New York State Department of Environmental Conservation
Division of Environmental Permits
NYSDEC HEADQUARTERS
625 BROADWAY
ALBANY, NY 12233
(518) 402-9167

SPDES PERMIT RENEWAL

9/17/2014

FRANK J CRESCENZO
BROOKHAVEN NATIONAL LAB
53 BELL AVE BLDG 464
UPTON NY 11973

Permittee Name: U S DEPT OF ENERGY
Facility Name: BROOKHAVEN NATIONAL LABORATORY
Ind. Code: 8733 County: SUFFOLK
DEC ID: 1-4722-00032/00072 SPDES No.: NY0005835
Permit Effective Date: 3/1/2015
Permit Expiration Date: 2/29/2020

Dear Permittee,

The State Pollutant Elimination System (SPDES) permit renewal for the facility referenced above is approved with the new effective and expiration dates. This letter together with the previous valid permit for this facility effective on 03/01/2010 and any subsequent modifications constitute authorization to discharge wastewater in accordance with all terms, conditions and limitations specified in the previously issued permit(s).

As a reminder, SPDES permits are renewed at a central location in Albany in order to make the process more efficient. All other concerns with your permit, including applications for permit modification or transfer to a new owner, a name change, and other questions, should be directed to:

Regional Permit Administrator
NYSDEC REGION 1 HEADQUARTERS
SUNY @ STONY BROOK|50 CIRCLE RD
STONY BROOK, NY 11790-3409
(631) 444-0365

If you have already filed an application for modification of your permit, it will be processed separately by that office.

If you have questions concerning this permit renewal, please contact LINDY SUE CZUBERNAT at (518) 402-9167.

Sincerely,

Stuart M. Fox

Stuart M. Fox
Deputy Chief Permit Administrator

cc:
RPA
BWC
RWE
File
BWP
EPA

New York State Department of Environmental Conservation
Division of Environmental Permits, Region 1
SUNY @ Stony Brook
50 Circle Road, Stony Brook, NY 11790-3409
Phone: (631) 444-0365 • **Fax:** (631) 444-0360
Website: www.dec.ny.gov

March 4, 2014

Jason Remien, Interim Manager
Brookhaven National Laboratory
PO Box 5000
Upton, NY 11973-5000

Re: Permit #1-4722-00032/00072

Dear Mr. Remien:

In conformance with the requirements of the State Uniform Procedures Act (Article 70, ECL) and its implementing regulations (6NYCRR, Part 621) we are enclosing your permit. Please carefully read all permit conditions and special permit conditions contained in the permit to ensure compliance during the term of the permit. If you are unable to comply with any conditions please contact us at the above address.

Also enclosed is a permit sign which is to be conspicuously posted at the project site and protected from the weather.

Sincerely,

Mark Carrara
Permit Administrator

cc: CO BWP
R1 DOW
EPA Region II
File

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

State Pollutant Discharge Elimination System (SPDES)
DISCHARGE PERMIT

First3.99

Industrial Code:	**8731**	SPDES Number:	**NY 0005835**
Discharge Class (CL):	**03**	DEC Number:	**1-4722-00032/00072**
Toxic Class (TX):	**T**	Effective Date (EDP):	**March 1, 2010**
Major Drainage Basin:	**17**	Expiration Date (ExDP):	**February 28, 2015**
Sub Drainage Basin:	**01**	Modification Dates:(EDPM)	**March 4, 2014**
Water Index Number:	**FB3-112**		
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").

PERMITTEE NAME AND ADDRESS

Name: **United States Department of Energy** Attention: **Frank Crescenzo, Brookhaven Group Manager**

Street: **53 Bell Ave, Building 464**

City: **Upton** State: NY Zip Code: **11973**

is authorized to discharge from the facility described below:

FACILITY NAME AND ADDRESS

Name: **Brookhaven National Laboratory**

Location (C,T,V): **Brookhaven (T)** County: **Suffolk**

Facility Address: **53 Bell Avenue**

City: **Upton** State: **NY** Zip Code: **11973**

NYTM -E: NYTM - N:

From Outfall No.: **001 (existing)** at Latitude: **40 ° 52 ' 48 "** & Longitude: **72 ° 51 ' 12 "**

into receiving waters known as: **Peconic River** Class: C

and; (list other Outfalls, Receiving Waters & Water Classifications) 001 (after upgrade), 002, 005-012 Groundwater, Class GA

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

DISCHARGE MONITORING REPORT (DMR) MAILING ADDRESS

Mailing Name: **U.S. Department of Energy – Brookhaven National Laboratory**

Street: **53 Bell Avenue**

City: **Upton** State: **NY** Zip Code: **11973**

Responsible Official or Agent: **Robert J. Lee, P.E., Division Manager, EPD** Phone: **(631) 344-3148**

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
EPA Region II - Michelle Josilo
SCDHS, Office of Pollution Control

Permit Administrator: Mark Carrara

Address: 50 Circle Road, Stony Brook NY 11790

Signature: Date: 3 /4 /2014

ADDITIONAL OUTFALL LOCATION INFORMATION

OUTFALL	DESCRIPTION	LATITUDE	LONGITUDE	RECEIVING WATER	CLASS
001	Upgraded Wastewater Treatment Plant Discharge to Recharge Beds	40^0 52‘35"	72^0 51‘ 10"	Groundwater	GA
01A *	Acid/Caustic Cleaning and Rinse Water from Plating and Etching Process for Printed Circuit Boards in Bldg. 535	40^0 52‘48"	72^0 51‘ 12"	Groundwater	GA
01B *	Rinse Water from Centralized Degreasing in Bldg. 498	40^0 52‘48"	72^0 51‘ 12"	Groundwater	GA
01F *	Cooling Tower Blowdown at Bldg. 902	40^0 52‘48"	72^0 51‘ 12"	Groundwater	GA
002	Stormwater, Cooling Tower Blowdown and Non-contact Cooling Water from the AGS and RHIC Systems	40^0 52‘53"	72^0 52‘ 27"	Groundwater	GA
02B	Stormwater, Non-contact Cooling Water and Cooling Tower Blow-down from Bldg. 1004	40^0 52‘48"	72^0 52‘ 41"	Groundwater	GA
003	AGS Cooling Water Discharge and Stormwater	40^0 52‘11"	72^0 52‘ 02"	Groundwater	GA
005	Stormwater Runoff, Once-through Cooling Water from Building. 555, and Cooling Tower Blowdown from the NSLS and NSLS-II	40^0 51‘30"	72^0 52‘ 24"	Groundwater	GA
06A	Stormwater Runoff, Non-contact Cooling Water from LINAC and Cooling Tower Blowdown	40^0 52‘38"	72^0 53‘ 00"	Groundwater	GA
06B	Stormwater, Non-contact Cooling Water and CoolingTower Blowdown from CAD Facility	40^0 52‘40"	72^0 52‘ 50"	Groundwater	GA
007	Water Treatment Facility Filter Backwash	40^0 52‘23"	72^0 53‘ 09"	Groundwater	GA
008	Stormwater Runoff from NSLS-II Site	40^0 51‘44"	72^0 52‘ 37"	Groundwater	GA
009**	Miscellaneous Sanitary and Non Contact Cooling Water Discharges	various locations	various locations	Groundwater	GA
010	Stormwater Runoff from Central Steam Facility	40^0 52‘03"	72^0 52‘ 05"	Groundwater	GA
011	Storm Runoff from HWMF	40^0 51‘50"	72^0 51‘ 41"	Groundwater	GA
012	Storm Runoff and Non Contact Cooling Water from Building 902	40^0 52‘26"	72^0 52‘ 57"	Groundwater	GA

Notes: * Outfall 01A, 01B and 01F discharge through Outfall 001.
** Outfall 009 is for miscellaneous sanitary wastewater discharges to groundwater that are permitted under EPA’s Underground Injection Control Permit No. NYU500001.

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 (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 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 ML can be neither lowered nor raised without a modification of this permit.	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. MONTHLY AVG (daily 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. RANGE: The minimum and maximum instantaneous measurements for the reporting period must remain between the two values shown. 7 DAY ARITHMETIC MEAN (7 day average): The highest allowable average of daily discharges over a calendar week. 12 MRA (twelve month rolling avg): The average of the most recent twelve month's monthly averages. 30 DAY GEOMETRIC MEAN (30 d geo 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 (7 d geo mean): The highest allowable geometric mean of daily discharges over a calendar week.

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. The additional monitoring requirement is triggered upon receipt by the permittee of any monitoring results in excess of the stated Action Level.

PERMIT LIMITS, LEVELS AND MONITORING – Existing Surface Water Discharge

OUTFALL No.	WASTEWATER TYPE	RECEIVING WATER	EFFECTIVE	EXPIRING
001	Process, Sanitary and Storm Runoff	Peconic River	3/1/2010	Upon Relocation of the Discharge to Recharge Beds

PARAMETER	MINIMUM	MAXIMUM	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FOOTNOTES (FN)
pH	5.8	9.0	SU	Daily	Grab	

PARAMETER	COMPLIANCE LIMIT		ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg.	Daily Max.					
Flow	Monitor	2.3		MGD	Continuous	Recorded	1, 2
Copper, Total	NA	0.15		mg/l	Monthly	24 hr Comp.	3
Iron, Total	NA	0.37		mg/l	Monthly	24 hr Comp.	3
Lead, Total	NA	0.019		mg/l	Monthly	24 hr Comp.	3
Mercury, Total	NA	50		**ng/l**	Monthly	Grab	4
Nickel, Total	NA	0.11		mg/l	Monthly	24 hr Comp.	3
Silver, Total	NA	0.015		mg/l	Monthly	24 hr Comp.	
Zinc, Total	NA	0.1		mg/l	Monthly	24 hr Comp.	3
BOD_5	NA	5		mg/l	Monthly	24 hr Comp.	5
Solids, Total Suspended	NA	20		mg/l	Monthly	24 hr Comp.	5
Ammonia (as N)	NA	1.5		mg/l	Monthly	24 hr Comp.	
Total Nitrogen	NA	10		mg/l	Monthly	24 hr Comp.	
Total Nitrogen (May 15 -Oct. 15)	NA	20		lbs./d	Monthly	24 hr Comp.	
Total Phosphorous	NA	Monitor		mg/l	Monthly	24 hr Comp.	
Solids, Settleable	NA	0.1		ml/l	Daily	Grab	
Temperature	NA	90		^{o}F	Daily	Grab	
1,1,1-Trichloroethane	NA	5		ug/l	Twice/Month	Grab	
Methylene Chloride	NA	5		ug/l	Twice/Month	Grab	
Toluene	NA	5		ug/l	Twice/Month	Grab	
2-Butanone	NA	50		ug/l	Twice/Month	Grab	
Cyanide, Total	NA	0.1		mg/l	Twice/Month	Grab	
Fecal Coliform	200	400		MPN/100ml	Monthly	Grab	
Chlorine, Total Residual	Monitor	0.05		mg/l	Weekly	Grab	17
HEDP	NA	Monitor		mg/l	Monthly	24 hr Comp.	6
Tolytriazole	NA	Monitor		mg/l	Monthly	24 hr Comp.	6
WET - Chronic Invertebrate	NA	1.0		TUc	Quarterly	see footnote	8
WET - Chronic Vertebrate	NA	1.0		TUc	Quarterly	see footnote	8

PERMIT LIMITS, LEVELS AND MONITORING – Discharge to Recharge Beds

OUTFALL No.	WASTEWATER TYPE	RECEIVING WATER	EFFECTIVE	EXPIRING
001	Process, Sanitary and Storm Runoff	Groundwater	Upon Relocation of the Discharge to the Recharge Beds	2/28/2015

PARAMETER	MINIMUM	MAXIMUM	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FOOTNOTES (FN)
pH	5.8	8.5	SU	Daily	Grab	

PARAMETER	COMPLIANCE LIMIT		ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg.	Daily Max.					
Flow	Monitor	2.3		MGD	Continuous	Recorded	2
Copper, Total	NA	0.15		mg/l	Monthly	24 hr Comp.	
Iron, Total	NA	0.60		mg/l	Monthly	24 hr Comp.	
Lead, Total	NA	0.025		mg/l	Monthly	24 hr Comp.	
Mercury, Total	NA	200		**ng/l**	Monthly	Grab	
Nickel, Total	NA	0.10		mg/l	Monthly	24 hr Comp.	
Silver, Total	NA	0.015		mg/l	Monthly	24 hr Comp.	
Zinc, Total	NA	2.0		mg/l	Monthly	24 hr Comp.	
BOD_5	NA	5		mg/l	Monthly	24 hr Comp.	5
Solids, Total Suspended	NA	20		mg/l	Monthly	24 hr Comp.	5
Solids, Total Dissolved	NA	1000		mg/l	Monthly	24 hr Comp.	
Ammonia (as N)	NA	2.0		mg/l	Monthly	24 hr Comp.	
Total Nitrogen	NA	10		mg/l	Monthly	24 hr Comp.	
Total Phosphorous	NA	Monitor		mg/l	Monthly	24 hr Comp.	
Solids, Settleable	NA	0.1		ml/l	Daily	Grab	
1,1,1-Trichloroethane	NA	5		ug/l	Twice/Month	Grab	
Methylene Chloride	NA	5		ug/l	Twice/Month	Grab	
Toluene	NA	5		ug/l	Twice/Month	Grab	
Cyanide, Total	NA	0.1		mg/l	Twice/Month	Grab	
HEDP	NA	0.5		mg/l	Monthly	24 hr Comp.	12
Tolytriazole	NA	0.05		mg/l	Monthly	24 hr Comp.	12

PERMIT LIMITS, LEVELS AND MONITORING (Continuation)

OUTFALL No.	Limitations Apply	RECEIVING WATER	EFFECTIVE	EXPIRING
Groundwater Monitoring Wells 048-08, 048-09, 048-10, 039-115, 039-88, 039-89	X All Year	Groundwater	Upon Relocation of the Discharge to the Recharge Beds	2/28/2015

PARAMETER	MINIMUM	MAXIMUM	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FOOTNOTES (FN)
pH	Monitor	Monitor	SU	1/year	Grab	

PARAMETER	COMPLIANCE LIMIT		ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg.	Daily Max.					
Copper, Total	NA	Monitor		mg/l	1/year	Grab	18
Iron, Total	NA	Monitor		mg/l	1/year	Grab	18
Lead, Total	NA	Monitor		mg/l	1/year	Grab	18
Mercury, Total	NA	Monitor		mg/l	1/year	Grab	18
Nickel, Total	NA	Monitor		mg/l	1/year	Grab	18
Silver, Total	NA	Monitor		mg/l	1/year	Grab	18
Zinc, Total	NA	Monitor		mg/l	1/year	Grab	18

OUTFALL No.	WASTEWATER TYPE	RECEIVING WATER	EFFECTIVE	EXPIRING
002	ASG Non Contact Cooling Water, Precipitation Drainage from Secondary Containment, Floor Drains and Storm Runoff and the STAR (Bldg 1006) Detector's Cooling Tower Blowdown, PHENIX (Bldg 1008) Detector's Blowdown, and the PHOBOS (Bldg 1010) & Bldg. 1005 Refrigerator Bldg. Cooling Tower Blowdown	Groundwater	3/1/2010	2/28/2015

PARAMETER	MINIMUM	MAXIMUM	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FOOTNOTES (FN)
pH	Monitor	9.0	SU	Monthly	Grab	9

PARAMETER	COMPLIANCE LIMIT		ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg.	Daily Max.					
Flow	Monitor	NA		MGD	Monthly	Recorded	2
Oil & Grease	NA	15		mg/l	Monthly	Grab	9
1,1,1-Trichloroethane	NA	5		ug/l	Quarterly	Grab	9
Chloroform	NA	7		ug/l	Quarterly	Grab	9
Bromodichloromethane	NA	50		ug/l	Quarterly	Grab	9
HEDP	NA	0.5		mg/l	Quarterly	Grab	9,12
Tolytriazole	NA	0.2		mg/l	Quarterly	Grab	9,12
Aluminum, Total	NA	2		mg/l	Quarterly	Grab	9

PERMIT LIMITS, LEVELS AND MONITORING (Continuation)

OUTFALL No.	WASTEWATER TYPE	RECEIVING WATER	EFFECTIVE	EXPIRING
02B	RF (Bldg. 1004) Cooling Tower Blowdown	Groundwater	3/1/2010	2/28/2015

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

PARAMETER	COMPLIANCE LIMIT		ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg.	Daily Max.					
Flow	NA	Monitor		MGD	Monthly	Recorded	2
Oil & Grease	NA	15		mg/l	Monthly	Grab	

OUTFALL No.	WASTEWATER TYPE	RECEIVING WATER	EFFECTIVE	EXPIRING
003	Stormwater Runoff and AGS Non Contact Cooling Water	Groundwater	3/1/2010	2/28/2015

PARAMETER	COMPLIANCE LIMIT		ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg.	Daily Max.					
No Monitoring Required							

OUTFALL No.	WASTEWATER TYPE	RECEIVING WATER	EFFECTIVE	EXPIRING
005	Stormwater Runoff, Once-through Cooling Water from Building. 555, and Cooling Tower Blowdown from the NSLS and NSLS-II	Groundwater	3/1/2010	2/28/2015

PARAMETER	MINIMUM	MAXIMUM	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FOOTNOTES (FN)
pH	Monitor	8.5	SU	Monthly	Grab	16

PARAMETER	COMPLIANCE LIMIT		ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg.	Daily Max.					
Flow	Monitor	NA		MGD	Monthly	Recorded	2
Oil & Grease	NA	15		mg/l	Monthly	Grab	
HEDP	NA	0.5		mg/l	Quarterly	Grab	12
Tolytriazole	NA	0.2		mg/l	Quarterly	Grab	12
Copper, Total	NA	1.0		mg/l	Quarterly	Grab	

PERMIT LIMITS, LEVELS AND MONITORING (Continuation)

OUTFALL No.	WASTEWATER TYPE	RECEIVING WATER	EFFECTIVE	EXPIRING
06A	LINAC Non Contact Cooling Water and Storm Runoff (Station HT1 - Southwest Side of Basin)	Groundwater	3/1/2010	2/28/2015

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

PARAMETER	COMPLIANCE LIMIT		ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg.	Daily Max.					
Flow	Monitor	NA		MGD	Monthly	Recorded	2
Oil & Grease	NA	15		mg/l	Monthly	Grab	
HEDP	NA	0.5		mg/l	Quarterly	Grab	12
Tolytriazole	NA	0.2		mg/l	Quarterly	Grab	12

OUTFALL No.	WASTEWATER TYPE	RECEIVING WATER	EFFECTIVE	EXPIRING
06B	Cooling Towers from Building 919, Floor Drains and Storm Runoff (Station HT2)	Groundwater	3/1/2010	2/28/2015

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

PARAMETER	COMPLIANCE LIMIT		ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg.	Daily Max.					
Flow	Monitor	NA		MGD	Monthly	Recorded	2
Oil & Grease	NA	15		mg/l	Monthly	Grab	
HEDP	NA	0.5		mg/l	Quarterly	Grab	12
Tolytriazole	NA	0.2		mg/l	Quarterly	Grab	12

OUTFALL No.	WASTEWATER TYPE	RECEIVING WATER	EFFECTIVE	EXPIRING
007	Water Treatment Plant Backwash (Station HX)	Groundwater	3/1/2010	2/28/2015

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

PARAMETER	COMPLIANCE LIMIT		ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg.	Daily Max.					
Flow	NA	Monitor		gpd	Monthly	Instantaneous	2

PERMIT LIMITS, LEVELS AND MONITORING (Continuation)

OUTFALL No.	WASTEWATER TYPE	RECEIVING WATER	EFFECTIVE	EXPIRING
008	Storm Runoff from NSLS II Site	Groundwater	3/1/2010	2/28/2015

PARAMETER	MINIMUM	MAXIMUM	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FOOTNOTES (FN)
pH	Monitor	8.5	SU	Monthly	Grab	10

PARAMETER	COMPLIANCE LIMIT		ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg.	Daily Max.					
Flow	NA	Monitor		gpd	Monthly	Instantaneous	2
1,1-Dichloroethane	NA	5		ug/l	Monthly	Grab	10
1,1,1-Trichloroethane	NA	5		ug/l	Monthly	Grab	10
Oil & Grease	NA	15		mg/l	Monthly	Grab	10
Aluminum, Dissolved	NA	2.0		mg/l	Quarterly	Grab	10,11

OUTFALL No.	WASTEWATER TYPE	RECEIVING WATER	EFFECTIVE	EXPIRING
009	Miscellaneous Sanitary and Non Contact Cooling Water Discharges	Groundwater	3/1/2010	2/28/2015

PARAMETER	COMPLIANCE LIMIT		ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg.	Daily Max.					
No Monitoring Required							

PERMIT LIMITS, LEVELS AND MONITORING (Continuation)

OUTFALL No.	WASTEWATER TYPE	RECEIVING WATER	EFFECTIVE	EXPIRING
010	Storm Runoff from Central Steam Facility	Groundwater	3/1/2010	2/28/2015

PARAMETER	MINIMUM	MAXIMUM	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FOOTNOTES (FN)
pH	Monitor	8.5	SU	Monthly	Grab	10

PARAMETER	COMPLIANCE LIMIT		ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg.	Daily Max.					
Flow	NA	Monitor		gpd	Monthly	Instantaneous	2
Oil & Grease	NA	15		mg/l	Monthly	Grab	10
Aluminum, Dissolved	NA	2.0		mg/l	Quarterly	Grab	10,11
Copper, Dissolved	NA	1.0		mg/l	Quarterly	Grab	10,11
Lead, Dissolved	NA	0.05		mg/l	Quarterly	Grab	10,11
Vanadium, Dissolved	NA	Monitor		mg/l	Quarterly	Grab	10,11

OUTFALL No.	WASTEWATER TYPE	RECEIVING WATER	EFFECTIVE	EXPIRING
011	Stormwater Runoff from HWMF	Groundwater	3/1/2010	2/28/2015

PARAMETER	COMPLIANCE LIMIT		ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg.	Daily Max.					
No Monitoring Required							

OUTFALL No.	WASTEWATER TYPE	RECEIVING WATER	EFFECTIVE	EXPIRING
012	Stormwater Runoff and Non Contact Cooling Water from Bldg. 902	Groundwater	3/1/2010	2/28/2015

PARAMETER	COMPLIANCE LIMIT		ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg.	Daily Max.					
No Monitoring Required							

ADDITIONAL REQUIREMENTS FOR ALL NON-SANITARY DISCHARGES TO THE SEWER COLLECTION SYSTEM

OUTFALL No.	WASTEWATER TYPE	RECEIVING WATER	EFFECTIVE	EXPIRING
01A	Acid/Caustic Cleaning Waters and Rinse Waters from Plating and Etching Processes in Building 535B	Sewer Collection System	3/1/2010	2/28/2015

PARAMETER	MINIMUM	MAXIMUM	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FOOTNOTES (FN)
pH	Monitor	Monitor	SU	Quarterly	Grab	14

PARAMETER	COMPLIANCE LIMIT		ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg.	Daily Max.					
Flow	Monitor	NA		gpd	Quarterly	Recorded	13,14

OUTFALL No.	WASTEWATER TYPE	RECEIVING WATER	EFFECTIVE	EXPIRING
01B	Rinse Water from Centralized Degreasing Facility in Building 498	Sewer Collection System	3/1/2010	2/28/2015

PARAMETER	MINIMUM	MAXIMUM	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FOOTNOTES (FN)
pH	Monitor	Monitor	SU	Quarterly	Grab	14

PARAMETER	COMPLIANCE LIMIT		ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg.	Daily Max.					
Flow	Monitor	NA		gpd	Quarterly	Recorded	13,14
Bis-(2-ethylhexyl) Phthalate	NA	Monitor		ug/l	Quarterly	Grab	14
Di-n-Butyl Phthalate	NA	Monitor		ug/l	Quarterly	Grab	14
Copper, Total	NA	Monitor		ug/l	Quarterly	Grab	14
Chromium, Total	NA	Monitor		ug/l	Quarterly	Grab	14
Iron, Total	NA	Monitor		ug/l	Quarterly	Grab	14
Manganese, Total	NA	Monitor		ug/l	Quarterly	Grab	14
Nickel, Total	NA	Monitor		ug/l	Quarterly	Grab	14
Zinc, Total	NA	Monitor		ug/l	Quarterly	Grab	14

ADDITIONAL REQUIREMENTS FOR ALL NON-SANITARY DISCHARGES TO THE SEWER COLLECTION SYSTEM (Continuation)

OUTFALL No.	WASTEWATER TYPE	RECEIVING WATER	EFFECTIVE	EXPIRING
01F	Cooling Tower Water and Blowdown from Building 902	Sewer Collection System	3/1/2010	2/28/2015

PARAMETER	MINIMUM	MAXIMUM	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FOOTNOTES (FN)
pH	Monitor	Monitor	SU	Quarterly	Grab	14

PARAMETER	COMPLIANCE LIMIT		ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg.	Daily Max.					
Flow	Monitor	NA		gpd	Quarterly	Recorded	13,14, 15
Polypropylene Glycol Monobutyl Ether	NA	Monitor		ug/l	Quarterly	Grab	14

FOOTNOTES APPLICABLE TO PERMIT LIMITS, LEVELS, MONITORING AND ADDITIONAL REQUIREMENTS

1. Approximately 15% of the STP effluent is permitted to be discharged to groundwater via exfiltration from the sand filter beds.

2. Quantities or concentrations of radioactivity in the effluent from all outfalls are subject to the requirements of the United States Department of Energy Order 458.1.

3. This is an interim limit. The final limit will be determined following implementation of measures identified by the Quantification and Removal Study.

4. An interim mercury limit of 100 ng/l is in effect until the permittee completes upgrades and diverts the sewage treatment plant discharge to the recharge beds.

5. The effluent value for BOD_5 and Total Suspended Solids shall not exceed 15% of the influent value.

6. Monitoring for 1-Hydroxyethylidene-1,1-diphosphonic acid (HEDP) and Tolytriazole at outfall 001 is based upon the use of water treatment chemicals containing these compounds contributing to wastewater flows to the onsite treatment plant. The intent of monitoring is to consistently demonstrate non-detectable concentrations of these compounds in the final discharge.

7. Reserved

8. Whole Effluent Toxicity (WET) Testing:

   Testing Requirements - WET testing shall consist of **Tier 2 Chronic only testing**. 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 only *Ceriodaphnia dubia* (water flea - invertebrate) because it has consistently proved to be the most sensitive species during previous testing. However, if the quantity or quality of effluent changes significantly, testing will again be required using both species to also include *Pimephales promelas* (fathead minnow - vertebrate). Substitute dilution water is approved for use, and can be adjusted to moderate hardness. 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 is 0.031:1 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 **for the duration of the permit.**

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

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

WET Testing Limit Exceedances - If WET limits are exceeded at a 50% rate, than a Toxicity Identification/Reduction Evaluation (TI/RE) will be required.

9. Sampling shall be conducted at a location downstream from where the existing discharge mixes with the cooling tower blowdown from the STAR detector.

10. Samples shall be collected during a storm event.

11. Results of filtered samples shall be reported for compliance.

12. Effluent limits for 1-Hydroxyethylidene-1,1-diphosphonic acid (HEDP) and Tolytriazole are based on the understanding that water treatment chemicals containing these ingredients are being used in systems that discharge to this outfall.

13. These discharges to the sanitary collection system shall be monitored to determine if any are causing an adverse impact on the Sewage Treatment Plant. Sampling and analyses for these discharges may be conducted in house and are not required to be analyzed by a State certified laboratory.

14. Samples shall be collected from either a dedicated drain line installed on the systems or from holding tanks used to collect waste prior to discharge to the sewer collection system.

15. A detailed daily log of oil consumption shall be maintained. Should an unaccountable loss of oil be realized, an investigation shall be conducted to determine the source of the oil loss. If the loss cannot be reconciled, the cooling tower must be shut down, sampled, and analyzed prior to discharge. If significant levels of contamination are found in the cooling tower oil, results shall be submitted to the Regional Water Engineer for approval to discharge.

16. Samples for pH at outfall 005 will be collected at the cooling tower blow-down pipe discharge.

17. The use of Hach DPD Method 8167 is required to sample for Bromine or Bromine/Chlorine mixtures which are present in water treatment chemicals used at this facility. The Hach DPD Method 8167 detects both bromine and chlorine compounds with results expressed as Chlorine. Alternatively, the permittee may perform an analytical study to demonstrate the validity of a comparable methodologies. Other analytical methods, however, must receive prior department approval before use.

18. Monitoring well sampling must reflect appropriate procedures to ensure representative groundwater samples are collected (e.g. bailing or pumping 3 well volumes prior to sample collection)

SPECIAL CONDITIONS - BEST MANAGEMENT PRACTICES

1. If and approved Best Management Practices (BMP) plan is not already in effect, the permittee shall develop a BMP plan to prevent, or minimize the potential for, release of significant amounts of toxic or hazardous pollutants to the waters of the State through plant site runoff; spillage and leaks; sludge or waste disposal; and storm water discharges including, but not limited to, drainage from raw material storage. Completed BMP plans shall be submitted by **WITHIN 6 MONTHS OF EFFECTIVE DATE OF MODIFICATION** to the Regional Water Engineer at the address shown on the Recording, Reporting and Additional Monitoring Requirements. The BMP plan shall be implemented within 6 months of submission, unless a different time frame is approved by this Department.

2. Subsequent modifications to or renewal of this permit does not reset or revise the deadline set forth in (1) above, unless a new deadline is set explicitly by such permit modification or renewal.

3. The permittee shall review all facility components or systems (including 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 toxic or hazardous pollutants are used, manufactured, stored or handled to evaluate the potential for the release of significant amounts of such 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. For hazardous pollutants, the list of reportable quantities as defined in 40 CFR, Part 117 may be used as a guide in determining significant amounts of releases. For toxic pollutants, 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 listed as toxic pollutants under Section 307(a)(1) of the Clean Water Act or as hazardous pollutants under Section 311 of the Act or that are identified as Chemicals of Concern by the Industrial Chemical Survey.

4. Whenever the potential for a significant release of toxic or hazardous pollutants to State waters is determined to be present, the permittee shall identify Best Management Practices that have been established to minimize such potential releases. Where BMPs are inadequate or absent, appropriate BMPs shall be established. In selecting appropriate BMPs, the permittee shall consider typical industry practices such as spill reporting procedures, risk identification and assessment, employee training, inspections and records, preventive maintenance, good housekeeping, materials compatibility and security. In addition, the permittee may consider structural measures (such as secondary containment and erosion/sediment control devices and practices) where appropriate.

5. Development of the BMP plan shall include sampling of waste stream segments for the purpose of toxic "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 storm water 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.

6. The BMP plan shall be documented in narrative form and shall include 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. USEPA guidance for development of storm water elements of the BMP is available in the September 1992 manual "Storm Water Management for Industrial Activities," USEPA Office of Water Publication EPA 832-R-92-006 (available from NTIS, (703)487-4650, order number PB 92235969). A copy of the BMP plan shall be maintained at the facility and shall be available to authorized Department representatives upon request. As a minimum, the plan shall include the following BMP's:

a. BMP Committee
b. Reporting of BMP Incidents
c. Risk Identification & Assessment
d. Employee Training
e. Inspections and Records
f. Preventive Maintenance
g. Good Housekeeping
h. Materials Compatibility
i. Security
j. Spill prevention & response
k. Erosion & sediment control
l. Management of runoff

7. The BMP plan shall be reviewed annually and shall be modified whenever: (a) changes at the facility materially increase the potential for significant releases of toxic or hazardous pollutants, (b) actual releases indicate the plan is inadequate or (c) a letter from the Regional Water Engineer highlights inadequacies in the plan..

MERCURY MINIMIZATION PROGRAM REQUIREMENTS

1. **General** - The permittee shall develop, implement, and maintain a Mercury Minimization Program (MMP). The MMP is required because the 50 ng/L permit limit exceeds the state-wide calculated water quality based effluent limit (WQBEL) of 0.70 nanograms/liter (ng/L) for Total Mercury. The goal of the MMP will be to reduce mercury effluent levels in pursuit of the calculated WQBEL.

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. As 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. All permit-related mercury monitoring shall be performed using EPA Method 1631 and shall be coordinated so that the results can be compared. All samples should be grabs and use of EPA Method 1669 during sample collection is recommended. Minimum required monitoring shall be 1/year at the following locations: wastewater treatment plant influents and effluents, key locations in the wastewater and/or stormwater collection systems, and known or potential mercury sources, including raw materials. Additional monitoring must be completed as may be required elsewhere in this permit or upon Department request.

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, 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 if 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 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. The first annual report is due EDPM + 1 year and follow-up reports are due annually thereafter. Note that the complete MMP documentation need not be submitted to the Department unless otherwise requested.

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.

Note: The Mercury Minimization Program requirements are intended for surface water discharges containing mercury in accordance with the Department's Technical and Operation Guidance Series (TOGS) 1.3.10 Mercury – SPDES Permitting, Multiple Discharge Variance and Water Quality Monitoring. The mercury minimization program will be discontinued upon completion and operation of the recharge beds thus eliminating the discharge outfall to the Peconic River.

SCHEDULE OF SUBMISSIONS

a) The permittee shall comply with the following schedule: **a) Short-term Hi-Intensity Sampling**

Outfall Number(s)	Compliance Action	Due Date
001	The permittee shall conduct sampling for the following parameters detected in the WWTP effluent and listed in the permit application. Sampling shall be once per week for a period of 3 months. The permittee submit the results of the analyses along with the daily flow: Parameter — EPA Method of Analysis Required — Sample Type delta BHC — 608 — 24 hr. Comp. Heptachlor — 608 — 24 hr. Comp.	Upon Relocation of the Discharge to the Recharge Beds + 5 months
001	The permittee shall conduct influent and effluent sampling for PCB congeners using EPA Method 1668C once per month for a period of 3 months. Sampling results shall include a summary of concentrations, reported in picograms per liter, for specific PCB congeners, congener groups (e.g., monochlorobiphenyl, dichlorobiphenyl, etc.), total PCBs and aroclors, as well as, daily treatment plant flows. After review of the results, the Department may reopen the permit to add additional limits or action levels for these parameters.	EDPM + 6 months

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 letter of "SPDES NOTICE/RENEWAL APPLICATION/PERMIT."

b) The permittee shall submit a written notice of compliance or non-compliance with each of the above schedule dates no later than 14 days following each elapsed date, unless conditions require more immediate notice as prescribed in 6 NYCRR Part 750-1.2(a) and 750-2. All such compliance or non-compliance notification shall be sent to the locations listed under the section of this permit entitled RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS. Each notice of non-compliance shall include the following information:

1. A short description of the non-compliance;
2. A description of any actions taken or proposed by the permittee to comply with the elapsed schedule requirements without further delay and to limit environmental impact associated with the non-compliance;
3. A description or any factors which tend to explain or mitigate the non-compliance; and
4. An estimate of the date the permittee will comply with the elapsed schedule requirement and an assessment of the probability that the permittee will meet the next scheduled requirement on time.

c) The permittee shall submit copies of any document required by the above schedule of compliance to 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.

WATER TREATMENT CHEMICAL (WTC) REQUIREMENTS

New or increased use of a WTC requires prior DEC review and authorization. At a minimum, the permittee must notify the DEC in writing of its intent to change WTC use by submitting a completed WTCFX Form for each WTC. The DEC 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 formal SPDES permit modification.** WTCs which are used in closed systems and cannot be discharged or those which are discharged to municipal STP do not require DEC review. **WTC use and discharge questions or requests for forms** should be directed to the DEC staff person who developed your SPDES permit. If you are not sure who that is, contact the DEC staff person who last inspected your facility.

Examples of WTCs include, biocides, coagulants, conditioners, corrosion inhibitors, defoamers, flocculants, scale inhibitors, sequestrants, and settling aids. DEC staff may also direct you to use a WTCFX Form for review and authorization of substances other than WTCs, e.g. process chemicals.

The permittee must demonstrate that the use and discharge of any WTCs containing **phosphorus**, tributary to the Great Lakes Basin or other ponded waters, is necessary and that no acceptable alternatives exist. Please note that in some cases your permit may require modification to regulate phosphorus.

Generic WTC Usage Requirements

1. WTC use shall not exceed the rate reported by the permittee or authorized below, whichever is less.

2. The discharge shall not cause or contribute to a violation of water quality or an exceedance of ambient water quality criteria.

3. **The permittee must 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 and subsequently discharged through outfalls. The permittee shall retain the logbook data for a period of at least 5 years. This period may be extended by request of the DEC.

4. **The permittee shall provide an annual report**, attached to the December DMR, containing the following information for each outfall: the current list of WTCs authorized for use and discharge by the DEC, for each WTC the amount in pounds used during the year, identification of authorized WTCs the permittee no longer uses, and any other pertinent information.

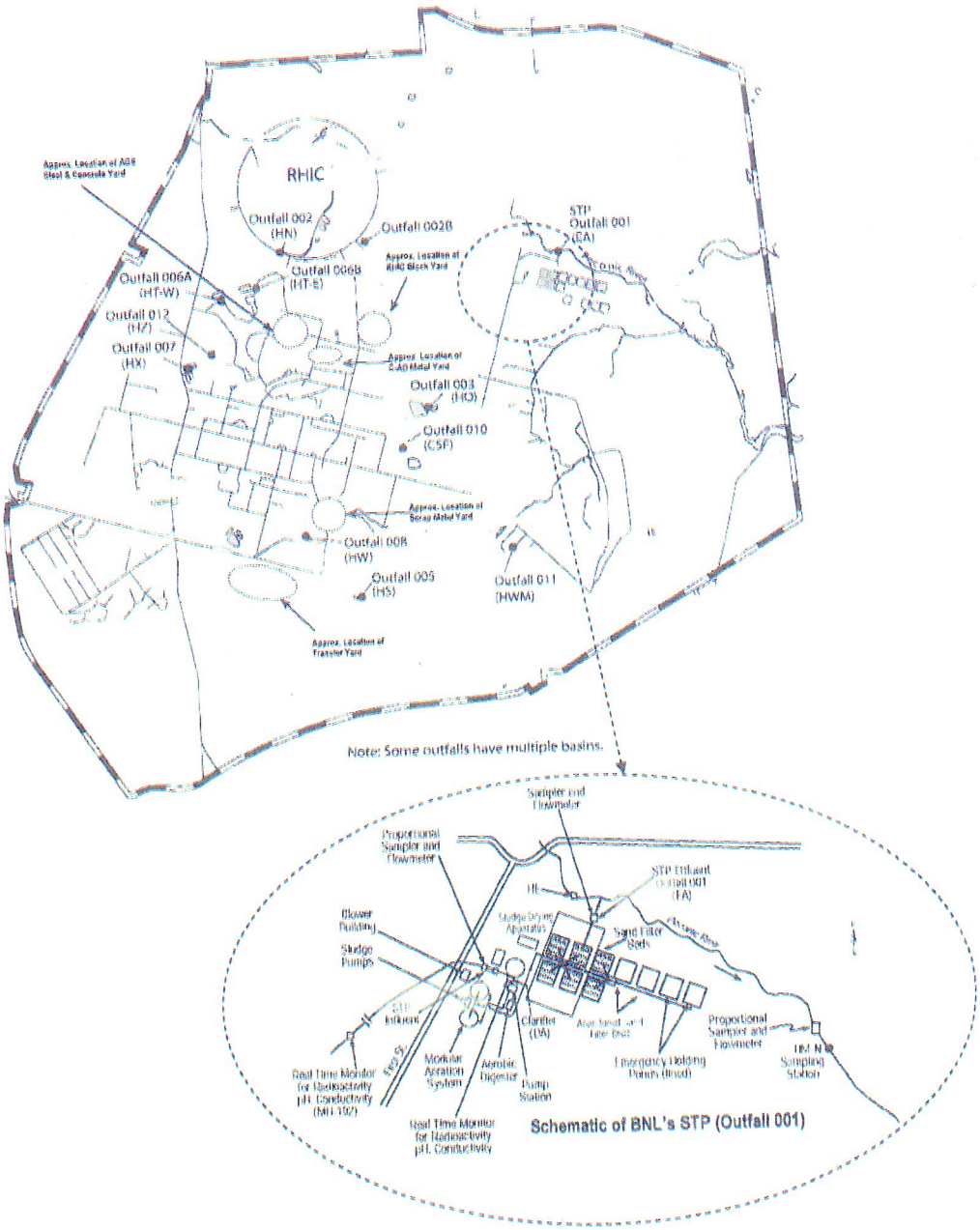
List of WTCs Authorized for Use and Discharge*

Affected Outfall(s)	Dosage (lbs/day) Avg	Max	WTC Manufacturer and Product Name	WTC Function
001	1	3	GE Betz / Optisperse ADJ562	Boiler Water Treatment
001	8	15	GE Betz / Optisperse CL362	Boiler Water Treatment
001	2	5	GE Betz / Cortrol IS100	Boiler Water Treatment
001	1	3	GE Betz / Cortrol IS102	Boiler Water Treatment
001	4	10	GE Betz / Steamate NA700	Boiler Water Treatment
001	50	50	Ashland Hercules Water Technologies / Wrico BGA	Cooling Tower Biocide
001	30	30	Ashland Hercules Water Technologies / Protectsol 629 P	Cooling Tower Inhibitor
001	12.5	50	Ashland Hercules Water Technologies / Biosperse 261T	Cooling Tower Biocide
001	0.85	1.7	Ashland Hercules Water Technologies / WPD 11 166	Cooling Tower Inhibitor
001, 002, 005, 06A, 06B	17	34	Ashland Hercules Water Technologies / Drew 2135	Cooling Tower Inhibitor
06A	1.14	3.2	Ashland Hercules Water Technologies / Drew 2100	Cooling Tower Inhibitor
001, 002, 005, 06A, 06B	32	32	Ashland Hercules Water Technologies / Drewbrom One L	Cooling Tower Biocide
001, 002, 005, 06A, 06B	19	19	Ashland Hercules Water Technologies / Biosperse 550	Cooling Tower Biocide
001	35	35	Ashland Water Technologies / 12.5% Sodium Hypochlorite	Microbiocide precursor
001	10.7	15	Ashland Water Technologies / Biosperse XD9400	Microbiocide precursor
001	17.9	18	Ashland Water Technologies / Spectrum XD 3899	Microbiocide
001	25	35	Ashland Water Technologies / Biosperse 3001	Microbiocide

* - Authorized WTCs must either be listed above or identified in a letter sent to the permittee by the DEC subsequent to issuance of this permit page. In cases where a WTC is listed above and in a letter from the DEC, the more recent document will control.

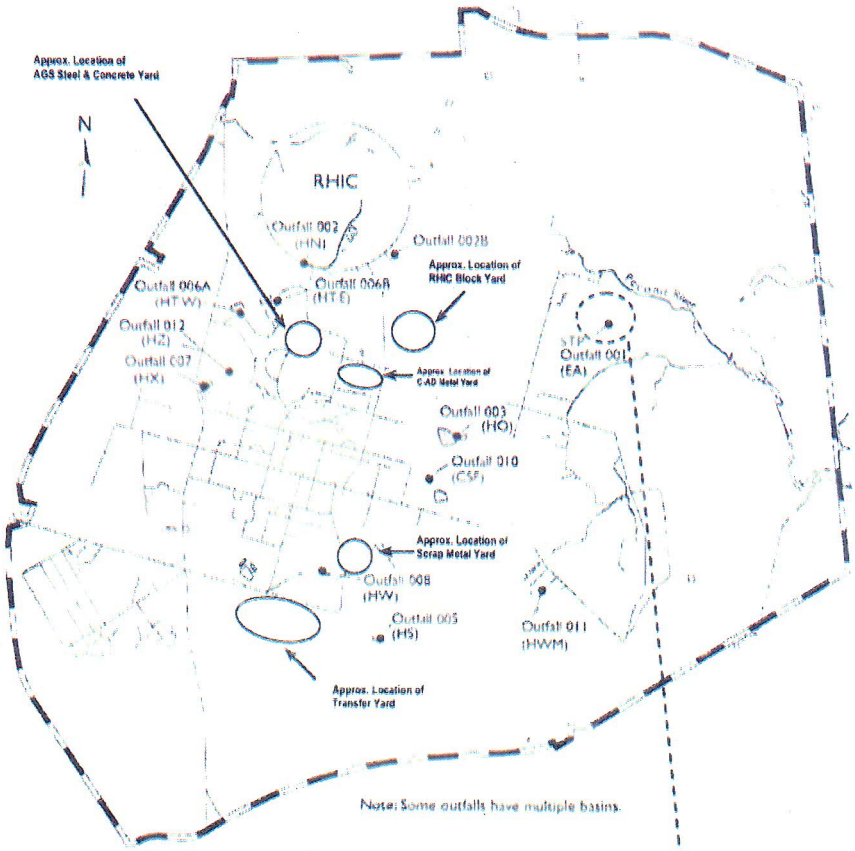
MONITORING LOCATIONS – Existing Surface Water Discharge

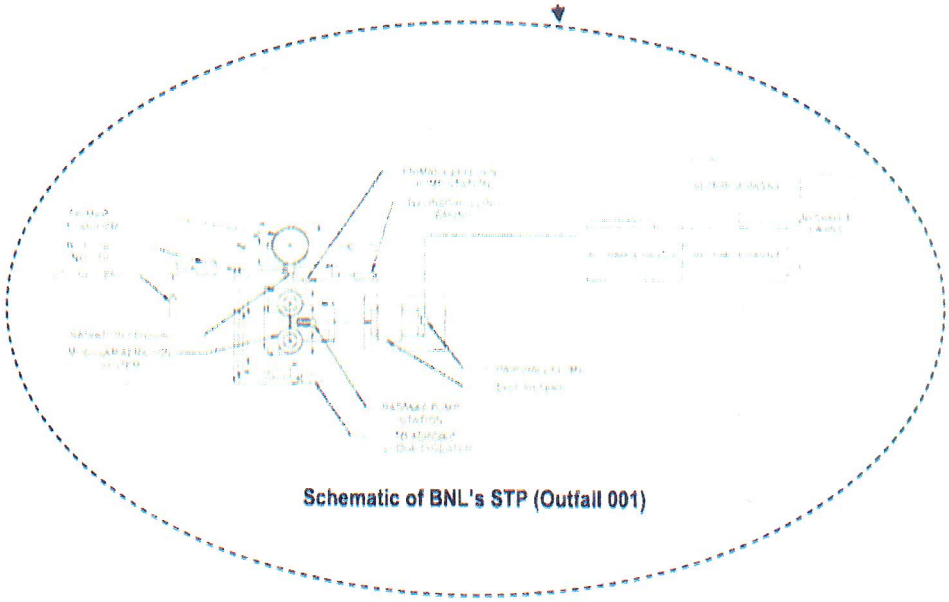
The permittee shall take samples and measurements, to comply with the monitoring requirements specified in this permit, at the location(s) specified below:



MONITORING LOCATIONS – Discharge to Recharge Beds

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

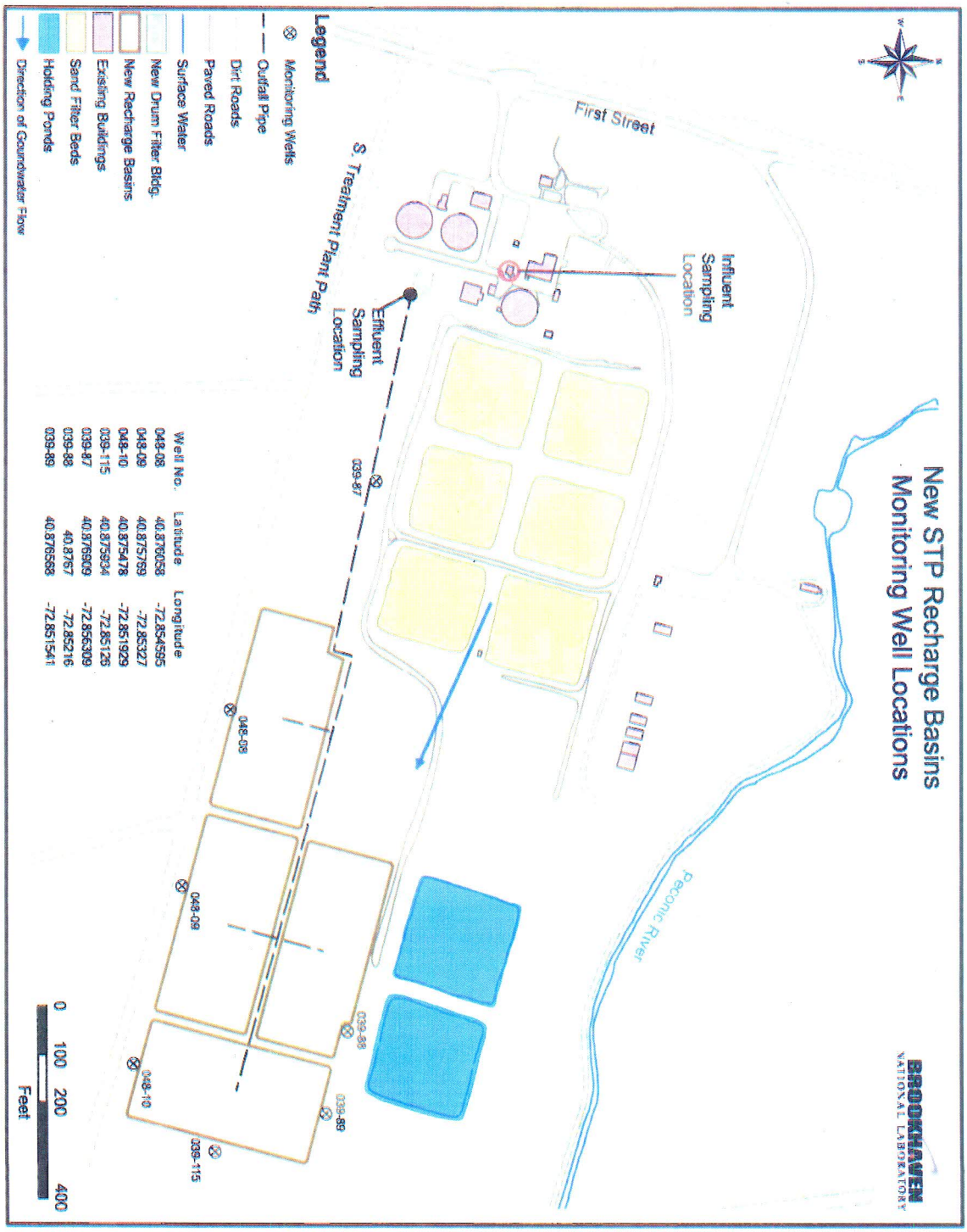




Schematic of BNL's STP (Outfall 001)

MONITORING LOCATIONS – Discharge to Recharge Beds

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



DISCHARGE NOTIFICATION REQUIREMENTS

(a) Except as provided in (c) and (f) 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:

(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) 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.

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 H as follows:.

B. General Conditions

1.	Duty to comply	6NYCRR Part 750-2.1(e) & 2.4
2.	Duty to reapply	6NYCRR Part 750-1.16(a)
3.	Need to halt or reduce activity not a defense	6NYCRR Part 750-2.1(g)
4.	Duty to mitigate	6NYCRR Part 750-2.7(f)
5.	Permit actions	6NYCRR Part 750-1.1(c), 1.18, 1.20 & 2.1(h)
6.	Property rights	6NYCRR Part 750-2.2(b)
7.	Duty to provide information	6NYCRR Part 750-2.1(i)
8.	Inspection and entry	6NYCRR Part 750-2.1(a) & 2.3

C. Operation and Maintenance

1.	Proper Operation & Maintenance	6NYCRR Part 750-2.8
2.	Bypass	6NYCRR Part 750-1.2(a)(17), 2.8(b) & 2.7
3.	Upset	6NYCRR Part 750-1.2(a)(94) & 2.8(c)

D. Monitoring and Records

1.	Monitoring and records	6NYCRR Part 750-2.5(a)(2), 2.5(c)(1), 2.5(c)(2), 2.5(d) & 2.5(a)(6)
2.	Signatory requirements	6NYCRR Part 750-1.8 & 2.5(b)

E. Reporting Requirements

1.	Reporting requirements	6NYCRR Part 750-2.5, 2.6, 2.7 & 1.17
2.	Anticipated noncompliance	6NYCRR Part 750-2.7(a)
3.	Transfers	6NYCRR Part 750-1.17
4.	Monitoring reports	6NYCRR Part 750-2.5(e)
5.	Compliance schedules	6NYCRR Part 750-1.14(d)
6.	24-hour reporting	6NYCRR Part 750-2.7(c) & (d)
7.	Other noncompliance	6NYCRR Part 750-2.7(e)
8.	Other information	6NYCRR Part 750-2.1(f)
9.	Additional conditions applicable to a POTW	6NYCRR Part 750-2.9
10.	Special reporting requirements for discharges that are not POTWs	6NYCRR Part 750-2.6

F. Planned Changes

1. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

   a. The alteration or addition to the permitted facility may meet of the criteria for determining whether facility is a new source in 40 CFR §122.29(b); or
   b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, or to notification requirements under 40 CFR §122.42(a)(1); or
   c. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

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

GENERAL REQUIREMENTS continued

G. Notification Requirement for POTWs

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

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

H. Sludge Management

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

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;**

[X] (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:
Alex Santino, P.E.
SCDHS, Office of Pollution Control
15 Horseblock Place
Farmingville, NY 11738

Send the **first copy** (second sheet) of each DMR page to:

Department of Environmental Conservation
Regional Water Engineer, Region 1
SUNY at Stony Brook
50 Circle Road
Stony Brook, New York 11790 3409

Phone: (631) 444 0405

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.

New York State Department of Environmental Conservation
Division of Water
Bureau of Water Permits, 4th Floor
625 Broadway, Albany, New York 12233-3505
Phone: (518) 402-8111 • **FAX:** (518) 402-9029
Website: www.dec.state.ny.us

Joe Martens
Commissioner

MEMORANDUM
BWP Drafted – SPDES PIMs and New

TO:	Joe Sun		, Regional Project Manager	
THROUGH:	Shayne Mitchell		, Section Chief, Bureau of Water Permits, DOW	
FROM:	Bruce Terbush		, Permit Writer, Bureau of Water Permits, DOW	
SUBJECT:	SPDES No.: NY	0005835	**Permittee Name:**	United States Department of Energy
	UPA No.:	1-4722-00032/00072	**Facility Name:**	Brookhaven National Laboratory
DATE:	February 12, 2014			

X	PIM		New		Other (specify):

	Draft Permit	Complete Permit, pages -		Complete Fact Sheet, pages -	
X	Final Permit				

Comments were received from (see below). Responses are attached.

1.	U.S. Department of Energy	Dated:	12/20/2013
2.	Carmine F. Vasile	Dated:	12/20/2013
3.		Dated:	

If questions, please call BWP Permit Writer at 518-402-8235.

cc via email with attachment(s):
RWE-Region 1
Joe Sun, Region 1
BWP Permit Coordinator