

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



Industrial Code:	4911	SPDES Number:	NY-0001325
Discharge Class (CL):	03	DEC Number:	8-5736-00004/00001-0
Toxic Class (TX):	T	Effective Date (EDP):	October 1, 2017
Major Drainage Basin:	07	Expiration Date (ExDP):	September 30, 2022
Sub Drainage Basin:	05	Modification Dates: (EDPM)	
Water Index Number:	Seneca Lake		
Compact Area:			

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" or "CWA").

PERMITTEE NAME AND ADDRESS

Name:	Greenidge Generation LLC	Attention:	Dale Irwin
Street:	590 Plant Road		
City:	Dresden	State:	NY
		Zip Code:	14441

is authorized to discharge from the facility described below:

FACILITY NAME AND ADDRESS

Name:	Greenidge Power Generating Station		
Location (C,T,V):	Dresden (V)	County:	Yates
Facility Address:	590 Plant Road, PO Box 187		
City:	Dresden	State:	NY
From Outfall No.:	001	at Latitude:	42 ° 40 ' 57 "
		& Longitude:	76 ° 56 ' 56 "
		Zip Code:	14441
into receiving waters known as:	Keuka Lake Outlet	Class:	C(T)

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

01A	Keuka Lake Outlet	Class C(T)
002, 02A - 02I	Seneca Lake	Class B(T) & Groundwater (GA)
005	Seneca Lake	Class B(T)

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:	Greenidge Generation LLC		
Street:	590 Plant Road, PO Box 187		
City:	Dresden	State:	NY
		Zip Code:	14441
Responsible Official or Agent:	Dale Irwin	Phone:	(315) 536-2359 Ext 3423

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
Region2_NPDES@epa.gov

Permit Administrator: Scott E. Sheeley	
Address: 6274 East Avon Lima Road Avon, NY 14414	
Signature: <i>Scott E. Sheeley</i>	Date: 9/11/2017

OUTFALL SUMMARY

OUTFALL	DESCRIPTION	RECEIVING WATER / CLASS	LATITUDE LONGITUDE
001	Condenser Cooling Water and Outfall 02A Discharge	Keuka Lake Outlet Class C(T)	42° 40' 57" 76° 56' 56"
01A	Unit 4 Boiler Blowdown	Keuka Lake Outlet Class C(T)	42° 40' 57" 76° 56' 56"
002	Bottom Ash Pond Overflow to Seneca lake, Includes Stormwater; treated Coal Pile Runoff (02C); Treated Maintenance Cleaning Wastewater (02D); Oil Separator (02A); Boiler Chemical Cleaning Final Rinse (02B); and Outfalls 02E – 02I.	Seneca Lake Class B(T) & Groundwater (GA)	42° 40' 40" 76° 56' 38"
02A	Oil Separator (process oil, fuel oil storage area)	Seneca Lake Class B(T) & Groundwater (GA)	42° 40' 40" 76° 56' 38"
02B	Boiler Water Final Rinse	Seneca Lake Class B(T) & Groundwater (GA)	42° 40' 40" 76° 56' 38"
02C	Coal Pile Runoff, Fly Ash Hopper Decant, Demineralizer Regenerate Wastewater, Maintenance Cleaning Wastewater – treated and batch discharge to Ash Pond	Seneca Lake Class B(T) & Groundwater (GA)	42° 40' 40" 76° 56' 38"
02D	Treated Maintenance Cleaning Wastewater – batch discharged via 02C to Ash Pond	Seneca Lake Class B(T) & Groundwater (GA)	42° 40' 40" 76° 56' 38"
02E	Process Equipment Cooling Water, In-Plant drain Collection Sump	Seneca Lake Class B(T) & Groundwater (GA)	42° 40' 40" 76° 56' 38"
02F	Plant Feedwater Make-up Treatment	Seneca Lake Class B(T) & Groundwater (GA)	42° 40' 40" 76° 56' 38"
02G	Bottom Ash Sluice System	Seneca Lake Class B(T) & Groundwater (GA)	42° 40' 40" 76° 56' 38"
02H	North Yard Drain Sump and East Yard Drain Sump	Seneca Lake Class B(T) & Groundwater (GA)	42° 40' 40" 76° 56' 38"
02I	Roof Drains	Seneca Lake Class B(T) & Groundwater (GA)	42° 40' 40" 76° 56' 38"
005	Stormwater and Groundwater discharge	Seneca Lake Class B(T)	42° 40' 40" 76° 56' 36"

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.	See below	See below

PARAMETER	EFFLUENT LIMIT or CALCULATED LEVEL	COMPLIANCE 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 Minimum Level (ML) 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.

Notes:**1. EFFLUENT LIMIT TYPES:**

- a. **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.
- b. **DAILY MAX:** The highest allowable daily discharge. **DAILY MIN:** The lowest allowable daily discharge.
- c. **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.
- d. **7 DAY ARITHMETIC MEAN (7 day average):** The highest allowable average of daily discharges over a calendar week.
- e. **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.
- f. **7 DAY GEOMETRIC MEAN:** The highest allowable geometric mean of daily discharges over a calendar week.
- g. **RANGE:** The minimum and maximum instantaneous measurements for the reporting period must remain between the two values shown.

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	WASTEWATER TYPE			RECEIVING WATER			EFFECTIVE	EXPIRING
001	Condenser Cooling Water			Keuka Lake Outlet			EDP	ExDP
PARAMETER	EFFLUENT LIMIT or CALCULATED LEVEL		COMPLIANCE LEVEL/ ML	ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg	Daily Max						
Flow	----	134			MGD	Continuous	(3)	(3)
Discharge Temperature (Summer)	----	108			°F	Continuous	Recorder	(5)
Discharge Temperature (Winter)	----	86			°F	Continuous	Recorder	(5)
Intake-Discharge Temperature Difference (Summer)	----	26			°F	Continuous	Calculation	(5)
Intake-Discharge Temperature Difference (Winter)	----	31			°F	Continuous	Calculation	(5)
Total Residual Chlorine (4)	----	0.05			mg/l	Continuous	Recorder	(4)

FOOTNOTES: See page 10 of this Permit.

OUTFALL	WASTEWATER TYPE			RECEIVING WATER			EFFECTIVE	EXPIRING
01A	Unit 4 Boiler Blowdown			Keuka Lake Outlet			EDP	ExDP
PARAMETER	MINIMUM	MAXIMUM	UNITS	SAMPLE FREQUENCY		SAMPLE TYPE	FOOTNOTES (FN)	
pH	6.0	9.0	SU	Quarterly		Grab		
PARAMETER	EFFLUENT LIMIT or CALCULATED LEVEL		COMPLIANCE LEVEL/ ML	ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg	Daily Max						
Flow	Monitor	Monitor			GPD	Quarterly	Estimate	
Solids, Total Suspended (TSS)	30	100			mg/l	Quarterly	Grab	
Oil & Grease	----	15			mg/l	Quarterly	Grab	

OUTFALL	WASTEWATER TYPE				RECEIVING WATER	EFFECTIVE	EXPIRING		
002	Bottom Ash Pond Overflow, Includes Stormwater; treated Coal Pile Runoff (02C); Treated Maintenance Cleaning Wastewater (02D); Oil Separator (02A); Boiler Chemical Cleaning Final Rinse (02B); and Outfalls 02E – 02I.				Seneca Lake & Groundwater	EDP	ExDP		
PARAMETER		MINIMUM	MAXIMUM	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FOOTNOTES (FN)		
pH		6.5	9.0	SU	Weekly	Grab			
Temperature		Monitor	Monitor	°F	1/day	Grab	(6)		
PARAMETER		EFFLUENT LIMIT or CALCULATED LEVEL		COMPLIANCE LEVEL/ ML	ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
		Monthly Avg	Daily Max						
Flow		Monitor	Monitor			MGD	Continuous	Recorder	
Solids, Total Suspended (TSS)		----	50			mg/l	Weekly	24-hr. Comp.	
Oil & Grease		----	15			mg/l	Weekly	Grab	
Aluminum, Total		----	2.0			mg/l	Monthly	24-hr. Comp.	
Arsenic, Total		----	0.05			mg/l	2/Month	24-hr. Comp.	
Barium, Total		----	2.0			mg/l	Monthly	24-hr. Comp.	
Boron, Total		----	2.0			mg/l	2/Month	24-hr. Comp.	
Copper, Total		----	0.35			mg/l	Quarterly	24-hr. Comp.	
Fluoride, Total		----	3.0			mg/l	2/Month	24-hr. Comp.	
Iron, Total		1.0	2.0			mg/l	2/Month	24-hr. Comp.	
Magnesium, Total		35	60			mg/l	2/Month	24-hr. Comp.	
Manganese, Total		----	0.6			mg/l	Weekly	24-hr. Comp.	
Nickel, Total		----	0.2			mg/l	Quarterly	24-hr. Comp.	
Zinc, Total		----	3.2			mg/l	Quarterly	24-hr. Comp.	
Sulfate, Total (as S)		----	500			mg/l	2/Month	24-hr. Comp.	
Chlorine, Total Residual		----	0.05			mg/l	Weekly	Grab	(7)
Mercury, Total		----	50			ng/l	Quarterly	Grab	(2)
Whole Effluent Toxicity (WET) Testing									
WET - Acute Invertebrate					3.0	TUa	Quarterly	See footnote	(1)
WET - Acute Vertebrate					3.0	TUa	Quarterly	See footnote	(1)
WET - Chronic Invertebrate					10	TUc	Quarterly	See footnote	(1)
WET - Chronic Vertebrate					10	TUc	Quarterly	See footnote	(1)

FOOTNOTES: See page 10 of this Permit.

OUTFALL	WASTEWATER TYPE			RECEIVING WATER			EFFECTIVE	EXPIRING
02A	Oil Separator (process oil, fuel oil storage area)			Seneca Lake & Groundwater			EDP	ExDP
PARAMETER	EFFLUENT LIMIT or CALCULATED LEVEL		COMPLIANCE LEVEL/ ML	ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg	Daily Max						
Flow	----	Monitor			GPD	Monthly	Instantaneous	
Oil & Grease	----	15			mg/l	Monthly	Grab	

OUTFALL	WASTEWATER TYPE			RECEIVING WATER			EFFECTIVE	EXPIRING
02B	Boiler Water Final Rinse			Seneca Lake & Groundwater			EDP	ExDP
PARAMETER	MINIMUM	MAXIMUM	UNITS	SAMPLE FREQUENCY		SAMPLE TYPE	FOOTNOTES (FN)	
pH	6.0	9.0	SU	Each Discharge		Grab		
PARAMETER	EFFLUENT LIMIT or CALCULATED LEVEL		COMPLIANCE LEVEL/ ML	ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg	Daily Max						
Flow	----	Monitor			MGD	Each Discharge	Calculated	
Solids, Total Suspended (TSS)	----	Monitor			mg/l	Each Discharge	Grab	
Oil & Grease	----	15			mg/l	Each Discharge	Grab	
Copper, Total	----	0.35			mg/l	Each Discharge	Grab	
Iron, Total	----	1.0			mg/l	Each Discharge	Grab	

OUTFALL	WASTEWATER TYPE			RECEIVING WATER		EFFECTIVE	EXPIRING	
02C	Coal Pile Runoff, Fly Ash Hopper Decant, Demineralizer Regenerate Wastewater, Maintenance Cleaning Wastewater – treated and batch discharged to Ash Pond.			Seneca Lake & Groundwater		EDP	ExDP	
PARAMETER	MINIMUM	MAXIMUM	UNITS	SAMPLE FREQUENCY		SAMPLE TYPE	FOOTNOTES (FN)	
pH	6.0	9.0	SU	Weekly		Grab		
PARAMETER	EFFLUENT LIMIT or CALCULATED LEVEL		COMPLIANCE LEVEL/ ML	ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg	Daily Max						
Flow	Monitor	Monitor			MGD	Continuous	Recorded	
Solids, Total Suspended (TSS)	30	50			mg/l	Weekly	24-hr. Comp.	
Oil & Grease	----	15			mg/l	Weekly	Grab	
Aluminum, Total	2.0	4.0			mg/l	Weekly	24-hr. Comp.	
Arsenic, Total	----	0.05			mg/l	Weekly	24-hr. Comp.	
Chromium, Total	----	0.1			mg/l	Weekly	24-hr. Comp.	
Copper, Total	----	0.35			mg/l	Weekly	24-hr. Comp.	
Iron, Total	1.0	2.0			mg/l	Weekly	24-hr. Comp.	
Nickel, Total	----	0.2			mg/l	Weekly	24-hr. Comp.	
Zinc, Total	0.5	1.0			mg/l	Weekly	24-hr. Comp.	
Selenium, Total	0.02	Monitor			mg/l	Weekly	24-hr. Comp.	(8)
Ammonia (as NH ₃)	----	Monitor			mg/l	Monthly	24-hr. Comp.	
Sulfate	----	Monitor			mg/l	Monthly	24-hr. Comp.	
Magnesium, Total	----	Monitor			mg/l	Monthly	24-hr. Comp.	
Manganese, Total	0.6	Monitor			mg/l	Weekly	24-hr. Comp.	(8)
Mercury, Total	----	50			ng/l	Quarterly	Grab	(2)

FOOTNOTES: See page 10 of this Permit.

OUTFALL	WASTEWATER TYPE			RECEIVING WATER		EFFECTIVE	EXPIRING	
02D	Treated Maintenance Cleaning Wastewater – batch discharged via 02C to Ash Pond			Seneca Lake & Groundwater		EDP	ExDP	
PARAMETER	MINIMUM	MAXIMUM	UNITS	SAMPLE FREQUENCY		SAMPLE TYPE	FOOTNOTES (FN)	
pH	6.0	9.0	SU	Weekly		Grab		
PARAMETER	EFFLUENT LIMIT or CALCULATED LEVEL		COMPLIANCE LEVEL/ ML	ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg	Daily Max						
Flow	Monitor	Monitor			MGD	Continuous	Recorded	
Solids, Total Suspended	30	100			mg/l	Weekly	24 hr. Comp.	
Oil & Grease	----	15			mg/l	Weekly	Grab	
Copper, Total	----	0.35			mg/l	Weekly	24 hr. Comp.	
Iron, Total	1.0	1.0			mg/l	Weekly	24 hr. Comp.	

OUTFALL	WASTEWATER TYPE			RECEIVING WATER			EFFECTIVE	EXPIRING
02E	Process Equipment Cooling Water, In-Plant drain Collection Sump			Seneca Lake & Groundwater			EDP	ExDP
PARAMETER	EFFLUENT LIMIT or CALCULATED LEVEL		COMPLIANCE LEVEL/ ML	ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg	Daily Max						
NO MONITORING REQUIRED								

OUTFALL	WASTEWATER TYPE			RECEIVING WATER		EFFECTIVE	EXPIRING	
02F	Plant Feedwater Make-up Treatment			Seneca Lake & Groundwater		EDP	ExDP	
PARAMETER	EFFLUENT LIMIT or CALCULATED LEVEL		COMPLIANCE LEVEL/ ML	ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg	Daily Max						
Flow	Monitor	Monitor			MGD	Continuous	Recorded	

FOOTNOTES: See page 10 of this Permit.

FOOTNOTES: See page 10 of this Permit.

NO MONITORING REQUIRED

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FOOTNOTES:

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

Testing Requirements - WET testing shall consist of **Chronic only testing**. Acute toxicity (LC50 or EC50) is derived from the 48hr survival in the chronic test. 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. All tests conducted should be static-renewal (two 24 hr composite samples with one renewal for Acute tests and three 24 hr composite samples with two renewals for Chronic tests). 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 **10:1** for acute, and is **10:1** 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: $TU_a = (100)/(48 \text{ hr LC50})$ or $(100)/(48 \text{ hr EC50})$ (note that Acute data is generated by both Acute and Chronic testing) and $TU_c = (100)/(NOEC)$ when Chronic testing has been performed or $TU_c = (TU_a) \times (10)$ 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 TU_c . Report a TU_a 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, Bureau of Watershed Assessment and Management, 625 Broadway, Fourth Floor, Albany, NY 12233-3502. A summary page of the test results for the invertebrate and vertebrate species indicating TU_a , 48 hr LC50 or 48 hr EC50 for Acute tests and/or TU_c , 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.

2. EPA Method 1631 is required for Mercury Sampling.
3. Monitored by recording the operating mode of the circulating water pumps.
4. Shall be measured continuously during periods of chlorination.
5. Summer is defined for this permit, unless stated otherwise, as May 1st to October 31st. Winter is all other dates not so defined.
6. Shall be sampled from May 1st to October 31st.
7. **The interim limit for Total Residual Chlorine (TRC) is 0.5 mg/l.** The calculated Water Quality Based Effluent Limit (WQBEL) limit is 0.05 mg/l, however, the existing effluent quality (EEQ) from 02/28/2010 to 03/31/2011 indicated that the compliance limit (WQBEL) may not be achievable. See the Schedule of Compliance on **Page 22** of this permit. Sampling is required weekly during periods of chlorination.
8. **Interim limits of 0.06 mg/l for Total Selenium** at Outfall 02C, and **2.0 mg/l for Total Manganese** at Outfall 02C will be applied in accordance with the Schedule of Compliance on **Page 22**.
9. Monitored by recording the operating mode of the wastewater pumps.
10. Shall be measured by 4-aminoantipyrine (4AAP) test method.

A. ADDITIONAL REQUIREMENTS

1. Total residual chlorine shall not be discharged from a single generating unit for more than two hours per day. Chlorination shall occur during daylight hours only.
2. The permittee shall, within 60 days of the end of each month, submit to the NYSDEC offices in Avon and Albany at the addresses listed on Page 31 of this Permit, a monthly report for the following:
 - a. Daily minimum, maximum and average station electrical output shall be determined and logged.
 - b. Daily total water use shall be directly or indirectly measured as calculated and logged.
 - c. Temperature of the intake and discharges shall be measured and recorded continuously. Daily maximum and average intake and discharge temperatures and daily average and maximum heat discharge rates shall be logged and reported.
3. There shall be no discharge of PCB's from this facility.
4. No biocides, dyes, corrosion control chemicals or other water treatment chemical additives are authorized for use by the permittee except for those approved by the Department in accordance with the Water Treatment Chemical (WTC) Usage Notification Requirements. New or increased use of a WTC requires prior DEC review and authorization.
5. The spent chemical cleaning water and rinse water associated with the ammoniated EDTA and Citrosolv boiler cleaning processes may be discharged provided the effluent limitations for the corresponding outfalls are met.
6. The rinse water associated with the hydrochloric acid boiler cleaning process may be discharged provided the effluent limitations of the corresponding outfalls are met.
7. The treated or untreated spent chemical cleaning water associated with the hydrochloric acid boiler cleaning process shall not be discharged.
8. **[This item left intentionally blank].**
9. **Thermal Discharge Study**

A. Thermal Criteria Study Schedule

By EDP + 3 months, the permittee must submit an updated schedule to the Thermal Discharge Study Plan that was submitted January 27, 2011 and approved February 8, 2011. The Schedule must include a schedule for conducting field studies, thermal modeling and submission of an approvable Thermal Criteria Study Report (Report). When proposing the schedule, the field study shall be conducted within one year of NYSDEC approval of the schedule and the final Report shall be submitted to NYSDEC within three months of completion of field study.

B. Thermal Standard Study Requirement

Following Department review of the final *Thermal Criteria Study Report*, if any of the thermal criteria identified in NYCRR §704.2 are exceeded, the permittee will be notified by the Department that they will be required to either: (1) bring the thermal discharge into compliance with the exceeded criteria; or (2) submit an application for a variance to the thermal criteria according to the procedures detailed in 6 NYCRR §704.4. If the permittee requests a thermal variance, additional studies may be required, such as investigation of impact assessment for receiving water biota or an evaluation of compliance with the thermal standard contained in 6 NYCRR §704.1 and Section 316(a) of the Clean Water Act. If a thermal variance is approved, the permittee must request renewal of the variance during each subsequent permit renewal. The permittee must be prepared to provide documentation supporting the need for the variance if the Department requests such documentation. If, during the renewal request, the Department determines that there are signs of impairment as a result of the discharge, then the Department may require additional treatment of, or a change in, the thermal discharge.

The Workplan and final Report (3 copies of each) shall be submitted to: NYSDEC, Division of Water, Section Chief – Wastewater Permits West, Bureau of Water Permits, 4th Floor, 625 Broadway, Albany, New York 12233-3505.

10. Because of the possible attraction of fish to the warmed water in the Keuka Lake Outlet, and the possibility of inducing cold shock to these fish in the event of rapid plant shutdown during the period between November 1 and April 30, the following operational requirements shall be instituted relative to normal plant operation and plant shutdown.

- a. When the unit is taken off line, cessation of cooling water flow will become part of the shutdown procedure and should occur no sooner than 10 hours after generation ceases.
- b. By October 15 of each year, the permittee will submit to the fisheries manager in Avon the schedule for all outages for the coming period. If no outages are planned, the permittee will so state.

The above shutdown requirements may be modified or deleted if the permittee shows to the Department's satisfaction that these requirements are overly restrictive and not needed to protect the aquatic environment.

11. **Groundwater Monitoring Program (GWMP) for Ash Pond:**

The permittee shall submit annual reports to the Department by April 1st of each calendar year. The report shall follow the Groundwater Monitoring Plan submitted by AMEC Geomatrix, Inc. on July 29, 2010, and approved on February 23, 2011. The annual report shall consist of: (a) a description of the current ash pond operation including source(s) and discharges to pond, which include bottom ash sluice system discharge, treated coal pile runoff and any other discharges to the ash pond; (b) sampling results and comparison to the groundwater standards contained in 6 NYCRR Part 703 – New York State Groundwater and Division of Water Technical Guidance Series (1.1.1) for Ambient Water Quality Standards and Guidance Values and Groundwater Effluent limitations; (c) assessment of the impact of ash pond to the groundwater; (c) location of monitoring wells, and (d) suggestions to alleviate any concluded impact to the groundwater identified.

12. **Dilution Study:**

The purpose of the Dilution Study is to determine the near-field and far-field dilution factors in the ambient water (Seneca Lake). The dilution factors will be used in refining the current water quality based effluent limits (WQBEL) for Outfall 002 and its Sub-Outfalls, 02A-02I. The permittee shall submit an Alternatives Evaluation Report to determine the most appropriate method for completing the Dilution Study by EDP +6 months for review and approval by the Department. By the EDP + 2 years, the permittee must submit a Dilution Study Work Plan of the Dilution Study, prepared by a Professional Engineer currently licensed to practice in New York State, for review and approval. The work plan shall include a schedule for the Dilution Study. If the Department approves the work plan, the approved schedule will become an enforceable schedule.

At the conclusion of the Dilution Study, the permittee must submit a report summarizing the results of the study, which shall include dilution profiles for the near-field and far-field areas that will be used in estimating acute and chronic dilutions. The Department reserves the right to modify WQBELs pending the result of the report.

B. BIOLOGICAL MONITORING REQUIREMENTS

All submissions under this section should provide:

- Two (2) copies to the Steam Electric Unit Leader;¹
- One (1) copy of the cover letter to the Division of Water State Pollution Discharge Elimination System (SPDES); Compliance Information Section at the address listed on **Page 29** of this Permit; and
- One (1) copy of the cover letter to the Regional Water Engineer at the address listed on **Page 29** of this Permit, unless otherwise noted.

Best Technology Available

1. The Department has determined that the best technology available (BTA) for the Greenidge Station cooling water intake structure is the use of cylindrical wedge-wire intake screens (slot size $0.5 \text{ mm} \leq 1.0 \text{ mm}$) and variable speed drive pumps (VSPs) at Unit 4. A pilot study is necessary to confirm that the facility can operate reliably with wedge wire screens in this slot range. If the Department determines that the 0.5 mm to 1.0 mm slot-width screens are problematic at this facility, a contingency plan to meet the performance requirements contained in this permit must then be submitted for Department review and approval (*see* Biological Monitoring Requirement No. 13).

Variable Speed Drives on Cooling Water Pumps

2. Within six months of the effective date of the permit (EDP + 6 months), the permittee must provide a full description (including drawings) and schedule for installing and operating variable speed drives on the cooling water pumps at the Greenidge station.
3. Within 2 years of the effective date of the permit (EDP + 2 years) the permittee must complete the installation of the variable speed drives on the cooling water pumps at the Greenidge Station.

Cylindrical Wedge Wire Screen Pilot Study

4. Within six months of the effective date of the permit (EDP + 6 months), the permittee must submit an approvable *Cylindrical Wedge-Wire Screen (CWWS) Pilot Study Plan* that includes:
 - a. Details on CWWS dimensions and operational specifications [*i.e.*, capacity, through-slot velocities (no greater than 0.5 fps), frequency of operation, proposed air burst/cleaning frequencies];
 - b. Frequency of screen operation;
 - c. A detailed schedule for the study, plans, drawings, and description of all work to be done for the installation, testing and determination of the efficacy of the intake screens;
 - d. Six-month progress reporting, and final report to be submitted within 6 months of the pilot study completion; and
 - e. Description of all data analyses, calculations, models, and statistics that may be used to optimize the operations of CWWS.

Upon receipt of Department approval, the permittee must implement the *Cylindrical Wedge-Wire Screen Pilot Study* in accordance with the approved plans. The *Cylindrical Wedge-Wire Screen Pilot Study Plan* will become an enforceable condition of this SPDES permit.

¹ Steam Electric Unit Leader; Bureau of Habitat 5th Floor, Division of Fish, Wildlife, and Marine Resources; 625 Broadway; Albany, NY 12233-4756.

Technology Installation and Operation Plan

5. Within 3 months of receiving Department approval of the final CWWS Study Report, the permittee must submit an approvable *Technology Installation and Operation Plan* (TIOP) to meet the best technology available requirements under 6 NYCRR Part 704.5 and Section 316(b) of the Clean Water Act (CWA). This plan must include:
 - a. a full description (including drawings) and schedule for testing, installing and operating wedge wire intake screens selected to meet requirements of 6 NYCRR Part 704.5 and Section 316(b) CWA; and
 - b. the methodology for assessing the efficacy of these technologies and operational measures;
 - c. if the Department concurs that wedge wire screens with a slot size of $0.5 \text{ mm} \leq 1.0 \text{ mm}$ are not feasible at this facility, then within 6 months of such notification, the TIOP shall be revised to include a Contingency Plan (*see* Biological Monitoring Requirement No. 13); and
 - d. Complete installation of CWWS by the Effective Date of the Permit (EDP) + 5 years.

Upon receipt of Department approval, the permittee must implement the *Technology Installation and Operation Plan* in accordance with the approved schedule. The *Technology Installation and Operation Plan* and approved schedule will become an enforceable condition of this SPDES permit.

Verification Monitoring Plan

6. Within 3 months of Department approval of the *Technology Installation and Operation Plan*, the permittee must submit an approvable *Verification Monitoring Plan*. This plan must include details of procedures to confirm that the necessary reductions in impingement and entrainment required by this permit are being achieved, and must include the following:
 - a. At a minimum, two years of in-plant entrainment monitoring over a five-year averaging period to verify the full-scale performance of BTA measures;
 - b. A description of the frequency and duration of monitoring, the parameters to be monitored, and the basis for determining the parameters and the frequency and duration for monitoring;
 - c. A schedule of implementation; and
 - d. A draft proposed Standard Operation Procedure (SOP) that describes the sampling protocols for these monitoring studies.

The plan and SOP must be updated as required by the Department. Upon receipt of Department approval, the permittee must complete the *Verification Monitoring Plan* in accordance with the approved schedule. The *Verification Monitoring Plan* and approved schedule will become an enforceable condition of this SPDES permit.

7. Within 6 months of the completion of the *Verification Monitoring Plan* studies the permittee must submit an approvable report to the Steam Electric Unit Leader that demonstrates compliance with 6 NYCRR Part 704.5 and Section 316(b) CWA.

Performance Requirements

8. The permittee must reduce entrainment of all life stages of fish at the Greenidge Generating Station by at least 85 percent upon complete installation and implementation of the BTA and completion of the Verification Monitoring Plan.
9. The permittee must annually reduce the impingement mortality of all life stages of fish at the Greenidge Generating Station by at least 95 percent upon the completion of installation of BTA.

The permittee must determine the percent reductions in impingement mortality and entrainment by applying the calculation baseline for this facility as defined in Department Policy CP-52.

Additional Reporting Requirements

10. The permittee must maintain records of all data, reports and analysis pertaining to compliance with 6 NYCRR Part 704 and Section 316(b) of the CWA for a period no less than 10 years from EDP.
11. The permittee must submit status reports at EDP + 2.5 years and EDP + 4.5 years. At a minimum, these status reports must include a description of the operational status of the facility during the preceding two years and compliance with Biological Monitoring Requirements Nos. 1 through 7 of this permit.

General Requirement

12. Modification of the facility cooling water intake must not occur without prior Department approval. The permittee must submit written notification, including detailed descriptions and plans, to the NYS DEC Steam Electric Unit; the Director of the Bureau of Water Compliance Program; and both the Regional Permit Administrator and the Regional Water Engineer, Region 8, at least 60 days prior to any proposed change which would result in the alteration of the permitted operation, location, design, construction or capacity of the cooling water intake structure. The permittee must submit with the written notification a demonstration that the change reflects the best technology available for minimizing adverse environmental impacts pursuant to 6 NYCRR § 704.5 and Section 316(b) of the CWA. As determined by NYSDEC, a permit modification application in accordance with 6 NYCRR Part 621 may be required.

Contingency Plan to Meet BTA Requirements

13. If the Department determines that use of cylindrical wedge wire intake screens with a slot size of $0.5 \text{ mm} \leq 1.0 \text{ mm}$ is not feasible at this facility, within 6 months of the Department's notice, a Contingency Plan to meet the BTA requirements of 6 NYCRR Part 704.5 and Section 316(b) of the CWA must be submitted for the Department's review and approval. The focus of the plan shall be the utilization of wedge wire intake screens of alternate slot widths ($1.0 \text{ mm} > 2.0 \text{ mm}$). Upon Department approval, the Contingency Plan shall become part of the TIOP and an enforceable condition of this permit. Any contingency proposed must result in a reduction in impingement mortality and entrainment of no less than 85% from the calculation baseline for this facility as defined in Department Policy CP-52.

Deadline Extensions

14. Permittee may apply for extensions of the deadlines contained in the Biological Monitoring Requirements section of this Permit as provided for in 6NYCRR Part 750. Notwithstanding any extensions that may be granted by the Department, the completion of installation and operation of BTA shall not occur later than EDP + 5 years.

SPECIAL CONDITIONS – INDUSTRY BEST MANAGEMENT PRACTICES

1. **General** - The permittee shall develop, maintain, and implement a Best Management Practices (BMP) plan to prevent releases of significant amounts of pollutants to the waters of the State through plant site runoff; spillage and leaks; sludge or waste disposal; and stormwater discharges including, but not limited to, drainage from raw material storage. The BMP plan shall be documented in narrative form and shall include the 13 minimum BMPs and any necessary plot plans, drawings, or maps. Other documents already prepared for the facility such as a Safety Manual or a Spill Prevention, Control and Countermeasure (SPCC) plan may be used as part of the plan and may be incorporated by reference. A copy of the current BMP plan shall be submitted to the Department as required in item (2.) below and a copy must be maintained at the facility and shall be available to authorized Department representatives upon request.
2. **Compliance Deadlines** - The initial completed BMP plan was submitted to the Regional Water Engineer in October 2010 and was revised in June 2014. An updated BMP plan shall be **submitted within 9 months of EDP**. The BMP plan shall be implemented within 6 months of submission, unless a different time frame is approved by the Department. The BMP plan shall be reviewed annually and shall be modified whenever (a) changes at the facility materially increase the potential for releases of pollutants; (b) actual releases indicate the plan is inadequate, or (c) a letter from the Department identifies inadequacies in the plan. The permittee shall certify in writing, as an attachment to the December Discharge Monitoring Report (DMR), that the annual review has been completed. All BMP plan revisions (with the exception of SWPPPs - see item (5.) below) must be submitted to the Regional Water Engineer within 30 days. Note that the permittee is not required to obtain Department approval of the BMP plan (or of any SWPPPs) unless notified otherwise. Subsequent modifications to or renewal of this permit does not reset or revise these deadlines unless a new deadline is set explicitly by such permit modification or renewal.
3. **Facility Review** - The permittee shall review all facility components or systems (including but not limited to material storage areas; in-plant transfer, process, and material handling areas; loading and unloading operations; storm water, erosion, and sediment control measures; process emergency control systems; and sludge and waste disposal areas) where materials or pollutants are used, manufactured, stored or handled to evaluate the potential for the release of pollutants to the waters of the State. In performing such an evaluation, the permittee shall consider such factors as the probability of equipment failure or improper operation, cross-contamination of storm water by process materials, settlement of facility air emissions, the effects of natural phenomena such as freezing temperatures and precipitation, fires, and the facility's history of spills and leaks. The relative toxicity of the pollutant shall be considered in determining the significance of potential releases. The review shall address all substances present at the facility that are identified in Tables 6-10 of SPDES application Form NY-2C (available at http://www.dec.ny.gov/docs/permits_ej_operations_pdf/form2c.pdf) or that are required to be monitored for by the SPDES permit.
4. **13 Minimum BMPs:** Whenever the potential for a release of pollutants to State waters is determined to be present, the permittee shall identify BMPs that have been established to prevent or minimize such potential releases. Where BMPs are inadequate or absent, appropriate BMPs shall be established. In selecting appropriate BMPs, the permittee shall consider good industry practices and, where appropriate, structural measures such as secondary containment and erosion/sediment control devices and practices. USEPA guidance for development of stormwater elements of the BMP is available in *Developing Your Stormwater Pollution Prevention Plan A Guide for Industrial Operators*, February 2009, EPA 833-B-09-002. As a minimum, the plan shall include the following BMPs:

1. BMP Pollution Prevention Team	6. Security	10. Spill Prevention & Response
2. Reporting of BMP Incidents	7. Preventive Maintenance	11. Erosion & Sediment Control
3. Risk Identification & Assessment	8. Good Housekeeping	12. Management of Runoff
4. Employee Training	9. Materials/Waste Handling, Storage, & Compatibility	13. Street Sweeping
5. Inspections and Records		

Note that for some facilities, especially those with few employees, some of the above BMPs may not be applicable. It is acceptable in these cases to indicate "Not Applicable" for the portion(s) of the BMP Plan that do not apply to your facility, along with an explanation.

SPECIAL CONDITIONS – INDUSTRY BEST MANAGEMENT PRACTICES (continued)

5. **Stormwater Pollution Prevention Plans (SWPPPs) Required for Discharges of Stormwater From Construction Activity to Surface Waters** - As part of BMP #11, a SWPPP shall be developed prior to the initiation of any site disturbance of one acre or more of uncontaminated area. Uncontaminated area means soils or groundwater which are free of contamination by any toxic or non-conventional pollutants identified in Tables 6-10 of SPDES application Form NY-2C. Disturbance of any size contaminated area(s) and the resulting discharge of contaminated stormwater is not authorized by this permit unless the discharge is under State or Federal oversight as part of a remedial program or after review by the Regional Water Engineer; nor is such discharge authorized by any SPDES general permit for stormwater discharges. SWPPPs are not required for discharges of stormwater from construction activity to groundwater. The SWPPP shall conform to the *New York Standards and Specifications for Erosion and Sediment Control* and *New York State Stormwater Management Design Manual*, unless a variance has been obtained from the Regional Water Engineer, and to any local requirements. The permittee shall submit a copy of the SWPPP and any amendments thereto to the local governing body and any other authorized agency having jurisdiction or regulatory control over the construction activity **at least 30 days prior to soil disturbance**. The SWPPP shall also be submitted to the Regional Water Engineer if contamination, as defined above, is involved and the permittee must obtain a determination of any SPDES permit modifications and/or additional treatment which may be required prior to soil disturbance. Otherwise, the SWPPP shall be submitted to the Department only upon request. When a SWPPP is required, a properly completed *Notice of Intent* (NOI) form shall be submitted (available at www.dec.ny.gov/chemical/43133.html) prior to soil disturbance. Note that submission of a NOI is required for informational purposes; the permittee is not eligible for and will not obtain coverage under any SPDES general permit for stormwater discharges, nor are any additional permit fees incurred. SWPPPs must be developed and submitted for subsequent site disturbances in accordance with the above requirements. The permittee is responsible for ensuring that the provisions of each SWPPP are properly implemented.
6. **Required Sampling For "Hot Spot" Identification** - Development of the BMP plan shall include sampling of waste stream segments for the purpose of pollutant "hot spot" identification. The economic achievability of effluent limits will not be considered until plant site "hot spot" sources have been identified, contained, removed or minimized through the imposition of site specific BMPs or application of internal facility treatment technology. For the purposes of this permit condition a "hot spot" is a segment of an industrial facility (including but not limited to soil, equipment, material storage areas, sewer lines etc.) which contributes elevated levels of problem pollutants to the wastewater and/or stormwater collection system of that facility. For the purposes of this definition, problem pollutants are substances for which treatment to meet a water quality or technology requirement may, considering the results of waste stream segment sampling, be deemed unreasonable. For the purposes of this definition, an elevated level is a concentration or mass loading of the pollutant in question which is sufficiently higher than the concentration of that same pollutant at the compliance monitoring location so as to allow for an economically justifiable removal and/or isolation of the segment and/or B.A.T. treatment of wastewaters emanating from the segment.
7. **Facilities with Petroleum and/or Chemical Bulk Storage (PBS and CBS) Areas** - Compliance must be maintained with all applicable regulations including those involving releases, registration, handling and storage (6NYCRR 595-599 and 612-614). Stormwater discharges from handling and storage areas should be eliminated where practical.
 - A. **Spill Cleanup** - All spilled or leaked substances must be removed from secondary containment systems as soon as practical and for CBS storage areas within 24 hours, unless written authorization is received from the Department. The containment system must be thoroughly cleaned to remove any residual contamination which could cause contamination of stormwater and the resulting discharge of pollutants to waters of the State. Following spill cleanup the affected area must be completely flushed with clean water three times and the water removed after each flushing for proper disposal in an on-site or off-site wastewater treatment plant designed to treat such water and permitted to discharge such wastewater. Alternately, the permittee may test the first batch of stormwater following the spill cleanup to determine discharge acceptability. If the water contains no pollutants it may be discharged. Otherwise it must be disposed of as noted above. See *Discharge Monitoring* below for the list of parameters to be sampled for.
 - B. **Discharge Operation** - Stormwater must be removed before it compromises the required containment system capacity. Each discharge may only proceed with the prior approval of the permittee staff person responsible for ensuring SPDES permit compliance. Bulk storage secondary containment drainage systems must be locked in a closed position except when the operator is in the process of draining accumulated stormwater. Transfer area secondary containment drainage systems must be locked in a closed position during all transfers and must not be reopened unless the transfer area is clean of contaminants. Stormwater discharges from secondary containment systems should be avoided during periods of precipitation. A logbook shall be maintained on site noting the date, time and personnel supervising each discharge.

C. Discharge Screening - Prior to each discharge from a secondary containment system the stormwater must be screened for contamination*. All stormwater must be inspected for visible evidence of contamination. Additional screening methods shall be developed by the permittee as part of the overall BMP Plan, e.g. the use of volatile gas meters to detect the presence of gross levels of gasoline or volatile organic compounds. If the screening indicates contamination, the permittee must collect and analyze a representative sample** of the stormwater. If the water contains no pollutants it may be discharged. Otherwise it must either be disposed of in an on site or off site wastewater treatment plant designed to treat and permitted to discharge such wastewater or the Regional Water Engineer can be contacted to determine if it may be discharged without treatment.

D. Discharge Monitoring - Unless the discharge from any bulk storage containment system outlet is identified in the SPDES permit as an outfall with explicit effluent and monitoring requirements, the permittee shall monitor the outlet as follows:

(i) *Bulk Storage Secondary Containment Systems:*

(a) The volume of each discharge from each outlet must be monitored. Discharge volume may be calculated by measuring the depth of water within the containment area times the wetted area converted to gallons or by other suitable methods. A representative sample shall be collected of the first discharge* following any cleaned up spill or leak. The sample must be analyzed for pH, the substance(s) stored within the containment area and any other pollutants the permittee knows or has reason to believe are present**.

(b) Every fourth discharge* from each outlet must be sampled for pH, the substance(s) stored within the containment area and any other pollutants the permittee knows or has reason to believe are present**.

(ii) *Transfer Area Secondary Containment Systems:*

The first discharge* following any spill or leak must be sampled for flow, pH, the substance(s) transferred in that area and any other pollutants the permittee knows or has reason to believe are present**.

E. Discharge Reporting - Any results of monitoring required above, excluding screening data, must be submitted to the Department by appending them to the corresponding DMR. Failure to perform the required discharge monitoring and reporting shall constitute a violation of the terms of the SPDES permit.

F. Prohibited Discharges - **In all cases, any discharge which contains a visible sheen, foam, or odor, or may cause or contribute to a violation of water quality is prohibited.** The following discharges are prohibited unless specifically authorized elsewhere in this SPDES permit: spills or leaks, tank bottoms, maintenance wastewaters, wash waters where detergents or other chemicals have been used, tank hydrotest and ballast waters, contained firefighting runoff, fire training water contaminated by contact with pollutants or containing foam or fire retardant additives, and unnecessary discharges of water or wastewater into secondary containment systems.

* Discharge includes stormwater discharges and snow and ice removal. If applicable, a representative sample of snow and/or ice should be collected and allowed to melt prior to assessment.

** If the stored substance is gasoline or aviation fuel then sample for oil & grease, benzene, ethylbenzene, naphthalene, toluene and total xylenes (EPA method 602). If the stored substance is kerosene, diesel fuel, fuel oil, or lubricating oil then sample for oil & grease and polynuclear aromatic hydrocarbons (EPA method 610). If the substance(s) are listed in Tables 6-8 of SPDES application form NY-2C then sampling is required. If the substance(s) are listed in NY-2C Tables 9-10 sampling for appropriate indicator parameters may be required, e.g. BOD5 or toxicity testing. Contact the facility inspector for further guidance. In all cases flow and pH monitoring is required.

MERCURY MINIMIZATION PROGRAM – Industrial Facilities

1. **General** - The permittee shall develop, implement, and maintain a Mercury Minimization Program (MMP) for those outfalls which have mercury effluent limits. The MMP is required because the 50 ng/L permit limit exceeds the statewide water quality based effluent limit (WQBEL) of 0.70 nanograms/liter (ng/L) for Total Mercury. The goal of the MMP is to reduce mercury effluent levels in pursuit of the WQBEL. Note – the mercury-related requirements in this permit conform to the mercury Multiple Discharge Variance specified in NYSDEC policy *DOW 1.3.10*.

2. **MMP Elements** - The MMP shall be documented in narrative form and shall include any necessary drawings or maps. Other related documents already prepared for the facility may be used as part of the MMP and may be incorporated by reference. At a minimum, the MMP shall include an on-going program consisting of: periodic monitoring; an acceptable control strategy which will become enforceable under this permit; and, submission of annual status reports.

A. **Monitoring** - The permittee shall conduct periodic monitoring designed to quantify and, over time, track the reduction of mercury. Wastewater treatment plant influents and effluents, and other outfalls shall be monitored in accordance with the minimum frequency specified on the mercury permit limits page. Additionally, key locations in the wastewater and/or stormwater collection systems, and known or potential mercury sources, including raw materials, shall be monitored at the above frequency during the first year of the MMP. Monitoring of key locations and known/potential sources may be reduced during subsequent years if downstream outfalls have maintained mercury levels less than 50 ng/l during the previous year. Additional monitoring must be completed as may be required elsewhere in this permit or upon Department request. Monitoring shall be coordinated so that the results can be effectively compared between internal locations and final outfalls.

All permit-related wastewater and stormwater mercury compliance point (outfall) monitoring shall be performed using EPA Method 1631. Use of EPA Method 1669 during sample collection is recommended. Unless otherwise specified, all samples should be grabs. Monitoring at influent and other locations tributary to compliance points may be performed using either EPA Methods 1631 or 245.7. Monitoring of raw materials, equipment, treatment residuals, and other non-wastewater/non-stormwater substances may be performed using other methods as appropriate.

B. **Control Strategy** - An acceptable control strategy is required for reducing mercury discharges via cost-effective measures, which may include, but is not limited to: source identification; replacement of mercury-containing equipment, materials, and products with mercury-free alternatives where environmentally preferable; more stringent control of tributary waste streams; remediation; and/or installation of new or improved treatment facilities. Required monitoring shall also be used, and supplemented as appropriate, to determine the most effective way to operate the wastewater treatment system(s) to ensure effective removal of mercury while maintaining compliance with other permit requirements.

C. **Annual Status Report** - An annual status report shall be submitted to the Regional Water Engineer and to the Bureau of Water Permits, 625 Broadway, Albany, N.Y. 12233-3505, summarizing: (a) all MMP monitoring results for the previous year; (b) a list of known and potential mercury sources; (c) all action undertaken pursuant to the strategy during the previous year; (d) actions planned for the upcoming year; and (e) progress toward the goal. Annual reports for the previous year are **due by April 1**. A file shall be maintained containing all MMP documentation which shall be available for review by NYSDEC representatives. Copies shall be provided upon request.

3. **MMP Modification** - The MMP shall be modified whenever: (a) changes at the facility or within the collection system increase the potential for mercury discharges; (b) actual discharges exceed 50 ng/L; (c) a letter from the Department identifies inadequacies in the MMP; or (d) pursuant to a permit modification.

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: () - ### - ####
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- (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, 625 Broadway, Albany, N.Y. 12233-3505, 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
002	Total Residual Chlorine	0.5 mg/l	<u>Compliance with Permit Limits:</u> The permittee shall submit an Alternatives Evaluation Engineering Report that will recommend a strategy to meet the QBEL of 0.05 mg/l. Submit interim status reports regarding the status of compliance. Meet the QBEL of 0.05 mg/l	Effective Date of Permit (EDP) + 7 months EDP + 12, 21 and 30 months EDP + 39 months
02C	Total Selenium Total Manganese	0.06 mg/l 2.0 mg/l	<u>Compliance with Permit Limits:</u> The permittee shall submit an approvable engineering report prepared by a professional engineer, currently registered in the State of New York, to evaluate and propose treatment methods to meet the limitations in this permit. Submit interim status reports regarding the status of compliance. Meet the final limits specified on Page 7 of this permit.	EDP + 7 months EDP + 12, 21, and 30 months EDP + 39 months
NA	NA	NA	<u>Variable Speed Drives on Cooling Water Pumps:</u> The installation of variable speed drives on the cooling water pumps must be completed.	EDP + 2 years
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 of 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:

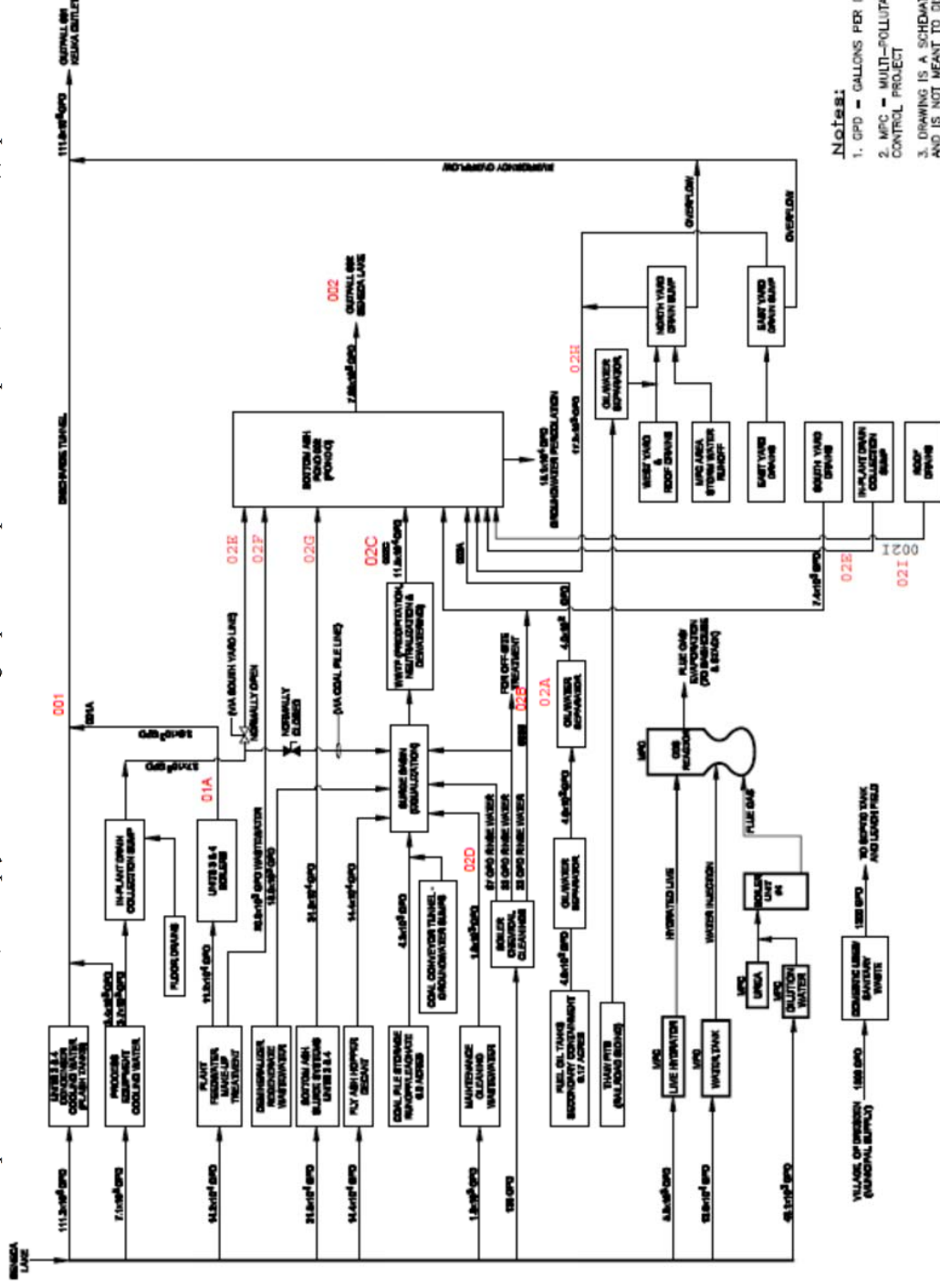
Outfall(s)	Parameter(s) Affected	Required Action	Due Date
02C	Ammonia (as NH ₃) Total Magnesium Sulfate	The permittee shall collect 10 samples representative of normal discharge conditions and treatment plant operations over a 4 week period for the identified parameters. The permittee shall use the approved EPA analytical method with the lowest possible detection limit as promulgated under 40 CFR Part 136 for the determination of the concentrations of parameters listed. The permittee shall submit a summary of the results of the analyses to the addresses listed above.	Effective Date of Permit (EDP) + 2 months
02G	Total Iron	The permittee shall collect 10 samples representative of normal discharge conditions and treatment plant operations over a 4 week period for the identified parameters. 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 listed. The permittee shall submit a summary of the results of the analyses to the addresses listed above.	EDP + 2 months
NA	NA	<u>Monthly Report:</u> The permittee shall submit a monthly report that meets the requirements set in Additional Requirement #2 on page 11 of this permit.	Within 60 days of the end of each month
NA	NA	<u>Groundwater Monitoring Program for Ash Pond (GWMP):</u> Submit annual GWMP Report in accordance with Additional Requirement #11 on Page 12 of this permit.	By April 2018 and annually thereafter
002	NA	<u>Dilution Study:</u> The permittee shall submit an Alternatives Evaluation Report to determine the most appropriate method for completing the Dilution Study. The Department shall review and approve the Alternatives Evaluation Report. The permittee shall submit an approvable Dilution Study Work Plan. The Work Plan shall be prepared by a Professional Engineer currently licensed to practice in New York State. The Work Plan must include a schedule for the Dilution Study. If the Department approves the Work Plan, the approved schedule will become an enforceable schedule.	EDP + 6 months EDP + 2 years
001	NA	<u>Thermal Study:</u> The permittee must submit an updated schedule to the Thermal Discharge Study Plan. Upon receipt of Department approval of the updated schedule, the permittee must complete the study and submit the Final Reports in accordance with the approved schedule.	EDP + 3 months
NA	NA	<u>Variable Speed Drives on Cooling Water Pumps:</u> Submit a full description (including drawings) and schedule for installing and operating variable speed drives on cooling water pumps at the Greenidge Station.	EDP + 6 months

Outfall(s)	Parameter(s) Affected	Required Action	Due Date
NA	NA	<u>Cylindrical Wedge Wire Screen (CWWS) Pilot Study:</u> An approvable pilot study plan shall be submitted that includes the requirements stated on Page 13 of this permit. Upon receipt of Department approval, the <i>CWWS pilot study</i> shall be implemented in accordance with the approved plans.	EDP + 6 months
NA	NA	<u>Technology Installation and Operation Plan (TIOP):</u> An approvable plan to meet the best technology available requirements under 6 NYCRR Part 704.5 and Section 316(b) of the Clean Water Act (CWA) shall be submitted. This plan shall include the requirements stated on page 14 of this permit. Upon receipt of Department approval, the <i>TIOP</i> shall be implemented in accordance with the approved plans.	Within 3 months of receiving Department notification
NA	NA	<u>Verification Monitoring Plan (VMP):</u> An approvable plan that must include details of procedures to confirm the necessary reductions in impingement and entrainment required by this permit are being achieved. The necessary reductions can be found under <i>Performance Requirements</i> on Page 14 of this permit. Submit an approvable report to the Steam Electric Unit Leader that demonstrates compliance with 6 NYCRR Part 704.5 and Section 316(b) of the Clean Water Act.	TIOP approval + 3 months Within 6 months of VMP study approval
NA	NA	<u>Operation Status Reports:</u> At a minimum, these reports must include a description of the operational status of the facility during the preceding two (2) years, and compliance with Biological Monitoring Requirements numbers 1-7, on Pages 13 and 14 of this permit.	EDP + 2.5 years and EDP + 4.5 years
NA	NA	<u>Contingency Plan to Meet BTA Requirements:</u> If the Department determines that use of cylindrical wedge wire intake screens with a slot size of $0.5 \text{ mm} \leq 1.0 \text{ mm}$ is not feasible, a contingency plan to meet the BTA requirements of 6 NYCRR Part 704.5 and Section 316(b) of the Clean Water Act must be submitted for the Department's review and approval. Upon approval, the Contingency Plan shall become part of the Technology Installation and Operation Plan (TIOP), and an enforceable condition of this permit.	Within 6 months of Department notification
NA	NA	<u>Completion of BTA:</u> Installation and operation of BTA must be completed.	EDP + 5 years

- 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 above submittal(s), unless noted otherwise. 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 locations(s) specified below:



- Notes:**
1. GPD - GALLONS PER DAY
 2. MPC - MULTI-POLLUTANT CONTROL PROJECT
 3. DRAWING IS A SCHEMATIC ONLY, AND IS NOT MEANT TO DISPLAY PHYSICAL LOCATIONS OR LAYOUTS.

MONITORING LOCATIONS

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



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 | 6NYCRR 750-2.1(e) & 2.4 |
| 2. Duty to reapply | 6NYCRR 750-1.16(a) |
| 3. Need to halt or reduce activity not a defense | 6NYCRR 750-2.1(g) |
| 4. Duty to mitigate | 6NYCRR 750-2.7(f) |
| 5. Permit actions | 6NYCRR 750-1.1(c), 1.18, 1.20 & 2.1(h) |
| 6. Property rights | 6NYCRR 750-2.2(b) |
| 7. Duty to provide information | 6NYCRR 750-2.1(i) |
| 8. Inspection and entry | 6NYCRR 750-2.1(a) & 2.3 |
- C. Operation and Maintenance
- | | |
|-----------------------------------|-------------------------------------|
| 1. Proper Operation & Maintenance | 6NYCRR 750-2.8 |
| 2. Bypass | 6NYCRR 750-1.2(a)(17), 2.8(b) & 2.7 |
| 3. Upset | 6NYCRR 750-1.2(a)(94) & 2.8(c) |
- D. Monitoring and Records
- | | |
|---------------------------|---|
| 1. Monitoring and records | 6NYCRR 750-2.5(a)(2), 2.5(a)(6), 2.5(c)(1), 2.5(c)(2), & 2.5(d) |
| 2. Signatory requirements | 6NYCRR 750-1.8 & 2.5(b) |
- E. Reporting Requirements
- | | |
|---|----------------------------------|
| 1. Reporting requirements for non-POTWs | 6NYCRR 750-2.5, 2.6, 2.7, & 1.17 |
| 2. Anticipated noncompliance | 6NYCRR 750-2.7(a) |
| 3. Transfers | 6NYCRR 750-1.17 |
| 4. Monitoring reports | 6NYCRR 750-2.5(e) |
| 5. Compliance schedules | 6NYCRR 750-1.14(d) |
| 6. 24-hour reporting | 6NYCRR 750-2.7(c) & (d) |
| 7. Other noncompliance | 6NYCRR 750-2.7(e) |
| 8. Other information | 6NYCRR 750-2.1(f) |
- F. Sludge Management
The permittee shall comply with all applicable requirements of 6 NYCRR Part 360.
- G. 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.
- H. 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 submitted in electronic format and 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 an **additional copy** of each DMR page to:

Send the **first copy** (second sheet) of each DMR page to:
Department of Environmental Conservation
Regional Water Engineer, Region 8
6274 E. Avon-Lima Road
Avon, NY 14414-9519

Phone: (585) 226-5450

- 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.