

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

PUBLIC NOTICE OF PROPOSED PERMIT ACTIONS UNDER THE RHODE ISLAND POLLUTANT DISCHARGE ELIMINATION SYSTEM (RIPDES) PROGRAM WHICH REGULATES DISCHARGES INTO THE WATERS OF THE STATE UNDER CHAPTER 46-12 OF THE RHODE ISLAND GENERAL LAWS OF 1956, AS AMENDED.

DATE OF NOTICE: Friday, February 4, 2011

PUBLIC NOTICE NUMBER: PN-11-02

**DRAFT RIPDES PERMITS:**

RIPDES PERMIT NUMBER: **RI0100005**

NAME AND MAILING ADDRESS OF APPLICANT:

**Town Bristol**  
Bristol Town Hall  
10 Court Street  
Bristol, Rhode Island 02809

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

**Bristol Wastewater Treatment Facility**  
Plant Avenue  
Bristol, Rhode Island 02809

RECEIVING WATER: Bristol Harbor

RECEIVING WATER CLASSIFICATION: SB1

The facility, which is the source of the discharge, is located in Bristol and is engaged in the treatment of wastewater from the sanitary sewer system in the town of Bristol. The facility has reapplied to the Rhode Island Department of Environmental Management for reissuance of an individual RIPDES permit to discharge water from the treatment plant, which includes the use of the following equipment and processes: aerated grit chamber, coarse screening, comminution, primary settling, rotating biological contactors, secondary settling, chlorination, and dechlorination. The discharge of treated effluent is made to Bristol Harbor through outfall 001A. This permit includes limits to ensure that the discharge will not cause a water quality violation.

RIPDES PERMIT NUMBER: **RI0100366**

NAME AND MAILING ADDRESS OF APPLICANT:

**Town of Jamestown**  
P.O. Box 377  
Jamestown, Rhode Island 02835

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

**Jamestown Wastewater Treatment Facility**  
Taylor Point  
Jamestown, Rhode Island 02835

RECEIVING WATER: Narragansett Bay

RECEIVING WATER CLASSIFICATION: SB1

The facility, which is the source of the discharge, is located in Jamestown and is engaged in the treatment of wastewater from the sanitary sewer system in the town of Jamestown. The facility has reapplied to the Rhode Island Department of Environmental Management for reissuance of an individual RIPDES permit to discharge water from the treatment plant, which includes the use of the following equipment and processes: coarse screening, grit removal (using a grit chamber), fine screening, extended aeration, clarification, and chlorination. The discharge of treated effluent is made to Narragansett Bay through outfall 001A. This permit includes limits to ensure that the discharge will not cause a water quality violation.

**DRAFT RIPDES PERMIT MODIFICATION:**

RIPDES PERMIT NUMBER: **RI0001333**

NAME AND MAILING ADDRESS OF APPLICANT:

ExxonMobil Oil Corporation  
3225 Gallows Road  
Fairfax, Virginia 22037

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

ExxonMobil Oil Corporation– East Providence Terminal  
1001 Wampanoag Trail  
East Providence, Rhode Island 02915

RECEIVING WATER: Providence River

RECEIVING WATER CLASSIFICATION: SB1 {a}

The facility, which is the source of the wastewater discharge, stores refined petroleum products (three (3) grades of gasoline, No. 2 fuel oil, diesel and ethanol). The permit authorizes the discharge from six (6) outfalls: outfall 001A (storm water, groundwater infiltration/inflow), outfall 100A (treated effluent from the PCS groundwater treatment system), outfall 200A (treated effluent from Tank 58 treatment

system), outfall 300A (treated effluent from the Vanity Fair Cliffs Area Recovery treatment system), outfall 400A (treated effluent from the Main Oil Water Separator), and outfall 500A (treated effluent from the Vanity Cliffs Area Oil Water Separator). The DEM is proposing to modify the pH limitations for outfall 001A contained in RIPDES Permit No. RI0001333 issued on September 30, 2008. The effluent pH limitations were 6.5-8.5 standard units (SU) while the proposed limitations would expand the permitted range to 6.0-9.0 SU. A study has been conducted that demonstrates that these new permit limits will not cause water quality violations. The DEM is also modifying the permit to indicate that, the DEM will eliminate the monitoring for Ethanol and/or MTBE contained in Part I.A.2 of the Permit if, after twelve (12) consecutive months of monitoring, all samples are reported as non-detect at the MDLs specified in the Permit. The DEM is also proposing to modify the hydrostatic testing requirements contained in part I.A.20 of RIPDES Permit.

**FURTHER INFORMATION ABOUT THE DRAFT PERMITS:**

A fact sheet/statement of basis (describing the type of facility and significant factual, legal and policy questions considered in these permit actions) may be obtained at no cost by writing or calling DEM as noted below:

Samuel Kaplan, P.E.  
Rhode Island Department of Environmental Management  
235 Promenade Street  
Providence, Rhode Island 02908-5767  
(401) 222-4700, extension 7046  
samuel.kaplan@dem.ri.gov

The administrative record containing all documents relating to these permit actions is on file and may be inspected, by appointment, at the DEM's Providence office mentioned above between 8:30 a.m. and 4:00 p.m., Monday through Friday, except holidays.

**PUBLIC COMMENT AND REQUEST FOR PUBLIC HEARING:**

Pursuant to Chapter 42-17.4 of the Rhode Island General Laws a public hearing has been scheduled to consider these permits. Notice should be taken that a public hearing will be held at the following time and place:

4:00 PM Tuesday, March 8, 2011  
Room 280  
235 Promenade Street  
Providence, Rhode Island 02908

In accordance with Rule 43 of the RIPDES Regulations, the following is a summary of the procedures that shall be followed at the Public Hearing:

- a. The Presiding Officer shall have the authority to open and conclude the Hearing and to maintain order; and
- b. Any persons appearing at such a hearing may submit oral or written statements and data concerning the draft permit.

In addition, for the sake of accuracy, it is requested that statements be submitted in writing at the time of the hearing or be mailed to the DEM's Office of Water Resources RIPDES Program, at the above address,

before the date of the hearing. Oral testimony will also be heard at the Public Hearing, but will be limited to five (5) minutes in duration.

235 Promenade Street is accessible to the handicapped. Individuals requesting interpreter services for the hearing impaired must notify the DEM at 401-222-4462 (TDD) 48 hours in advance of the hearing date.

**PUBLIC COMMENT PERIOD: (FEBRUARY 4, 2011 TO MARCH 9, 2011)**

Interested parties may submit comments on the permit actions and the administrative record to the address above no later than 4:00 PM Wednesday, March 9, 2011.

Any person, including the permittee/applicant, who believes these permit actions are inappropriate, must raise all reasonably ascertainable issues and submit all reasonably available arguments and factual grounds supporting their position, including all supporting material, by the close of the public comment period under Rule 41. The public comment period is from February 4, 2011 to March 9, 2011. Commenters may request a longer comment period if necessary to provide a reasonable opportunity to comply with these requirements. Comments should be directed to DEM as noted above.

If, during the public comment period, significant new questions are raised concerning the permit, DEM may require a new draft permit or statement of basis or may reopen the public comment period. A public notice will be issued for any of these actions.

**FINAL DECISION AND APPEALS:**

Following the close of the comment period the Director will issue a final decision and forward a copy of the final decision to the permittee and each person who has submitted written comments or requested notice. Within 30 days following the notice of the final decision, any interested person may submit a request for a formal hearing in accordance with the requirements of Rule 49.

1/25/11

Date

Angelo S. Liberty

Angelo S. Liberty, P.E.  
Chief of Surface Water Protection  
Office of Water Resources  
Department of Environmental Management



## 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:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>			<u>Concentration - specify units</u>		<u>Monitoring Requirement</u>	
	<u>Quantity - lbs./day</u>	<u>Average Monthly</u>	<u>Maximum Daily</u>	<u>Average Weekly</u>	<u>Maximum Daily</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow	3.79 MGD	---	MGD	*(Average)	*(Maximum)	Continuous	Recorder
BOD <sub>5</sub>	948 lbs/Day	30 mg/l	1,580 lbs/Day	45 mg/l	50 mg/l	3/Week	24-Hr. Comp.
BOD <sub>5</sub> - % Removal		85%				1/Month	Calculated
TSS	948 lbs/Day	30 mg/l	1,580 lbs/Day	45 mg/l	50 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> influent and effluent shall be performed Tuesday, Thursday and Sunday 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 after dechlorination).

## 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:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Concentration - specify units</u>		<u>Monitoring Requirement</u>	
	<u>Quantity - lbs./day</u>	<u>Average Monthly</u>	<u>Average Monthly</u>	<u>Average Weekly</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Fecal Coliform		200 MPN <sup>1</sup> 100 ml	400 MPN <sup>1</sup> 100 ml	400 MPN <sup>1</sup> 100 ml	3/Week	Grab
Total Residual Chlorine (TRC)		364 ug/l <sup>2</sup>	364 ug/l <sup>2</sup>	364 ug/l <sup>2</sup>	Continuous	Recorder <sup>2</sup>
pH		(6.5 SU)	(6.5 SU)	(8.5 SU)	2/Day	Grab

<sup>1</sup>The Fecal Coliform samples are to be taken Tuesday, Thursday, and Sunday at the same time as one of the TRC 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 per day, Monday - Friday (except holidays), equally spaced over one (1) eight (8) hour shift with a minimum of three hours between grabs. On Saturdays, Sundays, and holidays by taking at least two (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. The following methods may be used to analyze the grab samples: (1) DPD Spectrophotometric, EPA No. 330.5 or Standard Methods (18<sup>th</sup> Edition) No. 4500-Cl; (2) DPD Titrimetric, EPA No. 330.4 or Standard Methods No. 4500-Cl F; (3) Amperometric Titration, EPA No. 330.1 or Standard Methods No. 4500-Cl D or ASTM No. D1253-86(92);

<sup>3</sup>Values in parentheses ( ) are to be reported as Minimum/Average/Maximum for the reporting period rather than Average Monthly/Average Weekly/Maximum Daily.

Sampling for 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 after dechlorination)

## A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

3. During the period beginning on the effective date and lasting through permit expiration, the permittee is authorized to discharge from outfall serial number 001A (final discharge after dechlorination).

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

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Concentration - specify units</u>		<u>Monitoring Requirement</u>	
	<u>Quantity - lbs. per day</u>	<u>Average Monthly</u>	<u>Average Monthly</u>	<u>Average Weekly</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Oil and Grease						
TKN (as N) [Nov. 1 – April 30]		---	mg/l	---	1/Month	3 Grabs <sup>1</sup>
TKN (as N) [May 1 – Oct. 31]		---	mg/l	---	1/Month	24-Hr. Comp.
Nitrate, Total (as N) [Nov. 1 – April 30]		---	mg/l	---	2/Month	24-Hr. Comp.
Nitrate, Total (as N) [May 1 – Oct. 31]		---	mg/l	---	1/Month	24-Hr. Comp.
Nitrite, Total (as N) [Nov. 1 – April 30]		---	mg/l	---	2/Month	24-Hr. Comp.
Nitrite, Total (as N) [May 1 – Oct. 31]		---	mg/l	---	1/Month	24-Hr. Comp.
Nitrogen, Total [Nov. 1 – April 30]	---	lb/day	---	---	1/Month	Calculated
Nitrogen, Total [May 1 – Oct. 31]	---	lb/day	---	---	2/Month	Calculated

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

--- 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 after de-chlorination).

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 chlorination).

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

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Concentration - specify units</u>		<u>Monitoring Requirement</u>	
	Quantity - lbs. per day	Average	Average	Maximum	Measurement Frequency	Sample Type
Total Copper	Average Monthly	73.0 ug/L	Weekly	Daily	1/Week	24-Hr. Comp.

Samples taken in compliance with the monitoring requirements specified above shall be taken Monday through Friday at the following locations: Outfall 001A (final discharge after de-chlorination).

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 Characteristic	Discharge Limitations		Concentration - specify units		Monitoring Requirement	
	Quantity - lbs. per day	Average Monthly	Average Monthly	Maximum Daily	Measurement Frequency	Sample Type
Mysidopsis bahia – LC <sub>50</sub> <sup>1</sup>					1/Quarter	24-Hr. Comp.
				≥100% <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 (final discharge after dechlorination) in accordance with Part I.B. of the permit.

6.
  - a. The pH of the effluent shall not be less than 6.5 nor greater than 8.5 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 projections 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, Tables II and III. The results of these analyses shall be submitted to the Department of Environmental Management by January 15<sup>th</sup> of each year for the previous calendar year. The State User Fee Program samples may be utilized provided that the sampling is coordinated in advance. All sampling and analysis shall be done in accordance with EPA Regulations, including 40 CFR, Part 136; grab and composite samples shall be taken as appropriate.
  - g. This permit serves as the State's Water Quality Certificate for the discharges described herein.

## B. BIOMONITORING REQUIREMENTS AND INTERPRETATION OF RESULTS

### 1. General

Beginning on the effective date of the permit, the permittee shall perform four (4) acute toxicity tests per year on dechlorinated effluent 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 9. The State may require additional screening, range finding, definitive acute or chronic bioassays testing 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-hour (48) acute definitive toxicity tests on the specie listed below, for a total of four (4) acute toxicity tests per year.

<u>Species</u>	<u>Test Type</u> (Four Times Annually)	<u>Frequency</u>
Mysids ( <u>Mysidopsis bahia</u> )	Definitive 48-Hour Acute Static (LC <sub>50</sub> )	Quarterly

3. Testing Methods

Acute definitive toxicity tests shall be conducted in accordance with protocols listed in the EPA document: Cornelius I. Weber, et. al., 1991. Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms, Fourth Edition (or the most recent edition), Office of Research and Development Cincinnati, OH (EPA-600/4-90-027), incorporating any deviations from protocol listed herein, or additional methods if approved by the Director of RIDEM.

4. Sample Collection

For each sampling event a twenty-four- (24) hour flow-proportioned composite effluent sample shall be collected at a location after dechlorination during 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. Salinity Adjustment

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

6. Dilution Water

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

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

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

8. Chemical Analysis

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

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

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

<u>Total Metals</u>	<u>Effluent</u>	<u>Saline Diluent</u>	<u>Detection Limit (ug/l)</u>
Copper	X	X	1 ug/L
Cadmium	X	X	1.0 ug/L
Chromium	X	X	5.0 ug/L
Lead	X	X	3.0 ug/L
Zinc	X	X	20.0 ug/L
Nickel	X	X	10.0 ug/L
Aluminum	X	X	20.0 ug/L

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

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

9. Toxicity Test Report Elements

A report of results will include the following:

- Description of sample collection procedures and site description.
- Names of individuals collecting and transporting samples, times, and dates of sample collection and analysis.

- General description of tests: age of test organisms, origin, dates and results of standard toxicant tests (quality assurance); light and temperature regime; dilution water description; other information on test conditions if different than procedures recommended.
- The method used to adjust the salinity of the effluent must be reported.
- All chemical and physical data generated (include detection limits).
- Raw data and bench sheets.
- Any other observations or test conditions affecting test outcome.

Toxicity test data shall include the following:

- Survival for each concentration and replication at time twenty-four (24) and forty-eight (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.

10. Special Condition

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

11. Reporting of Bioassay Testing

Bioassay Testing shall be reported as follows:

<u>Quarter Testing to be Performed</u>	<u>Report Due No Later Than</u>	<u>Results Submitted on DMR for</u>
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

The first report shall be submitted to RIDEM no later than \_\_\_\_\_.

A signed copy 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 02908-5767

## 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 users 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 submitted to the Rhode Island Department of Environmental Management (DEM) a draft evaluation of the existing approved local limits for concurrence by the DEM. The DEM will provide written notification either granting approval of the local limits evaluation or stating the deficiencies revealed therein. Should the DEM determine that a deficiency exists in the local limits evaluation submittal, the permittee shall submit to the DEM, within thirty (30) days of the receipt of said notice (unless a longer timeframe is specified therein), a revised local limits evaluation

consistent with the DEM's notice of deficiency.

- b. Once approved by the DEM, if the local limits evaluation described in Part I.C.3.a of this permit determines that an updated technically-based local limits analysis is necessary, the permittee shall submit to the DEM a technically-based local limitations analysis within six (6) months of receiving DEM approval of the initial local limits evaluation. The technically-based local limits analysis shall contain proposed numerical limitations developed by the permittee in accordance with the procedures set forth in the EPA's July, 2004 Local Limits Guidance Manual. All supporting data and calculations must be submitted with the evaluation. Upon review, the DEM will provide written notification either granting preliminary approval of the local limits analysis or stating the deficiencies revealed therein. Should the DEM determine that a deficiency exists in the local limits analysis submittal, the permittee shall submit to the DEM, within thirty (30) days of the receipt of said notice (unless a longer timeframe is specified therein), a revised evaluation consistent with the DEM's notice of deficiency.
  - c. Should the analysis from Part I.C.3.b, if required, determine the need to revise local limits, then within sixty (60) days of the receipt of preliminary approval of the proposed limits, the permittee shall submit to the DEM a request for a pretreatment program modification in accordance with 40 CFR 403.18 and Part C.5.e of this permit. Upon final approval by the DEM and adoption by the permittee, these limits shall be deemed Pretreatment Standards for the purposes of Section 307(d) of the Clean Water Act. No longer than thirty (30) days (unless a longer timeframe is specified) following the DEM's final approval of the proposed local limits, the permittee shall commence implementation of the revised local limits.
  - d. At the time of renewal of this permit and in accordance with 40 CFR 122.21(j)(4) as revised July 24, 1990, the permittee shall submit to the DEM with its permit renewal application a written technical evaluation of the need to revise local limits. The evaluation shall be based, at a minimum, on information obtained during the implementation of the permittee's approved local limits monitoring plan and procedures 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 Enforcement Response Plan (ERP) that meets the requirements of 40 CFR 403.8(f)(5). The permittee shall continue to implement the ERP at all times.
5. General
- a. The permittee shall carry out inspection, surveillance, and monitoring procedures which will determine, independent of information supplied by the industrial user, whether the industrial user is in compliance with Pretreatment Standards. At a minimum, all significant industrial users shall be inspected and monitored for all regulated pollutants 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 40 CFR 403 Streamlining provisions have been adopted, whether each SIU requires a slug control plan. If a slug control plan is required, it must include, at a minimum, those elements contained in 40

CFR 403.8(f)(2)(vi).

- b. The permittee shall reissue all necessary Industrial User (IU) control mechanisms within thirty (30) days of their expiration date. The permittee shall issue, within sixty (60) days after the determination that an IU is a Significant Industrial User (SIU), all SIU control mechanisms. All SIU control mechanisms must contain, at a minimum, those conditions stated in 40 CFR 403.8(f)(1)(iii)(B). All control mechanisms must be mailed via Certified Mail, Return Receipt Requested. A complete bound copy of the control mechanism with the appropriate receipt must be kept as part of the Industrial User's permanent file. In addition, the permittee must develop a fact sheet describing the basis for the SIU's permit and retain this fact sheet as part of the SIU's permanent file.
- c. The permittee must identify each instance of noncompliance with any pretreatment standard and/or requirement and take a formal documented action for each instance of noncompliance. Copies of all such documentation must be maintained in the Industrial User's permanent file.
- d. The permittee shall prohibit Industrial Users from the dilution of a discharge as a substitute for adequate treatment in accordance with 40 CFR 403.6(d).
- e. The permittee shall comply with the procedures of 40 CFR 403.18 for instituting any modifications of the permittee's approved Pretreatment Program. Significant changes in the operation of a POTW's Approved Pretreatment Program must be submitted and approved following the procedures outlined in 40 CFR 403.18(b) and 403.9(b). However, the endorsement of local officials responsible for supervising and/or funding the pretreatment program required by 403.9(b)(2) will not be required until DEM completes a preliminary review of the submission. The DEM will evaluate and review the permittee's initial proposal for a modification and provide written notification either granting preliminary approval of the proposed modifications or stating the deficiencies contained therein. DEM's written notification will also include a determination whether the submission constitutes a substantial or non-substantial program modification as defined by 40 CFR 403.18. Should DEM determine that a deficiency exists in the proposed modification, the permittee shall submit to DEM, within thirty (30) days of the receipt of said notice, a revised submission consistent with DEM's notice of deficiency.

Pretreatment program modifications which the permittee considers Non-substantial, shall be deemed to be approved within forty-five (45) days after submission of the request for modification, unless DEM determines that the modification is in fact a substantial modification or notifies the permittee of deficiencies. Upon receipt of notification that DEM has determined the modification is substantial, the permittee shall initiate the procedures and comply with the deadlines for substantial modifications, which are outlined below.

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

Within thirty (30) days of DEM's final approval of the proposed modification(s), the permittee shall implement the modification. 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).
  - h. The permittee shall, in accordance with 40 CFR 403.12(f), require all Industrial Users to immediately notify the permittee of all discharges by the Industrial User that could cause problems to the POTW, including slug loadings, as defined by 40 CFR 403.5(b).
  - i. The permittee shall require all Industrial Users to notify the permittee of substantial changes in discharge as specified in 40 CFR 403.12(j).
  - j. The permittee shall require New Sources to install and have in operation all pollution control equipment required to meet applicable Pretreatment Standards before beginning to discharge. In addition, the permittee shall require New Sources to meet all applicable Pretreatment Standards within the shortest feasible time which shall not exceed ninety (90) days in accordance with 40 CFR 403.6(b).
  - k. The permittee shall require all Industrial Users who are required to sample their effluent and report the results of analysis to the POTW to comply with signatory requirements contained in 40 CFR 403.12(l) when submitting such reports.
  - l. The permittee shall determine, based on the criteria set forth in 40 CFR 403.8(f)(2)(vii), using the EPA method of "rolling quarters", the compliance status of each Industrial User. Any Industrial User determined to meet Significant Non-Compliance (SNC) criteria shall be included in an annual public notification as specified in 40 CFR 403.8(f)(2)(viii).
  - m. The permittee shall require Industrial Users to comply with the notification and certification requirements of 40 CFR 403.12(p)(1), (3) and (4) pertaining to the discharge of substances to the POTW, which if disposed of otherwise, would be a hazardous waste under 40 CFR Part 261.
  - n. The permittee shall continue to designate, as SIUs, those Industrial Users (IUs) which meet the definition contained in the permittee's sewer use ordinance.
  - o. 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 with 40 CFR 403.6(e). The permittee must document all calculations within the control mechanism fact sheet and the resulting limits within the CIU's control mechanism. The permittee must ensure that the most stringent limit is applied to the CIU's effluent at end-of-pipe based upon a comparison of the resulting CWF limits and the permittee's local limits.

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

## 7. Annual Report

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

- a. A listing of Industrial Users which complies with requirements stated in 40 CFR 403.12(i)(1). The list shall identify all Categorical Industrial Users, Significant Industrial Users and any other categories of users established by the permittee;
- b. A summary list, 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 list 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.(l) 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 list of inspection and monitoring activity performed by the permittee, including;
  - significant industrial users inspected by the POTW (include inspection dates for each industrial user);
  - significant industrial user sampled by the POTW (include sampling dates and dates of analysis, for each industrial user);
- f. A summary list 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.

- h. A summary of public participation efforts including meetings and workshops held with the public and/or industry and notices/newsletters/bulletins published and/or distributed;
  - i. A program evaluation in terms of program effectiveness, local limits application and resources which addresses but is not limited to:
    - A description of actions being taken to reduce the incidence of SNC by Industrial Users;
    - effectiveness of enforcement response program;
    - sufficiency of funding and staffing;
    - sufficiency of the SUO, Rules and Regulations, and/or statutory authority;
  - j. An evaluation of recent/proposed program modifications, both substantial and non-substantial, in terms of the modification type, implementation and actual/ expected effect (note proposed modifications must be submitted under separate cover along with the information required by 40 CFR 403.18);
  - k. A detailed description of all interference and pass-through that occurred during the past year and, if applicable;
    - A thorough description of all investigations into interference and pass-through during the past year;
    - A description of the monitoring, sewer inspections and evaluations which were done during the past year to detect interference and pass-through, specifying pollutants analyzed and frequencies;
  - l. A summary of the average, maximum concentration, minimum concentration, and number of data points used for pollutant analytical results for influent, effluent, sludge and any toxicity or bioassay data from the wastewater treatment facility. The summary shall include a comparison of influent sampling results versus the maximum allowable headworks loadings contained in the approved local limits evaluation and effluent sampling results versus water quality standards. Such a comparison shall be based on the analytical results required in Parts I.A and I.C. of this permit and any additional sampling data available to the permittee; and
  - m. A completed pretreatment annual report summary (PARS) form.
8. Sewer Use Ordinance

The permittee has an approved Sewer Use Ordinance (SUO) that shall be implemented at all times. If the permittee submits to the DEM a request for a pretreatment program modification in accordance with 40 CFR 403.18 and Part C.5.e of this permit, a draft SUO amendment shall be submitted to DEM if applicable to the associated modification. Within thirty (30) following final approval of the SUO and modification by the DEM, the permittee shall commence implementation of the SUO and modification.

**D. OPERATION AND MAINTENANCE OF 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 \_\_\_\_\_.

**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 Pertaining to the Treatment, Disposal Utilization and Transportation of Wastewater Treatment Facility Sludge. 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.

## LIST OF TOXIC POLLUTANTS

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

Volatiles - EPA Method 624			Pesticides - EPA Method 608		
		MDL ug/l (ppb)			MDL ug/l (ppb)
1V	acrolein	10.0	18P	PCB-1242	0.289
2V	acrylonitrile	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
7V	chlorobenzene	1.0	23P	PCB-1260	0.222
8V	chlorodibromomethane	1.0	24P	PCB-1016	0.494
9V	chloroethane	1.0	25P	toxaphene	1.670
10V	2-chloroethylvinyl ether	5.0			
11V	chloroform	1.0	Base/Neutral - EPA Method 625		
12V	dichlorobromomethane	1.0			MDL ug/l (ppb)
14V	1,1-dichloroethane	1.0	1B	acenaphthene *	1.0
15V	1,2-dichloroethane	1.0	2B	acenaphthylene *	1.0
16V	1,1-dichloroethylene	1.0	3B	anthracene *	1.0
17V	1,2-dichloropropane	1.0	4B	benzidine	4.0
18V	1,3-dichloropropylene	1.0	5B	benzo(a)anthracene *	2.0
19V	ethylbenzene	1.0	6B	benzo(a)pyrene *	2.0
20V	methyl bromide	1.0	7B	3,4-benzofluoranthene *	1.0
21V	methyl chloride	1.0	8B	benzo(ghi)perylene *	2.0
22V	methylene chloride	1.0	9B	benzo(k)fluoranthene *	2.0
23V	1,1,2,2-tetrachloroethane	1.0	10B	bis(2-chloroethoxy)methane	2.0
24V	tetrachloroethylene	1.0	11B	bis(2-chloroethyl)ether	1.0
25V	toluene	1.0	12B	bis(2-chloroisopropyl)ether	1.0
26V	1,2-trans-dichloroethylene	1.0	13B	bis(2-ethylhexyl)phthalate	1.0
27V	1,1,1-trichloroethane	1.0	14B	4-bromophenyl phenyl ether	1.0
28V	1,1,2-trichloroethane	1.0	15B	butylbenzyl phthalate	1.0
29V	trichloroethylene	1.0	16B	2-chloronaphthalene	1.0
31V	vinyl chloride	1.0	17B	4-chlorophenyl phenyl ether	1.0
			18B	chrysene *	1.0
			19B	dibenzo (a,h)anthracene *	2.0
			20B	1,2-dichlorobenzene	1.0
			21B	1,3-dichlorobenzene	1.0
			22B	1,4-dichlorobenzene	1.0
			23B	3,3'-dichlorobenzidine	2.0
			24B	diethyl phthalate	1.0
			25B	dimethyl phthalate	1.0
			26B	di-n-butyl phthalate	1.0
			27B	2,4-dinitrotoluene	2.0
			28B	2,6-dinitrotoluene	2.0
			29B	di-n-octyl phthalate	1.0
			30B	1,2-diphenylhydrazine (as azobenzene)	1.0
			31B	fluoranthene *	1.0
			32B	fluorene *	1.0
			33B	hexachlorobenzene	1.0
			34B	hexachlorobutadiene	1.0
			35B	hexachlorocyclopentadiene	2.0
			36B	hexachloroethane	1.0
			37B	indeno(1,2,3-cd)pyrene *	2.0
			38B	isophorone	1.0
			39B	naphthalene *	1.0
			40B	nitrobenzene	1.0
			41B	N-nitrosodimethylamine	1.0
			42B	N-nitrosodi-n-propylamine	1.0
			43B	N-nitrosodiphenylamine	1.0
			44B	phenanthrene *	1.0
			45B	pyrene *	1.0
			46B	1,2,4-trichlorobenzene	1.0
Acid Compounds - EPA Method 625			Pesticides - EPA Method 608		
		MDL ug/l (ppb)			MDL ug/l (ppb)
1A	2-chlorophenol	1.0	1P	aldrin	0.059
2A	2,4-dichlorophenol	1.0	2P	alpha-BHC	0.058
3A	2,4-dimethylphenol	1.0	3P	beta-BHC	0.043
4A	4,6-dinitro-o-cresol	1.0	4P	gamma-BHC	0.048
5A	2,4-dinitrophenol	2.0	5P	delta-BHC	0.034
6A	2-nitrophenol	1.0	6P	chlordan	0.211
7A	4-nitrophenol	1.0	7P	4,4'-DDT	0.251
8A	p-chloro-m-cresol	2.0	8P	4,4'-DDE	0.049
9A	pentachlorophenol	1.0	9P	4,4'-DDD	0.139
10A	phenol	1.0	10P	dieldrin	0.082
11A	2,4,6-trichlorophenol	1.0	11P	alpha-endosulfan	0.031
			12P	beta-endosulfan	0.036
			13P	endosulfan sulfate	0.109
			14P	endrin	0.050
			15P	endrin aldehyde	0.062
			16P	heptachlor	0.029
			17P	heptachlor epoxide	0.040

## 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	20.0
Lead, Total	3.0
Mercury, Total	0.5
Nickel, Total	10.0
Selenium, Total	5.0
Silver, Total	1.0
Thallium, Total	5.0
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. A copy of the analytical laboratory report, specifying analytical methods used, shall be included with each report submission. 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

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. **RI0100005**

NAME AND ADDRESS OF APPLICANT:

**Town of Bristol**  
Bristol Town Hall  
10 Court Street  
Bristol, Rhode Island 02809

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

**Bristol Wastewater Treatment Facility**  
Plant Avenue  
Bristol, Rhode Island 02809

RECEIVING WATER: Bristol Harbor

CLASSIFICATION: SB1

I. **Proposed Action, Type of Facility, and Discharge Location**

The above named applicant has applied to the Rhode Island Department of Environmental Management 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 Wastewater Treatment Plant.

II. **Description of Discharge**

A quantitative description of the discharge in terms of significant effluent parameters based on DMR data from July 2005 through June 2010 is shown on Attachment A-1.

III. **Permit and Administrative Compliance Order Limitations and Conditions**

The final effluent limitations and monitoring requirements may be found in the permit.

IV. **Permit Basis and Explanation of Effluent Limitation Derivation**

The Town of Bristol owns and operates the Bristol Wastewater Treatment Facility located on Plant Avenue in Bristol, Rhode Island. The discharge to Bristol Harbor consists of treated sanitary sewage. A process flow diagram of the facility is shown in Attachment A-2.

Treatment consists of:

Aerated Grit Chamber  
Coarse Screening  
Comminution  
Primary Settling

Rotating Biological Contactors  
Secondary Settling  
Chlorination  
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 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).

The "Average Monthly" and "Average Weekly" BOD<sub>5</sub> and TSS limitations are based upon the secondary treatment requirements of Section 301(b)(1)(B) of the Clean Water Act (CWA) as defined in 40 CFR 133.102(a) – (c). The "Maximum Daily" BOD<sub>5</sub>, TSS, and fecal coliform are based on Rhode Island requirements for Publicly Owned Treatment Works (POTWs) under Section 401 (a)(1) of the CWA and in 40 CFR 124.53 and 124.56. The "Percent Removal" requirements are in accordance with 40 CFR 133.103. Settleable Solids has been included as a process-control parameters that can aid in the assessment of the operation of the plant but need not be an effluent limit. The pH limits have been set equal to the water quality criteria for saltwater from the Rhode Island Water Quality Regulations.

In order to evaluate the need for water quality based limits, it is necessary to determine the mixing which occurs in the immediate vicinity of the wastewater discharge (initial dilution). The Bristol WWTF's effluent is discharged through a 30-inch pipe which is approximately 25.25 feet offshore. As presented in the Bristol Wastewater Treatment Facility's previous Development Document, dated March, 2005, it was determined that a mixing zone and corresponding dilution factor is acceptable for the effluent from the Bristol Wastewater Treatment Facility. Based on the analysis of a Dye Study (ASA, 1991), a chronic dilution factor of 100 with a mixing zone of 100-150m in radius and an acute dilution factor of 28 with a mixing zone of 34m in radius were deemed appropriate.

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. 90% allocation was used 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 Cadmium, Chromium, Copper, Lead, Nickel, and Silver was obtained from the four (4) SINBADD cruises in "Cruise and Data Report", SINBADD 1,2,3 and 4.

In accordance with 40 CFR Part 122.4(d)(1)(iii), water quality-based effluent limitations are required for those pollutants in the discharge that have the reasonable potential to cause or contribute to the exceedance of 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 concentrations 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 UFP data. After the metals data collected from the Bristol WWTF during the previous five (5) years was evaluated, the data clearly showed that limits must be maintained for Copper. In addition, permit limits are required for TRC. However, the Endrin limit from the 2005 permit was eliminated due to sampling results for this parameter which indicated that effluent levels of this parameter were below the detection limit.

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 requirement of testing for nutrients, nitrate, nitrite, and TKN has been maintained to make a determination on nutrient loadings in the receiving water. This information will aid the Department in decision making on the necessity of nutrient removal from the treatment plant wastewater.

The required priority pollutant scans are specified in the State User Fee program. The biomonitoring requirements are set forth in 40 CFR 133.11 and in the State's Water Quality Regulations. The bioassay requirements in the permit, one (1) acute toxicity test to be conducted on effluent once per quarter, shall assure control of toxicity in the effluent.

The permit contains requirements for the permittee to comply with the State's Sludge Regulations and the RIDEM Order of Approval 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 Office has determined that all permit limitations are consistent with the Rhode Island Antidegradation policy. A document which outlines the permit development in greater detail is available upon request.

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.

#### **V. 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. Any person, prior to such date, may submit a request in writing for a public hearing to consider the draft permit to the Rhode Island Department of Environmental Management. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public hearing may be held after at least thirty (30) days public notice whenever the Director finds that response to this notice indicates significant public interest. 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 a public hearing, if such hearing is held, 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 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.

VI. **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 x7046

1-26-11  
Date

  
Eric A. Beck, P.E.  
Supervising Sanitary Engineer  
RIPDES Permitting Section  
Office of Water Resources  
Department of Environmental Management

**ATTACHMENT A-1: HISTORICAL EFFLUENT DATA**

**DESCRIPTION OF DISCHARGE:** Discharge from settling tanks 001

**EFFLUENT CHARACTERISTICS AT POINT OF DISCHARGE**

<b>PARAMETER</b>	<b>MONTHLY AVG.<sup>1</sup></b>	<b>WEEKLY AVG.<sup>2</sup></b>	<b>DAILY MAX.<sup>3</sup></b>
FLOW, MGD	3.76		17.2 <sup>4</sup>
BOD, LBS/DY	396.8 (AVG. MASS)		772.5 (MAX. MASS)
BOD, MG/L	12.95	16.53	22.48
BOD, % REMOVAL	92.56		
TSS, LBS/DY	420.16		809.77
TSS, MG/L	13.82	18.92	24.79
TSS, % REMOVAL	91.54		
SETTLABLE SOLIDS, ML/L		0.0895	0.1088
FECAL COLIFORMS MPN/100 ML	<u>30.03 MPN</u> 100 ML	<u>102.36 MPN</u> 100 ML	<u>401778.23 MPN</u> 100 ML
CHLORINE, TOTAL RESIDUAL UG/L	54.25		185.52
PH, S.U.	6.62		7.41
OIL & GREASE MG/L			1.305
NITROGEN TOTAL KJELDHAL MG/L	15.85		15.42
NITROGEN NITRATE (TOTAL AS N)	6.90		7.89
NITROGEN NITRITE (TOTAL AS N)	0.61		1.57
TOTAL NITROGEN	23.07		23.29
TOTAL NITROGEN LOAD (LB/DAY)	554.22		
COPPER, TOTAL, UG/L	11.53		19.58

Biotoxicity Data LC<sub>50</sub> Values (in percent effluent)

	2008		2009				2010		
	2nd qtr.	3rd qtr.	4th qtr.	1st qtr.	2nd qtr.	3rd qtr.	4th qtr.	1st qtr.	2nd qtr.
Pre-Cl <sub>2</sub> Mysid	>100	>100	>100	>100	>100	>100	>100	>100	>100

<sup>1</sup>Data represents statistical mean of the monthly average from July 2005 – June 2010

<sup>2</sup>Data represents statistical mean of the weekly average from July 2005 – June 2010

<sup>3</sup>Data represents statistical mean of the daily maximum from July 2005 – June 2010

<sup>4</sup>Data represents maximum monthly value of maximum flow from July 2005 – June 2010

**ATTACHMENT A-2: Process flow diagram for Bristol WWTF**

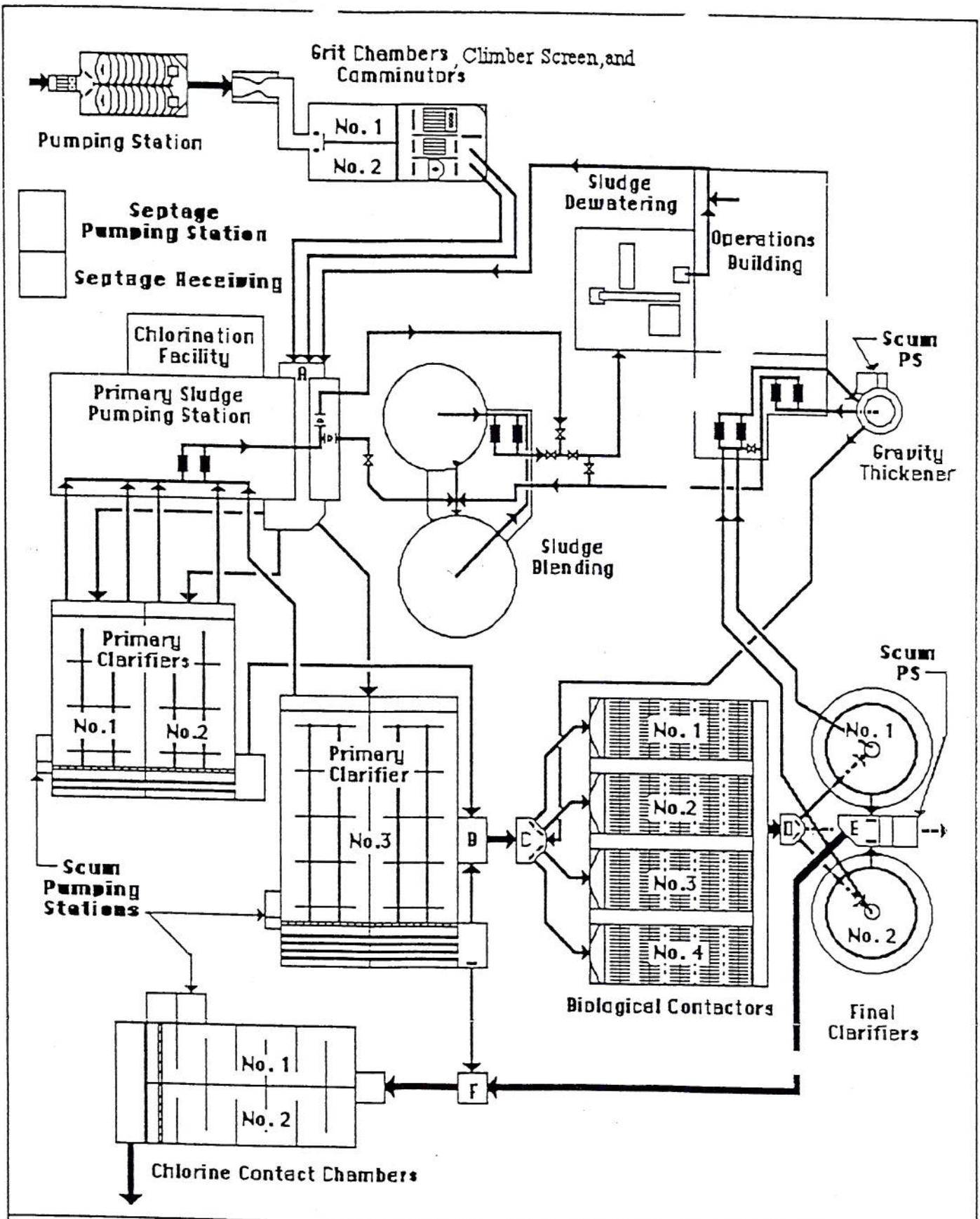


Figure 2-8  
 Bristol Wastewater Facilities Plan  
 Treatment Facility Process Schematic

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

**Town of Jamestown**  
P.O. Box 377  
Jamestown, Rhode Island 02835

is authorized to discharge from a facility located at the

**Jamestown Wastewater Treatment Facility**  
Taylor Point  
Jamestown, Rhode Island 02835

to receiving waters named

Narragansett Bay

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

This permit shall become effective on \_\_\_\_\_, \_\_\_\_\_.

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

This permit supersedes the permit issued on September 27, 2005

This permit consists of fifteen (15) pages in Part I including effluent limitations, monitoring requirements, etc. and ten (10) pages in Part II including General Conditions.

Signed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

**DRAFT**

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

**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 chlorination).

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

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>			<u>Concentration - specify units</u>		<u>Monitoring Requirement</u>		
	<u>Average Monthly</u>	<u>Quantity - lbs./day</u> <u>Average Monthly</u>	<u>Maximum Daily</u>	<u>Average Monthly</u> *(Minimum)	<u>Average Weekly</u> *(Average)	<u>Maximum Daily</u> *(Maximum)	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow	0.73 MGD	---	MGD	---	---	---	Continuous	Recorder
BOD <sub>5</sub>	183	304		30 mg/l	45 mg/l	50 mg/l	3/Week	24-Hr. Comp.
BOD <sub>5</sub> - % Removal	85%						1/Month	Calculated
TSS	183	304		30 mg/l	45 mg/l	50 mg/l	3/Week	24-Hr. Comp.
TSS - % Removal	85%						1/Month	Calculated
Settleable Solids					---	---	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 after chlorination).

**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 chlorination).

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

<u>Effluent Characteristic</u>	<u>Quantity - lbs./day</u>		<u>Discharge Limitations</u>		<u>Concentration - specify units</u>		<u>Monitoring Requirement</u>	
	<u>Average Monthly</u>	<u>Maximum Daily</u>	<u>Average Monthly</u> *(Minimum)	<u>Average Weekly</u> *(Average)	<u>Average Daily</u> *(Maximum)	<u>Maximum Daily</u> *(Maximum)	<u>Measurement Frequency</u>	<u>Sample Type</u>
Fecal Coliform			200 MPN <sup>1</sup> 100 ml	400 MPN <sup>1</sup> 100 ml	400 MPN <sup>1</sup> 100 ml	400 MPN <sup>1</sup> 100 ml	3/Week	Grab
Total Residual Chlorine (TRC)			2.0 mg/l		2.0 mg/l		Continuous	Recorder <sup>2</sup>
pH			(6.0 SU)		(9.0 SU)		1/Day	Grab

<sup>1</sup>The Fecal Coliform samples are to be taken on Tuesday, Thursday, and either Saturday or Sunday at the same time as one of the TRC 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 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 per day, Monday - Friday (except holidays), equally spaced over one (1) eight hour working shift with a minimum of three hours between grabs, and on Saturdays, Sundays, and Holidays by taking at least two (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 (18<sup>th</sup> Edition) No. 4500-Cl G; (2) DPD Titrimetric, EPA No. 330.4 or Standard Methods (18<sup>th</sup> Edition) No. 4500-Cl F; (3) Amperometric Titration, EPA No. 330.1 or Standard Methods (18<sup>th</sup> Edition) No. 4500-Cl D or ASTM No. D1253-86(92); (4) Iodometric Direct Titration, EPA No. 330.3 or Standard Methods (18<sup>th</sup> Edition) No. 4500-Cl B; (5) Iodometric Back Titration (either end-point), EPA No. 330.2 or Standard Methods (18<sup>th</sup> Edition) No. 4500-Cl C.

<sup>3</sup>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 after chlorination).

**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

3. During the period beginning on the effective date and lasting through permit expiration, the permittee is authorized to discharge from outfall serial number 001A (final discharge after chlorination).

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

<u>Effluent Characteristic</u>	<u>Quantity - lbs. per day</u>		<u>Concentration - specify units</u>		<u>Monitoring Requirement</u>	
	<u>Average Monthly</u>	<u>Maximum Daily</u>	<u>Average Monthly</u>	<u>Average Weekly</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Oil and Grease					1/Month	Grab
TKN (May 1 – October 31)					1/Month	24-Hr. Comp.
Nitrate, Total (as N) (May 1 – October 31)					1/Month	24-Hr. Comp.
Nitrite, Total (as N) (May 1 – October 31)					1/Month	24-Hr. Comp.
Nitrogen, Total (TKN + Nitrate + Nitrite, as N) (May 1 – October 31)					1/Month	Calculated

--- 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 location: Outfall 001A (final discharge after chlorination).

**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(s) 001A.

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

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Concentration - specify units</u>		<u>Monitoring Requirement</u>	
	Quantity - lbs. per day	Average Monthly	Average Monthly	Maximum Daily	Measurement Frequency	Sample Type
LC50 <sup>1</sup> (Mysids)				50% or Greater <sup>2</sup>	1/Quarter	24-Hr. Comp.

<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 50% or greater limit is defined as a sample which is composed of 50% effluent.

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

5.
  - 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.
6. The permittee shall analyze its effluent annually for the EPA Priority Pollutants as listed in 40 CFR 122, Appendix D, Tables II and III. The results of these analyses shall be submitted to the Department of Environmental Management by January 15<sup>th</sup> of each year for the previous calendar year. The State user fee samples may be utilized provided that the sampling is coordinated in advance. All sampling and analysis shall be done in accordance with EPA Regulations, including 40 CFR, Part 136; grab and composite samples shall be taken as appropriate.
7. This permit serves as the State's Water Quality Certificate for the discharges described herein.

## **B. BIOMONITORING REQUIREMENTS AND INTERPRETATION OF RESULTS**

### **1. General**

Beginning on the effective date of the permit, the permittee shall perform four (4) acute toxicity tests per year on samples collected from discharge outfall 001A prior to chlorination.

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 Part I.B.9. 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 shall conduct forty-eight-hour (48) acute definitive toxicity tests on the specie, listed below, for a total of four (4) acute toxicity tests per year. This requirement entails performing one (1) specie testing as follows:

<u>Species</u>	<u>Type Test</u> One Specie Test (Four Times Annually)	<u>Frequency</u>
Mysids ( <u>Mysidopsis Bahia</u> )	Definitive 48-Hour Acute Static (LC <sub>50</sub> )	Quarterly

3. Testing Methods

Acute definitive toxicity tests shall be conducted in accordance with protocols listed in the EPA document: Cornelius I. Weber, et. al., 1991. Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms, Fourth Edition (or the most recent edition), Office of Research and Development Cincinnati, OH (EPA-600/4-90-027), incorporating any deviations from protocol listed herein, or additional methods if approved by the Director of RIDEM.

4. Sample Collection

For each sampling event a twenty-four- (24) hour flow-proportioned composite effluent sample shall be collected at a location just prior to chlorination during 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. Salinity Adjustment

Prior to the initiation of testing, the effluent must be adjusted to make the salinity of the effluent equal to that of the marine dilution water. The test solution must be prepared by adding non-toxic dried ocean salts to a sufficient quantity of 100% effluent to raise the salinity to the desired level. After the addition of the dried salts, stir gently for thirty (30) to sixty (60) minutes, preferably with a magnetic stirrer, to ensure that the salts are in solution. It is important to check the final salinity with a refractometer or salinometer. Salinity adjustments following this procedure and in accordance with EPA protocol will ensure that the concentrations (% effluent) of each dilution are real and allow for an accurate evaluation with the acute LC<sub>50</sub> ≥ 50% permit limit and acute monitoring requirements.

6. Dilution Water

Dilution water used for marine acute toxicity analyses should be of sufficient quality to meet minimum acceptability of test results (See Part I.B.7). For these tests, 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 of South Ferry Road, Narragansett. It is noted that the University claims no responsibility for the personal safety of this dock. The permittee shall observe the rules posted at the dock. If this natural seawater diluent is found to be, or suspected to be toxic or unreliable, an alternate source of natural seawater or, deionized water mixed with hypersaline brine or artificial sea salts of

known quality with a salinity and pH similar to that of the receiving water may be substituted AFTER RECEIVING WRITTEN APPROVAL FROM RIDEM.

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

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

s. Sample Volume Required Minimum four (4) liters

8. Chemical Analysis

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

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

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

<u>Total Metals</u>	<u>Effluent</u>	<u>Saline Diluent</u>	<u>Detection Limit (ug/L)</u>
Total Aluminum	x	x	5.0
Total Cadmium	x	x	1.0
Total Copper	x	x	20.0
Hexavalent Chromium	x	x	20.0
Total Lead	x	x	3.0
Total Nickel	x	x	10.0
Total Zinc	x	x	20.0

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.

9. Toxicity Test Report Elements

A report of results will include the following:

- Description of sample collection procedures and site description.
- Names of individuals collecting and transporting samples, times, and dates of sample collection and analysis.
- General description of tests: age of test organisms, origin, dates and results of standard toxicant tests (quality assurance); light and temperature regime; dilution water description; other information and 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 forty-eight (48) hours.
- $LC_{50}$  and 95% confidence limits shall be calculated using one of the following methods in order of preference: Probit, Trimmed Spearman Karber, Moving Average Angle, or the graphical method. All printouts (along with the name of the program, the date, and the author(s)) and graphical displays must be submitted. When data is analyzed by hand, worksheets should be submitted. The report shall also include the No Observed Acute Effect Level (NOAEL) which is defined as the highest concentration of the effluent (in % effluent) in which 90% or more of the test animals survive.
- The Probit, Trimmed Spearman Karber, and Moving Average Angle methods of analyses can only be used when mortality of some of the test organisms are observed in at least two (2) of the (percent effluent) concentrations tested (i.e., partial mortality). If a test results in a 100% survival and a 100% mortality in adjacent treatments ("all or nothing" effect), an  $LC_{50}$  may be estimated using the graphical method.

10. Special Condition

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

11. Reporting of Bioassay Testing

Bioassay Testing shall be reported as follows:

<u>Quarter Testing To be Performed</u>	<u>Report Due No Later Than</u>	<u>Results Submitted on DMR for</u>
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

The first report shall be submitted to RIDEM no later than \_\_\_\_\_ 15, \_\_\_\_\_.

A signed copy of these, and all other reports required herein, 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. 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 \_\_\_\_\_ 15, 20\_\_.

**D. SLUDGE**

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

**E. 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 values equal to zero



**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	20.0
Lead, Total	3.0
Mercury, Total	0.5
Nickel, Total	10.0
Selenium, Total	5.0
Silver, Total	1.0
Thallium, Total	5.0
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).

**F. 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. The first report is due on \_\_\_\_\_ 15, \_\_\_\_\_. Signed copies of these, and all other reports required herein, shall be submitted to:

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

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. **RI0100366**

NAME AND ADDRESS OF APPLICANT:

**Town of Jamestown**  
P.O. Box 377  
Jamestown, Rhode Island 02835

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

**Jamestown Wastewater Treatment Facility**  
Taylor Point  
Jamestown, Rhode Island 02835

RECEIVING WATER: **Narragansett Bay**

CLASSIFICATION: **SB1**

**I. Proposed Action, Type of Facility, and Discharge Location**

The above named applicant has applied to the Rhode Island Department of Environmental Management 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 Jamestown Wastewater Treatment Facility at Outfall 001A.

**II. Description of Discharge**

A quantitative description of the discharge in terms of significant effluent parameters based on DMR data from July 2005 through June 2010 is shown on Attachment A-1.

**III. Permit and Administrative Compliance Order Limitations and Conditions**

The final effluent limitations and monitoring requirements may be found in the permit.

**IV. Permit Basis and Explanation of Effluent Limitation Derivation**

The Town of Jamestown owns and operates the Jamestown Wastewater Treatment Facility located at Taylor Point in Jamestown, Rhode Island. The discharge to Narragansett Bay consists of treated sanitary sewage contributed by the Town of Jamestown. Treatment consists of coarse screening, grit removal (using a grit chamber), fine screening, extended aeration, clarification, and chlorination. A diagram of the facility is included in Attachment A-2.

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 discharge levels based on background data and available dilution; 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 "Jamestown Wastewater Treatment Facility Permit Development Document" is available upon request.

The "Average Monthly" and "Average Weekly" BOD<sub>5</sub> and TSS limitations plus the pH limitations are based upon the secondary treatment requirements of Section 301 (b)(1)(B) of the CWA as defined in 40 CFR 133.102 (a) – (c). The "Maximum Daily" BOD<sub>5</sub> and TSS limits and the fecal coliform limits are based on Rhode Island requirements for Publicly Owned Treatment Works (POTWs) under Section 401 (a)(1) of the CWA and in 40 CFR 124.53 and 124.56. The "Percent Removal" requirements are in accordance with 40 CFR 133.103. Settleable Solids monitoring has been included as a process-control parameter that can aid in the assessment of the operation of the plant but need not have an effluent limit.

In order to evaluate the need for water quality-based limits, it is necessary to determine the mixing which occurs in the immediate vicinity of the discharge (initial dilution). The Jamestown WWTF effluent is discharged through a pipe which is approximately 350 feet offshore and is fitted with a diffuser. The diffuser consists of seven (7) ports that are four (4) inches in diameter and have approximately twelve (12) feet of spacing between each port. Rule 17 of the RIPDES Regulations requires the use of design flow when establishing limits for Publicly Owned Treatment Works (POTWs). During development of the August 3, 1994 permit, the RIDEM Division of Water Resources determined the initial dilution using the EPA computer model UMERGE. Based upon the design flow of 0.73 MGD (as noted in the Order of Approval No. 430), the mean low water depth at the outfall of fifty (50) feet, and stagnant receiving water conditions, an initial dilution of 273:1 was determined. The UMERGE model output files are presented in Attachment A of the Jamestown Wastewater Treatment Facility Permit Development Document.

Based on the above dilution factor 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.

In accordance with 40 CFR Part 122.4(d)(1)(iii), it is only necessary to establish limitations for those pollutants in the discharge which have the reasonable potential to cause or contribute to the exceedance of the in-stream criteria. In order to evaluate the need for permit limitations, the permit limits were compared to the Discharge Monitoring Report (DMR) data and the State User Fee Program data. Based on the analysis presented above, no water quality-based permit limitations are required. The technology-based average monthly and maximum daily Total Residual Chlorine (TRC) limitations of 2.0 mg/l have been carried over from the previous permit.

Evaluation of the data collected for biotoxicity has revealed that the prechlorinated effluent samples from the treatment plant have consistently demonstrated acceptable acute toxicity for Mysids. Toxicity results for effluent collected prior to chlorination for the period 3<sup>rd</sup> Quarter 2008 through 2<sup>nd</sup> Quarter 2010 had LC<sub>50</sub> values of >100% effluent. The actual data can be found in Attachment A-1. Based upon past toxicity results and the high degree of instream mixing, the permit contains an LC<sub>50</sub> ≥ 50% effluent limit for quarterly acute tests conducted on Mysids. The biomonitoring requirements are set forth in 40 CFR 131.11 and in the State's Water Quality Regulations to assure control of toxicity in the effluent. If effluent toxicity is demonstrated in the future, then the permit requires a toxicity identification and reduction study to be conducted.

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. At this time, nutrient criteria have not been established for the receiving water. However, seasonal (May through October) testing requirements for TKN, Nitrate, and Nitrite are being maintained to determine nutrient loadings to the receiving water, and are consistent with the Department's policy requiring all facilities to perform baseline nutrient monitoring. This information will aid the Department in the determination of the necessity for future nutrient removal from the treatment plant effluent.

The permit contains requirements for the permittee to comply with the State's Sludge Regulations and RIDEM Order of Approval No. 1320 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 Office has determined that all permit limitations are consistent with the Rhode Island Antidegradation policy.

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.

#### **V. 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. Any person, prior to such date, may submit a request in writing for a public hearing to consider the draft permit to the Rhode Island Department of Environmental Management. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public hearing may be held after at least thirty (30) days public notice whenever the Director finds that response to this notice indicates significant public interest. 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 a public hearing, if such hearing is held, 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 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.

VI. **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.  
Engineer  
Office of Water Resources  
Department of Environmental Management  
235 Promenade Street  
Providence, Rhode Island 02908  
Telephone: (401) 222-4700 ext. 7046

1-28-11  
Date

  
Eric A. Beck, P.E.  
Supervising Sanitary Engineer  
RIPDES Permitting Section  
Office of Water Resources  
Department of Environmental Management

**ATTACHMENT A-1**

**DESCRIPTION OF DISCHARGE:** Secondary treated domestic and industrial wastewater.  
**DISCHARGE:** 001A – Secondary Treatment Discharge

**AVERAGE EFFLUENT CHARACTERISTICS AT POINT OF DISCHARGE:**

<b>PARAMETER</b>	<b>MONTHLY AVERAGE<sup>1</sup></b>	<b>WEEKLY AVERAGE<sup>2</sup></b>	<b>DAILY MAXIMUM<sup>3</sup></b>
FLOW	0.47 MGD		1.01 MGD
BOD <sub>5</sub>	9.15 mg/l	12.72 mg/l	20.01 mg/l
BOD <sub>5</sub> load	37.74 lb/d		118.02 lb/d
TSS	6.14 mg/l	7.83 mg/l	12.75 mg/l
TSS load	21.18 lb/d		76.79 lb/d
Fecal Coliform	4.05 MPN/100 ml	12.12 MPN/100 ml	89.82 MPN/100 ml
pH	6.36 S.U. (Min.)		7.16 S.U. (Max.)
Total Chlorine Residual	1.09 mg/l		1.89 mg/l
Oil & Grease			2.5 mg/l
Nitrite, Total (as N)			0.09 mg/l
Nitrate, Total (as N)			3.38 mg/l
Nitrogen, Total Kjeldhal			2.68 mg/l
Nitrogen, Total			5.47 mg/l
Settleable Solids		0.0017 ml/l	0.0833 ml/l
BOD % Removal	95.25		
TSS % Removal	96.42		

<sup>1</sup>Data represents the mean of the monthly average data from July 2005-June 2010

<sup>2</sup>Data represents the mean of the weekly average data from July 2005-June 2010

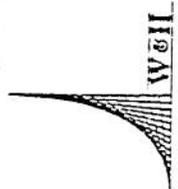
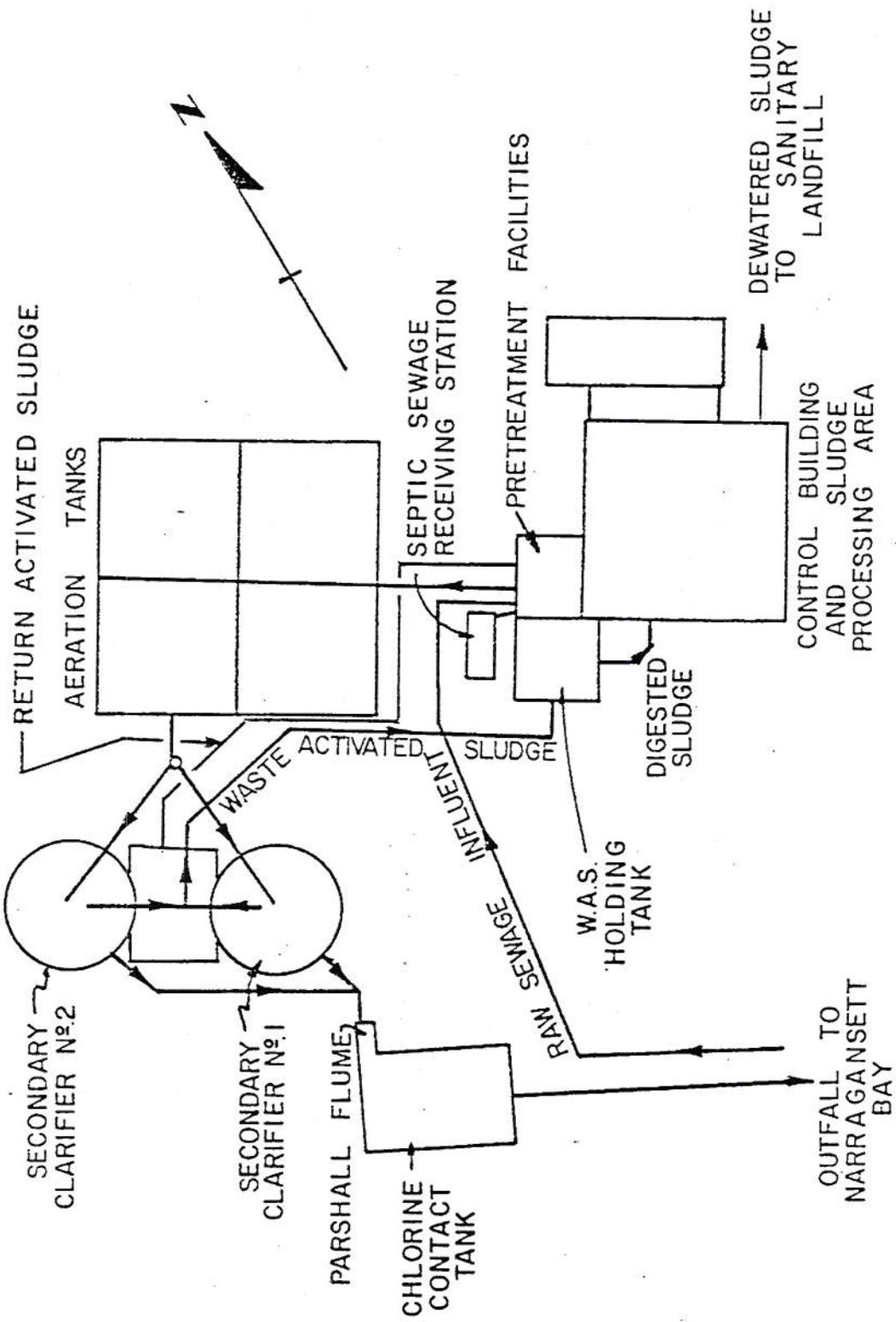
<sup>3</sup>Data represents the mean of the daily maximum data from July 2005-June 2010

**Biotoxicity Data LC<sub>50</sub> Values (in percent effluent)**

Pre-C12 Mysid  
Minnow

2008		2009				2010	
3rd qtr.	4th qtr.	1st qtr.	2nd qtr.	3rd qtr.	4th qtr.	1st qtr.	2nd qtr.
>100	>100	>100	>100	>100	>100	>100	>100

**ATTACHMENT A-2: Process flow diagram – *next page***



**WHITMAN & HOWARD INC.**  
 ENGINEERS AND ARCHITECTS  
 45 WILLIAM ST. WELLESLEY, MASS.

FLOW DIAGRAM  
 WATER POLLUTION CONTROL FACILITY  
 JAMESTOWN, RHODE ISLAND

MODIFICATION

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, RIPDES Permit No. RI0001333 issued to ExxonMobil Oil Corporation, for the ExxonMobil Oil Corporation - East Providence Terminal on September 30, 2008, shall be modified as follows:

The minimum and maximum pH limitations for outfall 001A contained in Part I.A.1 of RIPDES Permit No. RI0001333 shall be replaced by the minimum and maximum pH limitations in Attachment 1 of this permit modification reflecting the pH limit modification from 6.5-8.5 SU to 6.0-9.0 SU for outfall 001A.

Part I.A.2 of RIPDES Permit No. RI0001333 shall be modified to include footnote 4 in Attachment 2 of this permit modification.

Part I.A.20 of RIPDES Permit No. RI000133 shall be deleted in its entirety and replaced with the language in Attachment 3 of this permit modification.

Except as set forth in this modification, the remaining effluent limitations, monitoring requirements and other conditions in the original permit are unchanged and in effect.

This modification shall become effective on \_\_\_\_\_.

This permit and the authorization to discharge expire at midnight, November 30, 2013.

This change modifies the permit issued on September 30, 2008.

This modification consists of four (4) pages.

Signed this \_\_\_\_\_ day of \_\_\_\_\_, 2011.

**Draft**

---

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

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

STATEMENT OF BASIS

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

RIPDES PERMIT NO. **RI0001333**

NAME AND ADDRESS OF APPLICANT:

**ExxonMobil Oil Corporation**  
3225 Gallows Road  
Fairfax, Virginia 22037

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

**ExxonMobil Oil Corporation –East Providence Terminal**  
1001 Wampanoag Trail  
East Providence, Rhode Island 02915

RECEIVING WATER: Providence River

CLASSIFICATION: SB1(a)

**I. Proposed Action, Type of Facility, and Discharge Location**

In accordance with Consent Agreement No. RIA-401 entered into between the Rhode Island Department of Environmental Management (DEM) and ExxonMobil Oil Corporation (ExxonMobil) the DEM is proposing to modify the pH limitations for outfall 001A contained in RIPDES Permit No. RI0001333 issued on September 30, 2008. The effluent pH limitations were 6.5-8.5 standard units (SU) while the proposed limitations would expand the permitted range to 6.0-9.0 SU. The DEM is also modifying the permit to indicate that the DEM will eliminate the monitoring for Ethanol and/or MTBE contained in Part I.A.2 of the Permit if, after twelve (12) consecutive months of monitoring, all samples are reported as non-detect at the MDLs specified in the Permit. The DEM is also proposing to modify the hydrostatic testing requirements contained in part I.A.20 of RIPDES Permit No. RI0001333 issued on September 30, 2008.

**II. Permit Limitations and Conditions**

The proposed permit modifications to effluent limitations and monitoring requirements may be found in the draft permit modification.

**III. Permit Modification Basis and Explanation of Effluent Limitation Derivation**

ExxonMobil owns and operates the ExxonMobil Oil Corporation-East Providence Terminal located at 1001 Wampanoag Trail, East Providence, Rhode Island. Refined

petroleum products (three (3) grades of gasoline, No. 2 fuel, diesel and ethanol) are transported to the facility by marine tankers or barges and off-loaded to storage tanks. Deliveries are then made to either the pipeline, truck rack or back to the docks for loading to tankers and/or barges.

Permit No. RI0003111 was issued on September 30, 2008. Because ExxonMobil was concerned that it would not be able to comply with the pH limits of 6.5 SU and 8.5 SU on a continuous basis, ExxonMobil requested a stay of the final permit limits and the DEM and ExxonMobil entered into a Consent Agreement, RIA-401, to resolve these contested permit limits.

The DEM and the ExxonMobil jointly agreed that ExxonMobil could conduct a pH study. The DEM reviewed and approved ExxonMobil's proposed Scope of Work for conducting the pH Study. The results of the pH study indicate that, if the effluent is discharged with a pH of 6.0-9.0 SU, the in stream pH at the edge of the mixing zone will not exceed the applicable water quality criteria for pH of 6.5–8.5 SU. Based on the findings of the pH Evaluation Report the DEM is in agreement that modifying the pH limitations in the final permit to a range of 6.0–9.0 SU is appropriate.

Because ExxonMobil felt that the Ethanol and MTBE sampling requirements for outfall 001A and the hydrostatic testing requirements were excessive and did not reflect the minimal potential to contain pollutants, ExxonMobil appealed these permit requirements. In response, DEM and ExxonMobil entered into a Consent Agreement, RIA-401, to resolve these contested permit limits.

ExxonMobil has indicated that it feels that there is limited potential for the discharge from outfall 001A to contain Ethanol and MTBE. Therefore, in order to allow ExxonMobil to be able to stop testing for these pollutants if it is demonstrated that outfall 001A does not contain these pollutants, the permit is being modified to require ExxonMobil to perform monthly testing on samples collected from discharge Outfall 001A for Ethanol and MTBE and, if the results of twelve (12) consecutive months of monitoring shows effluent concentrations below the applicable minimum detection limits from the permit, then ExxonMobil will no longer be required to continue sampling for Ethanol and MTBE at outfall 001A.

In addition to hydrostatic testing of tanks, ExxonMobil occasionally tests piping using hydrostatic methods. Integrity testing of piping that is in service is typically pressure tested using petroleum product, or by using non-destructive testing methods, such as x-ray photography. New piping fabrications, consisting of piping that has not been in hydrocarbon service, will typically be hydrostatically tested using water. Hydrostatic test water is stored near the fabricating area in portable tanks before and after testing. Modification of existing piping consists of piping that has been in hydrocarbon service before, and the finished fabrications are not hydrostatically tested using water. If existing piping is hydrostatically tested with water, the water is managed as petroleum contact water and is not discharged.

The volume of water used to hydrostatically test new piping is a relatively small contribution to the overall facility flow, and would typically be 10,000 to 20,000 gallons per event, but could be as large as 150,000 gallons. The hydrostatic test water is stored in portable tanks before and after use in the piping fabrication, and may be reused on multiple fabrications during a project. The risk of contaminating the hydrostatic test

water with pollutants is low because the pipe being tested has not been in petroleum service. Therefore, the permit is being modified to simplify the sampling and testing requirements for piping hydrostatic testing water to reflect the limited potential for pollutants in the water in comparison to discharges of hydrostatic test water from petroleum storage tanks.

#### **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. Any person, prior to such date, may submit a request in writing for a public hearing to consider the draft permit to the Rhode Island Department of Environmental Management. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public hearing may be held after at least thirty (30) days of public notice whenever the Director finds that response to this notice indicates significant public interest. 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 a public hearing, if such hearing is held, 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 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 am and 4:00 pm, Monday through Friday, excluding holidays from:

Joseph Camara  
Department of Environmental Management  
235 Promenade Street  
Providence, RI 02908

Telephone: (401) 222-4700, ext. 7640 Email: [joseph.camara@dem.ri.gov](mailto:joseph.camara@dem.ri.gov)

1-28-11  
Date



Eric A. Beck, P.E.  
Supervising Sanitary Engineer

Attachment 1

Permit No. RI0001333

PART I

**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

1. During the period beginning on the effective date and lasting through permit expiration, the permittee is authorized to discharge from outfall serial number 001A. (Overflow Weir from Second Lagoon). Such discharges shall be limited and monitored by the permittee as specified below.

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Concentration - specify units</u>		<u>Monitoring Requirement</u>	
	<u>Quantity - lbs./day</u>	<u>Average Monthly</u>	<u>Average Monthly</u>	<u>Average Weekly</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
pH		<u>Maximum Daily</u>	<u>*(Minimum)</u> (6.0 S.U.)	<u>*(Average)</u>	<u>Maximum Daily</u> <u>*(Maximum)</u> (9.0 S.U.)	<u>2/Month</u> <sup>1,3</sup> Grab

<sup>1</sup>The two (2) grab samples shall be taken as follows: one when the separator at Main Tank Farm is being pumped with proper allowances for hydraulic detention time (time for flow to travel from separator to overflow weir) and one (1) during dry weather or when the pumps at the Main Tank Farm are not in operation. If the separator at the Main Tank Farm can not be pumped under normal operating conditions, the two (2) samples for TSS, Oil and Grease, and pH for the current month shall be taken during dry weather (when the pumps at the Main Tank Farm are not in operation).

<sup>2</sup>The one grab sample shall be taken when the Main Tank Farm Separator is being pumped, giving proper allowances for hydraulic detention time (time for flow to travel from separator to overflow weir). If pumping cannot occur under normal operating conditions, BTEX sampling shall be suspended for that month.

<sup>3</sup> The permittee must keep a log of times when the pumps at the Main Tank Farm are in operation in accordance with Part I.A.21 of the permit, and maintain the log data on-site for 5 years.

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

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

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: Outfall 001A - overflow weir from second lagoon.

Attachment 2

Permit No. RI0001333

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

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

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Concentration - specify units</u>		<u>Monitoring Requirement</u>	
	<u>Quantity - lbs./day</u>	<u>Average Monthly</u>	<u>Average Monthly</u>	<u>Maximum Daily</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
MTBE		---	---	---	1/Month <sup>1,2,4</sup>	Grab
Ethanol		---	---	---	1/Month <sup>1,2,3,4</sup>	Grab

<sup>1</sup>The sample shall be taken when the separator at Main Tank Farm is being pumped with proper allowances for hydraulic detention time (time for flow to travel from separator to overflow weir). If the separator at the Main Tank Farm cannot be pumped under normal operating conditions, the sample for MTBE and Ethanol for the current month shall be taken during dry weather (when the pumps at the Main Tank Farm are not in operation).

<sup>2</sup>The permittee must keep a log of times when the pumps at the Main Tank Farm are in operation in accordance with Part I.A.21 of the permit, and maintain the log data on-site for 5 years.

<sup>3</sup>Ethanol shall be analyzed using EPA method 1671.

<sup>4</sup>The permittee shall perform monthly testing on samples collected from the discharge at Outfall 001A. If the results of twelve (12) consecutive months of monitoring shows effluent concentrations below the applicable minimum detection limits from Part I.C, then the permittee is no longer required to continue sampling.

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

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: Outfall 001A - overflow weir from second lagoon.

### Attachment 3

Permit No. RI0001333

20. The permittee shall notify the Office of Water Resources at least twenty-four (24) hours prior to the commencement of any proposed hydrostatic-test water discharges.

Prior to testing tank(s), the interior of the tank(s) being tested shall be cleaned and certified to be free of petroleum product. There shall be no discharge of tank cleaning residual/debris to either of the oil/water separators or lagoons. At a minimum, four (4) representative samples shall be taken of the hydrostatic-test water: one (1) grab sample of the influent (water added to the tank) and three (3) serial-grab samples of the effluent (test water discharged from the tank), which after treatment through the oil water separator and two lagoons is discharged to the receiving waters. The influent grab sample shall be taken approximately midway through the fill segment of the hydrostatic-test procedure. The three (3) effluent serial-grab samples shall be taken over the duration of the entire discharge segment of the hydrostatic-test procedure. The first serial-grab sample shall be taken during the initial phase of the discharge; the second serial grab sample is to be taken midway through the discharge; and the final sample shall be taken at the end of the discharge. All effluent samples should be taken directly from the effluent of the tank prior to discharge into the oil/water separator and/or mixing with any other authorized waste streams. These samples should provide adequate characterization of the influent and effluent hydrostatic-test water and shall be analyzed for the following parameters:

- |                                 |                                 |
|---------------------------------|---------------------------------|
| a. Total Suspended Solids (TSS) | d. Chemical Oxygen Demand (COD) |
| b. Oil & Grease                 | e. Dissolved Oxygen (DO)        |
| c. Total Iron                   | f. pH                           |

Hydrostatic testing of piping is limited to piping that has not been in hydrocarbon service before. At a minimum one (1) representative sample of the discharge from pipe testing shall be taken from the final collection tank(s) holding the hydrostatic test water. The sample will be made up of equal parts of grab samples taken from each tank. The grab samples will be taken from the top, middle and bottom of water column in each tank and then composited. All samples should be taken and analytical results received prior to discharge into the oil/water separator. These samples shall be analyzed for the following parameters:

- |                                 |                       |
|---------------------------------|-----------------------|
| a. Total Suspended Solids (TSS) | b. Oil & Grease (O/G) |
|---------------------------------|-----------------------|

All hydrostatic test waters released from the tank(s) and/or pipe(s) must satisfy all the effluent limitations and conditions of this permit after treatment through the oil/water separator and lagoons. The surface of the oil/water separator should be routinely observed during hydrostatic test water discharges to determine if there is any detectable increase in the separated oil layer to prevent inadvertent hydrocarbon release to the receiving water(s). A logbook shall be kept to document the start and end of each hydrostatic test, the total flow discharged and all monitoring data.

Should any visual inspection or suspicious odor indicate the presence of petroleum while inspecting the oil/water separator as required above or if laboratory results from the samples of the discharge become available that indicate an exceedance of the permit effluent limits, the transfer shall be halted immediately followed by notification to the RI DEM of the suspended discharge. After the discharge of the hydrostatic test water has been completed, the permittee shall submit a letter/report to the RI DEM within thirty (30) days, summarizing the results of the transfer. This report shall contain: the date(s) of hydrostatic test water transfer; the volume of hydrostatic test water transferred; and the analytically determined values of the discharge parameters.

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DEFINITIONS

## GENERAL REQUIREMENTS

(a) Duty to Comply

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

- (1) The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.
- (2) The CWA provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the CWA is subject to a civil penalty not to exceed \$10,000 per day of such violation. Any person who willfully or negligently violates permit conditions implementing Sections 301, 302, 306, 307 or 308 of the Act is subject to a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment of not more than 1 year, or both.
- (3) Chapter 46-12 of the Rhode Island General Laws provides that any person who violates a permit condition is subject to a civil penalty of not more than \$5,000 per day of such violation. Any person who willfully or negligently violates a permit condition is subject to a criminal penalty of not more than \$10,000 per day of such violation and imprisonment for not more than 30 days, or both. Any person who knowingly makes any false statement in connection with the permit is subject to a criminal penalty of not more than \$5,000 for each instance of violation or by imprisonment for not more than 30 days, or both.

(b) Duty to Reapply

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

(c) Need to Halt or Reduce Not a Defense

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

(d) Duty to Mitigate

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

(e) Proper Operation and Maintenance

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

(f) Permit Actions

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

(g) Property Rights

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

(h) Duty to Provide Information

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

(i) Inspection and Entry

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

- (1) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- (2) Have access to and copy, at reasonable times any records that must be kept under the conditions of this permit;
- (3) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under this permit; and

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

(j) Monitoring and Records

- (1) Samples and measurements taken for the purpose of monitoring shall be representative of the volume and nature of the discharge over the sampling and reporting period.
- (2) The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings from continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 5 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.
- (3) Records of monitoring information shall include:
  - (i) The date, exact place, and time of sampling or measurements;
  - (ii) The individual(s) who performed the sampling or measurements;
  - (iii) The date(s) analyses were performed;
  - (iv) The individual(s) who performed the analyses;
  - (v) The analytical techniques or methods used; and
  - (vi) The results of such analyses.
- (4) Monitoring must be conducted according to test procedures approved under 40 CFR Part 136 and applicable Rhode Island regulations, unless other test procedures have been specified in this permit.
- (5) The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall upon conviction, be punished by a fine of not more than \$10,000 per violation or by imprisonment for not more than 6 months per violation or by both. Chapter 46-12 of the Rhode Island General Laws also provides that such acts are subject to a fine of not more than \$5,000 per violation, or by imprisonment for not more than 30 days per violation, or by both.
- (6) Monitoring results must be reported on a Discharge Monitoring Report (DMR).
- (7) If the permittee monitors any pollutant more frequently than required by the permit, using test procedures approved under 40 CFR Part 136, applicable State regulations, or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.

(k) Signatory Requirement

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

(l) Reporting Requirements

- (1) Planned changes. The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility.
- (2) Anticipated noncompliance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with the permit requirements.
- (3) Transfers. This permit is not transferable to any person except after written notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under State and Federal law.
- (4) Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit.
- (5) Twenty-four hour reporting. The permittee shall immediately report any noncompliance which may endanger health or the environment by calling DEM at (401) 222-3961, (401) 222-6519 or (401) 222-2284 at night.

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

The following information must be reported immediately:

- (i) Any unanticipated bypass which causes a violation of any effluent limitation in the permit; or
- (ii) Any upset which causes a violation of any effluent limitation in the permit; or
- (iii) Any violation of a maximum daily discharge limitation for any of the pollutants specifically listed by the Director in the permit.

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

- (6) Other noncompliance. The permittee shall report all instances of noncompliance not reported under paragraphs (1), (2), and (5), of this section, at the time monitoring reports are submitted. The reports shall contain the information required in paragraph (1)(5) of the section.
- (7) Other information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, they shall promptly submit such facts or information.

(m) Bypass

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

- (1) Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs (2) and (3) of this section.
- (2) Notice.
  - (i) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten (10) days before the date of the bypass.
  - (ii) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Rule 14.18 of the RIPDES Regulations.
- (3) Prohibition of bypass.
  - (i) Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:
    - (A) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage, where "severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production;
    - (B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
    - (C) The permittee submitted notices as required under paragraph (2) of this section.

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

(n) Upset

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

- (1) Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of paragraph (2) of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
- (2) Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
  - (a) An upset occurred and that the permittee can identify the cause(s) of the upset;
  - (b) The permitted facility was at the time being properly operated;
  - (c) The permittee submitted notice of the upset as required in Rule 14.18 of the RIPDES Regulations; and
  - (d) The permittee complied with any remedial measures required under Rule 14.05 of the RIPDES Regulations.
- (3) Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

(o) Change in Discharge

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

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

(p) Removed Substances

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

(q) Power Failures

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

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

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

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

(r) Availability of Reports

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

(s) State Laws

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

(t) Other Laws

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

(u) Severability

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

(v) Reopener Clause

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

(w) Confidentiality of Information

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

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

- (i) The name and address of any permit applicant or permittee;
- (ii) Permit applications, permits and any attachments thereto; and
- (iii) NPDES effluent data.

(x) Best Management Practices

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

(y) Right of Appeal

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

**DEFINITIONS**

1. For purposes of this permit, those definitions contained in the RIPDES Regulations and the Rhode Island Pretreatment Regulations shall apply.
2. The following abbreviations, when used, are defined below.

cu. M/day or M <sup>3</sup> /day	cubic meters per day
mg/l	milligrams per liter
ug/l	micrograms per liter
lbs/day	pounds per day
kg/day	kilograms per day
Temp. °C	temperature in degrees Centigrade
Temp. °F	temperature in degrees Fahrenheit
Turb.	turbidity measured by the Nephelometric Method (NTU)
TNFR or TSS	total nonfilterable residue or total suspended solids
DO	dissolved oxygen
BOD	five-day biochemical oxygen demand unless otherwise specified
TKN	total Kjeldahl nitrogen as nitrogen
Total N	total nitrogen
NH <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