AUTHORIZATION TO DISCHARGE UNDER THE
RHODE ISLAND POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of Chapter 46-12 of the Rhode Island General Laws, as amended,

The Narragansett Bay Commission
One Service Road
Providence, Rhode Island 02905

is authorized to discharge from a facility located at the

Bucklin Point Wastewater Treatment Facility
102 Campbell Avenue
East Providence, Rhode Island 02914
And
Associated Combined Sewer Overflows

to receiving waters named

Seekonk, Moshassuck, and Blackstone Rivers

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective on December 1, 2017.

This permit and the authorization to discharge expire at midnight, five (5) years from the effective date.

This permit supersedes the permit issued on December 31, 2001.

This permit consists of 33 pages in Part I including effluent limitations, monitoring requirements, etc. and 10 pages in Part II including General Conditions.

Signed this 29th day of September, 2017.

Angelo S. Liberti

Angelo S. Liberti, P.E., Chief of Surface Water Protection
Office of Water Resources
Rhode Island Department of Environmental Management
Providence, Rhode Island

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date and lasting through permit expiration, the permittee is authorized to discharge from outfall serial number 001A (Advanced Treatment Discharge after Disinfection).

   Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations					Monitoring Requirement	
	Quantity - lbs./day		Concentration - specify units				
	Monthly Average	Maximum Daily	Monthly Average *(Minimum)	Weekly Average *(Average)	Maximum Daily *(Maximum)	Measurement Frequency	Sample Type
Flow (To Plant Headworks)	--- MGD	--- MGD[1]				Continuous	Recorder
Flow (To Advanced Treatment)	31 MGD	--- MGD[1]				Continuous	Recorder
$CBOD_5$ (Nov. 1 – Apr. 30)	6,464	11,634	25 mg/l	40 mg/l	45 mg/l	1/Day	24-Hr. Comp.
$CBOD_5$ (May 1 – Oct. 31)	2,585	3,878	10 mg/l	10 mg/l	15 mg/l	1/Day	24-Hr. Comp.
$CBOD_5$ - % Removal	85%					1/Month	Calculated
TSS (Nov. 1 – Apr. 30)	7,756	12,927	30 mg/l	45 mg/l	50 mg/l	1/Day	24-Hr. Comp.
TSS (May 1 – Oct. 31)	5,171	7,756	20 mg/l	20 mg/l	30 mg/l	1/Day	24-Hr. Comp.
TSS-% Removal	85%					1/Month	Calculated
Settleable Solids				--- ml/l	--- ml/l	1/Day	Grab

--- Signifies a parameter which must be monitored and data must be reported; no limit has been established at this time.

Sampling for TSS, $CBOD_5$, Flow, and Settleable Solids shall be performed Sunday-Saturday. All $CBOD_5$ and TSS samples shall be taken on the influent and effluent with appropriate allowances for hydraulic detention (flow-through) time.

[1]Flow to the WWTF's headworks shall be reported. All flows up to 116 MGD shall receive at least primary treatment and disinfection. Up to 46 MGD must receive advanced treatment.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: Outfall 001A (Advanced Treatment Discharge after Disinfection).

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

2. During the period beginning on the effective date and lasting through permit expiration, the permittee is authorized to discharge from outfall serial number 001A (Advanced Treatment Discharge after Disinfection).

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations					Monitoring Requirement	
	Quantity - lbs./day		Concentration - specify units				
	Monthly Average	Maximum Daily	Monthly Average *(Minimum)	Weekly Average *(Average)	Maximum Daily *(Maximum)	Measurement Frequency	Sample Type
Enterococci			35 cfu[1] 100 ml		276 cfu[1] 100 ml	2/Day	Grab[2]
Fecal Coliform			--- MPN[1] 100 ml	--- MPN[1] 100 ml	--- MPN[1] 100 ml	1/Day	Grab[2]
UV Intensity[3]			(--- mw/cm^2)	(--- mw/cm^2)	(--- mw/cm^2)	Continuous	Recorder
UV Transmittance[3]			(--- %)	(--- %)	(--- %)	Continuous	Recorder
UV Dosage[3]			(---mw-s/cm^2)[4]	(---mw-s/cm^2)[4]	(---mw-s/cm^2)[4]	Continuous	Recorder
pH			(6.0 SU)		(9.0 SU)	1/Day	Grab

[1]The Geometric Mean shall be used to obtain the "maximum daily" (when there are multiple sampled in a day), "weekly average", and "monthly average" values.

[2] The Fecal Coliform sample shall be taken at the same time as one of the Enterococci samples. Compliance with the Enterococci limitations shall be determined by taking a minimum of two (2) grab samples per day, separated by a minimum of three (3) hours, unless good cause exists for not having the minimum separation. In the event that the permittee believes that good cause exists, written documentation, in the form of a cover letter to the permittee's Discharge Monitoring Reports, must be submitted to the DEM demonstrating that good cause existed. The facility shall report any fecal coliform daily geometric mean that exceeds 400 MPN/100 mL to the RIDEM by calling (401) 222-4700 during working hours or (401) 222-3070 at night. Notification must include fecal coliform concentrations including dates, times, and any steps (if any) to be taken to reduce future fecal coliform concentrations.

[3]UV Intensity, Transmittance, and Dosage readings shall be recorded continuously to provide a record that proper disinfection was achieved at all times.

[4]UV Dosage is defined as the UV Intensity (mW/ cm^2) multiplied by the Exposure Time (s).

*Values in parentheses () are to be reported as Minimum/Average/Maximum for the reporting period rather than Average Monthly/Average Weekly/Maximum Daily.

Sampling for Fecal Coliform, Enterococci, pH, UV Intensity, UV Transmittance, and UV Dosage shall be performed Sunday – Saturday.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: Outfall 001A (Advanced Treatment Discharge after Disinfection).

PART 1

A. **EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

3. During the period beginning on the effective date and lasting through permit expiration, the permittee is authorized to discharge from outfall serial number 001A (Advanced Treatment Discharge After Disinfection).

   Such discharges shall be monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations					Monitoring Requirement	
	Quantity - lbs./day		Concentration - specify units				
	Monthly Average	Maximum Daily	Monthly Average	Weekly Average	Maximum Daily	Measurement Frequency	Sample Type
Oil and Grease			--- mg/l		--- mg/l	1/Month	3 Grabs[1]
Phosphorus, Total			--- mg/l		--- mg/l	1/Week	24-Hr. comp.
TKN			--- mg/l		--- mg/l	3/week	24-Hr. Comp.
Nitrite, Total (as N)			--- mg/l		--- mg/l	3/week	24-Hr. Comp.
Nitrate, Total (as N)			--- mg/l		--- mg/l	3/week	Calculated
Nitrogen, Total (TKN + Nitrite + Nitrate, as N)							
(May-Oct)	1293 lbs/day		5.0 mg/l		--- mg/l	3/week	Calculated
(Nov-Apr)	--- lbs/day[2]		--- mg/l[2]		--- mg/l	3/week	Calculated

[1] Three (3) grab samples shall be collected per day with a minimum of six (6) hours between samples. Each grab sample must be analyzed individually and the maximum value reported as the "Maximum Daily" and the average of the grab samples reported as the "Monthly Average".

[2] The permittee shall operate the treatment facility to reduce the discharge of total nitrogen, during the months of November through April, to the maximum extent possible using all available treatment equipment in place at the facility, except carbon source.

--- Signifies a parameter which must be monitored and data must be reported; no limit has been established at this time.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: Outfall 001A (Advanced Treatment Discharge after Disinfection).

PART 1

A. **EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

4. During the period beginning on the effective date and lasting through permit expiration, the permittee is authorized to discharge from outfall serial number 001A (Advanced Treatment Discharge After Disinfection).
   Such discharges shall be monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations					Monitoring Requirement	
	Quantity - lbs./day		Concentration - specify units				
	Monthly Average	Maximum Daily	Monthly Average	Weekly Average	Maximum Daily	Measurement Frequency	Sample Type
Copper, Total[1]			6.5 ug/l		6.5 ug/l	2/Week	24-Hr. Comp.
Nickel, Total[1]			14.3 ug/l		70.3 ug/l	2/Week	24-Hr. Comp.
Zinc, Total[1]			85.6 ug/l		85.6 ug/l	2/Week	24-Hr. Comp.
Cyanide, Available[1]			0.8 ug/l[2]		0.8 ug/l[2]	2/Week	24-Hr. Comp.[3]
Ammonia, Total (as N)			--- mg/l		--- mg/l	1/Month	24-Hr. Comp.
Cadmium, Total[1]			--- ug/l		--- ug/l	1/Month	24-Hr. Comp.
Aluminum, Total[1]			--- ug/l		--- ug/l	1/Month	24-Hr. Comp.
Chromium, Hexavalent[1]			--- ug/l		--- ug/l	1/Month	24-Hr. Comp.
Lead, Total[1]			--- ug/l		--- ug/l	1/Month	24-Hr. Comp.

--- Signifies a parameter which must be monitored and data must be reported; no limit has been established at this time.

[1] Samples shall be taken on the influent and effluent with appropriate allowances for hydraulic detention (flow-through) time.

[2] The limit at which compliance/noncompliance determinations will be based is the Quantitation Limit, which is defined as 10 ug/l for Cyanide. This value may be reduced by permit modification as more sensitive methods are approved by EPA and the State.

[3] Compliance with these limitations shall be determined by taking three grab samples per eight-hour shift with a minimum of two (2) hours between grabs, and preserved immediately upon collection. All samples shall be composited, then analyzed for available Cyanide.

Samples taken in compliance with the monitoring requirements specified above shall be taken Monday through Friday at the following locations: Outfall 001A (Advanced Treatment Discharge after Disinfection).

PART 1

A. **EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

5. During the period beginning on the effective date and lasting through permit expiration, the permittee is authorized to discharge from outfall serial number 001A (Advanced Treatment Discharge after Disinfection).

   Such discharges shall be monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations					Monitoring Requirement	
	Quantity - lbs./day		Concentration - specify units				
	Monthly Average	Maximum Daily	Monthly Average	Weekly Average	Maximum Daily	Measurement Frequency	Sample Type
Mysidopsis bahia LC50[1]					100% or Greater[2]	1/Quarter	24-Hr. Comp.
Arbacia punctulata C-NOEC[3]					50% or Greater[4]	1/Quarter	24-Hr. Comp.

[1]LC_{50} is defined as the concentration of wastewater that causes mortality to 50% of the test organisms.

[2]The 100% or greater limit is defined as a sample that is composed of 100% effluent.

[3]C-NOEC is defined as the highest concentration of toxicant or effluent at which no adverse effects are observed.

[4]The 50% or greater limit is defined as a sample that is composed of 50% or more effluent.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: Outfall 001A in accordance with I.B of the permit.

PART 1

A. **EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

6. During the period beginning on the effective date and lasting through permit expiration, the permittee is authorized to discharge from outfall serial number(s) 002A (North Diversion Structure).

   Such discharges shall be monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations					Monitoring Requirement	
	Quantity - lbs./day		Concentration - specify units				
	Monthly Average	Maximum Daily	Monthly Average	Weekly Average	Maximum Daily	Measurement Frequency	Sample Type
Flow	--- MGD	--- MGD				Continuous	Recorder

--- Signifies a parameter which must be monitored and data must be reported; no limit has been established at this time.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: Outfall 002A.

PART 1

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

7. During the period beginning on the effective date and lasting through permit expiration, the permittee is authorized to discharge from outfall serial number 003A (Treated Wet Weather Outfall After Dechlorination and Prior to Combination with the Advanced Treatment Discharge). Such discharges shall be monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations					Monitoring Requirement	
	Quantity - lbs./day		Concentration - specify units				
	Monthly Average	Maximum Daily	Monthly Average	Weekly Average	Maximum Daily	Measurement Frequency	Sample Type
Flow	--- MGD	70 MGD				Continuous	Recorder
$CBOD_5$			--- mg/l		--- mg/l	When in Use[1]	24-Hr. Comp. (Hourly Grabs)
$CBOD_5$ - % Removal[1]	35%[1]					When in Use[1]	Calculated
TSS			--- mg/l		--- mg/l	When in Use[1]	24-Hr. Comp. (Hourly Grabs)
TSS - % Removal[1]	50%[1]					When in Use[1]	Calculated

[1]For monitoring purposes, an overflow is defined as any occurrence of a discharge from the wet weather facility with a minimum duration of 15 minutes. Overflows shall be considered to be separate if they are separated by six (6) hours or more. During months of no overflow, DMR's shall be marked as "no discharge". All overflows created by storm events that are greater than the one year six hour storm (2.4 inches) are not subject to these limitations and should not be included in DMR reporting calculations. However, any overflow, regardless of the size of the storm event, must be reported to the DEM's Operations and Maintenance Program.

--- Signifies a parameter which must be monitored and data must be reported; no limit has been established at this time.

*Values in parentheses () are to be reported as Minimum/Average/Maximum for the reporting period rather than Average Monthly/Average Weekly/Maximum Daily.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: Outfall 003A.

PART 1

A. **EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

8. During the period beginning on the effective date and lasting through permit expiration, the permittee is authorized to discharge from outfall serial number 003A (Treated Wet Weather Outfall After Dechlorination and Prior to Combination with the Advanced Treatment Discharge). Such discharges shall be monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations					Monitoring Requirement	
	Quantity - lbs./day		Concentration - specify units				
	Monthly Average	Maximum Daily	Monthly Average	Weekly Average	Maximum Daily	Measurement Frequency	Sample Type
Fecal Coliform[1]			--- MPN / 100 ml		--- MPN / 100 ml	When in Use[2]	Grab[3,4]
Enterococci[1]			--- cfu / 100 mL		276 cfu / 100 mL	When in Use[2]	Grab[3,4]
Total Residual Chlorine (TRC)[1,5]			--- ug/l[6]	--- ug/l[6]	20 ug/l[6]	When in Use[2]	Grab[4]

[1] The TRC, Fecal Coliform, and Enterococci samples shall be taken at the same time.

[2]For monitoring purposes, an overflow is defined as any occurrence of a discharge from the wet weather facility with a minimum duration of 15 minutes. Overflows shall be considered to be separate if they are separated by six (6) hours or more. During months of no overflow, DMR's shall be marked as "no discharge". All overflows created by storm events that are greater than the one year six hour storm (2.4 inches) are not subject to these limitations and should not be included in DMR reporting calculations. However, any overflow, regardless of the size of the storm event, must be reported to the DEM's Operations and Maintenance Program.

[3]The Geometric Mean shall be used to obtain the "monthly average", "weekly average", and "daily maximum" (when there are multiple samples taken in a given day) fecal coliform and enterococci results. Sampling for treated wet weather overflows taken between the hours of 2:30AM - 3:00PM on weekdays and during the hours of 2:30AM -11:00AM on weekends/holidays shall be reported on Discharge Monitoring Reports. Sampling at all times shall be reported on Monthly Operating Reports.

[4]One grab sample shall be taken per day of each overflow event. If an overflow event lasts longer than 24 hours, a grab sample shall be taken for each 24-hour period of the event.

[5]At each sampling event, one TRC sample shall be taken after chlorination but prior to dechlorination to verify that the wet weather flow has been properly chlorinated and one TRC sample shall be taken after dechlorination to verify that the wet weather flow has been properly dechlorinated. The sample after dechlorination shall be reported on DMR's.

[6]The following methods may be used to analyze the grab samples: (1) Low Level Amperometric Titration, Standard Methods (18th Edition) No. 4500-Cl E; (2) DPD Spectrophotometric, EPA No. 330.5 or Standard Methods (18th Edition) No. 4500-Cl G.

--- Signifies a parameter which must be monitored and data must be reported; no limit has been established at this time.

*Values in parentheses () are to be reported as Minimum/Average/Maximum for the reporting period rather than Average Monthly/Average Weekly/Maximum Daily.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: Outfall 003A (Treated Wet Weather Outfall after Dechlorination and Prior to Combination with the Advanced Treatment Discharge).

9. a. The pH of the effluent shall not be less than 6.0 nor greater than 9.0 standard units at any time, unless these values are exceeded due to natural causes or as a result of the approved treatment processes.

b. The discharge shall not cause visible discoloration of the receiving waters.

c. The effluent shall contain neither a visible oil sheen, foam, nor floating solids at any time.

d. The permittee's treatment facility shall maintain a minimum of 85 percent removal of both total suspended solids and 5-day carbonaceous biochemical oxygen demand during dry weather conditions. Dry weather is defined as any calendar day on which there is less than 0.1 inches of rain and no snow melt. The percent removal shall be based on monthly average values.

e. When the effluent discharged for a period of 90 consecutive days exceeds 80 percent of the designed flow, the permittee shall submit to the permitting authorities a projection of loadings up to the time when the design capacity of the treatment facility will be reached, and a program for maintaining satisfactory treatment levels consistent with approved water quality management plans.

f. The permittee shall analyze its effluent semi-annually for the EPA Priority Pollutants as listed in 40 CFR 122, Appendix D, Table II and III. One sample must be conducted with the 3rd Quarter bioassay sample and must be submitted to the DEM by October 15th. The results of the second analysis shall be submitted to the Department of Environmental Management by January 15th for the previous calendar year. The State user fee samples may be utilized provided that the sampling is coordinated in advance. All sampling and analysis shall be done in accordance with EPA Regulations, including 40 CFR, Part 136; grab and composite samples shall be taken as appropriate.

g. This permit serves as the State's Water Quality Certificate for the discharges described herein.

h. This permit authorizes the use of chorine disinfection only for emergency purposes at outfall 001A in accordance with the Bypass and Upset provisions from part II of the permit. Any emergency uses of chlorination at outfall 001A shall be in accordance with the facility's Operation and Maintenance Manual and shall be reported on the cover letter to the DMRs. The chlorination usage reporting for outfall 001A must include the reason why chlorine was used, the duration of its use, and any sampling/analytical data.

B. BIOMONITORING REQUIREMENTS AND INTERPRETATION OF RESULTS

1. General

Beginning on the effective date of the permit, the permittee shall perform four (4) acute and four (4) chronic toxicity tests per year on samples collected from discharge outfall 001. The permittee shall conduct the tests during dry weather periods (no rain within forty-eight (48) hours prior to or during sampling unless approved by DEM) according to the following test frequency and protocols. Data shall be reported as outlined in Section B.10. The State may require additional screening, range finding, and/or definitive acute or chronic bioassays as deemed necessary based on the results of the initial bioassays required herein. Indications of toxicity could result in requiring a Toxicity Reduction Evaluation (TRE) to investigate the causes and to identify corrective actions necessary to eliminate or reduce toxicity to an acceptable level.

2. Test Frequency

On four sampling events, (one each calendar quarter) the permittee will conduct toxicity tests on the two species listed below, for a total of eight toxicity tests per year. This requirement entails performing two-species testing as follows:

Species	Test Type	Frequency
Mysids (Mysidopsis bahia)	Definitive 48-Hour Acute Static (LC_{50})	Quarterly
Arbacia punctulata	Sea Urchin 1 hour fertilization test (chronic)	Quarterly

3. Testing Methods

Toxicity tests shall be conducted in accordance with protocols listed in 40 CFR Part 136.

4. Sample Collection

For each sampling event a twenty-four (24) hour flow proportioned composite final effluent sample shall be collected during a dry weather (no rain forty-eight (48) hours prior to or during sampling unless approved by RIDEM). This sample shall be kept cool (at 4°C) and testing shall begin within twenty-four (24) hours after the last sample of the composite is collected. In the laboratory, the sample will be split into two (2) subsamples, after thorough mixing, for the following:

A: Chemical Analysis
B: Toxicity Testing

All samples held overnight shall be refrigerated at 4°C. Grab samples must be used for pH and temperature.

5. Salinity Adjustment

Prior to the initiation of testing, the effluent must be adjusted to make the salinity of the effluent equal to that of the marine dilution water. The test solution must be prepared by adding non-toxic dried ocean salts to a sufficient quantity of 100% effluent to raise the salinity to the desired level. After the addition of the dried salts, stir gently for thirty (30) to sixty (60) minutes, preferably with a magnetic stirrer, to ensure that the salts are in solution. It is important to check the final salinity with a refractometer or salinometer. Salinity adjustments following this procedure and in accordance with EPA protocol will ensure that the concentrations (% effluent) of each dilution are real and allow for an accurate evaluation with the acute permit limit and chronic monitoring requirements.

6. Dilution Water

Dilution water used for marine acute toxicity analyses should be of sufficient quality to meet minimum acceptability of test results (See Sections B.7 and B.8). For both species, natural seawater shall be used as the dilution water. This water shall be collected from Narragansett Bay off the dock at the URI's Graduate School of Oceanography on South Ferry Road, Narragansett. It is noted that the University claims no responsibility for the personal safety on this dock. The permittee shall observe the rules posted at the dock. If this natural seawater diluent is found to be, or suspected to be toxic or unreliable, an alternate source of natural seawater or, deionized water mixed with hypersaline brine or artificial sea salts of known quality with a salinity and pH similar to that of the receiving water may be substituted AFTER RECEIVING WRITTEN APPROVAL FROM DEM.

7. Effluent Toxicity Test Conditions for Mysids (Mysidopsis bahia)

a.	Test Type	48-Hour Static Acute Definitive
b.	Salinity	25 ppt ± 10% for all dilutions
c.	Temperature (C)	25° ± 1°C
d.	Light Quality	Ambient laboratory illumination
e.	Photoperiod	8 - 16 Hour Light/24-Hour
f.	Test Chamber Size	250 ml
g.	Test Solution Volume	200 ml
h.	Age of Test Organisms	1 - 5 Days
i.	No. Mysids per Test Chamber	10
j.	No. of Replicate Test Chamber Per Concentration	2
k.	Total No. Mysids per Test Concentration	20
l.	Feeding Regime	Light feeding (two (2) drops concentrated brine shrimp nauplii, approx. 100 nauplii per mysid twice daily).
m.	Aeration	None, unless dissolved oxygen concentration falls below 40% of saturation at which time gentle single-bubble aeration should be started.
n.	Dilution Water	Narragansett Bay water as discussed above.
o.	Dilutions	Five (5) dilutions plus a control: 100%, 50%, 25%, 12.5%, 6.25% and 0% effluent.
p.	Effect Measured and Test	Mortality - no movement of body test duration or appendages on gentle prodding, 48-hour LC_{50} and NOAEL.
q.	Test Acceptability	90% or greater survival of test organisms in control solution.
r.	Sampling Requirements	Samples are collected and used within 24 hours after the last sample of the composite is collected.
s.	Sample Volume Required	Minimum four (4) liters

8. Test Conditions for Arbacia punctulata Fertilization Test

a.	Test type	Static

b.	Salinity	30 0/00 ± 2 0/00
c.	Temperature (C)	20 ± 1°C
d.	Light quality	Ambient laboratory light during test preparation
e.	Light intensity	10-20 uE/m²/s, or 50-100 ft-c (Ambient Laboratory Levels)
f.	Test vessel size	Disposable (glass) liquid scintillation vials (20 ml capacity), not pre-cleaned
g.	Test solution volume	5 ml
h.	Number of sea urchins	Pooled sperm from four (4) males and pooled eggs from four (4) females are used per test
i.	Number of egg and sperm cells per chamber	About 2000 eggs and 5,000,000 sperm cells per vial
j.	Number of replicate chambers per concentration	4 (minimum of 3)
k.	Dilution water	Narragansett Bay water as discussed above
l.	Dilution factor	Approximately 0.5
m.	Test duration	1 hour and 20 minutes
n.	Effects measured	Fertilization of sea urchin eggs
o.	Number of treatments per test	Minimum of five (5) effluent concentrations and a control. An additional dilution at the permitted effluent concentration (% effluent) is required.
p.	Acceptability of test results	Recommended sperm: egg ratio should result in fertilization of minimum of 70% of the eggs in the control chambers.

9. Chemical Analysis

The following chemical analysis shall be performed for every two-species sampling event.

Parameter	Effluent	Saline Diluent	Detection Limit (mg/l)
pH	X	X	---
Specific Conductance	X	X	---
Total Solids and Suspended Solids	X	X	---
Ammonia	X		0.1
Total Organic Carbon	X		0.5
Cyanide	X		0.01
Total Phenols	X		0.05
Salinity	X	X	PPT(0/00)

During the first, second, and fourth calendar quarter bioassay sampling events the following chemical analyses shall be performed:

Total Metals	Effluent	Saline Diluent	Detection Limit (ug/l)
Total Cadmium	X		0.1
Total Copper	X	X	1.0
Total Chromium (VI)	X		20.0
Total Zinc	X		5.0
Total Nickel	X		1.0
Total Lead	X	X	1.0
Total Aluminum	X		5.0

The above metal analyses may be used to fulfill, in part or in whole, monthly monitoring requirements in the permit for these specific metals.

During the third calendar quarter bioassay sampling event, the final effluent sample collected during the same twenty-four (24) hour period as the bioassay sample, shall be analyzed for priority pollutants (as listed in Tables II and III of Appendix D of 40 CFR 122). The bioassay priority pollutant scan shall be a full scan and may be coordinated with other permit conditions to fulfill any priority pollutant scan requirements.

10. Toxicity Test Report Elements

A report of results will include the following:

- Description of sample collection procedures and site description.
- Names of individuals collecting and transporting samples, times, and dates of sample collection and analysis.
- General description of tests: age of test organisms, origin, dates and results of standard toxicant tests (quality assurance); light and temperature regime; dilution water description; other information on test conditions if different than procedures recommended.
- The method used to adjust the salinity of the effluent must be reported.

- All chemical and physical data generated (include detection limits).
- Raw data and bench sheets.
- Any other observations or test conditions affecting test outcome.

Toxicity test data shall include the following:

Acute

- Survival for each concentration and replication at time twenty-four (24) and forty-eight (48) hours.
- LC_{50} and 95% confidence limits shall be calculated using one of the following methods in order of preference: Probit, Trimmed Spearman Karber, Moving Average Angle, or the graphical method. All printouts (along with the name of the program, the date, and the author(s)) and graphical displays must be submitted. When data is analyzed by hand, worksheets should be submitted. The report shall also include the No Observed Acute Effect Level (NOAEL) which is defined as the highest concentration of the effluent (in % effluent) in which 90% or more of the test animals survive.
- The Probit, Trimmed Spearman Karber, and Moving Average Angle methods of analyses can only be used when mortality of some of the test organisms are observed in at least two (2) of the (percent effluent) concentrations tested (i.e., partial mortality). If a test results in a 100% survival and 100% mortality in adjacent treatments ("all or nothing" effect), an LC_{50} may be estimated using the graphical method.

Chronic

- The endpoints of toxicity tests using the sea urchin are based on the reduction in percent of eggs fertilized. Chronic test data shall undergo hypothesis testing to determine if the distribution of results is normal using the Shapiro-Wilks test. The variance must also be tested for homogeneity using Bartlett's Test. Then the endpoint estimates, NOEC and LOEC must be determined using Dunnett's Procedure, Bonferroni's T-Test, Steel's Many-One Rank Test, or Wilcoxan Rank Sum Test. The choice of test depends on the number of replicates and whether the variance is homogeneous or not. See EPA/600/4-87/028 for details. (All printouts and graphics displays must be submitted along with the name of the program, the date, and the author(s). When data is analyzed by hand, the worksheets should be submitted).
- C-NOEC Chronic No Observed Effect Concentration
- LOEC Lowest Observed Effect Concentration
- MATC Maximum Allowable Toxicant Concentration

11. Special Condition

Due to the fact that the suggested dilution water for this facility to use in conducting the bioassays is from the end of the dock at the URI's Narragansett Bay Campus, a Letter of Agreement must be signed and submitted to the Graduate School of Oceanography. Requests to use another source of dilution water will have to be approved by the Department of Environmental Management.

12. Reporting of Bioassay Testing

Bioassay Testing shall be reported as follows:

Quarter Testing to be Performed	Results Submitted on DMR for
January 1 - March 31	March
April 1 - June 30	June
July 1 - September 30	September
October 1 - December 31	December

Reports shall be maintained by the permittee and shall be made available upon request by RIDEM.

C. INDUSTRIAL PRETREATMENT PROGRAM

1. Definitions

For the purpose of this permit, the following definitions apply.

a. 40 CFR 403 and sections thereof refer to the General Pretreatment regulations, 40 CFR Part 403 as revised.

b. Categorical Pretreatment Standards mean any regulation containing pollutant discharge limits promulgated by the USEPA in accordance with section 307(b) and (c) of the Clean Water Act (33 USC 1251), as amended, which apply to a specific category of industrial users and which appears in 40 CFR Chapter 1, subchapter N.

c. Pretreatment Standards include all specific prohibitions and prohibitive discharge limits established pursuant to 40 CFR 403.5, including but not limited to, local limits, and the Categorical Pretreatment Standards.

d. Regulated Pollutants shall include those pollutants contained in applicable categorical standards and any other pollutants listed in the Pretreatment Standards which have reasonable potential to be present in an industrial user's effluent.

2. Implementation

The authority and procedures of the Industrial Pretreatment Program shall at all times be fully and effectively exercised and implemented, in compliance with the requirements of this permit and in accordance with the legal authorities, policies, procedures and financial provisions described in the permittee's approved Pretreatment Program and Sewer Use Rules and Regulations, the Rhode Island Pretreatment Regulations and the General Pretreatment Regulations 40 CFR 403. The permittee shall maintain adequate resource levels to accomplish the objectives of the Pretreatment Program.

3. Local Limits

Pollutants introduced into POTWs by a non-domestic source (user) shall not: pass through the POTW, interfere with the operation or performance of the works, contaminate sludge as to adversely affect disposal options, or adversely affect worker safety and health.

a. Within thirty (30) days of the effective date of this permit, the permittee shall submit to the DEM, in the form of a non-substantial program modification request, a local limits monitoring plan and procedures to ensure that an adequate database is available for periodic evaluation and, if necessary, re-development of local limits. At a minimum, the monitoring plan and procedures must ensure that adequate, site-specific data is available to calculate, for all pollutants of concern, POTW removal efficiencies, concentrations of pollutants entering advanced

treatment, the volume of sludge produced and the pollutant concentrations contained therein, and the pollutant loadings contributed to the POTW from domestic sources. In addition, the monitoring plan must provide for at least annual analysis of the POTW's influent for all priority pollutants in order to identify additional or new pollutants of concern. The monitoring plan should incorporate and utilize to the extent possible the monitoring required by Part I.A of this permit. The permittee is referred to Section 4.3.2 of EPA's July, 2004 Local Limits Guidance Manual for assistance in development the monitoring plan and procedures. Upon review, the DEM will provide written notification either granting approval of the monitoring plan and procedures or stating the deficiencies revealed therein. Should the DEM determine that a deficiency exists in the submittal, the permittee shall submit to the DEM, within thirty (30) days of the receipt of said notice, a revised monitoring plan and procedures consistent with the DEM's notice of deficiency. No longer than thirty (30) days following DEM's final approval, the permittee shall commence implementation of the monitoring plan and procedures.

b. Within ninety (90) days of the effective date of the permit, the permittee shall submit to the DEM a workplan for the evaluation of the local discharge limitations for non-domestic users. The workplan must provide a description of the analysis to be performed, a brief summary of existing data which will be used in the evaluation, and a description of additional sampling and analysis to be performed during the evaluation. The DEM will review the workplan and provide written comment. Should the DEM determine that a deficiency exists in the proposed workplan, the permittee shall submit a revised workplan within thirty (30) days of the receipt of said notice.

c. Within six (6) months of DEM acceptance of the workplan described in Part I.C.3.a above, the permittee shall submit to the DEM a technical local limits evaluation in accordance with procedures set forth in the July, 2004 EPA Local Limits Guidance Manual and the approved workplan specified above in Part I.C.3.b of this permit. All supporting data must be submitted with the evaluation. Within sixty (60) days of the receipt of preliminary approval of the proposed local limits (unless a longer timeframe is specified therein), the permittee shall submit to the DEM a request for a pretreatment program modification in accordance with 40 CFR 403.18 and Part I.C.5.e of this permit. Upon final approval by the DEM and adoption by the permittee, these standards shall be deemed Pretreatment Standards for the purposes of Section 307(d) of the Clean Water Act.

d. Within thirty (30) days of final approval, the permittee shall adopt the revised local limits and reissue or modify all applicable industrial user permits to contain the modified local limits.

e. At the time of renewal of this permit and in accordance with 40 CFR 122.21(j)(4) as revised July 24, 1990, the permittee shall submit to the DEM with its permit renewal application a written technical evaluation of the need to revise local limits. The evaluation shall be based, at a minimum, on information obtained during the implementation of the permittee's local limits monitoring plan and current RIPDES permit discharge limits, sludge disposal criteria, secondary treatment inhibition, and worker health and safety criteria.

4. Enforcement Response Plan (ERP)

On September 29, 2003 DEM issued a determination that the permittee's May 9, 2003 ERP meets the requirements of 40 CFR 403.8(f)(5). The permittee shall continue to implement its approved ERP and any subsequent amendments approved by DEM, at all times.

5. General

a. The permittee shall carry out inspection, surveillance, and monitoring procedures which will determine, independent of information supplied by the industrial user, whether the industrial user is in compliance with Pretreatment Standards. At a minimum, all significant industrial users shall be inspected and monitored for all regulated pollutants (as determined by the permittee's approved Industrial Pretreatment Program on a case-by-case basis) at the frequency established in the approved Industrial Pretreatment Program but in no case less than once per year (one (1) year being determined as the reporting year established in Part I.C.7 of this permit). In addition, these inspections, monitoring and surveillance activities must be conducted in accordance with EPA's Industrial User Inspection and Sampling Manual for POTW's, April 1994. All inspections, monitoring, and surveillance activities shall be performed, and have records maintained, with sufficient care to produce evidence admissible in enforcement proceedings or judicial actions. The permittee shall evaluate, at least every two years unless specific 40 CFR 403 Streamlining provisions have been adopted to the contrary, whether each SIU requires a slug control plan. If a slug control plan is required, it must include, at a minimum, those elements contained in 40 CFR 403.8(f)(2)(vi).

b. The permittee shall reissue all necessary Industrial User (IU) control mechanisms within thirty (30) days of their expiration date. The permittee shall issue, within sixty (60) days after the determination that an IU is a Significant Industrial User (SIU), all SIU control mechanisms. All SIU control mechanisms must contain, at a minimum, those conditions stated in 40 CFR 403.8(f)(1)(iii)(B). All control mechanisms must be mailed via Certified Mail, Return Receipt Requested. A complete bound copy of the control mechanism with the appropriate receipt must be kept as part of the Industrial User's permanent file. In addition, the permittee must develop a Permit Fact Sheet describing the basis for the SIU's permit and retain this fact sheet as part of the SIU's permanent file.

c. The permittee must identify each instance of noncompliance with any pretreatment standard and/or requirement and take a formal documented action for each instance of noncompliance. Copies of all such documentation must be maintained in the Industrial User's permanent file.

d. The permittee shall prohibit Industrial Users from the dilution of a discharge as a substitute for adequate treatment in accordance with 40 CFR 403.6(d).

e. The permittee shall comply with the procedures of 40 CFR 403.18 for instituting any modifications of the permittee's approved Pretreatment Program. Significant changes in the operation of a POTW's Approved Pretreatment Program must be submitted and approved following the procedures outlined in 40 CFR 403.18(b) and 403.9(b). However, the endorsement of local officials responsible for supervising and/or funding the pretreatment program required by 403.9(b)(2) will not be required until DEM completes a preliminary review of the submission. The DEM will evaluate and review the permittee's initial proposal for a modification and provide written notification either granting preliminary approval of the proposed modifications or stating the deficiencies contained therein. DEM's written notification will also include a determination whether the submission constitutes a substantial or non-substantial program modification as defined by 40 CFR 403.18. Should DEM determine that a deficiency exists in the proposed modification, the permittee shall submit to DEM, within thirty (30) days of the receipt of said notice, a revised submission consistent with DEM's notice of deficiency.

Pretreatment program modifications which the permittee considers non-substantial, shall be deemed to be approved within forty-five (45) days after submission of the request for modification, unless DEM determines that the

modification is in fact a substantial modification or notifies the permittee of deficiencies. Upon receipt of notification that DEM has determined the modification is substantial, the permittee shall initiate the procedures and comply with the deadlines for substantial modifications, which are outlined below.

For substantial modifications, the permittee shall, within sixty (60) days (unless a longer time frame is granted) of the receipt of DEM's preliminary approval of the proposed modification, submit documentation (as required by 40 CFR 403.9(b)(2)) that any local public notification/participation procedures required by law have been completed, including any responses to public comments, and a statement that the local officials will endorse and/or approve the modification upon final approval by DEM.

Within thirty (30) days of DEM's final approval of the proposed modification, the permittee shall implement the modification and submit proof that the local officials have endorsed and/or approved the modification to the DEM. Upon final approval by the DEM and adoption by the permittee, this modification shall become part of the approved pretreatment program and shall be incorporated into this permit in accordance with 40CFR 122.63(g).

f. All sampling and analysis required of the permittee, or by the permittee of any Industrial User, must be performed in accordance with the techniques described in 40 CFR 136.

g. For those Industrial Users with discharges that are not subject to Categorical Pretreatment Standards, the permittee shall require appropriate reporting in accordance with 40 CFR 403.12(h).

h. The permittee shall, in accordance with 40 CFR 403.12(f), require all Industrial Users to immediately notify the permittee of all discharges by the Industrial User that could cause problems to the POTW, including slug loadings, as defined by 40 CFR 403.5(b).

i. The permittee shall require all Industrial Users to notify the permittee of substantial changes in discharge as specified in 40 CFR 403.12(j) and the permittee shall also notify DEM of each such substantial change in discharge prior to acceptance.

j. The permittee shall require New Sources to install and have in operation all pollution control equipment required to meet applicable Pretreatment Standards before beginning to discharge. In addition, the permittee shall require New Sources to meet all applicable Pretreatment Standards within the shortest feasible time which shall not exceed ninety (90) days in accordance with 40 CFR 403.6(b).

k. The permittee shall require all Industrial Users who are required to sample their effluent and report the results of analysis to the POTW to comply with signatory requirements contained in 40 CFR 403.12(l) when submitting such reports.

l. The permittee shall determine, based on the criteria set forth in 40 CFR 403.8(f)(2)(vii), using the EPA method of "rolling quarters", the compliance status of each Industrial User. Any Industrial User determined to meet Significant Non-Compliance (SNC) criteria shall be included in an annual public notification as specified in 40 CFR 403.8(f)(2)(viii).

m. The permittee shall require Industrial Users to comply with the notification and certification requirements of 40 CFR 403.12(p)(1), (3) and (4) pertaining to the discharge of substances to the POTW, which if disposed of otherwise, would be a hazardous waste under 40 CFR Part 261.

n. The permittee shall continue to designate, as SIUs, those Industrial Users (IUs) which meet the definition contained in the permittee's Sewer Use Rules & Regulations. The permittee shall notify each newly designated SIU of its classification as an SIU within thirty (30) days of identification and shall inform the SIU of the requirements of an SIU contained in 40 CFR 403.12.

6. Categorical Industrial Users (CIUs)

a. The permittee shall require Industrial Users to comply with applicable Categorical Pretreatment Standards in addition to all applicable Pretreatment Standards and Requirements. The permittee shall require of all Categorical Industrial Users (CIUs), all reports on compliance with applicable Categorical Pretreatment Standards and Categorical Pretreatment Standard deadlines as specified in and in accordance with Sections (b), (d), (e) and (g) of 40 CFR 403.12. In addition, the permittee shall require Categorical Industrial Users to comply with the report signatory requirements contained in 40 CFR 403.12(l) when submitting such reports.

b. If the permittee applies the Combined Wastestream Formula (CWF) to develop fixed alternative discharge limits of Categorical Pretreatment Standards, the application of the CWF and the enforcement of the resulting limits must comply with 40 CFR 403.6(e). The permittee must document all calculations within the control mechanism fact sheet and the resulting limits within the CIU's control mechanism. The permittee must ensure that the most stringent limit is applied to the CIU's effluent at end-of-pipe based upon a comparison of the resulting CWF limits and the permittee's local limits.

c. If the permittee has or obtains the authority to apply and enforce equivalent mass-per-day and/or concentration limitations of production-based Categorical Pretreatment Standards, then the permittee shall calculate and enforce the limits in accordance with 40 CFR 403.6(c). The permittee must document all calculations within the control mechanism fact sheet and the resulting limits within the CIU's control mechanism.

7. Annual Report

The annual report for the permittee's program shall contain information pertaining to the reporting year which shall extend from January 1st through December 31st and shall be submitted to the DEM by March 15th. Each item below must be addressed separately and any items which are not applicable must be so indicated. If any item is deemed not applicable a brief explanation must be provided. The annual report shall include the following information pertaining to the reporting year:

a. A listing of Industrial Users which complies with requirements stated in 40 CFR 403.12(i)(1). The list shall identify all Categorical Industrial Users, Significant Industrial Users and any other categories of users established by the permittee;

b. A summary list of any notifications received by the permittee of any substantial change in the volume or character of pollutants being introduced into the POTW by new or existing IUs. If applicable, an evaluation of the quality and quantity of influent introduced into the POTW and any anticipated impact due to the changed discharge on the quantity or quality of effluent to be discharged from the POTW shall be included;

c. A summary list of Industrial User compliance status. The summary shall identify the IUs determined to be in non-compliance, and if applicable, the type of enforcement actions taken and penalty amounts levied;

d. A list of industries which were determined, in accordance with Part I.C.5.I of this permit, to be in significant non-compliance required to be published in a local newspaper and proof of publication, from the newspaper, averring that the names of these violators has been published;

e. A summary list of inspection and monitoring activity performed by the permittee, including;

- significant industrial users inspected by the POTW (include inspection dates for each industrial user);

- significant industrial user sampled by the POTW (include sampling dates for each industrial user); NBC shall maintain records onsite that detail the date of each sampling analysis.

f. A summary list of permit issuance/reissuance activities including the name of the industrial user, expiration date of previous permit, and issuance date of new permit;

g. A summary list for each report/notification type required by 40 CFR 403.12 that was not received as required during the reporting year. All other records of notifications received in accordance with 40 CFR 403.12 shall be maintained in each Industrial User's file.

h. A summary of public participation efforts including meetings and workshops held with the public and/or industry and notices/newsletters/bulletins published and/or distributed;

i. A program evaluation in terms of program effectiveness, local limits application and resources which addresses but is not limited to:

- A description of actions being taken to reduce the incidence of SNC by Industrial Users;

- effectiveness of enforcement response program;

- sufficiency of funding and staffing;

- sufficiency of the Sewer Use Rules and Regulations and/or statutory authority;

j. An evaluation of recent/proposed program modifications, both substantial and non-substantial, in terms of the modification type, implementation and actual/ expected effect (note proposed modifications must be submitted under separate cover along with the information required by 40 CFR 403.18);

k. A detailed description of all interference and pass-through that occurred during the past year and, if applicable;

- A thorough description of all investigations into interference and pass-through during the past year;

- A description of the monitoring, sewer inspections and evaluations which were done during the past year to detect interference and pass-through, specifying pollutants analyzed and frequencies;

l. A summary of the average, maximum concentration, minimum concentration, and number of data points used for pollutant analytical results for influent, effluent, sludge and any toxicity or bioassay data from the wastewater treatment facility. The summary shall include a comparison of influent sampling results

versus the maximum allowable headworks loadings contained in the approved local limits evaluation and effluent sampling results versus water quality standards. Such a comparison shall be based on the analytical results required in Parts I.A and I.C. of this permit and any additional sampling data available to the permittee; and

m. A completed Annual Pretreatment Program Report Summary Sheet.

8. Sewer Use Rules and Regulations

The permittee has approved Sewer Use Rules and Regulations which shall continue to be implemented at all times.

D. COMBINED SEWER OVERFLOWS (CSOs)

1. EFFLUENT LIMITATIONS

a. During wet weather, the permittee is authorized to discharge from combined sewer outfalls (CSOs) listed in Part I.D.5, subject to the following:

i. The discharges shall comply with the EPA CSO Policy, including those requirements not specifically listed in this permit.

ii. The discharges shall receive treatment at a level providing Best Practicable Control Technology Currently Available (BPT), Best Conventional Pollutant Control Technology (BCT) to control and abate conventional pollutants and Best Available Technology Economically Achievable (BAT) to control and abate non-conventional and toxic pollutants. The DEM and EPA have made a Best Professional Judgment (BPJ) determination that BPT, BCT, and BAT for combined sewer overflow (CSO) control is the implementation of Nine Minimum Controls (NMC) specified below and detailed further in Part I.D.2. 'Nine Minimum Controls, Minimum Implementation Levels' of this permit and implementation of any additional controls required under the permittee's approved CSO Control Plan:

1. The permittee shall implement Standard Operating Procedures and proper operation and maintenance programs for the sewer system and all CSO outfalls to reduce the magnitude, frequency, and duration of CSOs. The program shall consider regular sewer inspections; sewer, catch basin, and regulator cleaning; equipment and sewer collection system repair or replacement, where necessary; disconnection of illegal connections, and the items in Parts I.E and I.D.2.f. of this permit.

2. The permittee shall implement Standard Operating Procedures that will maximize use of the collection system for wastewater storage that can be accommodated by the storage capacity of the collection system in order to reduce the magnitude, frequency, and duration of CSOs.

3. The permittee shall evaluate the CSO impacts from non-domestic users and take appropriate steps to minimize such impacts in accordance with its approved Nine Minimum Controls Plan.

4. The permittee shall implement Standard Operating Procedures to operate the POTW treatment plant at maximum treatable flow during all wet weather flow conditions to reduce the magnitude,

frequency, and duration of CSOs in accordance with its approved SOP. The permittee shall deliver all flows to the treatment plant within the constraints of the treatment capacity of the POTW.

5. Dry weather overflows from CSO outfalls are prohibited. The permittee shall implement Standard Operating Procedures and proper operation and maintenance programs to detect and eliminate dry weather overflows, including but not limited to routine bacteria monitoring at key in-stream locations, flow monitoring at all CSOs, and implementation of an effective Capacity, Management, Operation, and Maintenance (CMOM) Program. Each dry weather overflow must be reported to DEM as soon as the permittee becomes aware of the overflow. When the permittee detects a dry weather overflow, the permittee shall begin corrective action immediately. All dry weather sanitary and/or industrial discharges from CSOs must be reported to DEM within twenty-four (24) hours in accordance with the reporting requirements for plant bypass (Paragraph M of Part II of this permit). The permittee shall inspect the dry weather overflow each subsequent day until the overflow has been eliminated.

6. The permittee shall implement measures to control solid and floatable materials in CSOs. These measures shall include, but not be limited to, a requirement for facilities permitted by the NBC's Industrial Pretreatment Program to establish Best Management Practices (BMPs) to control the discharge of litter from their site to the combined sewer system and having the NBC verify the effectiveness of the BMPs during annual pretreatment inspections required under Part I.C of this permit. Any deficiencies with the BMPs shall be brought to the attention of the pretreatment permit holder.

7. The permittee shall implement a pollution prevention program focused on reducing the impact of CSOs on receiving waters.

8. The permittee shall implement a public notification process to inform citizens of when and where CSOs occur. The process must include: (a) a mechanism to alert persons of the occurrence of CSOs and; (b) a system to determine the nature and duration of conditions that are potentially harmful for users of receiving waters due to CSOs. NBC's existing notification systems employed to notify the public of CSO events (signage at CSO outfalls, flags, and notification to DEM of dry weather overflows) with the additional notification requirements from Part I.D.4 may be used to satisfy DEM's public notice reporting requirements.

9. The permittee shall monitor CSO outfalls to characterize CSO impacts and the efficacy of CSO controls.

b. Within ninety (90) days of the effective date of this permit, the permittee shall submit an updated Nine Minimum Controls Plan to DEM for review and approval. The update shall include the status of the implementation of each of the minimum controls shown in Parts I.D.1.a.ii.1. – 9. of the permit and evaluate alternatives to enhance their effectiveness and reflect consideration of the schedule for implementation of Phase III of NBC's CSO controls.

i. Once approved by DEM, the Permittee shall implement the approved Nine Minimum Controls Plan.

ii. If, after implementation of the Nine Minimum Controls Plan approved by DEM, DEM determines that modifications need to be made to the Plan, DEM shall notify the permittee in writing which elements of the Plan do not meet the minimum requirements of Parts I.D .1.a.ii.1-9 and need to be modified and the reason for the needed modification. This notification shall include a schedule for making the changes. After such notification from the DEM, the permittee shall make changes to the Plan and submit the revisions to the DEM for their approval.

2. Nine Minimum Controls, Minimum Implementation Levels

a. The Permittee must implement the nine minimum controls in accordance with the documentation approved by DEM or as subsequently modified to enhance the effectiveness of the controls. This implementation must include the following controls plus other controls the Permittee can reasonably implement as set forth in the documentation.

b. The direct discharge of holding tank wastes and septage to a CSO is prohibited. Discharges of holding tank wastes and septage into the sewer system must be at locations which minimize the likelihood of concentrated wastes being discharged from CSOs.

c. Dry weather overflows (DWOs) are prohibited. All dry weather sanitary and/or industrial discharges from CSOs must be reported to DEM within twenty-four (24) hours in accordance with the reporting requirements for plant bypass (Paragraph M of Part II of this permit).

d. The Permittee shall provide public awareness of all occurrences of a bypass of the treatment facility. The public awareness shall be provided by raising a red flag, with a minimum size of three feet by five feet (3' X 5'), at the outfall. The flag shall be raised at the onset of a facility bypass of any volume or after a failure in chlorination during which time at least 500,000 gallons are discharged. The flag shall be kept raised for five (5) continuous days after each bypass or failure in chlorination. Within thirty (30) days of the effective date of this permit, the permittee shall provide public notice in the Legal Section of the Providence Journal explaining the flag raising procedure. The wording for the Providence Journal notice shall be in accordance with the wording approved in the DEM's April 21, 1992 letter.

e. NBC shall maintain CSO identification signs at each CSO in the Bucklin Point Service Area. The signs must comply with the minimum requirement as approved by DEM.

f. Operation and maintenance of the sewer system:

i. All catch basins owned by the permittee shall be cleaned a minimum of twice per year.

ii. All collection system pump stations in the permittee's service area shall be inspected at least weekly and all pump station generators shall be inspected a minimum of twice per year.

iii. All regulators shall be inspected at least twice a month.

iv. All tidegates shall be inspected and maintained on a monthly basis.

v. All sumps in the Bucklin Point Service Area associated with CSO regulators shall be cleaned quarterly.

vi. A report on combined sewer overflow/regulator maintenance and repair during the previous six (6) months shall be submitted to the DEM, Office of Water Resources, by the 15th of January and July of each year. The report shall include which structures were checked and when, the condition of each one, which were reported and when, which ones must yet be repaired, the reasons any repair was delayed, and the anticipated repair schedule.

3. Within 180 days of the effective date of this permit, the permittee shall submit a proposed program to expand their existing program to encourage or require the implementation of practices to reduce the volume of stormwater discharged to the combined sewer systems to the DEM for review and approval. The submittal shall include but not be limited to consideration of sewer rate credits/modifications, grants, the use of supplemental environmental projects by users found in violation of NBC requirements, distribution of rain barrels, and providing technical assistance to customers and contributing municipalities for the implementation of green infrastructure practices at existing properties. The submittal shall also include a proposed schedule for the implementation of the program. Upon review, the DEM will provide written notification either granting approval of the program or stating the deficiencies revealed therein. Should the DEM determine that a deficiency exists, the permittee shall submit a revised program that addresses the DEM's deficiencies to the DEM within thirty (30) days of the receipt of said notice, unless a longer timeframe is specified by DEM. Upon DEM approval, the permittee shall commence implementation of the program in accordance with the approved schedule.

4. The permittee shall implement a web-based public notification process to inform the public of when and where CSOs occur. The notification system must include a map-based system that alerts persons of the occurrence of CSOs and the duration of CSOs.

5. Combined Sewer Overflows or Emergency Bypasses

Discharge Serial No.	Location	Maximum Daily Flow That Could Be Discharged	Discharge Type	Receiving Water
002A	North Diversion Structure Structure (Bucklin Point)	Flows exceeding 116 MGD	Combined Sewer Overflow/Emergency Bypass	Seekonk River
003A	Bucklin Point WWTF (Treated Wet Weather Outfall)	70 MGD	Combined Sewer Overflow	Seekonk River
101A	River Street at Samoset Street Central Falls, RI	23.30 MGD	Combined Sewer Overflow	Blackstone River
103A	Aigan Street at High Street Central Falls, RI	90.33 MGD	Combined Sewer Overflow	Blackstone River
104A	Charles Street at Sacred Heart Avenue Central Falls, RI	133.2 MGD	Combined Sewer Overflow	Blackstone River
105A	Cross Street at Roosevelt Avenue Central Falls, RI	62.86 MGD	Combined Sewer Overflow	Blackstone River
106A	Higginson Ave (2 pipes) Central Falls, RI	73.76 MGD (total)	Combined Sewer Overflow	Blackstone River
107A	Dexter Street (107A) Hunt Street (107B) (combine into CSO in Richmond Street - 107 Central Falls, RI)	50.90 MGD(total)	Combined Sewer Overflow	Blackstone River
201A	East Street west of Branch Street Pawtucket, RI	161.5 MGD	Combined Sewer Overflow	Blackstone River
202A	Beneath Roosevelt Ave. Bridge west of Japonica Street Pawtucket, RI	161.5 MGD	Combined Sewer Overflow	Blackstone River
203A	Carnation Street west of Front Street, Pawtucket, RI	unknown	Combined Sewer Overflow	Blackstone River
204A	North Side of Central Avenue northwest of its intersection with Front Street, Pawtucket, RI	17.1 MGD	Combined Sewer Overflow (36" pipe)	Blackstone River
205A	Central Avenue west of its intersection with Front Street Pawtucket, RI	239.0 MGD	Combined Sewer Overflow (54" pipe)	Blackstone River
206A	Blackstone Avenue east of Roosevelt Avenue, Pawtucket, RI	unknown	Combined Sewer Overflow	Blackstone River
207A	Blackstone Avenue west of Front Street, Pawtucket, RI	unknown	Combined Sewer Overflow	Blackstone River

5. Combined Sewer Overflows or Emergency Bypasses (continued)

208A	Exchange Street east of Roosevelt Avenue, Pawtucket, RI	unknown	Combined Sewer Overflow	Blackstone River
209A	Exchange Street west of Fountain Street, Pawtucket, RI	12.3 MGD	Combined Sewer Overflow	Blackstone River
210A	Main Street between East Avenue and the west abutment of the Main Street Bridge, Pawtucket, RI	80.8 MGD	Combined Sewer Overflow (48" pipe serves as a relief pipe for Outfall 211A)	Blackstone River
211A	Main Street between East Avenue and west abutment of the Main Street Bridge, Pawtucket, RI	62.0 MGD	Combined Sewer Overflow	Blackstone River
212A	Main Street between diversion structure on Broadway and east abutment on the Main Street Bridge, Pawtucket, RI	unknown	Combined Sewer Overflow	Blackstone River
213A	Easement area extending east of the intersection of East Avenue and Pleasant Street, Pawtucket, RI	203.5 MGD	Combined Sewer Overflow (48" pipe)	Seekonk River
214A	Roosevelt Avenue Extension east of Pleasant Street, Pawtucket, RI	unknown	Combined Sewer Overflow	Seekonk River
215A	Division Street between east bridge abutment & diversion structure (#18) Pawtucket, RI	71.1 MGD	Combined Sewer Overflow	Seekonk River
216A	Between intersection of School Street and Woodlawn Avenue, Pawtucket, RI	45.9 MGD	Combined Sewer Overflow	Seekonk River
217A	Overflow from diversion structures at Taft (#10) & Merry (#11) Streets through an easement to the west bank of the river, Pawtucket, RI	38.8 MGD	Combined Sewer Overflow	Seekonk River
218A	Bucklin Brook overflow Pawtucket, RI	258.4 MGD	Combined Sewer Overflow	Seekonk River
220A	Moshassuck Street Pawtucket, RI	145.4 MGD	Combined Sewer Overflow	Moshassuck River

E. OPERATION AND MAINTENANCE OF THE SEWER SYSTEM

Operation and maintenance of the sewer system shall be in compliance with the General Requirements of Part II and the following terms and conditions:

1. Maintenance Staff

The permittee shall provide an adequate staff to carry out the operation, maintenance, repair, and testing functions required to ensure compliance with the terms and conditions of this permit.

2. Infiltration/Inflow

The permittee shall minimize infiltration/inflow to the sewer system. A summary report of all actions taken to minimize infiltration/inflow during the previous year shall be submitted to DEM, Office of Water Resources, by the 15th day of January of each year.

3. Combined Sewer Overflows and Bypasses

The permittee shall operate and improve the sewer system to minimize the discharge of pollutants from combined sewer overflows and bypasses in accordance with the approved Nine Minimum Control Plan and Long-term CSO Control Plan.

4. Resiliency Planning

Within one year of the effective date of this permit, the NBC shall submit a Resiliency Plan and schedule of short and long term actions that will be taken to maintain operation and protect key collection and treatment system assets. The plan shall be consistent with the DEM's Guidance for the Consideration of Climate Change Impacts in the Planning and Design of Municipal Wastewater Collection and Treatment Infrastructure and include consideration of the findings of the 2017 DEM report Implications of Climate Change for Rhode Island Wastewater Collection and Treatment Infrastructure. The Resiliency Plan shall include, but not be limited to: (i) an assessment of current and projected impacts from natural hazards on critical components within the NBC collection and treatment systems, as well as on the systems themselves; (ii) a plan to adapt and protect vulnerable components and systems; (iii) an analysis that provides justification for selected adaptation methods. The analysis must consider component and system design life and sea-level rise projections. For the purposes of this Resiliency Plan, critical components are considered those necessary to ensure the forward flow and treatment of wastewater in accordance with the limits set forth in this permit. The Resiliency Plan shall also consider impacts on NBC from neighboring facilities during high hazard events. This Plan shall be subject to DEM review and approval. If DEM determines that modifications need to be made to the Plan, DEM shall notify the permittee in writing which elements of the Plan need to be modified and the reason for the needed modification. This notification shall include a schedule for making the changes. After such notification from the DEM, the permittee shall make changes to the Plan and submit the revisions to the DEM for their approval.

F. SLUDGE

The permittee shall conform and adhere to all conditions, practices and regulations as contained in the State of Rhode Island Rules and Regulations for the Treatment, Disposal, Utilization and Transportation of Sewage Sludge. The permittee shall comply with its DEM Order of Approval for the disposal of sludge.

G. DETECTION LIMITS

The permittee shall assure that all wastewater testing required by this permit, is performed in conformance with the method detection limits listed below (the EPA method is noted for reference, other EPA approved methods found in 40 CFR Part 136 may be utilized). All sludge testing required by this permit shall be in conformance with the method detection limits found in 40 CFR 503.8. In accordance with 40 CFR Part 136, EPA approved analysis techniques, quality assurance procedures and quality control procedures shall be followed for all reports required to be submitted under the RIPDES program. These procedures are described in "Methods for the Determination of Metals in Environmental Samples" (EPA/600/4-91/010) and "Methods for Chemical Analysis of Water and Wastes" (EPA/600/4-79/020).

The report entitled "Methods for the Determination of Metals in Environmental Samples" includes a test which must be performed in order to determine if matrix interferences are present, and a series of tests to enable reporting of sample results when interferences are identified. Each step of the series of tests becomes increasingly complex, concluding with the complete Method of Standard Additions analysis. The analysis need not continue once a result which meets the applicable quality control requirements has been obtained. Documentation of all steps conducted to identify and account for matrix interferences shall be submitted along with the monitoring reports.

If, after conducting the complete Method of Standard Additions analysis, the laboratory is unable to determine a valid result, the laboratory shall report "could not be analyzed". Documentation supporting this claim shall be submitted along with the monitoring report. If valid analytical results are repeatedly unobtainable, DEM may require that the permittee determine a method detection limit (MDL) for their effluent or sludge as outlined in 40 CFR Part 136, Appendix B.

When calculating sample averages for reporting on discharge monitoring reports (DMRs):

1. "could not be analyzed" data shall be excluded, and shall not be considered as failure to comply with the permit sampling requirements;

2. results reported as less than the MDL shall be reported as zero in accordance with the DEM's DMR Instructions, provided that all appropriate EPA approved methods were followed.

Therefore, all sample results shall be reported as: an actual value, "could not be analyzed", or zero. The effluent or sludge specific MDL must be calculated using the methods outlined in 40 CFR Part 136, Appendix B. Samples which have been diluted to ensure that the sample concentration will be within the linear dynamic range shall not be diluted to the extent that the analyte is not detected. If this should occur the analysis shall be repeated using a lower degree of dilution.

LIST OF TOXIC POLLUTANTS

The following list of toxic pollutants has been designated pursuant to Section 307(a)(1) of the Clean Water Act. The Method Detection Limits (MDLs) represent the required Rhode Island MDLs.

Volatiles - EPA Method 624		MDL ug/l (ppb)
1V	acrolein	10.0
2V	acrylonitrile	5.0
3V	benzene	1.0
5V	bromoform	1.0
6V	carbon tetrachloride	1.0
7V	chlorobenzene	1.0
8V	chlorodibromomethane	1.0
9V	chloroethane	1.0
10V	2-chloroethylvinyl ether	5.0
11V	chloroform	1.0
12V	dichlorobromomethane	1.0
14V	1,1-dichloroethane	1.0
15V	1,2-dichloroethane	1.0
16V	1,1-dichloroethylene	1.0
17V	1,2-dichloropropane	1.0
18V	1,3-dichloropropylene	1.0
19V	ethylbenzene	1.0
20V	methyl bromide	1.0
21V	methyl chloride	1.0
22V	methylene chloride	1.0
23V	1,1,2,2-tetrachloroethane	1.0
24V	tetrachloroethylene	1.0
25V	toluene	1.0
26V	1,2-trans-dichloroethylene	1.0
27V	1,1,1-trichloroethane	1.0
28V	1,1,2-trichloroethane	1.0
29V	trichloroethylene	1.0
31V	vinyl chloride	1.0

Acid Compounds - EPA Method 625		MDL ug/l (ppb)
1A	2-chlorophenol	1.0
2A	2,4-dichlorophenol	1.0
3A	2,4-dimethylphenol	1.0
4A	4,6-dinitro-o-cresol	1.0
5A	2,4-dinitrophenol	2.0
6A	2-nitrophenol	1.0
7A	4-nitrophenol	1.0
8A	p-chloro-m-cresol	2.0
9A	pentachlorophenol	1.0
10A	phenol	1.0
11A	2,4,6-trichlorophenol	1.0

Pesticides - EPA Method 608		MDL ug/l (ppb)
1P	aldrin	0.059
2P	alpha-BHC	0.058
3P	beta-BHC	0.043
4P	gamma-BHC	0.048
5P	delta-BHC	0.034
6P	chlordane	0.211
7P	4,4'-DDT	0.251
8P	4,4'-DDE	0.049
9P	4,4'-DDD	0.139
10P	dieldrin	0.082
11P	alpha-endosulfan	0.031
12P	beta-endosulfan	0.036
13P	endosulfan sulfate	0.109
14P	endrin	0.050
15P	endrin aldehyde	0.062

Pesticides - EPA Method 608		MDL ug/l (ppb)
16P	heptachlor	0.029
17P	heptachlor epoxide	0.040
18P	PCB-1242	0.289
19P	PCB-1254	0.298
20P	PCB-1221	0.723
21P	PCB-1232	0.387
22P	PCB-1248	0.283
23P	PCB-1260	0.222
24P	PCB-1016	0.494
25P	toxaphene	1.670

Base/Neutral - EPA Method 625		MDL ug/l (ppb)
1B	acenaphthene *	1.0
2B	acenaphthylene *	1.0
3B	anthracene *	1.0
4B	benzidine	4.0
5B	benzo(a)anthracene *	2.0
6B	benzo(a)pyrene *	2.0
7B	3,4-benzofluoranthene *	1.0
8B	benzo(ghi)perylene *	2.0
9B	benzo(k)fluoranthene *	2.0
10B	bis(2-chloroethoxy)methane	2.0
11B	bis(2-chloroethyl)ether	1.0
12B	bis(2-chloroisopropyl)ether	1.0
13B	bis(2-ethylhexyl)phthalate	1.0
14B	4-bromophenyl phenyl ether	1.0
15B	butylbenzyl phthalate	1.0
16B	2-chloronaphthalene	1.0
17B	4-chlorophenyl phenyl ether	1.0
18B	chrysene *	1.0
19B	dibenzo (a,h)anthracene *	2.0
20B	1,2-dichlorobenzene	1.0
21B	1,3-dichlorobenzene	1.0
22B	1,4-dichlorobenzene	1.0
23B	3,3'-dichlorobenzidine	2.0
24B	diethyl phthalate	1.0
25B	dimethyl phthalate	1.0
26B	di-n-butyl phthalate	1.0
27B	2,4-dinitrotoluene	2.0
28B	2,6-dinitrotoluene	2.0
29B	di-n-octyl phthalate	1.0
30B	1,2-diphenylhydrazine (as azobenzene)	1.0
31B	fluoranthene *	1.0
32B	fluorene *	1.0
33B	hexachlorobenzene	1.0
34B	hexachlorobutadiene	1.0
35B	hexachlorocyclopentadiene	2.0
36B	hexachloroethane	1.0
37B	indeno(1,2,3-cd)pyrene *	2.0
38B	isophorone	1.0
39B	naphthalene *	1.0
40B	nitrobenzene	1.0
41B	N-nitrosodimethylamine	1.0
42B	N-nitrosodi-n-propylamine	1.0
43B	N-nitrosodiphenylamine	1.0
44B	phenanthrene *	1.0
45B	pyrene *	1.0
46B	1,2,4-trichlorobenzene	1.0

OTHER TOXIC POLLUTANTS

	MDL ug/l (ppb)
Antimony, Total	3.0
Arsenic, Total	1.0
Beryllium, Total	0.2
Cadmium, Total	0.1
Chromium, Total	1.0
Chromium, Hexavalent***	20.0
Copper, Total	1.0
Lead, Total	1.0
Mercury, Total	0.001
Nickel, Total	1.0
Selenium, Total	2.0
Silver, Total	0.5
Thallium, Total	1.0
Zinc, Total	5.0
Asbestos	**
Cyanide, Total	10.0
Phenols, Total***	50.0
Aluminum, Total	5.0
TCDD	**
MTBE (Methyl Tert Butyl Ether)	1.0

*Polynuclear Aromatic Hydrocarbons
**No Rhode Island Department of Environmental Management (DEM) MDL
*** Not a priority pollutant as designated in the 1997 Water Quality Regulations (Table 5)

NOTE:

The MDL for a given analyte may vary with the type of sample. MDLs which are determined in reagent water may be lower than those determined in wastewater due to fewer matrix interferences. Wastewater is variable in composition and may therefore contain substances (interferents) that could affect MDLs for some analytes of interest. Variability in instrument performance can also lead to inconsistencies in determinations of MDLs.

To help verify the absence of matrix or chemical interference the analyst is required to complete specific quality control procedures. For the metals analyses listed above the analyst must withdraw from the sample two equal aliquots; to one aliquot add a known amount of analyte, and then dilute both to the same volume and analyze. The unspiked aliquot multiplied by the dilution factor should be compared to the original. Agreement of the results within 10% indicates the absence of interference. Comparison of the actual signal from the spiked aliquot to the expected response from the analyte in an aqueous standard should help confirm the finding from the dilution analysis. (Methods for Chemical Analysis of Water and Wastes EPA-600/4-79/020).

For Methods 624 and 625 the laboratory must on an ongoing basis, spike at least 5% of the samples from each sample site being monitored. For laboratories analyzing 1 to 20 samples per month, at least one spiked sample per month is required. The spike should be at the discharge permit limit or 1 to 5 times higher than the background concentration determined in Section 8.3.2, whichever concentration would be larger. (40 CFR Part 136 Appendix B Method 624 and 625 subparts 8.3.1 and 8.3.11).

H. MONITORING AND REPORTING

1. Monitoring

All monitoring required by this permit shall be done in accordance with sampling and analytical testing procedures specified in Federal Regulations (40 CFR Part 136).

2. Reporting

Unless otherwise specified in this permit, the permittee shall submit reports, requests, and information and provide notices in the manner described in this section.

a. Submittal of DMRs Using NetDMR

The permittee shall continue to submit its monthly monitoring data in discharge monitoring reports (DMRs) to DEM no later than the 15th day of the month electronically using NetDMR. When the permittee submits DMRs using NetDMR, it is not required to submit hard copies of DMRs to DEM.

b. Submittal of Reports as NetDMR Attachments

Unless otherwise specified in this permit, the permittee must submit electronic copies of documents in NetDMR that are directly related to the DMR. These include the following:

- DMR Cover Letters
- Below Detection Limit summary tables
- Wet Weather Event Summary Reports
- Monthly Operating Reports

All other reports (i.e. I/I reports, P/T reports, etc.) should be submitted to DEM hard copy via regular US mail (see Part I.F.4 below).

c. Submittal of Requests and Reports to DEM

The following requests, reports, and information described in this permit shall be submitted to the DEM.

i. Transfer of Permit notice
ii. Request for changes in sampling location
iii. Request for reduction in testing frequency
iv. Request for reduction in WET testing requirement
v. Report on unacceptable dilution water / request for alternative dilution water for WET testing

These reports, information, and requests shall be submitted to DEM by hard copy mail to the following address:

Rhode Island Department of Environmental Management
RIPDES Program
235 Promenade Street
Providence, RI 02908

d. Submittal of Reports in Hard Copy Form

The following notifications and reports shall be submitted as hard copy with a cover letter describing the submission. These reports shall be signed and dated originals submitted to DEM.

i. Written notifications required under Part II
ii. Notice of unauthorized discharges, including Sanitary Sewer Overflow (SSO) reporting
iii. Priority Pollutant Scan results
iv. Infiltration/Inflow Reports

This information shall be submitted to DEM at the following address:

Rhode Island Department of Environmental Management
RIPDES Program
235 Promenade Street
Providence, Rhode Island 02908

e. Verbal Reports and Verbal Notifications

Any verbal reports or verbal notifications, if required in Parts I and/or II of this permit, shall be made to the DEM. This includes verbal reports and notifications which require reporting within 24 hours. (See Part II(I)(5) General Requirements for 24-hour reporting) Verbal reports and verbal notifications shall be made to DEM at (401) 222-4700 or (401) 222-3070 at night.

3. Fixed Site Monitoring and Reporting

The permittee shall continue as a partner in the Narragansett Bay Fixed Site Monitoring Network (NBFSMN) by continuing to seasonally operate and maintain instruments capable of collecting near surface and near bottom measurements of temperature, salinity, chlorophyll and dissolved oxygen on a continuous basis (usually every fifteen minutes, except when down for maintenance/repair) at Bullocks Point Reach and Seekonk River/Phillipsdale and by collecting and reporting data in accordance with the NBFSMN Seasonal Monitoring Quality Assurance Project Plan 2014, as amended.

PART II
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GENERAL REQUIREMENTS

DEFINITIONS

GENERAL REQUIREMENTS

(a) Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of Chapter 46-12 of the Rhode Island General Laws and the Clean Water Act (CWA) and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

(1) The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

(2) The CWA provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the CWA is subject to a civil penalty not to exceed $10,000 per day of such violation. Any person who willfully or negligently violates permit conditions implementing Sections 301, 302, 306, 307 or 308 of the Act is subject to a fine of not less than $2,500 nor more than $25,000 per day of violation, or by imprisonment of not more than 1 year, or both.

(3) Chapter 46-12 of the Rhode Island General Laws provides that any person who violates a permit condition is subject to a civil penalty of not more than $5,000 per day of such violation. Any person who willfully or negligently violates a permit condition is subject to a criminal penalty of not more than $10,000 per day of such violation and imprisonment for not more than 30 days, or both. Any person who knowingly makes any false statement in connection with the permit is subject to a criminal penalty of not more than $5,000 for each instance of violation or by imprisonment for not more than 30 days, or both.

(b) Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. The permittee shall submit a new application at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Director. (The Director shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)

(c) Need to Halt or Reduce Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

(d) Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

(e) Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures, and, where applicable, compliance with DEM "Rules and Regulations Pertaining to the Operation and Maintenance of Wastewater Treatment Facilities" and "Rules and Regulations Pertaining to the Disposal and Utilization of Wastewater Treatment Facility Sludge." This provision requires the operation of back-up or auxiliary facilities or similar systems only when the operation is necessary to achieve compliance with the conditions of the permit.

(f) Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause, including but not limited to: (1) Violation of any terms or conditions of this permit; (2) Obtaining this permit by misrepresentation or failure to disclose all relevant facts; or (3) A change in any conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

(g) Property Rights

This permit does not convey any property rights of any sort, or any exclusive privilege.

(h) Duty to Provide Information

The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

(i) Inspection and Entry

The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

(1) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

(2) Have access to and copy, at reasonable times any records that must be kept under the conditions of this permit;

(3) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under this permit; and

(4) Sample or monitor any substances or parameters at any location, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the CWA or Rhode Island law.

(j) Monitoring and Records

(1) Samples and measurements taken for the purpose of monitoring shall be representative of the volume and nature of the discharge over the sampling and reporting period.

(2) The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings from continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 5 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.

(3) Records of monitoring information shall include:

(i) The date, exact place, and time of sampling or measurements;

(ii) The individual(s) who performed the sampling or measurements;

(iii) The date(s) analyses were performed;

(iv) The individual(s) who performed the analyses;

(v) The analytical techniques or methods used; and

(vi) The results of such analyses.

(4) Monitoring must be conducted according to test procedures approved under 40 CFR Part 136 and applicable Rhode Island regulations, unless other test procedures have been specified in this permit.

(5) The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall upon conviction, be punished by a fine of not more than $10,000 per violation or by imprisonment for not more than 6 months per violation or by both. Chapter 46-12 of the Rhode Island General Laws also provides that such acts are subject to a fine of not more than $5,000 per violation, or by imprisonment for not more than 30 days per violation, or by both.

(6) Monitoring results must be reported on a Discharge Monitoring Report (DMR).

(7) If the permittee monitors any pollutant more frequently than required by the permit, using test procedures approved under 40 CFR Part 136, applicable State regulations, or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.

(k) Signatory Requirement

All applications, reports, or information submitted to the Director shall be signed and certified in accordance with Rule 12 of the Rhode Island Pollutant Discharge Elimination System (RIPDES) Regulations. Rhode Island General Laws, Chapter 46-12 provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $5,000 per violation, or by imprisonment for not more than 30 days per violation, or by both.

(l) Reporting Requirements

(1) Planned changes. The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility.

(2) Anticipated noncompliance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with the permit requirements.

(3) Transfers. This permit is not transferable to any person except after written notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under State and Federal law.

(4) Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit.

(5) Twenty-four hour reporting. The permittee shall immediately report any noncompliance which may endanger health or the environment by calling DEM at (401) 222-4700 or (401) 222-3070 at night.

A written submission shall also be provided within five (5) days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

The following information must be reported immediately:

(i) Any unanticipated bypass which causes a violation of any effluent limitation in the permit; or

(ii) Any upset which causes a violation of any effluent limitation in the permit; or

(iii) Any violation of a maximum daily discharge limitation for any of the pollutants specifically listed by the Director in the permit.

The Director may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

(6) Other noncompliance. The permittee shall report all instances of noncompliance not reported under paragraphs (1), (2), and (5), of this section, at the time monitoring reports are submitted. The reports shall contain the information required in paragraph (l)(5) of the section.

(7) Other information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, they shall promptly submit such facts or information.

(m) Bypass

"Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.

(1) Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs (2) and (3) of this section.

(2) Notice.

(i) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten (10) days before the date of the bypass.

(ii) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Rule 14.18 of the RIPDES Regulations.

(3) Prohibition of bypass.

(i) Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:

(A) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage, where "severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production;

(B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

(C) The permittee submitted notices as required under paragraph (2) of this section.

(ii) The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in paragraph (3)(i) of this section.

(n) Upset

"Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

(1) Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of paragraph (2) of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

(2) Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

(a) An upset occurred and that the permittee can identify the cause(s) of the upset;

(b) The permitted facility was at the time being properly operated;

(c) The permittee submitted notice of the upset as required in Rule 14.18 of the RIPDES Regulations; and

(d) The permittee complied with any remedial measures required under Rule 14.05 of the RIPDES Regulations.

(3) Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

(o) Change in Discharge

All discharges authorized herein shall be consistent with the terms and conditions of this permit. Discharges which cause a violation of water quality standards are prohibited. The discharge of any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit. Any anticipated facility expansions, production increases, or process modifications which will result in new, different or increased discharges of pollutants must be reported by submission of a new NPDES application at least 180 days prior to commencement of such discharges, or if such changes will not violate the effluent limitations specified in this permit, by notice, in writing, to the Director of such changes. Following such notice, the permit may be modified to specify and limit any pollutants not previously limited.

Until such modification is effective, any new or increased discharge in excess of permit limits or not specifically authorized by the permit constitutes a violation.

(p) Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner consistent with applicable Federal and State laws and regulations including, but not limited to the CWA and the Federal Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq., Rhode Island General Laws, Chapters 46-12, 23-19.1 and regulations promulgated thereunder.

(q) Power Failures

In order to maintain compliance with the effluent limitation and prohibitions of this permit, the permittee shall either:

> In accordance with the Schedule of Compliance contained in Part I, provide an alternative power source sufficient to operate the wastewater control facilities;

or if such alternative power source is not in existence, and no date for its implementation appears in Part I,

> Halt reduce or otherwise control production and/or all discharges upon the reduction, loss, or failure of the primary source of power to the wastewater control facilities.

(r) Availability of Reports

Except for data determined to be confidential under paragraph (w) below, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the DEM, 291 Promenade Street, Providence, Rhode Island. As required by the CWA, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in Section 309 of the CWA and under Section 46-12-14 of the Rhode Island General Laws.

(s) State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law.

(t) Other Laws

The issuance of a permit does not authorize any injury to persons or property or invasion of other private rights, nor does it relieve the permittee of its obligation to comply with any other applicable Federal, State, and local laws and regulations.

(u) Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

(v) Reopener Clause

The Director reserves the right to make appropriate revisions to this permit in order to incorporate any appropriate effluent limitations, schedules of compliance, or other provisions which may be authorized under the CWA or State law. In accordance with Rules 15 and 23 of the RIPDES Regulations, if any effluent standard or prohibition, or water quality standard is promulgated under the CWA or under State law which is more stringent than any limitation on the pollutant in the permit, or controls a pollutant not limited in the permit, then the Director may promptly reopen the permit and modify or revoke and reissue the permit to conform to the applicable standard.

(w) Confidentiality of Information

(1) Any information submitted to DEM pursuant to these regulations may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission in the manner prescribed on the application form or instructions or, in the case of other submissions, by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, DEM may make the information available to the pubic without further notice.

(2) Claims of confidentiality for the following information will be denied:

(i) The name and address of any permit applicant or permittee;

(ii) Permit applications, permits and any attachments thereto; and

(iii) NPDES effluent data.

(x) Best Management Practices

The permittee shall adopt Best Management Practices (BMP) to control or abate the discharge of toxic pollutants and hazardous substances associated with or ancillary to the industrial manufacturing or treatment process and the Director may request the submission of a BMP plan where the Director determines that a permittee's practices may contribute significant amounts of such pollutants to waters of the State.

(y) Right of Appeal

Within thirty (30) days of receipt of notice of a final permit decision, the permittee or any interested person may submit a request to the Director for an adjudicatory hearing to reconsider or contest that decision. The request for a hearing must conform to the requirements of Rule 49 of the RIPDES Regulations.

DEFINITIONS

1. For purposes of this permit, those definitions contained in the RIPDES Regulations and the Rhode Island Pretreatment Regulations shall apply.

2. The following abbreviations, when used, are defined below.

cu. M/day or M^3/day	cubic meters per day
mg/l	milligrams per liter
ug/l	micrograms per liter
lbs/day	pounds per day
kg/day	kilograms per day
Temp. °C	temperature in degrees Centigrade
Temp. °F	temperature in degrees Fahrenheit
Turb.	turbidity measured by the Nephelometric Method (NTU)
TNFR or TSS	total nonfilterable residue or total suspended solids
DO	dissolved oxygen
BOD	five-day biochemical oxygen demand unless otherwise specified
TKN	total Kjeldahl nitrogen as nitrogen
Total N	total nitrogen
NH_3-N	ammonia nitrogen as nitrogen
Total P	total phosphorus
COD	chemical oxygen demand
TOC	total organic carbon
Surfactant	surface-active agent
pH	a measure of the hydrogen ion concentration
PCB	polychlorinated biphenyl
CFS	cubic feet per second
MGD	million gallons per day
Oil & Grease	Freon extractable material
Total Coliform	total coliform bacteria
Fecal Coliform	total fecal coliform bacteria
ml/l	milliliter(s) per liter
NO_3-N	nitrate nitrogen as nitrogen
NO_2-N	nitrite nitrogen as nitrogen
NO_3-NO_2	combined nitrate and nitrite nitrogen as nitrogen
$C1_2$	total residual chlorine