

NPDES Permit No. IL0065145

Notice No. kar11192014

Public Notice Beginning Date: **August 15, 2015**

Public Notice Ending Date: **September 28, 2015**

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 Sauget
2897 Falling Springs Road
Sauget, Illinois 62206-1123

Name and Address of Facility:

American Bottoms Regional Wastewater Treatment Facility
1 American Bottoms Road
Sauget, Illinois
(St. Clair 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. IEPA on behalf of the U.S. Environmental Protection Agency, Region V (U.S. EPA) is also public noticing the inclusion of a removal credit authorization for Toluene as part of the American Bottoms Regional Wastewater Treatment Facility (American Bottoms) Pretreatment Program. 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 Keith Runge 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 Sauget.

The length of the Permit is approximately 5 years.

The main discharge number is 002. The seven day once in ten year low flow (7Q10) of the receiving stream, Mississippi River is 46,500 cfs.

The design average flow (DAF) for the facility is 27 million gallons per day (MGD) and the design maximum flow (DMF) for the facility is 52

MGD. Treatment consists of physical chemical pretreatment (consisting of bar screen, oil skimming, pH neutralization, clarifiers, and belt filter press), screening, grit removal, primary settling, activated sludge with powdered activated carbon addition, and secondary settling.

AMERICAN BOTTOMS PRETREATMENT PROGRAM-REMOVAL CREDIT

American Bottoms has requested approval of removal credit authorization for its Industrial Pretreatment Program pursuant to 40 C.F.R. § 403.7. The proposed authorization is for a 63.3% removal credit for Toluene for the Afton Chemical Corporation (Afton). If approved, American Bottoms would be authorized to adjust categorical standards for Afton for this pollutant up to the specified percentage.

On the basis of staff review and application of pertinent regulations, the U.S. EPA proposes to approve the request for removal credit authorization. The proposed determination is tentative.

Interested persons are invited to submit written comments on the proposed removal credit authorization. Copies of the relevant POTW documents are available for inspection and copying at U.S. EPA at the address in this Public Notice, and IEPA at the address listed above. Comments on the proposed removal credit authorization must be submitted in person or mailed no later than 30 days from the date of this Public Notice. Please deliver or mail all requests or comments on the proposed removal credit authorization to U.S. EPA at the address listed in this Public Notice (Attention: David Soong).

United States Environmental Protection Agency
 Region V, Water Division (Mail Code: WN-16J)
 NPDES Programs Branch
 77 West Jackson Boulevard
 Chicago, Illinois 60604

Any person may request a public hearing on the proposed removal credit authorization within 30 days of the date of the Public Notice by submitting a request to the U.S. EPA. The request shall indicate the interest of the person filling such request and the reasons why the person believes a hearing is warranted. A public hearing will be held if there is a significant degree of public interest in the proposed removal credit authorization. Public notice of such a hearing will be circulated in the newspaper and to the parties requesting the hearing.

If no substantive comments to this notice are received, the proposed removal credit will be approved as set forth herein without changes and without further public notice. In such event, this notice shall constitute the "notice of approval or disapproval" required by 40 C.F.R. § 403.11(e) and no additional notice shall be provided, the approved removal credit authorization, along with monitoring and reporting requirements, will be incorporated into American Bottom's NPDES permit by the IEPA pursuant to 40 C.F.R. § 122.63. Anyone who wishes to be sent a notice of the approval of the removal credit should send a request or such notice to the U.S. EPA. For further information, please call David Soong at 312/886-0136.

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

This Permit recognizes and continues the year-round disinfection exemption approved by the IEPA on October 23, 1995 and reissued February 25, 2014. It is the IEPA's tentative decision that under section 302.209 of the Illinois Pollution Control Board regulations, the following reach of waterbody is not classified for primary contact use activities and is not subject to the fecal coliform water quality standard of 35 Ill. Adm. Code 302.209.

This draft permit does not contain requirements for disinfection of the discharge from discharge number(s) 002 and A02. The Mississippi River from the discharge to one mile downstream and extending 1,000 feet out from the Illinois shore has been determined to be unsuited to support primary contact activities (swimming) due to physical, hydrologic or geographic configuration. Anyone knowing of primary contact activities occurring within this water segment is invited to submit comments to the IEPA. Comments should give the nature of the activities (i.e swimming, fishing, canoeing, etc.), the location and months of the year when these activities have been observed. The IEPA is also interested in obtaining information on the proximity of residential dwellings and the accessibility of the public to this water segment. Anyone with such information is asked to submit comments to the IEPA on this draft permit action. Instructions for submitting comments are contained earlier in this document.

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

Discharge Number	Receiving Stream	Latitude	Longitude	Stream Classification	Integrity Rating
002	Mississippi River	38° 36' 05" North	90° 11' 10" West	General Use	Not Rated
A02	Mississippi River	38° 36' 05" North	90° 11' 10" 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) receiving the discharge from outfall(s) 002 and A02 is (are) 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>
PCB's, Mercury	Fish Consumption

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): 002

Load limits computed based on a design average flow (DAF) of 27 MGD (design maximum flow (DMF) of 52 MGD).

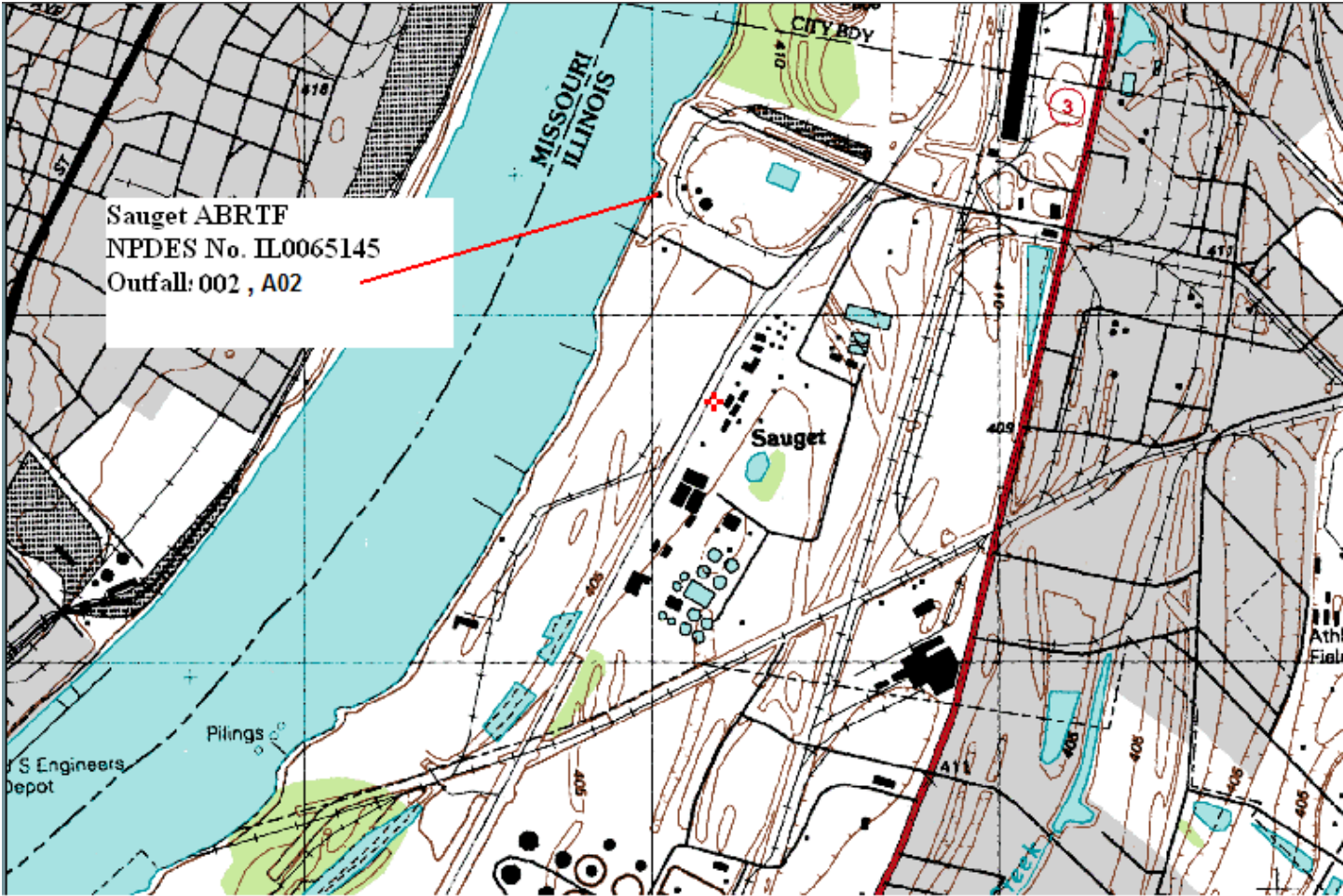
The effluent of the above discharge(s) shall be monitored and limited at all times as follows:

<u>Parameter</u>	<u>LOAD LIMITS lbs/day</u> <u>DAF (DMF)*</u>			<u>CONCENTRATION</u> <u>LIMITS mg/L</u>			<u>Regulation</u>
	<u>Monthly Average</u>	<u>Weekly Average</u>	<u>Daily Maximum</u>	<u>Monthly Average</u>	<u>Weekly Average</u>	<u>Daily Maximum</u>	
CBOD ₅	4,500 (8,670)	9,010 (17,300)		20	40		35 IAC 304.120 40 CFR 133.102
Suspended Solids	5,630 (10,800)	10,100 (19,500)		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	Monitor Only (May thru October)						35 IAC 304.121
Chlorine Residual						0.05	35 IAC 302.208
Phenol	67.6 (130)		135 (260)	0.3		0.6	35 IAC 304.124
Total Phosphorus (as P)	Monitor Only						35 IAC 304.123
Ammonia Nitrogen (as N)	Monitor Only						35 IAC 309.146
Total Nitrogen	Monitor Only						35 IAC 309.146
Toluene	Monitor Only						40 CFR 403.7

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. A requirement to monitor and a limit of 0.05 mg/L for residual chlorine when it is used.
10. The Permittee implements and administers an industrial pretreatment program pursuant to 40 CFR §403.
11. Submission of annual fiscal data.
12. A requirement for biomonitoring of the effluent.
13. A prohibition on discharges from high level emergency bypass(es).
14. Submission of semi annual reports indicating the quantities of sludge generated and disposed.
15. At minimum of 85% removal of CBOD₅ and suspended solids
16. Submission of Capacity, Management, Operations, and Maintenance (CMOM) plan.
17. Modeling or field studies may be used to demonstrate the availability of a mixing zone and ZID.
18. A requirement for monitoring Alpha-hexachlorocyclohexane, Chlordane, and 4,4'-Dichlorodiphenyl dichloroethane .
19. Phosphorus reduction feasibility study.
20. Phosphorus Discharge Optimization Plan.



Sauget ABRTF
NPDES No. IL0065145
Outfall: 002, A02

S Engineers
Depot

Pilings

Sauget

CITY BOY

Athl
Field

NPDES Permit No. IL0065145

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 Discharger:

Village of Sauget
2897 Falling Springs Road
Sauget, Illinois 62206-1123

Name and Address of Facility:

American Bottoms Regional Wastewater Treatment Facility
1 American Bottoms Road
Sauget, Illinois
(St. Clair County)

Receiving Waters: Mississippi 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

SAK:kar11192014

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Effluent Limitations, Monitoring, and Reporting

FINAL

Discharge Number(s) and Name(s): 002 STP Outfall (includes diffuser and 72" outfall pipe)*

Load limits computed based on a design average flow (DAF) of 27 MGD (design maximum flow (DMF) of 52 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 ***, ****	4,500 (8,670)	9,010 (19,500)		20	40		3 days/week	Composite
Suspended Solids****	5,630 (10,800)	10,100 (19,500)		25	45		3 days/week	Composite
pH	Shall be in the range of 6 to 9 Standard Units						3 days/week	Grab
Fecal Coliform	Monitor Only (May through October)						1 Day/Week	Grab
Chlorine Residual						0.05	****	Grab
Phenol	67.6 (130)		135 (260)	0.3		0.6	1 Day/Month	Composite
Total Phosphorus (as P)	Monitor Only						1 Day/Month	Composite
Ammonia Nitrogen (as N)	Monitor Only						1 Day/Month	Composite
Total Nitrogen	Monitor Only						1 Day/Month	Composite
Toluene	See Special Condition 10.D.2						1 Day/Month	Composite

* The effluent limitations, monitoring and reporting requirements on this page are applicable for Discharge Numbers 002 when it is used to discharge secondary effluent.

**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.

****The 30-day average percent removal shall not be less than 85%. See Special Condition 16.

*****See Special Condition 9.

*****See Special Condition 8

See Special Condition 19 for additional sampling.

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

Fecal Coliform shall be monitored May through October and 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.

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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	
COD	3 days/week	Composite
Suspended Solids	3 days/week	Composite

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

Two influent streams to be sampled (P-Chem plant and ABRTF).

Flow (MGD) shall be reported on the Discharge Monitoring Report (DMR) as monthly average and daily maximum. COD and Suspended Solids shall be reported on the DMR as a monthly average concentration. COD needs to be converted to the calculated BOD₅ using the correlation developed.

Special Conditions

SPECIAL CONDITION 1. This Permit may be modified to include different final effluent limitations or requirements which are consistent with applicable laws and regulations. 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 Section 122.63 and Without Public Notice.

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 (NetDMRs) instead of mailing paper DMRs to the IEPA. More information, including registration information for the NetDMR program, can be obtained on the IEPA website, <http://www.epa.state.il.us/water/net-dmr/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 Net-DMRs 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 for Discharge Number 002 shall be taken at a point representative of the discharge, prior to admixture with outfall A02, and prior to entry into the receiving stream.

SPECIAL CONDITION 9. For Discharge No. 002, any use of chlorine to control slime growths, odors or as an operational control, etc. shall not exceed the limit of 0.05 mg/L (daily maximum) total residual chlorine in the effluent. Sampling is required on a daily grab basis during the chlorination process. Reporting shall be submitted on the DMR's on a monthly basis.

SPECIAL CONDITION 10.

A. Publicly Owned Treatment Works (POTW) Pretreatment Program General Provisions

1. The Permittee shall implement and enforce its approved Pretreatment Program which was approved on July 24, 1997 and all approved subsequent modifications thereto. The Permittee shall maintain legal authority adequate to fully implement the Pretreatment Program in compliance with Federal (40 CFR 403), State, and local laws and regulations. All definitions in this section unless specifically otherwise defined in this section, are those definitions listed in 40 CFR 403.3. USEPA Region 5 is the Approved Authority for the administration of pretreatment programs in Illinois. The Permittee shall:

- a. Develop and implement procedures to ensure compliance with the requirements of a pretreatment program as specified in 40 CFR 403.8(f)(2).
- b. Carry out independent inspection and monitoring procedures at least once per year, which will determine whether each significant industrial user (SIU) is in compliance with applicable pretreatment standards;

Special Conditions

- c. Perform an evaluation, at least once every two (2) years, to determine whether each SIU needs a slug control plan. If needed, the slug control plan shall include the items specified in 40 § 403.8(f)(2)(vi);
 - d. Update its inventory of Industrial Users (IUs) at least annually and as needed to ensure that all SIUs are properly identified, characterized, and categorized;
 - e. Receive and review self monitoring and other IU reports to determine compliance with all pretreatment standards and requirements, and obtain appropriate remedies for noncompliance by any IU with any pretreatment standard and/or requirement;
 - f. Investigate instances of noncompliance, collect and analyze samples, and compile other information with sufficient care as to produce evidence admissible in enforcement proceedings, including judicial action;
 - g. Require development, as necessary, of compliance schedules by each industrial user to meet applicable pretreatment standards; and,
 - h. Maintain an adequate revenue structure and staffing level for continued operation of the Pretreatment Program.
2. The Permittee shall issue/reissue permits or equivalent control mechanisms to all SIUs prior to expiration of existing permits or prior to commencement of discharge in the case of new discharges. The permits at a minimum shall include the elements listed in 40 CFR § 403.8(f)(1)(iii)(B).
 3. The Permittee shall develop, maintain, and enforce, as necessary, local limits to implement the general and specific prohibitions in 40 CFR § 403.5 which prohibit the introduction of any pollutant(s) which cause pass through or interference and the introduction of specific pollutants to the waste treatment system from any source of nondomestic discharge.
 4. In addition to the general limitations expressed in Paragraph 3 above, applicable pretreatment standards must be met by all industrial users of the POTW. These limitations include specific standards for certain industrial categories as determined by Section 307(b) and (c) of the Clean Water Act, State limits, or local limits, whichever are more stringent.
 5. The USEPA and IEPA individually retain the right to take legal action against any industrial user and/or the POTW for those cases where an industrial user has failed to meet an applicable pretreatment standard by the deadline date regardless of whether or not such failure has resulted in a permit violation.
 6. The Permittee shall establish agreements with all contributing jurisdictions, as necessary, to enable it to fulfill its requirements with respect to all IUs discharging to its system.
 7. Unless already completed, the Permittee shall within twenty-four (24) months of the effective date of this Permit submit to USEPA and IEPA a proposal to modify and update its approved Pretreatment Program to incorporate Federal revisions to the general pretreatment regulations. The proposal shall include all changes to the approved program and the sewer use ordinance which are necessary to incorporate the revisions of the Pretreatment Streamlining Rule (which became effective on November 14, 2005), which are considered required changes, as described in the Pretreatment Streamlining Rule Fact Sheet 2.0: Required changes, available at: http://cfpub.epa.gov/npdes/whatsnew.cfm?program_id=3. This includes any necessary revisions to the Permittee's Enforcement Response Plan (ERP).
 8. Within 24 months from the effective date of this permit, the Permittee shall conduct a technical re-evaluation of its local limitations consistent with U.S. EPA's Local Limits Development Guidance (July 2004) and spreadsheet found at: <http://www.epa.gov/region5/water/npdestek/Locallmt.XLS>, and submit the evaluation and any proposed revisions to its local limits to IEPA and U.S. EPA Region 5 for review and approval. To demonstrate technical justification for new local industrial user limits or justification for retaining existing limits, the following information must be submitted to U.S. EPA:
 - a. Total plant flow
 - b. Domestic/commercial pollutant contributions for pollutants of concern
 - c. Industrial pollutant contributions and flows
 - d. Current POTW pollutant loadings, including loadings of conventional pollutants
 - e. Actual treatment plant removal efficiencies, as a decimal (primary, secondary, across the wastewater treatment plant)
 - f. Safety factor to be applied
 - g. Identification of applicable criteria:
 - i. NPDES permit conditions
 - Specific NPDES effluent limitations
 - Water-quality criteria
 - Whole effluent toxicity requirements

Special Conditions

- Criteria and other conditions for sludge disposal
 - ii. Biological process inhibition
 - Nitrification
 - Sludge digester
 - iii. Collection system problems
 - h. The Permittee's sludge disposal methods (land application, surface disposal, incineration, landfill)
 - i. Sludge flow to digester
 - j. Sludge flow to disposal
 - k. % solids in sludge to disposal, not as a decimal
 - l. % solids in sludge to digester, not as a decimal
 - m. Plant removal efficiencies for conventional pollutants
 - n. If revised industrial user discharge limits are proposed, the method of allocating available pollutants loads to industrial users
 - o. A comparison of maximum allowable headworks loadings based on all applicable criteria listed in g, above
 - p. Pollutants that have caused:
 - i. Violations or operational problems at the POTW, including conventional pollutants
 - ii. Fires and explosions
 - iii. Corrosion
 - iv. Flow obstructions
 - v. Increased temperature in the sewer system
 - vi. Toxic gases, vapors or fumes that caused acute worker health and safety problems
 - vii. Toxicity found through Whole Effluent Toxicity testing
 - viii. Inhibition
 - q. Pollutants designated as "monitoring only" in the NPDES permit
 - r. Supporting data, assumptions, and methodologies used in establishing the information a through q above
9. The Permittee's Pretreatment Program has been modified to incorporate a Pretreatment Program Amendment approved by USEPA on May 30, 2002, July 24, 2001, and May 4, 2006. The amendment became effective on the date of approval and is a fully enforceable provision of your Pretreatment Program.

Modifications of your Pretreatment Program shall be submitted in accordance with 40 CFR § 403.18, which established conditions for substantial and nonsubstantial modifications. All requests should be sent in electronic format to r5npdes@epa.gov, attention: NPDES Programs Branch.

B. Reporting and Records Requirements

1. The Permittee shall provide an annual report briefly describing the Permittee's pretreatment program activities over the previous calendar year. Permittees who operate multiple plants may provide a single report providing all plant-specific reporting requirements are met. Such report shall be submitted no later than April 28 of each year to USEPA Region 5, 77 West Jackson Blvd., Chicago, Illinois 60604, Attention: Water Enforcement and Compliance Assurance Branch, and shall be in the format set forth in IEPA's POTW Pretreatment Report Package which contains information regarding:
- a. An updated listing of the Permittee's significant industrial users, indicating additions and deletions from the previous year, along with brief explanations for deletions. The list shall specify which categorical Pretreatment standards, if any, are applicable to each Industrial User.
 - b. A descriptive summary of the compliance activities including numbers of any major enforcement actions, (i.e., administrative orders, penalties, civil actions, etc.), and the outcome of those actions. This includes an assessment of the compliance status of the Permittee's industrial users and the effectiveness of the Permittee's Pretreatment Program in meeting its needs and objectives.
 - c. A description of all substantive changes made to the Permittee's Pretreatment Program. Changes which are "substantial modifications" as described in 40 CFR § 403.18(c) must receive prior approval from the USEPA.
 - d. Results of sampling and analysis of POTW influent, effluent, and sludge.
 - e. A summary of the findings from the priority pollutants sampling. As sufficient data becomes available the IEPA may modify this Permit to incorporate additional requirements relating to the evaluation, establishment, and enforcement of local limits for organic pollutants. Any permit modification is subject to formal due process procedures pursuant to State and Federal law and regulation. Upon a determination that an organic pollutant is present that causes interference or pass through, the Permittee shall establish local limits as required by 40 CFR § 403.5(c).

Special Conditions

2. The Permittee shall maintain all pretreatment data and records for a minimum of three (3) years. This period shall be extended during the course of unresolved litigation or when requested by the IEPA or the Regional Administrator of USEPA. Records shall be available to USEPA and the IEPA upon request.
3. The Permittee shall establish public participation requirements of 40 CFR 25 in implementation of its Pretreatment Program. The Permittee shall at least annually, publish the names of all IU's which were in significant noncompliance (SNC), as defined by 40 CFR § 403.8(f)(2)(viii), in a newspaper of general circulation that provides meaningful public notice within the jurisdictions served by the Permittee or based on any more restrictive definition of SNC that the POTW may be using.
4. The Permittee shall provide written notification to USEPA Region 5, 77 West Jackson Blvd., Chicago, Illinois 60604, Attention: NPDES Programs Branch and to the Deputy Counsel for the Division of Water Pollution Control, IEPA, 1021 North Grand Avenue East, P.O. Box 19276, Springfield, Illinois 62794-9276 within five (5) days of receiving notice that any Industrial User of its sewage treatment plant is appealing to the Circuit Court any condition imposed by the Permittee in any permit issued to the Industrial User by Permittee. A copy of the Industrial User's appeal and all other pleadings filed by all parties shall be mailed to the Deputy Counsel within five (5) days of the pleadings being filed in Circuit Court.

C. Monitoring Requirements

1. The Permittee shall monitor its influent, effluent and sludge and report concentrations of the following parameters on monitoring report forms provided by the IEPA and include them in its annual report. Samples shall be taken at semi-annual intervals at the indicated reporting limit or better and consist of a 24-hour composite unless otherwise specified below. Semi-annual monitoring shall begin 3 months from the effective date of this permit. Sludge samples shall be taken of final sludge and consist of a grab sample reported on a dry weight basis.

STORET CODE	PARAMETER	Minimum reporting limit
01097	Antimony	0.07 mg/L
01002	Arsenic	0.05 mg/L
01007	Barium	0.5 mg/L
01012	Beryllium	0.005 mg/L
01027	Cadmium	0.001 mg/L
01032	Chromium (hex) (grab not to exceed 24 hours)*	0.01 mg/L
01034	Chromium (total)	0.05 mg/L
01042	Copper	0.005 mg/L
00718	Cyanide (grab)* (available**** or amenable to chlorination)	5.0 ug/L
00720	Cyanide (total) (grab)	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
71900	Mercury (effluent 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
01059	Thallium	0.3 mg/L
01092	Zinc	0.025 mg/L

Minimum reporting limits are defined as - (1) The minimum value below which data are documented as non-detects. or (2) Three to ten times the method detection limit. or (3) The minimum value of the calibration range.

All sample containers, preservatives, holding times, analyses, method detection limit determinations and quality assurance/quality control requirements shall be in accordance with 40 CFR 136.

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.

* Effluent only

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

***Utilize USEPA Method 1631E and the digestion procedure described in Section 11.1.1.2 of 1631E, other approved methods may be

Special Conditions

used for influent (composite) and sludge.

****USEPA Method OIA – 1617.

2. The Permittee shall conduct an analysis for the one hundred and ten (110) organic priority pollutants identified in 40 CFR 122 Appendix D, Table II as amended. This monitoring shall be done annually and reported on monitoring report forms provided by the IEPA and shall consist of the following:
 - a. The influent and effluent shall be sampled and analyzed for the one hundred and ten (110) organic priority pollutants. The sampling shall be done during a day when industrial discharges are expected to be occurring at normal to maximum levels.

Samples for the analysis of acid and base/neutral extractable compounds shall be 24-hour composites.

Three (3) grab samples shall be collected each monitoring day to be analyzed for volatile organic compounds. A single analysis for volatile pollutants (Method 624) may be run for each monitoring day by compositing equal volumes of each grab sample directly in the GC purge and trap apparatus in the laboratory, with no less than one (1) mL of each grab included in the composite.

Wastewater samples must be handled, prepared, and analyzed by GC/MS in accordance with USEPA Methods 624 and 625 of 40 CFR 136 as amended.
 - b. The sludge shall be sampled and analyzed for the one hundred and ten (110) organic priority pollutants. A sludge sample shall be collected concurrent with a wastewater sample and taken as final sludge.

Sampling and analysis shall conform to USEPA Methods 624 and 625 unless an alternate method has been approved by IEPA.
 - c. Sample collection, preservation and storage shall conform to approved USEPA procedures and requirements.
3. In addition, the Permittee shall monitor any new toxic substances as defined by the Clean Water Act, as amended, following notification by the IEPA or USEPA.
4. Permittee shall report any noncompliance with effluent or water quality standards in accordance with Standard Condition 12(e) of this Permit.
5. Analytical detection limits shall be in accordance with 40 CFR 136. Minimum detection limits for sludge analyses shall be in accordance with 40 CFR 503.

D. Removal Credits

Toluene

1. This Permit recognizes a 63.3% removal credit for Toluene, approved by USEPA and subject to the following conditions:
 - a. Applying the Combined Waste stream Formula (CWF) under 40 C.F.R. § 403.6(e) in conjunction with the removal credit for Toluene, the Permittee is to first develop revised limits for Toluene and then calculate CWF discharge permit limit by substituting the revised limits for the Categorical Standards in the CWF.
 - b. The removal credit for Toluene is to be granted exclusively to the Afton Chemical Corporation Facility; and,
 - c. Within six (6) months of the effective date of this Permit, the Permittee shall re-evaluate, and adopt, if necessary, a local limit for Toluene for the Afton Chemical Corporation facility.
2. At least one time per month, the Permittee shall monitor the concentration of Toluene in the primary influent and effluent of the P/Chem Plant, the ABRTF primary influent and effluent, and the ABRTF secondary (final) effluent utilizing USEPA Method 624. The Permittee shall also monitor the aqueous and sludge measurements of Toluene of the P/Chem Plant at least one time per month. The Permittee shall submit annual reports of the primary removal percentage calculated for each such sample and the overall removal percentage for the year of Toluene calculated pursuant 40 C.F.R. § 403.7(b) and Revision To Removal Credit Application For Toluene, dated May 2015. The calculated removal efficiency shall be adjusted to account for losses due to air emissions from the P/Chem Plant and screw pump, in accordance with the method described in the Permittee's Revision to Removal Credit Application for Toluene, dated May 2015. The report shall be submitted with the DMRs to IEPA and USEPA annually in the second month following the issuance of the initial industrial discharge permit limits implementing removal credits for Toluene.
3. Should the actual removal percentage for Toluene drop significantly below the percentage for which the removal credit was granted,

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the Permittee shall implement corrective action to bring the removal percentage for Toluene up to the level for which the removal credit was granted. The Permittee shall take appropriate corrective action within sixty (60) days of written notification by IEPA and/or USEPA that a removal percentage has dropped below an authorized level. This sixty (60) day time period may be extended by IEPA and/or USEPA if the Permittee or the Afton Chemical Corporation demonstrates that a longer time period is necessary to undertake the appropriate corrective action. Any extension of this sixty (60) day time period must be approved by IEPA and/or USEPA in writing. If the corrective action fails to bring the removal percentage up to an acceptable level within the agreed upon time period, this Permit may be reopened and modified pursuant to the provisions of Paragraph 6 below.

4. Should the Permittee be notified pursuant to Paragraph 3 above, the sampling frequency for Toluene shall increase to four times per month and the results shall be reported to IEPA and USEPA quarterly, within 30 days after the quarterly monitoring period. If the actual removal percentage for Toluene meets or exceeds the level for which the removal credit is granted for twelve consecutive months after notification pursuant to Paragraph 3 above, the Permittee may decrease sampling frequency for Toluene to monthly and the reporting frequency can be decreased to annually, with the first annual report due with the DMRs in the second month following the end of the annual reporting period and annually from then on.
5. Should the Permittee change operations at the treatment plant in a manner reasonably expected to reduce the removal of Toluene below the removal credit, the Permittee shall notify IEPA and USEPA in writing within fourteen (14) days of making such operational changes(s). The sampling frequency for Toluene shall increase to four times per month for the first six months after the implementation of the operational change. Removal percentages for Toluene shall be reported quarterly to IEPA and USEPA during this six month period.
6. Should corrective action fail to bring the removal percentage up to an acceptable level, this Permit may be reopened and modified to include a withdrawal or modification of the removal credit pursuant to 40 C.F.R. § 403.7(f)(4)(ii) and the provisions of Paragraph 3 above. Such action would not be done without Public Notice of the Removal Credit Modification or Withdrawal.
7. The removal credit shall be re-calculated pursuant to 40 C.F.R. § 403.7(b) and Revision to Removal Credit Application for Toluene, dated May 2015, and these re-calculations submitted with the application for NPDES permit renewal

E. Pretreatment Reporting

US EPA Region 5 is the approval Authority for administering the pretreatment program in Illinois. All requests for modification of pretreatment program elements should be submitted in redline/strikeout electronic format and must be sent to US EPA at r5npdes@epa.gov.

Permittee shall upon notice from US EPA, modify any pretreatment program element found to be inconsistent with 40 CFR 403.

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 Outfall 002.

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. Unless substitute tests are pre-approved, the following tests are required:
 - a. Fish - 96 hour static LC₅₀ Bioassay using fathead minnows (*Pimephales promelas*).
 - b. Invertebrate 48-hour static LC₅₀ Bioassay using *Ceriodaphnia*.
2. Test Requirements - The above tests shall be conducted using 24-hour composite samples unless otherwise authorized by the IEPA. 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. Sample collection and testing must be conducted in the 18th, 15th, 12th, and 9th month prior to the expiration date of this Permit. Effluent samples must be analyzed for ammonia, chloride, nitrite, and TDS, given that these parameters have been associated with acute toxicity in past testing.
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. Results from ammonia, chloride, nitrite, and TDS analyses, as well as any other parameter believed to contribute to effluent toxicity, must be included in the bioassay report.
4. Toxicity – Mixing for acute whole effluent toxicity is granted providing effluent does not exceed 1.0 Toxic Units outside of the ZID

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and toxicity only occurs in response to a regulated parameter that has been granted mixing. Should a bioassay result in greater than 1.0 Toxic Units outside of the ZID, or should the 100% effluent treatment exceed 1.0 Toxic Units due to an unknown toxicant or a parameter that has not been granted mixing, 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 one (1) week of becoming available to the Permittee. Should any of the additional bioassays result in greater than 1.0 Toxic Units outside of the ZID, or should the 100% effluent treatment exceed 1.0 Toxic Unit due to an unknown toxicant or a parameter that has not been granted mixing, 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 Identification and Reduction Evaluation - Should any of the additional bioassays result in toxicity to $\geq 50\%$ of organisms tested in the 100% effluent treatment, the Permittee must contact the IEPA within one (1) day of the results becoming available to the Permittee and begin the toxicity identification evaluation process in accordance with Methods for Aquatic Toxicity Identification Evaluations, EPA/600/6-91/003. The IEPA may also require, upon notification, that the Permittee prepare a plan for toxicity reduction evaluation to be developed in accordance with Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants, EPA/833B-99/002, which 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 CONDITION 13. Discharge Number A02 (discharge from P-chem wet weather storage facility) and Discharge 004 (Cahokia pump station) are emergency high level bypass. Discharge from these outfalls are prohibited. The Permittee shall maintain continuous electronic monitors capable of detecting all discharges from each prohibited discharge outfall or shall inspect each listed prohibited discharge outfall listed above within 24 hours of receiving .25 inches of precipitation or greater within a 24 hour period as recorded at the nearest National Weather Service Reporting Station. Permittee shall utilize chalk or block devices or other discharge confirming devices approved by the Department to enhance visual monitoring. These prohibited discharges, if they occur, are subject to conditions A-E listed below.

- A. Definitions
"Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a discharge. Severe property damage does not mean economic loss caused by delays in production.
- B. Notice
1. Anticipated discharge. If the Permittee knows in advance of the need for a prohibited discharge from Discharge Number A02 and 004, it shall submit prior notice, if possible at least ten days before the date of the discharge.
 2. Unanticipated discharge. The Permittee shall submit notice of an unanticipated discharge as required in Standard Condition 12(f) of this Permit (24-hour notice).
- C. Limitation on IEPA enforcement discretion. The IEPA may take enforcement action against a Permittee for prohibited discharges from discharge number A02 and 004, unless:
1. Discharge was unavoidable to prevent loss of life, personal injury, or severe property damage;
 2. There was no feasible alternatives to the discharge, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a discharge which occurred during normal periods of equipment downtime or preventive maintenance; and
 3. The Permittee submitted notices as required under Standard Condition 12(f) of this Permit.
- D. Emergency discharges when discharging, shall be monitored daily by grab sample for BOD₅, Suspended Solids and Fecal Coliform. The Permittee shall submit the monitoring results on Discharge Monitoring Report forms using one such form for each month in which discharging occurs. The Permittee shall specify the number of discharges per month that occur and shall report this number in the quantity daily maximum column. The Permittee shall report the highest concentration value of BOD₅ and Suspended Solids and Fecal Coliform discharged in the concentration daily maximum column.
- E. The above limitations on enforcement discretion apply only with respect to IEPA. They do not serve as a limitation on the ability of any other governmental agency or person to bring an enforcement action in accordance with the Federal Clean Water Act.

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SPECIAL CONDITION 14. 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 U.S. EPA and 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 25 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 this permit or the Sludge Permit, the results of this monitoring shall be included in the reporting of data submitted to the IEPA.

Where applicable, the Permittee shall comply with existing federal regulations governing sewage sludge use or disposal and shall comply with all existing applicable regulations in any jurisdiction in which the sewage sludge is actually used or disposed.

Where applicable, the Permittee shall comply with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish the standards for sewage sludge use or disposal even if the permit has not been modified to incorporate the requirement.

Where applicable, the Permittee shall ensure that the applicable requirements in 40 CFR Part 503 are met when the sewage sludge is applied to the land, placed on a surface disposal site, or fired in a sewage sludge incinerator.

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 15. BOD₅ and Suspended Solids (85% removal required) For Discharge No. 002. In accordance with 40 CFR 133, the 30-day average percent removal shall not be less than 85 percent except as provided in Sections 133.103 and 133.105. The percent removal need not be reported to the IEPA on DMRs but influent and effluent data must be available, as required elsewhere in this Permit, for IEPA inspection and review. For measuring compliance with this requirement, 5 mg/L shall be added to the effluent CBOD₅ concentration to determine the effluent BOD₅ concentration.

Percent removal is a percentage expression of the removal efficiency across a treatment plant for a given pollutant parameter, as determined from the 30-day average values of the raw wastewater influent concentrations to the facility and the 30-day average values of the effluent pollutant concentrations for a given time period.

SPECIAL CONDITION 16. The Permittee shall work towards the goals of achieving no discharges from sanitary sewer overflows or basement back-ups and ensuring that overflows or back-ups, when they do occur do not cause or contribute to violations of applicable standards or cause impairment in any adjacent receiving water. Overflows from sanitary sewers are expressly prohibited by this permit and by Ill. Adm. Code 306.304. In order to accomplish these goals of complying with this prohibition and mitigating the adverse impacts of any such overflows if they do occur, the Permittee shall (A) identify and report to IEPA all SSOs that do occur, and (B) develop, implement and submit to the IEPA a Capacity, Management, Operations, and Maintenance (CMOM) plan which includes an Asset Management strategy within 12 months of the effective date of this Permit or review and revise any existing plan accordingly. The CMOM plan shall be drafted and applicable to all sanitary sewers owned and operated by the Village of Sauget and American Bottoms Regional Wastewater Treatment Facility. The Permittee shall modify the Plan to incorporate any comments that it receives from IEPA and shall

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implement the modified plan as soon as possible. The Permittee should work as appropriate, in consultation with affected authorities at the local, county, and/or state level to develop the plan components involving third party notification of overflow events. The Permittee may be required to construct additional sewage transport and/or treatment facilities in future permits or other enforceable documents should the implemented CMOM plan indicate that the Permittee's facilities are not capable of conveying and treating the flow for which they are designed.

The CMOM plan shall include the following elements:

A. Measures and Activities:

1. A complete map and system inventory for the collection system owned and operated by the Permittee;
2. Organizational structure; budgeting; training of personnel; legal authorities; schedules for maintenance, sewer system cleaning, and preventative rehabilitation; checklists, and mechanisms to ensure that preventative maintenance is performed on equipment owned and operated by the Permittee;
3. Documentation of unplanned maintenance;
4. An assessment of the capacity of the collection and treatment system owned and operated by the Permittee at critical junctions and immediately upstream of locations where overflows and backups occur or are likely to occur; use flow monitoring as necessary;
5. Identification and prioritization of structural deficiencies in the system owned and operated by the Permittee;
6. Operational control, including documented system control procedures, scheduled inspections and testing;
7. The Permittee shall develop and implement an Asset Management strategy to ensure the long-term sustainability of the collection system. Asset Management shall be used to assist the Permittee in making decisions on when it is most appropriate to repair, replace or rehabilitate particular assets and develop long-term funding strategies; and
8. Asset Management shall include but is not limited to the following elements:
 - a. Asset Inventory and State of the Asset;
 - b. Level of Service;
 - c. Critical Asset Identification;
 - d. Life Cycle Cost; and
 - e. Long-Term Funding Strategy.

B. Design and Performance Provisions:

1. Monitor the effectiveness of CMOM;
2. Upgrade the elements of the CMOM plan as necessary; and
3. Maintain a summary of CMOM activities.

C. Overflow Response Plan:

1. Know where overflows and back-ups within the facilities owned and operated by the Permittee occur;
2. Respond to each overflow or back-up to determine additional actions such as clean up; and
3. Locations where basement back-ups and/or sanitary sewer overflows occur shall be evaluated as soon as practicable for excessive inflow/infiltration, obstructions or other causes of overflows or back-ups as set forth in the System Evaluation Plan.

D. System Evaluation Plan:

1. Summary of existing SSO and Excessive I/I areas in the system and sources of contribution;
2. Evaluate plans to reduce I/I and eliminate SSOs;
3. Special provisions for Pump Stations and force mains and other unique system components; and
4. Construction plans and schedules for correction.

E. Reporting and Monitoring Requirements:

1. Program for SSO detection and reporting; and
2. Program for tracking and reporting basement back-ups, including general public complaints.

F. Third Party Notice Plan:

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1. Describes how, under various overflow scenarios, the public, as well as other entities, would be notified of overflows within the Permittee's system that may endanger public health, safety or welfare;
2. Identifies overflows within the Permittee's system that would be reported, giving consideration to various types of events including events with potential widespread impacts;
3. Identifies who shall receive the notification;
4. Identifies the specific information that would be reported including actions that will be taken to respond to the overflow;
5. Includes a description of the lines of communication; and
6. Includes the identities and contact information of responsible POTW officials and local, county, and/or state level officials.

For additional information concerning USEPA CMOM guidance and Asset Management please refer to the following web site addresses.

http://www.epa.gov/npdes/pubs/cmom_guide_for_collection_systems.pdf and

http://water.epa.gov/type/watersheds/wastewater/upload/guide_smallsystems_assetmanagement_bestpractices.pdf

SPECIAL CONDITION 17. . A zone of initial dilution (ZID) is recognized for ammonia, Copper, Zinc, 2,4,6-trichlorophenol, 1-Chloro-2-nitrobenzene, 2-Chloroaniline with dimensions of 100 feet across the width of the river from the end-of-pipe and 18.5 feet downstream from this point. Within the ZID, 49:1 dilution is afforded. A mixing zone is recognized for ammonia, Copper, Phenols, Zinc, Sulfate, Chloride, chlorobenzene, dichlorobromomethane, 4,6-dinitro-o-cresol, pentachlorophenol, 2,4,6-trichlorophenol, benzo(b)fluoranthene, bis(2-ethylhexyl)phthalate, 1-Chloro-2-nitrobenzene, 2-Chloroaniline, and 4-Chloroaniline. A mixing zone is recognized with dimensions extending 300 feet across the width of the river and 2,000 feet downstream. Within the mixing zone 200:1 dilution is afforded.

SPECIAL CONDITION 18. The permittee shall sample the effluent from 002 on a monthly basis for a period of one year and analyse the sample for Alpha-hexachlorocyclohexane, Chlordane and 4,4'-Dichlorodiphenyl dichloroethane. This permit may be modified, with Public Notice and opportunity for public hearing, should it be determined that a reasonable potential to exceed water quality standards exists from the sample results.

SPECIAL CONDITION NO. 19. The Permittee shall, within thirty (30) months of the effective date of this permit, prepare and submit to the Agency a feasibility study that identifies the method, timeframe, and costs of reducing phosphorus levels in its discharge to a level consistently meeting a potential future effluent limit of 1 mg/L and 0.5 mg/L. The study shall evaluate the construction and O & M costs of the application of these limits on a monthly, seasonal and annual average basis.

SPECIAL CONDITION NO. 20. The Permittee shall develop and submit to the Agency a Phosphorus Discharge Optimization Plan within twenty four (24) months of the effective date of this permit. The plan shall include a tentative schedule for the implementation of these optimization measures. Annual progress reports on the optimization of the existing treatment facilities shall be submitted to the Agency by June 30 of each year. In developing the plan, the Permittee shall evaluate and implement, where appropriate, a range of measures for reducing phosphorus discharges from the treatment plant, including possible source reduction measures, operational improvements, and minor facility modifications that will optimize reductions in phosphorus discharges from the wastewater treatment facility. The Permittee's evaluation shall include, but not be limited to, an evaluation of the following optimization measures:

- A. WWTF influent reduction measures.
 1. Evaluate the phosphorus reduction potential of users.
 2. Determine which sources have the greatest opportunity for reducing phosphorus (i.e., industrial, commercial, institutional, municipal and others).
 - a. Determine whether known sources (e.g., restaurant and food preparation) can adopt phosphorus minimization and water conservation plans.
 - b. Evaluate and implement local limits on influent sources of excessive phosphorus.
- B. WWTF effluent reduction measures.
 1. Reduce phosphorus discharges by optimizing existing treatment processes.
 - a. Adjust the solids retention time for biological phosphorus removal.
 - b. Adjust aeration rates to reduce dissolved oxygen concentrations.
 - c. Add baffles to existing units to improve microorganism conditions by creating divided anaerobic, anoxic, and aerobic zones.
 - d. Change aeration settings in plug flow basins by turning off air or mixers at the inlet side of the basin system.
 - e. Minimize impact on recycle streams by improving aeration within holding tanks.
 - f. Reconfigure flow through existing basins to enhance biological nutrient removal.
 - g. Promote production of volatile fatty acids for biological phosphorus removal.

