IEPA 07-002

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 – (217) 782-3397
JAMES R. THOMPSON CENTER, 100 WEST RANDOLPH, SUITE 11-300, CHICAGO, IL 60601 – (312) 814-6026

ROD R. BLAGOJEVICH, GOVERNOR DOUGLAS P. SCOTT, DIRECTOR

(217) 782-5544

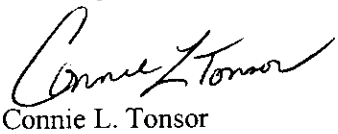
Dorothy M. Gunn, Clerk
Illinois Pollution Control Board
James R. Thompson Center
100 West Randolph Street, Suite. 11-500
Chicago, Illinois 60601

Re: Springfield Metro Sanitary District (Sugar Creek Wastewater Treatment Facility)
(Provisional Variance)

Dear Ms. Gunn:

Attached please find a letter from the Illinois Environmental Protection Agency (Illinois EPA) granting a provisional variance to Springfield Metro Sanitary District for its Sugar Creek Wastewater Treatment Facility, effective upon the District removing its tertiary pond from service for cleaning. The Illinois EPA is hereby submitting the letter to the Pollution Control Board for publication. Thank you for your assistance in this matter. If you have any questions regarding this matter, please contact the assigned attorney, James Day, at (217) 782-5544.

Sincerely,



Connie L. Tonsor
Associate Counsel
Division of Legal Counsel

Attachment

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

July 20, 2006

Springfield Metro Sanitary District Sugar Creek Plant	)	
Petitioner,	)	
v.	)	IEPA – 07-02 (Provisional Variance-Water)
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,	)	
Respondent.	)	

Re: Provisional Variance to discharge all effluents thru Outfall 010 for treatment plant maintenance.

Dear Mr. Slead:

The Agency has completed its technical review of the attached provisional variance request submitted by The Springfield Metro Sanitary District for the Sugar Creek Wastewater Treatment Facility (Sugar Creek WWTF) on July 5, 2006 and revised on July 19, 2006.

Based on the review, the Agency GRANTS the requested variance subject to specific conditions set forth below for a period of 45 days.

The Sugar Creek WWTF is located at 3300 Mechanicsburg Road, Springfield, Sangamon County, Illinois. Dry weather flows to Sugar Creek WWTF receive treatment through a system consisting of bar screens, aerated grit removal, flow measurement, activated sludge, secondary clarifiers, and a tertiary pond. Dry weather flows discharge to Sugar Creek through Outfall 008. The design average flows for secondary treatment is 10.0 MGD and the design maximum flow is 25 MGD. Excess flow treatment is provided by a primary clarifier, chlorination and an excess flow pond. Excess flows, flows above 25 MGD up to 100 MGD, discharge to Sugar Creek through Outfall 010.

The tertiary pond is currently in need of need of cleaning due to over 30 years of silt and solids build up. Petitioner is proposing to divert all flows , secondary treated flows and any excess storm water flows, to the excess flow pond with discharge to Outfall 010 while this essential maintenance work is completed. Petitioner predicts that 26,300 cubic

yards of solids materials will be removed from the tertiary pond during the variance period. With the removal of this material the tertiary pond will be returned to its original designed volume and depth.

NPDES Permit IL0021971 issued to the Springfield Metro Sanitary District Sugar Creek WWTF requires the following monitoring and effluent limits:

OUTFALL 010

Parameter	CONCENTRATION LIMITS mg/L Monthly Average	Daily Maximum	Sample Frequency
BOD_5			Daily When Discharging
Suspended Solids			Daily When Discharging
Fecal Coliform	Daily Maximum Shall Not Exceed 400 per 100 mL		Daily When Discharging
Chlorine Residual	0.75		Daily When Discharging

OUTFALL 008

Parameter	CONCENTRATION LIMITS mg/L Monthly Average	Daily Maximum	Sample Frequency
$CBOD_5$	10	20	2 Days/Week
Suspended Solids	12	24	2 Days/Week
Ammonia Nitrogen as (N):			
April through October	1.5	4.0	5 Days/Week
November through March	3.0	5.4	5 Days/Week

Petitioner is requesting interim limitations of 30 mg/l for CBOD and total suspended solids and 7.0 mg/l for ammonia nitrogen during the 45 day provisional period.

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

1. The environmental impact from the requested relief should be minimal:

2. No other reasonable alternatives appear available;

3. No public water supplies will be affected;

4. No federal regulations will preclude the granting of this request; and

5. Springfield Metro Sanitary District will face an arbitrary and unreasonable hardship if the request is not granted.

The Agency hereby GRANTS the Springfield Metro Sanitary District a provisional variance for its Sugar Creek WWTF to be allowed to discharge all flows through Outfall 010 subject to the following conditions:

A. The provisional variance will begin the date the tertiary pond is taken out of service and continue for 45 days;

B. During the term of the provisional variance the effluent being discharged from Outfall 010 shall not exceed 30 mg/l CBOD, 30 mg/l total suspended solids and 7.0 mg/l ammonia nitrogen;

C. Effluent sampling during the term of the provisional variance shall be performed in accordance with the Sampling and Reporting of Plant Discharges document attached to the petition for provisional variance;

D. Springfield Metro Sanitary District shall notify Roger Callaway of the Agency by telephone at 217/782-9720 when the tertiary pond is taken out of service and again when it is returned to service. Written confirmation of each notice shall be sent within five days to the following address:

Illinois Environmental Protection Agency
Bureau of Water - Water Pollution Control
Attention: Roger Callaway
1021 North Grand Avenue East, MC #19
Springfield, Illinois 62794-9276

E. Springfield Metro Sanitary District shall sign a certificate of acceptance of this provisional variance and forward that certificate to Roger Callaway at the address indicated above within one day of the date of this order. The certification should take the following form:

I(We)_____, hereby accept and agree to be bound by all terms and conditions of the provisional variance granted by the Agency in _____dated _____.

_____
Petitioner

_____
Authorized Agent

_____
Title

_____
Date

Springfield Metro Sanitary District shall continue to maintain compliance with all other conditions specified in its NPDES Permit No. IL0021971..

The Illinois EPA grants this provisional variance in accordance with its authority contained in Sections 35(b), 36 (c), and 37(b) of the Illinois Environmental Protection Act (415 ILCS 5/35(b), 36(c), and 37(b) (2004). The decision to grant this provisional variance is not intended to address compliance with any other applicable laws or regulations.

Sincerely,

Robert A. Messina
Chief Legal Counsel

cc: IPCB, Clerk

3017 North Eighth Street
Springfield, Illinois 62707
217-528-0491 TEL
217-528-0497 FAX
smsdJulie1@aol.com E-MAIL

IEPA 07-002

Roger Callaway
Illinois Environmental Protection Agency
BOW CAS#19
1021 North Grand East
P.O. Box 19276
Springfield, Illinois 62794-9276

Date: 7-5-2006

Dear Sir,

Please find attached a proposal for cleaning the tertiary pond at the Sugar Creek Facility of the Springfield Metro Sanitary District. The proposal includes a description of the work to be performed, cleaning time frame and sampling of effluents. Also attached are diagrams of the pond sounding data showing the deposits that need removed and of the flow pattern that will be used for discharges from the secondary and excess flow systems.

We are looking to start this project as soon as possible to take advantage of the drier summer weather.

If you have questions, comments or you need more information, please contact Jeff Slead at 217-528-0491 or 217-306-6991(Cell)

Sincerely,

Jeff W. Slead
Operations Supervisor

CC: Tim Zook
Al Keller

Attachments: Pond Sounding Chart
Flow Pattern and Sampling Diagram

Springfield Metro Sanitary District Proposed Sugar Creek Tertiary Pond Cleaning

TERTIARY POND DRAINING AND CLEANING:

The Sanitary District proposes to clean the Sugar Creek Facility tertiary pond of the 30+ years of silt and solids build up. In order to take advantage of dry weather the Sanitary District would start draining the tertiary pond on July 20, 2006, and expect the project to take approx. 45 days with dry weather. By opening the tertiary pond drain gate at the bottom of the effluent structure, the pond will drain to the tertiary effluent channel. The process of draining the pond will take approximately two days. The effluent from the tertiary pond will be sampled while draining and the drain gate will be closed if TSS concentrations increase visibly to a point that might cause an excursion of the permit limit. The remainder of the pond water will be pumped from the pond to the excess flow pond for settling. Currently there is approximately 16 MG of water in the pond that will need to be drained. The Agency will be notified when the pond draining and cleaning has begun and when the pond is returned to service.

Once the tertiary pond is drained, the excess deposits will be removed by mechanical means. The material in the pond will be removed to the edge of the pond berm and allowed to dry, before moving to the sludge farm or property contiguous with the farm that was previously used for farm soil removal. Approximately 26,300 cubic yards of material will be removed from the tertiary pond. The amount of material removed will return the tertiary pond to the original volume and depth (See attached pond sounding chart).

THE USE OF THE EXCESS FLOW POND:

To remove the tertiary pond from service, secondary effluent flow will have to be directed into the excess flow channel before the excess flow pond (Cook Street Pond). Currently the excess flow receives flow from rain events approx. 6 – 10 times per year. This flow, when discharge occurs, is chlorinated and samples for solids, pH, BOD, fecal coliform and chlorine residual are taken.

With flows from the secondary effluent, up to 25 MGD, being diverted to the excess flow pond, discharge will be constant. I believe that the excess flow pond discharge after a couple of days will be very nearly what we could have expected from the tertiary pond. The excess flow pond is 9.3 acres and holds approx. 15.2 MG of water. Therefore the detention time in excess flow pond will be about the same.

There is the chance that the excess flow clarifier will discharge into the same channel as the secondary effluent and discharge into the excess flow pond (Flows up to 100 MGD) during a rain event. In this event, the entire flow (Secondary and excess flow discharges) would need to be chlorinated and sampled as excess flow discharge.

SAMPLING AND REPORTING OF PLANT DISCHARGES:

During the pond cleaning period, we propose sampling as follows:

Secondary Effluent - A composite sample of the secondary clarifier effluent is sampled 5 days per week presently and this will remain the same. This sample is already tested for all of the tertiary discharge limits.

Tertiary Effluent (No excess flow discharge) – Tertiary effluent for this period will be discharged via the excess flow pond discharge (0010). There is no power at this location, so I propose sampling this discharge by means of 2 hour grab composites collected by the operator during the eight hour shift that the plant is currently manned. The sample will be tested for all of the current tertiary effluent permit required constituents. The sample will be collected and stored in a refrigerated sample cooler every two hours during the day shift.

Combined Tertiary and Excess Flow Discharges – During a rain event that causes an excess flow discharge to the excess flow pond, the effluent from the excess flow pond will represent both tertiary and excess flow discharges. We propose that the excess flow pond in this case will be sampled for all tertiary discharge permit constituents as well as all constituents for excess flow discharge permit limits. This will include chlorine residuals and fecal coliform tests. Depending on the amount of excess flow discharge to the pond, the tertiary limits for solids, BOD and ammonia may temporarily exceed the current tertiary limits. Excess flow discharges have been averaging 14 mg/L TSS, 16 mg/L BOD and 2.3 mg/L Ammonia and when combined with tertiary effluent which has been averaging 8 mg/L TSS, 3 mg/L BOD and 1.19 mg/L ammonia, I believe that the discharge from the excess flow pond will average somewhere in between. However, the secondary effluent sample analysis for this discharge time period will reflect the affect that the excess flow portion of the discharge had on the total discharge.

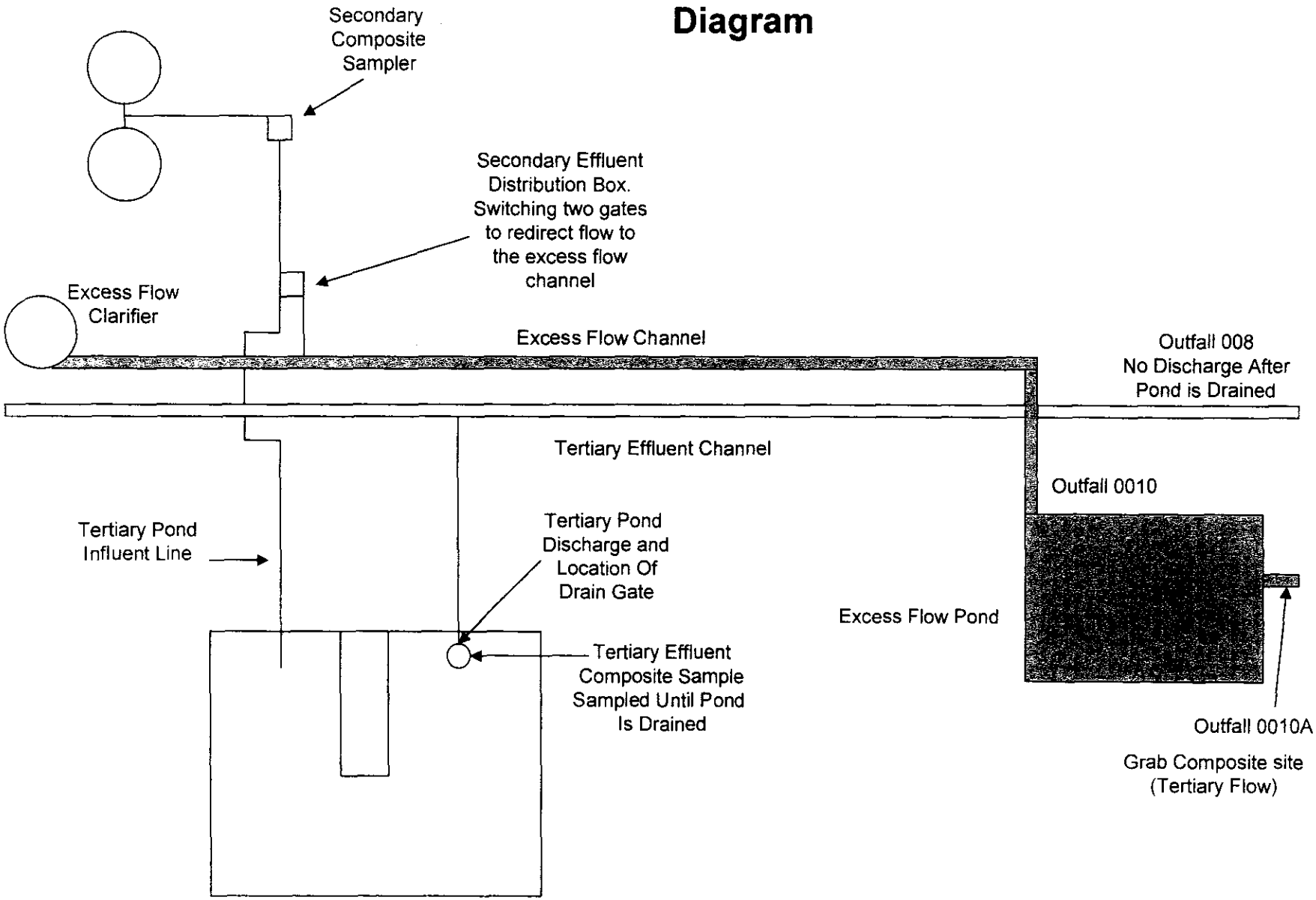
Pond Draining Discharges - While the pond is being drained it will be discharge mainly to the current tertiary discharge outfall (008) as described above. The current tertiary composite sample will be used until the pond is either empty or the remainder of the water contents are pumped to the excess flow channel. If pumping the remaining water to the excess flow channel is needed, a grab composite will be collected each 2 hours during pumping and stored in a refrigerated sample cooler for analysis. The analysis of this discharge will be the same as the secondary effluent composite.

SAMPLE AND FLOW REPORTING

We believe that the DMR's that we currently use do not reflect the proposed discharges for the pond cleaning time period. Flow that normally discharges from outfall 008 will be directed to outfall 0010A so the DMR reporting will need to be changed accordingly. We will need some direction on DMR reporting for this period so that an accurate reflection of the discharges will be reported. All sample analysis will be reported on the DMR'S where applicable as well as a separate report that will reflect all samples taken throughout this project.

If there are any recommendations or questions as to reporting, sampling or communications for this proposed pond cleaning period please contact Jeff W. Slead, Operations Supervisor at 217-528-0491 or 217-306-6991 (Cell).

Flow Diagram



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There is the chance that the excess flow clarifier will discharge into the same channel as the secondary effluent and discharge into the excess flow pond (Flows up to 100 MGD) during a rain event. In this event, the entire flow (Secondary and excess flow discharges) would need to be chlorinated and sampled as excess flow discharge.

We are asking for a variance to discharge plant tertiary flows from outfall 010 instead of outfall 008.

SAMPLING AND REPORTING OF PLANT DISCHARGES:

During the pond cleaning period, we propose sampling as follows:

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SAMPLE AND FLOW REPORTING

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Permit Variance Application:

Answers to questions 1- 13

1. The District believes that if the pond is not cleaned that eventually suspended solids concentrations in the plant effluent will increase due to the reduced detention time in the pond.
2. A description of the pond cleaning procedure is located on page 1 of this document. The pond is on plant grounds so no population or outside geographical area will be affected.
3. N/A
4. Approximately 26,300 cubic yards of material will be removed from the pond and disposed of on District property as described above. Water removed from the pond during draining will be discharged to the excess flow pond for discharge into Sugar Creek via discharge 0010. We are requesting a variance from permits of 12 mg/L suspended solids, 10 mg/L BOD and 1.5 mg/L ammonia to 30 mg/L Suspended solids and BOD and 7.0 mg/L ammonia for the variance period.
5. N/A
6. No adverse impact on Sugar Creek is expected. No treatment processes prior to the discharge into the excess flow pond will be affected by this variance, therefore the discharges from the excess flow pond should be the same that we could have expected from the tertiary pond.
7. If the tertiary pond is not cleaned eventually the lack of appropriate detention time will cause a hardship on the District by increases in suspended solids discharges.
8. Cleaning the pond will help assure that the treatment plant discharges remain within permit limits. This is a routine maintenance procedure that should be completed within the 45 days allowed by a permit variance.
9. There are no other alternatives for compliance other than to ask for this variance. The plant effluent flow can only be discharged to either the tertiary pond or the excess flow pond.
10. The time period for completing this project is 45 days or less, depending on weather. The pond needs to be drained of water and then the deposits removed mechanically.
11. The District has received no other variances for this or other projects at the Sugar Creek Facility in the past twelve months.
12. The current NPDES permit will expire on Aug 31, 2006. Permit renewal application has been completed and sent to the IEPA.
13. The current NPDES permit will expire on Aug 31, 2006. Permit renewal application has been completed and sent to the IEPA. This represents the only issue before the IEPA regarding the Sugar Creek Facility.

If there are any recommendations or questions as to reporting, sampling or communications for this proposed pond cleaning period please contact Jeff W. Slead, Operations Supervisor at 217-528-0491 or 217-306-6991 (Cell).

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Pond Sounding Chart

1" = 50'

NOTE

1. NUMBERS SHOWN ARE DEPTHS OF WATER IN FEET.