

RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
PERMITS SECTION  
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, October 28, 2016

PUBLIC NOTICE NUMBER: PN16-05

**DRAFT RIPDES PERMITS**

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 (DEM) for reissuance of an individual RIPDES permit to discharge water from the treatment plant to Narragansett Bay. This permit includes limits to ensure that the discharge will not cause a water quality violation.

**DRAFT RIPDES PERMIT MODIFICATIONS**

RIPDES PERMIT NUMBER: **RI0021555**

NAME AND MAILING ADDRESS OF APPLICANT:

**Rhode Island Air National Guard (RIANG)**  
143<sup>rd</sup> Airlift Wing

RIPDES PN 16-05-jbh

2 Hercules Drive  
North Kingstown, RI 02825

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

**Rhode Island Air National Guard**  
Quonset State Airport  
2 Hercules Drive  
North Kingstown, RI 02825

RECEIVING WATER: Frys Pond

RECEIVING WATER CLASSIFICATION: A

The DEM proposes to modify the existing RIPDES permit to include revised footnotes defining the Outfall 100A/B monitoring location, a permit condition requiring RIANG develop a plan to implement Best Management Practices (BMPs) at its vehicle refueling facility, and an updated reporting section to reflect the electronic submission of Discharge Monitoring Reports (DMRs). This permit modification contains limitations and conditions to ensure that the discharge of storm water is protective of water quality.

**FURTHER INFORMATION:**

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  
Office of Water Resources  
Permits Section  
235 Promenade Street  
Providence, Rhode Island 02908-5767  
(401) 222-4700, ext: 7046

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 if requested. Requests for a Public Hearing must be submitted in writing to the attention of Samuel Kaplan, P.E. at the address indicated above. Notice should be taken that if DEM receives a request from twenty-five (25) people, a governmental agency or subdivision, or an association having no less than twenty-five (25) members on or before Wednesday, November 30<sup>th</sup>, a public hearing will be held at the following time and place:

Tuesday, December 6, 2016 5:00PM  
Room 280  
235 Promenade Street  
Providence, Rhode Island 02908

RIPDES PN 16-05-jbh

Interested persons should contact DEM to confirm if a hearing will be held at the time and location noted above.

235 Promenade Street is accessible to the handicapped. Individuals requesting communication assistance (assistive listening devices/readers/interpreters/captions) must notify the D.E.M. at the telephone number listed above or at 831-5508 (T.D.D.) 48 hours in advance of the hearing date.

Interested parties may submit comments on the permit actions and the administrative record to the address above no later than Wednesday, December 7, 2016.

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.

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 Friday, October 28, 2016 to Wednesday, December 7, 2016. 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.

#### **FINAL DECISION AND APPEALS:**

Following the close of the comment period, and after a public hearing, if such hearing is held, 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.

10/20/16  
Date

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

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 \_\_\_\_\_, 201\_.

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

This permit supersedes the permit issued on March 18, 2011

This permit consists of sixteen (16) pages in Part I including effluent limitations, monitoring requirements, etc. and ten (10) pages in Part II including General Conditions.

Signed this \_\_\_\_\_ day of \_\_\_\_\_, 201\_.

**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>Monitoring Requirement</u>	
	<u>Quantity - lbs./day</u>		<u>Concentration - specify units</u>			<u>Measurement Frequency</u>	<u>Sample Type</u>
	<u>Average Monthly</u>	<u>Maximum Daily</u>	<u>Average Monthly</u> *(Minimum)	<u>Average Weekly</u> *(Average)	<u>Maximum Daily</u> *(Maximum)		
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				--- ml/l	--- ml/l	1/Day	Grab

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

Sampling for TSS and BOD<sub>5</sub> shall be performed Tuesday, Thursday, and either Saturday or Sunday. All BOD<sub>5</sub> and TSS samples shall be taken on the influent and effluent with appropriate allowances for hydraulic detention (flow-through) time.

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

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: Outfall 001A (final discharge 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>Discharge Limitations</u>					<u>Monitoring Requirement</u>	
	<u>Quantity - lbs./day</u>		<u>Concentration - specify units</u>			<u>Measurement Frequency</u>	<u>Sample Type</u>
	<u>Average Monthly</u>	<u>Maximum Daily</u>	<u>Average Monthly</u> *(Minimum)	<u>Average Weekly</u> *(Average)	<u>Maximum Daily</u> *(Maximum)		
Fecal Coliform			<u>--- MPN<sup>1</sup></u> 100 ml	<u>--- MPN<sup>1</sup></u> 100 ml	<u>--- MPN<sup>1</sup></u> 100 ml	3/Week	Grab
Enterococci			<u>35 cfu<sup>1</sup></u> 100 ml		<u>276 cfu<sup>1</sup></u> 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>Two (2) of the three (3) Enterococci samples are to be taken on Wednesday and Friday. The Fecal Coliform samples shall be taken at the same time as the Enterococci samples. The Geometric Mean shall be used to obtain the "average monthly" and "average weekly" values. The facility shall report any fecal coliform sample result that exceeds 400 mpn/100 ml to the RIDEM in accordance with the 24-hour reporting requirements under Part II(I)(5) of the permit.

<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-CI G; (2) DPD Titrimetric, EPA No. 330.4 or Standard Methods (18<sup>th</sup> Edition) No. 4500-CI F; (3) Amperometric Titration, EPA No. 330.1 or Standard Methods (18<sup>th</sup> Edition) No. 4500-CI 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-CI B; (5) Iodometric Back Titration (either end-point), EPA No. 330.2 or Standard Methods (18<sup>th</sup> Edition) No. 4500-CI C.

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

## A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

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

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

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>			<u>Monitoring Requirement</u>			
	Quantity - lbs. per day		Concentration - specify units			<u>Measurement Frequency</u>	<u>Sample Type</u>
<u>Average Monthly</u>	<u>Maximum Daily</u>	<u>Average Monthly</u>	<u>Average Weekly</u>	<u>Maximum Daily</u>			
Total Copper <sup>1</sup>			--- ug/L		--- ug/L	1/Quarter	24-Hr. Composite
Total Cadmium <sup>1</sup>			--- ug/L		--- ug/L	1/Quarter	24-Hr. Composite
Hexavalent Chromium <sup>1</sup>			--- ug/L		--- ug/L	1/Quarter	24-Hr. Composite
Total Lead <sup>1</sup>			--- ug/L		--- ug/L	1/Quarter	24-Hr. Composite
Total Zinc <sup>1</sup>			--- ug/L		--- ug/L	1/Quarter	24-Hr. Composite
Total Nickel <sup>1</sup>			--- ug/L		--- ug/L	1/Quarter	24-Hr. Composite
Total Aluminum <sup>1</sup>			--- ug/L		--- ug/L	1/Quarter	24-Hr. Composite
Cyanide <sup>1</sup>			--- ug/L		--- ug/L	1/Quarter	Composite <sup>2</sup>
Total Ammonia <sup>1</sup>			--- ug/L		--- ug/L	1/Quarter	24-Hr. Composite

<sup>1</sup> Monitoring data may be obtained in conjunction with the bioassay testing required in Part I.B of the permit.

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

6.
  - a. The pH of the effluent shall not be less than 6.0 nor greater than 9.0 standard units at any time, unless these values are exceeded due to natural causes or as a result of the approved treatment processes.
  - b. The discharge shall not cause visible discoloration of the receiving waters.
  - c. The effluent shall contain neither a visible oil sheen, foam, nor floating solids at any time.
  - d. The permittee's treatment facility shall maintain a minimum of 85 percent removal of both total suspended solids and 5-day biochemical oxygen demand. The percent removal shall be based on monthly average values.
  - e. When the effluent discharged for a period of 90 consecutive days exceeds 80 percent of the designed flow, the permittee shall submit to the permitting authorities a projection of loadings up to the time when the design capacity of the treatment facility will be reached, and a program for maintaining satisfactory treatment levels consistent with approved water quality management plans.
7. The permittee shall analyze its effluent annually for the EPA Priority Pollutants as listed in 40 CFR 122, Appendix D, Tables II and III. These priority pollutant scans shall be coordinated with the 3<sup>rd</sup> quarter bioassay sample and the results of these analyses shall be submitted to the Department of Environmental Management by October 15<sup>th</sup> of each year. All sampling and analysis shall be done in accordance with EPA Regulations, including 40 CFR, Part 136; grab and composite samples shall be taken as appropriate.
8. 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>	<u>Frequency</u>
	One Specie Test (Four Times Annually)	
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 40 CFR Part 136.

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	---
Total Ammonia	X		0.1
Total Organic Carbon	X		0.5
Available 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	0.1
Total Copper	x	x	1.0
Hexavalent Chromium	x	x	20.0
Total Lead	x	x	1.0
Total Nickel	x	x	1.0
Total Zinc	x	x	5.0

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 conducted 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

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

**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 \_\_\_\_\_, 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. 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 documented and maintained onsite.

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 maintained onsite. If valid analytical results are repeatedly unobtainable, DEM may require that the permittee determine a method detection limit (MDL) for their effluent or sludge as outlined in 40 CFR Part 136, Appendix B.

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

1. "could not be analyzed" data shall be excluded, and shall not be considered as failure to comply with the permit sampling requirements;
2. results reported as less than the MDL shall be reported as zero in accordance with the DEM's DMR Instructions, provided that all appropriate EPA approved methods were followed.

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



**OTHER TOXIC POLLUTANTS**

	MDL ug/l (ppb)
Antimony, Total	3.0
Arsenic, Total	1.0
Beryllium, Total	0.2
Cadmium, Total	0.1
Chromium, Total	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**

The monitoring program in the permit specifies sampling and analysis, which will provide continuous information on compliance and the reliability and effectiveness of the installed pollution abatement equipment. The approved analytical procedures found in 40 CFR Part 136 are required unless other procedures are explicitly required in the permit. The Permittee is obligated to monitor and report sampling results to the DEM within the time specified within the permit.

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

**1. Submittal of DMRs Using NetDMR**

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

**2. Submittal of Reports as NetDMR Attachments**

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

- DMR Cover Letters
- Below Detection Limit summary tables
- Monthly Operating Reports

*All other reports (i.e. I/I reports, Priority Pollutant Scans, etc.) should be submitted to DEM hard copy via regular US mail (see Part I.F.3 below).*

**3. Submittal of Reports in Hard Copy Form**

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

- A. Written notifications required under Part II
- B. Notice of unauthorized discharges, including Sanitary Sewer Overflow (SSO) reporting
- C. Priority Pollutant Scan results
- D. Infiltration/Inflow Reports

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

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

**4. Verbal Reports and Verbal Notifications**

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

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** (water body ID #:RI0007029E-01F)

**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 commercial sewage. The discharge is from the Jamestown Wastewater Treatment Facility (WWTF) at Outfall 001A.

**II. Description of Discharge**

A quantitative description of the discharge in terms of significant effluent parameters based on DMR data from April 2011 through March 2016 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 WWTF 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 an aerated grit chamber, extended aeration, secondary clarification, and chlorination. A diagram of the facility is included in Attachment A-2.

Jamestown's most recent RIPDES permit, authorizing discharges from the above-mentioned facility, was issued on March 18, 2011. The permit became effective on May 1, 2011 and was

subsequently modified on November 12, 2014. The permit expired on May 1, 2016. Jamestown submitted an application for permit reissuance to the DEM on October 19, 2015. On October 28, 2015 the DEM issued an application complete letter to Jamestown. In accordance with Rule 13(a) of the Regulations for the Rhode Island Pollutant Discharge Elimination System, Jamestown's 2011 permit remains in effect since the DEM has determined that a timely and complete permit application was submitted. Once this permit is reissued, it will supersede the 2011 permit.

### Receiving Water Description

The water body segment that receives the discharge from the Jamestown WWTF is described as Narragansett Bay. The waterbody identification # for this water body is RI0007029E-01F. This segment is located in Jamestown and is classified as a class SB1 water body according to the Rhode Island Water Quality Regulations. SB1 waters are designated for primary and secondary contact recreational activities and fish and wildlife habitat. They shall be suitable for aquacultural uses, navigation, and industrial cooling. These waters shall have good aesthetic value. Primary contact recreational activities may be impacted due to pathogens from approved wastewater discharges. However, all Class SB criteria must be met. Currently, this segment is not listed as impaired in the DEM's 2014 303(d) List of Impaired Waters.

### Permit Development

Development of RIPDES permit limitations is a multi-step process consisting of the following steps: calculating allowable water quality-based discharge levels using instream criteria, background data and available dilution; determining if technology based limits apply; developing Best Professional Judgment (BPJ)-based limits; taking the most stringent of the water quality-based, technology-based, and BPJ-based limits as the new allowable discharge levels; comparing existing permit limits to the new allowable discharge levels and performing an antidegradation/antibacksliding analysis to determine the final permit limits; and evaluating the ability of the facility to meet the final permit limits.

Water quality criteria are comprised of numeric and narrative criteria. Numeric criteria are scientifically derived ambient concentrations developed by EPA or the State for various pollutants of concern to protect human health and aquatic life. Narrative criteria are statements that describe the desired water quality goal. A technology-based limit is a numeric limit, which is determined by examining the capability of a treatment process to reduce or eliminate pollutants. 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).

### **WWTF Conventional Pollutant Permit Limitations**

#### Flow limits

The basis for the facility's flow limit of 0.73 MGD is the facility's 2009 Operations and Maintenance Manual approved April 17, 2013. This flow is consistent with the monthly average design flow from the WWTF's Facilities Plan that was approved by the DEM on June 24, 2003.

#### BOD<sub>5</sub>, TSS, Settleable Solids, and pH

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 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.

## Oil and Grease

Oil and Grease monitoring requirements have been maintained in this permit in order to serve as a process control parameter. Monitoring data will serve as an indicator of excessive levels of Oil and Grease in the collection system that is typically attributed to restaurants and other sources of Oil and Grease loading which discharge to the sewer collection system. Jamestown and DEM will be able to use this data to track and potentially initiate corrective action if necessary to prevent backups and blockages within the sewer collection system.

## Bacteria

Table 2.8.D(3) of the Rhode Island Water Quality Regulations includes Enterococci criteria for primary contact/swimming of a geometric mean of 35 colonies/100 ml and a single sample maximum of 104 colonies/100 ml. However, the "single sample maximum" value is only used by the Rhode Island Department of Health to evaluate swimming advisories at public beaches and is not applied to the receiving water in the area of the Jamestown WWTF's outfall. EPA's November 12, 2008 memorandum regarding "Initial Zones of Dilution for Bacteria in Rivers and Streams Designated for Primary Contact Recreation" specifies that it is not appropriate to use dilution for bacteria criteria in receiving waters that are designated for primary contact recreation.

Therefore, because the receiving water is designated for primary contact recreation, the DEM has assigned a monthly average Enterococci limit of 35 colonies/100 ml. This limit is consistent with the water quality criteria from Table 2.8.D(3) of the Rhode Island Water Quality Regulations.

The daily maximum enterococci limit has been set at the 90% upper confidence level value for "lightly used full body contact recreation" of 276 colonies/100 ml. The DEM has assigned Fecal Coliform monitoring to ensure that the discharge from the WWTF will not have an impact on any areas designated for shellfish harvesting outside of the immediate vicinity of the outfall.

## WWTF Toxic Pollutant Limits

The allowable effluent limitations were established on the basis of acute and chronic aquatic life criteria and human health criteria using the following: available instream dilution; an allocation factor; and background concentrations when available and/or appropriate. The aquatic life and human health criteria are specified in the Rhode Island Water Quality Regulations. Aquatic life criteria have been established to ensure the protection and propagation of aquatic life while human health criteria represent the pollutant levels that would not result in a significant risk to public health from ingestion of aquatic organisms. The more stringent of the two criteria was then used in establishing allowable effluent limitations. Details concerning the calculation of potential permit limitations, selection of factors, which influence their calculation, and the selection of final permit limitations are included below or in the attached documents.

### Mixing Zones and Dilution Factors

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 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-3.

Using the above-mentioned dilution factors the allowable discharge levels were calculated as follows:

- a) Background concentration unknown or available data is impacted by sources that have not yet achieved water quality based limits.

$$Limit_1 = (DF) * (Criteria) * (80\%)$$

Where: DF = acute or chronic dilution factor, as appropriate

- b) Using available background concentration data<sup>1</sup>.

$$Limit_1 = (DF) * (Criteria) * 90\% - (Background) * (DF - 1)$$

Where: DF = acute or chronic dilution factor, as 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. 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.

The formulas and data noted above were applied with the following exceptions:

- A) Pollutants that, based on the acute and chronic dilution factors, have a higher allowable chronic limit than allowable acute limit. For this situation, both the "Monthly Average" and "Daily Maximum" limits were set at the allowable acute limit.
- B) Total Residual Chlorine (TRC). The limits for TRC were established in accordance with the DEM Effluent Disinfection Policy. The "Monthly Average" and "Daily Maximum" were based on a 100% allocation, a zero background concentration, and the appropriate dilution factors. The 100% allocation factor for TRC was used due to the non-conservative nature of chlorine and the improbability of the receiving water having a detectable background TRC concentration. When these procedures are used to calculate water quality-based TRC limits, it results in allowable discharge levels greater than DEM's technology-based limit of 2.0 mg/L. Therefore, the DEM has maintained the WWTF's TRC limits at 2.0 mg/L.

The potential ammonia limitations were derived from acute and chronic water quality criteria for saltwater from the Rhode Island Water Quality Regulations, which are based upon salinity, pH, and temperature. A salinity equal to 30 ppt., pH equal to 8.0 standard units, and average temperatures equal to 20°C and 5°C during Summer and Winter seasons, respectively, were used to calculate the allowable water quality-based discharge levels for ammonia. Salinity and temperature values were based upon data contained in the Narragansett Bay Project Reports, #NBP-89-22 and #NBP-89-24, titled "Water Quality Survey of Narragansett Bay-A Summary of the SINBADD 1985-1986" and "SPRAY Cruise-Dissolved Oxygen and Chlorophyll", respectively. The pH value was determined from data contained in a report titled "Monitoring of the Providence and Seekonk Rivers for Trace Metals and Associated Parameters-SPRAY Cruises I, II, III" [Deoring et al., 1988], and from a University of Rhode Island Graduate School of Oceanography research paper titled "Co-occurrence of Dinoflagellate Blooms and High pH in Marine Enclosures", [Hinga, 1992].

Reference Attachment A-4 for calculations of allowable limits based on Aquatic Life and Human Health Criteria.

### Antibacksliding

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<sup>1</sup>Source of background data is *Water Quality Survey of Narragansett Bay - A Summary of Results from the SINBADD 1985-1986*; Pilson, Michael E.Q. and Hunt, Carlton, D.; March 1989; Report #NBP-89-22.

Antibacksliding restricts the level of relaxation of water quality based limits from the previous permit. Section 303(d)(4) of the Clean Water Act addresses antibacksliding as the following:

*Section 303(d)(4)*

- A) Standards not attained - For receiving waters that have not attained the applicable water quality standards, limits based on a TMDL or WLA can only be revised if the water quality standards will be met. This may be done by (i) determining that the cumulative effect of all such revised limits would assure the attainment of such water quality standards; or (ii) removing the designated use which is not being attained in accordance with regulations under Section 303.
- B) Standards attained - For receiving waters achieving or exceeding applicable water quality standards, limits can be relaxed if the revision is consistent with the State's Antidegradation Policy.

Therefore, in order to determine whether backsliding is permissible, the first question that must be answered is whether or not the receiving water is attaining the water quality standard. The Office has determined the most appropriate evaluation of existing water quality is by calculating the pollutant levels, which would result after consideration of all currently valid RIPDES permit limits or historic discharge data (whichever is greater), background data (when available), and any new information (i.e.: dilution factors).

Antidegradation

The RIDEM's "Policy on the Implementation of the Antidegradation Provisions of the Rhode Island Water Quality Regulations July 2006" (the Policy) establishes four tiers of water quality protection:

**Tier 1.** In all surface waters, existing uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.

**Tier 2.** In waters where the existing water quality exceeds levels necessary to support propagation of fish and wildlife, and recreation in and on the water, that quality shall be maintained and protected, except for insignificant changes in water quality as determined by the Director and in accordance with the Antidegradation Implementation Policy, as amended. In addition, the Director may allow significant degradation which is determined to be necessary to achieve important economic or social benefits to the State in accordance with the Antidegradation Implementation Policy, as amended.

**Tier 2½.** Where high quality waters constitute a Special Resource Protection Water SRPW<sup>2</sup>, there shall be no measurable degradation of the existing water quality necessary to protect the characteristic(s) which cause the waterbody to be designated a SRPW. Notwithstanding that all public drinking water supplies are SRPWs, public drinking water suppliers may undertake temporary and short-term activities within the boundary perimeter of a public drinking water supply impoundment for essential maintenance or to address emergency conditions in order to prevent adverse effect on public health or safety. These activities must comply with the requirements set forth in Tier 1 and Tier 2.

**Tier 3.** Where high quality waters constitute an Outstanding Natural Resource ONRWs<sup>3</sup>,

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<sup>2</sup>SRPWs are surface waters identified by the Director as having significant recreational or ecological uses.

<sup>3</sup>ONRWs are a special subset of high quality water bodies, identified by the State as having significant recreational or ecological water uses.

that water quality shall be maintained and protected. The State may allow some limited activities that result in temporary and short-term changes in the water quality of an ONRW. Such activities must not permanently degrade water quality or result in water quality lower than necessary to protect the existing uses in the ONRW.

The formulas previously presented ensure that permit limitations are based upon water quality criteria and methodologies established to ensure that all designated uses will be met.

In terms of the applicability of Tier 2 of the Policy, a water body is assessed as being high quality on a parameter-by-parameter basis. In accordance with Part II of the Policy, "Antidegradation applies to all new or increased projects or activities which may lower water quality or affect existing water uses, including but not limited to all 401 Water Quality Certification reviews and any new, reissued, or modified RIPDES permits." Part VI.A of the Policy indicates that it is not applicable to activities which result in insignificant (i.e.: short-term minor) changes in water quality and that significant changes in water quality will only be allowed if it is necessary to accommodate important economic and social development in the area in which the receiving waters are located (important benefits demonstration). Part VI.B.4 of the Policy states that: "Theoretically, any new or increased discharge or activity could lower existing water quality and thus require the important benefits demonstration. However, RIDEM will: 1) evaluate applications on a case-by-case basis, using BPJ and all pertinent and available facts, including scientific and technical data and calculations as provided by the applicant; and 2) determine whether the incremental loss is significant enough to require the important benefits demonstration described below. [If not then as a general rule RIDEM will allocate no more than 20%.] Some of the considerations which will be made to determine if an impact is significant in each site specific decision are: 1) percent change in water quality parameter value and their temporal distribution; 2) quality and value of the resource; 3) cumulative impact of discharges and activities on water quality to-date; 4) measurability of the change; 5) visibility of the change; 6) impact on fish and wildlife habitat; and 7) impact on potential and existing uses. As a general guide, any discharge or activity which consumes greater than 20% of the remaining assimilative capacity (See Section VI.B.2) will be considered a significant impact and will be required to demonstrate important economic or social benefits to justify the activity (See Section VI.C. below). However, on a case-by-case basis, any proposed percent consumption of the remaining assimilative capacity may be deemed significant and invoke full requirements to demonstrate important economic or social benefits."

In terms of a RIPDES permit, an increased discharge is defined as an increase in any limitation, which would result in an increased mass loading to a receiving water. The baseline for this comparison would be the monthly average mass loading established by the previous permit. It would be inappropriate to use the daily maximum mass loading since the Policy is not applicable to short-term changes in water quality.

For the purposes of ensuring that the revised limit is consistent with the requirements of antidegradation, existing water quality must be defined. As explained earlier, RIDEM evaluates existing water quality by determining the pollutant levels which would result under the design conditions appropriate for the particular criteria (i.e., background water quality, when available and/or appropriate; non-point source inputs; and existing RIPDES permit limitations or recent historical discharge data, whichever is higher). In general, available data would be used to make this determination.

Using the above-mentioned criteria, the present instream water quality  $C_p$  is defined as:

$$C_p = \frac{(DF - 1) * C_b + (I * C_d)}{DF}$$

where:  $C_b$  = background concentration<sup>4</sup>

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<sup>4</sup>Data collected at a location that is unimpacted by significant point source discharges.

$C_d$  = discharge data<sup>5</sup>  
DF = dilution factor

If the waterbody is a high quality water for the pollutant in question ( $C_p < C_{criteria}$ ), then the discharge requires an evaluation under Tier 2 protection. If the waterbody is not determined to be high quality for that parameter, then antibacksliding will allow an increased permit limit only if it can be assured that water quality standards would be attained. Therefore, the permit limit would be calculated to comply with Tier 1 protection, using the procedures noted previously (i.e., Limit<sub>1</sub>).

Assuming the receiving water has been designated as a high quality waterbody for the parameter under investigation, the next step is to determine whether the new or increased discharge is permissible and if so whether an important benefits demonstration is required. As explained above, for existing discharges RIDEM shall follow the general rule of allocating no more than 20% of the remaining assimilative capacity without the need to complete this demonstration (assuming the receiving water is not an SRPW or ONRW). On a case-by-case basis, the RIDEM may limit the allocation or determine that any incremental loss or impact to the receiving water is significant enough to require a detailed important benefits demonstration.

Since none of the limits proposed in this permit are less stringent than the limits from the previous permit, the proposed limits comply with the State's antibacksliding and antidegradation policies and additional analysis is not required.

A summary of DMR data for the past five (5) years and a summary of State User Fee Program data are provided in Attachments A-5 and A-6 respectively.

Attachment A-7 is a summary comparison of the allowable discharge levels vs. the DMR and State User Fee Program data.

#### Reasonable Potential

In accordance with 40 CFR Part 122.4(d)(1)(i), water quality-based effluent limitations are only required for those pollutants in the discharge that have the reasonable potential to cause or contribute to the exceedance of instream criteria. In order to evaluate the need for permit limitations, the most stringent calculated acute and chronic concentrations were compared to the average DMR data and the mean of the concentrations reported in the WWTF's annual priority pollutant scans. Based on this analysis, no pollutants have "reasonable potential". Therefore, this permit does not include any water quality-based limits. However, as indicated above, technology-based limits for TRC have been maintained in this permit.

#### Bioassay testing

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 2<sup>nd</sup> Quarter 2014 through 1<sup>st</sup> Quarter 2016 had LC<sub>50</sub> values of 100% effluent or >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.

Although these pollutants did not have "reasonable potential", quarterly monitoring for Cyanide,

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<sup>5</sup>Discharge data refers to the maximum of the permit limit or the historic discharge level. The historic discharge level is determined by calculating the upper 95<sup>th</sup> percent confidence interval for the monthly average reported data for the past five (5) years. For specific cases, changes in treatment efficiency or pretreatment limitations may support the use of an alternative period of time.

Total Ammonia, Total Aluminum, Total Cadmium, Total Copper, Hexavalent Chromium, Total Lead, Total Nickel, and Total Zinc have been included in the permit as part of the standard list of pollutants monitored as part of the quarterly toxicity testing.

### Other Limits and Conditions

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 its 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.

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.

### Final Permit Limits

Presented in Table #1 is a summary of the permit limitations.

Table #1 Final Permit Limitations

Parameter	Monthly Average (Minimum)	Weekly Average (Average)	Daily Maximum (Maximum)
Flow	0.73 MGD		--- MGD
BOD <sub>5</sub>	183 lbs/d		304 lbs/d
BOD <sub>5</sub>	30 mg/l	45 mg/l	50 mg/l
BOD <sub>5</sub> - % Removal	85%		
TSS	183 lbs/d		304 lbs/d
TSS	30 mg/l	45 mg/l	50 mg/l
TSS - % Removal	85%		
Settleable Solids		--- ml/l	--- ml/l
Fecal Coliform	--- MPN/100 ml	--- MPN/100 ml	--- MPN/100 ml
Enterococci	35 cfu/100 ml		276 cfu/100 ml
Total Residual Chlorine (TRC)	2.0 mg/l		2.0 mg/l
pH	(6.0 SU)		(9.0 SU)
Oil and Grease			--- mg/l
TKN (May 1 – October 31)	--- mg/l		--- mg/l
Nitrate, Total (as N) (May 1 – October 31)	--- mg/l		--- mg/l
Nitrite, Total (as N) (May 1 – October 31)	--- mg/l		--- mg/l
Nitrogen, Total	--- mg/l		--- mg/l

Hexavalent Chromium	--- ug/L		--- ug/L
Total Lead	--- ug/L		--- ug/L
Total Zinc	--- ug/L		--- ug/L
Total Nickel	--- ug/L		--- ug/L
Total Aluminum	--- ug/L		--- ug/L
Cyanide	--- ug/L		--- ug/L
Total Ammonia	--- ug/L		--- ug/L

**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.

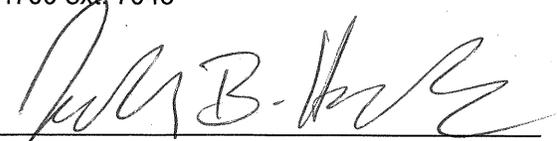
Following the close of the comment period, and after a public hearing, if such hearing is held, the Director will issue a final permit decision and forward a copy of the final decision to the applicant and each person who has submitted written comments or requested notice. Within thirty (30) days following 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

10/19/16  
 Date

  
 Joseph B. Haberek, P.E.  
 Principal Sanitary Engineer  
 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	0.3698 MGD		0.7394 MGD
BOD <sub>5</sub>	2.9983 mg/l	4.8652 mg/l	7.3833 mg/l
BOD <sub>5</sub> load	9.458 lb/d		31.4562 lb/d
TSS	4.0718 mg/l	7.2883 mg/l	11.3467 mg/l
TSS load	12.4553 lb/d		48.6392 lb/d
Fecal Coliform ml	2.2915 MPN/100 ml	12.7062 MPN/100 ml	400105 MPN/100
pH	6.2633 S.U. (Min.)		6.975 S.U. (Max.)
Total Chlorine Residual	1.0525 mg/l		1.8283 mg/l
Oil & Grease			1.6533 mg/l
Nitrite, Total (as N) <sup>4</sup>			0.0447 mg/l
Nitrate, Total (as N) <sup>4</sup>			4.7053 mg/l
Nitrogen, Total Kjeldhal <sup>4</sup>			2.7757 mg/l
Nitrogen, Total <sup>4</sup>			7.5007 mg/l
Settleable Solids		0 ml/l	0 ml/l
BOD % Removal	98.405		
TSS % Removal	97.6		

<sup>1</sup>Data represents the mean of the monthly average data from April 2011-March 2016

<sup>2</sup>Data represents the mean of the weekly average data from April 2011-March 2016

<sup>3</sup>Data represents the mean of the daily maximum data from April 2011-March 2016

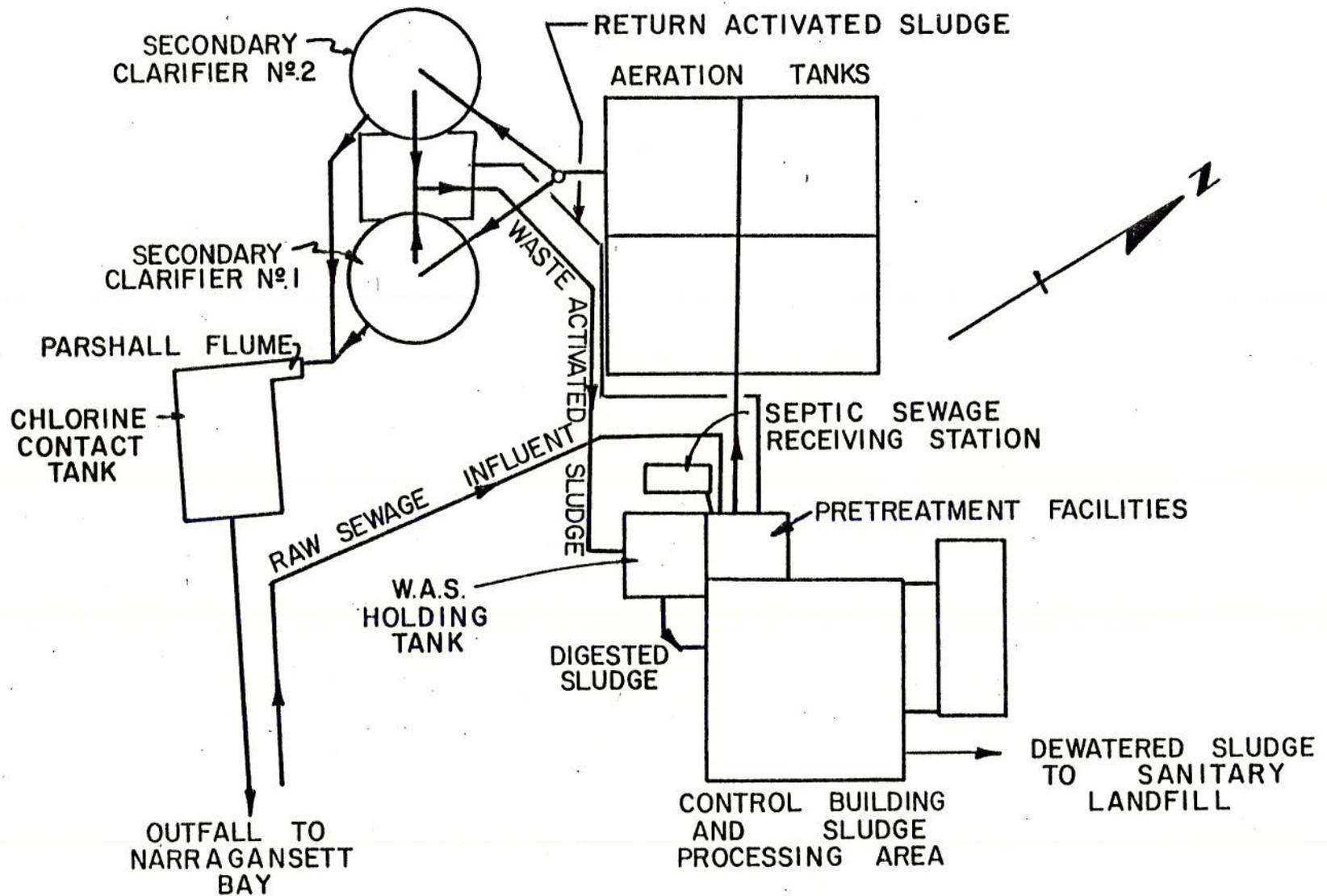
<sup>4</sup>Data represents the mean of daily maximum data from May-October of 2011-2015

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

Pre-Cl2 Mysid  
Minnow

2014			2015				2016
2nd qtr.	3rd qtr.	4th qtr.	1st qtr.	2nd qtr.	3rd qtr.	4th qtr.	1st qtr.
>100%	>100%	>100%	>100%	>100%	>100%	=100%	=100%

**ATTACHMENT A-2: Process flow diagram**



DATE No. 1



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

FLOW DIAGRAM  
 WATER POLLUTION CONTROL FACILITY  
 JAMESTOWN, RHODE ISLAND

**ATTACHMENT A-3: Mixing Zone**

UMERGE OUTPUT - JAMESTOWN WWTF - OUTFALL 001A

THIS OUTPUT FILE IS PART TWO OF TWO MODEL RUNS WHICH CHARACTERIZES THE SIDE OF JAMESTOWN'S OUTFALL WHICH HAS FOUR DIFFUSERS.

UMERGE VERSION 1.0 AUGUST 1985.

UNIVERSAL DATA FILE: JAMES\_4.DAT;2

CASE I.D. #1 EFFLUENT & AMBIENT DENSITY AS G/CM3, NO CURRENT, IXI=IX0=ZERO

ASPIRATION ENTRAINMENT COEFFICIENT = 0.10 (DEFAULT)  
 NUMBER OF STEPS ALLOWED = 5000 (DEFAULT)  
 ITERATION PRINTOUT FREQUENCY = 150 (DEFAULT)  
 PRINT ARRAY AA (0=NO, 1=YES) = 0 (DEFAULT)  
 PRINT ARRAY AB (0=NO, 1=YES) = 0 (DEFAULT)  
 PRINT ARRAY AC (0=NO, 1=YES) = 0 (DEFAULT)

INITIAL DENSITY OF THE PLUME = -1.0000 SIGMAT UNITS  
 FROUDE NUMBER = 3.5

DEPTH (M)	SIGMAT	U (M/S)
0.00	25.00	0.000
15.20	25.00	0.000

TOTAL EFFLUENT FLOW = 0.0183 CMS  
 NUMBER OF PORTS = 4  
 PORT DIAMETER = 0.1020 M  
 PORT SPACING = 4.00 M  
 VERTICAL PORT ANGLE FROM HORIZONTAL = 0.0 DEGREES  
 PORT DEPTH = 15.20 M

FIRST LINE OF OUTPUT ARE INTIAL CONDITIONS

X (M)	Z (M)	PLUME DIAMETER (M)	DILU- TION	DENDIFF (SIGMAT)	HORIZ VEL (M/S)	VERT VEL (M/S)	TOTAL VEL (M/S)	AMBIENT CURRENT (M/S)
0.00	15.20	0.102	1.00	26.00	0.56	0.00	0.56	0.000
0.00	15.20	0.102	1.01	25.82	0.56	0.00	0.56	0.000
0.42	15.09	0.262	2.78	9.19	0.20	0.13	0.24	0.000
0.94	14.32	0.479	7.82	3.25	0.07	0.19	0.20	0.000
1.32	12.66	0.870	22.08	1.15	0.02	0.17	0.17	0.000
1.61	9.55	1.613	62.40	0.41	0.01	0.14	0.14	0.000
1.85	3.74	3.005	176.45	0.14	0.00	0.11	0.11	0.000

COMPUTATIONS CEASE: PLUMES SURFACE

DILUTION = 272.52

UMERGE OUTPUT - JAMESTOWN WWTF - OUTFALL 001A

THIS OUTPUT FILE IS PART ONE OF THE TWO MODEL RUNS WHICH CHARACTERIZES THE SIZE OF JAMESTOWN'S OUTFALL WHICH HAS THREE DIFFUSERS.

UMERGE VERSION 1.0 AUGUST 1985.

UNIVERSAL DATA FILE: JAM\_3\_UM.DAT;1

CASE I.D. #1 EFFLUENT & AMBIENT DENSITY AS G/CM3, NO CURRENT, IXI=IX0=ZERO

ASPIRATION ENTRAINMENT COEFFICIENT = 0.10 (DEFAULT)  
NUMBER OF STEPS ALLOWED = 5000 (DEFAULT)  
ITERATION PRINTOUT FREQUENCY = 150 (DEFAULT)  
PRINT ARRAY AA (0=NO, 1=YES) = 0 (DEFAULT)  
PRINT ARRAY AB (0=NO, 1=YES) = 0 (DEFAULT)  
PRINT ARRAY AC (0=NO, 1=YES) = 0 (DEFAULT)

INITIAL DENSITY OF THE PLUME = -1.0000 SIGMAT UNITS  
FROUDE NUMBER = 3.5

DEPTH (M)	SIGMAT	U (M/S)
0.00	25.00	0.000
15.20	25.00	0.000

TOTAL EFFLUENT FLOW = 0.0137 CMS  
NUMBER OF PORTS = 3  
PORT DIAMETER = 0.1020 M  
PORT SPACING = 4.00 M  
VERTICAL PORT ANGLE FROM HORIZONTAL = 0.0 DEGREES  
PORT DEPTH = 15.20 M

FIRST LINE OF OUTPUT ARE INITIAL CONDITIONS

X (M)	Z (M)	PLUME DIAMETER (M)	DILU- TION	DEN- DIFF (SIGMAT)	HORIZ VEL (M/S)	VERT VEL (M/S)	TOTAL VEL (M/S)	AMBIENT CURRENT (M/S)
0.00	15.20	0.102	1.00	26.00	0.56	0.00	0.56	0.000
0.00	15.20	0.102	1.01	25.82	0.56	0.00	0.56	0.000
0.42	15.08	0.262	2.78	9.19	0.20	0.13	0.23	0.000
0.94	14.32	0.479	7.82	3.25	0.07	0.19	0.20	0.000
1.32	12.67	0.869	22.08	1.15	0.02	0.17	0.17	0.000
1.61	9.55	1.612	62.40	0.41	0.01	0.14	0.14	0.000
1.84	3.74	3.003	176.45	0.14	0.00	0.11	0.11	0.000

COMPUTATIONS CEASE: PLUMES SURFACE

DILUTION = 272.80

**ATTACHMENT A-4: Water Quality Calculations**

## CALCULATION OF WATER QUALITY BASED SALTWATER DISCHARGE LIMITS FACILITY SPECIFIC DATA INPUT SHEET

NOTE: LIMITS BASED ON RI WATER QUALITY CRITERIA DATED JULY 2006

FACILITY NAME: **Jamestown WWTF**

RIPDES PERMIT #: **RI0100366**

	DISSOLVED BACKGROUND DATA (ug/L)	ACUTE METAL TRANSLATOR	CHRONIC METAL TRANSLATOR
ALUMINUM	NA	NA	NA
ARSENIC	NA	1	1
CADMIUM	0.033823777	0.994	0.994
CHROMIUM III	NA	NA	NA
CHROMIUM VI	0.165139975	0.993	0.993
COPPER	0.664061543	0.83	0.83
LEAD	0.048476988	0.951	0.951
MERCURY	NA	0.85	NA
NICKEL	1.139875065	0.99	0.99
SELENIUM	NA	0.998	0.998
SILVER	0.005729996	0.85	0.85
ZINC	NA	0.946	0.946

**USE NA WHEN NO DATA IS AVAILABLE**

NOTE 1: BACKGROUND DATA BASED ON AVERAGE CONCENTRATIONS OBTAINED FROM THE FOUR SINBADD CRUISES IN CURRENT REPORT #: NBP-89-22 (LOCATIONS B13, B14, & B16).

NOTE 2: METAL TRANSLATORS FROM RI WATER QUALITY REGS.

DILUTION FACTORS	
ACUTE =	<b>273</b> x
CHRONIC =	<b>273</b> x
HUMAN HEALTH =	<b>273</b> x

NOTE: TEST WWTF'S DILUTION FACTORS OBTAINED FROM A DYE STUDY.

TOTAL AMMONIA CRITERIA (ug/L)	
WINTER ACUTE =	<b>21000</b>
CHRONIC =	<b>3100</b>
SUMMER ACUTE =	<b>7300</b>
CHRONIC =	<b>1100</b>

NOTE 1: LIMITS ARE FROM TABLE 3 IN THE RI WATER QUALITY REGS. USING:  
SALINITY = 30 g/Kg;  
pH = 8.0 S.U.  
WINTER (NOV-APRIL) TEMP=5.0 C;  
SUMMER (MAY-OCT) TEMP=20.0 C.

**CALCULATION OF WATER QUALITY BASED SALTWATER DISCHARGE LIMITS**

FACILITY NAME: Jamestown WWTF RIPDES PERMIT #: RI0100366

NOTE: METALS CRITERIA ARE DISSOLVED, METALS LIMITS ARE TOTAL; AMMONIA CRITERIA AND LIMITS HAVE BEEN CONVERTED TO ug/l N.

CHEMICAL NAME	CAS #	BACKGROUND CONCENTRATION (ug/L)	SALTWATER CRITERIA ACUTE (ug/L)	DAILY MAX LIMIT (ug/L)	SALTWATER CRITERIA CHRONIC (ug/L)	HUMAN HEALTH NON-CLASS A CRITERIA (ug/L)	MONTHLY AVE LIMIT (ug/L)
<b>PRIORITY POLLUTANTS:</b>							
<b>TOXIC METALS AND CYANIDE</b>							
ANTIMONY	7440360			No Criteria		640	139776
ARSENIC (limits are total recoverable)	7440382	NA	69	15069.6	36	1.4	305.76
ASBESTOS	1332214			No Criteria			No Criteria
BERYLLIUM	7440417			No Criteria			No Criteria
CADMIUM (limits are total recoverable)	7440439	0.033823777	40	9878.068343	8.8		2165.955667
CHROMIUM III (limits are total recoverable)	16065831	NA		No Criteria			No Criteria
CHROMIUM VI (limits are total recoverable)	18540299	0.165139975	1100	272129.9919	50		12326.36649
COPPER (limits are total recoverable)	7440508	0.664061543	4.8	1203.295494	3.1		700.0545306
CYANIDE	57125		1	218.40	1	140	218.4
LEAD (limits are total recoverable)	7439921	0.048476988	210	54241.65537	8.1		2078.847802
MERCURY (limits are total recoverable)	7439976	NA	1.8	462.4941176	0.94	0.15	32.76
NICKEL (limits are total recoverable)	7440020	1.139875065	74	18052.27675	8.2	4600	1721.913113
SELENIUM (limits are total recoverable)	7782492	NA	290	63462.92585	71	4200	15537.47495
SILVER (limits are total recoverable)	7440224	0.005729996	1.9	547.3781661			No Criteria
THALLIUM	7440280			No Criteria		0.47	102.648
ZINC (limits are total recoverable)	7440666	NA	90	20778.01268	81	26000	18700.21142
<b>VOLATILE ORGANIC COMPOUNDS</b>							
ACROLEIN	107028			No Criteria		290	63336
ACRYLONITRILE	107131			No Criteria		2.5	546
BENZENE	71432			No Criteria		510	111384
BROMOFORM	75252			No Criteria		1400	305760
CARBON TETRACHLORIDE	56235			No Criteria		16	3494.4
CHLOROBENZENE	108907			No Criteria		1600	349440
CHLORODIBROMOMETHANE	124481			No Criteria		130	28392
CHLOROFORM	67663			No Criteria		4700	1026480
DICHLOROBROMOMETHANE	75274			No Criteria		170	37128
1,2DICHLOROETHANE	107062			No Criteria		370	80808
1,1DICHLOROETHYLENE	75354			No Criteria		7100	1550640
1,2DICHLOROPROPANE	78875			No Criteria		150	32760
1,3DICHLOROPROPYLENE	542756			No Criteria		21	4586.4
ETHYLBENZENE	100414			No Criteria		2100	458640
BROMOMETHANE (methyl bromide)	74839			No Criteria		1500	327600
CHLOROMETHANE (methyl chloride)	74873			No Criteria			No Criteria
METHYLENE CHLORIDE	75092			No Criteria		5900	1288560

**CALCULATION OF WATER QUALITY BASED SALTWATER DISCHARGE LIMITS**

FACILITY NAME: Jamestown WWTF RIPDES PERMIT #: RI0100366

NOTE: METALS CRITERIA ARE DISSOLVED, METALS LIMITS ARE TOTAL; AMMONIA CRITERIA AND LIMITS HAVE BEEN CONVERTED TO ug/l N.

CHEMICAL NAME	CAS #	BACKGROUND CONCENTRATION (ug/L)	SALTWATER CRITERIA ACUTE (ug/L)	DAILY MAX LIMIT (ug/L)	SALTWATER CRITERIA CHRONIC (ug/L)	HUMAN HEALTH NON-CLASS A CRITERIA (ug/L)	MONTHLY AVE LIMIT (ug/L)
1,1,2,2TETRACHLOROETHANE	79345			No Criteria		40	8736
TETRACHLOROETHYLENE	127184			No Criteria		33	7207.2
TOLUENE	108883			No Criteria		15000	3276000
1,2TRANS-DICHLOROETHYLENE	156605			No Criteria		10000	2184000
1,1,1TRICHLOROETHANE	71556			No Criteria			No Criteria
1,1,2TRICHLOROETHANE	79005			No Criteria		160	34944
TRICHLOROETHYLENE	79016			No Criteria		300	65520
VINYL CHLORIDE	75014			No Criteria		2.4	524.16
ACID ORGANIC COMPOUNDS							
2CHLOROPHENOL	95578			No Criteria		150	32760
2,4DICHLOROPHENOL	120832			No Criteria		290	63336
2,4DIMETHYLPHENOL	105679			No Criteria		850	185640
4,6DINITRO-2-METHYL PHENOL	534521			No Criteria		280	61152
2,4DINITROPHENOL	51285			No Criteria		5300	1157520
4NITROPHENOL	88755			No Criteria			No Criteria
PENTACHLOROPHENOL	87865		13	2839.2	7.9	30	1725.36
PHENOL	108952			No Criteria		1700000	371280000
2,4,6TRICHLOROPHENOL	88062			No Criteria		24	5241.6
BASE NEUTRAL COMPOUNDS							
ACENAPHTHENE	83329			No Criteria		990	216216
ANTHRACENE	120127			No Criteria		40000	8736000
BENZIDINE	92875			No Criteria		0.002	0.4368
POLYCYCLIC AROMATIC HYDROCARBONS				No Criteria		0.18	39.312
BIS(2CHLOROETHYL)ETHER	111444			No Criteria		5.3	1157.52
BIS(2CHLOROISOPROPYL)ETHER	108601			No Criteria		65000	14196000
BIS(2ETHYLHEXYL)PHTHALATE	117817			No Criteria		22	4804.8
BUTYL BENZYL PHTHALATE	85687			No Criteria		1900	414960
2CHLORONAPHTHALENE	91587			No Criteria		1600	349440
1,2DICHLOROBENZENE	95501			No Criteria		1300	283920
1,3DICHLOROBENZENE	541731			No Criteria		960	209664
1,4DICHLOROBENZENE	106467			No Criteria		190	41496
3,3DICHLOROBENZIDENE	91941			No Criteria		0.28	61.152
DIETHYL PHTHALATE	84662			No Criteria		44000	9609600
DIMETHYL PHTHALATE	131113			No Criteria		1100000	240240000
Di-n-BUTYL PHTHALATE	84742			No Criteria		4500	982800
2,4DINITROTOLUENE	121142			No Criteria		34	7425.6

**CALCULATION OF WATER QUALITY BASED SALTWATER DISCHARGE LIMITS**

FACILITY NAME: Jamestown WWTF RIPDES PERMIT #: RI0100366

NOTE: METALS CRITERIA ARE DISSOLVED, METALS LIMITS ARE TOTAL; AMMONIA CRITERIA AND LIMITS HAVE BEEN CONVERTED TO ug/l N.

CHEMICAL NAME	CAS #	BACKGROUND CONCENTRATION (ug/L)	SALTWATER CRITERIA ACUTE (ug/L)	DAILY MAX LIMIT (ug/L)	SALTWATER CRITERIA CHRONIC (ug/L)	HUMAN HEALTH NON-CLASS A CRITERIA (ug/L)	MONTHLY AVE LIMIT (ug/L)
1,2DIPHENYLHYDRAZINE	122667			No Criteria		2	436.8
FLUORANTHENE	206440			No Criteria		140	30576
FLUORENE	86737			No Criteria		5300	1157520
HEXACHLOROBENZENE	118741			No Criteria		0.0029	0.63336
HEXACHLOROBUTADIENE	87683			No Criteria		180	39312
HEXACHLOROCYCLOPENTADIENE	77474			No Criteria		1100	240240
HEXACHLOROETHANE	67721			No Criteria		33	7207.2
ISOPHORONE	78591			No Criteria		9600	2096640
NAPHTHALENE	91203			No Criteria			No Criteria
NITROBENZENE	98953			No Criteria		690	150696
NNITROSODIMETHYLAMINE	62759			No Criteria		30	6552
NNITROSODINPROPYLAMINE	621647			No Criteria		5.1	1113.84
NNITROSODIPHENYLAMINE	86306			No Criteria		60	13104
PYRENE	129000			No Criteria		4000	873600
1,2,4trichlorobenzene	120821			No Criteria		70	15288
PESTICIDES/PCBs							
ALDRIN	309002		1.3	283.92		0.0005	0.1092
Alpha BHC	319846			No Criteria		0.049	10.7016
Beta BHC	319857			No Criteria		0.17	37.128
Gamma BHC (Lindane)	58899		0.16	34.944		1.8	393.12
CHLORDANE	57749		0.09	19.656	0.004	0.0081	0.8736
4,4DDT	50293		0.13	28.392	0.001	0.0022	0.2184
4,4DDE	72559			No Criteria		0.0022	0.48048
4,4DDD	72548			No Criteria		0.0031	0.67704
DIELDRIN	60571		0.71	155.064	0.0019	0.00054	0.117936
ENDOSULFAN (alpha)	959988		0.034	7.4256	0.0087	89	1.90008
ENDOSULFAN (beta)	33213659		0.034	7.4256	0.0087	89	1.90008
ENDOSULFAN (sulfate)	1031078			No Criteria		89	19437.6
ENDRIN	72208		0.037	8.0808	0.0023	0.06	0.50232
ENDRIN ALDEHYDE	7421934			No Criteria		0.3	65.52
HEPTACHLOR	76448		0.053	11.5752	0.0036	0.00079	0.172536
HEPTACHLOR EPOXIDE	1024573		0.053	11.5752	0.0036	0.00039	0.085176
POLYCHLORINATED BIPHENYLS3	1336363			No Criteria	0.03	0.00064	0.139776
2,3,7,8TCDD (Dioxin)	1746016			No Criteria		0.000000051	1.11384E-05
TOXAPHENE	8001352		0.21	45.864	0.0002	0.0028	0.04368
TRIBUTYL TIN			0.42	91.728	0.0074		1.61616

**CALCULATION OF WATER QUALITY BASED SALTWATER DISCHARGE LIMITS**

FACILITY NAME: Jamestown WWTF RIPDES PERMIT #: RI0100366

NOTE: METALS CRITERIA ARE DISSOLVED, METALS LIMITS ARE TOTAL; AMMONIA CRITERIA AND LIMITS HAVE BEEN CONVERTED TO ug/l N.

CHEMICAL NAME	CAS #	BACKGROUND CONCENTRATION (ug/L)	SALTWATER CRITERIA ACUTE (ug/L)	DAILY MAX LIMIT (ug/L)	SALTWATER CRITERIA CHRONIC (ug/L)	HUMAN HEALTH NON-CLASS A CRITERIA (ug/L)	MONTHLY AVE LIMIT (ug/L)
<b>NON PRIORITY POLLUTANTS:</b>							
<b>OTHER SUBSTANCES</b>							
ALUMINUM (limits are total recoverable)	7429905	NA		No Criteria			No Criteria
AMMONIA as N (winter/summer)	7664417		17262   6000.6	3770021   1310531	2548   904.2		556527   197477
4BROMOPHENYL PHENYL ETHER				No Criteria			No Criteria
CHLORIDE	16887006			No Criteria			No Criteria
CHLORINE	7782505		13	3549	7.5		2047.5
4CHLORO2METHYLPHENOL				No Criteria			No Criteria
1CHLORONAPHTHALENE				No Criteria			No Criteria
4CHLOROPHENOL	106489			No Criteria			No Criteria
2,4DICHLORO6METHYLPHENOL				No Criteria			No Criteria
1,1DICHLOROPROPANE				No Criteria			No Criteria
1,3DICHLOROPROPANE	142289			No Criteria			No Criteria
2,3DINITROTOLUENE				No Criteria			No Criteria
2,4DINITRO6METHYL PHENOL				No Criteria			No Criteria
IRON	7439896			No Criteria			No Criteria
pentachlorobenzene	608935			No Criteria			No Criteria
PENTACHLOROETHANE				No Criteria			No Criteria
1,2,3,5tetrachlorobenzene				No Criteria			No Criteria
1,1,1,2TETRACHLOROETHANE	630206			No Criteria			No Criteria
2,3,4,6TETRACHLOROPHENOL	58902			No Criteria			No Criteria
2,3,5,6TETRACHLOROPHENOL				No Criteria			No Criteria
2,4,5TRICHLOROPHENOL	95954			No Criteria			No Criteria
2,4,6TRINITROPHENOL	88062			No Criteria			No Criteria
XYLENE	1330207			No Criteria			No Criteria

**CALCULATION OF WATER QUALITY BASED SALTWATER DISCHARGE LIMITS**

FACILITY NAME: Jamestown WWTF

RIPDES PERMIT #: RI0100366

CHEMICAL NAME	CAS#	DAILY MAX LIMIT (ug/L)	MONTHLY AVE LIMIT (ug/L)
<b>PRIORITY POLLUTANTS:</b>			
<b>TOXIC METALS AND CYANIDE</b>			
ANTIMONY	7440360	No Criteria	139776.00
ARSENIC, TOTAL	7440382	15069.60	305.76
ASBESTOS	1332214	No Criteria	No Criteria
BERYLLIUM	7440417	No Criteria	No Criteria
CADMIUM, TOTAL	7440439	9878.07	2165.96
CHROMIUM III, TOTAL	16065831	No Criteria	No Criteria
CHROMIUM VI, TOTAL	18540299	272129.99	12326.37
COPPER, TOTAL	7440508	1203.30	700.05
CYANIDE	57125	218.40	218.40
LEAD, TOTAL	7439921	54241.66	2078.85
MERCURY, TOTAL	7439976	462.49	32.76
NICKEL, TOTAL	7440020	18052.28	1721.91
SELENIUM, TOTAL	7782492	63462.93	15537.47
SILVER, TOTAL	7440224	547.38	No Criteria
THALLIUM	7440280	No Criteria	102.65
ZINC, TOTAL	7440666	20778.01	18700.21
<b>VOLATILE ORGANIC COMPOUNDS</b>			
ACROLEIN	107028	No Criteria	63336.00
ACRYLONITRILE	107131	No Criteria	546.00
BENZENE	71432	No Criteria	111384.00
BROMOFORM	75252	No Criteria	305760.00
CARBON TETRACHLORIDE	56235	No Criteria	3494.40
CHLOROBENZENE	108907	No Criteria	349440.00
CHLORODIBROMOMETHANE	124481	No Criteria	28392.00
CHLOROFORM	67663	No Criteria	1026480.00
DICHLOROBROMOMETHANE	75274	No Criteria	37128.00
1,2DICHLOROETHANE	107062	No Criteria	80808.00
1,1DICHLOROETHYLENE	75354	No Criteria	1550640.00
1,2DICHLOROPROPANE	78875	No Criteria	32760.00
1,3DICHLOROPROPYLENE	542756	No Criteria	4586.40
ETHYLBENZENE	100414	No Criteria	458640.00
BROMOMETHANE (methyl bromide)	74839	No Criteria	327600.00
CHLOROMETHANE (methyl chloride)	74873	No Criteria	No Criteria
METHYLENE CHLORIDE	75092	No Criteria	1288560.00
1,1,2,2TETRACHLOROETHANE	79345	No Criteria	8736.00

CHEMICAL NAME	CAS#	DAILY MAX LIMIT (ug/L)	MONTHLY AVE LIMIT (ug/L)
TETRACHLOROETHYLENE	127184	No Criteria	7207.20
TOLUENE	108883	No Criteria	3276000.00
1,2TRANS-DICHLOROETHYLENE	156605	No Criteria	2184000.00
1,1,1TRICHLOROETHANE	71556	No Criteria	No Criteria
1,1,2TRICHLOROETHANE	79005	No Criteria	34944.00
TRICHLOROETHYLENE	79016	No Criteria	65520.00
VINYL CHLORIDE	75014	No Criteria	524.16
<b>ACID ORGANIC COMPOUNDS</b>			
2CHLOROPHENOL	95578	No Criteria	32760.00
2,4DICHLOROPHENOL	120832	No Criteria	63336.00
2,4DIMETHYLPHENOL	105679	No Criteria	185640.00
4,6DINITRO-2METHYL PHENOL	534521	No Criteria	61152.00
2,4DINITROPHENOL	51285	No Criteria	1157520.00
4NITROPHENOL	88755	No Criteria	No Criteria
PENTACHLOROPHENOL	87865	2839.20	1725.36
PHENOL	108952	No Criteria	371280000.00
2,4,6TRICHLOROPHENOL	88062	No Criteria	5241.60
<b>BASE NEUTRAL COMPOUNDS</b>			
ACENAPHTHENE	83329	No Criteria	216216.00
ANTHRACENE	120127	No Criteria	8736000.00
BENZIDINE	92875	No Criteria	0.44
PAHs		No Criteria	39.31
BIS(2CHLOROETHYL)ETHER	111444	No Criteria	1157.52
BIS(2CHLOROISOPROPYL)ETHER	108601	No Criteria	14196000.00
BIS(2ETHYLHEXYL)PHTHALATE	117817	No Criteria	4804.80
BUTYL BENZYL PHTHALATE	85687	No Criteria	414960.00
2CHLORONAPHTHALENE	91587	No Criteria	349440.00
1,2DICHLOROBENZENE	95501	No Criteria	283920.00
1,3DICHLOROBENZENE	541731	No Criteria	209664.00
1,4DICHLOROBENZENE	106467	No Criteria	41496.00
3,3DICHLOROBENZIDENE	91941	No Criteria	61.15
DIETHYL PHTHALATE	84662	No Criteria	9609600.00
DIMETHYL PHTHALATE	131113	No Criteria	240240000.00
DI-n-BUTYL PHTHALATE	84742	No Criteria	982800.00
2,4DINITROTOLUENE	121142	No Criteria	7425.60
1,2DIPHENYLHYDRAZINE	122667	No Criteria	436.80
FLUORANTHENE	206440	No Criteria	30576.00

**CALCULATION OF WATER QUALITY BASED SALTWATER DISCHARGE LIMITS**

FACILITY NAME: Jamestown WWTF

RIPDES PERMIT #: RI0100366

CHEMICAL NAME	CAS#	DAILY MAX LIMIT (ug/L)	MONTHLY AVE LIMIT (ug/L)
FLUORENE	86737	No Criteria	1157520.00
HEXACHLORO BENZENE	118741	No Criteria	0.63
HEXACHLORO BUTADIENE	87683	No Criteria	39312.00
HEXACHLORO CYCLOPENTADIENE	77474	No Criteria	240240.00
HEXACHLORO ETHANE	67721	No Criteria	7207.20
ISOPHORONE	78591	No Criteria	2096640.00
NAPHTHALENE	91203	No Criteria	No Criteria
NITROBENZENE	98953	No Criteria	150696.00
N-NITROSODIMETHYLAMINE	62759	No Criteria	6552.00
N-NITROSODI-N-PROPYLAMINE	621647	No Criteria	1113.84
N-NITROSODIPHENYLAMINE	86306	No Criteria	13104.00
PYRENE	129000	No Criteria	873600.00
1,2,4trichlorobenzene	120821	No Criteria	15288.00
<b>PESTICIDES/PCBs</b>			
ALDRIN	309002	283.92	0.11
Alpha BHC	319846	No Criteria	10.70
Beta BHC	319857	No Criteria	37.13
Gamma BHC (Lindane)	58899	34.94	34.94
CHLORDANE	57749	19.66	0.87
4,4DDT	50293	28.39	0.22
4,4DDE	72559	No Criteria	0.48
4,4DDD	72548	No Criteria	0.68
DIELDRIN	60571	155.06	0.12
ENDOSULFAN (alpha)	959988	7.43	1.90
ENDOSULFAN (beta)	33213659	7.43	1.90
ENDOSULFAN (sulfate)	1031078	No Criteria	19437.60
ENDRIN	72208	8.08	0.50
ENDRIN ALDEHYDE	7421934	No Criteria	65.52
HEPTACHLOR	76448	11.58	0.17
HEPTACHLOR EPOXIDE	1024573	11.58	0.09
POLYCHLORINATED BIPHENYLS3	1336363	No Criteria	0.14
2,3,7,8TCDD (Dioxin)	1746016	No Criteria	0.00
TOXAPHENE	8001352	45.86	0.04
TRIBUTYLTIN		91.73	1.62

CHEMICAL NAME	CAS#	DAILY MAX LIMIT (ug/L)	MONTHLY AVE LIMIT (ug/L)
<b>NON PRIORITY POLLUTANTS:</b>			
<b>OTHER SUBSTANCES</b>			
ALUMINUM, TOTAL	7429905	No Criteria	No Criteria
AMMONIA (as N), WINTER (NOV-APR)	7664417	3770020.80	556526.88
AMMONIA (as N), SUMMER (MAY-OC)	7664417	1310531.04	197477.28
4BROMOPHENYL PHENYL ETHER		No Criteria	No Criteria
CHLORIDE	16887006	No Criteria	No Criteria
CHLORINE	7782505	3549.00	2047.50
4CHLORO2METHYLPHENOL		No Criteria	No Criteria
1CHLORONAPHTHALENE		No Criteria	No Criteria
4CHLOROPHENOL	106489	No Criteria	No Criteria
2,4DICHLORO6METHYLPHENOL		No Criteria	No Criteria
1,1DICHLOROPROPANE		No Criteria	No Criteria
1,3DICHLOROPROPANE	142289	No Criteria	No Criteria
2,3DINITROTOLUENE		No Criteria	No Criteria
2,4DINITRO6METHYL PHENOL		No Criteria	No Criteria
IRON	7439896	No Criteria	No Criteria
pentachlorobenzene	608935	No Criteria	No Criteria
PENTACHLOROETHANE		No Criteria	No Criteria
1,2,3,5tetrachlorobenzene		No Criteria	No Criteria
1,1,1,2TETRACHLOROETHANE	630206	No Criteria	No Criteria
2,3,4,6TETRACHLOROPHENOL	58902	No Criteria	No Criteria
2,3,5,6TETRACHLOROPHENOL		No Criteria	No Criteria
2,4,5TRICHLOROPHENOL	95954	No Criteria	No Criteria
2,4,6TRINITROPHENOL	88062	No Criteria	No Criteria
XYLENE	1330207	No Criteria	No Criteria

**ATTACHMENT A-5: DMR Effluent Data**

**JAMESTOWN WWTF****DMR Data Summary 7/11/16****\*\*\* NOT ICIS CERTIFIED\*\*\***001A

BOD, 5-day, 20 deg. C Location= 1

	MO AVG lb/d	DAILY MX lb/d
Mean	9.458	31.4562
Minimum	.	.
Maximum	51.	228.
Data Count	60	60

	MO AVG mg/L	WKLY AVG mg/L	DAILY MX mg/L
Mean	2.9983	4.8652	7.3833
Minimum	.	.	.
Maximum	10.	14.7	24.
Data Count	60	60	60

Chlorine, total residual Location= 1

	MO AVG mg/L	DAILY MX mg/L
Mean	1.0525	1.8283
Minimum	.55	.95
Maximum	1.64	2.
Data Count	60	60

Coliform, fecal general Location= 1

	MO GEO MPN/100mL	WKLY GEO MPN/100mL	DAILY MX MPN/100mL
Mean	2.2915	12.7062	400105.2467
Minimum	1.	1.	1.
Maximum	9.7	288.	24000000.
Data Count	60	60	60

Flow, in conduit or thru treatment plant Location

	MO AVG MGD	DAILY MX MGD
Mean	.3698	.7394
Minimum	.1322	.2
Maximum	.9236	2.489
Data Count	60	60

Nitrogen, Kjeldahl, total [as N] Location= 1

	DAILY MX mg/L
Mean	2.7757
Minimum	.
Maximum	8.8
Data Count	30

Nitrogen, nitrate total [as N] Location= 1

DAILY MX mg/L

Mean 4.7053  
 Minimum .1  
 Maximum 29.  
 Data Count 30

Nitrogen, nitrite total [as N] Location= 1

DAILY MX mg/L  
 Mean .0447  
 Minimum .  
 Maximum .338  
 Data Count 30

Nitrogen, total [as N] Location= 1

DAILY MX mg/L  
 Mean 7.5007  
 Minimum .9  
 Maximum 33.  
 Data Count 30

Oil & Grease Location= 1

DAILY MX mg/L  
 Mean 1.6533  
 Minimum .  
 Maximum 10.  
 Data Count 60

pH Location= 1

	MINIMUM SU	MAXIMUM SU
Mean	6.2633	6.975
Minimum	6.	6.5
Maximum	6.8	7.5
Data Count	60	60

Solids, settleable Location= 1

	WKLY AVG mL/L	DAILY MX mL/L
Mean	.	.
Minimum	.	.
Maximum	.	.
Data Count	60	60

Solids, total suspended Location= 1

	MO AVG lb/d	DAILY MX lb/d
Mean	12.4553	48.6392
Minimum	.27	1.65
Maximum	120.6	249.
Data Count	60	60

	MO AVG mg/L	WKLY AVG mg/L	DAILY MX mg/L
Mean	4.0718	7.2883	11.3467
Minimum	.2	.73	1.8
Maximum	16.2	43.	60.
Data Count	60	60	60

## BOD, 5-day, 20 deg. C Location= G

	MO AVG lb/d	DAILY MX lb/d
Mean	515.5667	866.1667
Minimum	293.	483.
Maximum	1109.	1871.
Data Count	60	60

	MO AVG mg/L	WKLY AVG mg/L	DAILY MX mg/L
Mean	209.545	268.1667	347.3
Minimum	73.	108.	120.
Maximum	409.	723.	1200.
Data Count	60	60	60

## Solids, total suspended Location= G

	MO AVG lb/d	DAILY MX lb/d
Mean	496.77	919.1833
Minimum	241.	426.
Maximum	1281.	4346.
Data Count	60	60

	MO AVG mg/L	WKLY AVG mg/L	DAILY MX mg/L
Mean	206.0067	305.3333	399.9667
Minimum	64.	88.	110.
Maximum	587.	1840.	2700.
Data Count	60	60	60

## BOD, 5-day, percent removal Location= K

	MINIMUM %
Mean	98.405
Minimum	92.
Maximum	100.
Data Count	60

## Solids, suspended percent removal Location= K

	MINIMUM %
Mean	97.6
Minimum	90.5
Maximum	99.9
Data Count	60

001T

## LC50 Statre 48Hr Acute Mysid. Bahia Location=

	MINIMUM %
Mean	94.7368
Minimum	.
Maximum	100.
Data Count	19

**ATTACHMENT A-6: Summary of State UFP Data**

test type	test date or collection date	parameter	conc.	units	sum	num	ave.	max.
PPS	9/23/2015	Ammonia	140	ug/L				
PPS	9/17/2014	Ammonia	480	ug/L				
PPS	9/11/2013	Ammonia	6300	ug/L	6920	3	2307	6300
PPS	9/23/2015	Barium	12	ug/L				
PPS	9/11/2013	Barium	16	ug/L				
PPS	9/17/2014	Barium	17	ug/L				
PPS	9/12/2012	Barium	18	ug/L	63	4	15.8	18
PPS	9/17/2014	Bis(2-ethylhexyl)phthalate	2.7	ug/L				
PPS	9/11/2013	Bis(2-ethylhexyl)phthalate	4.1	ug/L	6.8	2	3.4	4.1
UFP	11/9/2011	Bromodichloromethane	6.7	ug/L	6.7	1	6.7	6.7
UFP	11/9/2011	Chloroform	5	ug/L	5	1	5	5
PPS	9/11/2013	Copper, Total	5.4	ug/L				
PPS	9/17/2014	Copper, Total	6.5	ug/L				
PPS	9/23/2015	Copper, Total	6.7	ug/L				
UFP	11/9/2011	Copper, Total	13	ug/L	31.6	4	7.9	13
UFP	11/9/2011	Dibromochloromethane	4.8	ug/L	4.8	1	4.8	4.8
UFP	11/9/2011	Lead, Total	1	ug/L				
PPS	9/11/2013	Lead, Total	4.4	ug/L	5.4	2	2.7	4.4
UFP	11/9/2011	Nickel, Total	5	ug/L				
PPS	9/11/2013	Nickel, Total	6.6	ug/L				
PPS	9/23/2015	Nickel, Total	7.3	ug/L				
PPS	9/17/2014	Nickel, Total	7.5	ug/L	26.4	4	6.6	7.5
PPS	9/12/2012	Phenolics	34	ug/L				
PPS	9/17/2014	Phenolics	120	ug/L	154	2	77	120
UFP	11/9/2011	Zinc, Total	73	ug/L				
PPS	9/17/2014	Zinc, Total	130	ug/L				
PPS	9/11/2013	Zinc, Total	140	ug/L				
PPS	9/23/2015	Zinc, Total	280	ug/L	623	4	156	280

**ATTACHMENT A-7: Limits Comparison**

**Facility Name: Jamestown WWTF**  
**RIPDES Permit #: RI0100366**  
**Outfall #: 001A**

NOTE: METALS LIMITS ARE TOTAL METALS

Parameter	CAS #	Concentration Limits (ug/L)		Antideg. Limits (ug/L) Monthly Ave	Ave UFP&PPS Data (ug/L) 2011, 2013-15		Ave. DMR Data (ug/L) 4/11-3/16		Potential Permit Limits (ug/L)		Reasonable Potential?
		Based on WQ Criteria			Max	Ave	Daily Max	Mo. Ave	Daily Max	Monthly Ave	
		Daily Max	Monthly Ave								
<b>PRIORITY POLLUTANTS</b>											
<b>TOXIC METALS AND CYANIDE</b>											
ANTIMONY	7440360	No Criteria	139776.00	---	---	---	---	---	---	139776	N
ARSENIC (limits are total recoverable)	7440382	15069.60	305.76	---	---	---	---	---	15069.6	305.76	N
ASBESTOS	1332214	No Criteria	No Criteria	---	---	---	---	---	---	---	N
BERYLLIUM	7440417	No Criteria	No Criteria	---	---	---	---	---	---	---	N
CADMIUM (limits are total recoverable)	7440439	9878.07	2165.96	---	---	---	---	---	9878.068343	2165.955667	N
CHROMIUM III (limits are total recoverable)	16065831	No Criteria	No Criteria	---	---	---	---	---	---	---	N
CHROMIUM VI (limits are total recoverable)	18540299	272129.99	12326.37	---	---	---	---	---	272129.9919	12326.36649	N
COPPER (limits are total recoverable)	7440508	1203.30	700.05	---	13	7.9	---	---	1203.295494	700.0545306	N
CYANIDE	57125	218.40	218.40	---	---	---	---	---	218.4	218.4	N
LEAD (limits are total recoverable)	7439921	54241.66	2078.85	---	4.4	2.7	---	---	54241.65537	2078.847802	N
MERCURY (limits are total recoverable)	7439976	462.49	32.76	---	---	---	---	---	462.4941176	32.76	N
NICKEL (limits are total recoverable)	7440020	18052.28	1721.91	---	7.5	6.6	---	---	18052.27675	1721.913113	N
SELENIUM (limits are total recoverable)	7782492	63462.93	15537.47	---	---	---	---	---	63462.92585	15537.47495	N
SILVER (limits are total recoverable)	7440224	547.38	No Criteria	---	---	---	---	---	547.3781661	547.3781661	N
THALLIUM	7440280	No Criteria	102.65	---	---	---	---	---	---	102.648	N
ZINC (limits are total recoverable)	7440666	20778.01	18700.21	---	280	156	---	---	20778.01268	18700.21142	N
<b>VOLATILE ORGANIC COMPOUNDS</b>											
ACROLEIN	107028	No Criteria	63336.00	---	---	---	---	---	---	63336	N
ACRYLONITRILE	107131	No Criteria	546.00	---	---	---	---	---	---	546	N
BENZENE	71432	No Criteria	111384.00	---	---	---	---	---	---	111384	N
BROMOFORM	75252	No Criteria	305760.00	---	---	---	---	---	---	305760	N
CARBON TETRACHLORIDE	56235	No Criteria	3494.40	---	---	---	---	---	---	3494.4	N
CHLOROENZENE	108907	No Criteria	349440.00	---	---	---	---	---	---	349440	N
CHLORODIBROMOMETHANE	124481	No Criteria	28392.00	---	4.8	4.8	---	---	---	28392	N
CHLOROFORM	67663	No Criteria	1026480.00	---	5	5	---	---	---	1026480	N
DICHLOROBROMOMETHANE	75274	No Criteria	37128.00	---	6.7	6.7	---	---	---	37128	N
1,2DICHLOROETHANE	107062	No Criteria	80808.00	---	---	---	---	---	---	80808	N
1,1DICHLOROETHYLENE	75354	No Criteria	1550640.00	---	---	---	---	---	---	1550640	N
1,2DICHLOROPROPANE	78875	No Criteria	32760.00	---	---	---	---	---	---	32760	N
1,3DICHLOROPROPYLENE	542756	No Criteria	4586.40	---	---	---	---	---	---	4586.4	N
ETHYLBENZENE	100414	No Criteria	458640.00	---	---	---	---	---	---	458640	N
BROMOMETHANE (methyl bromide)	74839	No Criteria	327600.00	---	---	---	---	---	---	327600	N

CHLOROMETHANE (methyl chloride)	74873	No Criteria	No Criteria	---	---	---	---	---	---	---	N
METHYLENE CHLORIDE	75092	No Criteria	1288560.00	---	---	---	---	---	---	1288560	N
1,1,2,2TETRACHLOROETHANE	79345	No Criteria	8736.00	---	---	---	---	---	---	8736	N
TETRACHLOROETHYLENE	127184	No Criteria	7207.20	---	---	---	---	---	---	7207.2	N
TOLUENE	108883	No Criteria	3276000.00	---	---	---	---	---	---	3276000	N
1,2TRANS-DICHLOROETHYLENE	156605	No Criteria	2184000.00	---	---	---	---	---	---	2184000	N
1,1,1TRICHLOROETHANE	71556	No Criteria	No Criteria	---	---	---	---	---	---	---	N
1,1,2TRICHLOROETHANE	79005	No Criteria	34944.00	---	---	---	---	---	---	34944	N
TRICHLOROETHYLENE	79016	No Criteria	65520.00	---	---	---	---	---	---	65520	N
VINYL CHLORIDE	75014	No Criteria	524.16	---	---	---	---	---	---	524.16	N
ACID ORGANIC COMPOUNDS											
2CHLOROPHENOL	95578	No Criteria	32760.00	---	---	---	---	---	---	32760	N
2,4DICHLOROPHENOL	120832	No Criteria	63336.00	---	---	---	---	---	---	63336	N
2,4DIMETHYLPHENOL	105679	No Criteria	185640.00	---	---	---	---	---	---	185640	N
4,6DINITRO2METHYL PHENOL	534521	No Criteria	61152.00	---	---	---	---	---	---	61152	N
2,4DINITROPHENOL	51285	No Criteria	1157520.00	---	---	---	---	---	---	1157520	N
4NITROPHENOL	88755	No Criteria	No Criteria	---	---	---	---	---	---	---	N
PENTACHLOROPHENOL	87865	2839.20	1725.36	---	---	---	---	2839.2	---	1725.36	N
PHENOL	108952	No Criteria	371280000.00	---	---	---	---	---	---	371280000	N
2,4,6TRICHLOROPHENOL	88062	No Criteria	5241.60	---	---	---	---	---	---	5241.6	N
BASE NEUTRAL COMPOUNDS											
ACENAPHTHENE	83329	No Criteria	216216.00	---	---	---	---	---	---	216216	N
ANTHRACENE	120127	No Criteria	8736000.00	---	---	---	---	---	---	8736000	N
BENZIDINE	92875	No Criteria	0.44	---	---	---	---	---	---	0.4368	N
POLYCYCLIC AROMATIC HYDROCARBONS		No Criteria	39.31	---	---	---	---	---	---	39.312	N
BIS(2CHLOROETHYL)ETHER	111444	No Criteria	1157.52	---	---	---	---	---	---	1157.52	N
BIS(2CHLOROISOPROPYL)ETHER	108601	No Criteria	14196000.00	---	---	---	---	---	---	14196000	N
BIS(2ETHYLHEXYL)PHTHALATE	117817	No Criteria	4804.80	---	4.1	3.4	---	---	---	4804.8	N
BUTYL BENZYL PHTHALATE	85687	No Criteria	414960.00	---	---	---	---	---	---	414960	N
2CHLORONAPHTHALENE	91587	No Criteria	349440.00	---	---	---	---	---	---	349440	N
1,2DICHLOROBENZENE	95501	No Criteria	283920.00	---	---	---	---	---	---	283920	N
1,3DICHLOROBENZENE	541731	No Criteria	209664.00	---	---	---	---	---	---	209664	N
1,4DICHLOROBENZENE	106467	No Criteria	41496.00	---	---	---	---	---	---	41496	N
3,3DICHLOROBENZIDENE	91941	No Criteria	61.15	---	---	---	---	---	---	61.152	N
DIETHYL PHTHALATE	84662	No Criteria	9609600.00	---	---	---	---	---	---	9609600	N
DIMETHYL PHTHALATE	131113	No Criteria	240240000.00	---	---	---	---	---	---	240240000	N
Di-nBUTYL PHTHALATE	84742	No Criteria	982800.00	---	---	---	---	---	---	982800	N
2,4DINITROTOLUENE	121142	No Criteria	7425.60	---	---	---	---	---	---	7425.6	N
1,2DIPHENYLHYDRAZINE	122667	No Criteria	436.80	---	---	---	---	---	---	436.8	N
FLUORANTHENE	206440	No Criteria	30576.00	---	---	---	---	---	---	30576	N
FLUORENE	86737	No Criteria	1157520.00	---	---	---	---	---	---	1157520	N
HEXACHLOROBENZENE	118741	No Criteria	0.63	---	---	---	---	---	---	0.63336	N
HEXACHLOROBUTADIENE	87683	No Criteria	39312.00	---	---	---	---	---	---	39312	N

HEXACHLOROCYCLOPENTADIENE	77474	No Criteria	240240.00	---	---	---	---	---	240240	N	
HEXACHLOROETHANE	67721	No Criteria	7207.20	---	---	---	---	---	7207.2	N	
ISOPHORONE	78591	No Criteria	2096640.00	---	---	---	---	---	2096640	N	
NAPHTHALENE	91203	No Criteria	No Criteria	---	---	---	---	---	---		
NITROBENZENE	98953	No Criteria	150696.00	---	---	---	---	---	150696	N	
NNITROSODIMETHYLAMINE	62759	No Criteria	6552.00	---	---	---	---	---	6552	N	
NNITROSODINPROPYLAMINE	621647	No Criteria	1113.84	---	---	---	---	---	1113.84	N	
NNITROSODIPHENYLAMINE	86306	No Criteria	13104.00	---	---	---	---	---	13104	N	
PYRENE	129000	No Criteria	873600.00	---	---	---	---	---	873600	N	
1,2,4trichlorobenzene	120821	No Criteria	15288.00	---	---	---	---	---	15288	N	
PESTICIDES/PCBs											
ALDRIN	309002	283.92	0.11	---	---	---	---	283.92	0.1092	N	
Alpha BHC	319846	No Criteria	10.70	---	---	---	---	---	10.7016	N	
Beta BHC	319857	No Criteria	37.13	---	---	---	---	---	37.128	N	
Gamma BHC (Lindane)	58899	34.94	34.94	---	---	---	---	34.944	34.944	N	
CHLORDANE	57749	19.66	0.87	---	---	---	---	19.656	0.8736	N	
4,4DDT	50293	28.39	0.22	---	---	---	---	28.392	0.2184	N	
4,4DDE	72559	No Criteria	0.48	---	---	---	---	---	0.48048	N	
4,4DDD	72548	No Criteria	0.68	---	---	---	---	---	0.67704	N	
DIELDRIN	60571	155.06	0.12	---	---	---	---	155.064	0.117936	N	
ENDOSULFAN (alpha)	959988	7.43	1.90	---	---	---	---	7.4256	1.90008	N	
ENDOSULFAN (beta)	33213659	7.43	1.90	---	---	---	---	7.4256	1.90008	N	
ENDOSULFAN (sulfate)	1031078	No Criteria	19437.60	---	---	---	---	---	19437.6	N	
ENDRIN	72208	8.08	0.50	---	---	---	---	8.0808	0.50232	N	
ENDRIN ALDEHYDE	7421934	No Criteria	65.52	---	---	---	---	---	65.52	N	
HEPTACHLOR	76448	11.58	0.17	---	---	---	---	11.5752	0.172536	N	
HEPTACHLOR EPOXIDE	1024573	11.58	0.09	---	---	---	---	11.5752	0.085176	N	
POLYCHLORINATED BIPHENYLS3	1336363	No Criteria	0.14	---	---	---	---	---	0.139776	N	
2,3,7,8TCDD (Dioxin)	1746016	No Criteria	0.00	---	---	---	---	---	1.11384E-05	N	
TOXAPHENE	8001352	45.86	0.04	---	---	---	---	45.864	0.04368	N	
TRIBUTYLTIN		91.73	1.62	---	---	---	---	91.728	1.61616	N	
NON PRIORITY POLLUTANTS:											
OTHER SUBSTANCES											
ALUMINUM (limits are total recoverable)	7429905	No Criteria	No Criteria	---	---	---	---	---	---	N	
AMMONIA (winter)	7664417	3770020.80	556526.88	---	---	---	---	3770020.8	556526.88	N	
AMMONIA (summer)		1310531.04	197477.28	---	6300	2307	---	1310531.04	197477.28	N	
4BROMOPHENYL PHENYL ETHER	16887006	No Criteria	No Criteria	---	---	---	---	---	---	N	
CHLORIDE	7782505	No Criteria	No Criteria	---	---	---	---	---	---	N	
CHLORINE		3549.00	2047.50	---	---	---	1828.3	1052.5	3549	2047.5	Y
4CHLORO2METHYLPHENOL		No Criteria	No Criteria	---	---	---	---	---	---	N	
1CHLORONAPHTHALENE	106489	No Criteria	No Criteria	---	---	---	---	---	---	N	
4CHLOROPHENOL		No Criteria	No Criteria	---	---	---	---	---	---	N	
2,4DICHLORO6METHYLPHENOL		No Criteria	No Criteria	---	---	---	---	---	---	N	

1,1DICHLOROPROPANE	142289	No Criteria	No Criteria	---	---	---	---	---	---	---	N
1,3DICHLOROPROPANE		No Criteria	No Criteria	---	---	---	---	---	---	---	N
2,3DINITROTOLUENE		No Criteria	No Criteria	---	---	---	---	---	---	---	N
2,4DINITRO6METHYL PHENOL	7439896	No Criteria	No Criteria	---	---	---	---	---	---	---	N
IRON	608935	No Criteria	No Criteria	---	---	---	---	---	---	---	N
pentachlorobenzene		No Criteria	No Criteria	---	---	---	---	---	---	---	N
PENTACHLOROETHANE		No Criteria	No Criteria	---	---	---	---	---	---	---	N
1,2,3,5tetrachlorobenzene	630206	No Criteria	No Criteria	---	---	---	---	---	---	---	N
1,1,1,2TETRACHLOROETHANE	58902	No Criteria	No Criteria	---	---	---	---	---	---	---	N
2,3,4,6TETRACHLOROPHENOL		No Criteria	No Criteria	---	---	---	---	---	---	---	N
2,3,5,6TETRACHLOROPHENOL	95954	No Criteria	No Criteria	---	---	---	---	---	---	---	N
2,4,5TRICHLOROPHENOL	88062	No Criteria	No Criteria	---	---	---	---	---	---	---	N
2,4,6TRINITROPHENOL	1330207	No Criteria	No Criteria	---	---	---	---	---	---	---	N
XYLENE		No Criteria	No Criteria	---	---	---	---	---	---	---	N

PART II  
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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) 222-4700 or (401) 222-3070 at night.

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

The following information must be reported immediately:

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

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

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

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. RI0021555 issued to Rhode Island Air National Guard, for the facility located at Quonset State Airport on October 27, 2015, shall be modified as follows:

Part I.A.1 of the Permit shall be modified to include an effective date of January 1, 2016, an end date that is the effective date of the permit modification, and to change the TSS limit to “monitor only” as indicated in Attachment 1 of this permit modification.

Part I.A.2 of the Permit shall be modified to include an effective date that is the effective date of the permit modification and a revised footnote for the sampling location of Outfall 100A as indicated in Attachment 2 of this permit modification.

Part I.A.3 of the Permit shall be modified to include an effective date that is the effective date of the permit modification and a revised footnote for the sampling location of Outfall 100B as indicated in Attachment 3 of this permit modification.

Parts I.C.2 – I.C.5 and the first sentence of Part I.C.6 of the Permit shall be deleted in their entirety and replaced with the language in Attachment 4 of this permit modification.

The citations to various parts of the SWPPP in Parts I.C.6.b.(7), I.C.6.c.(2), and I.C.6.g of the Permit shall be revised to reflect the updated permit section numbering (seen in Attachment 4) as indicated in Attachment 5 of this permit modification.

Part I.E of the Permit shall be deleted in its entirety and replaced with the language in Attachment 6 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, December 31, 2020.

This change modifies the permit issued on October 27, 2015.

This modification consists of eleven (11) pages.

Signed this \_\_\_\_\_ day of \_\_\_\_\_, 2016.

**DRAFT**

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

## Attachment 1

PART I

Permit No. RI0021555

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### A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on January 1, 2016 and lasting through the effective date of the permit modification, the permittee is authorized to discharge from Outfall serial number 001. Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		Concentration - specify units		<u>Monitoring Requirement</u>		
	Quantity - lbs./day		Average	Average	Maximum	Measurement	Sample
	<u>Average</u>	<u>Maximum</u>	<u>Monthly</u>	<u>Weekly</u>	<u>Daily</u>	<u>Frequency</u>	<u>Type</u>
Flow		--- MGD				Quarterly	Estimate
Oil & Grease					15 mg/l	1/Quarter	Grab <sup>1</sup>
TSS					--- mg/l	1/Quarter	Grab <sup>1</sup>

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

<sup>1</sup> Wet weather samples must be collected during the first 30 minutes from discharges resulting from a storm event that is greater than 0.1 inch of rainfall in a 24-hour period and at least 72 hours from the previously measurable (greater than 0.1 inch of rainfall in a 24-hour period) storm event. If this is not feasible, wet weather samples may be taken within the first hour of discharge and noted on the Discharge Monitoring Report.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: Outfall 001 (storm water from the RIANG 143<sup>rd</sup> Airlift Wing base storm water collection system and off-site storm water inputs that enter this system, after treatment by the 22,500 gallon oil/water separator. The sampling location must be at the final discharge point from the 60 inch storm drain located in a concrete headwall into Fry's Pond).

## Attachment 2

PART I

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### A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

2. During the period beginning on the effective date of the permit modification and lasting through permit expiration, the permittee is authorized to discharge from Outfall serial number 100A. Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		Concentration - specify units		<u>Monitoring Requirement</u>		
	Quantity - lbs./day		Average	Average	Maximum	Measurement	Sample
	<u>Average Monthly</u>	<u>Maximum Daily</u> --- MGD	<u>Monthly</u>	<u>Weekly</u>	<u>Daily</u>	<u>Frequency</u>	<u>Type</u>
Flow						Continuous	Continuous <sup>1</sup>
Oil & Grease					15 mg/l	1/Quarter	Grab <sup>2</sup>
TSS					20 mg/l	1/Quarter	Grab <sup>2</sup>
Benzene					--- ug/l	1/Quarter	Grab <sup>2</sup>
Toluene					--- ug/l	1/Quarter	Grab <sup>2</sup>
Ethylbenzene					--- ug/l	1/Quarter	Grab <sup>2</sup>
Total Xylenes					--- ug/l	1/Quarter	Grab <sup>2</sup>
Ethanol					--- ug/l	1/Quarter	Grab <sup>2,3</sup>
Polynuclear Aromatic Hydrocarbons (PAHs)							
Acenaphthene					--- ug/l	1/Quarter	Grab <sup>2</sup>
Acenaphthylene					--- ug/l	1/Quarter	Grab <sup>2</sup>
Anthracene					--- ug/l	1/Quarter	Grab <sup>2</sup>
Benzo (a) anthracene					--- ug/l	1/Quarter	Grab <sup>2</sup>
Benzo (a) pyrene					--- ug/l	1/Quarter	Grab <sup>2</sup>
Benzo (b) fluoranthene					--- ug/l	1/Quarter	Grab <sup>2</sup>
Benzo (ghi) perylene					--- ug/l	1/Quarter	Grab <sup>2</sup>
Benzo (k) fluoranthene					--- ug/l	1/Quarter	Grab <sup>2</sup>

**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

2. During the period beginning on the effective date of the permit modification and lasting through permit expiration, the permittee is authorized to discharge from Outfall serial number 100A. 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>		
	Quantity - lbs./day		Average	Average	Maximum	Measurement	Sample
	<u>Average Monthly</u>	<u>Maximum Daily</u>	<u>Monthly</u>	<u>Weekly</u>	<u>Daily</u>	<u>Frequency</u>	<u>Type</u>
Chrysene					--- ug/l	1/Quarter	Grab <sup>2</sup>
Dibenzo (a,h) anthracene					--- ug/l	1/Quarter	Grab <sup>2</sup>
Fluoranthene					--- ug/l	1/Quarter	Grab <sup>2</sup>
Fluorene					--- ug/l	1/Quarter	Grab <sup>2</sup>
Indeno (1,2,3-cd) pyrene					--- ug/l	1/Quarter	Grab <sup>2</sup>
Naphthalene					--- ug/l	1/Quarter	Grab <sup>2</sup>
Phenanthrene					--- ug/l	1/Quarter	Grab <sup>2</sup>
Pyrene					--- ug/l	1/Quarter	Grab <sup>2</sup>

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

<sup>1</sup> Flow shall be determined by the use of a continuous flow monitor.

<sup>2</sup> One (1) sample shall be taken during wet weather. Wet weather samples must be collected during the first 30 minutes from discharges resulting from a storm event that is greater than 0.1 inch of rainfall in a 24-hour period and at least 72 hours from the previously measurable (greater than 0.1 inch of rainfall in a 24-hour period) storm event. If this is not feasible, wet weather samples may be taken within the first hour of discharge and noted on the Discharge Monitoring Report.

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

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: Outfall 100 (Storm water from the Petroleum based fuels, oil or lubricants (POL) Facility yard area/tanker truck parking area after treatment by the 8,000 gallon oil/water separator. The sampling location must be immediately downstream from the oil/water separator, prior to commingling with off-site storm water inputs).

### Attachment 3

PART I

Permit No. RI0021555

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#### A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

3. During the period beginning on the effective date of the permit modification and lasting through permit expiration, the permittee is authorized to discharge from Outfall serial number 100B. Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		Concentration - specify units		<u>Monitoring Requirement</u>		
	Quantity - lbs./day		Average	Average	Maximum	Measurement	Sample
	<u>Average Monthly</u>	<u>Maximum Daily</u>	<u>Monthly</u>	<u>Weekly</u>	<u>Daily</u>	<u>Frequency</u>	<u>Type</u>
Flow		--- MGD				Continuous	Continuous <sup>1</sup>
Oil & Grease					15 mg/l	1/Quarter	Grab <sup>2</sup>
TSS					20 mg/l	1/Quarter	Grab <sup>2</sup>
Benzene					--- ug/l	1/Quarter	Grab <sup>2</sup>
Toluene					--- ug/l	1/Quarter	Grab <sup>2</sup>
Ethylbenzene					--- ug/l	1/Quarter	Grab <sup>2</sup>
Total Xylenes					--- ug/l	1/Quarter	Grab <sup>2</sup>
Ethanol					--- ug/l	1/Quarter	Grab <sup>2,3</sup>
Polynuclear Aromatic Hydrocarbons (PAHs)							
Acenaphthene					--- ug/l	1/Quarter	Grab <sup>2</sup>
Acenaphthylene					--- ug/l	1/Quarter	Grab <sup>2</sup>
Anthracene					--- ug/l	1/Quarter	Grab <sup>2</sup>
Benzo (a) anthracene					--- ug/l	1/Quarter	Grab <sup>2</sup>
Benzo (a) pyrene					--- ug/l	1/Quarter	Grab <sup>2</sup>
Benzo (b) fluoranthene					--- ug/l	1/Quarter	Grab <sup>2</sup>
Benzo (ghi) perylene					--- ug/l	1/Quarter	Grab <sup>2</sup>
Benzo (k) fluoranthene					--- ug/l	1/Quarter	Grab <sup>2</sup>

**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

3. During the period beginning on the effective date of the permit modification and lasting through permit expiration, the permittee is authorized to discharge from Outfall serial number 100B. Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		Concentration - specify units		<u>Monitoring Requirement</u>		
	Quantity - lbs./day		Average	Average	Maximum	Measurement	Sample
	<u>Average Monthly</u>	<u>Maximum Daily</u>	<u>Monthly</u>	<u>Weekly</u>	<u>Daily</u>	<u>Frequency</u>	<u>Type</u>
Chrysene					--- ug/l	1/Quarter	Grab <sup>2</sup>
Dibenzo (a,h) anthracene					--- ug/l	1/Quarter	Grab <sup>2</sup>
Fluoranthene					--- ug/l	1/Quarter	Grab <sup>2</sup>
Fluorene					--- ug/l	1/Quarter	Grab <sup>2</sup>
Indeno (1,2,3-cd) pyrene					--- ug/l	1/Quarter	Grab <sup>2</sup>
Naphthalene					--- ug/l	1/Quarter	Grab <sup>2</sup>
Phenanthrene					--- ug/l	1/Quarter	Grab <sup>2</sup>
Pyrene					--- ug/l	1/Quarter	Grab <sup>2</sup>

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

<sup>1</sup> Flow shall be determined by the use of a continuous flow monitor.

<sup>2</sup> One (1) sample shall be taken during dry weather. Dry weather samples must be collected during the controlled release of storm water within the Petroleum-based fuels, oil or lubricants (POL) Facility secondary containment area(s) with proper allowances for hydraulic detention time (time for flow to travel from the oil/water separator to the sampling location).

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

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: Outfall 100 (storm water from the POL Facility secondary containment area(s) after treatment by the 8,000 gallon oil/water separator. The sampling location must be immediately downstream from the oil/water separator, prior to commingling with off-site storm water inputs).

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2. RIANG has submitted a plan to the DEM on September 1, 2016 for the implementation of appropriate storm water controls at the vehicle maintenance/refueling facility (Building 3). RIANG must ensure that the installation of the source-specific storm water controls will be done in accordance with all Town of North Kingstown, State, and Quonset Development Corporation (QDC) requirements. The plan will be subject to DEM review, modification, and approval. For the source-specific storm water controls at the vehicle maintenance/refueling facility, RIANG shall consider the following minimum design elements (Note: If RIANG will infiltrate any of the storm water from the vehicle maintenance/refueling facility, they must follow all the below elements):
  - a. Any storm water from the fuel dispensing and tank filling areas shall be treated using either a multi-chamber oil/water separator or acceptable proprietary device (minimum oil storage capacity of 500 gallons) that is preceded by at least one catch basin;
  - b. Provide a roof over the fuel dispensing area with roof drainage directed away from the dispensing area;
  - c. Elevate the fuel dispensing and tank filling areas to prevent storm water from running in and through them;
  - d. Provide grooved concrete for the perimeter of the pad around the fuel dispensing area to be used to contain small spills.
3.
  - a. RIANG shall submit an amended SWPPP to the DEM by September 1, 2017 that includes the addition of the representative sampling/monitoring point (defined as Outfall 100), sampling protocols for wet and dry weather sampling events, and updated site plans identifying the location of Outfall 100.
  - b. One (1) year following the installation of the storm water controls as required in Part I.C.2, RIANG shall submit an amended SWPPP to the DEM that includes a description of the storm water controls at the vehicle maintenance/refueling facility and an updated site plan identifying the location of the storm water controls.
4. The SWPPP shall be signed by the permittee in accordance with RIPDES Rule 12 and retained on-site. The SWPPP shall be made available upon request by the DEM.
5. If the SWPPP is reviewed by the DEM the permittee may be notified at any time that the SWPPP does not meet one or more of the minimum requirements of this part. After such notification from the DEM, the permittee shall make changes to the SWPPP and shall submit a written certification that the requested changes have been made. Unless otherwise provided by the DEM, the permittee shall have thirty (30) days after such notification to make the necessary changes.
6. The permittee shall immediately amend the SWPPP whenever there is a change in design, construction, operation, or maintenance, which has a significant effect of the potential for

the discharge of pollutants to the waters of the State; a release of reportable quantities of hazardous substances and oil; or if the SWPPP proves to be ineffective in achieving the general objectives of controlling pollutants in storm water discharges associated with industrial activity. Changes must be noted and then submitted to DEM within fourteen (14) days. Amendments to the SWPPP may be reviewed by DEM in the same manner as Part I.C.5 of this permit.

7. The SWPPP shall include, at a minimum, the following items:

## Attachment 5

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### Parts I.C.7.b(7)

- (7) *Storm Water Management.* The SWPPP must contain a narrative consideration of the appropriateness of traditional storm water management practices. Based on an assessment of the potential of various sources at the plant to contribute pollutants to storm water discharges associated with industrial activity (see Part I.C.7 of this permit), the SWPPP must provide that measures, determined to be reasonable and appropriate, must be implemented and maintained.

### Part I.C.7.c(2)

- (2) *Annual Deicing Fluid Collection and Management Report.* An annual report must be prepared which provides a summary and description of glycol usage, collection and management activities during the previous deicing season. Such report shall be submitted to the DEM with the Annual Site Inspection Reports required under Part I.C.7.g no later than July 15<sup>th</sup> of each year and must include, at a minimum, the following:

### Part I.C.7.g

- g. Annual Site Inspection Report. An annual site inspection must be conducted by appropriate personnel named in the SWPPP to verify that the description of potential pollutant sources required under Part I.C.7.a is accurate, that the drainage map has been updated or otherwise modified to reflect current conditions, and controls to reduce pollutants in storm water discharges associated with industrial activity identified in the SWPPP are being implemented and are adequate. If possible, the annual site inspection must be conducted during a period of actual deicing operations. If not practicable during active deicing or the weather is too inclement, conduct the evaluations when deicing operations are likely to occur and the materials and equipment for deicing are in place. The following areas shall be included in all inspections: aircraft and runway deicing areas, storage areas for aircraft/vehicles/equipment awaiting maintenance, fueling area(s), aircraft/vehicle/equipment maintenance areas (both indoors and outdoors), material storage areas, aircraft/vehicle/equipment cleaning areas, loading and unloading areas, and storm water discharge location and receiving water. A tracking or follow up procedure must be used to ensure that the appropriate action has been taken in response to the inspection. A copy of the annual site inspection report and records documenting significant observations made during the site inspection must be submitted to the DEM by July 15<sup>th</sup> for the previous twelve (12) month period (July 1 – June 30). A copy of the annual site inspection report must also be retained as part of the SWPPP for a minimum of five (5) years.

## Attachment 6

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### E. 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. Submittal of DMRs Using NetDMR

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

#### 3. Submittal of Reports as NetDMR Attachments

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

- DMR Cover Letters
- Below Detection Limit summary tables
- Storm event information per Part I.E.7 of the permit
- Storm water sampling waiver per Part I.E.8 of the permit

*All other reports should be submitted to DEM hard copy via regular US mail (See Part I.E.5 below).*

#### 4. Submittal of Requests to DEM

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

- Transfer of Permit notice
- Request for changes in sampling location
- Request for reduction in testing frequency
- Request to add chemicals or “bioremedial agents including microbes” to the collection and treatment system per Part I.A.5 of the permit

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

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

5. Submittal of Reports to DEM

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

- Written notifications required under Part II
- Notice of unauthorized discharges
- Amendments to the SWPPP per Parts I.C.3, I.C.5, and I.C.6 of the permit
- Annual Deicing Fluid Collection and Management Report per Part I.C.7.c of the permit
- Annual Site Inspection Report per Part I.C.7.g of the permit

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

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

6. Verbal Reports and Verbal Notifications

Any verbal reports or verbal notifications, if required in Parts I and/or II of this permit, shall be made to the DEM. This includes verbal reports and notifications which require reporting within 24 hours. (See Part II(1)(5) General Requirements for 24-hour reporting) Verbal reports and verbal notifications shall be made to DEM at (401) 222-4700 or (401) 222-3070 at night.

7. In addition to the required sampling results submitted in accordance with Part I.A.1., I.A.2., and I.A.3 of this permit, the permittee must provide the date and duration (hours) of the storm events sampled, the total depth of rainfall (inches), and the total volume of runoff (Ft<sup>3</sup>). This information must be submitted electronically with the DMR forms at the frequency specified in Part I.E.2 of this permit.

8. If the permittee is unable to collect samples due to adverse climatic conditions which make the collection of samples dangerous or impractical, the permittee must submit, in lieu of sampling data, a description of why samples could not be collected, including available precipitation data for the monitoring period. The permittee can only exercise this waiver once in a two (2) year period for the outfalls designated as 001 and 100. A waiver is not required if there was no flow from the outfall for the reporting period. This information must be submitted electronically with the DMR form for the period in which a sampling waiver is being requested.

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.

**RI0021555**

NAME AND ADDRESS OF APPLICANT:

**Rhode Island Air National Guard**  
143<sup>rd</sup> Airlift Wing  
2 Hercules Drive  
North Kingstown, RI 02825

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

**Rhode Island Air National Guard**  
**Quonset State Airport**  
2 Hercules Drive  
North Kingstown, RI 02825

RECEIVING WATER:

**Frys Pond (Water Body ID# RI0007027L-06)**

CLASSIFICATION:

**A**

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

The Rhode Island Department of Environmental Management (DEM) proposes to issue a modification to the Rhode Island Air National Guard's (RIANG)'s RIPDES Permit to discharge into the designated receiving water. The proposed modifications include revised footnotes for the sampling locations at Outfall 100A/B, a permit condition requiring the RIANG to develop and submit a plan for implementing Best Management Practices (BMPs) at the vehicle maintenance/refueling facility, and updated requirements for the electronic reporting of Discharge Monitoring Report (DMR) forms all contained in RIPDES Permit No. RI0021555 issued on October 27, 2015. The facility's discharge consists of storm water runoff associated with industrial activity at RIANG's base. The discharge is to Frys Pond.

**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**

The RIANG 143<sup>rd</sup> Airlift Wing (AW) operates the facility located at the Quonset State Airport in North Kingstown, RI. The facility provides support for the 143AW, which flies and maintains C-130 aircraft to support its airlift mission. This permit authorizes storm water and allowable non-storm water point source discharges as defined in the permit to Frys Pond from RIANG's storm water collection system.

Permit No. RI0021555 was issued on October 27, 2015 and became effective January 1, 2016. Because RIANG was concerned that it would not be able to comply with the TSS limits of 20 mg/L at Outfalls 001A and 100A, RIANG requested a stay of the final permit limits via a stay/hearing request letter dated December 2, 2015. The December 2<sup>nd</sup> submittal requested a stay of the following permit conditions until the RIPDES permit could be modified:

- Part I.A. – Daily Maximum effluent limitations for Total Suspended Solids (TSS) for Outfall 001A (the sampling location at the final discharge point from the 60 inch storm drain located in a concrete headwall into Frys Pond) and Outfall 100A (the sampling location immediately downstream from the oil/water separator following the drainage manhole located within the 30 inch RCP storm drainage line, but prior to commingling with off-site storm water inputs).

In the request for hearing provided by RIANG in the December 2<sup>nd</sup> submittal it was noted that the facility would not be able to comply with the TSS limits at Outfall 001A due to Frys Pond being tidally influenced, background TSS levels in the pond being above the 20 mg/L daily maximum limit, and storm water discharging into the pond including additional sources of storm water from surrounding industries. Also, the hearing request stated that RIANG may not be able to comply with the TSS limits at the new sampling point, defined in the October 2015 RIPDES permit as Outfall 100A, as the storm water collected during wet weather conditions would include storm water runoff from the vehicle maintenance/refueling facility and Hercules Drive drainage areas, which would not be treated by an oil/water separator prior to sampling. Thus, RIANG believed they would not be able to meet the 20 mg/L Best Professionally Judgement (BPJ)-based limit with partial treatment of the storm water.

On January 21, 2016 RIANG submitted to the DEM a scope of work/monitoring plan as required by Part I.C.2.a of the October 2015 permit that provided an evaluation of the storm water collection systems downstream of the vehicle maintenance/refueling facility and Petroleum-based fuels, oil or lubricants (POL) facility. From this evaluation RIANG proposed a monitoring plan to characterize the storm water contributions from the vehicle maintenance facility utilizing existing sampling locations upstream and downstream from the maintenance facility, and also proposed a scope of work/schedule for installing a manhole access point downgradient of the POL facility 8,000 gallon oil/water separator with a five (5) month maximum timeframe to solicit a contractor and complete the installation of the monitoring location. RIANG additionally committed to amending its SWPPP within one (1) year of the approved date to install the new sampling location as required in Part I.C.2.b of the October 2015 permit. Upon review of January 21<sup>st</sup> submittal, the DEM determined that an on-site meeting and inspection would be necessary to discuss RIANG's pending stay request for TSS limits and to come to an agreement on the appropriate sampling location for the POL facility so the permit may be modified. On February 11, 2016 a compliance evaluation inspection and on-site meeting was conducted by RIPDES staff and the following were the outcomes of the site visit:

- RIANG will be able to install the monitoring location for the POL facility and both RIANG and DEM agreed the point immediately downstream from the POL facility

oil/water separator was representative of the storm water drainage for wet and dry weather sampling from the area. RIANG noted they may need additional time to complete the construction. As a result, DEM proposed to modify the date that RIANG must complete construction of the representative sampling/monitoring point (to be defined as Outfall 100A/B) from July 1, 2016 to September 1, 2016.

- RIANG requested a stay of the TSS permit limits at Outfall 001A until the new sampling location is installed.
- RIANG was willing to construct additional Best Management Practices (BMPs) at the vehicle maintenance/refueling facility when it is reconstructed.

In lieu of convening an Administrative Hearing the DEM had intended to enter into a Consent Agreement with RIANG regarding the disputed permit conditions contained in RIANG's December 2nd stay/appeal request. Subsequently, the DEM granted a stay for the Daily Maximum (20 mg/L) TSS effluent limitation for Outfall 001A (Part I.A.1 of the permit) that will continue until the permit modification becomes effective. RIANG indicated in an August 26, 2016 letter regarding the draft Consent Agreement/permit modification that the Outfall 100 representative sampling/monitoring point had been installed per the requirements of the draft permit modification, and RIANG requested the Consent Agreement be rendered moot so that DEM could move forward with the public notice of the draft permit modification. In addition, on September 1, 2016 RIANG submitted plans to implement storm water controls at the vehicle maintenance/refueling facility (Building 3) in accordance with the draft permit modification requirements. The only remaining schedule from the draft Consent Agreement was included in Paragraph 11 of the Agreement to address the process of reissuing a modified permit. Based on the above information and the items agreed to by DEM and RIANG during the February 11<sup>th</sup> inspection and on-site meeting, the modified permit will contain the following conditions:

- Parts I.A.1-3 of RIPDES Permit No. RI0021555 were modified to include updated effective and end dates, the TSS limits for Outfall 001A have been changed to monitor only, and the footnotes in Parts I.A.2-3 were revised to reflect the Outfall 100A/B monitoring location as a point immediately downstream from the 8,000-gallon oil/water separator at the POL facility, prior to commingling with off-site storm water inputs.
- Part I.C.2 of the RIPDES Permit No. RI0021555 was added to include a permit condition for implementing BMPs at the vehicle maintenance/refueling facility. RIANG has submitted a plan on September 1, 2016 for the implementation of the appropriate storm water controls at the vehicle maintenance/refueling facility (Building 3) that will be subject to DEM review, modification, and approval. For the source-specific storm water controls at the vehicle maintenance/refueling facility, RIANG shall consider the following minimum design elements (Note: If RIANG will infiltrate any of the storm water from the vehicle maintenance/refueling facility, they must follow all the below elements): Any storm water from the fuel dispensing and tank filling areas shall be treated using either a multi-chamber oil/water separator or acceptable proprietary device (minimum oil storage capacity of 500 gallons) that is preceded by at least one catch basin; Provide a roof over the fuel dispensing area with roof drainage directed away from the dispensing area; Elevate the fuel dispensing and tank filling areas to prevent storm water from running in and through them; Provide grooved concrete for the perimeter of the pad around the fuel dispensing area to be used to contain small spills.
- The SWPPP requirements in Part I.C.3 were updated so that RIANG must amend the SWPPP by September 1, 2017 to reflect the installation of the Outfall 100 sampling/monitoring location. In addition, the SWPPP will need to be amended again

within one (1) year of the installation of stormwater controls at the vehicle maintenance/refueling facility when it is reconstructed.

- Part I.E (Monitoring and Reporting) was revised to reflect the electronic submission of DMRs by RIANG using the EPA reporting tool NetDMR in order to comply with the NPDES Electronic Reporting Rule (E Rule). The E Rule requires NPDES regulated entities to begin submitting DMRs electronically by December 21, 2016.

#### 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.

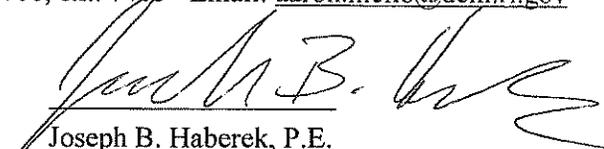
#### V. DEM Contact

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:

Aaron Mello  
Department of Environmental Management  
235 Promenade Street  
Providence, RI 02908

Telephone: (401) 222-4700, ext. 7405 Email: [aaron.mello@dem.ri.gov](mailto:aaron.mello@dem.ri.gov)

10/21/16  
Date

  
Joseph B. Haberek, P.E.  
Principal Sanitary Engineer