

NPDES Permit No. IL0020516

Notice No. RKO:11051101.bah

Public Notice Beginning Date: **August 25, 2011**

Public Notice Ending Date: **September 26, 2011**

National Pollutant Discharge Elimination System (NPDES)  
Permit Program

PUBLIC NOTICE/FACT SHEET  
of  
Draft Reissued 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 Discharger:

Village of Cary  
655 Village Hall Drive  
Cary, Illinois 60013

Name and Address of Facility:

Village of Cary WWTP  
305 Spring Street  
Cary, Illinois 60013  
(McHenry 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 discharger. 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 Raj Ojha 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 and industrial wastewater for the Village of Cary.

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, Fox River is 109 cfs.

The design average flow (DAF) for the facility is 2.8 million gallons per day (MGD) and the design maximum flow (DMF) for the facility is 7.0 MGD. Treatment consists of a comminutor/bar screen, an influent metering flume, a grit tank, two primary clarifiers, three secondary aeration tanks, two oxidation ditches, effluent flow measurement consisting of parshall flume/ultrasonic meter followed by effluent disinfection and dechlorination. The sludge handling consists of three anaerobic digesters, sludge holding and thickening followed by drying beds.

This Reissued Permit does not increase the facility's DAF, DMF, concentration limits, and/or load limits.

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

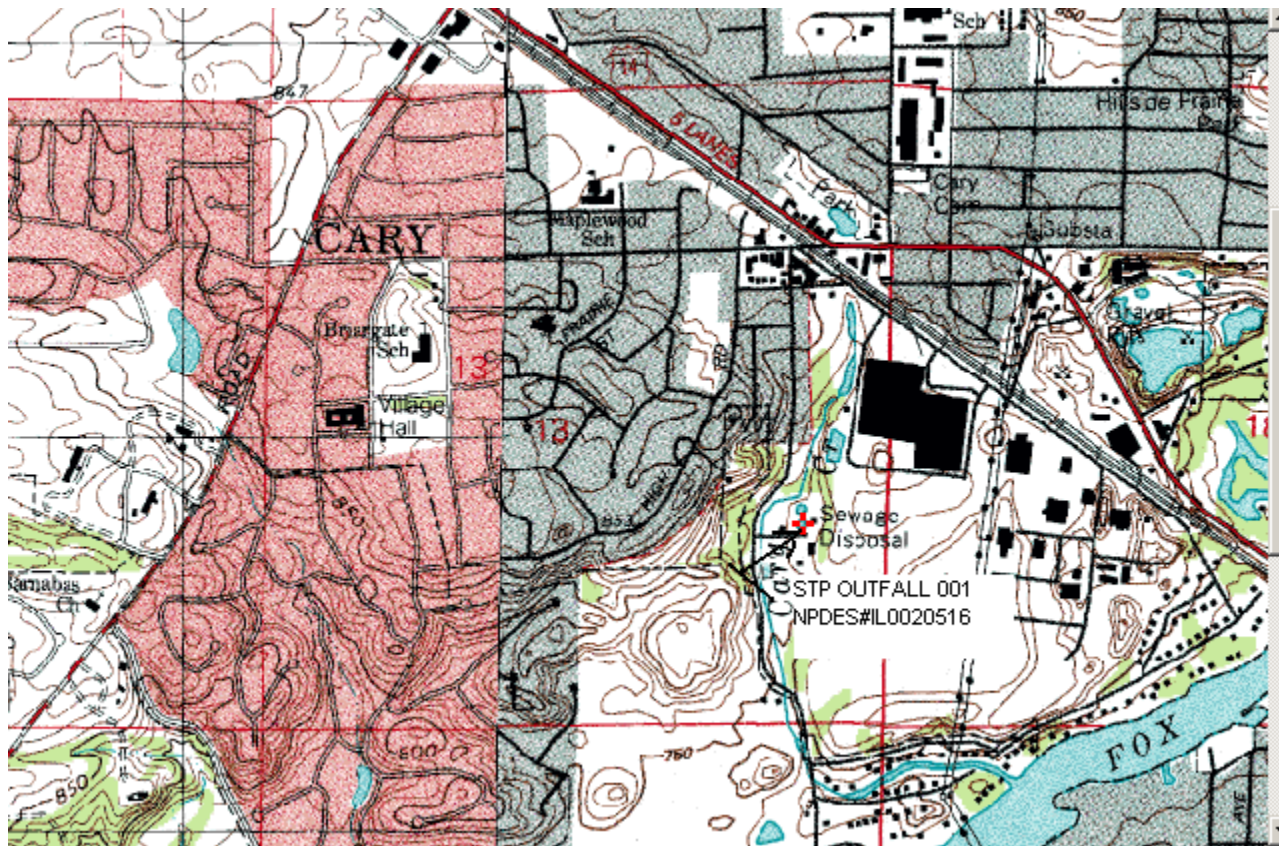
<u>Discharge Number</u>	<u>Receiving Stream</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Stream Classification</u>	<u>Integrity Rating</u>
001	Fox River	42° 12' 09" North	88° 14' 27" West	General Use	Not Rated

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

The stream segment(s), DT 06, receiving the discharge from outfall(s) 001 is on the 303(d) list of impaired waters.

The following parameters have been identified as the pollutants causing impairment:

<u>Potential Causes</u>	<u>Uses Impaired</u>
pH	Aquatic life



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): 001 STP Outfall

Load limits computed based on a design average flow (DAF) of 2.8 MGD (design maximum flow (DMF) of 7.0 MGD).

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

	LOAD LIMITS lbs/day DAF (DMF)*				CONCENTRATION LIMITS mg/L				
Parameter	Monthly Average	Weekly Average	Daily Maximum	Yearly Average	Monthly Average	Weekly Average	Daily Maximum	Yearly Average	Regulation
CBOD <sub>5</sub>	467 (1,168)	934 (2,335)			20	40			35 IAC 304.120 40 CFR 133.102
Suspended Solids	584 (1,460)	1,051 (2,627)			25	45			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							35 IAC 304.121
Chlorine Residual							0.05		35 IAC 302.208
Ammonia Nitrogen: Apr.-Oct.	35 (88)		49 (123)		1.5		2.1		35 IAC 355 and 35 IAC 302
Nov.-Feb.	93 (234)		96 (239)		4.0		4.1		
March	35 (88)		61 (152)		1.5		2.6		
Phosphorus	Monitor only								35 IAC 304.123
Total Nitrogen	Monitor only								35 IAC 309.146
Nickel	Monitor Only								35 IAC 309.146
Mercury				0.00028 (0.00070)				0.000012	35 IAC 302.208
					Monthly Avg. not less than	Weekly Avg. not less than	Daily Minimum		
Dissolved Oxygen March-July					N/A	6.0	5.0		35 IAC 302.206
August-February					5.5	4.0	3.5		

\*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 applicable and are hereby incorporated by reference.
8. Effluent sampling point location.
9. Controlling the sources of infiltration and inflow into the sewer system.
10. Monitoring for arsenic, barium, cadmium, hexavalent chromium, total chromium, copper, weak acid dissociable cyanide, total cyanide, fluoride, dissolved iron, total iron, lead, manganese, mercury, nickel, oil, phenols, selenium, silver and zinc is required to be conducted semi-annually beginning 3 months from the effective date.
11. Submission of annual fiscal data.
12. The Permittee is required to perform biomonitoring tests in the 18<sup>th</sup>, 15<sup>th</sup>, 12<sup>th</sup> and 9<sup>th</sup> months prior to the expiration date of the permit, and to submit the results of such tests to the IEPA within one week of receiving the results from the laboratory.
13. Submission of semi annual reports indicating the quantities of sludge generated and disposed.
14. Total Nitrogen Monitoring.
15. Reopening of this Permit to include revised effluent limitations based on a Total Maximum Daily Load (TMDL) or other water quality study.
16. Mercury compliance schedule.
17. In-stream monitoring for pH and temperature.

NPDES Permit No. IL0020516

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

Reissued (NPDES) Permit

Expiration Date:

Issue Date:

Effective Date:

Name and Address of Permittee:

Village of Cary  
655 Village Hall Drive  
Cary, Illinois 60013

Facility Name and Address:

Village of Cary WWTP  
305 Spring Street  
Cary, Illinois 60013  
(McHenry County)

Receiving Waters: Fox River

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

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## NPDES Permit No. IL0020516

Effluent Limitations, Monitoring, and Reporting

## FINAL

Discharge Number(s) and Name(s): 001 STP Outfall

Load limits computed based on a design average flow (DAF) of 2.8 MGD (design maximum flow (DMF) of 7.0 MGD).

Excess flow facilities (if applicable) shall not be utilized until the main treatment facility is receiving its maximum practical flow.

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:

<u>Parameter</u>	<u>LOAD LIMITS lbs/day</u> <u>DAF (DMF)*</u>				<u>CONCENTRATION</u> <u>LIMITS mg/L</u>			<u>Yearly</u> <u>Avg.</u>	<u>Sample</u> <u>Frequency</u>	<u>Sample</u> <u>Type</u>
	<u>Monthly</u> <u>Avg.</u>	<u>Weekly</u> <u>Avg.</u>	<u>Daily</u> <u>Max.</u>	<u>Yearly</u> <u>Avg.</u>	<u>Monthly</u> <u>Avg.</u>	<u>Weekly</u> <u>Avg.</u>	<u>Daily</u> <u>Max.</u>			
Flow (MGD)									Continuous	
CBOD <sub>5</sub> **	467 (1,168)	934 (2,335)			20	40			1 Day/Week	Composite
Suspended Solids	584 (1,460)	1,051 (2,627)			25	45			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							1 Day/Week	Grab
Chlorine Residual							0.05		1 Day/Week	Grab
Ammonia Nitrogen: As (N) Apr.-Oct.	35 (88)		49 (123)		1.5		2.1		3 Days/Week	Composite
Nov.-Feb.	93 (234)		96 (239)		4.0		4.1		3 Days/Week	Composite
March	35 (88)		61 (152)		1.5		2.6		3 Days/Week	Composite
Phosphorus	Monitor Only								2 Days/Month	Composite
Total Nitrogen***	Monitor Only								2 Days/Month	Composite
Nickel	Monitor Only								1 Day/Month	Composite
Mercury****				0.00028 (0.00070)				0.000012	2 Days/Month	Grab
					Monthly Average not less than	Weekly Average not less than	Daily Minimum			
Dissolved Oxygen March-July					N/A	6.0	5.0		1 Day/Week	Grab
August-February					5.5	4.0	3.5		1 Day/Week	Grab

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

\*\*Carbonaceous BOD<sub>5</sub> (CBOD<sub>5</sub>) testing shall be in accordance with 40 CFR 136.

\*\*\*See Special Condition 14.

\*\*\*\*See Special Condition 16.

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.

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

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

The yearly average Mercury value shall be computed monthly beginning 12 months after the effective date of the permit. The yearly average, monthly average and daily maximum value shall be reported on the DMR.

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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 <sub>5</sub>	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.

BOD<sub>5</sub> 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 1 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 applicable and are hereby incorporated 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. This permit may be modified to include requirements for the Permittee on a continuing basis to evaluate and detail its efforts to effectively control sources of infiltration and inflow into the sewer system and to submit reports to the IEPA if necessary.

SPECIAL CONDITION 10. The Permittee shall conduct semi-annual monitoring of the effluent and report concentrations (in mg/l) of the following listed parameters. Monitoring shall begin three (3) months from the effective date of this permit. The sample shall be a 24-hour effluent composite except as otherwise specifically provided below and the results shall be submitted on Discharge Monitoring Report Forms to IEPA unless otherwise specified by the IEPA. The parameters to be sampled and the minimum reporting limits to be attained are as follows:

<u>STORET CODE</u>	<u>PARAMETER</u>	<u>Minimum reporting limit</u>
01002	Arsenic	0.05 mg/L
01007	Barium	0.5 mg/L
01027	Cadmium	0.001 mg/L
01032	Chromium (hexavalent) (grab)	0.01 mg/L
01034	Chromium (total)	0.05 mg/L
01042	Copper	0.005 mg/L
00718	Cyanide (weak acid dissociable) (grab)	5.0 ug/L
00720	Cyanide (total) (grab not to exceed 24 hours)	5.0 ug/L
00951	Fluoride	0.1 mg/L
01045	Iron (total)	0.5 mg/L
01046	Iron (Dissolved)	0.5 mg/L
01051	Lead	0.05 mg/L
01055	Manganese	0.5 mg/L



Special Conditions

71900	Mercury (grab)**	1.0 ng/L*
01067	Nickel	0.005 mg/L
00556	Oil (hexane soluble or equivalent) (Grab Sample only)	5.0 mg/L
32730	Phenols (grab)	0.005 mg/L
01147	Selenium	0.005 mg/L
01077	Silver (total)	0.003 mg/L
01092	Zinc	0.025 mg/L

Unless otherwise indicated, concentrations refer to the total amount of the constituent present in all phases, whether solid, suspended or dissolved, elemental or combined, including all oxidation states.

\*1.0 ng/L = 1 part per trillion.

\*\*Utilize USEPA Method 1631E and the digestion procedure described in Section 11.1.1.2 of 1631E.

SPECIAL CONDITION 11. 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 12. The Permittee shall conduct biomonitoring of the effluent from Discharge Number(s) 001.

Biomonitoring

1. Acute Toxicity - Standard definitive acute toxicity tests shall be run on at least two trophic levels of aquatic species (fish, invertebrate) representative of the aquatic community of the receiving stream. Testing must be consistent with Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms (Fifth Ed.) EPA/821-R-02-012. Unless substitute tests are pre-approved; the following tests are required:
  - a. Fish - 96 hour static LC<sub>50</sub> Bioassay using fathead minnows (*Pimephales promelas*).
  - b. Invertebrate 48-hour static LC<sub>50</sub> Bioassay using *Ceriodaphnia*.
2. Testing Frequency - The above tests shall be conducted using 24-hour composite samples unless otherwise authorized by the IEPA. Samples must be collected in the 18th, 15th, 12th, and 9th month prior to the expiration date of this Permit.
3. Reporting - Results shall be reported according to EPA/821-R-02-012, Section 12, Report Preparation, and shall be submitted to IEPA, Bureau of Water, Compliance Assurance Section within one week of receipt from the laboratory. Reports are due to the IEPA no later than the 16th, 13th, 10th, and 7th month prior to the expiration date of this Permit.
4. Toxicity - Should a bioassay result in toxicity to >20% of organisms test in the 100% effluent treatment, the IEPA may require, upon notification, six (6) additional rounds of monthly testing on the affected organism(s) to be initiated within 30 days of the toxic bioassay. Results shall be submitted to IEPA within (1) week of becoming available to the Permittee. Should any of the additional bioassays result in toxicity to ≥50% of organisms tested in the 100% effluent treatments, the Permittee may wish to contact the IEPA to request the discontinuance of further sampling at which time the IEPA may require the Permittee to begin the toxicity reduction evaluation and identification as outlined below.
5. Toxicity Reduction Evaluation - Should the results of the biomonitoring program identify toxicity, the IEPA may require that the Permittee prepare a plan for toxicity reduction evaluation and identification. This plan shall be developed in accordance with Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants, EPA/833B-99/002, and shall include an evaluation to determine which chemicals have a potential for being discharged in the plant wastewater, a monitoring program to determine their presence or absence and to identify other compounds which are not being removed by treatment, and other measures as appropriate. The Permittee shall submit to the IEPA its plan for toxicity reduction evaluation within ninety (90) days following notification by the IEPA. The Permittee shall implement the plan within ninety (90) days or other such date as contained in a notification letter received from the IEPA.

The IEPA may modify this Permit during its term to incorporate additional requirements or limitations based on the results of the biomonitoring. In addition, after review of the monitoring results, the IEPA may modify this Permit to include numerical limitations for specific toxic pollutants. Modifications under this condition shall follow public notice and opportunity for hearing.

Special Conditions

SPECIAL CONDITION 13. 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, landfilling, 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.

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 14. The Permittee shall monitor the effluent for total nitrogen two days per month. The monitoring shall be a composite sample and the results reported as a daily maximum on the Permittee's Discharge Monitoring Forms.

SPECIAL CONDITION 15. This Permit maybe modified to include alternative or additional final effluent limitations pursuant to an approved Total Maximum Daily Load (TMDL) study or upon completion of an alternative water quality study.

SPECIAL CONDITION 16. A mercury limit of 0.000012 mg/L (Yearly Average) shall become effective two (2) years from the effective date of this Permit.

In order for the Permittee to achieve the above limit, it will be necessary to modify existing treatment facilities to include mercury removal, reduce mercury sources, or explore other ways to prevent discharges that exceed the above limit in accordance with the following schedule:

- |   |   |
|---|---|
| 1. Progress Report  | 6 months from effective date of permit  |
| 2. Progress Report  | 12 months from effective date of permit |
| 3. Progress Report on measures necessary to comply with mercury limit | 18 months from effective date of permit |
| 4. Obtain compliance with mercury limit                               | 24 months from effective date of permit |

Compliance dates set out in this Permit may be superseded or supplemented by compliance dates in judicial orders, Illinois Pollution Control Board orders. This Permit may be modified, with Public Notice, to include such revised compliance dates.

REPORTING

The Permittee shall submit a report no later than fourteen (14) days following the completion dates indicated for each numbered item in the compliance schedule, indicating, a) the date the item was completed, or b) that the item was not completed, the reasons for non-completion and the anticipated completion date.

Special Conditions

SPECIAL CONDITION 17. The Permittee may collect data in support of developing site-specific effluent limitations for ammonia nitrogen. In-stream monitoring for pH and temperature would be required. Samples should be taken downstream at a point representative of substantial mixing with the receiving stream and below the surface. A monitoring plan must be submitted to the Agency for approval which indicates the location, sample frequency and the duration of the monitoring program. Should the in-stream monitoring data indicate that less stringent ammonia nitrogen effluent limitations are protective of the receiving stream, this Permit may be modified to include alternate ammonia nitrogen effluent limitations designed to prevent exceedances of the ammonia nitrogen water quality standards.