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## 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

## City of East Providence 145 Taunton Avenue East Providence, Rhode Island 02914

is authorized to discharge from a facility located at

## East Providence Water Pollution Control Facility 1 Crest Avenue East Providence, Rhode Island 02915

to receiving waters named

## **Providence River**

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

This permit shall become effective on April 1, 2016.

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

This permit supersedes the permit issued on August 14, 2007.

This permit consists of 23 pages in Part I including effluent limitations, monitoring requirements, etc. and 10 pages in Part II including General Conditions.

Signed this 1<sup>st</sup> day of February, 2016.

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

## PARTI

## 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. (final discharge after dechlorination) Such discharges shall be limited and monitored by the permittee as specified below:

Effluent	Discharge Limitations				Monitoring Requirement		
Characteristic Quantity - lbs./day			Concentr	ation - specify un	its		
	Average <u>Monthly</u>	Maximum Daily	Average Monthly	Average <u>Weekly</u>	Maximum Daily	Measurement Frequency	Sample <u>Type</u>
Flow	14.2 MGD	MGD	( <u>ivinininun</u> )	( <u>Average</u> )	( <u>iviaximum)</u>	Continuous	Recorder
BOD <sub>5</sub> (Nov. 1 – Apr. 30)	2600	4300	22 mg/l	33 mg/l	36 mg/l	3/Week	24-Hr. Comp.
CBOD₅ (May 1 – Oct. 31)	1184	1776	10 mg/l	10 mg/l	15 mg/l	3/Week	24-Hr. Comp.
BOD₅ - % Removal	85%					1/Month	Calculated
TSS (Nov. 1 – Apr. 30)	2600	4300	22 mg/l	33 mg/l	36 mg/l	3/Week	24-Hr. Comp.
TSS (May 1 – Oct. 31)	2368	3553	20 mg/l	20 mg/l	30 mg/l	3/Week	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 and BOD<sub>5</sub> shall be performed Tuesday, Thursday and either Saturday or Sunday. All BOD<sub>5</sub> and TSS samples shall be taken on the influent and effluent with appropriate allowances for hydraulic detention (flow-through) time.

Sampling for Flow and Settleable Solids shall be performed Sunday-Saturday.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: Outfall 001A. (Final discharge from the WPCF after dechlorination)

## PARTI

## 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. (final discharge after dechlorination)

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

Effluent		Discharge Limita	ations			Monitoring Requir	rement
<u>Characteristic</u>	Quantity - Ib:	s./day	Concenti	ration - specify un	its		
	Average <u>Monthly</u>	Maximum Daily	Average <u>Monthly</u> *( <u>Minimum</u> )	Average <u>Weekly</u> *( <u>Average</u> )	Maximum <u>Daily</u> *( <u>Maximum</u> )	Measurement Frequency	Sample Type
Enterococci			<u>35 cfu</u> 1 100 ml		<u>276 cfu</u> ¹ 100 ml	3/Week	Grab
Fecal Coliform			<u> MPN</u> <sup>1</sup> 100 ml		<u> MPN</u> 1 100 ml	3/Week	Grab
Total Residual Chlorine (TRC)			190 ug/l²		190 ug/l²	3/Day	Grab
рН			(6.0 SU)		(9.0 SU)	2/Day	Grab

<sup>1</sup>Two (2) of the three (3) Enterococci samples are to be taken on Tuesday and Thursday. The Fecal Coliform samples and one of the required TRC samples shall be taken at the same time as the Enterococci samples. The Geometric Mean shall be used to obtain the "weekly average" and the "monthly average."

<sup>2</sup>The use of a continuous TRC recorder after chlorination and prior to dechlorination is required to provide a record that proper disinfection was achieved at all times. Compliance with these limitations shall be determined by taking three grab samples of the final effluent (after dechlorination) per day. Monday - Friday (except holidays), equally spaced over one (1) day with a minimum of three hours between grabs, and on Saturdays, Sundays, and Holidays by taking at least (2) grab samples each day with a minimum of two (2) hours between grabs. The maximum daily and average monthly values are to be computed from the averaged grab sample results for each day. The following methods may be used to analyze the grab samples: (1) DPD Spectrophotometric, EPA No. 330.5 or Standard Methods (18th Edition) No. 4500-CI G; (2) DPD Titrimetric, EPA No. 330.4 or Standard Methods (18th Edition) No. 4500-CI F; (3) Amperometric Titration, EPA No. 330.1 or Standard Methods (18th Edition) No. 4500-CI D or ASTM No. D1253-86(92).

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

Sampling for pH and Chlorine Residual shall be performed Sunday-Saturday.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: Outfall 001A. (Final discharge from the WPCF after dechlorination)

## PART I

## A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

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

Effluent		Discharge Lin	<u>nitations</u>			Monitoring Req	<u>uirement</u>
<u>Characteristic</u>	Quantity - Average <u>Monthly</u>	lbs./day Maximum Daily	Co Average <u>Monthly</u>	ncentration - spec Average <u>Weekly</u>	ify units Maximum Daily	Measurement Frequency	Sample <u>Type</u>
Oil and Grease					— mg/l	1/Month	3 Grabs1
TKN			mg/l		mg/l	1/Week	24-Hr. Comp.
Nitrate, Total (as N)			mg/l		mg/l	1/Week	24-Hr. Comp.
Nitrite, Total (as N)			mg/l		mg/l	1/Week	24-Hr. Comp.
Nitrogen, Total [TKN + Nitrate + Nitrite, as N] (Nov. 1-Apr. 30) (May 1-Oct. 31)	lb/day 694 lb/day		mg/l² 5.9 mg/l		mg/l mg/l	1/week 1/week	Calculated Calculated

<sup>1</sup> Three (3) grab samples shall be equally spaced over the course of an eight (8) hour shift with a minimum of three (3) hours between samples. Each grab sample must be analyzed individually and the maximum values reported.

<sup>2</sup> 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 methanol addition.

--- 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 Monday through Friday at the following locations: Outfall 001A. (Final discharge from the WPCF after dechlorination)

## PART I

## 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. (final discharge after dechlorination)

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

Effluent	Discharge Limitations				Monitoring Requirement		
Characteristic	Quantity -	lbs./day	Conc	centration - specify			
	Average	Maximum	Average	Average	Maximum	Measurement	Sample
	Monthly	Daily	Monthly	Weekly	Daily	Frequency	Туре
Copper, Total <sup>1</sup>			ug/l		ug/l	1/Quarter	24-Hr. Comp.
Cyanide <sup>1</sup>			11.7 ug/l		11.7 ug/l	1/Month	Composite <sup>2</sup>
Cadmium, Total <sup>1</sup>			ug/l		ug/l	1/Quarter	24-Hr. Comp.
Chromium, Total <sup>1</sup>			ug/l		ug/l	1/Quarter	24-Hr. Comp.
Lead, Total <sup>1</sup>			ug/l		ug/l	1/Quarter	24-Hr. Comp.
Zinc, Total <sup>1</sup>			ug/l		ug/l	1/Quarter	24-Hr. Comp.
Nickel, Total <sup>1</sup>			ug/l		ug/l	1/Quarter	24-Hr. Comp.
Aluminum, Total <sup>1</sup>			ug/l		ug/l	1/Quarter	24-Hr. Comp.

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

<sup>1</sup>Monitoring data may be obtained in conjunction with bioassay testing.

<sup>2</sup>Compliance with these limitations shall be determined by taking three (3) grab samples per day, equally spaced over one (1) day with a minimum of three (3) hours between grabs, and preserved immediately upon collection. All three (3) samples shall be composited then analyzed for available Cyanide.

--- 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 Monday through Friday at the following locations: Outfall 001A. (Final Discharge from the WCPF after dechlorination).

#### East Providence Final Permit

## PART I

## A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

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

Effluent **Discharge Limitations** Monitoring Requirement Characteristic Quantity - lbs./day Concentration - specify units Maximum Average Average Average Maximum Measurement Sample Monthly Daily Monthly Weekly Daily Frequency Туре Mysidopsis bahia 100% 24-Hr. Comp. 1/Quarter LC501 or Greater<sup>2</sup> 100% 24-Hr. Comp. 1/Quarter Menidia spp. LC50<sup>1</sup> or Greater<sup>2</sup>

<sup>1</sup>LC<sub>50</sub> is defined as the concentration of wastewater that causes mortality to 50% of the test organisms.

<sup>2</sup>The 100% or greater limit is defined as a sample which is composed of 100% 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. (final discharge after dechlorination)

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- 6. 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 biochemical oxygen demand. 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 annually for the EPA Priority Pollutants as listed in 40 CFR 122, Appendix D, Table II and III. The results of these analyses shall be submitted to the Department of Environmental Management by January 15<sup>th</sup> for the previous calendar year. 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.

## B. BIOMONITORING REQUIREMENTS AND INTERPRETATION OF RESULTS

1. <u>General</u>

Beginning on the effective date of the permit, the permittee shall perform eight (8) acute toxicity tests per year on samples collected from discharge outfall 001A. 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 RIDEM) according to the following test frequency and protocols. Acute data shall be reported as outlined in Section I.B.10. The State may require additional screening, range finding, 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 (4) sampling events, (one (1) each calendar quarter) the permittee will conduct forty-eight (48) hour acute definitive toxicity tests on the two (2) species listed below, for a total of eight (8) acute toxicity tests per year. This requirement entails performing two- (2-) species testing as follows:

<u>Species</u>	<u>Test Type</u> Two (2) Species Test	Frequency Four Times Annually
Mysids ( <u>Mysidopsis</u> <u>bahia</u> )	Definitive 48-Hour Acute Static (LC50)	Quarterly

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#### **Species**

Test Type

Frequency

Silversides	Definitive 48-Hour	Quarterly
( <u>Menidia spp.</u> )	Acute Static (LC50)	

## 3. <u>Testing Methods</u>

Acute definitive toxicity tests shall be conducted in accordance with the test methods and protocols listed in 40 CFR 136, incorporating any deviations from protocol or additional methods as approved by the Director of RIDEM.

#### 4. <u>Sample Collection</u>

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: Acute Toxicity Testing

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

## 5. <u>Salinity Adjustment</u>

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 acute monitoring requirements.

## 6. <u>Dilution Water</u>

Dilution water used for marine acute toxicity analyses should be of sufficient quality to meet minimum acceptability of test results (See I.B.7 and I.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 nown quality with a salinity and pH similar to that of the receiving water may be substituted AFTER RECEIVING WRITTEN APPROVAL FROM RIDEM.

## Effluent Toxicity Test Conditions for Mysids<sup>1</sup> (Mysidopsis bahia)

a.	Test Type	48-Hour Static Acute Definitive
b.	Salinity	25 ppt <u>+</u> 10% for all dilutions
C.	Temperature (C)	25º <u>+</u> 1ºC
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
1.	Feeding Regime	Light feeding (two (2) drops concen- trated brine shrimp nauplii, approx. 100 nauplii per mysid twice daily).
m.	Aeration	None, unless dissolved oxygen con- centration falls below 40% of satura- tion at which time gentle single-bub- ble aeration should be started.
n.	Dilution Water	Narragansett Bay water as discussed above.
0.	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 <sub>50</sub> and NOAEL.
q.	Test Acceptability	90% or greater survival of test orga- nisms in control solution.

## <sup>1</sup>Adapted from EPA/600/4-90/027

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	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.	Effluent ( <u>Menidi</u>	Toxicity Conditions for Silversides <sup>1</sup> a spp.)	
	a.	Test Type	48-Hour Static Acute Definitive
	b.	Salinity	25ppt <u>+</u> 2ppt
	C.	Temperature	25º <u>+</u> 1ºC
	d.	Light Quality	Ambient laboratory illumination
	e.	Photoperiod	8-14 hour light/24 hour
	f.	Test Chamber Size	250-1000 ml
	g.	Test Solution Volume	Minimum 200ml/replicate
	h.	Age of Test Organisms	Less than thirty (30) days
	i.	No. Fish Per Test Chamber	10 (Not to exceed loading limits).
	j.	No. of Replicate Test Chambers Per Concentration	2
	k.	Total No. of Fish Per Test Concentration	20
	I.	Feeding Regime	None
	m.	Aeration	None, unless DO 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.
	0.	Dilutions	Five (5) dilutions plus a control: 100%, 50%, 25%, 12.5%, 6.25% and 0% effluent.
	p.	Effect Measured and Test Duration	Mortality - no movement, 48-hour LC₅₀ and NOAEL.
	q.	Test Acceptability	90% or greater survival of test organisms in control solution.

<sup>1</sup>Adapted from EPA/600/4-90/02

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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

## 9. <u>Chemical Analysis</u>

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

Parameter	Effluent	Saline <u>Diluent</u>	Detection Limit (mg/l)
рH	х	х	
Specific Conductance	х	Х	lyalikan iyu
Total Solids and Suspended Solids	Х	Х	
Ammonia	х		0.1
Total Organic Carbon	Х		0.5
Cyanide	х		0.01
Total Phenols	х		0.05
Salinity	х	х	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 <u>Diluent</u>	Detection Limit (µg/l)
Copper	Х	х	1.0 ug/L
Cadmium	Х	Х	1.0 ug/L
Chromium	Х	Х	5.0 ug/L
Lead	Х	Х	3.0 ug/L
Zinc	Х	Х	20.0 ug/L
Nickel	Х	Х	10.0 ug/L
Aluminum	Х	Х	20.0 ug/L

The above analyses may be used to fulfill, in part or in whole, 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 the other permit conditions to fulfill any priority pollutant scan requirements.

## 10. <u>Toxicity Test Report Elements</u>

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:

- Survival for each concentration and replication at time twenty-four (24) and fortyeight (48) hours.
- LC<sub>50</sub> 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<sub>50</sub> may be estimated using the graphical method.

## 11. Reporting of Bioassay Testing

Bioassay Testing shall be reported as follows:

Quarter Testing	Report Due	Results Submitted
to be Performed	<u>No Later Than</u>	on DMR for
January 1 - March 31	April 15	March
April 1 - June 30	July 15	June
July 1 - September 30	October 15	September
October 1 - December 31	January 15	December

Bioassay testing following the protocol described herein shall commence during the 2<sup>nd</sup> calendar quarter of 2016, and the first report shall be submitted to RIDEM no later than July 15, 2016.

Bioassay reports shall be submitted to:

RIPDES Program Office of Water Resources Rhode Island Department of Environmental Management 235 Promenade Street Providence, Rhode Island 02908-5767

## 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 Ordinance, 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 effect disposal options, or adversely effect worker safety and health.

- a. The permittee has an approved Local Limits Monitoring Plan (LLMP) that shall continue to be implemented at all times.
- b. At the time of renewal of this permit and in accordance with 40 CFR 122.44(j)(2), 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 procedures required above by Part I.C.3.a of this permit and current RIPDES permit discharge limits, sludge disposal criteria, secondary treatment inhibition, and worker health and safety criteria.

## 4. Enforcement Response Plan (ERP)

The permittee has an approved ERP that meets the requirements of 40 CFR 403.8(f)(5). The permittee shall continue to implement its approved ERP at all times.

- 5. <u>General</u>
  - The permittee shall carry out inspection, surveillance, and monitoring procedures а. 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 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 shall include the contents specified by 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 fact sheet describing the basis for the SIU's permit and retain this fact sheet as part of the SIU's permanent file.

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- 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).
- The permittee shall comply with the procedures of 40 CFR 403.18 for instituting e. 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 Nonsubstantial, 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 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 approval by DEM.

Within thirty (30) days of DEM's final approval of the proposed modification(s), the permittee shall implement the modification and submit proof that the local officials have endorse and/or approved the modification(s) to the DEM. Upon final approval by the DEM and adoption by the permittee, this modification(s) 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).

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- 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.
- 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(I) when submitting such reports.
- The permittee shall determine, based on the criteria set forth in 40 CFR 403.8(f)(2)(viii), 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 40 CFR 403.3 and the permittee's sewer use ordinance.

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(1) 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

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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 July 1st through June 30th and shall be submitted to the DEM by August 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 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, including dates, 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 of the Compliance status of each Industrial User (IU), as of the end of last quarter covered by the annual report. The list shall identify all IUs in non-compliance, the pretreatment program requirement which the IU failed to meet, and the type, and date of the enforcement action initiated by the permittee in response to the violation. If applicable, the list shall also contain the date which IUs in non-compliance returned to compliance, a description of corrective actions ordered, and the penalties 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 a copy of an affidavit of publication, from the newspaper, averring that the names of these violators has been published;
- e. A summary 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 and dates of analysis for each industrial user);

- f. A summary of permit issuance/reissuance activities including the name of the industrial user, expiration date of previous permit, issuance date of new permit, and a brief description of any changes to the permit;
- g. A list including the report/notification type, due date, and receipt date for each report/notification required by 40 CFR 403.12.
- 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;
- 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 SUO, Rules and Regulations, and/or statutory authority;
- 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;

- I. 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 Report Summary Sheet.
- 8. Inter-jurisdictional Agreement

The permittee has an approved Inter-jurisdictional Agreement with the Town of Barrington, which shall continue to be implemented at all times.

9. <u>Sewer Use Ordinance</u>

The permittee has an approved Sewer Use Ordinance which shall continue to be implemented at all times.

## D. 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 six (6) months shall be submitted to RIDEM, Office of Water Resources, by the 15<sup>th</sup> day of January and July of each year. The first report is due July 15, 2016.

## E. 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 Sewage Sludge Management. The permittee shall comply with its RIDEM Order of Approval for the disposal of sludge.

## F. 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. 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.

Therefore, all sample results shall be reported as: an actual value, "could not be analyzed", less than the reagent water MDL, or less than an effluent or sludge specific MDL. 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.

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 included as zeros.

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## LIST OF TOXIC POLLUTANTS

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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)	Pestic	Pesticides - EPA Method 608		
1V	acrolein	10.0	18P	PCB-1242	0.289	
2V	acrvlonitrile	5.0	19P	PCB-1254	0.298	
3V	benzene	1.0	20P	PCB-1221	0.723	
5V	bromoform	1.0	21P	PCB-1232	0.387	
6V	carbon tetrachloride	1.0	22P	PCB-1248	0.283	
71/	chlorobenzene	10	23P	PCB-1260	0.222	
81/	chlorodibromomethane	10	24P	PCB-1016	0.494	
01/	chloroethane	1.0	25P	tovanhene	1 670	
30		50	x	toxaphone	1.070	
100	2-ChloroeuryWhyreurer	10	Bacol	Noutral - FRA Method 625	MDL ug/L(pph)	
	Chiolololini	1.0	10	acepontitione *	10	
12V	dichloropromometriane	1.0	10	acenaphthulana *	1.0	
14V	1,1-dichloroethane	1.0	20		1.0	
15V	1,2-dichloroethane	1.0	3B 4D	anthracene	1.0	
16V	1,1-dichloroethylene	1.0	4B	benziaine	4.0	
17V	1,2-dichloropropane	1.0	58	benzo(a)anthracene	2.0	
18V	1,3-dichloropropylene	1.0	6B	benzo(a)pyrene *	2.0	
19V	ethylbenzene	1.0	7B	3,4-benzofluoranthene *	1.0	
20V	methyl bromide	1.0	8B	benzo(ghi)perylene *	2.0	
21V	methyl chloride	1.0	9B	benzo(k)fluoranthene *	2.0	
22V	methylene chloride	1.0	10B	bis(2-chloroethoxy)methane	2.0	
23V	1.1.2.2-tetrachloroethane	1.0	11B	bis(2-chloroethyl)ether	1.0	
24	tetrachloroethylene	1.0	12B	bis(2-chloroisopropyl)ether	1.0	
251/	toluene	10	13B	bis(2-ethylhexyl)phthalate	1.0	
261/	1.2-trans-dichloroethylene	10	14B	4-bromophenyl phenyl ether	1.0	
207	1.1.1 trichloraothana	1.0	15B	hutvihenzvi ohthalate	10	
21 V	1,1,2 trichloroothana	1.0	168	2-chloronanhthalene	10	
201		1.0	170	A chlorophenyl phenyl ether	1.0	
290	inchioroeanyiene	1.0	100	4-chiorophenyr phenyr ether	10	
31V	vinyi chionde	1.0	100		2.0	
			198	diberizo (a,ri)antiracene	2.0	
Acid Cor	npounds - EPA Method 625	MDL ug/I (ppb)	20B	1,2-dichlorobenzene	1.0	
1A	2-chlorophenol	1.0	21B	1,3-dichlorobenzene	1.0	
2A	2,4-dichlorophenol	1.0	22B	1,4-dichlorobenzene	1.0	
ЗA	2,4-dimethylphenol	1.0	23B	3,3'-dichlorobenzidine	2.0	
4A	4,6-dinitro-o-cresol	1.0	24B	diethyl phthalate	1.0	
5A	2,4-dinitrophenol	2.0	25B	dimethyl phthalate	1.0	
6A	2-nitrophenol	1.0	26B	di-n-butyl phthalate	1.0	
7A	4-nitrophenol	1.0	27B	2,4-dinitrotoluene	2.0	
8A	p-chloro-m-cresol	2.0	28B	2,6-dinitrotoluene	2.0	
9A	pentachlorophenol	1.0	29B	di-n-octyl phthalate	1.0	
10A	phenol	1.0	30B	1.2-diphenvlhvdrazine	1.0	
11A	2.4.6-trichlorophenol	1.0		(as azobenzene)		
• (			31B	fluoranthene *	1.0	
Pesticide	es - EPA Method 608	MDL. ua/i (ppb)	32B	fluorene *	1.0	
10300100	aldrin	0.059	33B	hexachlorobenzene	10	
11	aloha_BHC	0.000	34B	hexachlorobutadiene	10	
20	hote RHC	0.000	358	bevachlorocyclonentadiene	20	
5r 4D		0.040	260	hexachloroethane	10	
47		0.040	300	indono(1.2.3.od)nyreno *	20	
5P	della-BHC	0.034	0/0	indeno(1,2,3-cu)pyrene	10	
62	chlordane	0.211	200		1.0	
7P	4,4-001	0.251	398	naphinalene	1.0	
8P	4,4'-DDE	0.049	40B	nitropenzene	1.0	
9P	4,4'-DDD	0.139	418	N-nitrosodimetnylamine	1.0	
10P	dieldrin	0.082	42B	N-nitrosodi-n-propylamine	1.0	
11P	alpha-endosulfan	0.031	43B	N-nitrosodiphenylamine	1.0	
12P	beta-endosulfan	0.036	44B	phenanthrene *	1.0	
13P	endosulfan sulfate	0.109	45B	pyrene *	1.0	
14P	endrin	0.050	46B	1,2,4-trichlorobenzene	1.0	
15P	endrin aldehyde	0.062				
16P	heptachlor	0.029				
17P	heptachlor epoxide	0.040				

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## OTHER TOXIC POLLUTANTS

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

\* Polynuclear Aromatic Hydrocarbons

\*\* No Rhode Island Department of Environmental Management (RIDEM) MDL

## 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).

## G. 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

Monitoring results obtained during the previous month(s) shall be summarized and reported on Discharge Monitoring Report (DMR) Forms, postmarked no later than the 15th day of the month following the completed reporting period. Signed copies of these, and all other reports required herein, shall be submitted to:

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

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DEFINITIONS

Revised 11/7/12

#### 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) <u>Proper Operation and Maintenance</u>

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.

## (I) Reporting Requirements

- (1) <u>Planned changes</u>. The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility.
- (2) <u>Anticipated noncompliance</u>. 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) <u>Transfers.</u> 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) <u>Monitoring reports.</u> Monitoring results shall be reported at the intervals specified elsewhere in this permit.
- (5) <u>Twenty-four hour reporting</u>. 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) <u>Other noncompliance</u>. 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 (1)(5) of the section.
- (7) <u>Other information</u>. 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) <u>Bypass not exceeding limitations.</u> 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) <u>Notice.</u>
  - (i) <u>Anticipated bypass.</u> 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) <u>Unanticipated bypass</u>. The permittee shall submit notice of an unanticipated bypass as required in Rule 14.18 of the RIPDES Regulations.
- (3) <u>Prohibition of bypass.</u>
  - (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) <u>Effect of an upset</u>. 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) <u>Conditions necessary for a demonstration of upset</u>. 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) <u>Burden of proof.</u> 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) <u>Removed Substances</u>

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 <u>et seq.</u>, 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) <u>State Laws</u>

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) <u>Severability</u>

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, <u>DEM may make the information available to the public without further notice</u>.
- (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 <sup>3</sup> /day	cubic meters per day
mg/l	milligrams per liter
ug/I	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 <sub>3</sub> -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 <sub>3</sub> -N	nitrate nitrogen as nitrogen
NO <sub>2</sub> -N	nitrite nitrogen as nitrogen
NO <sub>3</sub> -NO <sub>2</sub>	combined nitrate and nitrite nitrogen as nitrogen
Cl <sub>2</sub>	total residual chlorine

## RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF WATER RESOURCES 235 PROMENADE STREET PROVIDENCE, RHODE ISLAND 02908-5767

## FACT SHEET

RHODE ISLAND POLLUTANT DISCHARGE ELIMINATION SYSTEM (RIPDES) PERMIT TO DISCHARGE TO WATERS OF THE STATE

RIPDES PERMIT NO. RI0100048

NAME AND ADDRESS OF APPLICANT:

City of East Providence 145 Taunton Avenue East Providence, Rhode Island 02914

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

#### East Providence Water Pollution Control Facility

1 Crest Avenue East Providence, Rhode Island 02915

RECEIVING WATER: Providence River

CLASSIFICATION: SB1{a}

## 1. Proposed Action, Type of Facility, and Discharge Location

The above-named applicant has applied to the Rhode Island Department of Environmental Management (DEM) for reissuance of a RIPDES Permit to discharge into the designated receiving water. The facility is engaged in the treatment of domestic and industrial sewage. The discharge is from the East Providence Water Pollution Control Facility. DEM intends to enter into a consent agreement to give the City time to renegotiate their operational agreement as it relates to meeting Total Nitrogen limits.

## II. Description of Discharge

A quantitative description of the discharge in terms of significant effluent parameters based on DMR data from April 2007 through March 2012 is shown on Attachment A-1. A facility diagram is shown in Attachment A-2.

#### III. Permit Basis and Explanation of Effluent Limitation Derivation

The City of East Providence owns and operates the Wastewater Treatment Facility located at 1 Crest Avenue in East Providence, Rhode Island. The discharge to Providence River consists of treated sanitary sewage contributed by the municipalities of East Providence and Barrington. The facility receives industrial wastewater flow from 6 of Significant Industrial Users (SIUs) which contribute an average daily wastewater flow of 0.5 MGD to the facility. Treatment consists of Coarse Screening, Comminution, Primary Settling, Aeration, Secondary Settling, Chlorination, and Dechlorination.

The requirements set forth in this permit are from the State's Water Quality Regulations and the State's Regulations for the Rhode Island Pollutant Discharge Elimination System, both filed pursuant to RIGL Chapter 46-12, as amended. RIDEM's primary authority over the permit comes from EPA's delegation of the program in September 1984 under the Federal Clean Water Act (CWA).

Development of RIPDES permit limitations is a multi-step process consisting of: determining if Federal effluent guidelines apply; calculation of allowable water quality-based discharge levels based on background data and available dilution; assigning appropriate Best Professional Judgment-based limits; comparing existing and proposed limits; comparing discharge data to proposed limits; and developing interim limits as appropriate. A brief description of these steps is presented below. For a more detailed presentation, the "East Providence Wastewater Treatment Facility Permit Development Document" is available upon request.

The "Percent Removal" biochemical oxygen demand (BOD<sub>5</sub>) and total suspended solids (TSS) limits and pH limitations are based upon the secondary treatment requirements in Section 301(b)(1)(B) of the Clean Water Act (CWA), as defined in 40 CFR 133. The November-April BOD<sub>5</sub> and TSS limits are based on the quantity (i.e. lb/day) limits from the previous permit such that the mass load is held constant. This results in concentration-based limits that have been decreased proportional to the increase in design flow. The previous permit's "Average Monthly" and "Average Weekly" limits were based on the secondary treatment requirements and the "Maximum Daily" limits were based on Rhode Island requirements for Publicly Owned Treatment Works (POTWs) under Rule 17.04(b) of the RIPDES Regulations and as provided in 40 CFR 123.25. The May-October "Average Monthly", "Average Weekly", and "Daily Maximum" carbonaceous biochemical oxygen demand (CBOD<sub>5</sub>) and total suspended solids (TSS) limits are set at levels more stringent than those called out in 40 CFR 133.102 (a)-(c) due to increased pollutant removals that will be achieved from the operation of nutrient removal equipment.

RIDEM and EPA agree that the Total Suspended Solids are an appropriate measure of the solids content being discharged to the receiving waters. Therefore, settleable solids are a "process-control parameter" that can aid in the assessment of the operation of the plant but need not be an effluent limit.

Oil and Grease monitoring requirements have been maintained in this permit in order to serve as a process control parameter. Monitoring data will serve as a monitor of potential excessive levels of Oil and Grease in the collection system that may cause backups and blockages.

The Rhode Island Water Quality Regulations include Enterococci criteria for primary contact/swimming of a geometric mean of 35 colonies/100 ml and a single sample maximum of 104 colonies/100 ml. The "single sample maximum" value is only used to evaluate beach swimming advisories, which does not apply to the receiving water in the area of the outfall. EPA's November 12, 2008 memorandum regarding "Initial Zones of Dilution for Bacteria in Rivers and Streams Designated for Primary Contact Recreation" clarifies that it is not appropriate to use dilution for bacteria criteria in receiving waters that are designated for primary contact recreation. Therefore, because the receiving water is designated for primary contact recreation, the DEM has assigned a monthly average Enterococci limit of 35 colonies/100 ml. The daily maximum enterococci limit has been set at the 90% upper confidence level value for "lightly used full body contact recreation" of 276 colonies/100 ml. The DEM has also assigned Fecal Coliform monitoring to ensure that the discharge from the WWTF will not have an impact on any areas designated for shellfish harvesting outside of the immediate vicinity of the outfall.

It has been determined that mixing zones and corresponding dilution factors are acceptable for the effluent from the East Providence Wastewater Treatment Facility. As indicated in the previous permit's Fact Sheet, a chronic dilution factor of 40 and an acute dilution factor of 20 were established. The acute mixing zone is defined as the portion of the Providence River located within a radius of 120 meters centered around a point 50 meters due south of the outfall. The chronic mixing zone is defined as that portion of the Providence River south of a line, from can buoy "39" to the intersection with the shoreline due east, and northeast of a line, from can buoy "39" to the intersection of a point on the shoreline located 700 meters due south of the line

previously described. The wastewater treatment facilities effluent is discharged through a 30" pipe which is approximately 1000 feet offshore. Additional information regarding the East Providence mixing zones can be found in the September 1991 Fact Sheet, which is on file at the DEM.

Based on the above dilution factors and the saltwater aquatic life and non-class A human health criteria, from the Rhode Island Water Quality Regulations, allowable discharge concentrations were established using 80% allocation when no background data was available and 90% allocation when background data was available. 100% allocation of total residual chlorine (TRC) was used due to the fact that Chlorine is not expected to be found in ambient water and it is a non-conservative pollutant. Background data, for Cadium, Chromium, Copper, Lead, Nickel, and Silver, was obtained from the four SINBADD cruises in Current Report #: NBP-89-22.

Based upon a Facilities Plan Update (FPU) dated July 2010, the City recalculated its design flow based upon revised population projections and extending sewers to serve the Waterfront Development Area. In DEM's FPU approval letter from December 2010, DEM stated that it would allow a design flow increase from 10.4 MGD to 14.2 MGD. In order to comply with the Antibacksliding and Antidegradation requirements, the DEM decreased the concentration-based limits proportional to the flow increase, such that the mass load is held constant. Therefore, potential effluent concentration limits were decreased by a factor of 10.4/14.2=0.732 to maintain constant potential effluent load limits, and reasonable potential for each parameter was assessed at the new, lower effluent concentration limits.

In accordance with 40 CFR Part 122.4(d)(1)(iii), water quality based effluent limitations are only required for those pollutants in the discharge that have the reasonable potential to cause or contribute to the exceedance of the instream criteria. In order to evaluate the need for permit limitations, allowable monthly average (chronic) discharge concentrations were compared to the monthly average Discharge Monitoring Report (DMR) data and the mean of the concentration reported from the State User fee Program (UFP) data. Additionally, the allowable daily maximum (acute) discharge concentrations were compared to the daily maximum DMR data and the maximum of the concentrations reported from the UFP data.

Based on the analysis presented above, water quality based limitations for Outfall 001A are appropriate for total residual chlorine and cyanide. In addition, monitoring for Total Copper, Total Cadmium, Total Chromium, Total Lead, Total Zinc, Total Nickel, and Total Aluminum has been added to the permit as part of the quarterly toxicity testing requirements.

Based upon the previously mentioned FPU, DEM revised the Total Nitrogen limit to 5.9 mg/L to compensate for the design flow limit increase to 14.2 MGD, thereby keeping permitted Nitrogen load constant in pounds per day. Therefore, the new permit increases the monthly average permit flow limit from 10.4 MGD to 14.2 MGD and reduces the seasonal Total Nitrogen limit from 8.0 mg/L to 5.9 mg/L, and maintains the seasonal Total Nitrogen load limit of 694 lbs/day. This permit also maintains the provision that the permittee 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. Assigning seasonal total nitrogen limits and requiring that the WWTF be operated year round in a manner to reduce the discharge of nitrogen to the maximum extent possible will result in substantial progress towards the mitigation of hypoxic/anoxic events and meeting water guality standards. In addition, average monthly sampling for offseason Total Nitrogen and average monthly and maximum daily sampling for other Nitrogen parameters such as Nitrate, Nitrite, and TKN have been maintained to facilitate the continued characterization of all forms of Nitrogen from the facility's discharge. Additional information regarding the basis for Nitrogen limitations and monitoring for Nitrogen may be found in the "East Providence Wastewater Treatment Facility Permit Development Document".

The biomonitoring requirements are set forth in 40 CFR 131.11 and in the State's Water Quality Regulations. RIDEM's toxicity permitting policy is based on past toxicity data and the level of available dilution. Dilutions greater than 20:1 require that acute toxicity be evaluated. The permit requires that two acute toxicity tests be conducted on the final effluent once per quarter. The permit contains acute LC50 > 100% effluent limits which shall assure control of toxicity in the effluent. If toxicity is consistently demonstrated, then toxicity identification and reduction will be required.

The effluent monitoring requirements have been specified in accordance with RIPDES regulations as well as 40 CFR 122.41 (j), 122.44 (i), and 122.48 to yield data representative of the discharge.

The permit contains requirements for the permittee to comply with the State's Sludge Regulations for sludge disposal in accordance with the requirements of Section 405(d) of the Clean Water Act (CWA). Permits must contain sludge conditions requiring compliance with limits, state laws, and applicable regulations as per Section 405(d) of the CWA and 40 CFR 503. The RIDEM Sludge Order of Approval sets forth the conditions to ensure this compliance.

The permit contains a reporting requirement for a local program to regulate industrial discharges to the sewer system (referred to as pretreatment program). This program is being required under authority of Section 402(b)(8) of the CWA and 40 CFR 122.44 (j) and 403.8 because the city receives significant discharges of industrial wastewater.

The remaining general and specific conditions of the permit are based on the RIPDES regulations as well as 40 CFR Parts 122 through 125 and consist primarily of management requirements common to all permits.

## IV. Comment Period, Hearing Requests, and Procedures for Final Decisions

All persons, including applicants, who believe any condition of the draft permit is inappropriate must raise all issues and submit all available arguments and all supporting material for their arguments in full by the close of the public comment period, to the Rhode Island Department of Environmental Management, Office of Water Resources, 235 Promenade Street, Providence, Rhode Island, 02908-5767. A public hearing will be held after a thirty (30) day public notice. In reaching a final decision on the draft permit the Director will respond to all significant comments and make these responses available to the public at DEM's Providence Office.

Following the close of the comment period, and after the public hearing, the Director will issue a final permit decision and forward a copy of the final decision to the applicant and each person who has submitted written comments, provided oral testimony, or requested notice. Within thirty (30) days following the notice of the final permit decision any interested person may submit a request for a formal hearing to reconsider or contest the final decision. Requests for formal hearings must satisfy the requirements of Rule 49 of the Regulations for the Rhode Island Pollutant Discharge Elimination System.

#### V. DEM Contact

Additional information concerning the permit may be obtained between the hours of 8:30 a.m. and 4:00 p.m., Monday through Friday, excluding holidays from:

Samuel Kaplan, P.E. Department of Environmental Management Office of Water Resources 235 Promenade Street Providence, Rhode Island 02908 Telephone: (401) 222-4700, extension 7046 samuel.kaplan@dem.ri.gov

Bille

Joseph B. Haberek, P.E. Principal Sanitary Engineer RIPDES Program Office of Water Resources Department of Environmental Management

2/1/16

## **ATTACHMENT A-1**

# DESCRIPTION OF DISCHARGE:Secondary treated domestic and industrial wastewater.DISCHARGE:001A - Secondary Treatment Discharge

AVERAGE EFFLUENT CHARACTERISTICS AT POINT OF DISCHARGE:

PARAMETER	MONTHLY AVERAGE <sup>1</sup>	WEEKLY AVERAGE <sup>2</sup>	DAILY MAXIMUM <sup>3</sup>	
FLOW	7.0266 MGD		9.61 MGD	
BODs	14.4 mg/l	21.8mg/l	40.6 mg/l	
BOD₅	888.0 lb/day		3517.5 lb/day	
BOD <sub>5</sub> % removal	92.9%			
TSS	15.8 mg/l	24.30 mg/l	45.10 mg/l	
TSS	913.1 lb/day		3972.9 lb/day	
TSS% removal	92.6%			
Settleable Solids		0.19 ml/l	0.20 ml/l	
Total Nitrogen	10.84 mg/L		14.31 mg/L	
Total Nitrogen	599.9 lb/day			
Ammonia	4.08 mg/l		5.57 mg/l	
Nitrite	0.24 mg/l		0.40 mg/l	
Nitrate	4.74 mg/l		6.01 mg/l	
TKN	5.94 mg/l		8.67 mg/l	
Phosphorus			1.50 mg/l	
Oil and Grease			4.62 mg/l	
Fecal Coliform	24.47 MPN/100 ml	42.1 MPN/100 ml	290.2 MPN/100 ml	
рН	6.63 S.U. (Minimum)		7.16 S.U. (Maximum)	
Chlorine Residual	74.8 mg/l		175.2 mg/l	
Copper	9 ug/l		9 ug/l	
Cyanide	8.8 ug/l		9.2 ug/l	
Heptachlor	<0.05 ug/l <sup>4</sup>		<0.05 ug/l⁴	

<sup>1</sup>Data represents the mean of the monthly average data from April 2007 - March 2012 unless otherwise indicated <sup>2</sup>Data represents the mean of the average weekly data from April 2007 - March 2012 unless otherwise indicated <sup>3</sup>Data represents the mean of the daily maximum data from April 2007 - March 2012 unless otherwise indicated <sup>4</sup>Data represents the mean of the monthly average data from October 2007 - December 2010

## ATTACHMENT A-1, Cont.

## Biotoxicity Data LC50 Values (in percent effluent)

Pre-Ciz Mysidopsis bahia	<b>2010</b> 1 <sup>nd</sup> qtr. >100	2 <sup>rd</sup> qtr. >100	<b>3<sup>th</sup> qtr.</b> >100	4 <sup>st</sup> qtr. >100	2011 1 <sup>nd</sup> qtr. >100	2 <sup>rd</sup> qtr. >100	<b>3<sup>th</sup> qtr.</b> >100	4 <sup>st</sup> qtr. >100	20121 <sup>st</sup> qtr >100
Pre-Cl₂ Menidia spp.	>100	>100	>100	>100	>100	>100	>100	>100	>100

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ATTACHMENT A-2: FACILITY DIAGRAM



Attachment A-2: facility diagram



# **RHODE ISLAND**

Department Of Environmental Management 235 Promenade Street, Providence, RI 02908-5767

TDD 401-222-4462

February 2, 2016

**CERTIFIED MAIL** 

Mr. Richard Kirby, City Manager City of East Providence East Providence City Hall 145 Taunton Avenue East Providence, RI 02914-4505

#### RE: East Providence Water Pollution Control Facility -RIPDES No. RI0100048

Dear Mr. Kirby:

Enclosed is the final Rhode Island Pollutant Discharge Elimination System (RIPDES) Permit issued for the above-mentioned facility. State regulations, promulgated under Chapter 46-12 of the Rhode Island General Laws of 1956, as amended, require this permit to become effective on the date specified in the permit. Also enclosed is a copy of the Rhode Island Department of Environmental Management's (DEM's) response to the comments received on the draft permit and information relative to hearing requests and stays of RIPDES Permits.

Please note that paragraph 11(a) of consent agreement RIA-367, which was entered into between the DEM and the City of East Providence (City) on April 2, 2007, states that: "If the Facilities Plan Update includes a proposal to establish a design flow that exceeds the monthly average flow limit established in the [2007] permit, then the Facilities Plan Update must indicate that pollutant loadings will not be increased and the City agrees not to appeal a permit modification that establishes concentration limits that ensure compliance with this requirement". Therefore, in accordance with this condition, the City has previously agreed not to appeal the attached permit's lower concentration limits that were established to keep the pollutant loadings constant.

Should the City have any questions concerning this permit, feel free to contact Joseph Haberek, PE or me at 401-222-4700, extensions 7715 and 7225, respectively.

Sincerely.

Angelo S. Liberti, PE Chief of Surface Water Protection

Enclosures

Stephen Coutu, P.E., City of East Providence ec: Thomas Azevedo, SUEZ - NA East Providence WPCF Eric Beck, DEM/OWR Joseph Haberek, DEM/OWR Annie McFarland, RIDEM-OWR



## **RESPONSE TO COMMENTS**

On July 15, 2013 the Rhode Island Department of Environmental Management (DEM) public noticed its proposed reissuance of Rhode Island Pollutant Discharge Elimination System (RIPDES) Permit number RI0100048, which was issued to the City of East Providence (City) for its wastewater treatment facility located at 1 Crest Avenue, East Providence. In response to this public notice, the City submitted comments, dated August 16, 2013, on the proposed draft permit. The following responses address the comments that were raised by the City in its August 16, 2013 letter:

- Comments: The City's 2013 comment letter questioned the draft permit's flow limits, indicating that the City felt that the proposed permit changed the flow limits from "Average Monthly to Maximum Month"; objected to the imposition of a lower Total Nitrogen (TN) concentration limit at flows less than 14.2 MGD; objected to the reduced CBOD<sub>5</sub> and TSS limits for the May through October period "without being provided a sound, rational water quality based rationale"; and objected to the use of a maximum month design flow of 14.2 MGD that "was the result of a long-term study and projections (20-25 years), yet the permit only has a term of 5 years".
- Responses: Rule 17 of the Regulations for the Rhode Island Pollutant Discharge Elimination System (the RIPDES Regulations) requires that limits be based on the facility's design flow. The permitted flow is consistent with the maximum monthly flow from the City's Facilities Plan Update, which was approved by DEM in a letter dated December 14, 2010. The flow limits included in the City's RIPDES permits have always been a maximum flow limit with a monthly averaging period (i.e., a maximum monthly flow). Therefore, the type of flow limit has not changed and the numeric maximum monthly limit of 14.2 MGD is consistent with the design flow from the City's approved Facilities Plan Update and no change to the draft permit is required. However, the DEM has updated the Fact Sheet's description of the reason why the design flow increased, to clarify that it was to accommodate flows from the Waterfront Development Area.

As indicted in the DEM's July 15, 2013 public notice cover letter, the reduction in the TN concentration limit was necessary in response to approval of the City's request to increase its design flow. This flow increase was previously anticipated and addressed by paragraph 11(a) of the City's 2007 consent agreement RIA-367, that was entered into between the DEM and the City of East Providence (City) on April 2, 2007, which states: "If the Facilities Plan Update includes a proposal to establish a design flow that exceeds the monthly average flow limit established in the permit, then the Facilities Plan Update must indicate that pollutant loadings will not be increased and the City agrees not to appeal a permit modification that establishes concentration limits that ensure compliance with this requirement". As indicated in the Summary of 5/14/10 Meeting Between DEM OWR, City of East Providence, AECOM and United Water, which was included as attachment 5 of the City's August 16, 2013 draft permit comment letter, "The City agreed to submit a final design for the full BNR system described in the approved facility plan in August to meet a TN concentration limit of 5.9 mg/l...the City will submit an initial request to phase construction of the BNR upgrade... Each phase will be required to meet 5.9 mg/l and the request will include a trigger upon which installation of remaining equipment will be initiated and completed, along with justification for the request." It was ultimately agreed that phased construction was not appropriate and the design that was approved under the DEM's December 17, 2010 Order of Approval # 1595, is capable of meeting a TN concentration of 5.9 mg/l at all flows up to 14.2 MGD. Based on this information, it is clear that the City's treatment facility is capable of meeting the 5.9 mg/l TN limit and no change to the draft permit is required.

The May-October CBOD<sub>5</sub> and TSS limits are not water quality-based limits. They are technology-based Best Professional Judgement limits. As indicated in the Permit Development Document, these limits were "set at levels more stringent than those called out in 40 CFR 133.102 (a)-(c) due to increased pollutant removals that will be achieved from the operation of nutrient removal equipment". A review of the Biowin model predictions that were submitted with the City's Order of Approval application indicates that the CBOD<sub>5</sub> effluent concentrations are between 4.3 mg/l and 5.7 mg/l for the Average Daily, Maximum Monthly, and Maximum Daily model runs and the TSS effluent concentrations are between 11.7 and 14.5 mg/l for the same model runs. These model predictions are all below the applicable permit limits included in the City's draft RIPDES permit. In addition, historic effluent data since the City's upgraded treatment facility was brought on-line has also demonstrated the ability to comply with the proposed May-October CBOD<sub>5</sub> and TSS limits. Based on this information, it is clear that the City's treatment facility was designed to meet these limits and no change to the draft permit is required.

## HEARING REQUESTS

Please note that under paragraph 11(a) of consent agreement RIA-367 the City previously agreed not to appeal lower concentration limits that were established to keep pollutant loadings constant. If the City wishes to contest any of the other provisions of this permit, it may request a formal hearing within thirty (30) days of receipt of this letter. The request should be submitted to the Administrative Adjudication Division at the following address:

Bonnie Stewart, Clerk Department of Environmental Management Office of Administrative Adjudication One Capitol Hill Second Floor Providence, RI 02903

Any request for a formal hearing must conform to the requirements of Rule 49 of the RIPDES Regulations.

## STAYS OF RIPDES PERMITS

Should the DEM receive and grant a request for a formal hearing, the contested conditions of the permit will not automatically be stayed. However, the permittee, in accordance with Rule 50 of the RIPDES Regulations, may request a temporary stay for the duration of adjudicatory hearing proceedings. Requests for stays of permit conditions should be submitted to the Office of Water Resources at the following address:

Angelo S. Liberti, P.E. Chief of Surface Water Protection Office of Water Resources Rhode Island Department of Environmental Management 235 Promenade Street Providence, Rhode Island 02908

All uncontested conditions of the permit will be effective and enforceable in accordance with the provisions of Rule 49 of the RIPDES Regulations.