Linda Murphy
Roger Janson

RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
235 Promenade Street, Providence, RI 02908-5767 TDD 401-222-4462

June 27, 2005

CERTIFIED MAIL

Mr. Matt A. Calderiso, Jr.
Superintendent
Bristol Wastewater Facility
2 Plant Avenue
Bristol, RI 02809

RE: Issuance of Final RIPDES Permit for the Bristol Wastewater Facility
RIPDES Application No. RI0100005

Dear Mr. Calderiso:

Enclosed is your final Rhode Island Pollutant Discharge Elimination System (RIPDES) Permit issued pursuant to the referenced application. State regulations, promulgated under Chapter 46-12 of the Rhode Island General Laws of 1956, as amended, require this permit to become effective on the date specified in the permit.

Also enclosed is information relative to hearing requests and stays of RIPDES Permits.

We appreciate your cooperation throughout the development of this permit. Should you have any questions concerning this permit, feel free to contact Samuel Kaplan of the State Permits Staff at (401) 222-4700, extension 7046.

Sincerely,

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

EAB:sk

Enclosures

cc: EPA Permits Branch, Region 1
Joe Federico, P.E., Beta Engineering
Annie McFarland, DEM
Joseph B. Haberek, P.E., DEM

RESPONSE TO COMMENTS

NO SIGNIFICANT COMMENTS WERE RECEIVED ON THE DRAFT PERMIT FOR THIS FACILITY; THEREFORE, NO RESPONSE WAS PREPARED.

HEARING REQUESTS

If you wish to contest any of the provisions of this permit, you may request a formal hearing within thirty (30) days of receipt of this letter. The request should be submitted to the Administrative Adjudication Division at the following address:

Bonnie Stewart, Clerk
Department of Environmental Management
Office of Administrative Adjudication
235 Promenade Street, 3rd Floor
Providence, Rhode Island 02908

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

STAYS OF RIPDES PERMITS

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

Angelo S. Liberti, P.E.
Chief of Watersheds and Standards
Office of Water Resources
235 Promenade Street
Providence, Rhode Island 02908

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

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,

Town of Bristol

is authorized to discharge from a facility located at

Bristol Wastewater Treatment Facility
Plant Avenue
Bristol, Rhode Island 02809

to receiving waters named

Bristol Harbor

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

This permit shall become effective on August 1, 2005.

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

This permit supersedes the permit issued on July 28, 1999.

This permit consists of 22 pages in Part I including effluent limitations, monitoring requirements, etc. and 10 pages in Part II including General Conditions.

Signed this 27th day of June, 2005

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.

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

Effluent Characteristic	Discharge Limitations					Monitoring Requirement	
	Quantity - lbs./day		Concentration - specify units				
	Average Monthly	Maximum Daily	Average Monthly *(Minimum)	Average Weekly *(Average)	Maximum Daily *(Maximum)	Measurement Frequency	Sample Type
Flow	3.79 MGD	--- MGD				Continuous	Recorder
BOD_5	948 lbs/Day	1,580 lbs/Day	30 mg/l	45 mg/l	50 mg/l	3/Week	24-Hr. Comp.
BOD_5 - % Removal			85%			1/Month	Calculated
TSS	948 lbs/Day	1,580 lbs/Day	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_5 influent and effluent shall be performed Tuesday, Thursday and Sunday with appropriate allowances for hydraulic detention (flow-through) time. Sampling for Flow and Settleable Solids shall be performed Sunday-Saturday.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: Outfall 001A (final discharge after de-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.

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

Effluent Characteristic	Discharge Limitations					Monitoring Requirement	
	Quantity - lbs./day		Concentration - specify units				
	Average Monthly	Maximum Daily	Average Monthly *(Minimum)	Average Weekly *(Average)	Maximum Daily *(Maximum)	Measurement Frequency	Sample Type
Fecal Coliform			200 MPN[1] 100 ml	400 MPN[1] 100 ml	400 MPN[1] 100 ml	3/Week	Grab
Total Residual Chlorine (TRC)			364 ug/l[2]		364 ug/l[2]	Continuous	Recorder[2]
pH			(6.0 SU)		(9.0 SU)	2/Day	Grab

[1]The Fecal Coliform samples are to be taken Tuesday, Thursday, and Sunday at the same time as one of the TRC samples. The Geometric Mean shall be used to obtain the "weekly average" and the "monthly average."

[2]Compliance with these limitations shall be determined by taking three grab samples per day, Monday - Friday (except holidays), equally spaced over one (1) eight (8) hour shift with a minimum of three hours between grabs. On Saturdays, Sundays, and holidays by taking at least two (2) grab samples each day with a minimum of two (2) hours between grabs. The maximum daily and average monthly values are to be computed from the averaged grab sample results. The following methods may be used to analyze the grab samples: (1) DPD Spectrophotometric, EPA No. 330.5 or Standard Methods (18th Edition) No. 4500-Cl; (2) DPD Titrimetric, EPA No. 330.4 or Standard Methods No. 4500-Cl F; (3) Amperometric Titration, EPA No. 330.1 or Standard Methods No. 4500-Cl D or ASTM No. D1253-86(92);

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

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

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: Outfall 001A (final discharge after de-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(s) 001A.

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

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

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

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

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

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

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

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

Effluent Characteristic	Discharge Limitations					Monitoring Requirement	
	Quantity - lbs. per day		Concentration - specify units				
	Average Monthly	Maximum Daily	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
Total Copper[1]			73.0 ug/L		113.5 ug/L	1/Week	24-Hr. Comp.
Endrin[3]					0.829 ug/L	1/Quarter	Grab

[1]Influent and effluent shall be sampled for the above parameters once per month. Sampling of influent and effluent shall be done to account for detention time through the plant.

[2]Three (3) grab samples shall be equally spaced over the course of one (1) eight (8) hour shift with a minimum of three (3) hours between grabs. All three (3) samples shall be composited, then analyzed.

[3]Beginning on the effective date of the permit, the permittee shall perform four (4) tests per year on samples collected from discharge outfall 001A. If the results of four (4) consecutive quarters of testing demonstrates levels below the MDL in Part I.F, then the permittee may make a written request to DEM to cease the required monitoring.

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

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

5. 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:

Effluent Characteristic	Discharge Limitations					Monitoring Requirement	
	Quantity - lbs. per day		Concentration - specify units				
	Average Monthly	Maximum Daily	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
Mysidopsis bahia – LC_{50}[1]					≥100%[2]	1/Quarter	24-Hr. Comp.

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

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

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: Outfall 001A (final discharge after de-chlorination) in accordance
with I.B. of the permit.

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 projections of loadings up to the time when the design capacity of the treatment facility will be reached, and a program for maintaining satisfactory treatment levels consistent with approved water quality management plans.

f. The permitte shall analyze its effluent annually for the EPA Priority Pollutants as listed in 40 CFR 122, Appendix D, Tables II and III. The results of these analyses shall be submitted to the Department of Environmental Management. The State User Fee Program samples may be utilized provided that the sampling is coordinated in advance. All sampling and analysis shall be done in accordance with EPA Regulations, including 40 CFR, Part 136; grab and composite samples shall be taken as appropriate.

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

B. BIOMONITORING REQUIREMENTS AND INTERPRETATION OF RESULTS

1. General

Beginning on the effective date of the permit, the permittee shall perform four (4) acute toxicity tests per year on dechlorinated effluent samples collected from discharge Outfall 001A. The permittee shall conduct the tests during dry weather periods (no rain within forty-eight (48) hours prior to or during sampling unless approved by RIDEM) according to the following test frequency and protocols. Acute data shall be reported as outlined in Section 9. Test results and reports will be interpreted by the State. The State may require additional screening, range finding, definitive acute or chronic bioassays testing as deemed necessary based on the results of the initial bioassays required herein. Indications of toxicity could result in requiring a Toxicity Reduction Evaluation (TRE) to investigate the causes and to identify corrective actions necessary to eliminate or reduce toxicity to an acceptable level.

2. Test Frequency

On four (4) sampling events, (one (1) each calendar quarter) the permittee will conduct forty-eight-hour (48) acute definitive toxicity tests on the one (1) specie listed below, for a total of four (4) acute toxicity tests per year.

Species	Test Type (Four Times Annually)	Frequency
Mysids (*Mysidopsis bahia*)	Definitive 48-Hour Acute Static (LC_{50})	Quarterly

3. Testing Methods

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

4. Sample Collection

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

A: Chemical Analysis
B: Acute Toxicity Testing

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

5. Salinity Adjustment

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

6. Dilution Water

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

7. Effluent Toxicity Test Conditions for Mysids[1] (Mysidopsis bahia)

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

[1]Adapted from EPA/600/4-90/027

8. Chemical Analysis

The following chemical analysis shall be performed for every one (1) specie sampling event.

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

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

Total Metals	Effluent	Saline Diluent	Detection Limit (ug/l)
Copper	X	X	1 ug/L

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

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

9. Toxicity Test Report Elements

A report of results will include the following:

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

- The method used to adjust the salinity of the effluent must be reported.
- All chemical and physical data generated (include detection limits).
- Raw data and bench sheets.
- Any other observations or test conditions affecting test outcome.

Toxicity test data shall include the following:

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

10. Special Condition

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

11. Reporting of Bioassay Testing

Bioassay Testing shall be reported as follows:

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

Bioassay testing following the protocol described herein shall commence during the 3rd quarter (July 1 – September 30) of 2005, and the first report shall be submitted to RIDEM no later than October 15, 2005.

A signed copy of these, and all other reports required herein, shall be submitted to:

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

C. INDUSTRIAL PRETREATMENT PROGRAM

1. Definitions

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

a. 40 CFR 403 and sections thereof refer to the General Pretreatment regulations, 40 CFR Part 403 as revised July 17, 1997.

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

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

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

2. Implementation

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

3. Local Limits

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

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

consistent with the DEM's notice of deficiency.

b. Once approved by the DEM, if the local limits evaluation described in Part 1.C.3.a of this permit determines that an updated technically-based local limits analysis is necessary, the permittee shall submit to the DEM a technically-based local limitations analysis within six (6) months of receiving DEM approval of the initial local limits evaluation. The technically-based local limits analysis shall contain proposed numerical limitations developed by the permittee in accordance with the procedures set forth in the EPA's July, 2004 Local Limits Guidance Manual. All supporting data and calculations must be submitted with the evaluation. Upon review, the DEM will provide written notification either granting preliminary approval of the local limits analysis or stating the deficiencies revealed therein. Should the DEM determine that a deficiency exists in the local limits analysis submittal, the permittee shall submit to the DEM, within thirty (30) days of the receipt of said notice (unless a longer timeframe is specified therein), a revised evaluation consistent with the DEM's notice of deficiency.

c. Should the analysis from Part I.C.3.b, if required, determine the need to revise local limits, then within sixty (60) days of the receipt of preliminary approval of the proposed limits, the permittee shall submit to the DEM a request for a pretreatment program modification in accordance with 40 CFR 403.18 and Part C.5.e of this permit. Upon final approval by the DEM and adoption by the permittee, these limits shall be deemed Pretreatment Standards for the purposes of Section 307(d) of the Clean Water Act. No longer than thirty (30) days (unless a longer timeframe is specified) following the DEM's final approval of the proposed local limits, the permittee shall commence implementation of the revised local limits.

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

4. Enforcement Response Plan (ERP)

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

5. General

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

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

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

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

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

Pretreatment program modifications which the permittee considers Non-substantial, shall be deemed to be approved within (90) days after submission of the request for modification, unless DEM determines that the modification is in fact a substantial modification or notifies the permittee of deficiencies. Upon receipt of notification that DEM has determined the modification is substantial, the permittee shall initiate the procedures and comply with the deadlines for substantial modifications, which are outlined below.

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

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

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

g. For those Industrial Users with discharges that are not subject to Categorical

Pretreatment Standards, the permittee shall require appropriate reporting in accordance with 40 CFR 403.12(h).

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

i. The permittee shall require all Industrial Users to notify the permittee of substantial changes in discharge as specified in 40 CFR 403.12(j).

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

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

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

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

n. The permittee shall continue to designate, as SIUs, those Industrial Users (IUs) which meet the definition contained in the permittee's sewer use ordinance.

o. The permittee shall notify each newly designated SIU of its classification as an SIU within thirty (30) days of identification and shall inform the SIU of the requirements of an SIU contained in 40 CFR 403.12.

6. Categorical Industrial Users (CIUs)

a. The permittee shall require Industrial Users to comply with applicable Categorical Pretreatment Standards in addition to all applicable Pretreatment Standards and Requirements. The permittee shall require of all Categorical Industrial Users (CIUs), all reports on compliance with applicable Categorical Pretreatment Standards and Categorical Pretreatment Standard deadlines as specified in and in accordance with Sections (b), (d), (e) and (g) of 40 CFR 403.12. In addition, the permittee shall require Categorical Industrial Users to comply with the report signatory requirements contained in 40 CFR 403.12(1) when submitting such reports.

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

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

7. Annual Report

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

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

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

c. A summary list of the Compliance status of each Industrial User (IU), as of the end of last quarter covered by the annual report. The list shall identify all IUs in non-compliance, the pretreatment program requirement which the IU failed to meet, and the type, and date of the enforcement action initiated by the permittee in response to the violation. If applicable, the list shall also contain the date which IUs in non-compliance returned to compliance, a description of corrective actions ordered, and the penalties levied.

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

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

- significant industrial users inspected by the POTW (include inspection dates for each industrial user);
- significant industrial user sampled by the POTW (include sampling dates and dates of analysis, for each industrial user);

f. A summary list of permit issuance/reissuance activities including the name of the industrial user, expiration date of previous permit, issuance date of new permit, and a brief description of any changes to the permit;

g. A list including the report/notification type, due date, and receipt date for each report/notification required by 40 CFR 403.12.

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

i. A program evaluation in terms of program effectiveness, local limits application and resources which addresses but is not limited to:
- A description of actions being taken to reduce the incidence of SNC by Industrial Users;
- effectiveness of enforcement response program;
- sufficiency of funding and staffing;
- sufficiency of the SUO, Rules and Regulations, and/or statutory authority;

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

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

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

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

l. A summary of the average, maximum concentration, minimum concentration, and number of data points used for pollutant analytical results for influent, effluent, sludge and any toxicity or bioassay data from the wastewater treatment facility. The summary shall include a comparison of influent sampling results versus the maximum allowable headworks loadings contained in the approved local limits evaluation and effluent sampling results versus water quality standards. Such a comparison shall be based on the analytical results required in Parts I.A and I.C. of this permit and any additional sampling data available to the permittee; and

m. A completed pretreatment annual report summary (PARS) form (Attachment A-1 contains a copy of the PARS form, this form MUST be used).

8. Sewer Use Ordinance

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

D. OPERATION AND MAINTENACE OF SEWER SYSTEM

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

1. Maintenance Staff

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

2. Infiltration/Inflow

The permittee shall minimize infiltration/inflow to the sewer system. A summary report of all actions taken to minimize infiltration/inflow during the previous six (6) months shall be submitted to RIDEM, Office of Water Resources, by the 15th day of January and July of each year. The first report is due _____.

E. SLUDGE

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

F. DETECTION LIMITS

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

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

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

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

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

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

2. results reported as less than the MDL shall be included as values equal to the MDL, and the average shall be reported as "less than" the calculated value.

For compliance purposes, DEM will replace all data reported as less than the MDL with zeroes, provided that DEM determines that all appropriate EPA approved methods were followed. If the re-calculated average exceeds the permit limitation it will be considered a violation.

LIST OF TOXIC POLLUTANTS

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

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

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

Pesticides - EPA Method 608		MDL ug/l (ppb)
1P	aldrin	0.059
2P	alpha-BHC	0.058
3P	beta-BHC	0.043
4P	gamma-BHC	0.048
5P	delta-BHC	0.034
6P	chlordane	0.211
7P	4,4'-DDT	0.251
8P	4,4'-DDE	0.049
9P	4,4'-DDD	0.139
10P	dieldrin	0.082
11P	alpha-endosulfan	0.031
12P	beta-endosulfan	0.036
13P	endosulfan sulfate	0.109
14P	endrin	0.050
15P	endrin aldehyde	0.062
16P	heptachlor	0.029
17P	heptachlor epoxide	0.040

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

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

OTHER TOXIC POLLUTANTS

	MDL ug/l (ppb)
Antimony, Total	3.0 - EPA Method 204.2[1]
Arsenic, Total	5.0 - EPA Method 206.9
Beryllium, Total	0.2 - Standard Methods 18th Ed. 3113B
Cadmium, Total	1.0 - EPA Method 200.9
Chromium, Total	5.0 - Standard Methods 18th Ed. 3113B
Chromium, Hexavalent***	50.0 - Standard Methods 16th Ed., 312.B
Copper, Total	20.0 - EPA Method 200.7
Lead, Total	5.0 - EPA Method 200.9
Mercury, Total	0.5 - EPA Method 245.1
Nickel, Total	20.0 - EPA Method 200.7
Selenium, Total	5.0 - EPA Method 200.9
Silver, Total	1.0 - Standard Methods 18th Ed. 3113B
Thallium, Total	1.0 - EPA Method 279.2[1]
Thallium, Total	5.0 - EPA Method 200.9
Zinc, Total	20.0 - EPA Method 200.7
Asbestos	**
Cyanide, Total	10.0 - EPA Method 335.4
Phenols, Total***	50.0 - EPA Method 420.2
TCDD	**
MTBE (Methyl Tert Butyl Ether)	1.0 - EPA Method 524.2

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

NOTE:
All MDLs have been established in accordance with the definition of "Detection Limits" in the RIDEM Water Quality Regulations for Water Pollution Control. Unless otherwise noted the MDLs have been determined in reagent water by the Rhode Island Department of Health, Division of Laboratories. 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.

[1]Method detection limits for these metals analyses were determined by the USEPA. They are not contrived values and should be obtainable with any satisfactory atomic absorption spectrophotometer. To insure valid data the analyst must analyze for matrix interference effects and if detected treat accordingly using either successive dilution matrix modification or method of Standard Additions (Methods for Chemical Analysis of Water and Wastes EPA-600/4-79/020).

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

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

G. MONITORING AND REPORTING

1. Monitoring

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

2. Reporting

Monitoring results obtained during the previous month(s) shall be summarized and reported on Discharge Monitoring Report (DMR) Forms, postmarked no later than the 15th day of the month following the completed reporting period. A copy of the analytical laboratory report, specifying analytical methods used, shall be included with each report submission. Signed copies of these, and all other reports required herein, shall be submitted to:

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

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

FACT SHEET

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

RIPDES PERMIT NO. **RI0100005**

NAME AND ADDRESS OF APPLICANT:

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

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Bristol Wastewater Treatment Facility
Plant Avenue
Bristol, Rhode Island 02809

RECEIVING WATER: SB1

CLASSIFICATION:

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

The above named applicant has applied to the Rhode Island Department of Environmental Management for reissuance of a RIPDES Permit to discharge into the designated receiving water. The facility is engaged in the treatment of domestic and industrial sewage. The discharge from the Wastewater Treatment Plant.

II. Description of Discharge

A quantitative description of the discharge in terms of significant effluent parameters based on DMR data from October 1999 through October 2004 is shown on Attachment A-2.

III. Permit and Administrative Compliance Order Limitations and Conditions

The final effluent limitations and monitoring requirements may be found in the permit. Effluent flow (average monthly flow), as measured on Discharge Monitoring Reports, was observed to be in excess of permit limitations for 14 months between October 1999 and October 2004, typically during early spring. In addition, average daily effluent flow, as measured in the Monthly Operating Reports, was in excess of 80% of the permit limits for a period in excess of 90 days in the months of February, March, April, and May of 2000. Therefore, DEM plans to enter into a consent agreement with the Town of Bristol to reduce infiltration and inflow to a level that would allow for the Bristol Wastewater Treatment Facility to consistently comply with effluent flow limitations.

IV. Permit Basis and Explanation of Effluent Limitation Derivation

The Town of Bristol owns and operates the Bristol Wastewater Treatment Facility located on Plant Avenue in Bristol, Rhode Island. The discharge to Bristol Harbor consists of treated sanitary sewage. Treatment consists of:

Aerated Grit Chamber	Rotating Biological Contactors
Coarse Screening	Secondary Settling
Comminution	Chlorination
Primary Settling	Dechlorination

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

The "Average Monthly" and "Average Weekly" BOD_5 and TSS limitations plus the pH limitations are based upon the secondary treatment requirements of Section 301(b)(1)(B) of the Clean Water Act (SWA) as defined in 40 CFR 133.102(a) – (c). The "Maximum Daily" BOD_5, TSS, and fecal coliform are based on Rhode Island requirements for Publicly Owned Treatment Works (POTWs) under Section 401 (a)(1) of the CWA and in 40 CFR 124.53 and 124.56 The "Percent Removal" requirements are in accordance with 40 CFR 133.103. Settleable Solids has been included as a process-control parameters that can aid in the assessment of the operation of the plant but need not be an effluent limit.

In order to evaluate the need for water quality based limits, it is necessary to determine the mixing which occurs in the immediate vicinity of the wastewater discharge (initial dilution). The Bristol WWTF's effluent is discharged through a 30-inch pipe which is approximately 25.25 feet offshore. As presented in the Bristol Wastewater Treatment Facility's previous Development Document, dated March, 1999, it was determined that a mixing zone and corresponding dilution factor is acceptable for the effluent from the Bristol Wastewater Treatment Facility. Based on the analysis of a Dye Study (ASA, 1991), a chronic dilution factor of 100 with a mixing zone of 100-150m in radius and an acute dilution factor of 28 with a mixing zone of 34m in radius were deemed appropriate.

Based on the above dilution factors and the saltwater aquatic life and non-Class A human health criteria from the Rhode Island Water Quality regulations, allowable discharge concentrations were established using 80% allocation when no background data was available. 90% allocation was used when background data was available. 100% allocation of Total Residual Chlorine (TRC) was used due to the fact that chlorine is not expected to be found in ambient water and it is a non-conservative pollutant. Background data for Cadmium, Chromium, Copper, Lead, Nickel, and Silver was obtained from the four (4) SINBADD cruises in "Cruise and Data Report", SINBADD 1,2,3 and 4.

In accordance with 40 CFR Part 122.4(d)(1)(iii), water quality-based effluent limitations are required for those pollutants in the discharge that have the reasonable potential to cause or contribute to the exceedance of instream criteria. In order to evaluate the need for permit limitations, allowable monthly average (chronic) discharge concentrations were compared to the monthly average Discharge Monitoring Report (DMR) data and the mean of the concentrations reported from the State User Fee Program (UFP) data. Additionally, the allowable daily maximum (acute) discharge concentrations were compared to the daily maximum DMR data and the maximum UFP data. After the metals data collected from the Bristol WWTF during the previous five (5) years was evaluated, the data clearly showed that limits are not required for Cadmium, Chromium, Lead, Nickel, and Silver. This determination was based on the fact that the data was well below levels that would be required in order to meet water quality. However, based these comparisons, water quality limitations have been deemed necessary for TRC, Copper, and Endrin.

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

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

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

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

The Office has determined that all permit limitations are consistent with the Rhode Island Antidegradation policy. A document which outlines the permit development in greater detail is available upon request.

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

V. Comment Period, Hearing Requests, and Procedures for Final Decisions

All persons, including applicants, who believe any condition of the draft permit is inappropriate must raise all issues and submit all available arguments and all supporting material for their arguments in full by the close of the public comment period, to the Rhode Island Department of Environmental Management, Office of Water Resources, 235 Promenade Street, Providence, Rhode Island, 02908-5767. Any person, prior to such date, may submit a request in writing for a public hearing to consider the draft permit to the Rhode Island Department of Environmental Management. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public hearing may be held after at least thirty (30) days public notice whenever the Director finds that response to this notice indicates significant public interest. In reaching a final decision on the draft permit the Director will respond to all significant comments and make these responses available to the public at DEM's Providence Office.

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

VI. **DEM Contact**

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

Samuel Kaplan
Department of Environmental Management
Office of Water Resources
235 Promenade Street
Providence, Rhode Island 02908
Telephone: (401) 222-4700 x7046

5/13/05
Date

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

ATTACHMENT A-1
PRETREATMENT ANNUAL REPORT SUMMARY

			PPS1	PAU1	PAU2	PAU3
GENERAL INFORMATION:						
Control Authority Name:						
Address: _____ City:						
State/Zip:						
Coordinator Name: _____ Phone: _____		COOR		X		X
RIPDES Permit Number: _____		NPID	X	X	X	X
Reporting Period - Start Date: *Starting date that the summary covers.*	_____	PSSD	X			
Reporting Period - End Date: *Ending date that the summary covers. Normally 12 months after start date.*	_____	PSED	X			
Total Number of SIU's *This number includes the number of CIU's.*	_____	SIUS		X		
Total Number of CIU's	_____	CIUS		X		
SIGNIFICANT INDUSTRIAL USER COMPLIANCE STATUS						
Number of CIU's Submitting BMR's/# Required:	____/					
Number of CIU's Submitting 90-Day Compliance Reports/# Required:	____/					
Number of SIU's in Significant Noncompliance with Pretreatment Compliance Schedules/# Required to Meet Schedules: *Over the reporting period, the number of SIU's in SNC because they violated a compliance schedule milestone date by 90 days or more or have violated a compliance schedule reporting date by 30 days or more and have not returned to compliance.*	_____	SSNC	X			
Number of SIU's in SNC with Self-Monitoring Requirements: *Over the reporting period, the number of SIU's in SNC because they failed to accurately report their noncompliance or have failed to provide self-monitoring results within 30 days of the due date and have not returned to compliance with the schedule or reporting.*	_____	MSNC		X		

SIGNIFICANT INDUSTRIAL USER COMPLIANCE STATUS (Con't)			PPS1	PAU1	PAU2	PAU3
Number of SIU's in Significant Noncompliance for Either Violating Effluent Or Reporting Requirements: *At the end of the reporting period, the number of SIU's in SNC for violating an effluent standard (Local Limits, Categorical Standards or General Federal Prohibitions) or for violating a reporting requirement and has NOT had adequate enforcement action taken against them by the POTW.*	_____	PSNC		X		
Number of SIU's in SNC with Reporting Requirements: *At the end of the reporting period, the number of SIU's in SNC for violating a reporting requirement.*	_____	RSNC			X	
Number of SIU's in SNC with Effluent Requirements: *At the end of the reporting period, the number of SIU's in SNC for violating their effluent standards (Local Limits, Categorical Standards or General Federal Prohibitions).*	_____	SNPS				X
COMPLIANCE MONITORING PROGRAM						
Number of SIU's Without Active (Expired) Permits: *At the end of the reporting period, the number of SIU's that have no Industrial Discharge Permit or have an expired permit.*	_____	RDN1				X
Number of SIU's With Permits Expired for 180 Days or More: *Over the reporting period, the number of SIU's that did not have an Industrial Discharge Permit for more than 180 days or had an expired permit for more than 180 days.*	_____	NOCM		X		
Number of SIU's (Both) not Inspected and Sampled by POTW in the Past 12 Months: *Over the reporting period, the number of SIU's that have not been sampled by the POTW and have not been inspected by the POTW.*	_____	NOIN		X		
Number of SIU's not Sampled/Not Inspected by the POTW in the Past 12 Months: *Two part field. First, over the designated reporting period, the number of SIU's that have not been sampled by the POTW. Second, over the designated reporting period, the number of SIU's that have not been inspected by the POTW.*	____/____	RDN2				X
Number of SIU's in SNC with Self-Monitoring and Not Inspected and Not Sampled in the Past 12 Months: *Over the reporting period, the number of SIU's that first, meet the criteria of MSNC and second, have not been sampled by the POTW and have also not been inspected by the POTW.*	_____	SNIN		X		

PRETREATMENT ANNUAL REPORT SUMMARY - Page 3

ENFORCEMENT ACTIONS

			PPS1	PAU1	PAU2	PAU3
Number of Compliance Schedules Issued: *Over the designated reporting period, the number of SIU's that were issued a compliance schedule by the POTW.*	_____	SOCS	X			
Number of Notices of Violation Issued to SIU's: *Over the designated reporting period, the number of NOV's issued to SIU's by the POTW.*	_____	VINO	X			
Number of Administrative Orders Issued to SIU's: *Over the designated reporting period, the number of AO's issued to SIU's by the POTW.*	_____	ADOR	X			
Combined Total of Administrative Orders and Notices of Violation: *Over the designated reporting period, the number of AO's and NOV's issued to SIU's by the POTW.*	_____	FENF	X			
Civil Suits Filed Against SIU's: *Over the designated reporting period, the number of civil suits filed against SIU's by the POTW.*	_____	CIVL	X			
Criminal Suits Filed Against SIU's: *Over the designated reporting period, the number of criminal suits filed against SIU's by the POTW.*	_____	CRIM	X			
Combined Total of Civil Suits and Criminal Suits: *Over the designated reporting period, the number of civil and criminal suits filed against SIU's by the POTW.*	_____	JUDI	X			
Number of SIU's Published in the Newspaper as Significant Violators: *Over the designated reporting period, the number of SIU's that have been or will be published in the newspaper for being in SNC by the POTW.*	_____	SVPU	X			
Number of SIU's From Which Penalties Were Collected: *Over the designated reporting period, the number of SIU's that the POTW has collected a penalty from.*	_____	IUPN	X			
Total Amount of Penalties Collected: *Over the designated reporting period, the total amount of penalty dollars that has been collected from SIU's by the POTW.*	_____	PAMT	X			
Number of SIU's Subject to Any Enforcement Action: *Over the designated reporting period, the total number of SIU's which have been subject to any type of formal enforcement action by the POTW.*	_____	NENF	X			

ATTACHMENT A-2: HISTORICAL EFFLUENT DATA

DESCRIPTION OF DISCHARGE: Discharge from settling tanks 001

EFFLUENT CHARACTERISTICS AT POINT OF DISCHARGE

PARAMETER	MONTHLY AVG.[1]	WEEKLY AVG.[2]	DAILY MAX.[3]
FLOW, MGD	3.15		20[4]
BOD, LBS/DY	300.61 (AVG. MASS)		618.21 (MAX. MASS)
BOD, MG/L	11.80	15.05	21.75
BOD, % REMOVAL	93.41		
TSS, LBS/DY	3999.08		6747.92
TSS, MG/L	164.04	206.94	279.30
TSS, % REMOVAL	91.84		
SETTLEABLE SOLIDS, ML/L		0.13	0.15
FECAL COLIFORMS MPN/100 ML	15.62 MPN / 100 ML	45.81 MPN / 100 ML	233.12 MPN / 100 ML
CHLORINE, TOTAL RESIDUAL UG/L	0.12		0.21
PH, S.U.	6.42		7.29
OIL & GREASE MG/L			1.75
NITROGEN TOTAL KJELDHAL MG/L	20.36		21.81
NITROGEN NITRATE (TOTAL AS N)	4.79		5.76
NITROGEN NITRITE (TOTAL AS N)			7.59
CYANIDE, TOTAL UG/L			9.95
COPPER, TOTAL, UG/L	17.85		28.57

Biotoxicity Data LC_{50} Values (in percent effluent)

	2002		2003				2004		
	2nd. qtr.	3rd. qtr.	1st. qtr.	2nd. qtr.	3rd. qtr.	4th. qtr.	1st. qtr.	2nd. qtr.	3rd. qtr.
Pre-Cl_2 Mysid	>100	>100	>100	>100	>100	>100	>100	>100	>100

[1]Data represents statistical mean of the monthly average from October 1999 – October 2004

[2]Data represents statistical mean of the weekly average from October 1999 – October 2004

[3]Data represents statistical mean of the daily maximum from October 1999 – October 2004

[4]Data represents maximum monthly value of maximum flow from October 1999 – October 2004