

NPDES Permit No. IL0079197

Notice No. GY:13060604.bah

Public Notice Beginning Date: **February 13, 2014**

Public Notice Ending Date: **March 17, 2014**

National Pollutant Discharge Elimination System (NPDES)
Permit Program

PUBLIC NOTICE/FACT SHEET
of
Draft New NPDES Permit to Discharge into Waters of the State

Public Notice/Fact Sheet Issued By:

Illinois EPA
Division of Water Pollution Control
Permit Section
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276
217/782-0610

Name and Address of Permittee:

Village of Stillman Valley
120 North Walnut Street
P.O. Box 127
Stillman Valley, Illinois 61084-0127

Name and Address of Facility:

Stillman Valley New Wastewater Treatment Plant
East Hales Corner Road
Stillman Valley, Illinois 61084-0127
(Ogle County)

The Illinois Environmental Protection Agency (IEPA) has made a tentative determination to issue a NPDES Permit to discharge into the waters of the state and has prepared a draft Permit and associated fact sheet for the above named Permittee. The Public Notice period will begin and end on the dates indicated in the heading of this Public Notice/Fact Sheet. All comments on the draft Permit and requests for hearing must be received by the IEPA by U.S. Mail, carrier mail or hand delivered by the Public Notice Ending Date. Interested persons are invited to submit written comments on the draft Permit to the IEPA at the above address. Commentors shall provide his or her name and address and the nature of the issues proposed to be raised and the evidence proposed to be presented with regards to those issues. Commentors may include a request for public hearing. Persons submitting comments and/or requests for public hearing shall also send a copy of such comments or requests to the Permit applicant. The NPDES Permit and notice numbers must appear on each comment page.

The application, engineer's review notes including load limit calculations, Public Notice/Fact Sheet, draft Permit, comments received, and other documents are available for inspection and may be copied at the IEPA between 9:30 a.m. and 3:30 p.m. Monday through Friday when scheduled by the interested person.

If written comments or requests indicate a significant degree of public interest in the draft Permit, the permitting authority may, at its discretion, hold a public hearing. Public notice will be given 45 days before any public hearing. Response to comments will be provided when the final Permit is issued. For further information, please call Getie Yilma at 217/782-0610.

The following water quality and effluent standards and limitations were applied to the discharge:

Title 35: Environmental Protection, Subtitle C: Water Pollution, Chapter I: Pollution Control Board and the Clean Water Act were applied in determining the applicable standards, limitations and conditions contained in the draft Permit.

The applicant is engaged in treating domestic wastewater for the Village of Stillman Valley.

The length of the Permit is approximately 5 years.

The main discharge number is 001. The seven day once in ten year low flow (7Q10) of the receiving stream, Stillman Creek is 0.52 cfs.

The design average flow (DAF) for the facility is 0.2 million gallons per day (MGD) and the design maximum flow (DMF) for the facility is 0.73 MGD. Treatment consists of screening, packaged activated sludge, UV disinfection, aerobic sludge digestion, sludge dewatering and landfill/ land application of sludge.

Pursuant to the waiver provisions authorized by 40 CFR § 123.24, this draft permit is within the class, type, and size for which the Regional Administrator, Region V, has waived his right to review, object, or comment on this draft permit action.

Application is made for the new discharge(s) which is (are) located in Ogle County, Illinois. The following information identifies the discharge point, receiving stream and stream classifications:

Discharge Number	Receiving Stream	Latitude	Longitude	Stream Classification	Integrity Rating
003	Stillman Creek	42° 6' 33" North	89° 10' 8" West	General Use	Not Rated

To assist you further in identifying the location of the discharge(s) please see the attached map.

The stream segment(s), (Segment PP-01), receiving the discharge from outfall(s) 001 is not on the 303 (d) list of impaired waters.

The discharge(s) from the facility is (are) proposed to be monitored and limited at all times as follows:

Discharge Number(s) and Name(s): 003 STP Outfall

Load limits computed based on a design average flow (DAF) of 0.2 MGD (design maximum flow (DMF) of 0.73 MGD).

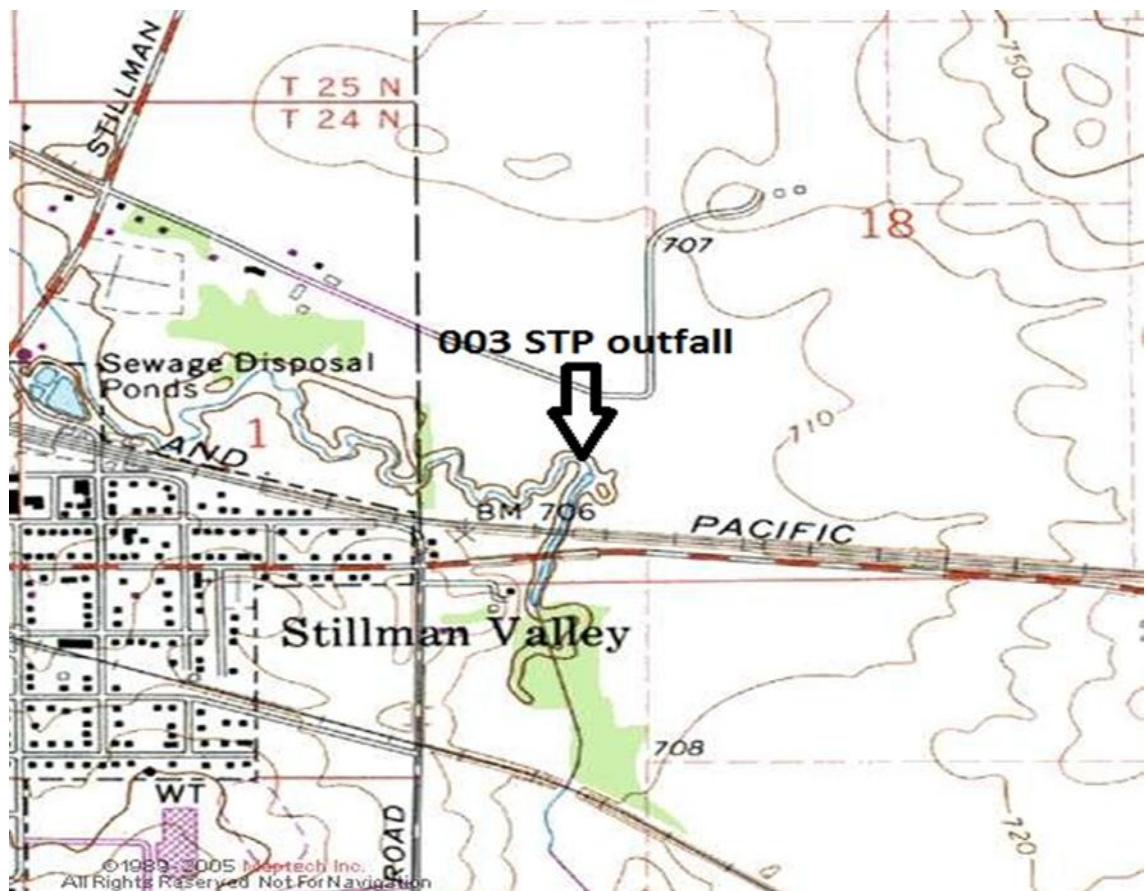
The effluent of the above discharge(s) shall be monitored and limited at all times as follows:

Parameter	LOAD LIMITS lbs/day DAF (DMF)*			CONCENTRATION LIMITS mg/L			Regulation
	Monthly Average	Weekly Average	Daily Maximum	Monthly Average	Weekly Average	Daily Maximum	
CBOD ₅	17 (61)		33 (122)	10		20	35 IAC 304.120 40 CFR 133.102
Suspended Solids	20 (73)		40 (146)	12		24	35 IAC 304.120 40 CFR 133.102
pH	Shall be in the range of 6 to 9 Standard Units						35 IAC 304.125
Fecal Coliform	Daily Maximum shall not exceed 400 per 100 mL (May through October)						35 IAC 304.121
Chlorine Residual						0.05	35 IAC 302.208
Ammonia Nitrogen: March	2.5 (9.1)	6.3 (23)	7.8 (29)	1.5	3.8	4.7	35 IAC 355 and 35 IAC 302
April-Oct.	2.5 (9.1)		5.0 (18)	1.5		3.0	
Nov.-Feb.	4.2 (15)		8.0 (29)	2.5		4.8	
Phosphorus (as P)	Monitor Only						35 IAC 309.146
Total Nitrogen	Monitor Only						35 IAC 309.146
				Monthly Avg. not less than	Weekly Avg. not less than	Daily Minimum	
Dissolved Oxygen March-July				N/A	6.25	5.0	35 IAC 302.206
August-February				6.0	4.5	4.0	

*Load Limits are calculated by using the formula: $8.34 \times (\text{Design Average and/or Maximum Flow in MGD}) \times (\text{Applicable Concentration in mg/L})$.

This draft Permit also contains the following requirements as special conditions:

1. Reopening of this Permit to include different final effluent limitations.
2. Operation of the facility by or under the supervision of a certified operator.
3. Submission of the operational data in a specified form and at a required frequency at any time during the effective term of this Permit.
4. More frequent monitoring requirement without Public Notice in the event of operational, maintenance or other problems resulting in possible effluent deterioration.
5. Prohibition against causing or contributing to violations of water quality standards.
6. Recording the monitoring results on Discharge Monitoring Report Forms using one such form for each outfall each month and submitting the forms to IEPA each month.
7. The provisions of 40 CFR Section 122.41(m) & (n) are incorporated herein by reference..
8. Effluent sampling point location.
9. Seasonal fecal coliform limits.
10. Submission of annual fiscal data.
11. Submission of semi annual reports indicating the quantities of sludge generated and disposed.
12. Reopening of this Permit to include revised effluent limitations based on a Total Maximum Daily Load (TMDL) or other water quality study.
13. Notify the IEPA upon completion and start of operation of the new treatment plant.
14. Total Nitrogen monitoring.



Stillman Valley STP Antidegradation Assessment
NPDES Permit No. IL0079197 Ogle County

The subject facility has applied for an NPDES permit for a new treatment plant to be located $\frac{3}{4}$ miles upstream of the existing plant. The old plant is beyond its useful life and the decision was made to find a new site and build a new plant. The DAF of the new plant will remain the same as the old – 0.2 MGD. Since the old plant had issues with breakdowns and an undersized final clarifier, the new plant will produce better quality effluent. The proposed treatment will consist of activated sludge treatment. The discharge will enter Stillman Creek approximately $\frac{3}{4}$ miles upstream of the present discharge.

Identification and Characterization of the Affected Water Body.

Stillman Creek (segment PP-01) has a 7Q10 flow of 0.52 cfs at this location and is a General Use water. The stream is listed as fully supporting aquatic life uses on the draft 2012 Illinois Integrated Water Quality Report and Section 303(d) List. Stillman Creek is not listed as a biologically significant stream in the 2008 Illinois Department of Natural Resources Publication *Integrating Multiple Taxa in a Biological Stream Rating System*, nor is it given an integrity rating at this location. Stillman Creek is designated as an enhanced water pursuant to the dissolved oxygen water quality standard. The IDNR WIRT system does not list any state threatened or endangered aquatic species as residing in the receiving stream.

Identification of Proposed Pollutant Load Increases or Potential Impacts on Uses.

The new facility will not increase pollutant loading to Stillman Creek. However, since the new plant will be located upstream of the old plant, a $\frac{3}{4}$ mile length of the stream will now have a treated sewage effluent input that did not have this previously. Given that the new plant will consistently produce a high quality effluent, no adverse impacts are anticipated. The overall loading of pollutants to the stream will be lowered given the problems experienced at the old plant.

Fate and Effect of Parameters Proposed for Increased Loading.

The previously unaffected portion of Stillman Creek will have an increase in loading of BOD, TSS, ammonia, phosphorus and nitrogen. However, no overall change to the loading to the creek will occur. The BOD and ammonia discharged by this facility will decay into simpler and harmless byproducts by naturally occurring organisms in the receiving stream. Some of the nitrogen originating in the ammonia will remain in the stream in the form of nitrates or organic nitrogen. Ammonia and dissolved oxygen standards will not be exceeded by this discharge. Given that Stillman Creek was found to fully support aquatic life uses when the old plant was discharging, no adverse impacts are anticipated when the new plant is discharging.

Purpose and Social & Economic Benefits of the Proposed Activity.

The existing treatment plant is at the end of its useful life and has numerous problems consistently treating the community's sewage. Because of a lack of redundancy and an undersized final clarifier, sewage must be bypassed when repairs are needed. The new plant will allow these problems to be eliminated, making sewage treatment more efficient.

Assessments of Alternatives for Less Increase in Loading or Minimal Environmental Degradation.

The plans for construction of a nitrifying treatment plant with nutrient removal capabilities are consistent with appropriate technology for this size and type of project. Treatment plant specifications have been selected to avoid or minimize environmental impacts. They also represent an economically reasonable design taking into consideration both initial capital costs and ongoing maintenance expenses. Viable alternatives to the selected treatment process do not exist for this project.

The City considered regionalization with Davis Junction but this alternative was rejected due to the cost of transmitting sewage over long distances.

Land application was also considered. Transporting the effluent to an area of suitable land would mean that an expensive force main would need to be constructed. Land application was rejected due to cost.

The Village's engineering firm (Willett Hofmann & Associates, Inc.) produced a document titled Economic Impact for Phosphorus Treatment for Village of Stillman Valley Ogle County, Illinois New Wastewater Treatment and Off-Site Sanitary Sewer Improvements, 2013. The design of the treatment plant for the community has been determined to be capable of meeting a total nitrogen concentration of 8 mg/L, but cannot meet a phosphorus concentration equated to "removal" of phosphorus, i.e., 1 mg/L. The engineers determined what would be necessary to add on to the existing design to allow the plant to achieve 1 mg/L phosphorus. This entails chemical addition using ferric chloride. The probable construction cost to add chemical addition was determined to be \$220,300 with an annual operation and maintenance cost of \$63,500. An economic impact analysis of these increased costs was conducted using USEPA's Interim Economic Guidance for Water Quality Standards. The conclusion of this analysis was that the phosphorus removal option would have a "large impact" on the community and is therefore considered unaffordable. Phosphorus removal beyond that of the intrinsic basic design of the treatment plant will not be required.

Summary Comments of the Illinois Department of Natural Resources, Regional Planning Commissions, Zoning Boards or Other Entities.

The Illinois Department of Natural Resources was consulted regarding threatened and endangered species issues via the EcoCAT system on March 28, 2012. No threatened or endangered species concerns exist and consultation was terminated.

Agency Conclusion.

This preliminary assessment was conducted pursuant to the Illinois Pollution Control Board regulation for Antidegradation found at 35 Ill. Adm. Code 302.105 (antidegradation standard) and was based on the information available to the Agency at the time the draft permit was written. We tentatively find that the proposed activity will result in the attainment of water quality standards; that all existing uses of the receiving stream will be maintained; that all technically and economically reasonable measures to avoid or minimize the extent of the proposed increase in pollutant loading have been incorporated into the proposed activity; and that this activity will benefit the community at large by providing adequate sewage treatment for the future. Comments received during the NPDES permit public notice period will be evaluated before a final decision is made by the Agency.

NPDES Permit No. IL0079197

Illinois Environmental Protection Agency

Division of Water Pollution Control

1021 North Grand Avenue East

Post Office Box 19276

Springfield, Illinois 62794-9276

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

New (NPDES) Permit

Expiration Date:

Issue Date:

Effective Date:

Name and Address of Permittee:

Village of Stillman Valley
120 North Walnut Street
P.O. Box 127
Stillman Valley, Illinois 61084-0127

Facility Name and Address:

Stillman Valley New Wastewater Treatment Plant
East Hales Corner Road
Stillman Valley, Illinois 61084-0127
(Ogle County)

Receiving Waters: Stillman Creek

In compliance with the provisions of the Illinois Environmental Protection Act, Title 35 of the Ill. Adm. Code, Subtitle C, Chapter I, and the Clean Water Act (CWA), the above-named Permittee is hereby authorized to discharge at the above location to the above-named receiving stream in accordance with the standard conditions and attachments herein.

Permittee is not authorized to discharge after the above expiration date. In order to receive authorization to discharge beyond the expiration date, the Permittee shall submit the proper application as required by the Illinois Environmental Protection Agency (IEPA) not later than 180 days prior to the expiration date.

Alan Keller, P.E.
Manager, Permit Section
Division of Water Pollution Control

SAK:GY:13060604.bah

Effluent Limitations, Monitoring, and Reporting

FINAL

Discharge Number(s) and Name(s): 003 STP Outfall

Load limits computed based on a design average flow (DAF) of 0.2 MGD (design maximum flow (DMF) of 0.73 MGD).

From the effective date of this Permit until the expiration date, the effluent of the above discharge(s) shall be monitored and limited at all times as follows:

Parameter	LOAD LIMITS lbs/day DAF (DMF)*			CONCENTRATION LIMITS mg/L			Sample Frequency	Sample Type
	Monthly Average	Weekly Average	Daily Maximum	Monthly Average	Weekly Average	Daily Maximum		
Flow (MGD)							Continuous	
CBOD ₅ **	17 (61)		33 (122)	10		20	1 Day/Week	Composite
Suspended Solids	20 (73)		40 (146)	12		24	1 Day/Week	Composite
pH	Shall be in the range of 6 to 9 Standard Units						1 Day/Week	Grab
Fecal Coliform***	Daily Maximum shall not exceed 400 per 100 mL (May through October)						1 Day/Week	Grab
Chlorine Residual***						0.05	1 Day/Week	Grab
Ammonia Nitrogen: As (N) March.	2.5 (9.1)	6.3 (23)	7.8 (29)	1.5	3.8	4.7	1 Day/Week	Composite
April-Oct.	2.5 (9.1)		5.0 (18)	1.5		3.0	1 Day/Week	Composite
Nov.-Feb.	4.2 (15)		8.0 (29)	2.5		4.8	1 Day/Week	Composite
Phosphorus (as P)****	Monitor Only						1 Day/Month	Composite
Total Nitrogen****	Monitor Only						1 Day/Month	Composite
				Monthly Average not less than	Weekly Average not less than	Daily Minimum		
Dissolved Oxygen March-July				N/A	6.25	5.0	1 Day/Week	Grab
August-February				6.0	4.5	4.0	1 Day/Week	Grab

*Load limits based on design maximum flow shall apply only when flow exceeds design average flow.

**Carbonaceous BOD₅ (CBOD₅) testing shall be in accordance with 40 CFR 136.

***See Special Condition 9.

****Discharge is subject to the requirements and limitations of Special Condition 14.

Flow shall be reported on the Discharge Monitoring Report (DMR) as monthly average and daily maximum.

Fecal Coliform shall be reported on the DMR as a daily maximum value.

pH shall be reported on the DMR as minimum and maximum value.

Chlorine Residual shall be reported on DMR as daily maximum value.

Phosphorus and Total Nitrogen shall be reported on the DMR as a daily maximum value.

Dissolved oxygen shall be reported on the DMR as a minimum value.

NPDES Permit No. IL0079197

Influent Monitoring, and Reporting

The influent to the plant shall be monitored as follows:

<u>Parameter</u>	<u>Sample Frequency</u>	<u>Sample Type</u>
Flow (MGD)	Continuous	
BOD ₅	1 Day/Week	Composite
Suspended Solids	1 Day/Week	Composite

Influent samples shall be taken at a point representative of the influent.

Flow (MGD) shall be reported on the Discharge Monitoring Report (DMR) as monthly average and daily maximum.

BOD₅ and Suspended Solids shall be reported on the DMR as a monthly average concentration.

Special Conditions

SPECIAL CONDITION 1. This Permit may be modified to include different final effluent limitations or requirements which are consistent with applicable laws, regulations, or judicial orders. The IEPA will public notice the permit modification.

SPECIAL CONDITION 2. The use or operation of this facility shall be by or under the supervision of a Certified Class 2 operator.

SPECIAL CONDITION 3. The IEPA may request in writing submittal of operational information in a specified form and at a required frequency at any time during the effective period of this Permit.

SPECIAL CONDITION 4. The IEPA may request more frequent monitoring by permit modification pursuant to 40 CFR § 122.63 and Without Public Notice in the event of operational, maintenance or other problems resulting in possible effluent deterioration.

SPECIAL CONDITION 5. The effluent, alone or in combination with other sources, shall not cause a violation of any applicable water quality standard outlined in 35 Ill. Adm. Code 302.

SPECIAL CONDITION 6. The Permittee shall record monitoring results on Discharge Monitoring Report (DMR) Forms using one such form for each outfall each month.

In the event that an outfall does not discharge during a monthly reporting period, the DMR Form shall be submitted with no discharge indicated.

The Permittee may choose to submit electronic DMRs (eDMRs) instead of mailing paper DMRs to the IEPA. More information, including registration information for the eDMR program, can be obtained on the IEPA website, <http://www.epa.state.il.us/water/edmr/index.html>.

The completed Discharge Monitoring Report forms shall be submitted to IEPA no later than the 25th day of the following month, unless otherwise specified by the permitting authority.

Permittees not using eDMRs shall mail Discharge Monitoring Reports with an original signature to the IEPA at the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Attention: Compliance Assurance Section, Mail Code # 19
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

SPECIAL CONDITION 7. The provisions of 40 CFR Section 122.41(m) & (n) are incorporated herein by reference.

SPECIAL CONDITION 8. Samples taken in compliance with the effluent monitoring requirements shall be taken at a point representative of the discharge, but prior to entry into the receiving stream.

SPECIAL CONDITION 9. Fecal Coliform limits for Discharge Number 003 are effective May thru October. Sampling of Fecal Coliform is only required during this time period.

The total residual chlorine limit is applicable at all times. If the Permittee is chlorinating for any purpose during the months of November through April, sampling is required on a daily grab basis. Sampling frequency for the months of May through October shall be as indicated on effluent limitations, monitoring and reporting page of this Permit.

SPECIAL CONDITION 10. During January of each year the Permittee shall submit annual fiscal data regarding sewerage system operations to the Illinois Environmental Protection Agency/Division of Water Pollution Control/Compliance Assurance Section. The Permittee may use any fiscal year period provided the period ends within twelve (12) months of the submission date.

Submission shall be on forms provided by IEPA titled "Fiscal Report Form For NPDES Permittees".

SPECIAL CONDITION 11. For the duration of this Permit, the Permittee shall determine the quantity of sludge produced by the treatment facility in dry tons or gallons with average percent total solids analysis. The Permittee shall maintain adequate records of the quantities of sludge produced and have said records available for IEPA inspection. The Permittee shall submit to the IEPA, at a minimum, a semi-annual summary report of the quantities of sludge generated and disposed of, in units of dry tons or gallons (average total percent solids) by different disposal methods including but not limited to application on farmland, application on reclamation land, landfiling, public distribution, dedicated land disposal, sod farms, storage lagoons or any other specified disposal method. Said reports shall be submitted to the IEPA by January 31 and July 31 of each year reporting the preceding January thru June and July thru December interval of sludge disposal operations.

Special Conditions

Duty to Mitigate. The Permittee shall take all reasonable steps to minimize any sludge use or disposal in violation of this Permit.

Sludge monitoring must be conducted according to test procedures approved under 40 CFR 136 unless otherwise specified in 40 CFR 503, unless other test procedures have been specified in this Permit.

Planned Changes. The Permittee shall give notice to the IEPA on the semi-annual report of any changes in sludge use and disposal.

The Permittee shall retain records of all sludge monitoring, and reports required by the Sludge Permit as referenced in Standard Condition 23 for a period of at least five (5) years from the date of this Permit.

If the Permittee monitors any pollutant more frequently than required by the Sludge Permit, the results of this monitoring shall be included in the reporting of data submitted to the IEPA.

Monitoring reports for sludge shall be reported on the form titled "Sludge Management Reports" to the following address:

Illinois Environmental Protection Agency
Bureau of Water
Compliance Assurance Section
Mail Code #19
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

SPECIAL CONDITION 12. This Permit may be modified to include alternative or additional final effluent limitations pursuant to an approved Total Maximum Daily Load (TMDL) Study or upon completion of an alternate Water Quality Study.

SPECIAL CONDITION 13. The Permittee shall notify the IEPA in writing once the treatment plant expansion has been completed. A letter stating the date that the expansion was completed shall be sent to the following address within fourteen (14) days of the expansion becoming operational:

Illinois Environmental Protection Agency
Bureau of Water
Compliance Assurance Section, Mail Code #19
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

SPECIAL CONDITION 14. The Permittee shall operate the facilities designed for biological nutrient removal (BNR). Monitoring for Phosphorus is required to document the actual total phosphorus effluent concentration. The Permittee shall monitor the effluent for total phosphorus once per month. Monitoring for Total Nitrogen is required to document the actual total nitrogen effluent concentration. The Permittee shall monitor the effluent for total nitrogen once per month. The monitoring shall be a composite sample and the results reported as a daily maximum on the Permittee's Discharge Monitoring Forms.

The Permittee shall notify the IEPA in writing of any operational deficiencies and corrective measures that are operational in nature to be taken if the treatment plant exceeds the average monthly goal concentration value of 8 mg/L of Total Nitrogen in the effluent.

Illinois Environmental Protection Agency
Bureau of Water
Compliance Assurance Section, Mail Code #19
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794

Illinois Environmental Protection Agency
Bureau of Water
Rockford Field Office
4302 North Main Street
Rockford, Illinois 61103