



NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
State Pollutant Discharge Elimination System (SPDES)
DISCHARGE PERMIT
Special Conditions 12/5/05

First3.99

Industrial Code: **4911**
Discharge Class (CL): **03**
Toxic Class (TX): **T**
Major Drainage Basin: **13**
Sub Drainage Basin: **01**
Water Index Number: **H**
Compact Area:

SPDES Number: **NY- 0008010**
DEC Number: **3-3922-00003/00003**
Effective Date (EDP):
Expiration Date (ExDP):
Modification Dates: **(EDPM)**

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: **Mirant Bowline LLC** Attention: **James Garlick**
Street: **140 Samsondale Avenue**
City: **West Haverstraw** State: **NY** Zip Code: **10993**

is authorized to discharge from the facility described below:

FACILITY NAME AND ADDRESS

Name: **Bowline Point Generating Station (Units 1 & 2)**
Location (C,T,V): **Haverstraw** County: **Rockland**
Facility Address: **140 Samsondale Avenue**
City: **West Haverstraw** State: **NY** Zip Code: **10993**
NYTM -E: NYTM - N:
From Outfall No.: **001** at Latitude: **41 ° 12 ' 18 "** & Longitude: **73 ° 57 ' 27 "**
into receiving waters known as: **Hudson River** Class: **SB**

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

001, 001A-G	Hudson River	Class SB	006-017 Minisceongo Creek/Hudson
002, 002A-G	Hudson River	Class SB	
003	Minisceongo Creek	Class I	
004	Hudson River	Class SB	

in accordance with: effluent limitations; monitoring and reporting requirements; other provisions and conditions set forth this permit; and 6 NYCRR Part 750-1.2(a) and 750-2.

DISCHARGE MONITORING REPORT (DMR) MAILING ADDRESS

Mailing Name: **Mirant Bowline LLC**
Street: **140 Samsondale Avenue**
City: **West Haverstraw** State: **NY** Zip Code: **10993**
Responsible Official or Agent: **James Garlick, VP of Operations** Phone: **(845)786-8053**

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:

Bureau of Water Permits (3505)
Regional Water Engineer, L. Myerson
Rockland County Department of Health
U. S. EPA Region II, NYC, ATTN: Jeff Gratz
A. Sheeran, DEC Albany (1750)

Permit Administrator: William R. Adriance	
Address: 625 Broadway Albany, New York 12233-1760	
Signature:	Date: / /

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	PRACTICAL QUANTITATION LIMIT (PQL)	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 standards, 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 analytical method specified in the permit shall be used to monitor the amount of the pollutant in the outfall to this level, provided that the laboratory analyst has complied with the specified quality assurance/quality control procedures in the relevant method. 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.	Type I or Type II Action Levels are monitoring requirements, as defined below in Note 2, that trigger additional monitoring and permit review when exceeded.	This can include units of flow, pH, mass, Temperature, concentration. Examples include µg/l, lbs/d, etc.	Examples include Daily, 3/week, weekly, 2/month, monthly, quarterly, 2/yr and yearly.	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.

DAILY AVG or 30 DAY ARITHMETIC MEAN (30 day average): 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. **TYPE I :** The additional monitoring requirement is triggered upon receipt by the permittee of any monitoring results in excess of the stated Action Level. **TYPE II:** The additional monitoring requirement is triggered upon receipt by the permittee of any monitoring results that show the stated action level exceeded for four of six consecutive samples, or for two of six consecutive samples by 20 % or more, or for any one sample by 50 % or more.

PERMIT LIMITS, LEVELS AND MONITORING

OUTFALL No.	WASTEWATER TYPE				RECEIVING WATER	EFFECTIVE	EXPIRING	
001 & 002	Non-Contact Cooling Water				Hudson River	EDPM	ExDP	
PARAMETER	ENFORCEABLE LIMIT		MONITORING ACTION LEVEL		UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg.	Daily Max.	TYPE I	TYPE II				
Flow: October 16-June 15th June 16 th -October 15th	Monitor	740 910			MGD	Continuous	Recorder	a
Temperature	Monitor	102			F	Continuous	Recorder	a,b
Discharge-Intake Temperature Difference	Monitor	23			F	Continuous	Recorder	b
Net Discharge of Heat	Monitor	5.8 10E9			BTU/hr	Daily	Calculation	c
Total Residual Chlorine	Monitor	0.2			mg/l	Continuous during periods of Chlorination	Recorder	d

OUTFALL No.	WASTEWATER TYPE				RECEIVING WATER	EFFECTIVE	EXPIRING
01A & 02A	Boiler Blowdown				Hudson River via 001/002	EDPM	ExDP

PARAMETER	MINIMUM	MAXIMUM	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FOOTNOTES (FN)
pH	6.0	9.0	SU	Monthly	Grab	e

PARAMETER	ENFORCEABLE LIMIT		MONITORING ACTION LEVEL		UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg.	Daily Max.	TYPE I	TYPE II				
Flow	Monitor	Monitor			GPD	Monthly	Instantaneous	e
Total Suspended Solids	30	50			mg/l	Monthly	Grab	e
Oil & Grease	NA	15			mg/l	Annual	Grab	e
Iron			1.0		mg/l	Following Start-up	4 hr Composite*	e,f
Copper			1.0		mg/l	Following Start-up	4 hr Composite*	e,f

OUTFALL No.	WASTEWATER TYPE				RECEIVING WATER	EFFECTIVE	EXPIRING	
01B & 02B	Service Water Strainer backwash				Hudson River via 001/002	EDPM	ExDP	
PARAMETER	ENFORCEABLE LIMIT		MONITORING ACTION LEVEL		UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg.	Daily Max.	TYPE I	TYPE II				
Total Suspended Solids	30	50			mg/l	Annual	Grab	

OUTFALL No.	WASTEWATER TYPE				RECEIVING WATER	EFFECTIVE	EXPIRING	
01C & 02C	Units 1 & 2 Oil Water Separators				Hudson River via 001/002	EDPM	ExDP	
PARAMETER	MINIMUM	MAXIMUM	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FOOTNOTES (FN)		
pH	6.0	9.0	SU	Monthly	Grab			
PARAMETER	ENFORCEABLE LIMIT		MONITORING ACTION LEVEL		UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg.	Daily Max.	TYPE I	TYPE II				
Oil & Grease	Monitor	15			mg/l	Weekly	Grab	g

OUTFALL No.	WASTEWATER TYPE				RECEIVING WATER	EFFECTIVE	EXPIRING	
01D	Demineralizer Prefilter Backwash				Hudson River via 001	EDPM	ExDP	
PARAMETER	MINIMUM	MAXIMUM	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FOOTNOTES (FN)		
pH	6.0	9.0	SU	Annual	Grab			
PARAMETER	ENFORCEABLE LIMIT		MONITORING ACTION LEVEL		UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg.	Daily Max.	TYPE I	TYPE II				
Total Suspended Solids	30	50			mg/l	Annual	Grab	

PERMIT LIMITS, LEVELS AND MONITORING

OUTFALL No.	WASTEWATER TYPE			RECEIVING WATER	EFFECTIVE	EXPIRING		
01E	Waste Treatment Facility - Low Volume Waste			Hudson River via 001	EDPM	ExDP		
PARAMETER	MINIMUM	MAXIMUM	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FOOTNOTES (FN)		
pH	6.0	9.0	SU	Continuous	Recorder			
PARAMETER	ENFORCEABLE LIMIT		MONITORING ACTION LEVEL		UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg.	Daily Max.	TYPE I	TYPE II				
Flow	Monitor	Monitor			GPD	Continuous	Recorder	
Total Suspended Solids	30	50			mg/l	Batch	Grab	
Oil & Grease	Monitor	15			mg/l	Batch	Grab	
Iron	Monitor	1.0			mg/l	Batch	Grab	

OUTFALL No.	WASTEWATER TYPE			RECEIVING WATER	EFFECTIVE	EXPIRING		
01F	Waste Treatment Facility - Metal Containing Wastewater			Hudson River via 001	EDPM	ExDP		
PARAMETER	MINIMUM	MAXIMUM	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FOOTNOTES (FN)		
pH	6.0	9.0	SU	Continuous	Recorder			
PARAMETER	ENFORCEABLE LIMIT		MONITORING ACTION LEVEL		UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg.	Daily Max.	TYPE I	TYPE II				
Flow	Monitor	Monitor			GPD	Continuous		
Total Suspended Solids	30	50			mg/l	Batch		
Oil & Grease	Monitor	15			mg/l	Batch		
Iron (total)	Monitor	1.0			mg/l	Batch		
Copper (Total)	Monitor	1.0			mg/l	Batch		
Manganese (Total)	1.0	2.0			mg/l	Batch		
Zinc (Total)	0.5	1.0			mg/l	Batch		
Nickel (Total)	1.0	2.0			mg/l	Batch		
Chromium (Hexavalent)	0.05	0.1			mg/l	Batch		
Chromium (Total)	0.5	1.0			mg/l	Batch		
Vanadium (Total)	3.0	6.0			mg/l	Batch		

OUTFALL No.	WASTEWATER TYPE			RECEIVING WATER	EFFECTIVE	EXPIRING		
01G & 02G	Boiler Seal Trough Water			Hudson River via 001	EDPM	ExDP		
PARAMETER	MINIMUM	MAXIMUM	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FOOTNOTES (FN)		
pH	6.0	9.0	SU	Quarterly	Grab			
PARAMETER	ENFORCEABLE LIMIT		MONITORING ACTION LEVEL		UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg.	Daily Max.	TYPE I	TYPE II				
Flow	Monitor	Monitor			GPD	Quarterly	Estimate	
Total Suspended Solids	30	50			mg/l	Quarterly	Grab	
Oil & Grease	NA	15			mg/l	Quarterly	Grab	
Iron (Net)	NA	1.0			mg/l	Quarterly	Grab	

OUTFALL No.	WASTEWATER TYPE			RECEIVING WATER	EFFECTIVE	EXPIRING		
003	Stormwater Runoff (Oil Tank Farm)			Minisceongo Creek	EDPM	ExDP		
PARAMETER	ENFORCEABLE LIMIT		MONITORING ACTION LEVEL		UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg.	Daily Max.	TYPE I	TYPE II				
Flow	Monitor	Monitor			GPD	Monthly	Estimated	
Oil & Grease	NA	15			mg/l	Monthly	Grab	

OUTFALL No.	WASTEWATER TYPE			RECEIVING WATER	EFFECTIVE	EXPIRING		
011, 012, 017	Stormwater Runoff (Group II)			Minisceongo Creek	EDPM	ExDP		
PARAMETER	MINIMUM	MAXIMUM	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FOOTNOTES (FN)		
pH	6.0	9.0	SU	Monthly	Grab			
PARAMETER	ENFORCEABLE LIMIT		MONITORING ACTION LEVEL		UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg.	Daily Max.	TYPE I	TYPE II				
Flow	Monitor	Monitor			GPD	Monthly	Grab	
Total Suspended Solids	30	50			mg/l	Monthly	Grab	
Oil & Grease	NA	15			mg/l	Monthly	Grab	

NOTES:

1. Outfall 004 Screen Wash Return Water (no Monitoring Required)
2. Outfalls 006, 007, 008, 009, 010, 013, 014, 015, 016 Stormwater Runoff (No Monitoring Required)

FOOTNOTES:

- a. Daily total flow shall be calculated on the basis of hourly circulating water pump operation logs.
- b. These limitations may be exceeded during periods when one or more condensing units are operating with only one or more circulating water pumps per unit out of service due to pump breakdown or routine pump maintenance. In the event of a pump breakdown, the permittee shall take corrective action as soon as possible. Where possible, routine pump maintenance resulting in these limitations being exceeded should be avoided from May through September. For each occurrence of these limitations being exceeded, the permittee shall indicate on the Discharge Monitoring Report (DMR) Form (1) which circulating water pumps, if any, were not in operation (2) the dates and time such pumps were not operating (3) the reasons for such pumps not operating and (4) the period(s) (date and times) during which these limitations were exceeded. In no case shall these limitation be exceeded more than 10 days in any calendar month or more than 10% of the time in any calendar year.
- c. The net rate of addition of heat to the Hudson River of combined discharges 001 and 002 shall not exceed 1.46 billion Kcal/Hour (5.8 Billion BTU/hr). Daily maximum net heat addition shall be calculated and reported.
- d. There shall be no discharge of total residual chlorine for a total of more than two hours per day and not more than one unit shall discharge total residual chlorine at any one time. Chlorination shall not occur when intake water temperature is below 50 degrees F, except if approved by DEC. Chlorination shall take place during daylight hours only.
- e. Boiler blowdown will be sampled prior to quenching with river water.
- f. 4 hour composite sampling of the boiler blowdown is to commence immediately upon the change of routing from the equalization tank to the main circulating water system
- g. Permittee may request a reduction in monitoring frequency following completion of 6 months of monitoring data.

SCHEDULE OF COMPLIANCE

a) **The permittee shall comply with the following schedule.**

<u>Action Code</u>	<u>Outfall Number(s)</u>	<u>Compliance Action</u>	<u>Due Date</u>
		Annually install and maintain coarse barrier net between 15 October and 15 May	EDP
	001, 002	Limit cooling water flow to 514,000gpm (740MGD) between October 16 through June 15, and to 632,000 gpm (910MGD) for the remainder of the year	EDP
		Submit protocol for Tri-Axial Thermal Survey	EDP + 6 months
		Submit approvable study plan for fine mesh barrier net or alternative	EDP + 6 months
	001, 002	Submit approvable engineering report and plans for variable speed drives or pumps.	EDP + 1.5 years
		Install and operate variable speed drives or pumps	6 months after approval of engineering plan
		Submit Verification Monitoring Plan	EDP + 1.5 years
		Implement Verification Monitoring Plan	As Approved
		Reduce impingement mortality of fish and shellfish by 95%	EDP + 3 years
		Submit approvable engineering report and installation plan for fine mesh barrier net or alternative	2 years after approval of study plan
		Submit Technology and Compliance Assessment	EDP + 2.5 years
		Submit status reports	EDP + 2.5 and 4.5 years
		Install fine mesh barrier net or alternative	EDP + 4 years
		Reduce entrainment of fish and shellfish by 80%	EDP + 4 years
		Submit description of cumulative reductions in impingement mortality and entrainment and a detailed analysis of measures to further reduce impingement mortality and entrainment.	EDP + 4.5 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 NYS DEC letter entitled “SPDES NOTICE/RENEWAL APPLICATION/PERMIT”, the permittee is not required to repeat the submission. The above due dates are independent from the effective date of the permit stated in the letter of “SPDES NOTICE/RENEWAL APPLICATION/PERMIT.”

Additional Requirements

1. Collected screenings, sludges, and other solids and precipitates separated from the Permittee's discharges and/or intake water authorized by this permit shall be disposed of in such a manner as to prevent entry of such materials into navigable waters or the tributaries. Any fish, shellfish, or other organisms collected or trapped as a result of intake water screenings or treatment may be returned to the water body habitat, together with associated solids.
2. The permittee shall submit on an annual basis to the NYSDEC at its offices in Tarrytown and Albany (see addresses below) a month-by-month report of daily operating data in EXCEL[®] format, by the 28th of January of the following year, that includes the following:
 - a. Daily minimum, maximum and average station electrical output shall be determined and logged.
 - b. Daily minimum, maximum and average water use shall be directly or indirectly measured or calculated and logged.
 - c. Temperature of the intake and discharges shall be measured and recorded continuously. Daily minimum, maximum and average intake and discharge temperatures shall be logged.
 - d. One copy of each annual report must be sent to the NYSDEC; Division of Water, Bureau of Watershed Compliance Programs; 625 Broadway; Albany, New York 12233-3506; and a second copy must be sent to NYSDEC; Regional Water Engineer, Region 3; 200 White Plains Road; Tarrytown, New York 10591.
3. Discharge of blowdown during boiler start-up shall be routed to the wastewater treatment plant. No wastewater shall be routed to the main circulating water system until parameters have fallen below permit limits.

OTHER WATER QUALITY REQUIREMENTS

1. There shall be no net addition of PCBs by this facility's discharges to the Hudson River.
2. Notwithstanding any other requirements in this permit, the permittee shall also comply with all applicable Water Quality Regulations promulgated by the Interstate Environmental Commission (IEC) including Sections 1.01 and 2.05 (f) as they relate to oil and grease.
3. It is recognized that influent quality changes, equipment malfunction, acts of God, or other circumstances beyond the control of the Permittee may, at times, result in effluent concentrations exceeding the permit limitations despite the exercise of appropriate care and maintenance measures, and corrective measures by the permittees. The permittee may come forward to demonstrate to the NYSDEC that such circumstances exist in any case where effluent concentrations exceed those set forth in this permit. The NYSDEC, however, is not obligated to wait for, or solicit, such demonstrations prior to the initiation of any enforcement proceedings, nor must it accept as valid on its face the statement made in any such demonstration.
4. All chemicals listed and/or referenced in the permit application are approved for use. If use of new biocides, corrosion control chemicals or water treatment chemicals is intended, application must be made and approval granted prior to use. No use will be approved that would cause exceedance of state water quality standards.

5. Within six months of the effective date of the permit, the permittee shall submit to the NYSDEC, Division of Water, for review and approval a protocol, approvable as defined in 6 NYCRR Part 750-1.2(a)(8), for conducting a tri-axial (3-Dimensional) thermal study. The purpose of the thermal study is to define the characteristics of the mixing zone for the discharge from Outfall 001 in accordance with 6 NYCRR Part 704.3, and to determine compliance with special criteria under 6 NYCRR Part 704.2(b)(5). The study shall include a delineation of the 90-degree, 83 degree and all other isopleths at various depths and stages of tide necessary to delineate compliance with the special criteria under 6 NYCRR Part 704.2(b)(5). The thermal study must be conducted under critical ambient temperature and tidal current conditions when all units are operating under summer conditions. All ambient and discharge temperatures must be recorded to the nearest degree Fahrenheit. The thermal study shall be conducted within one year after the NYSDEC approves the thermal study protocol. The results of the thermal study shall be submitted to the NYSDEC within three months of the completion of the study. The final report must include the technical material necessary to satisfy the requirements of 6 NYCRR Part 704.3-Mixing zone criteria. Upon reviewing the results of the thermal study, the Division of Water will determine whether the requirements of 6 NYCRR Part 704.2 have been met. The protocol and final report (3 copies of each) shall be submitted to: NYSDEC, Division of Water, Director of the Bureau of Water Permits, 4th Floor, 625 Broadway, Albany, New York 12233-3505.

BIOLOGICAL REQUIREMENTS:

Required Technologies and Operational Measures

Variable Speed Drives or Pumps

1. By EDP + 1.5 years, the permittee must submit to the NYS DEC Steam Electric Unit Leader an approvable engineering report that evaluates potential options for installing variable speed capabilities to the Bowline Generating Station Units 1 and 2 cooling water intake structure. This report must be prepared by a person or firm licensed to practice professional engineering in the State of New York in accordance with standards accepted by DEC, and must select the alternative that achieves the greatest practicable reduction in cooling water flow. At a minimum, the report must evaluate the use of variable speed drives on single and multiple pumps; and include construction plans, a detailed construction schedule, and operating procedures for achieving the requirements in Biological Requirement 2 of this permit. This approved engineering report and schedule will become an enforceable condition of this SPDES permit.
2. Within 6 months of the Department's approval of the engineering report required in Biological Requirement 1 of this permit, the permittee must install and operate variable speed drives or pumps as described in the approved engineering report.

Coarse Barrier Net

3. The permittee must annually install a coarse mesh barrier net (9.5mm mesh) between 15 October and the date of complete installation of a fine mesh barrier net (or an approved alternative) or 15 May, whichever is first.

Flow Restrictions

4. The permittee must continue to limit flow entering the cooling water intake structure to 514,000 gpm (740MGD) between October 16 through June 15, and to 632,000 gpm (910MGD) for the remainder of the year.

Fine Mesh Barrier Net or Alternative

5. By EDP + 6 months, the permittee must submit to the NYS DEC Steam Electric Unit Leader an approvable study plan evaluating:
- a. the deployment of a fine mesh barrier net (3 mm mesh) installed in Bowline Pond between 1 May and 31 August that filters cooling water entering Bowline Generating Station Units 1 and 2;

AND

- b. alternative technologies, operational measures, or combinations of technologies and operational measures capable of attaining the performance standards for reducing impingement mortality and entrainment contained in Biological Requirements 8 and 9 of this permit.

At a minimum, the study plan must include study protocols, a schedule for conducting the study or studies, and the submission of an approvable report. Upon receipt of Department approval of the study plan, the permittee must complete the study and submit the report according to the approved schedule. The approved study plan and schedule will become an enforceable condition of this SPDES permit.

6. Within 2 years of the Department's approval of the study plan required in Biological Requirement 5 of this permit, the permittee must submit to the NYS DEC Steam Electric Unit Leader an approvable detailed engineering report and installation plan for:
- a. the deployment of a fine mesh barrier net installed in Bowline Pond that filters cooling water entering Bowline Generating Station Units 1 and 2;

OR

- b. alternative technologies, operational measures, or combinations of technologies and operational measures capable of attaining the performance standards for reducing impingement mortality and entrainment contained in Biological Requirements 8 and 9 of this permit.

This report must be prepared by a person or firm licensed to practice professional engineering in the State of New York in accordance with standards accepted by DEC and must include detailed construction plans, an installation schedule, and an operating/maintenance plan for achieving the requirements in Biological Requirements 7, 8, and 9 of this permit. The approved engineering report and installation plan will become an enforceable condition of this SPDES permit.

7. By EDP + 4 years, the permittee must either:
- a. install a fine mesh barrier net between 1 May and 31 August;

OR

- b. install/implement alternative technologies, operational measures, or combinations of technologies and operational measures

as described in the approved engineering report required in Biological Requirement 6 of this permit.

Performance Standards

8. The permittee must reduce entrainment of all life stages of fish and shellfish at the Bowline Generating Station (Units 1 and 2) by at least 80 percent during the fifth year of this permit. Percent reductions must be calculated from the full flow calculation baseline for this facility using the existing cooling water intake structure located on Bowline Pond. Compliance may be assessed based upon a three year cumulative average of the percent reductions.
9. The permittee must annually reduce impingement mortality of all life stages of fish and shellfish at the Bowline Generating Station (Units 1 and 2) by at least 95 percent during the fourth and all subsequent years of this permit. Percent reductions must be calculated from the full flow calculation baseline for this facility using the existing cooling water intake structure located on Bowline Pond.

Compliance Monitoring and Verification

10. By EDP + 2.5 years, the permittee must submit to the NYS DEC Steam Electric Unit an approvable *Technology and Compliance Assessment* which includes, at a minimum, a description of the methodology for assessing the efficacy of technologies and operational measures required by Biological Requirements 1 through 7 for attaining the performance standards listed in Biological Requirements 8 and 9 above. The assessment must be submitted to the NYS DEC Steam Electric Unit for approval prior to implementation.
11. By EDP + 1.5 years, the permittee must submit to the NYS DEC Steam Electric Unit Leader an approvable *Verification Monitoring Plan* designed to confirm that the reductions in impingement mortality and entrainment required by this permit are being achieved. At a minimum, the plan must include two years of full scale impingement mortality and entrainment studies conducted during the third and fourth full calendar years of this permit term, and a draft proposed Standard Operation Procedure (SOP) that describes the sampling protocols for these monitoring studies. The permittee must submit to the NYS DEC Steam Electric Unit Leader an acceptable final SOP within 2 months of receipt of Department comments on the proposed SOP. The plan and SOP must be updated based on submissions for Biological Requirements 6 and 7 of this SPDES permit and as required by the Department. Upon receipt of Department approval, the permittee must implement the *Verification Monitoring Plan* in accordance with the approved schedule. The approved *Verification Monitoring Plan* will become an enforceable condition of this SPDES permit.

Additional Reporting Requirements

12. The permittee must submit status reports to the NYS DEC Steam Electric Unit Leader 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 Requirements 1 through 11 of this permit.

13. By EDP + 4.5 years, the permittee must submit, to the NYS DEC Steam Electric Unit Leader, a report that includes:
 - a. a description and detailed analysis of the cumulative reductions in impingement mortality and entrainment achieved during the first four years of this permit term, and
 - b. a detailed analysis of technologies and/or operational measures available at that time, which have been demonstrated to, or have the potential to, further reduce fish mortality at the Bowline Generating Station (Units 1 and 2). The list of technologies and/or operational measures included in this analysis must be selected with the concurrence of the Department.
14. 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 Leader; the Director of the Bureau of Water Compliance Program; and both the Regional Permit Administrator and the Regional Water Engineer, Region 3, 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 Clean Water Act. As determined by NYS DEC, a permit modification application in accordance with 6 NYCRR § 621 may be required.
15. Live sturgeon collected during any biological monitoring program studies will be counted, measured and examined for tags, then carefully returned to the river as quickly as possible. Dead sturgeon must be counted, measured, weighed, examined for tags, frozen and held for the NYS DEC. Each sturgeon must be individually labeled indicating date of capture, length and weight. Written notification of the collection must be sent to the NYS DEC Steam Electric Unit Leader within 30 days. Any dead sturgeon not transferred to NYS DEC within one year after its collection may be disposed of, in accordance with NYS Solid Waste Regulations, or handled as instructed by the National Marine Fisheries Service (NMFS).
16. The permittee must maintain records of all data, reports and analysis pertaining to compliance with 6NYCRR §704 and Section 316(b) CWA for a period no less than 10 years from the effective date of this permit.

DISCHARGE NOTIFICATION REQUIREMENTS

- (a) Except as provided in (c), (f) 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 three years.
- (f) If, upon November 1, 1997, the permittee has installed signs that include the information required by 17-0815-a(2)(a) of the ECL, but do not meet the specifications listed above, the permittee may continue to use the existing signs for a period of up to five years, after which the signs shall comply with the specifications listed above.
- (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:
- (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.
- (i) The permittee shall periodically inspect the outfall identification signs in order to ensure that they are maintained, are still visible and contain information that is current and factually correct.

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 shall be submitted **WITHIN 6 MONTHS OF EDPM** to the Regional Water Engineer. 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 (4.B.) 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.state.ny.us/website/dcs/permits/olpermits/form2c.pdf>) or that are required to be monitored for by the SPDES permit.

4. A. **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 the September 1992 manual *Storm Water Management for Industrial Activities*, EPA 832-R-92-006 (available from NTIS, 703-487-4650, order # PB 92235969). 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.

B. 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 groundwaters.

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.state.ny.us/website/dow/toolbox/swforms.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 is properly implemented.

5. **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**.

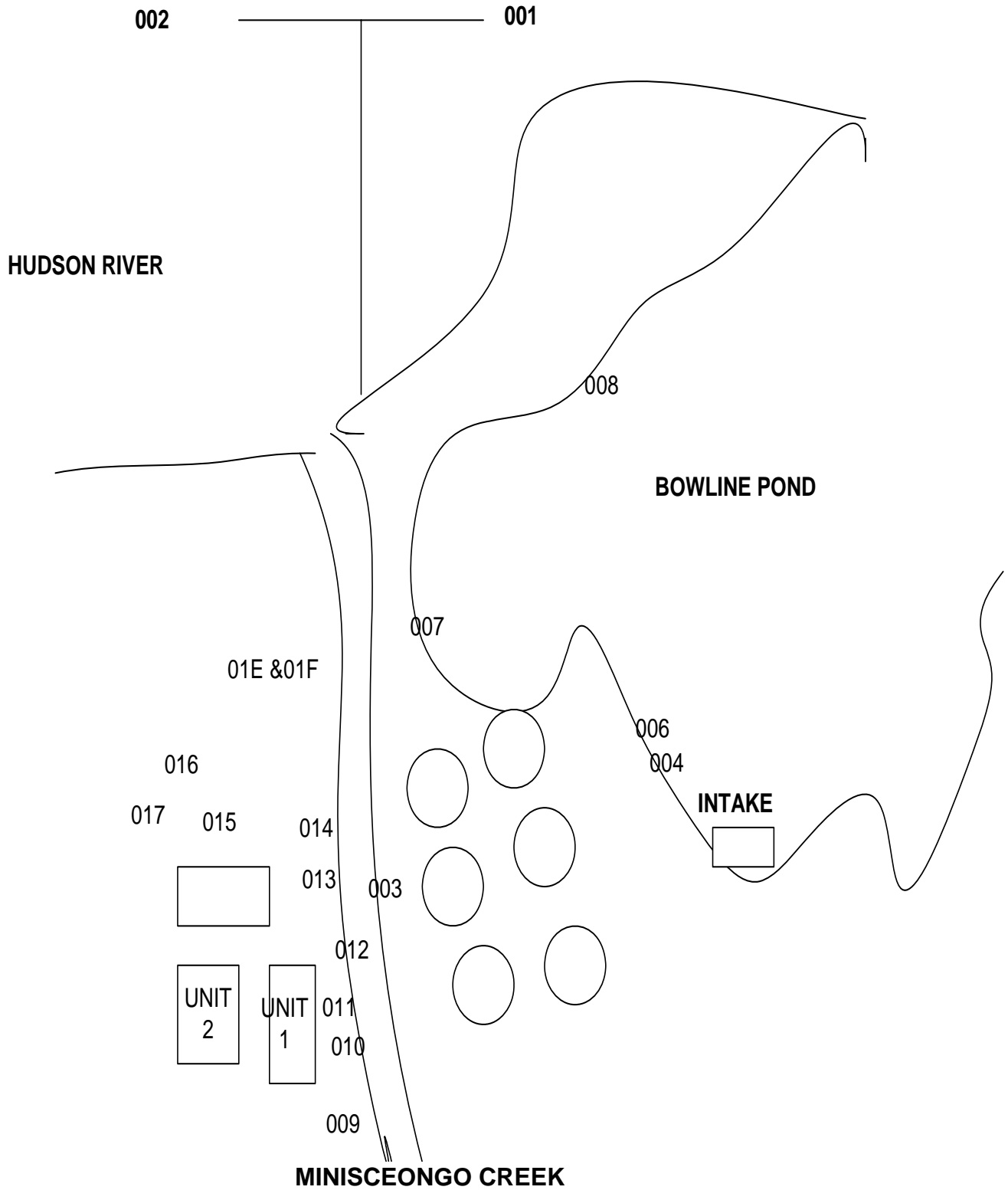
E. Discharge Reporting - Any results of monitoring required above, excluding screening data, must be submitted to the Department by appending them to the corresponding DMR. Failure to perform the required discharge monitoring and reporting shall constitute a violation of the terms of the SPDES permit.

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 fire fighting 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.

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:



RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS

- a) The permittee shall also refer to 6 NYCRR Part 750-1.2(a) and 750-2 for additional information concerning monitoring and reporting requirements and conditions.
- b) The monitoring information required by this permit shall be summarized, signed and retained for a period of three 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 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 Watershed Compliance Programs
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 3
200 White Plains Road, 5th Floor
Tarrytown, New York 10591-5805

Phone: (914) 332-1835

Send an **additional copy** of each DMR page to:

- c) Noncompliance with the provisions of this permit shall be reported to the Department as prescribed in 6 NYCRR Part 750-1.2(a) and 750-2.
- d) Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit.
- e) If the permittee monitors any pollutant more frequently than required by the permit, using test procedures approved under 40 CFR Part 136 or as specified in this permit, the results of this monitoring shall be included in the calculations and recording of the data on the Discharge Monitoring Reports.
- f) Calculation for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.
- g) Unless otherwise specified, all information recorded on the Discharge Monitoring Report shall be based upon measurements and sampling carried out during the most recently completed reporting period.
- h) Any laboratory test or sample analysis required by this permit for which the State Commissioner of Health issues certificates of approval pursuant to section five hundred two 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 sent to the Environmental Laboratory Accreditation Program, New York State Health Department Center for Laboratories and Research, Division of Environmental Sciences, The Nelson A. Rockefeller Empire State Plaza, Albany, New York 12201.