger Callaway

DEKALB SANITARY DISTRICT

BOARD OF TRUSTEES

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STEVE OLSEN
OPERATIONS MANAGER

DIANA FOUST, S.P.H.R.
ASSISTANT TO MANAGER/H R

March 5, 2012

Mr. Roger Callaway
Illinois Environmental Protection Agency
Division of Water Pollution Control
2200 Churchill Road
Springfield, Illinois 62706

**Re: DeKalb Sanitary District (NPDES Permit No. IL0023027)
Application for 40-Day Provisional Variance**

Dear Mr. Callaway:

The DeKalb Sanitary District is requesting a provisional variance due to the failure of the Rotary Distributor of the #2 Trickling Filter. This filter represents approximately 50% of the District's attached growth process. The repairs for this unit should be completed within the next three to four weeks. However, additional time is required to ensure proper re-growth on the filter media. It is in regards to this failure that we are requesting a 40- day provisional variance from the District's NPDES permit limits (NPDES Permit No. IL0023027).

The DeKalb Sanitary District is the Designated Management Authority for planning, collection and treatment of wastewater in its FPA which includes DeKalb Township, Afton Township and parts of Cortland Township. The District currently serves approximately 55,286 P.E. of residential and non-residential users. The District receives and treats all wastewater at their Main Wastewater Treatment Plant with has a Design Average Flow of 8.63 MGD and Design Maximum Flow of 18.13 MGD.

All influent flows receive mechanical screening, grit removal and raw sewage pumping. Flow from the raw sewage pump station is received by a diversion structure. Flows less than 18.13 MGD are tributary to the treatment process; while flows over 18.13 MGD are treated by excess flow facilities.

All process flow receives primary treatment. Settled solids are pumped from the primary clarifiers to the anaerobic digesters for volatile solids reduction. Effluent from the primary clarifiers is split between the attached growth processes and single stage nitrification process. The attached growth process treats up to 7.25 MGD, while the single-stage nitrification facility provides treatment for up to 1.38 MGD. Effluent from these treatment processes are recombined in the chlorine contact tank, disinfected and discharged to the Kishwaukee River.

Pursuant to Part 180.202 Procedures and Criteria for Reviewing Applications for Provisional Variances we offer the following explanations and answers.

1) A statement identifying the regulations, Board Order, or permit requirements from which the variance is requested;

Variance from CBOD₅, Ammonia Nitrogen, and Design Maximum Flows as outlined in NPDES Permit # IL0023027.

2) A description of the business or activity for which the variance is requested, including pertinent data on location, size, and the population and geographic area affected by the applicant's operations;

The Variance is requested due to the failure of the Rotary Distributor for the #2 Trickling Filter.

3) The quantity and types of materials used in the process or activity for which the variance is requested, as appropriate;

The rebuild of the rotary distributor including bearings and seals. Distributor arms to be dismantled to achieve repairs.

4) The quantity, types and nature of materials or emissions to be discharged, deposited or emitted under the variance, and the identification of the receiving waterway or land, or the closest receiving Class A and Class B land use, as appropriate;

We anticipate discharging effluent meeting the proposed treatment limits to Segment IL-PQC-13 of the Kishwaukee River due to the trickling filter failure.

5) The quantity and types of materials in drinking water exceeding the allowable content, or other pertinent facts concerning variances from the Board's public water supply regulations;

Not applicable

6) An assessment of any adverse environmental impacts which the variance may produce;

The #2 trickling filter represents approximately 40% of the District's CBOD removal ability. The RBC's will begin to remove more CBOD and less Ammonia Nitrogen treatment as this treatment shifts to that process. During the variance period increased CBOD₅ and Ammonia Nitrogen concentrations will be present in the effluent. However, the increased discharge limits will not be sustained for any longer than the 40-day variance period and should not produce any adverse environmental impacts and once the repairs are completed and growth reestablished on the filter media, the District will be able to sustain higher quality effluent limits.

If you should have any questions regarding this request, please contact us at your convenience.

Respectfully,
DeKalb Sanitary District

Steve Olsen, Operations Manager

Cc: Mark Eddington, DeKalb Sanitary District