

Admission File

New York State Department of Environmental Conservation

Division of Environmental Permits, 4th Floor

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Joe Martens
Commissioner

June 9, 2014

*1-1-2014 thru
12/31/2015*

Mr. Tom Rhoads, P.E.
Commissioner
Onondaga Co. Dept of Water Environment Protection
650 Hiawatha Blvd West
Syracuse, NY 13204

Re: Brewerton Water Pollution Control Plant
DEC#7-3122-00009/00001 SPDES#: NY0027596

Dear Mr. Rhoads:

Enclosed is a final modified State Pollutant Discharge Elimination System (SPDES) permit for the above referenced facility. This permit has been modified under the Environmental Benefit Permit Strategy. Comments and a request for an adjudicatory hearing and a settlement conference were received from Onondaga County Department of Water Protection (OCWEP) on this modification resulting in the department and OCWEP entering into negotiation to resolve the issues raised. The request for a hearing and settlement conference were withdrawn on May 9, 2014 by OCWEP.

Be advised, the Uniform Procedures Regulations (6NYCRR Part 621) provide that an applicant may request a public hearing if a permit contains conditions which are unacceptable to them. Any such request must be made in writing within 30 calendar days of the date of permit issuance and must be addressed to the Chief Permit Administrator at the letterhead address. A copy should also be sent to the Chief Administrative Law Judge at NYSDEC, 625 Broadway, 1st Floor, Albany, NY 12233-1550.

Should you have questions on the administration of this modification, please feel free to contact me at the address or phone number listed above. Should you have technical questions on permit content, please contact the permit engineer, John Weidman, at (518) 402-8197, or the Regional Water Engineer, Joseph Zalewski, at (315) 426-7500.

Sincerely,

Teresa Diehsner
Division of Environmental Permits

Enclosure

- c: D. Bimber, RPA
- J. Zalewski, RWE
- J. Weidman, Permit Engineer
- C. Jamison, CO-BWP Permit Coordinator
- M. Josilo, EPA Reg 2
- M. Child, IJC
- NYSDOH District Office

Responsiveness Summary
Brewerton Water Pollution Control Plant
DEC ID 7-3122-00009/00001 NY0027596
Prepared By: John Weidman, Bureau of Water Permits
January 2014

Background The above referenced draft SPDES permit was developed as a Department initiated modification pursuant to 6NYCRR Part 750-1.18, New York State's Environmental Benefit Permit Strategy (EBPS). The draft permit was public noticed in the Environmental Notice Bulletin on 12/15/2010 and in the Eagle Star Review on 12/29/2010. Comments and a request for hearing were received from Onondaga County Department of Water Environment Protection (County) dated 1/28/2011. Further comments dated 4/15/2011, 8/8/2011, 3/12/2012, and 3/21/2014 were also received providing comments on the draft permit and revisions. In response to comments a revised draft permit was provided for County review on 5/19/2011 and 10/15/2012. As a result of all comments received, the following summarizes the changes that have been made to the original draft permit dated December 2010. Further responses are provided for the 1/28/2011 and 3/21/2014 comments below. A revised draft permit was provided to USEPA on 5/12/2014 and comments were provided to the Department and are addressed below.

1. Corrected contact information on page 1 of the permit (see Miscellaneous Comments below).
2. Corrected typo on permit limits page of the permit for Total Suspended Solids (sample type). Corrected typo to continue influent monitoring for Settleable Solids and pH. (see Miscellaneous Comments below)
3. Changed limit for total residual chlorine from 0.12 mg/l to 0.14 mg/l (the permit limit for TRC is 2.0 mg/l in the current SPDES permit). Changed the effective date for this new TRC limit to May 15, 2016. See below for additional discussion.
4. Removed Capacity, Management, Operation and Maintenance Plan requirements (pages 6-8 of original draft SPDES permit). Replaced with Sewer System Evaluation Survey requirements on Schedule of Submittals page of the permit.
5. Added General Requirements and updated the standard language on the Recording, Reporting and Additional Monitoring Requirements page of the permit (page 11 – 13 of 13).
6. SPDES Fact Sheet has been updated accordingly.

In addition, the following summarizes the Department's response to the comments provided in the January 28, 2011 letter from the Onondaga County Department of Water Environment Protection on the draft SPDES Permit for the Brewerton Wastewater Treatment Plant:

Comment – Capacity, Management, Operation and Maintenance Plan (CMOM): The County provided several comments in their January 28, 2011 comment letter pertaining to the CMOM program requirements included in the draft.

NYSDEC Response to CMOM comments: Upon further review, the Department has determined that it would be more appropriate, for this facility, to replace the Capacity, Management, Operation and Maintenance (CMOM) Plan requirements contained in the draft permit with conditions designed to address Infiltration/Inflow (I/I) issues. To address the I/I issues at the Brewerton facility, the CMOM requirements (pages 6-8 of the original draft permit) were removed and the schedule of compliance page revised, removing the CMOM requirements and adding requirements for the systematic examination of the sewer system to determine, for each source of I/I, the specific location, estimated flow rates, and the most cost-effective method of rehabilitation.

It should be noted that the Sewer System Evaluation Survey (SSES) requirements are now on the Schedule of Submittals page of the permit instead of the Schedule of Compliance page.

The proposed SSES requires submission of "results of a systematic examination of the sewer system for the Department's review and approval to determine, for each source of I/I, the specific location, estimated flow rates, and the most cost-effective method of rehabilitation."

It also requires that the SSES include a prioritized list of projects necessary to minimize I/I and a schedule of implementation of those projects.

As written, the *Schedule of Submittals* allows the County flexibility to prioritize projects, which may focus on County owned infrastructure (County responsibility). The condition does not mandate action on town infrastructure. To clarify this, the Department has modified requirement 2 of the Schedule of Submittals page to add that the County will be responsible for implementing the approved schedule for "County owned infrastructure" by "DEC Approval + 3 months". No other changes are necessary.

Permit Limits – Total Chlorine Residual (0.12mg/l) – page 3 of 12

TRC Comment (a): Request to utilize the 7Q10 and 30Q10 from the most recent 13 year flow monitoring data set from the Oneida River Station near Euclid (USGS 04247000), instead of utilizing or incorporating the nearly 60 year old data set that includes the former gauge station at Caughdenoy which was abandoned in 1997 following the installation near Euclid.

NYSDEC Response to TRC Comment (a): USGS gage 04247000, Oneida River near Euclid, is located approximately 7.6 miles downstream from the Brewerton WPCP discharge and the former USGS station 04246500, Oneida River at Caughdenoy. According to USGS the records from station 04247000 are not equivalent to those published from station 04246500 due to flow regulation between sites. Therefore, the Department will continue to use the flow records from station 04246500, Oneida River at Caughdenoy, as they are more reflective of flow conditions near the point of discharge. However, the 7Q10 critical low flow has been updated to 82.7 MGD by utilizing the entire period of record (through Sept 1998) for the station. As a result, the revised WQBEL for Total Residual Chlorine is 0.14 mg/l, which is an increase from the 0.12 limit contained in the draft SPDES Permit.

TRC Comment (b): Request to grant the County a 3 month extension to the current compliance schedule of 12 months from effective date of permit. Such an extension was requested to allow

the County time to procure consultant services, allow for 60 days of DEC review of the design, and complete construction.

NYSDEC Response to TRC Comment (b): After discussing this comment with the County, the Department will allow for a 9 month extension to the current compliance schedule of 12 months from the effective date of the permit modification to allow the County enough time to procure consultant services, allow for DEC review of the design, and to complete construction. Therefore, the revised effective date of the 0.14 mg/l TRC limit will be May 15, 2016.

Mercury Minimization Program (MMP) Comment – page 5 of 12: The MMP comment refers to inspections and sampling of dental facilities raising significant logistical and legal issues, especially with respect to Doctor Patient confidentiality (HIPAA) requirements. Therefore, the County believes that mandatory inspections of all dental facilities should not be required and that an alternative approach would be to require of those dental offices that do not file NYSDEC notices.

NYSDEC Response: In accordance with TOGS 1.3.10 (Mercury – SPDES Permitting, Multiple Discharge Variance, and Water Quality Monitoring), to be authorized by the Multiple Discharge Variance (MDV), a permit must include the limits and Mercury Minimization Program version as specified in Table 3 of the TOGS. For this facility (a POTW with a design flow < 5 MGD), Table 3 indicates that permit limits will not be necessary, but does require a Mercury Minimization Program for Low Priority POTWs (refer to page 48 of TOGS 1.3.10).

The alternative to obtaining a MDV to is to obtain an Individual Discharge Variance (IDV). As addressed in TOGS 1.3.10 (starting on page 24), IDVs should only be necessary upon a permittee's refusal to be authorized by the MDV. Such permittees have two regulatory options to obtain necessary permit authorization, i.e., accept a Mercury effluent limit of 0.70 ng/L, or apply for and receive approval of a site-specific IDV in accordance with 6 NYCRR Part 702.17.

If a permittee requests any deviation from the MDV during the public notice period, it must be supported by an IDV application. Since many permittees are likely to be unaware of this requirement, such permittees must be advised of the need for an IDV application. Therefore, if the County would like to obtain an IDV for this facility an application must be submitted within 60 days of this notification (or 60 days from the date of this letter). IDV application requirements are summarized in *Appendix D* of TOGS 1.3.10.

Permit requirements based on an approved IDV must conform to both 6 NYCRR Part 702.17(e) and the TMDL, and these should be identical to the MDV requirements except where differences have been justified by the permittee. It is possible for an IDV to result in more or less stringent requirements as compared to the MDV. All IDV authorized permits will be placed on the Department's EBPS *No Administrative Renewal List*. IDVs last for five years, or the term of the permit, whichever period is less. For such permits, the permit language identified on page 25 of TOGS 1.3.10 must be added to the bottom of the MMP permit page.

Considering the flexibility contained in the MDV, it is not clear how a permittee can successfully demonstrate that an IDV which is less stringent than the MDV is acceptable. However, assuming this demonstration can be made to the satisfaction of Department, such IDV requests for Great Lakes Basin dischargers must be sent to USEPA Region 2 for their review. If a permittee's IDV application is not accepted by either NYSDEC or USEPA, then either authorization via the MDV, an effluent limit of 0.70 ng/L, or denial of the permit must be pursued.

Miscellaneous Comments

Comment 1: Permittee Name and address (pg 1 of 12)

NYSDEC Response: A permittee is the legally responsible party accountable for undertaking a permitted action in accordance with the provisions and conditions of a permit. Onondaga County is considered the legally responsible party. Onondaga County Department of Water Environment Protection is a department within the County and not considered the permittee. Onondaga County will remain as the permittee name in the permit.

Although Onondaga County's address is 1100 Civic Center, 421 Montgomery Street, in an effort to send the permit to the designated person in the attention line, the address on the permit has been changed to 650 Hiawatha Blvd. West, Syracuse, NY 13204.

Comment 2: Responsible Official or Agent should be Michael Bumbolo (pg 1 of 12)

NYSDEC Response: Michael Bumbolo is listed on the DMR Authorization form for the Brewerton WWTP. To account for future changes only Head Operator is listed on page 1 of the permit

Comment 3: TSS Limits should be 30 day arithmetic mean, not daily maximum (pg 3 of 12)

NYSDEC Response: The draft permit has been revised as requested.

Comment 4: Settleable Solids, missing checked box for influent grab sample (pg 3 of 12)

NYSDEC Response: The draft permit has been revised as requested.

Comment 5: pH, missing checked box for influent grab sample (pg 3 of 12)

NYSDEC Response: The draft permit has been revised as requested.

Comment 6: Section b – missing the checked box for the County Health Department (pg 12 of 12)

NYSDEC Response: The draft permit has been revised as requested.

Department response to March 21, 2014 comments from Onondaga County WEP on revised draft SPDES permits for Brewerton WPCP

Comment: The County cannot agree to DEC permit enforceable schedule of action items related to the SSES which mandate the County action on town infrastructure.

NYSDEC Response: The proposed SSES condition requires submission of “results of a systematic examination of the sewer system for the Department's review and approval to determine, for each source of I/I, the specific location, estimated flow rates, and the most cost-effective method of rehabilitation.”

It also requires that the SSES include a prioritized list of projects necessary to minimize I/I and a schedule of implementation of those projects.

As written, the *Schedule of Submittals* condition allows the County flexibility to prioritize projects, which may focus on County owned infrastructure (County responsibility). The condition does not mandate action on town infrastructure. To clarify this, the Department has modified requirement 2 of the Schedule of Submittals page to add that the County will be responsible for implementing the approved schedule for “County owned infrastructure” by “DEC Approval + 3 months”. No other changes are necessary.

A revised draft was provided to Sieglinde Pylypchuk, Clean Water Regulatory Branch, US Environmental Protection Agency (USEPA), Region 2, on May 12, 2014 and the following comments have been addressed:

Comment: Footnote 5 on page 3 of the permit should be deleted since it is not needed (“During this October 16 to May 14 period the permittee will continue to operate all treatment processes.”)

NYSDEC Response: Removed second sentence from Footnote 5 on page 3 of the permit as it is not needed.

Comment: Please explain how WET Action Levels on page 4 of the permit were calculated.

NYSDEC Response: Updated WET Action Levels on page 4 of permit to reflect the increase in available dilution that was used to calculate the TRC limit (which resulted in TRC limit being increased, from 0.12 mg/l in original draft permit to 0.14 mg/l in the final permit). The Acute Action Level will increase from 3.8 TUa to 4.4 TUa. The Chronic AL will increase from 24 TUc to 28.6 TUc.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
State Pollutant Discharge Elimination System (SPDES)
DISCHARGE PERMIT



First3.99

Industrial Code: **4952**
 Discharge Class (CL): **05**
 Toxic Class (TX): **N**
 Major Drainage Basin: **07**
 Sub Drainage Basin: **03**
 Water Index Number: **O-66-11**
 Compact Area: **IJC**

SPDES Number: **NY0027596**
 DEC Number: **7-3122-00009/00001**
 Effective Date (EDP): **01/01/2011**
 Expiration Date (ExDP): **12/31/2015**
 Modification Dates: (EDPM) **07/01/2014**

This SPDES permit is issued in compliance with Title 8 of Article 17 of the Environmental Conservation Law of New York State and in compliance with the Clean Water Act, as amended, (33 U.S.C. §1251 et.seq.)(hereinafter referred to as "the Act").

PERMITTEE NAME AND ADDRESS

Name: **Onondaga County**
 Street: **650 Hiawatha Blvd. West**
 City: **Syracuse**

Attention: **Commissioner, WEP**

State: **NY** Zip Code: **13204-1194**

is authorized to discharge from the facility described below:

FACILITY NAME AND ADDRESS

Name: **Brewerton Water Pollution Control Plant**
 Location (C,T,V): **Cicero (T)**
 Facility Address: **Guy Young Road**
 City: **Cicero**

County: **Onondaga**

State: **NY** Zip Code: **13029**

NYTM -E: From Outfall No.: **001** at Latitude: **43 ° 12 ' 58 "** & Longitude: **76 ° 09 ' 19 "**
 into receiving waters known as: **Oneida River** Class: **B**

and; (list other Outfalls, Receiving Waters & Water Classifications)

in accordance with: effluent limitations; monitoring and reporting requirements; other provisions and conditions set forth in this permit; and 6 NYCRR Part 750-1 and 750-2.

DISCHARGE MONITORING REPORT (DMR) MAILING ADDRESS

Mailing Name: **Onondaga County Department of Water Environment Protection**
 Street: **650 Hiawatha Blvd. West**
 City: **Syracuse**
 Responsible Official or Agent: **Head Operator**


State: **NY** Zip Code: **13204-1194**

Phone: **(315) 676-3432**

This permit and the authorization to discharge shall expire on midnight of the expiration date shown above and the permittee shall not discharge after the expiration date unless this permit has been renewed, or extended pursuant to law. To be authorized to discharge beyond the expiration date, the permittee shall apply for permit renewal not less than 180 days prior to the expiration date shown above.

DISTRIBUTION:

CO BWP - Permit Coordinator
 RWE, RPA - Region 7
 EPA Region II - Michelle Josilo
 NYSEFC
 NYSDOH District Office
 JC

Chief Permit Administrator: John J. Ferguson	
Address: Division of Environmental Permits 625 Broadway Albany, NY 12233-1750	
Signature: 	Date: 6/9/14

PERMIT LIMITS, LEVELS AND MONITORING DEFINITIONS

OUTFALL	WASTEWATER TYPE	RECEIVING WATER	EFFECTIVE	EXPIRING		
	This cell describes the type of wastewater authorized for discharge. Examples include process or sanitary wastewater, storm water, non-contact cooling water.	This cell lists classified waters of the state to which the listed outfall discharges.	The date this page starts in effect. (e.g. EDP or EDPM)	The date this page is no longer in effect. (e.g. ExDP)		
PARAMETER	MINIMUM	MAXIMUM	UNITS	SAMPLE FREQ.	SAMPLE TYPE	
e.g. pH, TRC, Temperature, D.O.	The minimum level that must be maintained at all instants in time.	The maximum level that may not be exceeded at any instant in time.	SU, °F, mg/l, etc.			
PARA-METER	EFFLUENT LIMIT	MINIMUM LEVEL (ML)	ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE
	Limit types are defined below in Note 1. The effluent limit is developed based on the more stringent of technology-based limits, required under the Clean Water Act, or New York State water quality standards. The limit has been derived based on existing assumptions and rules. These assumptions include receiving water hardness, pH and temperature; rates of this and other discharges to the receiving stream; etc. If assumptions or rules change the limit may, after due process and modification of this permit, change.	For the purposes of compliance assessment, the permittee shall use the approved EPA analytical method with the lowest possible detection limit as promulgated under 40CFR Part 136 for the determination of the concentrations of parameters present in the sample unless otherwise specified. If a sample result is below the detection limit of the most sensitive method, compliance with the permit limit for that parameter was achieved. Monitoring results that are lower than this level must be reported, but shall not be used to determine compliance with the calculated limit. This PQL can be neither lowered nor raised without a modification of this permit.	Action Levels are monitoring requirements, as defined below in Note 2 which trigger additional monitoring and permit review when exceeded.	This can include units of flow, pH, mass, temperature, or concentration. Examples include µg/l, lbs/d, etc.	Examples include Daily, 3/week, weekly, 2/month, monthly, quarterly, 2/yr and yearly. All monitoring periods (quarterly, semiannual, annual, etc) are based upon the calendar year unless otherwise specified in this Permit.	Examples include grab, 24 hour composite and 3 grab samples collected over a 6 hour period.

Note 1; DAILY DISCHARGE: The discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for the purposes of sampling. For pollutants expressed in units of mass, the 'daily discharge' is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the 'daily discharge' is calculated as the average measurement of the pollutant over the day.

DAILY MAX.: The highest allowable daily discharge. **DAILY MIN.:** The lowest allowable daily discharge.

MONTHLY AVG: The highest allowable average of daily discharges over a calendar month, calculated as the sum of each of the daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

7 DAY ARITHMETIC MEAN (7 day average): The highest allowable average of daily discharges over a calendar week.

30 DAY GEOMETRIC MEAN: The highest allowable geometric mean of daily discharges over a calendar month, calculated as the antilog of: the sum of the log of each of the daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

7 DAY GEOMETRIC MEAN: The highest allowable geometric mean of daily discharges over a calendar week.

RANGE: The minimum and maximum instantaneous measurements for the reporting period must remain between the two values shown.

Note 2: ACTION LEVELS: Routine Action Level monitoring results, if not provided for on the Discharge Monitoring Report (DMR) form, shall be appended to the DMR for the period during which the sampling was conducted. If the additional monitoring requirement is triggered as noted below, the permittee shall undertake a short-term, high-intensity monitoring program for the parameter(s). Samples identical to those required for routine monitoring purposes shall be taken on each of at least three consecutive operating and discharging days and analyzed. Results shall be expressed in terms of both concentration and mass, and shall be submitted no later than the end of the third month following the month when the additional monitoring requirement was triggered. Results may be appended to the DMR or transmitted under separate cover to the same address. If levels higher than the Action Levels are confirmed, the permit may be reopened by the Department for consideration of revised Action Levels or effluent limits. The permittee is not authorized to discharge any of the listed parameters at levels which may cause or contribute to a violation of water quality standards.

PERMIT LIMITS, LEVELS AND MONITORING

OUTFALL No.	LIMITATIONS APPLY:	RECEIVING WATER	EFFECTIVE	EXPIRING
001	All year unless otherwise noted	Oneida River	07/01/2014	12/31/2015

PARAMETER	EFFLUENT LIMIT					MONITORING REQUIREMENTS				FN
	Type	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Location		
								Inf.	Eff.	
Flow	Monthly average	3.0	MGD			Continuous	Recorder	X		
BOD ₅	Monthly average	30	mg/l	750	lbs/d	1/week	24-hr comp	X	X	(1)
BOD ₅	7-Day average	45	mg/l	1125	lbs/d	1/week	24-hr comp	X	X	
UOD	Daily Maximum	-	mg/l	2775	lbs/d	1/week	Calculated		X	(2, 5)
Solids, Suspended	Monthly average	30	mg/l	750	lbs/d	1/week	24 hr. comp.	X	X	(1)
Solids, Suspended	7-Day average	45	mg/l	1125	lbs/d	1/week	24 hr. comp.	X	X	
Solids, Settlicable	Daily maximum	0.3	ml/l			2/day	Grab	X	X	
pH	Range	6.0-9.0	SU			2/day	Grab	X	X	
Nitrogen, Ammonia (as NH ₃)	Monthly average	Monitor	mg/l			1/week	24 hr. comp.	X	X	
TKN (as N)	Daily maximum	Monitor	mg/l			1/week	24 hr. comp.	X	X	(4)
Temperature	Daily maximum	Monitor	Deg F			2/day	Grab	X	X	
Phosphorus (as P)	Monthly average	1.0	mg/l			1/week	24 hr. comp.	X	X	
Effluent Disinfection required: [] All Year [X] Seasonal from <u>May 15</u> to <u>October 15</u>										
Coliform, Fecal	30 day geometric mean	200	No./100 ml			1/week	Grab		X	(3)
Coliform, Fecal	7 day geometric mean	400	No./100 ml			1/week	Grab		X	(3)
Chlorine, Total Residual <i>(Interim - effective until 5/15/2016)</i>	Daily maximum	2.0	mg/l			2/day	Grab		X	(3)
Chlorine, Total Residual <i>(Final - effective 5/15/2016)</i>	Daily maximum	0.14	mg/l			2/day	Grab		X	(3)

FOOTNOTES:

- (1) Effluent shall not exceed 15 % and 15 % of influent concentration values for BOD₅ & TSS respectively.
- (2) Ultimate Oxygen Demand shall be computed as follows: UOD = 1½ x CBOD₅ + 4½ x TKN (Total Kjeldahl Nitrogen)
- (3) Monitoring of these parameters is only required during the period when disinfection is required.
- (4) The requirement for "Total Kjeldahl Nitrogen, mg/l as N" may be deleted if the permittee elects to perform BOD₂₈ (UOD) 24-hour composite. If this option is chosen TKN monitoring is to be done once per month with a 24 hour composite on both influent and effluent.
- (5) The UOD limit of 2,775 lbs/day shall be in effect only from May 15 to October 15.

WHOLE EFFLUENT TOXICITY (WET) TESTING

OUTFALL NUMBER	LEVELS APPLY:		RECEIVING WATER	EFFECTIVE	EXPIRING				
001	All year unless otherwise noted		Oneida River	07/01/2014	12/31/2015				
PARAMETER	EFFLUENT LIMIT		PQL	MONITORING ACTION LEVEL		UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg.	Daily Max.	Daily Max.	TYPE I	TYPE II				
WET - Acute Invertebrate				4.4		TUa	Quarterly	see footnote	1
WET - Acute Vertebrate				4.4		TUa	Quarterly	see footnote	1
WET - Chronic Invertebrate				28.6		TUc	Quarterly	see footnote	1
WET - Chronic Vertebrate				28.6		TUc	Quarterly	see footnote	1

(1) **Whole Effluent Toxicity (WET) Testing:**

Testing Requirements - WET testing shall consist of **Chronic only**. WET testing shall be performed in accordance with 40 CFR Part 136 and TOGS 1.3.2 unless prior written approval has been obtained from the Department. The test species shall be *Ceriodaphnia dubia* (water flea - invertebrate) and *Pimephales promelas* (fathead minnow - vertebrate). Receiving water collected upstream from the discharge should be used for dilution. The appropriate dilution series bracketing the IWC and including one exposure group of 100% effluent should be used to generate a definitive test endpoint, otherwise an immediate rerun of the test is required. WET testing shall be coordinated with the monitoring of chemical and physical parameters limited by this permit so that the resulting analyses are also representative of the sample used for WET testing. The ratio of critical receiving water flow to discharge flow (i.e. dilution ratio) is 11.5:1 for acute, and 23:1 for chronic. Discharges which are disinfected using chlorine should be dechlorinated prior to WET testing or samples shall be taken immediately prior to the chlorination system.

Monitoring Period - WET testing shall be performed at the specified sample frequency **during calendar years ending in 3 and 8 beginning in January and lasting for a period of one full year.**

Reporting - Toxicity Units shall be calculated and reported on the DMR as follows: $TUa = (100)/(48 \text{ hr LC50})$ or $(100)/(48 \text{ hr EC50})$ (note that Acute data is generated by both Acute and Chronic testing) and $TUc = (100)/(NOEC)$ when Chronic testing has been performed or $TUc = (TUa) \times (10)$ when only Acute testing has been performed and is used to predict Chronic test results, where the 48 hr LC50 or 48 hr EC50 and NOEC are expressed in % effluent. This must be done for both species and using the Most Sensitive Endpoint (MSE) or the lowest NOEC and corresponding highest TUc. Report a TUa of 0.3 if there is no statistically significant toxicity in 100% effluent as compared to control.

The complete test report including all corresponding results, statistical analyses, reference toxicity data, daily average flow at the time of sampling and other appropriate supporting documentation, shall be submitted within 60 days following the end of each test period to the Toxicity Testing Unit, Division of Water, NYSDEC, 625 Broadway, Albany NY 12233. A summary page of the test results for the invertebrate and vertebrate species indicating TUa, 48 hr LC50 or 48 hr EC50 for Acute tests and/or TUc, NOEC, IC25, and most sensitive endpoints for Chronic tests, should also be included at the beginning of the test report.

WET Testing Action Level Exceedances - If an action level is exceeded then the Department may require the permittee to conduct additional WET testing including Acute and/or Chronic tests. Additionally, the permittee may be required to perform a Toxicity Reduction Evaluation (TRE) in accordance with Department guidance. If such additional testing or performance of a TRE is necessary, the permittee shall be notified in writing by the Regional Water Engineer. The written notification shall include the reason(s) why such testing or a TRE is required.

MERCURY MINIMIZATION PROGRAM

Mercury Minimization Program for Low Priority POTWs - The permittee shall inspect each tributary dental facility at least once every five years to verify compliance with the wastewater treatment operation, maintenance, and notification elements of 6NYCRR Part 374.4. Inspection and/or outreach to other industrial/commercial sectors which may contribute mercury is also recommended. All new or increased tributary discharges, including hauled wastes, which are from sources that are industrial in nature must be evaluated for mercury content and if levels exceed 500 ng/L then authorization must be obtained from the Department prior to acceptance. A file shall be maintained containing the notices submitted by dental offices and all other pertinent information. This file shall be available for review by DEC representatives and copies shall be provided upon request. Note that a permit modification may be necessary to include more stringent requirements for POTWs which do not maintain low mercury effluent levels.

DISCHARGE NOTIFICATION REQUIREMENTS

- (a) Except as provided in (c) and (g) of these Discharge Notification Act requirements, the permittee shall install and maintain identification signs at all outfalls to surface waters listed in this permit. Such signs shall be installed before initiation of any discharge.
- (b) Subsequent modifications to or renewal of this permit does not reset or revise the deadline set forth in (a) above, unless a new deadline is set explicitly by such permit modification or renewal.
- (c) The Discharge Notification Requirements described herein do not apply to outfalls from which the discharge is composed exclusively of storm water, or discharges to ground water.
- (d) The sign(s) shall be conspicuous, legible and in as close proximity to the point of discharge as is reasonably possible while ensuring the maximum visibility from the surface water and shore. The signs shall be installed in such a manner to pose minimal hazard to navigation, bathing or other water related activities. If the public has access to the water from the land in the vicinity of the outfall, an identical sign shall be posted to be visible from the direction approaching the surface water.

The signs shall have **minimum** dimensions of eighteen inches by twenty four inches (18" x 24") and shall have white letters on a green background and contain the following information:

N.Y.S. PERMITTED DISCHARGE POINT

SPDES PERMIT No.: NY _____

OUTFALL No. : _____

For information about this permitted discharge contact:

Permittee Name: _____

Permittee Contact: _____

Permittee Phone: () - ### - ####

OR:

NYSDEC Division of Water Regional Office Address :

NYSDEC Division of Water Regional Phone: () - ### - ####

- (e) For each discharge required to have a sign in accordance with a), the permittee shall, concurrent with the installation of the sign, provide a repository of copies of the Discharge Monitoring Reports (DMRs), as required by the **RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS** page of this permit. This repository shall be open to the public, at a minimum, during normal daytime business hours. The repository may be at the business office repository of the permittee or at an off-premises location of its choice (such location shall be the village, town, city or county clerk's office, the local library or other location as approved by the Department). In accordance with the **RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS** page of your permit, each DMR shall be maintained on record for a period of five years
- (f) The permittee shall periodically inspect the outfall identification sign(s) in order to ensure they are maintained, are still visible, and contain information that is current and factually correct. Signs that are damaged or incorrect shall be replaced within 3 months of inspection.

DISCHARGE NOTIFICATION REQUIREMENTS (continued)

- (g) All requirements of the Discharge Notification Act, including public repository requirements, are waived for any outfall meeting any of the following circumstances, provided Department notification is made in accordance with (h) below:
- (i) such sign would be inconsistent with any other state or federal statute;
 - (ii) the Discharge Notification Requirements contained herein would require that such sign could only be located in an area that is damaged by ice or flooding due to a one-year storm or storms of less severity;
 - (iii) instances in which the outfall to the receiving water is located on private or government property which is restricted to the public through fencing, patrolling, or other control mechanisms. Property which is posted only, without additional control mechanisms, does not qualify for this provision;
 - (iv) instances where the outfall pipe or channel discharges to another outfall pipe or channel, before discharge to a receiving water; or
 - (v) instances in which the discharge from the outfall is located in the receiving water, two-hundred or more feet from the shoreline of the receiving water.
- (h) If the permittee believes that any outfall which discharges wastewater from the permitted facility meets any of the waiver criteria listed in (g) above, notification (form enclosed) must be made to the Department's Bureau of Water Permits, Central Office, of such fact, and, provided there is no objection by the Department, a sign and DMR repository for the involved outfall(s) are not required. This notification must include the facility's name, address, telephone number, contact, permit number, outfall number(s), and reason why such outfall(s) is waived from the requirements of discharge notification. The Department may evaluate the applicability of a waiver at any time, and take appropriate measures to assure that the ECL and associated regulations are complied with.

SCHEDULE OF COMPLIANCE

a) The permittee shall comply with the following schedule:

Outfall(s)	Parameter(s) Affected	Interim Effluent Limit(s)	Compliance Action	Due Date
001	Chlorine, Total Residual	2.0 mg/l	Interim Permit Limit	Effective 07/01/2014 to May 15, 2016
001	Chlorine, Total Residual	-	Permittee shall provide plans to the Department for achieving final permit limit	04/01/2015
001	Chlorine, Total Residual	-	Permittee shall provide status report to the Department documenting progress toward achieving final permit limit.	01/01/2016 (see note (b) below)
001	Chlorine, Total Residual	0.14 mg/l (final)	Final Permit Limit	Effective May 15, 2016

The above compliance actions are one time requirements. The permittee shall comply with the above compliance actions to the Department's satisfaction once. When this permit is administratively renewed by NYSDEC letter entitled "SPDES NOTICE/RENEWAL APPLICATION/PERMIT," the permittee is not required to repeat the submission(s) noted above. The above due dates are independent from the effective date of the permit stated in the "SPDES NOTICE/RENEWAL APPLICATION/PERMIT" letter.

- b) For any action where the compliance date is greater than 9 months past the previous compliance due date, the permittee shall submit interim progress reports to the Department every nine (9) months until the due date for these compliance items are met.
- c) The permittee shall submit a written notice of compliance or non-compliance with each of the above schedule dates no later than 14 days following each elapsed date, unless conditions require more immediate notice as prescribed in 6 NYCRR Part 750-1.2(a) and 750-2. All such compliance or non-compliance notification shall be sent to the locations listed under the section of this permit entitled RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS. Each notice of non-compliance shall include the following information:
 - 1. A short description of the non-compliance;
 - 2. A description of any actions taken or proposed by the permittee to comply with the elapsed schedule requirements without further delay and to limit environmental impact associated with the non-compliance;
 - 3. A description or any factors which tend to explain or mitigate the non-compliance; and
 - 4. An estimate of the date the permittee will comply with the elapsed schedule requirement and an assessment of the probability that the permittee will meet the next scheduled requirement on time.
- d) The permittee shall submit copies of any document required by the above schedule of compliance to the NYSDEC Regional Water Engineer at the location listed under the section of this permit entitled RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS and to the Bureau of Water Permits, 625 Broadway, Albany, N.Y. 12233-3505, unless otherwise specified in this permit or in writing by the Department.

SCHEDULE OF SUBMITTALS

a) The permittee shall submit the following information to the Regional Water Engineer at the address listed on the Recording, Reporting and Monitoring page of this Permit, and to the Bureau of Water Permits, 625 Broadway, Albany NY 12233-3505:

Outfall Number(s)	Compliance Action	Due Date
	<p><u>Sewer System Evaluation Survey (SSES)</u></p> <p>1. Submit the results of a systematic examination of the sewer system for the Department's review and approval to determine, for each source of Infiltration/Inflow (I/I), the specific location, estimated flow rates, and the most cost-effective method of rehabilitation. The SSES shall compare the cost of rehabilitation to remove sources of I/I with the cost of transporting the I/I to a treatment facility and providing treatment. The SSES shall include a prioritized list of projects necessary to minimize I/I and a schedule of implementation of those projects.</p> <p>2. Begin implementation of the approved schedule for County owned infrastructure.</p> <p>The schedule of actions contained in the approved plan shall, by this reference, be made part of and enforceable under this permit.</p> <p>3. The permittee shall submit an annual report detailing the actions taken the preceding year in accordance with the schedule specified in Compliance Action 1 above.</p>	<p>01/01/2016</p> <p>DEC approval + 3 months</p> <p>January 31st of each year</p>

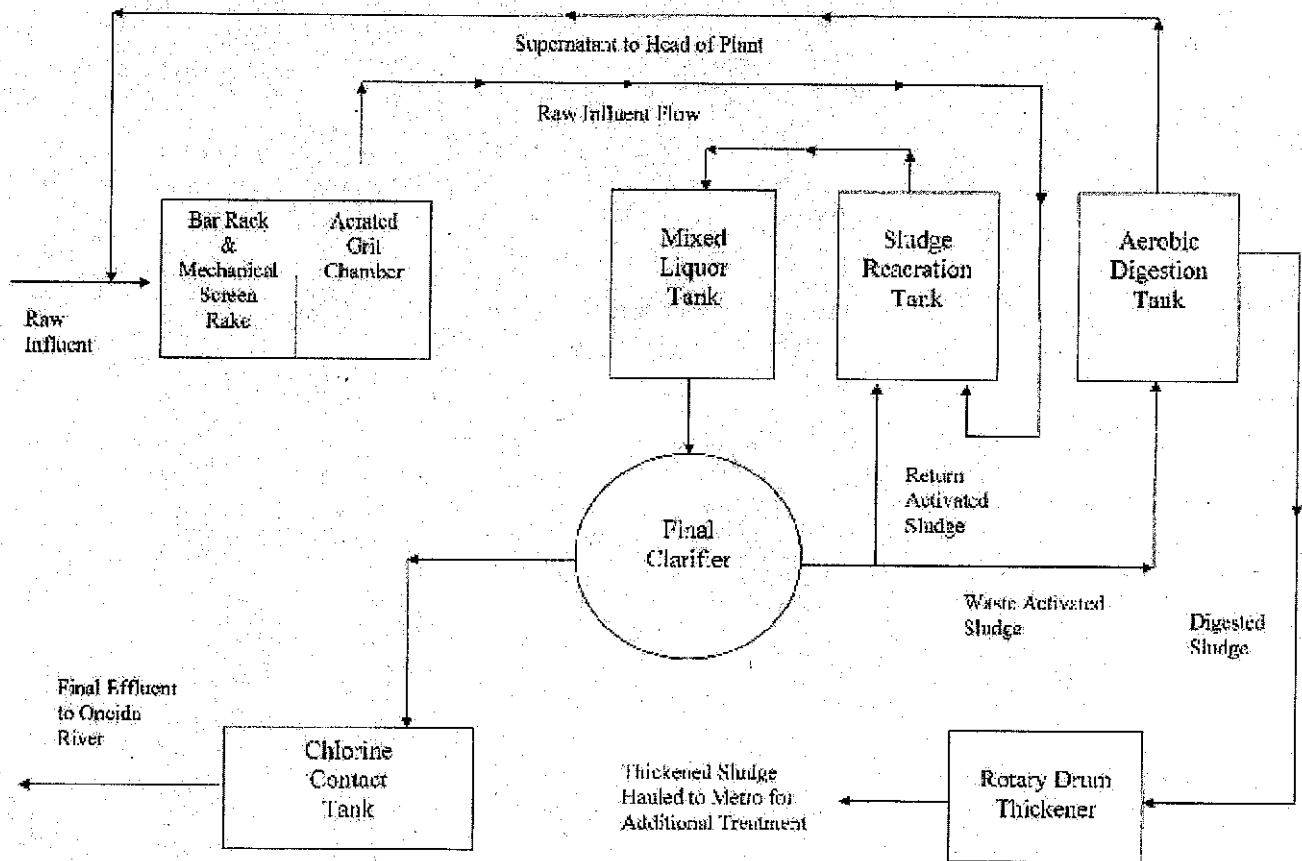
b) Unless noted otherwise, the above actions are one time requirements. The permittee shall submit the results of the above actions to the satisfaction of the Department. When this permit is administratively renewed by NYSDEC letter entitled "SPDES NOTICE/RENEWAL APPLICATION/PERMIT," the permittee is not required to repeat the submittal(s) noted above. The above due dates are independent from the effective date of the permit stated in the letter of "SPDES NOTICE/RENEWAL APPLICATION/PERMIT."

MONITORING LOCATIONS

The permittee shall take samples and measurements, to comply with the monitoring requirements specified in this permit, at the location(s) specified below:

ATTACHMENT 3

Brewerton WPCP - Flow Diagram of Extended Aeration Process



GENERAL REQUIREMENTS

- A. The regulations in 6 NYCRR Part 750 are hereby incorporated by reference and the conditions are enforceable requirements under this permit. The permittee shall comply with all requirements set forth in this permit and with all the applicable requirements of 6 NYCRR Part 750 incorporated into this permit by reference, including but not limited to the regulations in paragraphs B through I as follows:
- B. General Conditions
- | | |
|--|--|
| 1. Duty to comply | 6 NYCRR Part 750-2.1(e) & 2.4 |
| 2. Duty to reapply | 6 NYCRR Part 750-1.16(a) |
| 3. Need to halt or reduce activity not a defense | 6 NYCRR Part 750-2.1(g) |
| 4. Duty to mitigate | 6 NYCRR Part 750-2.7(f) |
| 5. Permit actions | 6 NYCRR Part 750-1.1(c), 1.18, 1.20 & 2.1(h) |
| 6. Property rights | 6 NYCRR Part 750-2.2(b) |
| 7. Duty to provide information | 6 NYCRR Part 750-2.1(i) |
| 8. Inspection and entry | 6 NYCRR Part 750-2.1(a) & 2.3 |
- C. Operation and Maintenance
- | | |
|-----------------------------------|---|
| 1. Proper Operation & Maintenance | 6 NYCRR Part 750-2.8 |
| 2. Bypass | 6 NYCRR Part 750-1.2(a)(17), 2.8(b) & 2.7 |
| 3. Upset | 6 NYCRR Part 750-1.2(a)(94) & 2.8(c) |
- D. Monitoring and Records
- | | |
|---------------------------|--|
| 1. Monitoring and records | 6 NYCRR Part 750-2.5(a)(2), 2.5(c)(1), 2.5(c)(2), 2.5(d) & 2.5(a)(6) |
| 2. Signatory requirements | 6 NYCRR Part 750-1.8 & 2.5(b) |
- E. Reporting Requirements
- | | |
|--|---------------------------------------|
| 1. Reporting requirements | 6 NYCRR Part 750-2.5, 2.6, 2.7 & 1.17 |
| 2. Anticipated noncompliance | 6 NYCRR Part 750-2.7(a) |
| 3. Transfers | 6 NYCRR Part 750-1.17 |
| 4. Monitoring reports | 6 NYCRR Part 750-2.5(e) |
| 5. Compliance schedules | 6 NYCRR Part 750-1.14(d) |
| 6. 24-hour reporting | 6 NYCRR Part 750-2.7(c) & (d) |
| 7. Other noncompliance | 6 NYCRR Part 750-2.7(e) |
| 8. Other information | 6 NYCRR Part 750-2.1(f) |
| 9. Additional conditions applicable to a POTW | 6 NYCRR Part 750-2.9 |
| 10. Special reporting requirements for discharges that are not POTWs | 6 NYCRR Part 750-2.6 |
- F. Planned Changes
1. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:
 - a. The alteration or addition to the permitted facility may meet of the criteria for determining whether facility is a new source in 40 CFR §122.29(b); or
 - b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, or to notification requirements under 40 CFR §122.42(a)(1); or
 - c. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

In addition to the Department, the permittee shall submit a copy of this notice to the United States Environmental Protection Agency at the following address: U.S. EPA Region 2, Clean Water Regulatory Branch, 290 Broadway, 24th Floor, New York, NY 10007-1866.

GENERAL REQUIREMENTS continued**G. Notification Requirement for POTWs**

1. All POTWs shall provide adequate notice to the Department and the USEPA of the following:
 - a. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of CWA if it were directly discharging those pollutants; or
 - b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
 - c. For the purposes of this paragraph, adequate notice shall include information on:
 - i. the quality and quantity of effluent introduced into the POTW, and
 - ii. any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

POTWs shall submit a copy of this notice to the United States Environmental Protection Agency, at the following address:
U.S. EPA Region 2, Clean Water Regulatory Branch, 290 Broadway, 24th Floor, New York, NY 10007-1866.

H. Sludge Management

The permittee shall comply with all applicable requirements of 6 NYCRR Part 360.

I. SPDES Permit Program Fee

The permittee shall pay to the Department an annual SPDES permit program fee within 30 days of the date of the first invoice, unless otherwise directed by the Department, and shall comply with all applicable requirements of ECL 72-0602 and 6 NYCRR Parts 480, 481 and 485. Note that if there is inconsistency between the fees specified in ECL 72-0602 and 6 NYCRR Part 485, the ECL 72-0602 fees govern.

J. Water Treatment Chemicals (WTCs)

New or increased use and discharge of a WTC requires prior Department review and authorization. At a minimum, the permittee must notify the Department in writing of its intent to change WTC use by submitting a completed *WTC Notification Form* for each proposed WTC. The Department will review that submittal and determine if a SPDES permit modification is necessary or whether WTC review and authorization may proceed outside of the formal permit administrative process. The majority of WTC authorizations do not require SPDES permit modification. In any event, use and discharge of a WTC shall not proceed without prior authorization from the Department. Examples of WTCs include biocides, coagulants, conditioners, corrosion inhibitors, defoamers, deposit control agents, flocculants, scale inhibitors, sequestrants, and settling aids.

1. WTC use shall not exceed the rate explicitly authorized by this permit or otherwise authorized in writing by the Department.
2. The permittee shall **maintain a logbook** of all WTC use, noting for each WTC the date, time, exact location, and amount of each dosage, and, the name of the individual applying or measuring the chemical. The logbook must also document that adequate process controls are in place to ensure that excessive levels of WTCs are not used.
3. The permittee shall **submit a completed *WTC Annual Report Form*** each year that they use and discharge WTCs. This form shall be attached to either the December DMR or the annual monitoring report required below.

The *WTC Notification Form* and *WTC Annual Report Form* are available from the Department's website at <http://www.dec.ny.gov/permits/93245.html>.

RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS

- A. The monitoring information required by this permit shall be summarized, signed and retained for a period of at least five years from the date of the sampling for subsequent inspection by the Department or its designated agent. **Also, monitoring information required by this permit shall be summarized and reported by submitting;**

(if box is checked) completed and signed Discharge Monitoring Report (DMR) forms for each 1 month reporting period to the locations specified below. Blank forms are available at the Department's Albany office listed below. The first reporting period begins on the effective date of this permit and the reports will be due no later than the 28th day of the month following the end of each reporting period.

(if box is checked) an annual report to the Regional Water Engineer at the address specified below. The annual report is due by February 1 each year and must summarize information for January to December of the previous year in a format acceptable to the Department.

(if box is checked) a monthly "Wastewater Facility Operation Report..." (form 92-15-7) to the:

Regional Water Engineer and/or County Health Department or Environmental Control Agency specified below

Send the **original** (top sheet) of each DMR page to:
 Department of Environmental Conservation
 Division of Water, Bureau of Water Compliance
 625 Broadway, Albany, New York 12233-3506
 Phone: (518) 402-8177

Send the **first copy** (second sheet) of each DMR page to:
 Department of Environmental Conservation
 Regional Water Engineer, Region 7
 615 Erie Blvd. West
 Syracuse, NY 13204-2400
 Phone: (315) 426-7401

Send an **additional copy** of each DMR page to:
 Onondaga County Department of Health
 421 Montgomery Street
 Syracuse, New York 13202

- B. Monitoring and analysis shall be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit.
- C. More frequent monitoring of the discharge(s), monitoring point(s), or waters of the State than required by the permit, where analysis is performed by a certified laboratory or where such analysis is not required to be performed by a certified laboratory, shall be included in the calculations and recording of the data on the corresponding DMRs.
- D. Calculations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.
- E. Unless otherwise specified, all information recorded on the DMRs shall be based upon measurements and sampling carried out during the most recently completed reporting period.
- F. Any laboratory test or sample analysis required by this permit for which the State Commissioner of Health issues certificates of approval pursuant to section 502 of the Public Health Law shall be conducted by a laboratory which has been issued a certificate of approval. Inquiries regarding laboratory certification should be directed to the New York State Department of Health, Environmental Laboratory Accreditation Program.

MUNICIPAL FACT SHEET

Treatment Plant Description

The Brewerton Water Pollution Control Plant (facility) was constructed in 1974 and upgraded in 2000 and provides advanced secondary treatment for a design flow of 3.0 mgd. Treatment includes using either Extended Aeration or Contact Stabilization Activated Sludge Processes. Currently, the treatment plant is being operated using the Extended Aeration process. The wastewater undergoes screening and grit removal in the RSPS, utilizing both a bar rack and a mechanical screen rake, followed by grit removal in an aerated grit chamber, which uses a mechanical clam shell removal system. Wastewater is then pumped to the first in a series of two tanks to begin the activated sludge treatment process. Using the Extended Aeration Process, wastewater is pumped into the sludge reaeration tank as a plug flow. The wastewater flows through the aerated tanks and then into the aerated mixed liquor tank for extended activated sludge treatment. The treated wastewater then flows to the final clarifier where settling occurs with the aid of cationic polymer. Activated sludge collected in the clarifier is recirculated to the sludge reaeration tank and/or wasted to the two aerobic digestion tanks which operate in series. Digested sludge is thickened using a rotary drum thickener, stored in a concentration tank and hauled to the Metropolitan-Syracuse WWTP for further treatment. Effluent from the clarifier flows to the chlorine contact tank for seasonal disinfection using sodium hypochlorite before discharge to the Oneida River. Total Phosphorous is removed year round with the use of ferrous sulfate. Seasonal nitrification is related to ambient temperatures.

Background Information

The current SPDES permit - NY0027596 for the facility became effective on January 1, 1991, and has been administratively renewed in 1996, 2001 and 2006. The Department of Environmental Conservation has initiated a modification to the facility's SPDES permit, pursuant to 6 NYCRR Part 750-1.18 & 750-1.19, the priority ranking system, known as New York State's Environmental Benefit Permit Strategy (EBPS). The facility currently has an EBPS score of 129 and a ranking of 35 of 825. In response to the Department's April 30, 2010 Request for Information (RFI), the permittee provided a SPDES NY-2A permit application and sampling data for the facility on July 16, 2010. Sampling requested included conventional and 126 priority pollutants.

A review of the facility's Discharge Monitoring Reports from May 2007 to June 2010 shows the following exceedances were reported:

<u>DMR Period</u>	<u>Parameter</u>	<u>Permit Limit</u>	<u>Value Reported</u>
April 2009	BOD5 30 day avg	30 mg/l	32 mg/l
March 2008	BOD5 % Removal	85 %	83 %
February 2009	BOD5 % Removal	85 %	80 %
March 2009	BOD5 % Removal	85 %	80 %
April 2009	BOD5 % Removal	85 %	79 %
January 2010	BOD5 % Removal	85 %	82 %
March 2010	BOD5 % Removal	85 %	80 %

February 2008 Settleable Solids 0.3 ml/l < 0.4 ml/l

Summary of Proposed Permit Changes

The SPDES Permit has been revised as follows:

- Updated permit pages and conditions to reflect current permit language, Department guidance, format and nomenclature.
- Permit pages and conditions have been renumbered and reordered.
- Information on page 1 of the permit has been updated.
- A water quality based effluent limit for Total Residual Chlorine of 0.14 mg/l has been added to the permit. Current (seasonal) limit of 2.0 mg/l remains in effect for 21 months.
- As required by TOGS 1.3.2, added Whole Effluent Toxicity Testing requirement and action levels for Outfall 001.
- As required by TOGS 1.3.10, added Mercury Minimization Program requirements for low priority POTWs.
- Added Sewer System Evaluation Survey (SSES) requirements to the Schedule of Compliance page of the permit to address excessive Infiltration and Inflow at the facility.
- Included standard Discharge Notification Act language that require the permittee to install and maintain identification signs at all outfalls to surface waters listed in this permit.
- Added Schedule of Compliance page to permit.
- Updated standard language on last page of the permit.
- Removed second sentence from Footnote 5 on page 3 of the permit as it is not needed.

Please note that when the Department updates a permit this typically includes updated forms incorporating the latest general conditions.

See below for a further explanation of each of the changes identified above.

Discharge Composition

Table 1 in Appendix B presents the existing effluent quality for the facility. The average and maximum concentration and mass reported are based on 3 years (May 2007 – June 2010) of Discharge Monitoring Report (DMR) data submitted by the permittee. Additional pollutants detected in the effluent were reported in the SPDES NY-2A permit application.

Outfall and Receiving Water Information

Treated sanitary wastewater is discharged through Outfall 001, located at latitude 43° 12' 58" and longitude 76° 09' 19", into the Oneida River. The Oneida River is classified as Class B by the Department with the following beneficial uses: primary and secondary contact recreation and fishing. These waters shall be suitable for fish propagation and survival.

The facility maintains the following outfalls:

Outfall No.	Design Flow Rate (MGD)	Latitude	Longitude	Receiving Water	Water Class	Water Index Number
001	3.0	43° 12' 58"	76° 09' 19"	Oneida River	B	O-66-11

Critical flow and receiving water data is as follows:

Outfall No.	Receiving Water	7Q10 (MGD)	30Q10 (MGD)	Dilution/Mixing	pH (SU)	Temp (°C)	Hardness (mg/l)	Salinity
001	Oneida River	82.7	107.5	27.6:1	8.2	25	462	-

Critical Flows

The 7Q10 flow was obtained from USGS data. The 30Q10 flow was obtained by applying a multiplier to the 7Q10 flow. USGS gage 04247000, Oneida River near Euclid, is located approximately 7.6 miles downstream from the Brewerton WPCP discharge and the former USGS station 04246500, Oneida River at Caughdenoy. According to USGS the records from station 04247000 are not equivalent to those published from station 04246500 due to flow regulation between sites. As a result the Department will continue to use the flow records from station 04246500, Oneida River at Caughdenoy as they are more reflective of flow conditions near the point of discharge. However, the 7Q10 critical low flow has been updated to 82.7 MGD by utilizing the entire period of record (through Sept 1998) for the station.

Dilution/Mixing Zone Analysis

Mixing zone analyses are conducted in accordance with the following documents:

1. EPA T.S.D, entitled "Water Quality Based Toxics Control," dated March, 1991.
2. EPA Region VIII "Mixing Zones and Dilution Policy", dated December, 1994.
3. TOGS 1.3.1, entitled "Total Maximum Daily Loads and Water Quality Based Effluent Limits."

Critical Receiving Water Data

Temperature, pH, hardness and salinity values were obtained from the Rotating Intensive Basin Studies (RIBS) Water Quality Assessment Program.

Effluent Limitations

NYSDEC followed the Clean Water Act, state and federal regulations, and the Division of Waters Technical and Operational Guidance Series documents for developing the effluent limits.

In general, the Clean Water Act requires that the effluent limits for a particular pollutant are the more stringent of either the technology-based or water quality-based limits. A technology-based effluent limit requires a minimum level of treatment for municipal point sources based on currently available treatment technologies. A water quality-based effluent limit is designed to ensure that the water quality standards of receiving waters are being met. The table detailing the effluent limits is included in the draft permit. More information on the derivation of technology-based and water quality-based effluent limits is presented in Appendices A and B.

Monitoring Requirements

Section 308 of the Clean Water Act and federal regulations 40 CFR 122.44(i) require that monitoring be included in permits to determine compliance with effluent limitations. Additional effluent monitoring may also be required to gather data to determine if effluent limitations may be required. The Onondaga County Department of Water Environment Protection is responsible for conducting the monitoring and for reporting results on Discharge Monitoring Reports (DMRs) to NYSDEC.

The draft permit contains the monitoring requirements for the facility. Monitoring frequency is based on the minimum sampling necessary to adequately monitor the facilities performance. For municipal facilities, sampling frequency is based on the 1973 NYSDEC-USEPA Agreement as documented in TOGS 1.3.3.

Other Permit Conditions

Mercury Minimization Program

Permittees that have minimal mercury levels are required to inspect any potential sources of mercury that discharge to the POTW, including dental offices and other commercial / industrial sectors. All new and increased tributary discharges exceeding mercury levels of 500 ng/L must be approved by the Department prior to acceptance by the permittee.

Sewer System Evaluation Survey (SSES)

The permittee must submit the results of a systematic examination of the sewer system for the Department's review and approval to determine, for each source of Infiltration / Inflow (I/I), the specific location, estimated flow rates, and the most cost-effective method of rehabilitation. The SSES must compare the cost of rehabilitation to remove sources of I/I with the cost of transporting the I/I to a treatment facility and providing treatment. The SSES shall include a prioritized list of projects necessary to minimize I/I and a schedule of implementation of those projects for County owned infrastructure. The permittee must also submit an annual report detailing the actions taken the preceding year in accordance with the schedule specified above.

Compliance Schedule / Schedule of Submittals

Sewer System Evaluation Survey (SSES)

The requirements and due dates as required by the SSES requirements have been included in the permit and are listed on the Schedule of Submittals page of the SPDES Permit.

New Total Residual Chlorine Limit

A schedule item has been added to the draft permit requiring the permittee to meet the new Water Quality-Based Effluent Limit for Total Residual Chlorine. An interim limit of 2.0 mg/l will be in effect until May 15, 2016. The final limit of 0.14 mg/l becomes effective on May 15, 2016.

Additional Permit Provisions

The draft permit contains standard regulatory language that is/are required to be in all SPDES permits. These permit provisions are based largely upon 40 CFR 122, subpart C and include requirements pertaining to monitoring, recording, reporting, and compliance responsibilities.

Other Legal Requirements

Discharge Notification Act

In accordance with Discharge Notification Act ECL 17-0815-a, the permittee is required to post a sign at each point of wastewater discharge to surface waters. The permittee is also required to provide a public repository for DMRs as required by the SPDES permit.

Antidegradation Policy

New York State implements the antidegradation portion of the CWA based upon two documents:

1. Organization and Delegation Memorandum #85-40, entitled "Water Quality Antidegradation Policy," signed by the Commissioner of NYSDEC, dated September 9, 1985.
2. TOGS 1.3.9, entitled "Implementation of the NYSDEC Antidegradation Policy – Great Lakes Basin (Supplement to Antidegradation Policy dated September 9, 1985)."

An SPDES permit cannot be issued that would result in the water quality criteria being violated. The draft permit for the facility contains effluent limits which ensure that the existing beneficial uses of the Oneida River will be maintained.

Appendix A

Basis for Effluent Limitations

Statutory and Regulatory Basis for Limits

Sections 101, 301(b), 304, 308, 401, 402, and 405 of the Clean Water Act (CWA) provide the basis for the effluent limitations and other conditions in the draft permit. The NYSDEC evaluates discharges with respect to these sections of the CWA and the relevant SPDES regulations to determine which conditions to include in the draft permit.

In general, the permit writer does a statistical analysis of the monitoring data provided in permittee-submitted discharge monitoring reports (DMRs). Pollutant screening data as required in the Request for Information are also reviewed to determine the presence of additional contaminants that should be considered for inclusion in the permit. The permit writer determines the technology-based limits that must be incorporated into the permit. The Department then evaluates the water quality expected to result from these controls to determine if any violations of water quality standards in the receiving water would result. If violations could occur, water quality-based limits must be included in the permit. The draft permit limits reflect whichever requirements, technology or water quality, are more stringent. This Appendix describes the technology-based and water quality-based evaluation for the facility.

Technology-Based Evaluation

The 1972 Clean Water Act required publicly owned treatment works (POTWs) to meet performance-based requirements based on wastewater treatment technology. Section 301 of the Act established a required performance level, referred to as "secondary treatment, which all POTWs were required to meet by July 1, 1977.

More specifically, Section 301(b)(1)(B) of the Clean Water Act requires that EPA develop secondary treatment standards for POTWs as defined in Section 304(d)(1) of the CWA. Based on this statutory requirement, EPA developed secondary treatment regulations which are specified in 40 CFR Part 133.102. These technology-based regulations apply to all municipal wastewater treatment plants and identify the minimum level of effluent quality attainable by secondary treatment in terms of five-day biochemical oxygen demand (BOD₅), total suspended solids, and pH. In addition to the federal regulations, settleable solids need to be monitored for **Class B** waters according to 6 NYCRR Part 703.2.

Water Quality-Based Evaluation

In addition to the technology-based limits previously discussed, the NYSDEC evaluated the discharge to determine compliance with Section 301(b)(1)(C) of the Clean Water Act. This section requires the establishment of limitations in permits necessary to meet water quality standards by July 1, 1977.

The regulations in 40 CFR 122.44(d)(1) implement Section 301(b)(1)(C) of the Clean Water Act. These regulations require that SPDES permits include limits for all pollutants or parameters which are or may be discharged at a level which will cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality. The limits must be stringent enough to ensure that water quality standards are met and must be consistent with any available wasteload allocation (WLA).

Water Quality Criteria

Water quality regulations detailed in 6 NYCRR Parts 700-706 and ambient water quality standards and guidance values specified in TOGS 1.1.1 were applied to the facility's discharge. Specific application of the regulations and standards is detailed in Table 1 of this Appendix.

Reasonable Potential Evaluation

Reasonable potential analysis is the process for determining whether a discharge causes, has the reasonable potential to cause, or contributes to an excursion above New York State water quality criteria for toxic pollutants. When conducting a reasonable potential analysis for each pollutant of concern, factors such as receiving water classification, corresponding water quality criteria and guidance values, pollutant concentration in the effluent, dilution available in the receiving water, background concentrations and additional upstream and downstream dischargers containing the pollutant of concern are used to quantify the receiving water quality. If the expected concentration of the pollutant of concern in the receiving water exceeds the ambient water quality criteria or guidance value then there is reasonable potential that the discharge may cause or contribute to a violation of the water quality standard, and a water quality-based effluent limit or wasteload allocation for the pollutant is required. Calculations performed specifically for the effluent of this facility can be found at the end of this Appendix.

Procedure for Deriving Water Quality-Based Effluent Limits (WQBELs)

The TMDL process is a water quality based approach to implementing water quality standards. It is applied to an entire watershed or drainage basin whenever possible, but may also be applied to waterbody segments with individual or multiple pollutant sources. The TMDL analysis is carried out separately for each pollutant. It allows for the consideration of all sources of the pollutant including point sources, non-point sources, atmospheric deposition and natural background. Dependant on the complexity of the issue and the amount of data available, the analysis can be relatively simple such as a desk-top, mass-balance calculation or it can be exacting and detailed by using complex, multidimensional water quality models. The TMDL process serves a dual function in the permit development process. It provides the basis for the reasonable potential analysis. If the reasonable potential analysis indicates that the pollutant of concern has the potential to cause or contribute to an excursion of water quality standards, the TMDL process is then used to determine the WQBELs for all sources of the pollutant to assure compliance with the standards.

Pollutant-Specific Analysis

This section outlines the basis for each of the effluent limitations in the facility's draft permit.

Biochemical Oxygen Demand and Total Suspended Solids

The facility is a publicly owned treatment works (POTW). Therefore, the facility is subject to the technology-based limits required for BOD₅ and TSS of 40 CFR 133.102, as shown in the following table:

Parameter	30-day Average (mg/L)	7-day Average (mg/L)	Percent Removal (%)
BOD ₅	30	45	85
TSS	30	45	85

In addition to the concentration limits, 40 CFR 122.45(f) requires that SPDES permits contain mass-based limits for most pollutants. Mass-based limits in lbs/day are derived by multiplying the design flow in MGD by the concentration limit in mg/L by a conversion factor of 8.34.

pH

In addition to limits on BOD₅ and TSS, 40 CFR 133.102 requires that the effluent pH be within the range of 6.0 to 9.0 standard units (SU) for POTWs.

Settleable Solids

The narrative water quality standards provided in 6 NYCRR Part 703.2 state that the discharge of settleable solids shall not cause deposition or impair the receiving waters for their best usages.

A Daily Maximum limit of 0.3 mL/L for settleable solids is included in the permit. This parameter is a measure of the proper design and operation of biological treatment facility.

Nitrogen, including Total Kjeldahl Nitrogen, Ammonia, Nitrate, and Nitrite

All POTWs with a design flow of 1.0 MGD or greater presently monitor for Ammonia and Total Kjeldahl Nitrogen at the influent and effluent per TOGS 1.3.3. Since the highest reported value for Ammonia was 9.3 mg/l and the water quality based effluent is 15.9 mg/l, therefore the current monitor only requirement has been retained.

Phosphorus

As required by TOGS 1.3.3 the current phosphorus limit of 1.0 mg/L is also included in the draft permit.

Mercury

Mercury was detected in the effluent at a level of 2.3 ng/L, which exceeds the water quality standard of 0.7 ng/L. However, mercury is believed to be present in this discharge solely due to one or more of the following factors: presence in rainfall; water supply; and/or low level societal use of mercury. Considering the very low levels detected in this POTW effluent, their likely source, and that the ubiquitous nature of mercury contamination currently makes it impractical for any dischargers to achieve the calculated water quality based effluent limit, it has been determined that only modest reductions in mercury may be achievable by this permittee. Therefore, a simplified mercury minimization program is considered sufficient to address mercury being discharged by this permittee.

Disinfection Requirements

The facility discharges into the Oneida River, a Class B water. In accordance with TOGS 1.3.3, seasonal disinfection of all coliform and/or pathogen bearing wastes discharged into Class B waters is required.

Fecal Coliform

During periods when disinfection is required, TOGS 1.3.3 and 6 NYCRR Part 703.4 establish a minimum requirement and a water quality standard that the WWTP should achieve a monthly geometric mean of less than 200 per 100 ml. A geometric mean of samples taken within a 7 consecutive day period shall be less than 400 per 100 ml.

Total Residual Chlorine (TRC)

A final TRC limit of 0.14 mg/L is included in the draft permit. 6 NYCRR Part 703.5 establishes a total residual chlorine standard of 5 µg/L. Since the Oneida River provides a 27.6:1 chronic dilution ratio, the permit limit for TRC is derived using the total residual chlorine standard (0.005 mg/l) and the dilution ratio of 27.6:1. Using the chronic dilution ratio and standard a water quality based effluent limit for TRC of 0.14 mg/l was calculated. The current limit of 2.0 mg/l will remain in effect until May 15, 2016.

Whole Effluent Toxicity (WET) Testing

Whole effluent toxicity (WET) tests are laboratory tests that replicate to the greatest extent possible the total effect and actual environmental exposure of aquatic life to effluent toxicants without requiring the identification of specific toxicants. WET tests use small vertebrate and invertebrate species, and/or plants, to measure the aggregate toxicity of an effluent. There are

two different durations of toxicity tests: acute and chronic. Acute toxicity tests measure survival over a 96-hour test exposure period. Chronic toxicity tests measure reductions in survival, growth, and reproduction over a 7-day exposure.

Federal regulations at 40 CFR 122.44(d)(1) require that permits contain limits on whole effluent toxicity when a discharge has reasonable potential to cause or contribute to an exceedence of a water quality standard.

Per TOGS 1.3.2, WET testing is required for this facility because:

- POTWs exceed a discharge of 1.0 MGD.

An effluent action level of 4.4/28.6 TU_a/TU_c for invertebrates/vertebrates has been included in the draft permit. The requirements for WET testing are explained in the footnote of Page 4 of the permit.

Appendix B

Individual Outfall Data Summaries and Permit Limit Development

Existing Effluent Quality and Technology Based Effluent Limits (TBEL)

Technology Based Effluent Limit (TBEL) is set based upon an evaluation of Best Available Technology Economically Achievable (BAT), Best Conventional Pollutant Control Technology (BCT), Best Practicable Technology Currently Available (BPT), and Best Professional Judgment (BPJ). BPJ limits may be set using any reasonable method that takes into consideration the criteria set forth in 40 CFR 125.3.

For the Existing Effluent Quality, the statistical methods utilized are in accordance with TOGS 1.2.1 and the USEPA, Office of Water, Technical Support Document For Water Quality-based Toxics Control, March 1991, Appendix E. Statistical calculations were not performed for parameters with insufficient data. Generally, ten or more data points are needed to calculate percentiles (See TOGS 1.2.1 Appendix D). Two or more data points are necessary to calculate an average and a maximum. Non-detects were excluded in the statistical calculations.

Monitoring data collected during the following time period of May 2007 – June 2010 was used to calculate statistics and these data were taken from DMR data provided by the permittee.

Water Quality Based Effluent Limits (WQBEL)

Ambient Water Quality Criteria (AWQC) and guidance values specified in “Water Quality Regulations” New York State Codes, Rules and Regulations Title 6, Chapter X, Parts 700-705 and TOGS 1.1.1 were applied to the following pollutants identified in the facilities discharge. Water Quality Based Effluent Limits (WQBEL’s) were calculated by applying the TMDL process for each pollutant

TABLE 1

(1) General Permittee Data:

Permit Number	Permittee Name	Facility Name	Location (C, T, V)	County	Industrial Code	Major/Sub Basin
NY0027596	Onondaga County Department of Water Environment Protection	Brewerton Water Pollution Control Plant	Cicero (T)	Onondaga	4952	07-03

(2) Summary of Final Outfall Flow Rate(s) and Receiving Water Data:

Outfall Information				Receiving Water Information								
Outfall #	Latitude ° ' "	Longitude ° ' "	Flow Rate (MGD)		Class	Water Index Number	7Q10 (MGD)	30Q10 (MGD)	Dilution/Mixing	pH (SU)	Temp (°F)	Hardness (mg/l)
			Average	Design								
001	43,12,58	76,09,19	1.8	3.0	B	O-66-11	82.7	107.5	27.6:1	8.2	25	462

(3) Individual Outfall Data Summaries and Permit Limit Development:

Outfall	001
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Type of Treatment:	Advanced secondary treatment using either Extended Aeration or Contact Stabilization. Activated Sludge Processes. Includes screening and grit removal in the raw sewage pumping station structure (utilizing both a bar rack and a mechanical screen rake) followed by grit removal in an aerated grit chamber. Also includes activated sludge treatment process (using extended aeration process) final clarifier and disinfection (using sodium hypochlorite). Total Phosphorus is removed year round with use of ferrous sulfate. Seasonal nitrification is related to ambient temperatures.
and	
Sludge Handling:	Digested sludge is thickened using a rotary drum thickener, stored in a concentration tank and hauled to METRO-Syracuse WWTP for further treatment.

Effluent Parameter (Units) (concentration units - mg/l, ug/l or ng/l; mass units - lbs/d or g/d)	Existing Effluent Quality			Technology Based Effluent Limit			Water Quality Based Effluent Limit			Permit Basis (T or WQ)	
	concentration		mass	Conc.	Mass	Type	Basis	AWQC	Effluent		
	Avg.	Max.							Avg.		Max.
Whole Effluent Toxicity (WET) TESTING									Recommended?	Yes	WQ
Flow Rate, units = MGD	Average	1.8	Maximum	2.7	3.0	Monthly avg.	R-BPI, TOGS 1.3.3				T
pH (SU)	Minimum	6.5	Maximum	7.6	6.0 - 9.0	Range	R-40 CFR 133.102(G)	6.5-8.5	TBEL ok		T
BOD ₅ (30 day), mg/l, lbs/day		32	259	510	30	Monthly avg.	R-40 CFR 133.102	D.O. Std	TBEL ok		T
BOD ₅ (7 day), mg/l, lbs/day		39	404	1200	45	7 day avg.	R-40 CFR 133.102	D.O. Std	TBEL ok		T
UOD (daily max), mg/l, lbs/day (May 15 to October 15)		-	820	1400	-	Daily max.	R-TOGS 1.3.3	D.O. Std	TBEL ok		T
TSS (30 day), mg/l, lbs/day		15	155	410	30	Monthly avg.	R-40 CFR 133.102	Narr. Std	TBEL ok		T
TSS (7 day), mg/l, lbs/day		23	270	1100	45	7 day avg.	R-40 CFR 133.102	Narr. Std	TBEL ok		T
Solids, Settleable, ml/l		0.4	-	-	0.3	Daily max.	R-TOGS 1.3.3	Narr. Std	TBEL ok		T
Effluent Disinfection: [] All Year [X] Seasonal from: May 15 to October 15											

Effluent Parameter (Units) (concentration units - mg/l, ug/l or ng/l; mass units - lbs/d or g/d)	Existing Effluent Quality				Technology Based Effluent Limit				Water Quality Based Effluent Limit			Permit Basis (T or WQ)
	concentration		mass		Conc.	Mass	Type	Basis	AWQC conc.	Effluent		
	Avg.	Max.	Avg.	Max.						conc.	mass	
Fecal Coliform(30 day/7 day), #/100 ml	9.5/44	51/246	-	-	200/400		GM	R-6NYCRR 703.4	200/400	TBEL ok		T
Chlorine, Total Residual, mg/l	1.78	2	-	-	2.0		Daily max.	R-TOGS 1.3.3	0.005	0.14		WQ
Phosphorus, Total (mg/l)	0.61	0.86	-	-	1.0		Monthly avg.	R-TOGS 1.3.3	Narr. Std	TBEL ok		T
Ammonia (as NH ₃) (mg/l)	6.3	9.3	-	-	Monitor		Daily max.	R	0.62	15.9		T
TKN (as N) (mg/l)	7.2	10	-	-	Monitor		Daily max.	R	D.O. Std	TBEL ok		T
Mercury, ng/l (from RFI Effluent Sample collected on 5/25/10)	2.3 ng/l	-	-	-	none		-	-	BPJ	0.7	0.7	T
Zinc, mg/l (from 2010 RFI Priority Pollutant Scan)	0.0205 mg/l	-	-	-	none		-	-	BPJ	1.3	15.8	T
Chloroform, ug/l (from 2010 RFI Priority Pollutant Scan)	3.4 ug/l	-	-	-	none		-	-	BPJ	Class A/GA only	NA	T

REFERENCES:

1. 6 NYCRR Parts 700-706
2. 40 CFR Parts 122, 125, 407 Subparts A through H
3. EPA Technical Support Document, *Water Quality Based Toxics Control*, March, 1991.
4. EPA Region VIII *Mixing Zones and Dilution Policy*, December, 1994.
5. NYSDEC Division of Water, Technical & Operational Guidance Series (TOGS).
Available at <http://www.dec.ny.gov/regulations/2652.html>:
 - a. 1.1.1, *Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations*, June 1998
 - b. 1.2.1, *Industrial Permit Writing*, February 2000
 - c. 1.3.1, *Total Maximum Daily Loads and Water Quality Based Effluent Limits*, July 1996
6. Application Form 2A submitted by the permittee on July 16, 2010