PRETREATMENT PROGRAM

ANNUAL REPORT

JANUARY 1, 2015 – DECEMBER 31, 2015

ATTACHMENT VOLUME I

NBC AND PRETREATMENT PROGRAM SPECIFIC INFORMATION

ATTACHMENT VOLUME I

NARRAGANSETT BAY COMMISSION

AND

PRETREATMENT PROGRAM

SPECIFIC INFORMATION

LISTING OF ATTACHMENT SECTIONS
ATTACHMENT VOLUME I

NBC AND PRETREATMENT PROGRAM SPECIFIC INFORMATION

ATTACHMENT VOLUME I

SECTION 1

NBC PUBLIC INFORMATION, MAILINGS, NEWSPAPER ARTICLES, AND ADVERTISEMENTS

INFORMATIONAL LETTERS TO USERS

February 27, 2015

ENVIRONMENTAL MERIT AWARDS

Mass Mailing - All Users - Both Districts
List Attached

Dear «Title» «LastName»:

The Narragansett Bay Commission (NBC) is proud to announce its twentieth annual NBC Environmental Merit Awards. As you may be aware, each year the NBC honors companies that have gone above and beyond compliance using pollution prevention techniques and approaches, implemented storm water mitigation technologies, and companies that achieved perfect compliance records.

There are three types of Environmental Merit Awards, the Pollution Prevention Award, the Perfect Compliance Award, and the Stormwater Management Award. Companies qualified for a Pollution Prevention Award must be in good standing with the NBC Rules and Regulations and able to demonstrate pollution prevention efforts that have resulted in volume/toxicity reduction of pollutants, commitment to sound environmental management practices, application of pollution prevention efforts for use by other companies, employee participation, extraordinary efforts to go beyond compliance and/or demonstrate innovative approaches to waste management. Companies that are qualified for Stormwater Management Awards must demonstrate stormwater abatement efforts resulting in measurable reduction/elimination of storm flow to the NBC sewer system.

If you would like to nominate your company for an NBC Environmental Merit Award, you can find the application and award criteria on our website using the following link:

http://www.narrabay.com/en/ProgramsAndProjects/PretreatmentProgram/Environmental%20Merit%20Awards.aspx

Please download the application and return it by March 17, 2015 to:

Jim McCaughey, PE, BCEE
Environmental Manager
The Narragansett Bay Commission
One Service Road
Providence, RI 02905
Email: jmccaughey@narrabay.com
Fax: 401.461-6540

If you have any questions, please contact me at 461.8848, ext. 490.

Sincerely,

Kerry M. Britt
Pretreatment Manager

cc: Jim McCaughey
John Zuba

March 3, 2015

PERFECT COMPLIANCE
Mass Mailing
All SIUs - Both Districts
List Attached

Dear :

As you may be aware the Narragansett Bay Commission (NBC) Pretreatment staff reviews the files of all Significant Industrial Users (SIUs) as a part of the Pretreatment Annual Report preparation. As a part of this review, a list of SIUs achieving perfect compliance is compiled. These companies did not receive any Notices of Violation during the review period. In 2014, 16 SIUs achieved perfect compliance with the NBC Rules and Regulations and their permits. These companies are to be commended for their hard work and efforts to maintain compliance. I would like to take this opportunity to congratulate the following companies:

A. Harrison & Company, Inc.	Interplex Engineered Products, Inc.
AG&G Incorporated	Metallurgical Solutions, Inc.
Armbrust International, Ltd.	Providence Journal Company - Production Facility
Darlene Group, Inc.	Providence Metallizing Company, Inc.
Dominion Energy Manchester Street, Inc.	Stackbin Corporation
Electrolizing, Inc.	Tanury Industries PVD, Inc.
General Cable Industries, LLC	Technodic, Inc.
Hord Crystal Corporation	Truex, Inc.

An advertisement recognizing the achievements of these companies was published in the Providence Journal on February 25, 2015. Aligned herewith is a copy of the advertisement for your reference.


NARRAGANSETT BAY COMMISSION
Perfect Compliance
in recognition of Significant Industrial User Perfect Compliance in 2014

The Narragansett Bay Commission recognizes these Significant Industrial User companies for perfect regulatory compliance with Pretreatment Program regulations during 2014:

A Harrison & Company, Inc.
Armbrust International, Ltd.
Dominion Energy Manchester Street, Inc.
Hord Crystal Corporation
Metallurgical Solutions, Inc.
Providence Journal Company - Production Facility
Stackbin Corporation
Technodic, Inc.
AG&G Incorporated
Darlene Group, Inc.
Electrolizing, Inc.
General Cable Industries, LLC
Interplex Engineered Products, Inc.
Providence Metallizing Company, Inc.
Tanury Industries, PVD, Inc.
Truex, Inc.

Has your company demonstrated extraordinary environmental efforts this year?
If so, apply for an NBC Environmental Merit Award! Download an application form at www.narrabay.com.

Vincent J. Mesolella, *Chairman* • **Raymond J. Marshall, P.E.,** *Executive Director*
One Service Road, Providence, RI 02905
401-461-8848 • www.narrabay.com

Sincerely,

Kerry M. Britt
Pretreatment Manager

KMB:smb

March 6, 2015

MASS MAILING ALL SIUs
Field's Point and Bucklin Point
List attached

Dear :

The R. I. DEM requires the Narragansett Bay Commission (NBC), prior to submission of its Annual Pretreatment Report, to notify all significant industrial users annually if their firm was classified as a Significant Industrial User (SIU) during that report year. Therefore, this letter is to notify you that your firm was classified as a SIU during 2014, since one or more of the following criteria applied to your firm:

1. Firm is subject to Federal EPA categorical standards;

2. Firm discharges an average process waste stream of 5,000 gallons per day (0.005 MGD) or more;

3. Firm contributes a process waste stream which is 5% or more of the average dry weather hydraulic or organic capacity of the NBC treatment facility to which the firm discharges;

4. Firm has reasonable potential to adversely affect the POTW's operation, or has the potential for violating any pretreatment standard or requirement.

In accordance with EPA and NBC regulations and the terms of NBC Wastewater Discharge Permits, SIUs must comply with various site specific requirements and must also comply with the EPA reporting requirements outlined in 40 CFR part 403.12. Site specific requirements may include (1) development, implementation, and maintenance of Toxic Organic Solvent Management and Spill & Slug Prevention Control Plans, (2) monitoring of process effluent, and (3) maintenance of logbooks, manifests, and associated paperwork. Reporting requirements may include (1) immediate notification of any spill or slug discharge, (2) twenty-four hour notification of any effluent violation, (3) submission of effluent monitoring reports within thirty days from the end of the month in which monitoring is required, or within thirty days from the sampling date, (4) submission of properly completed and signed Self-Monitoring Compliance Reports with each wastewater analysis, (5) notification of any changes in operation, and (6) submission of any other document by the NBC specified date.

Please refer to your discharge permit to ensure that you are in full compliance with the specific aforementioned requirements that apply to your facility. I recommend that you have regular meetings with all levels of employees at your firm to discuss the environmental regulations and your specific permit requirements and to develop ways to maintain full compliance. I recommend that you form Employee Awareness Programs, since so often your existing employees with the "hands on" responsibilities may see a better way to produce your product or to achieve and maintain compliance. I also encourage your firm to develop Environmental Management Systems (EMS) to provide your firm the environmental focus needed to ensure compliance with today's complex environmental regulations and issues. Avoiding non-compliance is a hard job requiring the participation of every employee from the hourly worker to the owner or CEO. The hard work of all employees is necessary to ensure that the name of your firm is never published in the annual Public Notice in the Providence Journal for being in Significant Non-Compliance (SNC) with NBC and EPA regulations.

The NBC Environmental, Safety & Technical Assistance (ESTA) Program is available to assist you with pollution prevention measures to help your firm achieve and maintain full compliance with environmental regulations. This technical assistance program is free and confidential. Contact Mr. James McCaughey, P.E., at 461-8848, ext. 352 to find out more about the NBC ESTA Program.

The NBC wishes you well at your efforts to comply with the NBC and EPA regulations throughout 2015. If you have any questions regarding this letter or the NBC Pretreatment Program in general, feel free to contact the engineer or technician responsible for regulating your firm at 461-8848, ext. 490.

Sincerely,

Kerry M. Britt
Pretreatment Manager

KMB:smb

cc: Pretreatment Engineers/Technicians

April 27, 2015

MASS MAILING
Categories 11 through 59 - Both Districts
List Attached

Dear :

This informational form letter is being sent to all industrial firms regulated by the Narragansett Bay Commission (NBC) Pretreatment Program to educate our users about EPA Regulations regarding Significant Non-Compliance. Federal general pretreatment program regulations require the NBC to annually publish a list of all industrial users that violate any of the EPA Significant Non-Compliance Criteria listed below:

SIGNIFICANT NON-COMPLIANCE CRITERIA

A. Chronic violations of wastewater discharge limits, defined here as those in which 66% or more of all of the measurements taken during a six-month period exceed (by any magnitude) a numerical Pretreatment Standard or Requirement for the same pollutant parameter;

B. Technical Review Criteria (TRC) violations, defined here as those in which 33% or more of all the measurements for each pollutant parameter taken during a six-month period equal or exceed the product of a numerical Pretreatment Standard or Requirement multiplied by the applicable TRC value (TRC = 1.4 for BOD, TSS, fats, oil, and grease and 1.2 for all other pollutants except pH);

C. Any other violation of a pretreatment effluent limit (daily maximum or long-term average) that the Commission determines has caused, alone or in combination with other discharges, interference or pass through (including endangering the health of Commission personnel or the general public);

D. Any discharges of a pollutant that has caused imminent endangerment to human health, welfare or the environment or has resulted in the Commission's exercise of its emergency authority to halt or prevent such a discharge;

E. Failure to meet, within 90 days after the scheduled date, a compliance milestone contained in a Commission notification, permit or enforcement order, for starting construction, completing construction or attaining final compliance;

F. Failure to provide, within 30 days after the due date, required reports such as baseline monitoring reports, 90-day compliance reports, self-monitoring compliance reports and reports on compliance with compliance schedules;

G. Failure to accurately report non-compliance;

H. Any other violation or group of violations which the Commission determines has adversely effected the operation or implementation of the Pretreatment Program.

The EPA requires that the NBC must review each industrial user file every three (3) months for SNC criteria A and B referenced above, evaluating the user's previous six (6) month compliance status as can be seen from the enclosed EPA graphic. **If an industrial user exceeds the compliance percentages specified in the SNC criteria A or B, even for just one quarterly evaluation period, the user is in significant non-compliance and must be listed in the newspaper.** The compliance percentages specified in SNC criteria A and B are calculated for each sample location specified in your Wastewater Discharge Permit. The NBC still reviews each user file annually to determine the user's compliance status with EPA criteria C through H. This EPA data evaluation method clearly shows how important it is for an industrial user to sample early and often during each quarterly data review period, especially for any parameters which your firm may periodically experience excursions above the discharge limits. Sampling early and often each quarterly review period will ensure that you are not listed as a violator for criteria A and B.

SUBMIT ALL REPORTS BY THE DUE DATE SPECIFIED BY THE NBC. The name of your firm will automatically be published in the newspaper as being in SNC for criteria F if any NBC requirement is not satisfied within thirty (30) days of the due date. Notify the NBC within twenty-four (24) hours of becoming aware of any sampling violation and immediately begin to resample for any parameters in violation (except for BOD and TSS). This is required by your discharge permit and is clearly stated on the Self-Monitoring Compliance Report form that must accompany each analyses. Please do not hesitate to contact the NBC Environmental, Safety & Technical Assistance (ESTA) Section if your firm is experiencing compliance problems and would like assistance with pollution prevention measures. The NBC ESTA staff is available to provide FREE technical assistance to your firm. For information regarding how pollution prevention assistance can help your firm achieve and maintain compliance, contact Mr. James McCaughey at 461-8848, ext. 352.

PLEASE NOTE THAT THE NBC DOES NOT WANT TO PUBLISH THE NAME OF ANY FIRM, BUT WE MAY HAVE NO CHOICE. On February 25, 2015, the names of eight (8) firms from both districts were published in an advertisement in the Providence Journal due to their SNC status. These firms were billed by the NBC for the reimbursement cost for this public notice. A copy of this public notice is enclosed for your information. Only you can ensure that the name of your firm is not published for being in Significant Non-Compliance with NBC and EPA regulations. Please feel free to contact the ESTA staff if the NBC can be of assistance with your compliance endeavors. Good luck maintaining full compliance during 2015.

If you should have any questions regarding this letter or the permit requirements specific to your facility, contact the engineer or technician that regulates your firm at 461-8848, ext. 490.

Sincerely,

Kerry M. Britt
Pretreatment Manager

KMB:smb

Enclosures

cc: Pretreatment Engineers and Technicians

The Narragansett Bay Commission

SIGNIFICANT NON-COMPLIANCE CRITERIA

(a) Chronic Violations of Wastewater discharge limits, defined here as those in which 66% or more of all of the measurements taken during a six (6) month period exceed (by any magnitude) a numerical Pretreatment Standard or Requirement for the sample pollutant parameter;

(b) Technical Review Criteria (TRC) violations, defined here as those in which 33% or more of all measurements for each pollutant parameter taken during a six (6) month period equal or exceed the product of a numerical Pretreatment Standard or Requirement multiplied by the applicable TRC (TRC = 1.4 for oil and grease and 1.2 for all other pollutants except pH);

(c) Any other violation of a pretreatment effluent limit (daily maximum or long-term average) that the Narragansett Bay Commission (NBC) determines has caused, alone or in combination with other discharges, interference or pass through, including endangering the health of NBC personnel or the general public;

(d) Any discharges of a pollutant that has caused imminent endangerment to human health, welfare of the environment or has resulted in the NBC's exercise of its emergency authority to halt or prevent such a discharge;

(e) Failure to meet, within ninety (90) days after the scheduled date, a compliance milestone contained in a permit or enforcement order for completing construction or attaining final compliance;

(f) Failure to provide, within thirty (30) days after the due date, required reports such as baseline monitoring reports, ninety (90) day compliance reports, Self-Monitoring Compliance Reports, and reports on compliance with compliance schedules;

(g) Failure to accurately report noncompliance;

(h) Any other violation or group of violations which the NBC determines will adversely affect the operation or implementation of the Pretreatment Program.

EXPLANATION OF SIGNIFICANT NON-COMPLIANCE (SNC) CRITERIA

SNC Criteria A 66 % or more of measurements are in violation of effluent standards for any six (6) month review period.

Example: Firm samples for copper ten (10) times in the six (6) month evaluation period of January 1 through June 30. Copper results are as follows:

(1)	1.16 ppm	-	In Compliance	(6)	1.21 ppm	-	Violation
(2)	2.34 ppm	-	Violation	(7)	4.35 ppm	-	Violation
(3)	1.26 ppm	-	Violation	(8)	1.40 ppm	-	Violation
(4)	2.31 ppm	-	Violation	(9)	2.17 ppm	-	Violation
(5)	0.87 ppm	-	In Compliance	(10)	0.91 ppm	-	In Compliance

The discharge limit for copper is 1.20 ppm, 7 out of 10 samples exceed this limit, therefore 70% of the copper samples are in violation, resulting in the firm being in SNC for copper for Criteria A.

SNC Criteria B Technical Review Criteria - 33% or more of measurements for the six (6) month review period exceed the limit multiplied by the TRC value. The TRC value = 1.2 for all parameters except oil and grease, where the TRC = 1.4

Example: For copper the TRC value multiplied by the copper limit = 1.2 x 1.2 = 1.44. Using the same results for copper as given in the example above:

Measurements		Copper TRC Limit	In Compliance With TRC Limit?
(1)	1.16 ppm	1.44 ppm	Yes
(2)	2.34 ppm	1.44 ppm	No
(3)	1.26 ppm	1.44 ppm	Yes
(4)	2.31 ppm	1.44 ppm	No
(5)	0.87 ppm	1.44 ppm	Yes
(6)	1.21 ppm	1.44 ppm	Yes
(7)	4.35 ppm	1.44 ppm	No
(8)	1.40 ppm	1.44 ppm	Yes
(9)	2.17 ppm	1.44 ppm	No
(10)	0.91 ppm	1.44 ppm	Yes

The TRC limit for copper, 1.44 is exceeded four (4) our of ten (10) samples in the review period, therefore, 40% exceedence of the TRC limit occurred, resulting in the firm being in SNC for Criteria B.

SNC Criteria C Any violation of a pretreatment effluent limit that has caused interference or pass-through of NBC facilities.

Example: A firm dumps an electroplating tank containing copper and cyanide. These toxic chemicals kill the microorganism at the NBC Wastewater Treatment facility, interfering with NBC operations. The firm is in SNC for Criteria C.

Example: A firm discharges a concentrated red dye containing copper. The red color passes through the NBC Wastewater Treatment facility, discoloring the receiving waters of Narragansett Bay. The firm is in SNC for Criteria C.

SNC Criteria D Discharging a pollutant that has caused imminent endangerment to human health or the environment.

Example: A firm dumps a degreasing solvent such as trichloroethylene into the sewer. Toxic chemical odors are evolved and enter nearby homes, businesses and endangers sewer workers. The firm is in SNC for Criteria D.

Example: An automotive repair facility dumps gasoline into the sewer creating toxic odors and explosive conditions in the sewer system. The firm is in SNC for criteria D.

SNC Criteria E Failure to meet, within ninety (90) days after a scheduled completion date, a compliance milestone...

Example: The firm, required by a compliance order, compliance schedule, permit or other document, fails to achieve a compliance milestone such as installing a pretreatment system, by the required date and exceeds the compliance milestone deadline by more than ninety (90) days. The firm is in SNC for Criteria E.

SNC Criteria F Failure to submit documents within thirty (30) days from the due date.

Example: A firm is required to sample in May and the compliance report is due by June 30. The report is submitted to the NBC on July 31, thirty one (31) days past the due date, therefore the firm is in SNC for Criteria F.

SNC Criteria G Failure to accurately report non-compliance.

Example: A firm is required to continuously record the pH of their effluent and to report the results monthly to the NBC on a monitoring report form. During the annual NBC inspection of the firm, the pH charts are reviewed and it is determined that low and high effluent pH violations have not been reported. The firm is in SNC for Criteria G and could face additional enforcement action for falsification of monitoring reports.

SNC Criteria H Any violation that adversely effects the operation or implementation of the pretreatment program.

Example: A firm refuses to allow access to NBC inspectors or harasses the NBC inspectors while performing their duties. The firm would be in SNC for Criteria H.

Determination of Industrial User (IU) Significant Noncompliance (SNC)

1. The POTW (in conjunction with the Approval Authority) must establish its "Pretreatment Year."

2. At the end of each quarter, POTWs and States should evaluate their IU's compliance status for the two criteria which are evaluated on a six month time frame (i.e., the "A" and "B" criteria - 403.8(f)(2)(vii)(A) and (B)) as illustrated below. The example below assumes a " Pretreatment Year" equal to the calendar year.

FIRST EVALAUTION PERIOD

End of previous "Pretreatment Year"

Beginning of the current "Pretreatment Year."

Oct.	Nov.	Dec.	Jan.	Feb.	Mar.

SECOND EVALUATION PERIOD

Jan.	Feb.	Mar.	Apr.	May	Jun

THIRD EVALUATION PERIOD

Apr.	May	Jun.	Jul.	Aug.	Sep

FOURTH EVALUATION PERIOD

Jul.	Aug.	Sep.	Oct.	Nov.	Dec

End of the current "Pretreatment Year."

3. At the end of the first quarter (March 30th in our example), the POTW must evaluate the data from an industrial user for the previous six months (e.g., beginning with October 1 of the previous "Pretreatment Year" as in our example). Likewise, the POTW must evaluate six months of data at the end of each subsequent quarter (e.g., June 30th, September 30th, and December 31st).

4. At the end of the "Pretreatment Year," the POTW must summarize the compliance status of its industrial users over the reporting period and report on this compliance status to the Approval Authority. The POTW must publish all industrial users which were identified in SNC during the "Pretreatment Year," unless the IU was previously published for violations which occurred solely in the last quarter of the previous "Year."

The Providence Journal
February 25, 2015

The Narragansett Bay Commission

PUBLIC NOTICE

Firms in Significant Non-Compliance

THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGULATION 40 C.F.R. 403.8(f) (2) (vii) and Article 10 of the Narragansett Bay Commission, Rules and Regulations require the NBC to publish annually the names of all industrial users in Significant Non-Compliance (SNC) with pretreatment standards and other pretreatment requirements during the preceding year. Companies deemed to be in Significant Non-Compliance are those industrial users who have violated any of the Significant Non-Compliance criteria listed, as defined by Article 2 of the NBC Rules and Regulations during the time period from October 1, 2013 through December 31, 2014. The parameter for which a company was not in compliance and/or the specific administrative deficiency are listed after the company name. The number(s) in parentheses correspond to the type of SNC criteria specified below. Some of the firms listed below may have been issued an Administrative Order in which administrative and/or civil penalties may have been assessed. Many of the companies listed have made significant progress toward correcting the violation and may now be in compliance.

Significant Non-Compliance Criteria:

(1) Chronic violations of wastewater discharge limits, defined here as those in which 66% or more of all of the measurements taken during a six-month period exceed (by any magnitude) a numerical Pretreatment Standard or Requirement for the same pollutant parameter;

(2) Technical Review Criteria (TRC) violations, defined here as those in which 33% or more of all the measurements for each pollutant parameter taken during a six-month period equal or exceed the product of a numerical Pretreatment Standard or Requirement multiplied by the applicable TRC value (TRC = 1.4 for BOD, TSS, fats, oil, and grease and 1.2 for all other pollutants except pH);

(3) Any other violation of a pretreatment effluent limit (daily maximum or long-term average) that the Commission determines has caused, alone or in combination with other discharges, interference or pass through (including endangering the health of Commission personnel or the general public);

(4) Any discharges of a pollutant that has caused imminent endangerment to human health, welfare or the environment or has resulted in the Commission's exercise of its emergency authority to halt or prevent such a discharge;

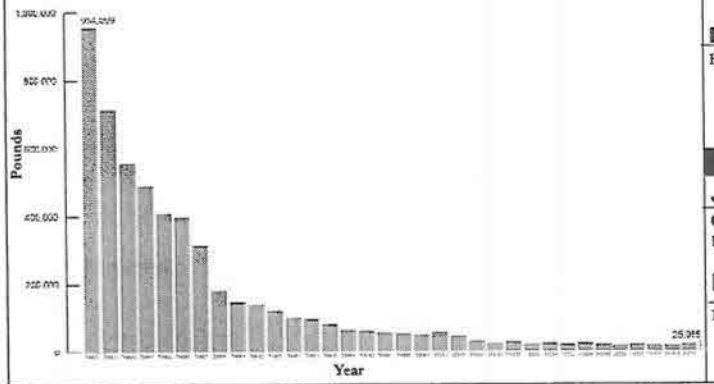
(5) Failure to meet, within 90 days after the scheduled date, a compliance milestone contained in a Commission notification, permit or enforcement order, for starting construction, completing construction or attaining final compliance;

(6) Failure to provide, within 30 days after the due date, required reports such as baseline monitoring reports, 90-day compliance reports, self-monitoring compliance reports and reports on compliance with compliance schedules;

(7) Failure to accurately report noncompliance;

(8) Any other violation or group of violations which the Commission determines has adversely effected the operation or implementation of the Industrial Pretreatment Program. •

Total Metals Influent to Field's Point WWTF, 1981-2014



THE NARRAGANSETT BAY COMMISSION IS COMMITTED TO PROTECTING THE STATE'S TWO LARGEST WASTEWATER TREATMENT FACILITIES AND NARRAGANSETT BAY FROM TOXIC DISCHARGES. This is accomplished by the issuance of discharge permits to commercial and industrial sewer users. These discharge permits specify the level of pollutants that can be discharged in a facility's wastestream and may require a firm to conduct wastewater monitoring to verify compliance with discharge limits, to implement a Spill Control Plan and/or Toxic Organic/Solvent Management Plan, and to install pretreatment equipment. Various reporting and record keeping requirements may also be written into discharge permits. The firms listed in this public notice violated one or more of the significant non-compliance criteria specified above. The Commission is required by the RI DEM and the US EPA to annually publish the names of all firms violating any of these criteria. Therefore, firms must be sure to comply with all the terms specified in their discharge permit to ensure that the name of their firm is not listed in this annual public notice. The NBC offers FREE technical assistance to firms located in the NBC service area through its non-regulatory Office of Environmental, Safety & Technical Assistance. For information on how the NBC Environmental, Safety & Technical Assistance Program can help your firm achieve and maintain compliance, contact the Environmental, Safety & Technical Assistance Program Staff at 461-8848/TDD 461-6549.

Most businesses located in the NBC district are to be commended for the fine job they have done treating their process discharges to remove toxic pollutants. In 1981, local industries discharged 954,099 pounds of heavy metals such as copper, nickel and zinc and 80,440 pounds of cyanide to the Field's Point Wastewater Treatment Facility. Since 1981, the total metals and cyanide loadings to the Field's Point facility have been reduced by 97.4% and 98.8% respectively. Similar toxic loading reductions have been observed at the NBC Bucklin Point facility.

Bucklin Point Service Area

Cumberland

Company Name	Violations Cited	Present Status
Nuzzo Campion Stone Enterprises, Inc.	Failure to submit report on time (6)	Report has been received. Firm is now out of business.

Lincoln

Denison Acquistion Company, LLC	Zn (2)	Firm is now in compliance.
dba Denison Pharmaceuticals, LLC	Failure to submit reports on time (6)	Reports have not been received.
Lincoln Manufacturing, Inc. dba Lincoln Fine Ingredients	O&G (2)	Firm is now in compliance.
Putnam Holdings, Inc. dba Bradley Press	Failure to submit reports on time (6)	Reports have been received.
Tanury Industries	TTO (2)	Firm is now in compliance.

Pawtucket

Bliss Manufacturing Company, Inc.	Ag (2)	Firm is now in compliance.

Field's Point Service Area

Johnston

Company Name	Violations Cited	Present Status
KB Surfaces, LLC	Failure to submit report on time (6)	Report has been received

Providence

Bella's Jewelry	Failure to submit report on time (6)	Report has been received.

The Narragansett Bay Commission will continue to lead in wastewater treatment, environmental protection, and environmental education to ensure a cleaner Narragansett Bay for all to enjoy.

Vincent J. Mesolella, *Chairman* • Raymond J. Marshall, P.E., *Executive Director*
Narragansett Bay Commission • One Service Road • Providence, RI 02905 • 401-461-8848 • TDD 401-461-6549 • FAX 401-461-6540 • http://www.narrabay.com
Twitter: @narrabay • Facebook: www.facebook.com/narrabay

The cost of this public notice will be billed to the firms listed above that were in significant non-compliance.

June 2, 2015

MASS MAILING
Summer Shutdown Letter
Both Districts - Categories 11 through 59
List Attached

Dear :

Typically, many industries shutdown their operations for a period of time during the summer months. Past operating experiences in the Narragansett Bay Commission (NBC) Districts have shown that large quantities of toxic and hazardous wastes have been indiscriminately dumped in significant quantities into the sewer system as part of an industry's "clean-up" procedure prior to their summer shutdown. This usually occurs in the last two weeks of June and throughout the month of July.

The two NBC Wastewater Treatment Facilities are secondary treatment facilities which utilize microorganisms to treat sanitary wastewater. These microorganisms work to reduce the amount of conventional pollutants discharged to Narragansett Bay from our treatment facilities. Slug discharges containing industrial pollutants can kill or severely impair the effectiveness of these microorganisms, thus creating a situation that would counter the efforts of the NBC to provide a clean bay for all to enjoy.

We urge all firms to dispose of their spent solutions properly, since it will be far less costly than the fines and legal expenses incurred if caught improperly disposing of these wastes. The NBC will be actively monitoring the sewer system during the upcoming vacation period to detect any illegal discharges. Industries found to be in violation of the NBC Rules and Regulations may be subject to a fine of up to $25,000 per violation and/or thirty (30) days of imprisonment for criminally negligent violations. Therefore, we ask for your cooperation and request that you contact your chemical supplier or a licensed hazardous waste hauler to properly dispose of your spent concentrated solutions during your upcoming vacation shutdown.

Over the next few weeks in advance of the summer shutdown, the Pretreatment staff will be conducting site visits to every manufacturing facility to remind the waste operators regarding waste disposal requirements and to assist operators regarding their waste treatment and disposal options. This will help to ensure that firms do not experience any compliance problems associated with the vacation facility clean up. For more information regarding the proper disposal of waste from your facility or to report illegal dumping, contact the Pretreatment Program staff at 461-8848, ext. 490. Thank you for your continued cooperation with regard to properly treating all waste and enjoy your summer vacation.

Sincerely

Kerry M. Britt
Pretreatment Manager

Enclosure

2 Ernest Street • Providence, Rhode Island 02905 • 401 461-8848 • 401 461-0170

Narragansett Bay Commission

Electroplaters, Metal Finishers, Chemical Processing Firms and Other Industries:

Vacation Shutdown
Prohibited Sewer Discharges

Typically many industries shut down their operation for a period of time during the holiday months. Past operating experiences in the Narragansett Bay Commission (NBC) District have shown that large quantities of toxic and hazardous wastes have been indiscriminately dumped in significant quantities into the sewer as part of an industry's "clean-up" procedure prior to their shutdown. This usually occurs in the last two weeks of June and throughout the month of July, as well as in December. Pursuant to Title 46 Chapter 25 of the Rhode Island General Laws, the NBC has adopted regulations which prohibit the discharge of wastes which could:

- create a fire or explosion (example: solvents such as trichloroethylene, xylene or gasoline);
- cause corrosive damage to our facilities (example: acids or bases);
- hinder the flow or causes obstructions to our facilities (example: fats, waxes, greases, oils, solids);
- result in an excessive hydraulic/pollutant flow rate (example: slug discharge from the dumping of plating or other baths);
- interfere with treatment facility operations (example: dumping cyanide or heavy metal containing solutions) and;
- cause pass through of the wastewater treatment facility (example: dumping of dyes or pigments).

Other wastes are also regulated specifically by type of waste and concentration by the NBC's Rules and Regulations. Copies of these regulations may be obtained at the NBC's Pretreatment office. In addition, it is illegal to discharge any non-sanitary wastewaters into the NBC sewer system prior to being issued a discharge permit. Please dispose of spent solutions properly. It is less costly than being caught illegally disposing of these wastes. Industries found to be in violation of the NBC's Rules and Regulations may be subject to a fine of up to $25,000 per violation per day and/or up to thirty (30) days of imprisonment. In general, industries located in the NBC service area are to be commended for the fine job to date at reducing toxic discharges to the sewer. In 1981, local industries discharged 954,099 pounds of heavy metals such as copper, nickel, and zinc, and 80,440 pounds of cyanide to the Field's Point Treatment Facility. A portion of these toxics would eventually pass through the treatment plant and enter Narragansett Bay. There has been a 97.0% reduction in heavy metal discharges to the Field's Point Facility since 1981. The cyanide loadings to this treatment facility were also reduced by 97.6% over this same period. This impressive reduction in toxic discharges by industry has also been noted at the Bucklin Point Wastewater Treatment Facility. The level of toxics entering Narragansett Bay from the NBC facilities has been similarly reduced.

The NBC will continue to be a leader in the field of wastewater treatment and environmental protection to ensure a cleaner Narragansett Bay for all to enjoy. For more information on the proper disposal of wastes from your facility, contact the pretreatment program staff at 461-8848 ext. 490 / TDD 461-6549.

Vincent J. Mesolella, *Chairman* Raymond J. Marshall, P.E., *Executive Director*

June 21, 2015

2014 SNC LETTER

Dear «Title» «LastName»:

The Narragansett Bay Commission (NBC) is required by the EPA to publish annually the names of all firms in Significant Non-Compliance (SNC). As you may know, the name of your firm was published in the Providence Journal on February 25, 2015 as being in SNC with NBC or EPA regulations for the reporting period of October 1, 2013 through December 31, 2014. A copy of the Public Notice is enclosed for your information. The publication of your firm's name should have come as no surprise to you since a form letter dated March 17, 2014 was sent to all users explaining the NBC regulations, the SNC review criteria, and the consequences for non-compliance. In addition, your firm was notified by Notice of Violation citing each non-compliance event at the time the violation occurred, notifying you of the fact the name of your firm may be published for being in SNC.

Enclosed please find an invoice in the amount of $390.00 for your share of the cost of the public notice. Your check must be made payable to the **Narragansett Bay Commission and mailed to the Pretreatment Section, 2 Ernest Street, Providence, RI 02905, no later than July 15, 2015. (Please do not send check to customer service with your pretreatment fee or consumption payment as this will result in billing errors.)**

Thank you for your anticipated prompt payment, and I urge you to comply with all your permit requirements and NBC/EPA regulations so that the NBC will not have to publish the name of your firm in the future. The NBC Environmental Safety & Technical Assistance (ESTA) Section is available to provide free technical assistance to your firm. To take advantage of the free NBC Pollution Prevention program, contact Mr. James McCaughey at 461-8848, ext. 352.

Sincerely,

Kerry M. Britt
Pretreatment Manager

KMB:sm

Enclosures

cc: Leah Foster
Mark Patrick McGuire, Esq.

November 12, 2015

MASS MAILING
Fuel Oil Users
List Attached

Dear :

As you know the heating season is here. Fuel oil that is discharged to the sewer can have a significant impact on the Narragansett Bay Commission (NBC) Wastewater Treatment Facilities. These impacts may include fouling equipment, interfering with normal treatment operations, and in severe cases can pass through the treatment facility and adversely impact Narragansett Bay. Below are two pictures of the impact a recent #6 fuel oil spill had on the Bucklin Point facility. Although the spill had no impact on the bay, the oil fouled equipment at the treatment facility, resulting in over $100,000 in cleanup costs that were incurred by the company that inadvertently discharged the oil.

The company responsible for the spill was not aware that they were losing oil into the sewer. This is one of the main reasons for the NBC permitting boiler facilities and requiring firms to implement self-inspection programs. As you prepare your heating system, it is important to review the conditions set forth in your Wastewater Discharge Permit. These conditions are designed to help you discover and quickly stop an oil leak. Also, it is important to inspect the entire heating system including preheaters and piping and perform any necessary maintenance prior to starting up the boiler.

Please contact the Pretreatment Office at (401) 461-8848, ext. 490 if you have any questions.

Sincerely,

Kerry M. Britt
Pretreatment Manager

cc: PT Engineers/Technicians

November 24, 2015

MASS MAILING
HOLIDAY SHUTDOWN LETTER
All IU and SIU (Categories 11 thru 50)
List Attached

Dear :

It is that time of year as the holiday season is here! Many companies close for vacation and maintenance activities during this time. We would like to take this opportunity to remind you that the Narragansett Bay Commission (NBC) is here to help industry maintain compliance. Pretreatment staff will be conducting brief inspections throughout this month to meet with our regulatory contacts, answer waste disposal questions, and provide general assistance. If you should have any questions regarding the proper disposal of any wastes generated from maintenance activities or would like to make modifications to your processes during the shutdown, please contact our office and we will be happy to assist you.

During and prior to the industry holiday shutdown, the NBC routinely monitors the sewer system to ensure that illegal dumping of waste does not occur and to catch illegal dumpers. Violators are subject to enforcement action which could result in civil and/or criminal penalties and termination of sewer use privileges. The attorney fees and fines associated with such an enforcement action will greatly outweigh the cost of proper disposal of waste. In general, industries within the NBC's service area are to be commended for their progress to date in reducing the toxic loadings to the NBC treatment facilities and Narragansett Bay. Please feel free to contact the NBC Pretreatment Office at 461-8848, ext. 490 should you need assistance.

Sincerely,

Kerry M. Britt
Pretreatment Manager

KMB:smb

Enclosure

cc: Pretreatment Engineers and Technicians

2 Ernest Street • Providence, Rhode Island 02905 • 401 461-8848 • 401 461-0170

Narragansett Bay Commission

Electroplaters, Metal Finishers, Chemical Processing Firms and Other Industries:

Vacation Shutdown
Prohibited Sewer Discharges

Typically many industries shut down their operation for a period of time during the holiday months. Past operating experiences in the Narragansett Bay Commission (NBC) District have shown that large quantities of toxic and hazardous wastes have been indiscriminately dumped in significant quantities into the sewer as part of an industry's "clean-up" procedure prior to their shutdown. This usually occurs in the last two weeks of June and throughout the month of July, as well as in December. Pursuant to Title 46 Chapter 25 of the Rhode Island General Laws, the NBC has adopted regulations which prohibit the discharge of wastes which could:

- create a fire or explosion (example: solvents such as trichloroethylene, xylene or gasoline);
- cause corrosive damage to our facilities (example: acids or bases);
- hinder the flow or causes obstructions to our facilities (example: fats, waxes, greases, oils, solids);
- result in an excessive hydraulic/pollutant flow rate (example: slug discharge from the dumping of plating or other baths);
- interfere with treatment facility operations (example: dumping cyanide or heavy metal containing solutions) and;
- cause pass through of the wastewater treatment facility (example: dumping of dyes or pigments).

Other wastes are also regulated specifically by type of waste and concentration by the NBC's Rules and Regulations. Copies of these regulations may be obtained at the NBC's Pretreatment office. In addition, it is illegal to discharge any non-sanitary wastewaters into the NBC sewer system prior to being issued a discharge permit. Please dispose of spent solutions properly. It is less costly than being caught illegally disposing of these wastes. Industries found to be in violation of the NBC's Rules and Regulations may be subject to a fine of up to $25,000 per violation per day and/or up to thirty (30) days of imprisonment. In general, industries located in the NBC service area are to be commended for the fine job to date at reducing toxic discharges to the sewer. In 1981, local industries discharged 954,099 pounds of heavy metals such as copper, nickel, and zinc, and 80,440 pounds of cyanide to the Field's Point Treatment Facility. A portion of these toxics would eventually pass through the treatment plant and enter Narragansett Bay. There has been a 97.0% reduction in heavy metal discharges to the Field's Point Facility since 1981. The cyanide loadings to this treatment facility were also reduced by 97.6% over this same period. This impressive reduction in toxic discharges by industry has also been noted at the Bucklin Point Wastewater Treatment Facility. The level of toxics entering Narragansett Bay from the NBC facilities has been similarly reduced.

The NBC will continue to be a leader in the field of wastewater treatment and environmental protection to ensure a cleaner Narragansett Bay for all to enjoy. For more information on the proper disposal of wastes from your facility, contact the pretreatment program staff at 461-8848 ext. 490 / TDD 461-6549.

Vincent J. Mesolella, *Chairman* Raymond J. Marshall, P.E., *Executive Director*

NEWSPAPER AND MAGAZINE ARTICLES

PROVIDENCE Journal

Print Page

By Kate Bramson

April 06. 2015 7:43AM

Sewer tunnels may affect potential Providence ballpark site

Underneath the park land where the new PawSox owners want to build a baseball stadium in Providence is one of seven “drop shafts” in the massive Narragansett Bay Commission's combined-sewer overflow system.

Underneath the park land where the new PawSox owners want to build a baseball stadium in Providence is one of seven “drop shafts” in the massive Narragansett Bay Commission’s combined-sewer overflow system.

Those drop shafts are tunnels designed to collect and then transport sewage and rainwater 300 feet underground, to where it can be treated in a vast network of tunnels and pipes before being discharged into Narragansett Bay, commission spokeswoman Jamie Samons said.

PawSox president and a principal owner of the team James J. Skeffington said the team’s engineers and consultants haven't determined what it might cost to move storm-water utilities underneath the proposed park on former Route 195 land where the team wants a ballpark.

The Narragansett Bay Commission doesn’t know either, Samons said.

The combined sewer overflow is a $360-million project, designed to last 100 years, Samons said. The drop shaft has been underneath the proposed park since 2008.

The commission is talking with engineers about whether that drop shaft would need to be moved, but they don’t know yet, she said.

PHOTO/ STEVE SZYDLOWSKI / THE PROVIDENCE JOURNAL

PawSox principal owner Jim Skeffington walks the195 land Thursday that he hopes will be the location for the Pawsox stadium. Skeffington talks about dreams for a ballpark on proposed park space.

“I think everyone understands that it’s not an inexpensive prospect to do something like that,” she said. “We can’t say how much it would be, but anytime you’re working underground, it’s expensive.”

Skeffington, a Providence lawyer, and nine other partners acquired the PawSox in February. Last week, he said the new owners of the Triple-A baseball team would release a more detailed plan for the ballpark later this month.

http://www.providencejournal.com/article/20150406/NEWS/150409579

Print Page

PROVIDENCE Journal

Print Page

By Kate Bramson
Journal Staff Writer

April 11. 2015 10:00PM

Utilities pose costly obstacle to building PawSox stadium in Providence

The 16-inch steel gas pipe delivers energy to about 80,000 of National Grid's 270,000 customers.

If the PawSox move forward with plans to build a stadium on former I-195 land set aside for a park, two large utilities accessed from this spot — a gas main and stormwater pipes that connect to the massive underground Combined Sewer Overflow project — would need to be moved. The Providence Journal/Sandor Bodo

PROVIDENCE — Two underground utilities — a stormwater-sewage collection system and a high-pressure gas main — would have to be moved if new PawSox owners build a stadium on former highway land now set aside as a public park.

The collection system springs into action during heavy rainstorms. It prevents raw sewage and stormwater from gushing into the Providence River and, ultimately, Narragansett Bay.

The 16-inch steel gas pipe delivers energy to about 80,000 of National Grid's 270,000 customers.

Both utilities would be costly to relocate.

The Narragansett Bay Commission estimates it could cost $7 million to move the top level of its catchment system, executive director Raymond Marshall said. That network of concrete pipes and holding chambers, metal gates and screens, and a generator is mostly underground. It extends about 20 feet down, underneath the land where the PawSox owners want to build a stadium.

National Grid doesn't know how much it would cost to move its gas main. But spokesman David Graves said there's no way a stadium could be built on top of the pipe, which was installed in 1968. Moving it would be "challenging," but "not impossible," and would require extensive engineering studies, he said.

Lawyer James J. Skeffington, president and a principal owner of the PawSox, said Thursday the team's engineering consultants have given him the "impression that whatever had to be done there could be reasonably accomplished without much difficulty." He declined to talk about cost estimates.

"My engineers are telling me it is possible to relocate certain underground utilities without in any way compromising the capacity that currently exists under that ballpark," Skeffington said in an interview. "And that's what we're suggesting we do — not in a way to diminish the capacity, and without sacrificing the environment."

Skeffington said in an earlier interview that he'd consider adding stormwater infrastructure costs to the stadium costs. Asked Thursday whether he's prepared to pay $7 million to move the catchment system, he replied: "I'm not prepared to negotiate this in this telephone conversation. ... We're trying to be cooperative here."

The PawSox owners have identified about 8 acres they want on the western side of the Providence River for a ballpark to replace McCoy Stadium in Pawtucket. Nearly 6 acres are owned by the I-195 Redevelopment District Commission, and about 2.19 acres are owned by Brown University. Brown's continuing education facility is the only building on the land sought by the PawSox. Skeffington said the team doesn't need all of the Brown property, but the building would need to be demolished.

Marshall said he has met with PawSox engineers, and they appear to be conducting a "fair evaluation."

The water collection system at the proposed stadium site connects with a "drop shaft" in the Narragansett Bay Commission's Combined Sewer Overflow project. There are seven drop shafts throughout the city that carry sewage and stormwater 300 feet underground to a massive tunnel. That system has been functioning since 2008. Wastewater is stored in that tunnel and then treated before it's released into Narragansett Bay.

Marshall said the commission won't consider moving the "drop shaft."

"The drop shaft is a totally separate animal," Marshall said, "and would cost many, many millions more to move because you have to go straight down 300 feet." Besides, he and Skeffington said the drop shaft is outside the proposed stadium area.

The Narragansett Bay Commission isn't prepared to embark on a multimillion-dollar project to move the top level of its catchment system, Marshall said. The commission couldn't take on such expense without approval from Rhode Island's Public Utilities Commission.

"We don't think it would be fair to our ratepayers to have to now spend the money to replace the system that was just installed within the last 10 years," he said.

Original water project

The commission began designing its Combined Sewer Overflow project in the 1990s and began building it in 2001 — to upgrade an 1870 system that dumped raw sewage into Narragansett Bay during major rainstorms. The federal Clean Water Act of 1972 required the commission to update its system to avoid such "dumps," which are now illegal.

Ratepayers — the home and business owners who pay for the system that treats water and sewage before releasing it into the Bay — are already shouldering a nearly $610-million burden for the first two phases of the Combined Sewer Overflow project. And soon, the commission will consider the final phase of the project, which is now being reevaluated. Preliminary estimates of that last phase alone indicate it could cost as much as $700 million, commission spokeswoman Jamie Samons said.

Marshall said he'd consider asking his board of directors to allow the PawSox to pay to move the top-level catchment system — and hire their own contractors.

"That of course assumes we have some active role overseeing any design work that the owners would do and any construction work," Marshall said. "We would certainly want someone out there looking at the plans and making sure design is in conformance with our standards and any construction activity would meet the same quality that we put into the original structures."

National Grid

Graves, of National Grid, said he doesn't think anyone from the PawSox team has met with anyone from the utility. Skeffington, also a partner with the law firm Locke Lord LLP, said he's aware of the gas main and he's sure the team's engineers will talk with National Grid, "if they haven't already."

The state Department of Transportation oversaw the highway-relocation project that freed up about 40 acres in the heart of the capital city. The I-195 Redevelopment District Commission now owns 26 of those acres and is responsible for developing the land in a way that stimulates Rhode Island's economy.

As those agencies prepared the land for new life, they worked with utility companies to install underground electrical, cable and other lines to support new development. National Grid deliberately didn't move its high-pressure gas main, Graves said, because its location is underneath land that was long ago earmarked to become the public park that the PawSox now want. Because the federal government paid for nearly all of the relocation project, strict federal guidelines mandate a certain amount of land be set aside for open space.

If the gas main under the park needs to be moved, Graves said the work would need to be done during the summer because many of those 80,000 customers heat their homes and businesses with gas. The utility couldn't risk cutting their heat source in the colder seasons, he said.

The park would be a safe use above the high-pressure steel pipe, Graves said.

But a stadium proposal threatens that gas main's location.

It's not good practice to build buildings atop such gas pipes, Graves said. The pressure from the weight of a building could damage the gas main. If it needed to be repaired or serviced, such work might require National Grid to excavate — and having a structure atop the pipe "makes it almost impossible to do operations and maintenance on a pipeline of that size," he said.

Graves said it's too soon to know how much it would cost to move the gas main. "Every job is different," he said. "Any ... time you go underground, the costs escalate because there is always the uncertainty — you don't know what you're going to find underground until you go underground.

"There could be ledge in the way, environmental issues in the way. To put a price tag on it now would be purely speculative."

—kbramson@providencejournal.com

(401) 277-7470

On Twitter: @JournalKate

PROVIDENCE Journal

Print Page

By Kate Bramson
Journal Staff Writer

April 16. 2015 11:15PM

Narragansett Bay Commission: Cost to move catchment system more than PawSox's estimate

PROVIDENCE, R.I. — PawSox owners budgeted $5 million to relocate two utilities located underneath left field in their proposed Providence ballpark, a figure lower than an estimate released by one public utility.

Lawyer James J. Skeffington, PawSox president and a principal owner, said Wednesday the team will pay to relocate Narragansett Bay Commission's stormwater-sewage collection system and National Grid's high-pressure gas main. The utilities are underneath the public land where the team wants to build a stadium.

Skeffington said the team's engineers estimate it would cost:

— $4.5 million to $5 million to move the stormwater-sewage system about 150 feet northwest of its current location; and

— $200,000 to $300,000 to move a high-pressure gas main to a proposed new route that National Grid has found "acceptable."

PHOTO/ PROVIDENCE JOURNAL FILES

This is the 20' drop shaft at Field's Point as it was being built in 2003, similar to the 15' shaft that at the proposed PawSox stadium site on the on the 195 land in Providence.

Skeffington said Narragansett Bay Commission officials said the agency would put the project out to bid in a competitive process: "We told them we would pay that expense so it would not be on the ratepayers," Skeffington said.

Skeffington said he met Tuesday with National Grid President Timothy F. Horan, who said he'd put moving the gas main "top of the list."

"And we'll move it if you go forward with your project — as long as you pay the cost," Skeffington said he was told.

The stormwater-sewage collection system connects with a 300-foot "drop shaft." The shaft carries raw sewage and rainwater to a massive tunnel that's part of the commission's Combined Sewer Overflow project. The shaft can remain in place.

The 16-inch steel gas pipe delivers energy to about 80,000 of National Grid's 270,000 customers statewide.

The Narragansett Bay Commission estimates it will cost up to $7 million to move its catchment system.

The agency develops conservative estimates because unknown issues can arise with underground work, spokeswoman Jamie Samons said. Plus, the public agency may have added costs a private developer won't face, she said.

National Grid doesn't know how much it would cost to move its gas main because it has yet to conduct an engineering study, spokesman David Graves said.

The PawSox are asking state legislators to authorize $5 million a year over 30 years — totaling $150 million — to lease the stadium from the team, which Skeffington said will pay the $85-million upfront costs to move utilities and build the ballpark and a parking garage. The team would pay $30 million back to the state during that time to sublease the stadium. Team owners say the $4-million annual fee the state would owe them would be reduced by what the team anticipates to be $2 million a year generated in state sales, income and hotel taxes.

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http://www.providencejournal.com/article/20150416/NEWS/150419393

Print Page

Board Of Narragansett Bay Commission To Review Options For Sewer Overflow Project

By AMBAR ESPINOZA·APR 27, 2015

The board of the Narragansett Bay Commission will vote tomorrow on how to approach the third and final phase of the Combined Sewer Overflow (CSO) project. That project aims to reduce the amount of untreated sewage and polluted runoff entering Narragansett Bay and its tributaries. The board will discuss three options at a meeting tonight.

The Narragansett Bay Commission re-evaluated this final leg of the CSO project last year through a series of meetings with stakeholders. They discussed three options to move forward with the project, including the current plan in the consent agreement to meet the federal Clean Water Act. All of the options come with a hefty price tag, ranging from $750 million to $924 million.

Ratepayers are footing most of the bill. The Narragansett Bay Commission is required to overhaul its sewer system to meet the federal clean water standards. The project is designed to reduce overflows of untreated sewer and polluted runoff by 95 percent.

Do you have insight or expertise? Please email us, we'd like to hear from you: news@ripr.org.

PROVIDENCE Journal

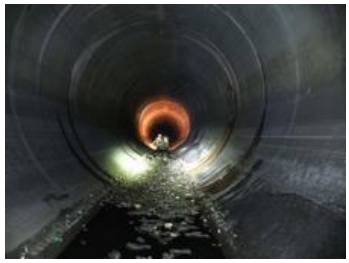
Print Page

By Alex Kuffner
Journal Staff Writer

April 28. 2015 11:15PM

Final, $815M phase of sewer project OK'd

PROVIDENCE, R.I. — The biggest public works project in Rhode Island history is getting bigger.



Inspectors inside the 3-mile tunnel that was built beneath Providence in the first phase of the project that was completed in 2008. Courtesy of the Narragansett Bay Commission

On Tuesday, the Board of Commissioners of the Narragansett Bay Commission voted to move ahead with an $815-million project that will become the third phase of a decades-long plan to contain and treat contaminated storm water that inundates century-old sewer systems in Providence, Pawtucket and Central Falls and overflows into the Seekonk and Providence rivers and the upper part of Narragansett Bay.

The commission has already spent $360 million on phase one and another $187 million on phase two, which, combined, will capture about 60 percent of the bacteria-laden storm water that passes through the systems.

The third phase will constitute the largest portion of the plan, bringing the total cost of all the work to $1.36 billion, and should take care of nearly all the remaining tainted water, wrapping up a project that in Rhode Island has been unprecedented in its scale.

The costs of all that construction have been borne by the 119,000 households in the commission's service area. Since the work began 14 years ago to comply with federal environmental laws, the average annual bill for a residence has tripled from about $165 to $490.

That is still lower than the state average when compared with sewer bills in other cities and towns, but the commissioners, at a workshop on Monday and again at the meeting on Tuesday, expressed concerns about the increased burden being placed on ratepayers.

"The whole process is a balancing act between affordability and water quality improvements," said Ray Marshall, executive director of the commission.

But not everyone was convinced that those interests were in balance. Commissioner Richard Burroughs, a professor of marine affairs at the University of Rhode Island, cast the lone dissenting vote against the phase three project after raising questions about how effective it will be considering the high cost.

He pointed to an analysis that showed that the additional work would have no effect on reducing the time it takes the waters to clear at the Narragansett Boating Center in Providence after a three-month storm, the baseline weather event used for planning. And in the shellfishing beds off Conimicut Point in Warwick, in the upper part of the Bay, the project would, he said, only cut the clearing time from 9.3 days to 5.3 days.

"The area of contention for me is that aspirations for water quality under the Clean Water Act are beyond what engineering and prudent finance can deliver," Burroughs said.

Nearly every other commissioner who spoke also expressed reservations about the price tag of the project, but they said they had little choice.

"Sometimes we have to make difficult decisions," said chairman Vincent J. Mesolella. "I think we're being very prudent here today."

The Narragansett Bay Commission handles sewage and storm water for an area encompassing Lincoln, Cumberland, Johnston, North Providence, Providence, Pawtucket, Central Falls and East Providence. A little more than half the dirty water is channeled to a treatment facility in Fields Point in Providence, where it's processed before emptying into the Providence River. The other half goes to a facility at Bucklin Point in East Providence.

When enough rain falls in a short period of time, the system becomes overtaxed and contaminated water spills into the Bay and its tributaries before it can be treated. Following passage of the federal Clean Water Act in 1972, the Environmental Protection Agency ordered the problem to be fixed. If nothing were done, the commission would have been subject to hefty fines. So planning for a solution started in the 1990s, and ground was broken on the Combined Sewer Overflow Project in 2001.

The first phase was construction of a 3-mile long, 26-foot-wide tunnel deep under Providence that can store runoff. The second phase included construction of ancillary pipes to connect to the tunnel. The centerpiece of the third phase is the construction between 2018 and 2038 of a second 3-mile-long storage tunnel that will stretch from Bucklin Point up the Seekonk River.

Under the plan, the average annual household bill would climb to $650 by 2020 and then to about $750 by 2030. Those increases for the system area as a whole are within EPA guidelines, which suggest that rates should not exceed 2 percent of household income. But commissioners said that the service area can't be held to a single affordability standard when there's such a wide disparity in incomes between different communities. What's affordable in affluent Lincoln is not affordable in low-income Central Falls.

Mesolella said that he's talked to the governor's office and leaders in the General Assembly about state funding that could help defray the costs for ratepayers. After all, he said, communities farther down the Bay that are outside the commission's service area primarily benefit from all the CSO improvements.

Even though he voted for the project, commissioner Richard Worrell said that in coming negotiations with the EPA and the state Department of Environmental

Management, efforts should be made to scale back and reduce costs.

"I want to push these issues as hard as we can," he said.

PROVIDENCE Journal

Print Page

By Alex Kuffner

April 28. 2015 3:05PM

Bay Commission votes $815 million to complete sewer overflow project; users to pay

PHOTO/ FRIEDA SQUIRES THE PROVIDENCE JOURNAL

In 2008, the Narragansett Bay Commission brought Phase 1 of the 1.3 billion sewer overflow project online.

PROVIDENCE -The Board of Commissioners of the Narragansett Bay Commission has voted to move ahead with an $815 million project that will become the third phase of a decades-long plan to contain and treat contaminated storm water that inundates century-old sewer systems in Providence, Pawtucket and Central Falls and overflows into the Seekonk and Providence rivers and the upper part of Narragansett Bay.

The commission has already spent $360 million on phase one and another $187 million on phase two, which, combined, will capture about 60 percent of the bacteria-laden storm water that passes through the systems. The third phase will constitute the largest portion of the plan, bringing the total cost of all the work to $1.36 billion, and should take care of nearly all the remaining tainted water, wrapping up a project that in Rhode Island has been unprecedented in its scale.

The costs of all that construction have been borne by the 119,000 households in the commission's service area. Since the work began 14 years ago to comply with federal environmental laws, the average annual bill for a residence has tripled from about $165 to $490. That is still lower than the state average when compared to water bills in other cities and towns, but the commissioners, at a workshop on Monday and again when they voted on Tuesday, expressed concerns about the increased burden being placed on ratepayers.

"The whole process is a balancing act between affordability and water quality improvements," said Ray Marshall, executive director of the commission.

http://www.providencejournal.com/article/20150428/NEWS/150429248

Print Page

Wastewater Agency Wrestles With Cost Of Water Quality Project

By AMBAR ESPINOZA·APR 29, 2015

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The board of the Narragansett Bay Commission considered several options to move forward with the final phase of its federally-mandated water quality project, all of them costly. The option they voted for will cost approximately $815 million.

Courtesy of Narragansett Bay Commission

The board of the Narragansett Bay Commission has voted to move forward with the final phase of a water quality project designed to overhaul its old sewer systems. The wastewater agency is struggling with how much it will cost to complete the project, aimed at further improving water quality in Narragansett Bay.

The Narragansett Bay Commission calls its multi-decade water quality project: “The biggest project you’ll never see.” (It’s also known as the Combined Sewer Overflow project.) It’s a system of underground tunnels and storage tanks meant to fix problems with the urban area’s older pipes that carry both sewage and stormwater.

Those pipes were built in the late 1800s to early 1900s, said Raymond Marshall, the executive director of the wastewater agency. “When it rains, the stormwater comes into our system at numerous locations, and at some point overwhelms the capacity of the pipes,” he said. Untreated sewage and stormwater ended up polluting upper Narragansett Bay, violating the federal Clean Water Act.

“And so over the last 15 years, we’ve been working to intercept those overflow points and drop them into a tunnel, which exists in the Field’s Point service district,” explained Marshall. “Now we are looking to do a similar type of project in the Bucklin Point service district.” That would involve building a second large tunnel that would run through Pawtucket, Central Falls and the northern part of East Providence.

“And by the way, since the original tunnel went online in November 1st of 2008, we’ve captured and treated 6.3 billion gallons of flow,” said Marshall. “So that would have gone raw right into the receiving waters. Now it’s getting full treatment at the Field’s Point treatment plant.”

Marshall expects to see more improvements from the project’s second phase, which was recently completed. He said the third phase at the Bucklin Point facility is designed to improve the water quality in the Blackstone and the Seekonk Rivers.

How will the state measure those improvements? By the number of additional shellfishing days after each storm. In this scenario, it could be an additional 3 ½ to 4 ½ days, said Marshall. It’ll cost $815 million to get there. Marshall said that will add more than $300 per year to the typical customer’s bill.

“Let’s say they’re about $460 [per year] now,” said Marshall. “They might be up to $500 in 5 years just through normal inflation costs, but then the rate will probably go up into the mid $700s – $750 per year.”

Customers won’t feel the impact to their wallets until around the year 2018 or 2019. But the agency is already worried about how it will affect low-income residents in Providence, Pawtucket and Central Falls.

“I don’t want to make you think we don’t care what happens in Lincoln and Cumberland,” said Marshall. “We do, but it’s the people who can least afford it that are located within those communities for the most part.”

From his seat at the board of the Narragansett Bay Commission, Rick Burroughs shares those concerns. And what's more, he's not convinced the final phase of the project will bring enough water quality improvement to make it worth doing.

"We need to be realistic about what is achievable," said Burroughs.

The Narrangansett Bay Commission has to make changes to comply with the federal Clean Water Act. But Burroughs noted the federal government allowed the state of Rhode Island to set its water quality standards.

"It turns out in Rhode Island, we identified only class A and class B waters, those being the cleanest, and we did not identify C waters," said Burroughs, meaning Rhode Island set the bar high, even for industrial areas.

Burroughs said the state should consider revising those standards for *some* areas. And he said the Narragansett Bay Commission could lead the way.

"Can we do that? The answer is maybe," said Burroughs, "but we would have to have a consensus throughout the state, including the Department of Environmental Management, that this was the prudent way to proceed for the state of Rhode Island."

Burroughs said that might achieve a better balance between the costs for residents and the mandate to improve water quality.

He and other board members pledged to tell state and federal regulators (the Rhode Island Department of Environmental Management and the U.S. Environmental Protection Agency) about their concerns when they submit their plans for the final phase of the project, which will bring the total cost to as much as $1.5 billion.

As some board members pointed out, that's more than the Paw Sox want to build a new stadium, and much more than the $20 million open space bond voters approved last year. And most of the cost will have to be paid by only about 118,000 households and the businesses in the Narragansett Bay Commission's service area.

Do you have insight or expertise on this topic? Please email us, we'd like to hear from you: news@ripr.org.

PROVIDENCE Journal

Print Page

By Kate Bramson
Journal Staff Writer

May 02. 2015 10:30PM

Proposed Pawsox stadium in Providence threatens master plan for stormwater mitigation

PROVIDENCE — The PawSox pitch to build a baseball stadium on prime riverfront property threatens to unravel nearly two years of work by multiple state agencies to create a master environmental permit that would shorten the time it takes for developers to build on former Route 195 land.

The site of the proposed Pawsox stadium in Providence. Some of the parcel has been set aside for public parkland that plays a key environmental role in the 195 district permitting process. The Providence Journal/Steve Szydlowski

The master permit hinges on a plan to use parkland within the 195 district for stormwater mitigation. Builders are required to treat a percentage of stormwater on parcels they develop. However, if they can't meet the entire stormwater requirement on a parcel, the master permit allows them to gain credit from the parkland's treatment of stormwater.

"It provides a regional stormwater treatment so that if they couldn't meet it on-site, they could ask for credit on the park," said Alisa Richardson, a supervising sanitary engineer at the Department of Environmental Management.

The I-195 Redevelopment District Commission owns 26 acres of former highway land and is charged with redeveloping the land in a way that stimulates the state's ailing economy and also creates 7 acres of public parkland. The Pawtucket Red Sox owners want 4.8 acres now set aside to become a public park.

In 2012 and 2013, the 195 commission worked with the DEM, the Coastal Resources Management Council and the Narragansett Bay Commission to develop the master environmental permit. Those agencies approved the 195 commission's request to treat the former highway land comprehensively and granted final approval for the master permit in November 2013.

The master permit shortens the necessary environmental review by the DEM and the CRMC. It ordinarily would take developers up to two years to get permits from those agencies, but the master-permit process is designed to take no longer than 60 days, 195 commission executive director Jan Brodie said in an interview.

Developers say the master permit offers the predictability they need to get projects moving more swiftly here in Rhode Island.

-- "Time is a killer"

Former 195 commission chairman Colin P. Kane championed the master permit during his tenure.

The commission looked to the Quonset Development Corporation, which has pre-permitted its development land, for ways to streamline permitting and prepare sites for developers of the former highway land.

Steven King, Quonset's managing director, spoke at a recent economic-development panel about how those pre-permits help attract companies — particularly in a state where developers often say they have to jump through hoops and wait for each agency to sign off on a proposal to get all the necessary permits.

"In Rhode Island, time is a killer," King said. "When you get bogged down, your business seeks the path of least resistance."

That might mean giving up on a project or finding a new site.

Brodie said developers often embark on extensive environmental and engineering reviews before knowing whether they'll be granted environmental permits. The 195 land was contaminated by past industrial uses long before the highway was built in the 1950s, and developers must address environmental issues before they build on it.

To grant the master permit, the state agencies have already completed an important engineering review of the land, and they have approved methods that developers can use to clean up the land and treat stormwater, Brodie said. Getting the permit is now an administrative step, she said.

"The master permit was essentially like a pre-permit," Coastal Resources Management Council Executive Director Grover Fugate told The Providence Journal. "As long as they stayed within the parameters, they were clear to go."

Developers must still get a separate permit to connect to the Narragansett Bay Commission's stormwater-and-wastewater-treatment system. As long as they follow that agency's checklist, spokeswoman Jamie Samons said, those are granted within 90 days — "and often much quicker."

- Parkland serves dual purpose

The stormwater mitigation that can be done on parkland in the 195 district makes all the other 195 parcels more desirable. More businesses can be built on each parcel if the trees and vegetation in two big parks, one on either side of the Providence River, can be used to help absorb rainwater.

The state Department of Transportation has already spent $1.2 million designing those district parks, DOT spokeswoman Rose Amoros said. That work has included selecting specific trees and shrubs for their ability to keep oil, grease, gasoline, pet waste, fertilizer and other toxins from streaming into and polluting the Providence River and, ultimately, Narragansett Bay.

Kane, whom Governor Raimondo has replaced on the 195 commission, declined an interview request for this story. However, he spoke at length with The Providence Journal in November 2013, as the master permit won approval. A private real-estate developer, he spoke of the unique challenges of treating stormwater on the 195 land parcels.

Traditional stormwater-treatment systems take up room and often must be built underground, but not underneath buildings, Kane said then.

In crowded urban areas, carving out space on small parcels for underground detention basins would "kill land" available for development, Kane said.

Then he pointed on the 195 land map to Parcel 5, a 1.5-acre site along South Main Street and near the east-side park. It's the fourth-largest development parcel in the district.

Commission consultants say Parcel 5 could accommodate a five-story building with 240,000 square feet of mixed-use development. But that wouldn't all be possible if a developer couldn't gain credit for stormwater mitigation from parkland elsewhere in the district, Kane said.

"If I had to solve the stormwater challenges on Parcel 5, which is a good example — myself, I couldn't do it," Kane said then. "I would be able to build — I'd have Snoopy's dog house there and everything else would be stormwater treatment."

"So," he continued, "the economic value of this is extraordinary, not just the time."

-- Would trigger new review

The PawSox hope to replace Pawtucket's McCoy Stadium with a new stadium on 9 1/2 acres in Providence. They want a total of 6 acres owned by the 195 commission — including the park on the west side of the river that helped make the master permit possible.

If the team wins state approval to build a stadium on that parkland, the change in use for that property would send the state's environmental agencies back to the drawing board.

"It's absolutely going to trigger us to go back and review all those permits and whether those requirements are being met," CRMC's Fugate said.

At the DEM, Richardson said any changes to the Coastal Resources Management Council permit would require the DEM to modify its permit.

"The park has the capacity to handle a substantial amount of stormwater," said Richardson, a supervising sanitary engineer. "The location of the parks is ideal for stormwater treatment — not only are they green and open space, but they're downstream and close to the Bay so you could intercept, you could pick up and collect a lot of stormwater there."

Instead, if a stadium were built on that parkland, developers would probably need to find alternative methods for treating stormwater, which could include building large underground systems, she said.

The 195 commission and its environmental-engineering consultants have begun investigating the impact a stadium would have on the master permit, Brodie said. That includes examining whether developers could no longer use that land to mitigate stormwater issues.

"This is definitely for an environmental engineer to make an assessment on, not me," Brodie said. "We are looking into it."

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PROVIDENCE Journal

Print Page

By Donita Naylor
Journal Staff Writer

May 21. 2015 4:55PM

Two areas in Newport, Westerly reopen to shellfishing

PROVIDENCE, R.I. — Two areas formerly closed to shellfishing will be reopened at sunrise Saturday because water quality has improved, the state Department of Environmental Management said in a news release Thursday.

Seasonal shellfishing rules will take effect Saturday. The two newly reopened areas are in Newport and Westerly.

Because Fort Adams State Park was connected to the Newport Wastewater Treatment Facility, the Newport Harbor closed safety zone has been reduced by 227 acres, the DEM announcement said.

The new boundaries of the closed area are described as East Passage and Newport Harbor east of a line from the northwest corner of the concrete bulkhead at Fort Adams to the Rose Island light, east of a line from the light to the rectangular structure on the southeast corner of Gould Island, and east of a line to the day marker at Halfway Rock, and south of a line from the day marker to the northwest corner of the rock jetty formerly known as Blue and Gold Pier, about 800 feet north of Greene Lane in Portsmouth.

In Westerly, the small cove at the western end of Quonochontaug Pond that was previously closed to shellfishing will reopen Saturday because of improvements in water quality, making the whole pond available for shellfishing. Harvesters should still be aware of management area restrictions, which can be found on DEM's website, starting on page 16.

With the help of the Narragansett Bay Commission, DEM has begun targeted monitoring of bacteria levels after 0.5 to 2.5 inches of rainfall to determine whether the rainfall triggers can be raised in Conditional Areas A and B and the Conimicut Triangle, and whether the size of these areas can be reduced.

Since the Combined Sewer Overflow project connected more storm runoff to the storage tunnel in 2014, more combined sewage and storm water has been treated at the Fields Point Wastewater Treatment Facility and less has flowed into the Woonasquatucket and Providence Rivers, the DEM said.

Until the triggers are revised, the old triggers will apply, although monitoring might allow some areas to be opened earlier.

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Print Page

Bacteria Levels Down By Half In Upper Narragansett Bay

By AMBAR ESPINOZA·AUG 6, 2015

Providence waterfront

John Bender / RIPR

Upper Narragansett Bay is cleaner than it used to be. That's according to the latest data from the Narragansett Bay Commission.

The Narragansett Bay Commission collects 29,000 water samples each year to analyze water quality.

Since 2008, bacteria levels in the upper bay and its rivers are down by more than 50 percent, according to Pamela Reitsma, one of the agency's scientists. She attributes that sharp reduction to the agency's multimillion-dollar water quality project designed to overhaul its old sewer system.

Reitsma said some conditional areas for shell fishing no longer close after an inch of rain as a result of this improvement.

“These conditional areas supply 45 percent to 50 percent of the quahog harvest per year in Narragansett Bay, which can equal $2.5 million in revenue for our shell fishermen in the bay," said Reitsma.

Reitsma said more work needs to be done with cities and towns to address ongoing contamination from runoff with such chemicals as lawn fertilizers.

“There is still a lot of bacterial contamination from sources like storm water," said Reistma. "And that’s the next large focus of the water quality community is to start focusing on those storm water impacts.”

Levels are also down for nitrogen and heavy metals as a result of other agency initiatives to address algal blooms from excess nutrients and to regulate heavy metals from industry.
Do you have insight or expertise on this topic? Please email us, we'd like to hear from you: news@ripr.org

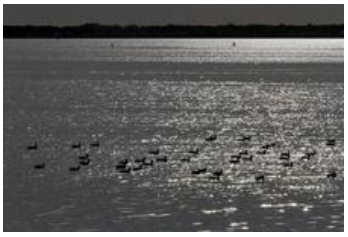
PROVIDENCE Journal

Print Page

By Alex Kuffner
Journal Staff Writer

August 10. 2015 11:15PM

Report: Bacteria levels in Narragansett Bay cut by 50%



PHOTO/ THE PROVIDENCE JOURNAL/BOB THAYER

Birds coast along Narragansett Bay in East Providence.

PROVIDENCE, R.I. — Bacteria levels are down dramatically in upper Narragansett Bay over the last seven years, since the completion of the first phase of a massive public works project to contain and treat contaminated stormwater.

According to the latest report from the Narragansett Bay Commission, levels of fecal coliform bacteria have been reduced by 50 percent in the wake of construction of a 3-mile long, 26-foot-wide tunnel deep under the city that can store tainted runoff.

The size of the reduction is significantly larger than the 40-percent decrease that the commission estimated when it proposed the Combined Sewer Overflow Project decades ago. And that may bolster the commission's case for the third phase of the ratepayer-funded project.

"We hope so," said Jamie Samons, public affairs manager for the commission. "Everyone agrees that the effects of Phase I have been fantastic."

The Narragansett Bay Commission is a quasi-state agency that handles sewage and stormwater for an area encompassing Lincoln, Cumberland, Johnston, North Providence, Providence, Pawtucket, Central Falls and East Providence with a total population of about 360,000 people. A little more than half the dirty water is channeled to a treatment facility at Fields Point in Providence, where it's processed before emptying into the Providence River. The other half goes to a facility at Bucklin Point, in East Providence.

When enough rain falls in a short period of time, the system becomes overtaxed, and contaminated water spills into the Bay and its tributaries before it can be treated. After passage of the federal Clean Water Act in 1972, the Environmental Protection Agency ordered the problem to be fixed. If nothing were done, the commission would have been subject to hefty fines. Planning for a solution started in the 1990s, and ground was broken on the $360-million first phase of the project in 2001.

That work concluded in 2008. The $213-million second phase, which was completed last year, included construction of ancillary pipes to connect to the tunnel. The centerpiece of the $815-million third phase is the construction of a second 3-mile-long storage tunnel that will stretch from Bucklin Point up the Seekonk River. That plan is now under review by the state Department of Environmental Management.

The data on bacteria reductions were based on weekly tests at 20 monitoring stations in the upper Bay and connected waterways, said Pamela Reitsma, environmental scientist with the commission. The largest decrease — of about 70 percent — took place around the Point Street Bridge in Providence.

Reitsma attributed the improvements, which also included reductions in nitrogen and metals, primarily to the storage tunnel under Providence, but said there are other factors at play, too.

For example, more industrial users in the commission's coverage area are being required to store and treat runoff on their properties, which prevents stormwater from even entering the CSO system. That initiative alone has freed up about 10 percent of the tunnel's capacity, according to Reitsma.

Other municipalities on the Bay also have their own programs that have helped reduce stormwater runoff. Reitsma pointed to Bristol, which reduced pavement, planted rain gardens and diverted a discharge pipe in the area around the town beach.

Reitsma said it's too early to say what the effects on water quality will be from the second phase of the CSO project, but the expectation is that improvements will spread beyond the upper Bay, up the Seekonk and Woonasquatucket rivers.

But the improvements so far are hard to miss. The number of beach closures has decreased. And with the improved water quality, East Providence is working to clean up other sources of pollution with the hopes of eventually reopening a beach at Sabin Point Park in the Riverside section of the city.

In addition, two important shellfishing areas in the Bay are staying open for more days every year. The number of acre-days the areas were open was up 36 percent in 2013 compared with 2004, according to commission data. That's key, because about half the state's quahogs are harvested from those areas.

The possible effect of the overflow tunnel on those areas could be seen just last week. The areas were closed after Tuesday's storm because of rainfall and a discharge of untreated water from the commission's Bucklin Point facility, which temporarily lost power. The DEM reopened the areas on Saturday, 3½ days earlier than expected, and said in a news release that may have been due to the tunnel.

"The investments that people are making throughout the state are making a difference, and the CSO tunnel was one of them," Reitsma said.

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PROVIDENCE Journal

Print Page

By Alex Kuffner
Journal Staff Writer

August 19. 2015 11:15PM

Clearer and cleaner: Study finds Narragansett Bay's health improving

Decade-long study reports drop in nutrient levels, which in turn means clearer water and fewer algae blooms

In yet another sign of the improving health of Narragansett Bay, a study led by oceanographers at the University of Rhode Island has found that nutrient levels in the Bay are half what they were in the 1990s, resulting in clearer water and fewer algae blooms.

The decade-long study financed by the National Oceanic and Atmospheric Administration focused on discharges from 11 Rhode Island wastewater treatment plants, which are the main source of nitrogen — a nutrient that feeds algae and can ultimately lead to low oxygen levels in the water. Under regulations enacted after a massive fish kill in Greenwich Bay in 2003 that was caused by a lack of oxygen, the treatment plants were required to reduce nitrogen discharges by 50 percent.

The study — led by Candace Oviatt, professor of oceanography at URI, with contributions from researchers at the University of Connecticut, water resources officials at the Rhode Island Department of Environmental Management and others — confirmed that those reductions have been achieved as compared with previous studies from the late 1990s.

“There’s huge improvement,” Oviatt said. “People out on the Bay — sailors, fishermen — are astonished by how clear the water is.”

The study comes on the heels of a report from the Narragansett Bay Commission, the quasi-public agency that operates the state’s largest wastewater treatment plant, in Providence, that found that bacteria levels in the upper Bay are down 50 percent over the past seven years since the completion of an enormous public works project to store and treat contaminated stormwater.

Oviatt said that the two studies complement each other showing marked improvements in different areas that measure the overall health of the Bay. Although the commission’s stormwater storage tunnel primarily helped with bacteria levels, it also contributed to decreases in nutrient levels, according to Oviatt.

The improvements have led to fewer beach closures around the Bay and have spurred a plan to reopen a beach at Sabin Point in East Providence that has been closed to swimming for decades.

Hypoxia

The URI-led research set out to better understand hypoxia — low levels of oxygen — in the Bay. Aiming to verify computer models on nutrient loads, it used data from 12 stations in the Bay that measure water temperature, salinity, oxygen content, chlorophyll and pH levels. The researchers also collected nutrient samples year-round from 13 locations throughout the Bay.

The study found that decreases in nitrogen and phosphorous levels in recent years had other positive effects. Algae growth was down by as much as 25 percent in the middle part of the Bay, with smaller reductions of about 15 percent in both the lower Bay and the Providence River, which is considered the upper Bay.

That has contributed to clearer water. Although clarity is harder to document, said Oviatt, it’s plain to see especially in such areas as the waters off Fields Point in Providence or the stretch of water from Conimicut Point in Warwick to Prudence Island.

“That used to be rather opaque, and now it’s really clear,” Oviatt said of the latter area.

Although nutrient levels are down substantially, hypoxic events are still occurring. In the last three months, there have been two relatively small fish kills in the Seekonk and upper Providence rivers that DEM officials have attributed to low oxygen levels.

Rainstorms can contribute to those events in two different ways. Runoff can increase the amount of nutrients from lawn fertilizers and other sources that make it into the Bay. Additionally, an increased flow of freshwater from rivers can create what’s known as stratification, reducing oxygen levels.

So in a rainy summer like in 2013, the number of hypoxic events was high. In the summer of 2014, which was drier, the number was down.

Low oxygen is also a problem that depends on location. In general, levels improve from north to south, from the Seekonk River to the Providence River to mid-Bay.

“We haven’t completely cured the problems with hypoxia,” said Sue Kiernan, deputy chief of the DEM’s Office of Water Resources. “But there’s no question that we’ve successfully reduced the nitrogen load.”

Still some problems

Both she and Oviatt emphasized that, while there have been general improvements in the Bay's overall health, there are problem areas. Greenwich Bay, the site of the large fish kill a dozen years ago, still lags behind, as does Bristol Harbor. Those areas may require more localized solutions, they said.

The improvements have also coincided with reductions in nitrogen discharges from wastewater treatment plants in Massachusetts, namely the facility that serves the Upper Blackstone Water Pollution Abatement District in Worcester. A further decrease in levels could come once the Woonsocket Regional Wastewater Commission implements reductions in its discharges into the Blackstone River.

Oviatt credited the work of the local treatment facilities to make changes and the DEM, which has overseen the work. The facilities can hypothetically do even more to cut nitrogen discharges, but the costs could be high, she said.

For now, the state is gauging what has been done so far and considering ways to address other sources of nutrients, such as runoff. Officials are also looking at natural methods of filtering nutrients, including expanding shellfish beds and planting eelgrass.

“We’re in a phase of evaluating the progress that we’ve gained, and that will lay the groundwork for planning any further restoration,” Kiernan said.

And, she added, the improvements so far shouldn’t be underestimated.

“This is a significant achievement and important step toward restoring Narragansett Bay water quality,” Kiernan said.

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PROVIDENCE Journal

Print Page

August 23. 2015 2:01AM

Editorial: A healthier Bay

Researchers shared good news last week about Narragansett Bay, that jewel of an asset that sustains life and provides recreation and beautiful views for Rhode Islanders and tens of thousands of visitors each year.

Boaters off Conimicut Point, in Warwick, on Narragansett Bay. THE PROVIDENE JOURNAL/STEVE SZYDLOWSKI

Among the findings from a 10-year study: nitrogen discharges from 11 wastewater treatment plants have been reduced by 50 percent since the late 1990s, an achievement that has led to less algae, clearer water, fewer beach closings, and hopefully, a more vibrant home for fish, plant and marine life.

As Candace Oviatt, leader of a team of researchers from the University of Rhode Island, put it: "There's huge improvement."

"People out on the bay — sailors, fishermen — are astonished by how clear the water is."

The URI study follows a Narragansett Bay Commission study that found bacteria levels in the upper Bay are down 50 percent over the past seven years, thanks to efforts to store and treat contaminated storm water.

Both studies point to a healthier Narragansett Bay.

As should be expected however, there is still plenty of work to do.

Some parts of the Bay still suffer from low oxygen levels that make it difficult for fish and other creatures to survive. The nitrogen levels that feed the low oxygen problem can still be reduced, and they may be reduced when the Woonsocket Regional Wastewater Commission moves forward with plans to lower its discharges into the Blackstone River.

Also, while beach closures are less common, they still happen on a regular basis because of high bacteria levels, as we have seen this summer in communities such as Warwick, Warren, Middletown and Newport.

All in all, though, praise is due to Rhode Island taxpayers, local treatment facilities, the Department of Environmental Management and others who have worked to reduce nitrogen levels in the Bay, as well as those who have worked to control storm water runoff. Through their efforts, Rhode Island is taking steps to protect and preserve this natural asset that is such an integral part of our state.

This work must continue.

http://www.providencejournal.com/article/20150823/OPINION/150829782

Print Page

PROVIDENCE Journal

Print Page

By Alex Kuffner
Journal Staff Writer

September 05. 2015 11:15PM

Environmental Journal: Providence College landscaping is extra green

"Rain gardens" scattered around campus are not only lovely to look at; they collect and filter tainted stormwater that would otherwise flow into Narragansett Bay.

A landscaping feature called a bioswale, tucked next to a new parking lot at Providence College, helps filter out silt and contaminants from stormwater runoff, and also helps educate students about pollution control. The Providence Journal/Steve Szydlowski

PROVIDENCE, R.I. — It's hard to tell that the graceful assembly of stones and native plants in a corner of a new parking lot on the Providence College campus is actually a system to collect and filter dirty stormwater that could otherwise flow all the way into Narragansett Bay.

It looks like a landscaping feature, a rather attractive one, but its purpose goes beyond mere aesthetics. It's called a bioswale. Or a bioretention pond. My favorite name for it is a rain garden.

The idea behind the system and a handful of others on the PC campus is pretty simple. Collect tainted runoff from rainstorms in a series of catch basins that can hold the water and allow it to slowly percolate into the ground. Contaminants are filtered out in the soil and plants and the water eventually makes its way into the underground water table.

In the last few weeks, studies have been released showing that Narragansett Bay is cleaner and clearer than it has been in decades. Much of the improvement in water quality is down to more stringent state regulations that have forced wastewater treatment plants to more aggressively filter out the nutrients that feed algae blooms and can lead to fish kills.

And bacteria levels are down dramatically in the upper Bay because of a massive — and very expensive — tunnel that the Narragansett Bay Commission built under Providence seven years ago to store tainted runoff for treatment later.

But smaller, relatively inexpensive "green infrastructure" projects like those at PC have also played their part in cleaning up the Bay.

It may all seem a little esoteric. Why should the average Rhode Islander care about a rain garden at a private college? But then environmental regulators and advocates say that controlling and treating stormwater is critical to everything from protecting precious drinking-water supplies around Rhode Island to keeping the state's beloved beaches open in the summer.

Since the first rain garden was built in 2005 on the PC campus, the college has put in systems at three more locations, including an expansive one at the Ruane Center for the Humanities with leafy trees, flower-lined paths, footbridges and an outdoor classroom.

The systems filter out nitrogen and phosphorous from fertilizers used on the college's lawns. They also take care of oil, grease and heavy metals that run off its roads and parking lots, as well as sand and salt used in the winter. Without them, those contaminants would have another destination, says Gale Gennaro, director of PC's Office of Environmental Health and Safety.

"Everything would end up in the Bay," she said.

Gennaro says that PC is in a unique position when compared with other colleges in Providence. While Brown University, the Rhode Island School of Design or Johnson & Wales University have buildings spread out across the city, PC sits on a single, contiguous campus totaling 105 acres.

"It allows me to look at it as a watershed," said Gennaro, who has held her current position since 2002.

That means the college has been able to come up with a long-term master plan that only deals with runoff. When new buildings are constructed, stormwater control is taken into account, as federal and state regulations require, but PC has also upgraded systems at older buildings and planned ahead for projects that could be years away.

Steven Maurano, associate vice president for public affairs, says he believes PC is the only college in Rhode Island that has a campus-wide stormwater plan.

All the projects under the plan must comply with rules set by the R.I. Department of Environmental Management and the U.S. Environmental Protection Agency. They must also be approved by the Narragansett Bay Commission, the quasi-state agency that handles wastewater for about a third of the state.

The projects at PC aren't just about managing stormwater. They also aim to educate the college's students. Gennaro and the college's engineers and architects worked with faculty and students in the biology department to select a variety of plants, such as sedge, sand cherry and chokeberry, that are durable enough to withstand the sometimes forceful flows of water during storms but can also enhance the college's visual appeal.

A sampling port at the newest rain garden at the Glay parking lot will also allow students to check for contaminants in the water that's being captured and see how effectively the filtration system is working.

"It's an education tool, too," Gennaro said.

Perhaps the greatest test of the college's rain gardens came during the spring floods of 2010. Providence didn't experience the extreme flooding that communities around the Pawcatuck and Pawtuxet rivers did, but the rains in the capital city were still unrelenting.

As Gennaro walked around a rain garden built in 2003 near the Slavin Center, she recalled the storms five years ago and said the broad drainage basin at this particular spot looked more like a swimming pool.

That was a good thing, she said. Despite all the rainfall in a relatively short period of time, the system wasn't overwhelmed and there was no runoff that could carry pollutants into nearby drains and on into Rhode Island's prized Narragansett Bay.

"It held all the water," Gennaro said. "It did what it was supposed to do."

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R.I.’s huge strides on Bay pollution

BY PHIL HOLMES

Gov. Gina Raimondo signs a bill this year requiring cesspools to be eliminated within one year of the sale of a property. THE PROVIDENCE JOURNAL/SANDOR BODO

As I read Joe Paliotta’s Sept. 18 Commentary piece (“Cesspools are not problem in R.I.”), I had the feeling that the date of the article was wrong. Much of what was printed was true back in the late 1990s.

Since February 1973, I have made my living on the water, as a commercial fisherman and later in other maritime industries. I hold a 100 ton near coastal captain’s license. I have worked in the Newport tourism industry as well as at several area yacht clubs. I am a past president of the Rhode Island Shellfishermen’s Association and have worked on the Narragansett Bay Commission’s (NBC) Citizens Advisory Committee (CAC) and as a Combined Sewer Overflow Project stakeholder.

The first meeting I attended was on Dec. 18, 1989. I was able to explain what Bay closures were doing to commercial fishermen and their ability to earn a living and support a family. I was subsequently invited to NBC’s

discussion about combined sewer overflows (CSO). In spring 1990, I led a protest against pollution at the Bucklin Point Treatment Plant, which drew 120 boats and 200 shellfishermen. Let's just say I have been involved.

Cesspools are a touchy subject to those residents who have them. Many homeowners are not able to spend the $25,000 to $40,000 that is needed to install septic systems or connect to sewer lines. The first house I bought had a cesspool. It cost us more than $2,000 (in 1981 dollars) to hook up to the sewer. I only paid $18,500 for the house, so the work was more than 10 percent of the value of the house at the time.

Mr. Paliotta states that "the municipal treatment plants (all outdated)" are causing much more pollution in the Bay than cesspools. I now live in Warren. In the past three years, Warren has spent $2.2 million on system upgrades. Bristol has spent millions on its plant and eliminating a non-point problem at its beach. Other municipalities, including East Greenwich, Warwick and Newport, have also upgraded their facilities. Fall River put in a CSO system at a cost of $125 million.

In the past, only two systems in Rhode Island had CSOs: NBC (Providence) and a small section of Newport.

Since the completion of Phase 1 of the NBC CSO project in November 2008, the underground pipe, much has changed. This system has captured for treatment more than 7 billion gallons of storm-water/sewer overflow at a rate of more than 1.1 billion gallons annually, 40 percent of the overflow into Narragansett Bay.

Phase 2 was completed in 2014, and it will capture an additional 20 percent of the overflows. That's a total of 60 percent of the combined sewer overflows being caught, treated, and discharged cleaner than the water it is discharged into. Nitrogen has been reduced 60 percent or better because of improvements at both the Fields Point and Bucklin Point treatment plants.

It is also significant to note that both Phase 1 and Phase 2 were completed on time and on budget. Has the money been spent wisely? Yes. Has it been spent well? Yes.

I commend Rep. Vincent Mesolella, former NBC Executive Director Paul Pinault, current Executive Director Raymond Marshall and all the people of the NBC for their hard work in managing and operating a large system well. They have won many national awards for their success.

There have been real improvements in water quality, shellfish landings, and Bay beaches. Bay closures have declined dramatically. Shellfish landings have increased and the reputation of the Rhode Island quahog has undergone a renaissance. Not to be left out of this story is the return of the Rhode Island oyster industry, which now lands more than $5 million annually.

The upshot of all this is that: yes, cesspools are a non-point problem. To those homeowners who have either connected to a sewer system or installed a modern, effective septic system, thank you! To those who need to, there are low-interest financing options available through the Rhode Island Clean Water Financial Authority.

Instead of blaming others for our Bay's problems, we all need to do our share.

—Phil Holmes is past president of the Rhode Island Shellfishermen's Association, a member of the Narragansett Bay Commission Citizens Advisory Committee and a Combined Sewer Overflow Project stakeholder.

PROVIDENCE Journal

Print Page

By Alex Kuffner
Journal Staff Writer

November 02. 2015 12:01AM

The state of Upper Narragansett Bay: It's cleaner, but more needs to be done in and near urban communities

The 2015 edition of "Watershed Counts" finds significant gains have been made as coastal wastewater treatment plants have come into compliance with tightened regulations

PROVIDENCE — Upper Narragansett Bay is cleaner than it has been in years, but the quality of these waters in heavily-developed Providence, East Providence and neighboring communities still has a long way to go, according to the latest installment of an annual report on the Bay that will be released on Monday.

The authors of "Watershed Counts" point to a proposal to reopen a beach at Sabin Point in Riverside as a sign of the recent progress in cleaning up Upper Narragansett Bay. The Providence Journal/Kris Craig

The 2015 edition of "Watershed Counts" focuses on urban waters in the Bay, finding that significant gains have been made over the past decade as coastal wastewater treatment plants have come into compliance with tightened regulations and with the construction of a massive tunnel under Providence to store stormwater for treatment.

The authors of the report — representing more than 60 Rhode Island nonprofits, government agencies and academic institutions — point to a proposal to reopen a beach at Sabin Point in East Providence that has been closed for decades as a sign of the recent progress.

But they also say that the East Providence project and others cited in the report are reflective of isolated efforts and that more needs to be done to coordinate work across communities.

"All of these projects have benefited the local communities by improving water quality, increasing access to the urban waters for fishing and kayaking, or reducing environmental threats to lives and infrastructure," the report says. "These are great accomplishments and serve as models to other communities. But local isolated efforts need help in taking on the big issues — such as degraded water quality and the implications of climate change."

What organization or state agency will provide that help is unclear, said Nicole Rohr, assistant director of the University of Rhode Island's Coastal Institute, which oversaw the report with the Narragansett Bay Estuary Program. The Coastal Institute has helped towns create better plans for dealing with dirty stormwater, a prime source of bacteria and nutrient contamination in the Bay, but the organization's resources are limited.

"I think that towns are aware of the importance of this," she said. "But there are only so many people and so much money."

Despite the uncertainty looking forward, the report applauds the efforts so far to clean up the waters of the Upper Bay and the rivers that drain into it. Other recent studies have documented the improvements.

According to test results released in the summer by the Narragansett Bay Commission, which operates the largest wastewater treatment system in the state, since the completion of its 3-mile-long combined sewer overflow tunnel in Providence, fecal coli-form bacteria levels in the Bay are down by 50 percent. The data were based on weekly tests at 20 monitoring stations in the Upper Bay and connected waterways, with the largest decrease — of about 70 percent — taking place around the Point Street Bridge in Providence.

Also last summer, the University of Rhode Island released the results of a decade-long study that found that levels of nitrogen and other nutrients in the Bay are now half what they were in the 1990s, resulting in clearer water and fewer harmful algae blooms.

Rohr said that Watershed Counts chose to highlight urban waters precisely because of the recent strides, as well as because of their importance as recreational areas to the people who live around them. That is something that is often overlooked because of the attention given to beaches in less-developed South County.

She said a project like the renovation of Festival Pier on the Seekonk River has had far-reaching effects for the residents of Pawtucket, who use it as a place to launch boats and kayaks.

"The new and improved pier better serves the community by bringing a bit of the outdoors into its urban backyard," the report says.

It's just the type of work that Watershed Counts aimed to recognize when the first annual report came out in 2011. The authors set out to report on changes in Narragansett Bay in a way that's accessible to the general public.

The main message that the report aims to convey this year?

"Our urban waters are really important," Rohr said. "A lot of people use them and people have been doing a lot to improve them, but more work is needed."

akuffner@providencejournal.com

(401) 277-7457

Wastewater Agency Wants To Generate More Of Its Own Renewable Power

By AMBAR ESPINOZA·DEC 25, 2015

RIPR File Photo

The Narragansett Bay Commission reports savings of $1.1 million a year thanks to a trio of wind turbines at the agency's Field's Point facility in Providence. Because of those energy savings, the agency wants to get up to 80 percent of its power from renewable sources.
The wind turbines have been providing more than 40 percent of the power used at the Field's Point wastewater treatment facility.

They've been so successful that the Narragansett Bay Commission wants to add more renewable energy projects to the mix, "especially if those renewable energy projects can produce a savings for our ratepayers," said spokeswoman Jamie Samons. "So as a result, we've been looking at solar, we've been looking at biogas generation, and a number of other types of projects."

Samons reports a renewable energy project is currently under construction at the Bucklin Point wastewater treatment facility in East Providence. It would use methane gas produced from the byproduct of the wastewater treatment process. That project is expected to generate 30 to 40 percent of the Bucklin Point's power needs.

Samons said laws in Rhode Island will allow the agency to use renewable energy credits from green energy projects that are not located physically on the agency's sites.
"So for us this means that perhaps we can be a part of a solar array project in another part of the state and yet still benefit from that energy production," said Samons.

Clean water is an expensive proposition, said Samons, and the agency's Board of Commissioners is trying to balance its responsibility to both ratepayers and Narragansett Bay.

Do you have insight or expertise on this topic? Please email us, we'd like to hear from you: news@ripr.org.

NBC PRESS RELEASES AND PUBLIC NOTICES

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NBC Announces 2015 Earth Day River Clean Up Grants

NBC Announces 2015 Earth Day River Clean Up Grants

Post Details

Posted February 11, 2015

Filed under General

The Narragansett Bay Commission (NBC) is once again encouraging local organizations to plan ambitious Earth Day clean ups by offering grants ranging from $250 up to $1,000. Those eligible to apply include state and federal agencies, municipalities and non-profit organizations. Applications are provided on the website www.narrabay.com. Applications and project description forms must be in by February 13, 2015 and all projects must be completed by August 31, 2015.

Funding for these Earth Day grants are provided through NBC's Environmental Enforcement Fund to assist these local organizations in purchasing supplies for these clean up events. The grants may be used for volunteer cleanup, restoration and beautification projects at local rivers and lakes. The projects must be aimed at restoring and improving the green spaces in local communities, include an educational component and take place within or around the NBC service district or its receiving waters.

NBC continuously strives for a cleaner Bay and is proud to announce the completion of Phase II of the Combined Sewer Overflow (CSO) project, also known as "the biggest project you will never see". Completion of Phase I of the CSO project has already resulted in significant water quality improvements in the upper bay, including 45 - 65 additional days annually of shellfishing and the opportunity to open new bathing beaches north of Conimicut Point. The completion of Phase II is expected to significantly improve water quality of the Woonasquatucket, West, Moshassuck and Seekonk Rivers. When phase III is complete, CSO discharges will have been reduced by 98%."

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Narragansett Bay Commission

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NBC Joins USDOE Better Plants Program

NBC Joins USDOE Better Plants Program

Post Details

Posted February 11, 2015

Filed under General

The Narragansett Bay Commission (NBC) is now the newest member to the Better Plants Program by the U.S. Department of Energy (DOE) and also one of their first partners from the wastewater treatment sector. The DOE's Better Plants Program is a national Partnership initiative to drive significant improvement in energy efficiency across the U.S. industry.

The U.S. energy sector has an annual energy bill of about $200 billion and there are significant savings available through cost-effective investment in energy efficiency. Capturing these savings helps manufacturers save money, reduce air pollution and stay competitive in global markets. Working with the Better Plants Program NBC must improve its energy intensity by 25% over ten years, develop energy management plans and track and report their annual progress. The DOE helps these companies establish key energy performance metrics, evaluate energy saving opportunities and organize plant-level training events.

NBC's new Field's Point Administration Building has been LEED Silver Certified by the U.S. Green Building Certification Institute. The certification is for energy use, lighting, water and material use. The building sits at the base of three 1.5 megawatt wind turbines that provide on average 50% of the plants energy, saving NBC about $1 million a year. By using less energy NBC saves money, reduces greenhouse gas emissions and contributes to healthier environment. "NBC takes great pride in its historic and on-going energy conservation and efficiency efforts and accomplishments including the use of available renewable energy resources. NBC is excited to be working with the U.S. DOE on their Better Business Program to help find even more energy savings opportunities" stated Jim McCaughey, NBC Environmental Safety and Technical Assistant Manager. Today, over 120 companies are partnering with DOE through Better Plants, representing close to 1,800 facilities and about 8% of the total U.S. manufacturing energy footprint.

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Narragansett Bay Commission Honors 16 Organizations for Environmental Excellence

Narragansett Bay Commission Honors 16 Organizations for Environmental Excellence

Post Details

Posted April 14, 2015

Filed under **General**

The Narragansett Bay Commission (NBC) held its 20th Annual Environmental Merit Award ceremony Thursday, April 9th at Kirkbrae Country Club. Janet Coit, Director of RI's Department of Environmental Management (DEM) and an advocate for clean water, clean air and healthy communities, joined NBC Staff and Award winners at the event. Coit praised the NBC on administering one of the most successful pretreatment programs in the country, and recognized sixteen local companies who achieved perfect compliance with all NBC regulations. One additional organization was honored for its excellence in stormwater management.

The companies in perfect compliance include: A. Harrison & Company, Inc., AG&G Incorporated, Armbrust International, Ltd., Darlene Group, Inc., Dominion Energy Manchester Street, Inc., Electrolizing, Inc., General Cable Industries, Hord Crystal Corporation, Interplex Engineered Prodicts, Metallurgical Solutions, Inc., Providence Journal Corporation, Providence Metallizing Company, Inc., Stackbin Corporation, Tanury Industries, PVD, Inc., Technodic, Inc., and Truex, Inc. Three of the sixteen companies awarded have achieved perfect compliance ten or more times: Induplate LLC, Providence Metallizing and Truex, Inc.

Achievement First RI received the NBC's seventh annual Stormwater Management Award. The award recognizes those companies, organizations or individuals that successfully use Best Management Practices to minimize stormwater impacts on the NBC sewer collection system. Achievement First RI serves 180 kindergarten and first grade students in the reclaimed Oliver Hazard Perry Middle School in Providence. As a part of their $5 million renovation to the school, Pare Engineering designed a stormwater management system that will divert approximately 60,000 gallons of stormwater out of the NBC combined sewer system during a three-month storm. This stormwater will now be recharged into ground on the Achievement First project site. It is a rare and impressive design that will prevent all of their stormwater flow from their site from entering the NBC combined sewer system.

NBC also announced the grantees for the 2015 Earth Day River Clean Up Grant Program. This program helps clean up the Woonasquatucket River and other local bodies of water. Hundreds of volunteers from different organizations gather to remove thousands of pounds of tires and debris from the beds and banks of the rivers, ponds and shorelines of Rhode Island during these annual Earth Day clean ups.

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Shellfish Beds Open Early

Shellfish Beds Open Early

Post Details

Posted April 27, 2015

Filed under General

News Release
RI Department of Environmental Management
235 Promenade Street, Providence, RI 02908
(401) 222-2771 TDD/(401) 222-4462

For Release: **April 28, 2015**

Contact: **Gail Mastrati 222-4700 ext. 2402**

SHELLFISH AREA 'A' IN UPPER NARRAGANSETT BAY TO RE-OPEN TWO and One Half DAYS EARLY AS A RESULT OF ACCEPTABLE POST-STORM MONITORING DATA

Shellfishing Area Will Reopen at Sunrise on Saturday April 25, 2015

PROVIDENCE - The Department of Environmental Management announces that Conditional Area A in upper Narragansett Bay will re-open to shellfishing beginning at sunrise Saturday April 25, two and one half days earlier than the scheduled April 28th at noon re-opening. The area has been closed to shellfishing since Noon on Tuesday, 21 following a 1.03"rainstorm on Monday evening into Tuesday morning.

The early opening is possible due to operation of Narragansett Bay Commission's Combined Sewer Overflow (CSO) tunnel, phase II which went on line in December 2014, and an agreement reached between DEM and US FDA which allows DEM and to re-open Conditional Areas A or B to shellfish harvesting as soon as post-storm monitoring data demonstrates it is safe to do so. DEM developed this plan to expedite the benefits associated with the tremendous investment in construction of NBC's Phase II CSO storage tunnel.

Under this plan, DEM continues to enact a seven-day closure of the shellfish Conditional Area A after a half-inch of rainfall and Conditional Area B after an inch of rainfall; however, as conditions allow, DEM uses post-storm monitoring data and operational information to determine whether these areas can be opened earlier. DEM staff, with assistance from NBC's Environmental Monitoring Section and Save The Bay will continue to collect post-storm monitoring data as resources and conditions allow.

At this time, the conditional area of the Conimicut triangle, Greenwich Bay and Mt. Hope Bay are closed and will remain closed until noon on Tuesday April 28th . DEM maintains a 24-hour shellfishing hotline with recorded updated information on shellfish closure areas. That number is 222-2900. Rainfall is predicted for Thursday and additional closures will be posted on the DEM hotline if necessary.

-30-

For General Information 222-6800 • After Hours Emergencies 222-3070 • Disclaimer

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What's More Exciting Than Clean Water?

What's More Exciting Than Clean Water?

Post Details

Posted May 21, 2015

Filed under General

Narragansett Bay Commission's 500 Watershed Explorers Gather to Celebrate Rhode Island's most precious resource

On Friday, May 22, 2015 from 10:00 a.m. to 1:00 p.m., over 500 elementary school students, teachers and guests from nine Rhode Island schools will gather at Goddard Park in Warwick for an environmental education conference to culminate the Narragansett Bay Commission's year-long Woon Watershed Explorers (WWE) program.

The NBC's WWE program has been exciting school children for over ten years. The award winning hands-on water quality monitoring program takes students and teachers outside and gets them "up close and personal" with the health of their local watersheds. The program encourages students and teachers to become stewards of the environment, specifically focusing on their local rivers, ponds, lakes and streams, and Narragansett Bay.

Students from the Paul Cuffee School and Meeting Street School in Providence, Sarah Dyer Barnes Elementary School in Johnston, Anna McCabe Elementary School in Smithfield, Kent Heights Elementary School in East Providence, Agnes Little Elementary School and St. Cecilia School in Pawtucket, Centredale Elementary in North Providence, and Ashton Elementary School in Cumberland all participated in the Woon Watershed Explorers Program this year.

On May 22, these nine schools will join NBC staff along with staff from Biomes Marine Biology Center, Save the Bay, Aububon Society of Rhode Island, Roger William's Park Zoo and the New England Aquarium for a day of environmental education activities. The day will start with data presentations from each school and two student essays and then students will break up into groups to participate in numerous environmental education activities.

The goals of the NBC's WWE Program and the culminating environmental education conference are to help students connect the health of their local watersheds to the overall health of Narragansett Bay, and to inspire them to care for these precious resources so that future generations can enjoy them. Another important goal of the watershed explorers program is to help students realize how vital clean water is for survival.

"I feel the students learn about respecting their environment. They discover new critters they never even knew existed and how human actions can help or hurt these critters' existence. They also learn that some of the animals that they may find fascinating really don't belong in the local watershed and how these animals can negatively impact the animals that really are native to our environment. If it wasn't for the work that Narragansett Bay Commission does in our classrooms, very little science would be taught in the second grade at our school, and certainly not in the exciting way that NBC introduces the students to these scientific concepts," said Kari-Ann Cute, a second grade teacher at Agnes Little Elementary School in Pawtucket, RI.

"I think the NBC WWE program benefits all of my students in a multitude of ways. First, the program links place-based education with the Next Generation Science Standards. Students not only learn about watersheds, but they have the opportunity to study THEIR watershed in an intimate way through water sampling, sight visits, bio-samples at their local river, and a tour of the Field's Point Waste Water treatment facility. These on site experiences combined with classroom instruction allow students to make connections between their own actions and the health of their watershed," said Stacy Gale, the STEM specialist at the Paul Cuffee School in Providence, RI.

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Conditional Shellfish Areas in Upper Narragansett Bay to Re-Open Four and One-Half Days Early as a Result of Acceptable Post Storm Monitoring Data

Conditional Shellfish Areas in Upper Narragansett Bay to Re-Open Four and One-Half Days Early as a Result of Acceptable Post Storm Monitoring Data

Post Details

Posted August 31, 2015

Filed under **General**

For Release: August 28, 2015 from the RI Department of Environmental Management

Contact: Gail Mastrati 222-4700 ext. 2402

CONDITIONAL SHELLFISH AREAS IN UPPER NARRAGANSETT BAY TO RE-OPEN FOUR AND ONE-HALF DAYS EARLY AS A RESULT OF ACCEPTABLE POST-STORM MONITORING DATA

Conimicut Triangle Will Reopen at Sunrise on Saturday, August 29 PROVIDENCE - The Department of Environmental Management announces that the Conimicut Triangle conditional area in Upper Narragansett Bay will re-open to shellfishing beginning at sunrise on Saturday, August 29 – four and one-half days earlier than the scheduled opening at noon on September 2. The shellfish closure was enacted on Wednesday, August 26 as a result of rainfall recorded at NOAA's TF Green Airport weather station.

The early opening is possible due to the operation of NBC's Combined Sewer Overflow (CSO) tunnel and related improvements completed under Phase II, which went online in December 2014. An agreement reached between DEM and the US Food and Drug Administration allows DEM to re-open the Upper Bay conditional areas to shellfish harvesting as soon as post-storm monitoring data demonstrates it is safe to do so. DEM developed this plan to expedite the benefits associated with the tremendous investment in construction of NBC's CSO Abatement Project. Under this plan, DEM continues to enact a seven-day closure of the shellfish conditional areas in the Upper Bay: Conimicut Triangle after a half-inch (0.5") of rainfall; Area A after eight-tenths of an inch (0.8") of rainfall; and Area B after an inch and a half (1.5") of rainfall. As conditions allow, DEM uses post-storm monitoring data and operational information to determine whether these areas can be opened earlier. The data used to determine acceptability of this early opening – one day after the 0.68" rainfall recorded at T.F. Green Airport during the early hours of Wednesday, August 26 – was collected by DEM staff on August 27th.

At this time, the conditional area of the Greenwich Bay, Mt. Hope Bay and the Kickemuit River are closed and will remain closed until noon on September 2, 2015. DEM maintains a 24-hour shellfishing hotline with recorded updated information on shellfish closure areas. If required, additional closures will be posted on the DEM hotline at 222-2900.

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The Providence Journal
February 25, 2015

The Narragansett Bay Commission

PUBLIC NOTICE

Firms in Significant Non-Compliance

THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGULATION 40 C.F.R. 403.8(f) (2) (vii) and Article 10 of the Narragansett Bay Commission, Rules and Regulations require the NBC to publish annually the names of all industrial users in Significant Non-Compliance (SNC) with pretreatment standards and other pretreatment requirements during the preceding year. Companies deemed to be in Significant Non-Compliance are those industrial users who have violated any of the Significant Non-Compliance criteria listed, as defined by Article 2 of the NBC Rules and Regulations during the time period from October 1, 2013 through December 31, 2014. The parameter for which a company was not in compliance and/or the specific administrative deficiency are listed after the company name. The number(s) in parentheses correspond to the type of SNC criteria specified below. Some of the firms listed below may have been issued an Administrative Order in which administrative and/or civil penalties may have been assessed. Many of the companies listed have made significant progress toward correcting the violation and may now be in compliance.

Significant Non-Compliance Criteria:

(1) Chronic violations of wastewater discharge limits, defined here as those in which 66% or more of all of the measurements taken during a six-month period exceed (by any magnitude) a numerical Pretreatment Standard or Requirement for the same pollutant parameter;

(2) Technical Review Criteria (TRC) violations, defined here as those in which 33% or more of all the measurements for each pollutant parameter taken during a six-month period equal or exceed the product of a numerical Pretreatment Standard or Requirement multiplied by the applicable TRC value (TRC = 1.4 for BOD, TSS, fats, oil, and grease and 1.2 for all other pollutants except pH);

(3) Any other violation of a pretreatment effluent limit (daily maximum or long-term average) that the Commission determines has caused, alone or in combination with other discharges, interference or pass through (including endangering the health of Commission personnel or the general public);

(4) Any discharges of a pollutant that has caused imminent endangerment to human health, welfare or the environment or has resulted in the Commission's exercise of its emergency authority to halt or prevent such a discharge;

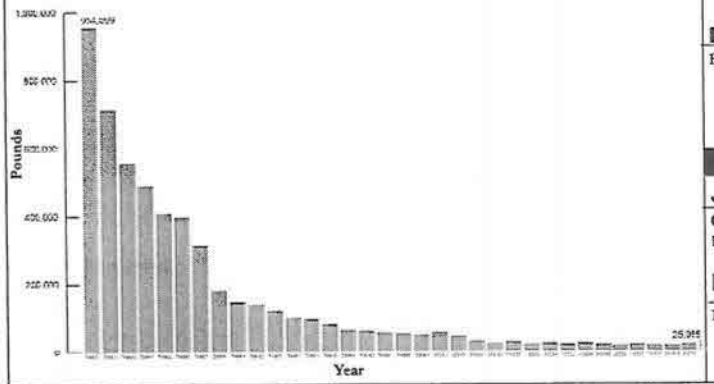
(5) Failure to meet, within 90 days after the scheduled date, a compliance milestone contained in a Commission notification, permit or enforcement order, for starting construction, completing construction or attaining final compliance;

(6) Failure to provide, within 30 days after the due date, required reports such as baseline monitoring reports, 90-day compliance reports, self-monitoring compliance reports and reports on compliance with compliance schedules;

(7) Failure to accurately report noncompliance;

(8) Any other violation or group of violations which the Commission determines has adversely effected the operation or implementation of the Industrial Pretreatment Program. •

Total Metals Influent to Field's Point WWTF, 1981-2014



THE NARRAGANSETT BAY COMMISSION IS COMMITTED TO PROTECTING THE STATE'S TWO LARGEST WASTEWATER TREATMENT FACILITIES AND NARRAGANSETT BAY FROM TOXIC DISCHARGES. This is accomplished by the issuance of discharge permits to commercial and industrial sewer users. These discharge permits specify the level of pollutants that can be discharged in a facility's wastestream and may require a firm to conduct wastewater monitoring to verify compliance with discharge limits, to implement a Spill Control Plan and/or Toxic Organic/Solvent Management Plan, and to install pretreatment equipment. Various reporting and record keeping requirements may also be written into discharge permits. The firms listed in this public notice violated one or more of the significant non-compliance criteria specified above. The Commission is required by the RI DEM and the US EPA to annually publish the names of all firms violating any of these criteria. Therefore, firms must be sure to comply with all the terms specified in their discharge permit to ensure that the name of their firm is not listed in this annual public notice. The NBC offers FREE technical assistance to firms located in the NBC service area through its non-regulatory Office of Environmental, Safety & Technical Assistance. For information on how the NBC Environmental, Safety & Technical Assistance Program can help your firm achieve and maintain compliance, contact the Environmental, Safety & Technical Assistance Program Staff at 461-8848/TDD 461-6549.

Most businesses located in the NBC district are to be commended for the fine job they have done treating their process discharges to remove toxic pollutants. In 1981, local industries discharged 954,099 pounds of heavy metals such as copper, nickel and zinc and 80,440 pounds of cyanide to the Field's Point Wastewater Treatment Facility. Since 1981, the total metals and cyanide loadings to the Field's Point facility have been reduced by 97.4% and 98.8% respectively. Similar toxic loading reductions have been observed at the NBC Bucklin Point facility.

Bucklin Point Service Area

Cumberland

Company Name	Violations Cited	Present Status
Nuzzo Campion Stone Enterprises, Inc.	Failure to submit report on time (6)	Report has been received. Firm is now out of business.

Lincoln

Denison Acquistion Company, LLC	Zn (2)	Firm is now in compliance.
dba Denison Pharmaceuticals, LLC	Failure to submit reports on time (6)	Reports have not been received.
Lincoln Manufacturing, Inc. dba Lincoln Fine Ingredients	O&G (2)	Firm is now in compliance.
Putnam Holdings, Inc. dba Bradley Press	Failure to submit reports on time (6)	Reports have been received.
Tanury Industries	TTO (2)	Firm is now in compliance.

Pawtucket

Bliss Manufacturing Company, Inc.	Ag (2)	Firm is now in compliance.

Field's Point Service Area

Johnston

Company Name	Violations Cited	Present Status
KB Surfaces, LLC	Failure to submit report on time (6)	Report has been received

Providence

Bella's Jewelry	Failure to submit report on time (6)	Report has been received.

The Narragansett Bay Commission will continue to lead in wastewater treatment, environmental protection, and environmental education to ensure a cleaner Narragansett Bay for all to enjoy.

Vincent J. Mesolella, *Chairman* • Raymond J. Marshall, P.E., *Executive Director*
Narragansett Bay Commission • One Service Road • Providence, RI 02905 • 401-461-8848 • TDD 401-461-6549 • FAX 401-461-6540 • http://www.narrabay.com
Twitter: @narrabay • Facebook: www.facebook.com/narrabay

The cost of this public notice will be billed to the firms listed above that were in significant non-compliance.

NARRAGANSETT BAY COMMISSION

Perfect Compliance

in recognition of Significant Industrial User Perfect Compliance in 2014

The Narragansett Bay Commission recognizes these Significant Industrial User companies for perfect regulatory compliance with Pretreatment Program regulations during 2014:

A Harrison & Company, Inc.
Armbrust International, Ltd.
Dominion Energy Manchester Street, Inc.
Hord Crystal Corporation
Metallurgical Solutions, Inc.
Providence Journal Company - Production Facility
Stackbin Corporation
Technodic, Inc.
AG&G Incorporated
Darlene Group, Inc.
Electrolizing, Inc.
General Cable Industries, LLC
Interplex Engineered Products, Inc.
Providence Metallizing Company, Inc.
Tanury Industries, PVD, Inc.
Truex, Inc.

Has your company demonstrated extraordinary environmental efforts this year?

If so, apply for an NBC Environmental Merit Award! Download an application form at www.narrabay.com.

Vincent J. Mesolella, *Chairman* • **Raymond J. Marshall, P.E.,** *Executive Director*
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NBC NEWSLETTERS

NBC Pipeline

January 2015

NBC Pipeline is a monthly publication designed to keep Narragansett Bay Commission staff up to date on internal current affairs. Staff is welcome to forward to the Public Affairs Office any items they would like to share or see in a future publication. Your suggestions and participation are encouraged and appreciated.

Calendar of Events *for January*

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1 New Year's Day HOLIDAY	2 Payday	3
4	5	6	7	8	9	10
11	12	13 Board of Commissioners Meeting 11 AM	14	15	16 Payday	17
18	19  Martin Luther King Jr. Day	20	21	22	23	24
25	26	27	28	29	30 Payday	31

All meetings are held at the Commission's One Service Road Offices unless otherwise noted.

News Briefs...

The 2015 Calendar For NBC's Annual Poster Contest Has Arrived!

NBC is pleased to present its 2015 calendar. The calendar highlights the winners from the 21st annual poster contest, "3 P's, Only Please". This theme brings awareness to those about only flushing the 3 P's, paper, pee and poop to help to protect NBC's pumps, pipes and personnel. Items such as "flushable" wipes, dental floss, facial tissue, paper towels and hygiene products are extremely harmful to wastewater treatment systems. These items can cause clogs, damage pumps and pipes, and take hours of personnel time to remedy. Students were asked to create an artistic campaign about why it is so important to only flush the 3 P's.

If you would like a copy, please contact **Talia Girard by email or ext. 394**. We hope you enjoy the beautiful artwork created by these talented students.

Upcoming United Healthcare Meetings

Kara Condon, Diane Tucker and Lauren McGrew from United healthcare along with Joe D'Amico, NBC's benefits consultant, will hold a meeting on January 12th at the COB and on January 16th at Bucklin Point. The purpose of these meetings is to explain the basics of a deductible, what's credited towards it and what happens once your deductible is met; and to review and clarify the on-line process of paying for covered health care expenses through your HSA.

If you have any questions related to any of these topics or others, it will be important for you to attend one of these meetings.

COB
When: January 12, 2015
Where: COB, Main Conference Room
Time: 9:00 am - 10:00 am General Presentation
10:15 am - 3:30 pm one-on-one meetings

Bucklin Point
When: January 16, 2015
Where: BP, Training Room
Time: 9:00 am - 10:00 am General Presentation
10:15 am - 12:00 noon one-on-one meetings

To sign up to meet one-on-one with a United representative, please call **Kristen at extension 371** to arrange a convenient time.

Welcome...

Anna Kilian, Chemist

Ryan Chenette, FP Mechanic I

Thank You...

To all those who donated an unwrapped, new toy for the Port Providence Toy Drive. The Holidays were little brighter for a local child thanks to you!

Including the donations collected here at NBC, the EWG Girl Scouts collected **5,074** "Bare Necessities" for children in Rhode Island. Thank you for your geneosity!

--Sherri Arnold

Project Undercover

Winter Fire Prevention Tips

Now that winter has officially arrived, the amount of time people spend indoors drastically increases when compared to the other seasons of the year. The National Fire Protection Association (NFPA) and the United States Fire Administration (USFA) are combining efforts to remind the public that the winter months are the leading time of year for home fires. Half of all home heating fires occur in the months of December, January and February. This is one of the reasons why employees are encouraged to remember the following fire prevention tips that can not only be applied in their work areas, but also within their homes:

- Electrical & Appliance Safety - Use electrical extension cords wisely; never overload extension cords or wall sockets; immediately discard frayed extension cords; keep an eye on what you cook in toasters and ovens.
- Portable Space Heaters - Remember to turn off your space heater if you are leaving your work area or if you're leaving for the day. Never run or store space heaters next to com bustible materials such as paper or wood. Check to make sure the portable heater has a thermostat control mechanism, and will switch off automatically if the heater falls over.
- Emergency Equipment - Never block sprinklers, firefighting equipment or emergency exits. Be familiar with how to oper ate a fire extinguisher, if needed.

For more information on fire prevention methods, employees may visit the National Fire Protection Association's (NFPA) website.

The Safety Corner: The following EH&S Trainings have been scheduled for January. As always, please obtain your supervisor's permission prior to registering for any safety training.

Lockout/Tagout Classroom Training (FP): 1/7, 1/13, 1/15 & 1/20

--Submitted by Dave Aucoin

Newly Upgraded Bucklin Point Gets Attention from TPO Magazine

Treatment Plant Operator Magazine featured Tom Ciolfi and NBC's newly upgraded Bucklin Point Facility in its January issue. The $38 million upgrade was completed as of July 2014, now meeting new nitrogen effluent permit limits of 5.0 mg/L. Bucklin Point is owned and operated by NBC, managed by United Water and operated and maintained by Commission employees.

Tom Ciolfi, superintendent of the Bucklin Point Facility.

United Water is currently in its ninth year of a ten year contract with NBC. NBC and United Water have daily meetings before every shift to address the day's duties and also making it a point to listen to any employees concerns, striving for teamwork.

Along with the advanced biological nutrient removal upgrade they've also focused on other cosmetic work at the facility, making the plant look and feel like new. To read the full article, go to http://www.tpomag.com/editorial/2015/01/asset_management_gets_big_attention_at_the_newly_upgraded_plant_bucklin_poi.

Ed Taylor inspects the UV disinfection system

-- Photo Credits: TPO Magazine

Casual Day Fund

The Casual Day Fund made two donations in December to the Pawtucket Food Bank and the Hope Alzheimers Center. The organizations were suggested by NBC employees who participate in the Casual Day Fund.

If you particpate in the Casual Day Fund and would like to suggest a 501(c)(3) organization for a donation please contact a member of the Casual Day Fund Committee: Jamie Samons, Kim Kirwan, Claudette Kalf, Renee Rinaldi-Patterson, Patricia Pinilla, Jaqueline Giroux, Leah Foster or Lori Vernon.

NBC Pipeline

February 2015

NBC Pipeline is a monthly publication designed to keep Narragansett Bay Commission staff up to date on internal current affairs. Staff is welcome to forward to the Public Affairs Office any items they would like to share or see in a future publication. Your suggestions and participation are encouraged and appreciated.

Calendar of Events *for February*

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2  Groundhog Day	3	4	5	6	7
8	9	10	11	12	13 Payday	14  Valentine's Day
15	16  President's Day	17	18	19	20	21
22	23	24	25	26	27 Payday	28

All meetings are held at the Commission's One Service Road Offices unless otherwise noted.

News Briefs...

2015 RI Spring Flower & Garden Show

The Rhode Island Spring Flower & Garden Show is kind enough to offer NBC employees discounted admission tickets again this year. The Show runs Thursday February 19th- Sunday February 22nd at the RI Convention center. Hours of operation are Thursday through Saturday 10 AM - 8 PM and Sunday 10 AM - 6 PM.

Under this special offer NBC employees will pay only $14 for tickets (a $5 savings off the general admission at the door price of $19) to attend the premier flower show in New England. Tickets are good for any one of the four show days.

Redemption is quick and easy!

- Go to www.flowershow.com
- Go to the official flower show ticket store and click purchase tickets
- Select the $17 advanced ticket
- Input the number of tickets that you would like to purchase.
- Select go to checkout and enter code **FSMEMPDISC** in the coupon code section.
- Click apply and your ticket price will drop down to $14.

In order to receive this discount, tickets must be purchased by February 11th.

Welcome...

Daniel Glantz,
Principal Systems
Design Programmer

Congratulations...

To **Joanne Parker** of EMDA on the birth of not one, but TWO grandsons! Parker Hamilton was born December 21st and weighed 7 lbs. 9 oz. and Logan Benjamin was born January 23rd and weighed 10 lbs. 3 oz.! Moms and babies are all doing very well, and needless to say, Joanne is thrilled!

Parker Hamilton

Logan Banjamin

-- Submitted by John Motta

NBC Staff Presents at the NEWEA Conference in Boston

On January 28th Cynthia Morissette and Christine Comeau presented on NBC's Public Outreach: *Educating Youth and Engaging Stakeholders* at the annual NEWEA Conference at the Marriot in Boston, MA. The presentation focused two award winning NBC initiatives; the Woon Watershed Explorers Educational Program, and the Snapshot of the Upper Narragansett Bay website. The presentation discussed how NBC uses these programs to outreach and educate local students, stakeholders and the public. Pamela Reitsma also helped with the preparation of the presentation.

Photo above: Cynthia Morissette

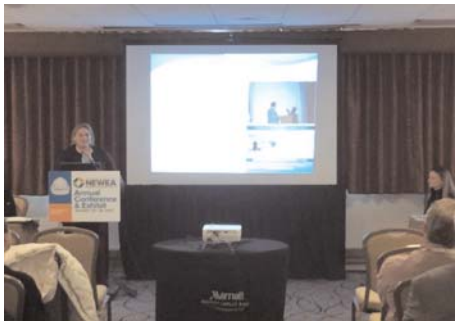


Photo above: Christine Comeau

-- Submitted by John Motta

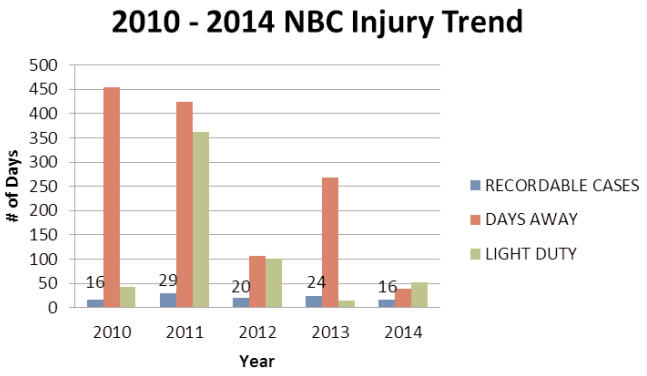
NBC Injury Trend Heading in Right Direction

In accordance with OSHA's Recording and Reporting Occupational Injuries and Illness Standard (29 CFR 1904), NBC is required to maintain a log of work-related injuries and illnesses each calendar year. A work-related injury or illness is considered recordable if the incident results in a fatality, loss of consciousness, days away from work, restricted work or job transfer, or medical treatment beyond first aid.

This "OSHA 300A Summary" log is required to be posted throughout common areas in the workplace by February 1st of each year. The Log must be visible at all times and cannot be covered or defaced. The ESTA Section is proud to report that the total number of OSHA-Recordable Injuries throughout NBC decreased by 33% from 2013 to 2014. Likewise, the total number of days away from work resulting from on-the-job injuries decreased by 86%. These impressive reductions are a true testament to the increased level of safety awareness that NBC employees have exhibited in recent years.

NBC's Incidence Rate (number of recordable injuries per 100 full-time employees) was 7.4 for 2014, slightly above the national average of 6.7 for the wastewater industry in 2013. Calculating incidence rates is heavily dependent on certain types of employment data, and the ESTA staff would like to extend a big THANK YOU to NBC's Payroll and Human Resources departments for their ongoing help throughout the years! Also, a huge THANK YOU goes out to ALL NBC staff for working safely while performing their important daily job tasks. Together, we all can aim for a lower number of recordable injuries in 2015 and help to continue lowering NBC's Incidence Rate.

-- Submitted by Dave Aucoin

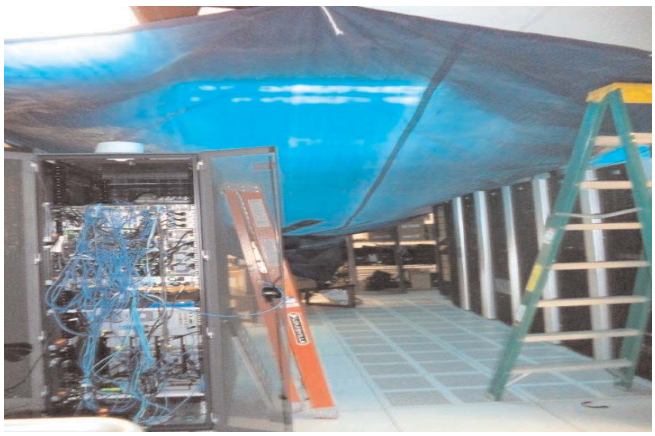


NBC's IM is Always Up for a Challenge

IM received a call early the morning of Friday, January 30th that the roof in IT at the COB building was leaking on the main computer. The roof above is a flat roof where HVAC equipment is stored. When staff went up to evaluate the cause, they encountered a lot of snow accumulation in this open air box-like area. The heavy snow had completely blocked all three drains on the roof. As the snow started to melt, it found its way into old cracks and even made some new ones to wreak havoc on the IT area. The accumulated snow had to be lifted over the 12' high walls surrounding the equipment. IM created a bucket brigade to shovel snow into buckets, climb the ladders and dump the snow onto the sloped roof where it fell to the sidewalk below. With the assistances of many, it took staff all day to clear this small roof section of accumulated snow. A follow up visit with IT indicated that the leak had stopped and appears to be draining properly now. Great job all that participated: Tony DiIorio, Juan Andujar, Dave Weisman, Dave Teixeira, Kim Ramos, and Paul Nordstrom!

IM Staff removing the snow.

IM's Kim Ramos and Juan Andujar dumping the snow over the roof



IT ceiling

-- Submitted by Meg Goulet

NBC's IM and Operations Staff Clean up after Recent Snow Events

The snow storm from January 26th and 27th dumped an estimated 20"-24" in and around the Providence region. NBC's snow storm responders did an awesome job dealing with the blowing wind and cold temperatures while trying to maintain access to the critical components of the WWTF during and after the storm. Less than one week later, the area was hit with another snow storm on the morning of February 2nd. An estimated 10" was added on to the already large snow piles. Again, NBC's snow storm responders were champs and continued to work tirelessly to keep the critical assets open. Staff continued to work to clear snow and mounds away from NBC facilities in and around the WWTF and out in the service area. One area of particular challenge is at the new G8 Tunnel Facility off Promenade Street. NBC staff worked to clear the sidewalks around the G8 Tunnel Facility and the neighboring school, Paul Cuffee, was so grateful for the work that staff did, that they came out and presented some of the staff with Paul Cuffee T-Shirts! Thanks for a job well done everyone. There were so many responders that came in after hours to help out, thank you to Richard Yurovchak, Juan Andujar, Tony DiIorio, Rick Mello, Norm Rodolewicz, Anthony Turchetta, Ed Ferruolo, Mark Brasil, Mike Ceasrine, Steve Fascitelli, Mike Butler, and Anthony Lena.

IM staff from left to right: Anthony Lena, Dave Texeira, Dave Weisman, Chris Moran, Paul Annicelli, Kim Ramos, Juan Andujar, Richard Yurovchak, Maurice Jarest & Anthony DiIorio.

--Submitted by Meg Goulet

NBC Joins the U.S. Department of Energy's Better Plants Program

NBC is now the newest member to the Better Plants Program by the U.S. Department of Energy (DOE) and also one of their first partners from the wastewater treatment sector. The DOE's Better Plants Program is a national Partnership initiative to drive significant improvement in energy efficiency across the U.S. industry.

The U.S. energy sector has an annual energy bill of about $200 billion and there are significant savings available through cost-effective investment in energy efficiency. Capturing these savings helps manufacturers save money, reduce air pollution and stay competitive in global markets. Working with the Better Plants Program NBC must improve its energy intensity by 25% over ten years, develop energy management plans and track and report their annual progress. The DOE helps these companies establish key energy performance metrics, evaluate energy saving opportunities and organize plant-level training events.

NBC's new Field's Point Administration Building has been LEED Silver Certified by the U.S. Green Building Certification Institute. The certification is for energy use, lighting, water and material use. The building sits at the base of three 1.5 megawatt wind turbines that provide on average 50% of the plants energy, saving NBC about $1 million a year. By using less energy NBC saves money, reduces greenhouse gas emissions and contributes to healthier environment. "NBC takes great pride in its historic and on-going energy conservation and efficiency efforts and accomplishments including the use of available renewable energy resources. NBC is excited to be working with the U.S. DOE on their Better Business Program to help find even more energy savings opportunities" stated Jim McCaughey, NBC Environmental Safety and Technical Assistant Manager. Today, over 120 companies are partnering with DOE through Better Plants, representing close to 1,800 facilities and about 8% of the total U.S. manufacturing energy footprint.

NBC Pipeline

March 2015

NBC Pipeline is a monthly publication designed to keep Narragansett Bay Commission staff up to date on internal current affairs. Staff is welcome to forward to the Public Affairs Office any items they would like to share or see in a future publication. Your suggestions and participation are encouraged and appreciated.

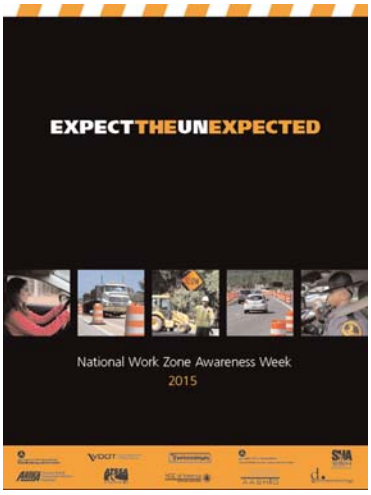
Calendar of Events *for March*

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
8	9	10	11 CAC Meeting 5 PM	12	13 Payday	14
15	16	17 Board of Commissioner's Meeting 11 AM St. Patrick's Day	18	19 St. Joseph's Day	20 First Day of Spring	21
22	23	24	25	26	27 Payday	28
29	30	31				

All meetings are held at the Commission's One Service Road Offices unless otherwise noted.

News Briefs...

National Work Zone Awareness Week



Sponsored annually by the National Traffic Safety Services Association (NTSSA), National Work Zone Awareness Week is a campaign that marks the start of the construction season with the goal of encouraging safe driving through highway work zones and construction sites. The theme for this year's observance is "Expect the Unexpected," with the key message for drivers to use extra caution in work zones throughout the country.

NBC employees should remain vigilant while operating personal or NBC-owned vehicles in work zones, within the treatment plants and along Service Road. Additionally, only those employees who are certified in NBC's "Flagger/Work Zone Safety Program" may direct traffic in work zones and each employee is responsible for remaining up-to-date on their certification training. Staff should continue to follow required procedures while setting up work zones and directing traffic, and also remember to check current supplies to ensure they meet ANSI and DOT guidelines. This includes all types of personal protective equipment and associated paddles and signs that are being used.

The Safety Corner: The following EH&S Trainings have been scheduled for March. As always, please obtain your supervisor's permission prior to registering for any safety training.

• Lockout/Tagout Classroom Training: 3/10, 3/12, 3/17, 3/19 & 3/25

-- Submitted by: Dave Aucoin

Congratulations...

To Customer Service Rep. **Karen Bonn** on becoming a grandmother. Jaelyn Aubrey Gomes was born on February 4, 2015, weighing 7lbs 14oz. Mom, dad and baby Jaelyn are doing great!

Fun in the Snow..

Customer Service Rep. Joyce Ranger's dog Annabel enjoyed her sled ride after one of the many February snow storms.

Easter Egg Cookies

Ingredients:
COOKIES:
1 1/2 cups all-purpose flour (about 6 1/2 ounces)
1/2 teaspoon baking powder
1/2 teaspoon baking soda
1/4 teaspoon salt
1/2 cup granulated sugar
1/4 cup butter, softened
1 teaspoon vanilla extract
1 large egg
ICING:
2 cups powdered sugar
3 tablespoons fat-free milk
1/4 teaspoon vanilla extract
Food coloring (optional)

Preparation: Spoon flour into dry measuring cups; level with a knife. Combine flour, baking powder, baking soda, and salt, stirring with a whisk. Place granulated sugar and butter in a large bowl; beat with a mixer at medium speed until well blended (about 5 minutes). Beat in 1 teaspoon vanilla and egg. Add flour mixture, beating at low speed until blended. Place dough between two sheets of plastic wrap. Roll dough to a 1/4-inch thickness. Chill 1 hour. Preheat oven to 375°. Cut dough with a 2 1/4-inch egg-shaped cutter. Place cookies on a baking sheet lined with parchment paper. Bake at 375° for 8 minutes or until edges of cookies are browned. Cool cookies 1 minute on pan. Remove cookies from parchment; cool completely on a wire rack. To prepare icing, combine powdered sugar, milk, and 1/4 teaspoon vanilla; stir until smooth. Add food coloring, if desired. Stir well. Spread or pipe icing onto cookies.

NBC Pipeline

April 2015

NBC Pipeline is a monthly publication designed to keep Narragansett Bay Commission staff up to date on internal current affairs. Staff is welcome to forward to the Public Affairs Office any items they would like to share or see in a future publication. Your suggestions and participation are encouraged and appreciated.

Calendar of Events *for April*

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3 Good Friday	4
5 Easter	6	7	8	9 Environmental Merit Awards Breakfast	10 Payday	11
12	13	14	15	16	17	18
19	20	21	22 CAC Meeting 5 PM Earth Day	23	24 Payday	25
26	27	28 Board of Commissioner's Meeting 11 AM	29	30		

All meetings are held at the Commission's One Service Road Offices unless otherwise noted.

News Briefs...

Rough Winter for the Ducks at NBC

On Friday February 13th, FP Process Monitor Rick Mello found a small female mallard duck over by the wet weather tanks near an icy embankment at the Field's Point facility. The duck was exhausted, frozen and malnourished. FP Mechanic II Glenn Peterson was able to catch her and was kind enough to take the duck home and attempt to nurse her back to health. She was kept in a dog kennel in the basement and fed dog food and water; she had no interest in any of the vegetables or leafy greens at first. Within the first 12-14 hours she started to come around and flap her wings and switched over to eating corn kernels. Glenn kept her for just over three weeks to make sure she was strong and healthy before being released. On Tuesday March 10th, she was brought over to a quiet spot over by the final clarifiers to be released and took right off! Seven ducks were lost that same weekend she was found due to the extreme cold and brutal winter we've had thus far.

Fit NBC

Join some fellow NBC employees as we get fresh air and exercise to support a GREAT cause!

Walk MS: Providence 2015,
presented by Biogen-Idec
Date: Sunday, April 19, 2015
Location: Providence Career and
Technical Academy
Time: 9 a.m. check-in; 10 a.m. start

Check out this website for event details and to donate: Click here or contact **Nora at ext. 450** for more info.

NBC Casual Day Fund

The NBC Casual Day Fund will be making a donation to the MS Society and March of Dimes.

Welcome...

Robert Tavone, BP Operator I

Julie Nigohosian, Customer Service Representative

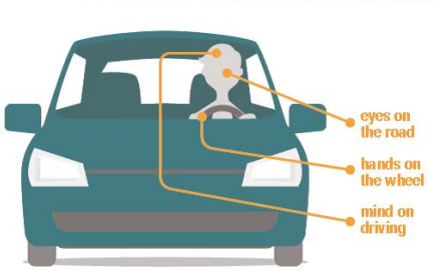
Michael Stuard, Financial Analyst

Caitlin Caranci, Customer Service Fiscal Clerk

Anthony Ciacciarelli's Grandmother turns 100!

IM's inspector, Anthony Ciacciarelli's grandparents to the left and right of him.

April is National Distracted Driving Awareness Month



National Safety Council (NSC) has designated the month of April as National Distracted Driving Awareness Month. With a strong emphasis on the fact that cell phone use while driving negatively impacts a driver's ability to focus on the road, the month's awareness campaign message is "Calls kill - Hands-free is not risk-free."

Eighty percent of Americans believe that hands-free devices are safer to use while driving, compared to a handheld phone. This is simply not the case. Cell phone use during fatal car crashes is either known or suspected in the majority of incidents. Numerous studies have indicated that hands-free devices are no safer simply because the brain remains distracted by the actual conversation. When talking on a cell phone, drivers can miss seeing up to half of the environment around them, including traffic lights, stop signs and pedestrians.

Employees can also take an opportunity during April to pledge to drive cell-free, by taking the Focused Driver Challenge on NSC's website www.nsc.org. All NBC employees are encouraged to review NBC's Policy on Safety Procedures When Operating NBC Vehicles: Seat Belt, Texting and Smoking (Policy #G-V-4). NBC employees may also take the Beacon Insurance Defensive Driving training class online, which is accessible through the Training Central > Safety Training Online path on BayNet.

--Submitted by Dave Aucoin

Lunch and Learn Retirement Plan Meeting

Marc Beausoleil, Director, Financial Planning from GPS Investment Advisors and Mark Geraigery from Mass Mutual will host a retirement plan meeting on May 12th for all employees.

With Mass Mutual as your plan provider for NBC's non-union retirement plans as well as the Deferred Compensation Plan, you can easily manage your retirement accounts online. Mark Geraigery will focus on helping you to navigate the Mass Mutual interactive website and update you on how to gain access to your retirement accounts via mobile applications. There will also be time for Marc Beausoleil to address any questions you may have. The presentation is scheduled to last for approximately one half hour and Marc Beausoleil will be available after the meeting for individual consultations.

Pizza and refreshments will be provided during the lunch break, or feel free to bring your own bag lunch.

Meeting Details:
When: Tuesday, May 12, 2015
Where: COB - Main Conference Room
Time: 12:00 pm - 1:00 pm
Individual Meetings: 1:30 - 4:00 pm

To sign up to attend this meeting and/or to sign up for an individual meeting, please call Kristen at ext. 371.

As seats are limited, sign up will be on a first come first serve basis.

Only a Few Months Left to Earn your $500 in Wellness Incentives

If you have not already taken advantage of the $500 offered to you through NBC's wellness incentives, click the link below for a list of programs that you may still have time to complete before the new Wellness Incentive Program begins on July 1, 2015 and ends on June 30, 2016.

Wellness Incentive Credits

Health & Wellness

NBC Pipeline

May 2015

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Calendar of Events *for May*

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
3	4	5	6	7	8 Payday	9
10 Mother's Day	11	12	13	14	15	16
17	18	19	20 CAC Meeting 5 PM	21	22 Payday	23
24	25  HOLIDAY	26	27 Board of Commissioner's Meeting 11 AM	28	29	30
31						

All meetings are held at the Commission's One Service Road Offices unless otherwise noted.

News Briefs...

2015 Environment Merit Awards Breakfast

NBC held its 20th Annual Environmental Merit Award ceremony Thursday, April 9th at Kirkbrae Country Club. Janet Coit, Director of RI's Department of Environmental Management (DEM) and an advocate for clean water, clean air and healthy communities, joined NBC Staff and Award winners at the event. Janet Coit works closely with NBC on these important matters. NBC has one of the most successful pretreatment programs in the country. Kerry Brit, NBC's Pretreatment Manager, and her entire staff, are repeatedly recognized by their peers as well as the environmental protection agency for their excellence and expertise. This year, sixteen companies achieved perfect compliance with all NBC regulations and one local organization was honored for its excellence in stormwater management. Less than ten percent of NBC's permitted users generally meet all their permit requirements.

The companies in perfect compliance include: A. Harrison & Company, Inc., AG&G Incorporated, Armbrust International, Ltd., Darlene Group, Inc., Dominion Energy Manchester Street, Inc., Electrolizing, Inc., General Cable Industries, Hord Crystal Corporation, Interplex Engineered Prodicts, Metallurgical Solutions, Inc., Providence Journal Corporation, Providence Metallizing Company, Inc., Stackbin Corporation, Tanury Industries, PVD, Inc., Technodic, Inc., and Truex, Inc. Three of the sixteen companies awarded have achieved perfect compliance ten or more times; Induplate LLC, Providence Metallizing and Truex, Inc.

NBC instituted a Stormwater Management Award in 2007 to recognize those companies, organizations or individuals that successfully use Best Management Practices to minimize stormwater impacts on the NBC sewer collection system. The 2014 Stormwater Management Award goes to Achievement First RI. Achievement First serves 180 kindergarten and first grade students in the reclaimed Oliver Hazard Perry Middle School in Providence. As a part of their $5 million renovation to the school, PARE Engineering designed a stormwater management system that will divert approximately 60,000 gallons of stormwater out of the NBC combined sewer system during a three-month storm. This stormwater will now be recharged into ground on the Achievement First project site. It is a rare and impressive design that will prevent all of their stormwater flow from their site from entering the NBC combined sewer system.

Photo above, from left to right: George Palmisciano, Chairman Vin Mesollela, John Zuba and David Potter. Geroge and David from Pare Engineering, accepted the award on behalf of Achievement First Providence Mayoral Academy for Pare's stormwater design and structural engineering work on the school.

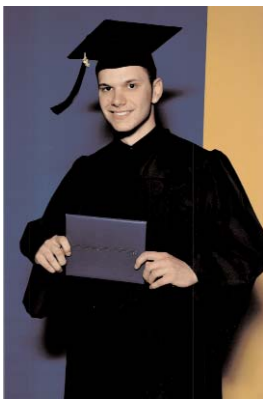
NBC also announced the grantees for the 2015 Earth Day River Clean Up Grant Program. This program helps clean up the Woonasquatucket River and other local bodies of water. Hundreds of volunteers from different organizations gather to remove thousands of pounds of tires and debris from the beds and banks of the rivers, ponds and shorelines of Rhode Island during these annual Earth Day clean ups.

Congratulations...

To **Ron Goodinson**, O&M Coordinator at Field's Point has been elected Vice President of the Rhode Island Board of Softball Officials for 2015. Congratulations Ron!

-- Submitted by Carmine Goneconte

To **Claudette Kalf's** son, Myles Robert Kalf on graduating from the New England Institute of Technology on May 3rd, completing his Bachelor of Science Degree in Video Game Design



Goodwill E-Waste Recycling Event

NBC's next Goodwill E-Waste Recycling Event is scheduled for Wednesday, May 13th from 7:30 - 9:30 AM.

List of acceptable items: computers, laptops, flat screen monitors, peripherals, audio equipment, video equipment, electronics, toner/printer cartridges, file cabinets, metal shelving, small household appliances, clothing & accessories (shoes, belts, etc.), textiles (Bedding, linens, towels, etc.) & small toys.

NOT acceptable: televisions, desk top printers, CRT Monitors, florescent bulbs & single use Alkaline Batteries.

Emergency Action Plans.....Are You Prepared?

With the onset of warmer weather, NBC employees will be finding themselves spending more time outdoors, and with the bulk of NBC employees working within the highly industrialized area near the Port of Providence, it is important to be fully prepared for any type of emergency situation. This could include weather, chemical releases or acts of terrorism that can result in building evacuation or shelter in place orders issued by local authorities. The spring is a great time of year for employees to review NBC's Emergency Action Plan documents, which can be found on BayNet under "General Info" / "Health & Safety Info." In the event of any type of emergency situation at NBC, employees and visitors should always adhere to the following response steps:

1. Recognize the emergency,
2. Don't panic,
3. Know your own role - follow advice from one of NBC's Emergency Coordinators,
4. Always check-in with your supervisor during an emergency,
5. Let the local police and fire departments do their job.

NBC will be participating in the 11th annual Port Evacuation Drill, which is scheduled for Tuesday, June 2nd at 10:00 AM. The drill is coordinated by the Providence Emergency Management Agency (PEMA) in conjunction with the Providence Fire Department and all Port facilities. Requests for NBC volunteers will be made during May. If anybody should have any questions about NBC's Emergency Action Plans or the Port Drill, please contact your supervisor or feel free to contact **Dave Aucoin** at **ext. 418**.

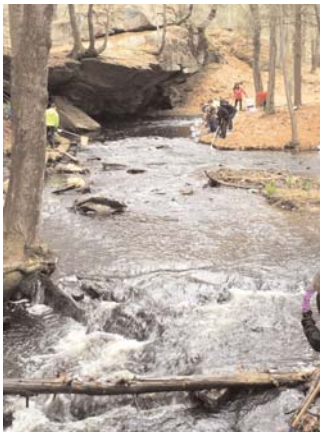
Safety Corner: The following Health & Safety trainings are scheduled for May. As always, please obtain your supervisor's permission prior to registering for any safety training.

• Work Zone Safety/Flagger Certification - May 14th & 27th

-- Submitted by Dave Aucoin

NBC's Woon Watershed Explorers look for Macroinvertebrates

Fourth graders from S.D. Barnes Elementary in Johnston visited Greystone Mill Pond on Friday, April 17th. Students found lots of interesting critters, such as crayfish, dragonfly nymphs and even a tadpole!



Fifth graders from Anna McCabe Elementary in Smithfield visited Mowry Conservation Area on April 30th. Students found lots of critters here as well, some included salamanders, crayfish, caddisfly larvae and water striders.

NBC Wins 2015 Environmental Merit Award from EPA

On Wednesday, April 22nd, Tom Uva and Laurie Horridge attended EPA's Enviromental Merit Award Ceremony at Faneuil Hall in Boston to accept a 2015 Environmental Merit Award. NBC was recognized for its commitment to Narragansett bay, going above and beyond what is required for wastewater treatment and water quality monitoring.

Osprey Egg Found at Bucklin Point

The NBC constructed 3 towers, about 30' - 35' tall, at Bucklin Point for Osprey to use as nesting spots. Currently, a nest is on every tower and there are more birds than towers. A camera system powered by a small solar installation, takes video of the Osprey. NBC is working on getting a live feed of that so people can see the birds in real time. The osprey should have more eggs within the next month.

NBC Helps Out a New Local Restaurant: Captain Jack's Clam Shack

Thanks to the help of NBC's Pretreatment Manager, Kerry Britt, James Lamonte was able to open a new local seafood restaurant. Lamonte opened Captain Jack's Clam Shack February 2015 on Central Avenue in Seekonk. The restaurant is right on the Pawtucket line and Lamonte needed permission for its sewer to discharge into the Rhode Island sewer system and Kerry Britt was able to make that happen.

Captain Jack's Clam Shack has been quite the hit since its opening in February. Thursday nights are "Buck a Shuck" nights with all types of oysters that you can try for just a $1. The restaurant is kid friendly, kids get pirate hats, patches and tattoos which are all part of the Caribbean pirate theme. Lamonte wanted to make this a fun experience for the whole family!

You can find Captain Jack's on Facebook, www.facebook.com/captainjacksclamshack for more info.

NBC Pipeline

June 2015

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Calendar of Events *for June*

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3 RIBC Blood Drive 9 AM - 12 PM COB	4	5 Payday	6
7	8	9	10 Poster Contest & Science Fair Awards 5 PM - FP Admin. Bldg.	11	12	13
14 Flag Day	15	16	17 CAC Meeting 5 PM	18	19 Payday	20
21 First Day of Summer Father's Day	22	23 Board of Commissioner's Meeting 11 AM	24	25	26	27
28	29	30				

All meetings are held at the Commission's One Service Road Offices unless otherwise noted.

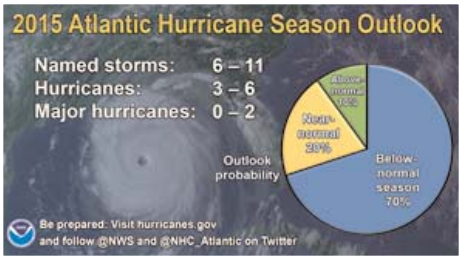
News Briefs...

FP Senior E&I Technician Gary Ruggiero Receives NWPCA's Markelewicz Award

On April 30th, the Narragansett Water Pollution Control Association (NWPCA) held its annual awards banquet at the Potowomut Country Club in Warwick. The NWPCA awarded Field's Point's Senior E & I Technician Gary Ruggierio the Robert J. Markelewicz Award for his outstanding contributions to wastewater system maintenance. Congratulations Gary!

From left to right: Gary Ruggierio & Paul Desrosiers with the Markelewicz Award.

2015 Hurricane Season Outlook and Preparedness



The Atlantic Hurricane Season officially runs from June 1st through November 30th each year. For the upcoming season, the National Oceanic and Atmospheric Administration (NOAA) has predicted a 70% chance that there will be 6 to 11 named storms (winds of 39 mph or higher), 3 to 6 of which could develop into hurricanes (winds of 74 mph or higher). Additionally, the NOAA anticipates that at most, 2 major hurricanes (category 3, 4, or 5) have the potential to develop throughout the season.

Category	Wind speed (mi/h)	Storm surge (ft)
1	74 – 95	4 – 5
2	96 – 110	6 – 8
3	111 – 129	9 – 12
4	130 – 156	13 – 18
5	> 157	> 18

A major hurricane has not made landfall in RI since 1991 (Bob), but NBC employees should always avoid complacency during hurricane season. All employees are encouraged to review NBC's hurricane preparedness, response and recovery documents under the Health & Safety Info tab on BayNet. The NOAA will issue an updated outlook for the Atlantic hurricane season in early August, just prior to the historical peak of the season.

Safety Corner: All Health & Safety trainings scheduled for June will soon be posted under the "Training Central" tab on BayNet. As always, please obtain your supervisor's permission prior to registering for any safety training.

-- Submitted by Dave Aucoin

Farm Fresh Veggie Boxes are Back!

For the past two years NBC has participated in the Farm Fresh RI Veggie Box program. NBC is considering doing it again, but needs to have at least 10 participants in order to have NBC as a delivery site.

The boxes include 8-10 in season produce items. This is a great way to start or continue eating healthy, and you are supporting local RI and MA farms. You don't get to choose the produce that goes into your boxes, but Farm Fresh does send out great newsletters that explain each of the items you receive as well as some great recipes to help you use the produce.

Boxes cost $25 each with an annual $6 membership fee and deliveries are biweekly (either on Tuesday or Wednesday).

Check out the link below:
http://farmfreshri.deliverybizpro.com/home.php

Feel free to contact **Jamie Samons at ext. 377** or by email if you are interested or have any questions.

Iziarh Visits Thailand...

NBC's Environemental Engineer, Iziarh Roberts vacationed in Thailand last month. This photo was taken of Iziarh at a Tiger park in Pattaya, Thailand.

Woon Watershed Explorers Gather at Goddard Park

On Friday, May 22nd over 500 elementary school students, teachers and guests from nine Rhode Island schools gathered at Goddard Park in Warwick for NBC's annual environmental education conference to conclude NBC's year-long Woon Watershed Explorers environmental education program.

The program encourages students and teachers to become stewards of the environment focusing on their local watershed and other surrounding water bodies. Students from Sarah Dyer Barnes Elementary in Johnston, Anna McCabe Elementary in Smithfield, Ashton Elementary in Cumberland, Kent Heights Elementary in East Providence, Agnes Little Elementary and St. Cecilia's in Pawtucket, Paul Cuffee and Meeting Street in Providence and Centredale Elementary in North Providence, participated in the Woon Watershed Explorers Program this year and attended the conference at Goddard Park.

The students began the day presenting their macro invertebrate projects and two student essays, followed by educational activities presented by NBC staff, Biomes Marine Biology Center, Save the Bay, Audubon Society of RI, Roger Williams Park Zoo, and New England Aquarium. The goal is to help students understand the connection between the health of their local watersheds and Narragansett Bay and to keep these precious resources healthy for the future generations.

NBC Pipeline

July 2015

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Calendar of Events *for July*

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3 NBC Observ. HOLIDAY Payday	4  Independence Day
5	6	7	8	9	10	11
12	13 NACWA Conference in Providence	14	15	16	17 Payday	18
19	20	21	22	23	24	25
26	27	28	29	30	31 Payday	

FOLLOW US ON Instagram

@narrabay

News Briefs...

NBC Awards Poster Contest and Science Fair Winners at its Annnual Gallery Night

On Wednesday, June 10th, NBC awarded many talented young artists and scientists at NBC's 22nd annual Poster Contest & Science Fair Awards Ceremony. This year's poster theme was "Watershed Wonders", focusing on the students perspective on why they find watersheds to be a wonder. Science Fair projects were judged at the RI State Science Fair for excellence in water quality investigation. Students gathered with family and friends in the Education Room at the Field's Point Administration Building where the students art work were displayed around the room for all to see. Laurie Horridge, Director of Executive Affairs, presented this year's science fair winners and poster contest winners with award certificates and a check from NBC for their excellent work. Those whose posters were chosen will be featured in the 2016 NBC calendar coming out in December.

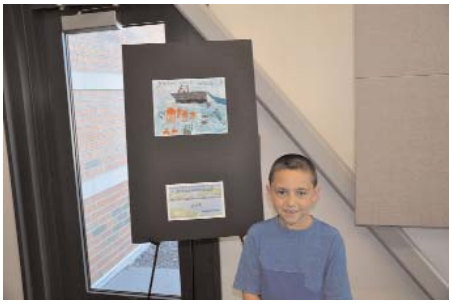


Photo above: Joshua Antoninich second grade honorable mention from S. D. Barnes Elementary.

Photo above: Science Fair winners Andrew and Paul Hong with Laurie Horridge.

Bucklin Point's Jesse Gomez Uses the Heimlich to Save a Co-workers Life

On Thursday, June 18th during the morning shift coffee break at Bucklin Point Jesse Gomez, Operator I, was sitting next to John Dufresne, Heavy Equipment Operator. There was normal conversation going on amongst the guys when all of a sudden John stopped talking and just sat there not moving. He wasn't noticed until he slumped forward in his chair, his head landing on the table and his face starting to turn blue. Jesse immediately reacted by lifting John out of the chair by his underarms and performed the Heimlich Maneuver on him. Apparently John swallowed whatever was lodged in his throat and gasped for air as he recovered. Many coworkers were present and witnessed the event. John, thankfully, was OK just very shaken up by what happened and proceeded to take the rest of the day off.

From left to right: Paul Nordstrom, Jesse Gomez & Ray Marshall

Jesse was publicly acknowledged for saving John's life. Executive Director, Ray Marshall and Director of Operations and Engineering, Paul Nordstrom presented Jesse with a nice Leather duffle bag for saving his co-workers life.

Welcome...

Marc Pariseault, BP Assistant Operations Manager

Jerilyn Isom, Customer Service Representative

Mark Famiglietti, BP Operator I

Andrew M. Wesley, Electrician

Clifford Koehler, BP Operations Supervisor

Terrence Harrington, BP Operations Supervisor

Thunderstorm Safety

The primary goal of The National Weather Service's (NWS) Seasonal Safety Campaign is to prepare the public for hazardous weather year-round. As part of this commitment, the NWS recognized the week of June 21-27 as Lightning Safety Awareness Week in an effort to further convey the hazards of lightning and thunderstorms to the public. As strong thunderstorms are prevalent in New England during the summer, all NBC employees should take caution while working not only outdoors, but indoors as well. Lightning can enter a building through three different ways - a direct strike, through the wires or pipes that extend outside the building, or through the ground.

Here are some basic safety tips all NBC employee should keep in mind during a thunderstorm:

• Seek proper shelter: Stay inside a safe building or vehicle for at least 30 minutes after you hear the last thunderclap and avoid contact with plumbing, metal doors and wooden frames.

• Avoid contact with corded phones: Phone use is the leading cause of indoor lightning injuries in the United States. Lightning can travel long distances in both phone and electrical wires, particularly in rural areas.

• Avoid contact with electrical equipment or cords: If you plan to unplug any electronic equipment, do it well before the storm arrives.

• Avoid contact with plumbing: Do not wash your hands, do not take a shower, do not wash dishes, and do not do laundry. Stay away from windows and doors, and stay off porches, as these can provide the path for a direct strike to enter a home.

• Do not lie on concrete floors and do not lean against concrete walls.

• Go in your basement. Generally, they are a safe place to go during thunderstorms.

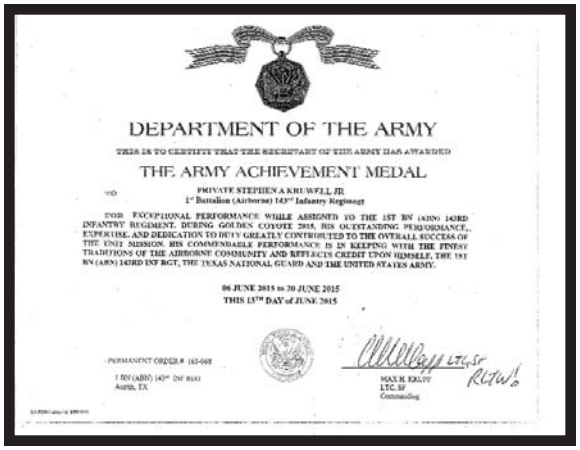
• Remember your pets: Dog houses are not lightning-safe. Dogs that are chained to trees or chained to wire runners can easily fall victim to a lightning strike.

Safety Corner: All Health & Safety trainings scheduled for July will soon be posted under the "Training Central" tab on BayNet. As always, please obtain your supervisor's permission prior to registering for any safety training.

-- Submitted by Dave Aucoin

Congratulations...

To Bucklin Point's Assistant Maintenance Scheduler/Planner, Stephen Kruwell. Stephen completed 3 weeks of paratrooper training with the army and was awarded a medal for his service.



DEPARTMENT OF THE ARMY

THE ARMY ACHIEVEMENT MEDAL

PRIVATE STEPHEN A KRUWELL JR
1st Battalion (Airborne) 143rd Infantry Regiment

FOR EXCEPTIONAL PERFORMANCE WHILE ASSIGNED TO THE 1ST BN (ABN) 143RD INFANTRY REGIMENT, DURING GOLDEN COYOTE 2015. HIS OUTSTANDING PERFORMANCE, EXPERTISE, AND DEDICATION TO DUTY GREATLY CONTRIBUTED TO THE OVERALL SUCCESS OF THE UNIT MISSION. HIS COMMENDABLE PERFORMANCE IS IN KEEPING WITH THE FINEST TRADITIONS OF THE AIRBORNE COMMUNITY AND REFLECTS CREDIT UPON HIMSELF, THE 1ST BN (ABN) 143RD INF BGT, THE TEXAS NATIONAL GUARD AND THE UNITED STATES ARMY.

06 JUNE 2015 to 20 JUNE 2015
THIS 13TH DAY of JUNE 2015

-- Submitted by Carmine Goneconte

Racoon Makes Himself Comfortable in a Tree at the COB Building

This little guy was found snuggled up in the tree behind the COB near the Customer Service entrance on June 10th. NBC called the animal control office and the telephone message referred us to the Providence Police. The police dispatcher said it was a DEM issue and that she would call both the Providence animal control officer and DEM. Unfortunately, neither showed up or called. The next day, the raccoon was gone, hopefully the little guy is doing ok where ever he may be.

Mark your Calendars...

Flu Shot Clinics will take place on September 22, 2015 at the following locations...

Field's Point: 6:30-8:30 AM
COB: 9:30-11:30 AM
Bucklin Point: 2:00-3:00 PM

Sign up instructions will be forthcoming sometime in August.

-- Submitted by Cecille Antonelli

RI's Ocean State Alliance Team Wins First Place at the Regional Operations Challenge

RI's wastewater team, known as "Ocean State Alliance" came in first place in collections at the Wastewater Olympics. The contest tests for strength, speed and endurance designed to test the knowledge and skills used in wastewater collection practices and repairs. The team came in first place for the process control event, first place in the lab event, second place in the collections event, second place in the pump maintenance event, second place in the safety event, and then receiving an overall first place win in the Operations Challenge. With these results the team is now invited to the upcoming National Operations Challenge in Chicago.

Four out of five men on the team are NBC employees. Team members include Joe Crosby, Ed Davies, Vinny Russo, Ryan Chenette, and Ryan Patnode (West Warwick WWTF).

The competition included proficiency testing in water purification process control strategies, laboratory skills, a fast-paced safety rescue simulation, emergency repairs of a complex pump, and a high-speed sewer line repair using all the physical and mental skills used daily by wastewater treatment professionals. Congratulations team!

From left to right: Ryan Patnode (WW WWTF), Joe Crosby, Ed Davies, Ryan Chenette, and Vinny Russo.

Huge Striper Fish Found in the Seekonk River

Bucklin Point's Operations Manager Carmine Goneconte's daughter Jessica and her furture husband caught some huge stripers near the Red Bridge in Providence, which is part of the Seekonk River. A decade ago, stripers never ventured that far upstream. The size and number of schoolie stripers in the Seekonk now is a true testament to the water quality.

-- Submitted by Carmine Goneconte

NBC Wins Best Places Best Places to Work For the Fifth Consecutive Year

NBC has been selected as one of the Best Places to Work in RI for 2015 by Providence Business News for the fifth consecutive year. Human Resource Mangager, Cecille Antonelli and Senior Human Resource Representrative, Brenda Smith accepted the award on behalf of NBC at the June 23rd monthly Board Meeting.

From left to right: Vinny Mesollela, Cecille Antonelli, Brenda Smith & Ray Marshall.

Successful Fire Drill at Corporate Office Building

On Thursday, June 25th, the COB Safety Committee conducted a surprise fire drill for all COB employees. The drill went smoothly, as all employees and visitors calmly evacuated the building (even with several exits blocked) and managers accounted for all employees within their sections. The designated rally point for a COB evacuation was correctly utilized by all employees, and the entire drill lasted for only 5 minutes. Special thanks to the members of the Safety Committee for helping to plan the drill, as well as to the COB Emergency Coordinators who assisted with restricting building access during the drill and making sure all employees remained safe throughout.

The fire drill was a test of the building evacuation and employee alarm system components of NBC's Emergency Action Plan, as required by OSHA. The National Fire Protection Association's (NFPA) Life Safety Code also requires fire drills to be conducted with sufficient frequency in order to familiarize occupants with drill procedures and to ensure that such procedures become routine and extend to all building occupants.

-- Submitted by Dave Aucoin

NBC Pipeline

August 2015

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Calendar of Events *for August*

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3	4	5 Another Day on Upper, Upper Bay	6	7	8
9	10 Victory Day HOLIDAY	11	12	13	14 Payday	15
16	17	18	19	20	21	22
23	24	25	26	27	28 Payday	29
30	31					

News Briefs...

New at NBC: Bottle Filling Stations

The bubblers/water fountains on the first floor of the COB have undergone a makeover. The Halsey Taylor retrofit for the bubbler has added water filtration and a bottle-filling station to the two drinking fountains. The same filtered and chilled water that comes from the spout now flow from a sensor-activated filler that allows for any sort of cup, bottle, or refillable container to be used. An additional feature on the retrofit unit is a digital counter that records how much disposable waste its usage has eliminated, in terms of the number of plastic water bottles saved. Having this bottle-filler in a highly visible area, like the first floor of the COB, shows that NBC is dedicated to protecting our environment. The Pretreatment section has also installed a retrofit unit as a part of their office remodeling project, and has been realizing the waste savings for several months. Special thanks to the Purchasing and Maintenance Departments for their roles in facilitating the installation of the retrofit. Everyone is encouraged to make use of the new bottle-filling stations. If the retrofit units are a hit with staff, other water fountains can be retrofitted as well.

-- Submitted by Brendan Cunha

NBC Biologist Receives NEWEA's Alfred E. Peloquin Award

NBC's Biologist, **Nora-Jean Lough** received the prestigous Alfred E. Peloquin Award from the New England Water Environment Association (NEWEA). Nora will be honored at the award ceremony during NEWEA's Annual Conference in Boston January 27th 2016. This award is given annually in each of the six New England States and recognizes an individual whose personal service has contributed to excellence in plant operations either directly at a treatment plant, or indirectly through assistance to plant operations personnel. Staff Celebrated with Nora on Thursday July 16th with an ice cream cake. Congratulations Nora!

Photo above from left to right: Angela Glater, Ed Davies, Ray Marshall, Nora-Jean Lough, Tom Uva, Laurie Horridge & Walter Palm

Welcome...

Norman Ellinwood, FP Mechanic I

Ashley C. Petteruto, EMDA Clerk

Adriana Saldarriaga, Customer Service Representative

Congratulations...

To **Cynthia Morissette** and her husband Brien on the birth of their second child, Amira. She was born on July 22nd at 8:01 PM. Weighing 5 lbs 5 oz. Everyone is happy and healthy and Kali is so excited to be a big sister!

Working Safely in Hot Weather

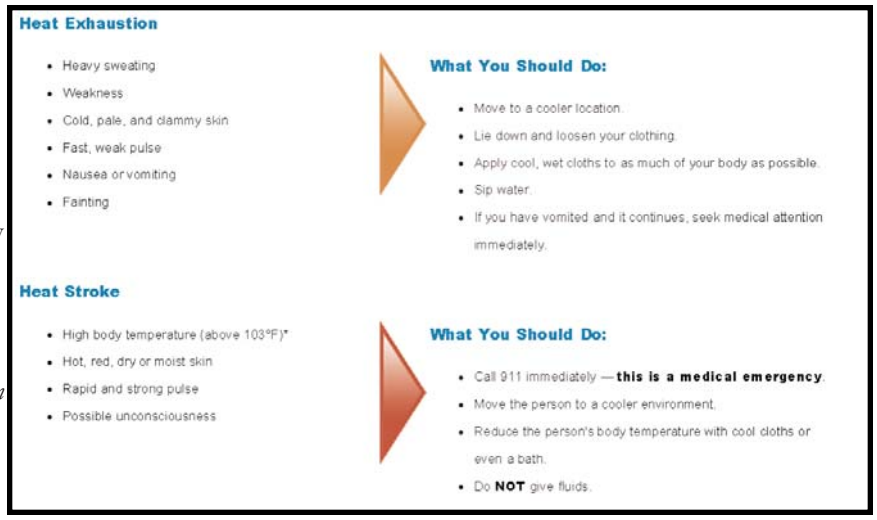
The arrival of the summer months in New England is typically accompanied by unpredictable weather. However, the one constant factor that affects everyone is the warm weather. Working outside in the heat can result in heat illness if proper precautions are not followed. Every year, thousands of workers become sick from exposure to heat, and some even die. Heat illness and fatalities are preventable.

The body normally cools itself by sweating. During hot weather, however, especially with high humidity levels, sweating simply isn't enough. Heat illnesses range from heat rash and heat cramps to heat exhaustion and heat stroke. Body temperature can rise to dangerous levels during continuous exposure to excessive heat. OSHA's annual Heat Illness Prevention Campaign aims to raise awareness among employees and employers about the dangers of working in hot weather. To ensure that heat illnesses and fatalities are avoided, NBC employees should keep the following safety tips in mind:

- Drink water every 15 minutes, even if you are not thirsty.
- Rest in the shade to cool down.
- If possible, try to wear light-colored clothing.
- Keep an eye on co-workers, recognize the signs of heat illnesses, and know how to respond

The OSHA Heat Tool application is relatively new and also a great tool that can assist supervisors with scheduling work activities during hot weather.

-- Submitted by Dave Aucoin



Three Little Ducklings Were Rescued from the Aeration Tanks at Bucklin Point

On Wednesday, July 22nd at the Bucklin Point facility, four staff members helped rescue three little ducklings from one of the Aeration Tanks. The Hawk you see pictured below to the left, attacked the mother duck, scaring the ducklings and causing them to jump into the Aeration Tank. Operations Supervisor Anthony Turchetta witnessed this happen and him along with Domingo Monroe, Joe Garganese and Marc Pariseault used a net to help get them out of the tank and then placed them in one of the ponds by the facility. The ducklings are doing well; nice work guys!

Wishing Two NBC Employees a Happy Retirement..

EMDA Data Clerk, **Joanne Parker** retired from NBC on June 30th after 27 years with NBC. Joanne was one who was always ready and willing to help with whatever task was at hand, and she always had a smile on her face. At her insistence not to have a big celebration, staff held a modest retirement send-off in the Operations cafeteria, where she was given a card and a few gifts, including an NBC cup and saucer she had always wanted. She will truly be missed by us all and is wished the best in her retirement!

Photo above from left to right: Tom Uva, John Motta, Jim Kelly, Joanne Parker, Amanda Kezirian, Rebecca Songolo, Fern Johnson, Brandi-Lyn Colacone, Stephen Despasquale, Eliza Moore, Kevin Wilcox, Michael Giammarco, Jeff Tortorella, Christine Comeau, Michael Golenia, Kathy Oliver, & David Thacker.

-- Submitted by Rebecca Songolo

Maintenance Manager, **Rich Williams** retired from NBC on July 24th after 32 years with NBC. Staff put together a small retirement party for him in the Operations lunch room on July 22nd. Staff enjoyed pizza and cake to celebrate a happy retirement for Rich. He was given a card and small gift for his many years at NBC.

Photo above from left to right: Paul Desrosiers, Rich Williams, Ray Marshal & Rich Bernier

Mark your Calendars...

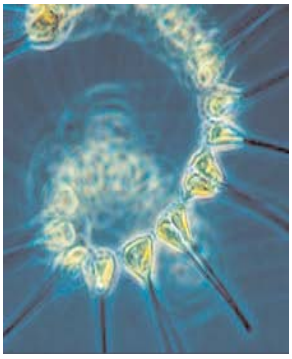
Flu Shot Clinics will take place on September 22, 2015 at the following locations...

Field's Point: 6:30-8:30 AM
COB: 9:30-11:30 AM
Bucklin Point: 2:00-3:00 PM

Sign up instructions will be forthcoming sometime this month.

-- Submitted by Cecille Antonelli

Fish Kill in Seekonk and Providence Rivers NOT NBC Related



Chris Deacutis of RI's DEM is very impressed with NBC's EMDA and Lab staff. Unfortunately, there was a fish kill that occured in the Seekonk and Providence Rivers that began in the evening and early morning hours of July 17th and 18th, starting in the uper Seekonk River. Field observations and water quality measurements show that the incident is being caused by low oxyen levels in the bottom waters.

DEM and NBC collaborated to monitor these low oxygn conditions. NBC staff performed its regularly scheduled water survey on July 21st and 22nd. Data was shared with DEM and fish samples were also taken at that time. In result the extent of this low oxygen issue stretches all the way down to India Point Park and continued further south affecting the lower Providence River.

These conditions are brought on by excess nutrients from various sources that cause algae to grow rapidly. With the results of NBC's data, DEM has ruled out that the cause of the fish kill is NBC wastewater related. Great job everyone and a big thank you to the staff who agressively pursued this matter!

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NBC Pipeline

September 2015

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Calendar of Events *for September*

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
6	7  Labor Day HOLIDAY	8	9 RIBC Blood Drive 9 AM - 12 PM COB	10	11 Payday	12
13	14	15	16 CAC Meeting 12 PM	17	18	19
20	21	22	23  First day of Autumn	24	25 Payday	26
27	28	29 Board of Commissioner's Meeting 11 AM	30			

All meetings are held at the Commission's One Service Road Offices unless otherwise noted.

News Briefs...

Training Central Gets a Reboot

The IT Department will be rolling out an enhanced training management system on BayNet. IT will demo the system for managers. Watch for an email announcement with demo dates and times.

New users will be trained on the new Training Central system during their IT orientation. Training will be offered to present users or they can view a presentation that's available on SharePoint.

Users will be able to view catalogs of courses offered through the Human Resources, Information Technology and Environmental Assistance departments. Students can also review their training history, enroll in courses, add or drop class sessions, and receive email reminders.

For more information, contact **Deb Samson (ext. 428)**.

Rope Partners Tech Gets High Up to Repair Wind Turbines

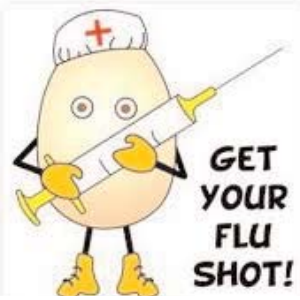
Turbine A (located next to the new lab building) and Turbine C (behind the O&M building) received some repairs on Wednesday, September 2nd. Steve Swette, a technician from Rope Partners cleared a fouled drainage hole at the tip of one of the blades on Turbine A. The blade was making a whistling noise, which is indicative of a problem with the drainage hole. You can hear the whistling sound in the video here: Video. Later on in the afternoon on Wednesday the technician checked and repaired one of the blades on Turbine C as well.

Photo Credit: Mike Spring

Photo Credit: Talia Girard

Mark your Calendars...

Flu Shot Clinics will take place on September 22, 2015 at the following locations...

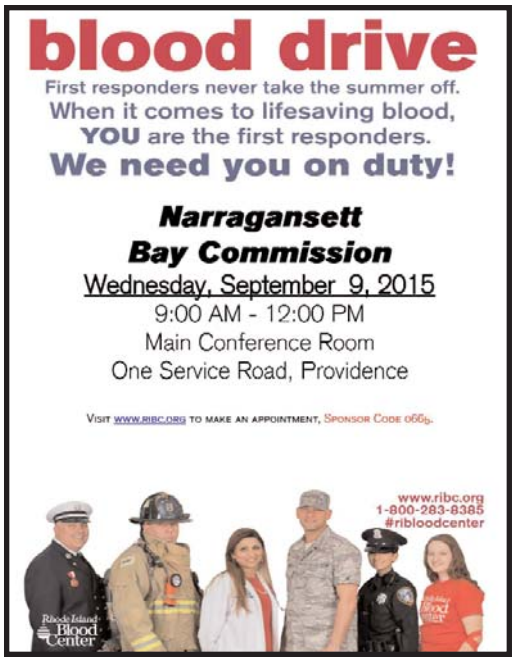


Field's Point: 6:30-8:30 AM
COB: 9:30-11:30 AM
Bucklin Point: 2:00-3:00 PM

To Register: Log-on to www.thewellcomp.com
Click: Register Now
Click: Flu - Worksite Events
Login for FP: narrbayernest
Login for COB: narrbayservice
Login for BP: narrbaycampbell

YOU MUST BRING YOUR INSURANCE CARD WITH YOU TO THE EVENT AND MUST BE AGES 19 YEARS AND OLDER ONLY.

-- Submitted by Cecille Antonelli



National Preparedness Month

The month of September is annually designated as National Preparedness Month by the Federal Emergency Management Agency (FEMA). Emergencies may be local, statewide, natural or man-made. In New England, the threat of natural hazards such as hurricanes and flooding is all too real, especially as the fall months coincide with the peak of the Atlantic hurricane season. All NBC employees should be reminded of the following basic steps while preparing for any type of emergency:

1. Get a **KIT** - Supplies such as bottled water, canned food and a flashlight with batteries should be adequate to last for at least three days. A back up power source should also be available.

2. Make a **PLAN** - At NBC, emergency preparedness plans are in place. While at home, NBC employees should discuss with their friends and family how they'll contact each other during an emergency, in addition to where they'll meet and what they'll do.

3. Stay **INFORMED** - Tune into either a portable radio or your car radio during emergencies, especially power outages. Learn about emergency plans that have been established in your area before an emergency happens. To find out if NBC's Adverse Weather Policy is implemented during an emergency, remember to either check your Outlook Inbox or simply call 401-461-2243 for detailed information.

4. Get **INVOLVED** - Obtain emergency response training and learn how to participate in community exercises, and volunteer to support your community's first responders.

For access to more resources and detailed information, employees are encouraged to visit www.ready.gov. Disaster-specific safety tips are available through a free text message notification service from FEMA, and can be previewed HERE. As a reminder, NBC's Hurricane Preparedness Plans are available on SharePoint and can be accessed by clicking HERE.

September EH&S Trainings (obtain supervisor's permission and please register through the new Training Central link on BayNet)

Hazardous Waste Awareness Training: 9/15, 9/16 & 9/29 (applicable employees)

--Submitted by Dave Aucoin

Field's Point Staff Worked Quickly to Repair Air-leak in IFAS Tank

On Thursday, August 27th Field's Point Operations worked hard to repair an air-line leak in one of the IFAS tanks. There was a significant amount of air loss that had grown larger over time and needed to repaired. Upon inspection, the nuts on the threaded rods on the flange became loose and air was being forced into the pre-anoxic zone of that IFAS tank.

Millions of plastic media covering the bottom of the empty IFAS tank.

The tank was drained to allow mechanics access to the air leak. Mechanic I Mark Brasil and Mechanic I Ryan Chenette entered the tank with hip waders as the water levels in the tank were still almost waist high. They used c-clamps to compress the cap back onto the flange. They were able to do this with air still flowing through the main air piping, which was not an easy task.

With the leak finally capped, they installed new bolts and finished the repair. Mechanic II John Schupp and Mechanic II Glenn Peterson did the setup of all the confined space equipment and also served as attendants. Maintenance Supervisor Mike Spring and Maintenance Supervisor Greg Dacruz planned out the repair strategy and supervised the project. The tank was back up and running within a few hours. Great job guys!

Pipe where the air-leak was coming from.

NBC Pipeline

October 2015

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Calendar of Events *for October*

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
4	5	6	7	8	9 Payday	10
11	12  Columbus Day HOLIDAY	13	14	15	16	17
18	19	20	21	22	23  Game @ 7:05 Payday	24
25	26	27	28	29	30	31  Halloween

News Briefs...

Results are in for the 2015 Annual Golf Tournament

On Thursday, September 24th NBC staff and friends held their annual golf tournament at the Swansea Country Club. The day consisted of 10 teams and the winning foursome beat the 2nd place team only by one stroke. The winning team included Rich Bernier, Rich Bernier's son Adam Bernier, Mark Thomas and Dennis ARusso. Congratulations!

NBC Wins 2015 Top Project Award from Water & Wastes Digest

NBC received the 2015 Top Projects award from Water & Wastes Digest (W&WD) for NBC's IFAS Project at the Field's Point Wastewater Treatment Facility. Maintenance Supervisor Michael Spring attended the WEFTEC Conference at Maggiano's Little Italy on September 29th in Chicago to accept the award on behalf of NBC.

Above photo features Michael Spring at the Award Ceremony with other award winners. Michael is the third one in from the left.

Awards were presented to owners, designers, contractors and manufacturers involved in the 12 water and wastewater projects selected as winners by the editorial staff. Nominations for Top Projects were accepted from April to July 2015. Projects highlight a water or wastewater project that was in its design or construction phase over the last 18 months.

December's issue of W&WD will feature the award NBC received and details on the the IFAS Project.

Reminder!

Friday, October 9th is the last day to purchase tickets for the P-Bruins opener on October 23rd**.** Tickets are $20 and include a free popcorn and soda! Contact **Talia Girard at ext. 394** if interested!

Welcome...

Melissa Medeiros, Customer Service Representative

Gabriel Vieira, Operator I

Gina Cofone, Customer Service Representative

Congratulations...

To IM Manager, **Meg Goulet's** son on graduating from Basic Training in Lawton, OK for the Massachusetts National Guard on September 30th. He has qualified to attend the Language Defense School in Monterey, California but must complete additional security training in Arizona first, where he is currently stationed.

Wishing Ansumana Sirleaf a Happy Retirement

NBC's Field's Point, Operator II Ansumana Sirleaf retired on August 20th after working with NBC for 25 years. Field's Point staff put together a small retirment party in the Field's Point lunchroom on August 18th to wish him a happy retirement!

Above photo: Ansumana Sirleaf on the left and Nick Narducci on the right.

Above photo: Paul Desrosiers, Rich Bernier, Carmine Goneconte, Ansumana Sirleaf & Ray Marshall.

Above photo: Eric Bogosian, Brian Lalli, Luis Lubo, Ansumana Sirleaf, Marcos Quinones, Joe Celona Jr., & Gary Ruggiero.

-- Submitted by John Lombardi

Coming this Fall: Casual Day Wristbands

NBC's Casual Day Fund, sustained by the continued generous donations of NBC employees, has supported numerous local charitable organizations in making positive changes in our community. In the past year alone, the Fund has made employee-suggested donations to the MS Society, the March of Dimes, Pawtucket Soup Kitchen, the Hope Alzheimer's Center, Hasbro Children's Hospital, and the Gloria Gemma Breast Cancer Research Foundation.

Starting this fall, employees who contribute to the Casual Day Fund will receive a blue wristband to wear on Casual Fridays. Only employees who wear the wristband will be allowed to dress casually on Fridays; all others should wear normal office attire.

It's never too late to join the Casual Day Fund! To ensure your comfy Fridays, simply request that Payroll deduct $2 per pay period for the Fund. It's a win-win: you'll be supporting local charities (and, hey: please let us know where to direct those donation dollars---your input is important!) AND you'll make sure the last day of the week is spent in stress-free clothing.

-- Submitted by Jamie Samons

Mark Your Calendars...

For these upcoming wellness events...

Simply Engaged Health Fair:
Nov. 18, 2015
Holiday Cooking Demo:
Nov. 16, 2015
15 Minute Chair Massages:
Dec. 4, 2015 at Field's Pt.
Dec. 16, 2015 at Bucklin Pt.
Dec. 17, 2015 at the Main Office

Further details coming soon...

-- Submitted by Cecille Antonelli

Providence Closes Hurricane Barrier Because of Rainy Days Ahead

The last week of September and first few days of October were quite miserable. NBC's IM staff were able to get a picture of the closure of Providence's Hurricane Barrier (top right photo) and also the water levels at NBC's Providence River Siphon Building (bottom right photo).

NBC Pipeline

November 2015

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Calendar of Events *for November*

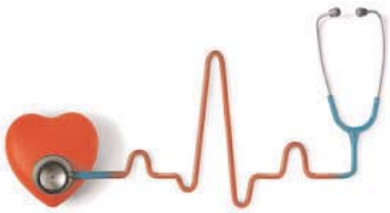
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1 Daylight Savings Time	2	3 Election Day	4 CAC Meeting 12 PM	5	6 Payday	7
8	9	10 Board of Commissioner's Meeting 11 AM	11  Veteran's Day HOLIDAY	12	13	14
15	16 Holiday Cooking Demo 11 AM FP Kitchen	17	18 Know Your Numbers Event 7 AM - 11 AM COB	19	20 Payday	21
22	23	24	25	26  Thanksgiving HOLIDAY	27	28
29	30					

All meetings are held at the Commission's One Service Road Offices unless otherwise noted.

News Briefs...

November's Know Your Numbers Event

NBC is committed to improving your health and well-being by offering a free health screening event on November 18, 2015.



The screening services include:
- Body mass index
- Blood pressure
- Glucose (blood sugar) level
- Cholesterol level

Eligible employees may receive a $100 wellness incentive award and a $75 gift card through the MYUHC Rally program, and all participants will receive an NBC souvenir.

Register today or learn more about your other options:
https://register.wellness-inc.com/narragansettbay OR call 1-855-215-0230

2015 Employee Appreciation

Employee Appreciation Luncheons for...

COB, Pretreatment, EMDA and Lab: 12/10 from 12 PM - 2 PM.

Bucklin Point Employee Appreciation Events:
11 PM - 7 AM shift: 12/17 @ 5:00 AM
7 AM - 3 PM shift: 12/17 @ 11:30 AM
3 PM - 11 PM shift: 12/17 @ 6 PM

IM Employee Appreciation Event: 12/10 @ 11:30

Employee Appreciation for Field's Point TBD.

Employee Holiday Party

There will be an NBC Holiday Party at the Sayles Hill Club in North Smithfield.

When: Saturday December 5th 6 PM - 12 AM
Where: 71 Sayles Hill Road. North Smithfield, RI
Price: $30 per person

Please RSVP by Friday November 20th with Steve Fascitelli at ext. 256 or John Schupp at ext. 225 in Maintenance.

There will be a hot and cold buffet, DJ, an optional yankee gift swap which is optional. Recommended maximum for gifts is $20.

Welcome...

Gregory Tocco, FP Operator I

Melissa Defusco, CS Fiscal Clerk

Congratulations...

To **Claudette Kalf** on the birth of her new grandson, Adrian Myles Kalf. Son of Phillip and Elizabeth Kalf and little brother to Julian Kalf. Adrian was born on November 2nd at Woman & Infants Hospital, weighing in at 7lbs 8 oz.

IM Employee of the Month

A number of IM Staff have recommended **Tricia Fabrizio**, IM Clerk as Employee of the Month for November. Tricia has been working with staff on various items to help them do their job better. In addition, she has been very proactive and attentive to keeping the Safety Committee moving forward.

-- Submitted by Paul Nordstrom

NBC Staff Participates in Emergency Response Seminar

On Wednesday, September 30th, employees from NBC's ESTA, Interceptor Maintenance and Operations sections participated in a full-day Emergency Response Seminar and RIWARN Tabletop Exercise at the Providence Water Supply Board's Water Treatment Plant in Hope, RI. This free event was well-attended by 43 people, most of whom represented a water or wastewater system within RI. Several presentations were given, with topics ranging from utility incidents that required mutual aid, to how emergency power facility assessments can be helpful to utilities.

Every state in the U.S. has an active WARN, and NBC has been a proud member of RIWARN since its inception in 2007. The acronym "WARN" stands for "Water & Wastewater Agency Response Network," and involves the concept of utilities helping utilities in order to prepare for, respond to, or recover from natural or manmade emergencies. Participation in a state WARN is voluntary, but membership is extremely beneficial because, among many other reasons, member utilities can request assistance from each other in the form of trained personnel and/or specialized equipment. This type of resource is very unique to the water and wastewater fields, which in turn results in a quicker response and recovery timeline during and after an emergency

RIWARN was one of only six states in the country this year to obtain approval for this valuable exercise. The seminar and tabletop exercise was funded by the EPA, facilitated by the Horsley Witten Group, and organized with the help of a great Exercise Design Team comprised of representatives from NBC, Providence Water, RI DOH, RI DEM, RI EMA, and Providence EMA.

November EH&S Trainings (obtain supervisor's permission and please register through the new Training Central link on BayNet)

• 40-Hr. Hazwoper Certification Training (applicable employees): 10/27, 10/28, 10/29, 11/3, 11/4

• Powered Industrial Trucks - Classroom Training (BP employees): 11/3, 11/5, 11/10

-- Submitted by Dave Aucoin

Did You Know?

To produce one smartphone requires 240 gallons of water. The water is used throughout the production process for making a smartphone: from creating the microchips to mining the metals used in the batteries to polishing the silica glass used in their touch screens. Another fact that may surprise you, is that the number of activated cell phones is soon to exceed the world's population.

Photo above and information from the "Your Water Footprint" by Stephen leahy

Check out *"Your Water Footprint"* by Stephen Leahy for more shocking facts about how much water we use to make everyday products.

P-Bruin Ticket Special for Upcoming December Games

Friday, November 20th is the last day to purchase tickets for the December P-Bruin's game; Friday December 4th at 7, Saturday December 5th at 7 or Sunday December 6th at 3. Tickets are $20 and include a free hotdog and soda! Children under 12 will also receive a P-Bruins hat deliverd to their seats. Contact **Talia Girard at ext. 394** if interested!

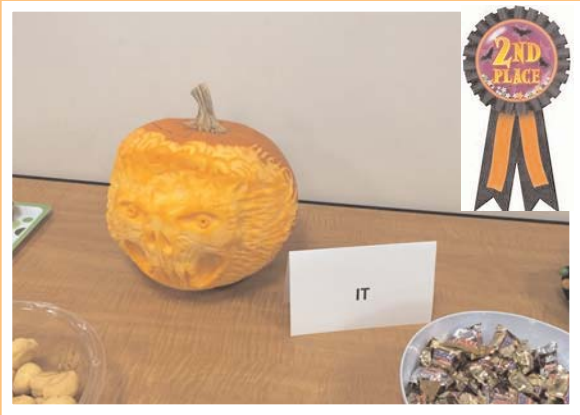
Holiday Cooking Demo

There will be a Holiday Cooking Demonstration on November 16, 2015 in the Field's Point Kitchen at 11:00 am.

You will learn how to add some zest to your holiday table with nutritious and delicious menu selections and enjoy samples, too!

To sign up to attend, call **Crystine at extension 376.**

NBC's Annual Pumpkin Decorating Contest



PP&R

NBC Pipeline

December 2015

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Calendar of Events *for December*

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4 Payday	5
6  Hanukkah Begins	7	8	9 CAC Meeting 12 PM	10 Employee Appreciation for COB & IM	11	12
13	14 Hanukkah Ends	15 FP Employee Appreciation Board of Commissioner's Meeting 11 AM	16	17 BP Employee Appreciation	18 Payday	19
20	21	22  First Day of Winter	23	24  Christmas Eve	25 Christmas Day	26  Kwanzaa Begins
27	28	29	30	31 New Year's Eve		

All meetings are held at the Commission's One Service Road Offices unless otherwise noted.

News Briefs...

2015 Employee Appreciation

Employee Appreciation Luncheons for...

COB, Pretreatment, EMDA and Lab: 12/10 from 12 PM - 2 PM.

IM Employee Appreciation Event: 12/10 @ 11:30

Field's Point Employee Appreciation Events:
7 AM - 3 PM shift: 12/15 @ 11:30 AM
3 PM - 11 PM shift: 12/15 @ 6 PM
11 PM - 7 AM shift: 12/16 @ 5:30 AM

Bucklin Point Employee Appreciation Events:
11 PM - 7 AM shift: 12/17 @ 5:00 AM
7 AM - 3 PM shift: 12/17 @ 11:30 AM
3 PM - 11 PM shift: 12/17 @ 6 PM

NBC Employees Complete 40 Hour Hazwoper Training

In early November, ten employees from NBC's Laboratory and EMDA sections successfully completed a 40 hour safety training course on Hazardous Waste Operations and Emergency Response (Hazwoper). This specialized OSHA training was tailored to the needs and capabilities of NBC staff and conducted over the course of 5 days by instructors from The New England Consortium (TNEC) at UMASS - Lowell.

NBC employees experience wearing first responder PPE

Throughout the course, employees received training that focused on chemical hazard recognition, site control, personal protective equipment (PPE) and how to access multiple sources of information to identify properties of hazardous chemicals. NBC currently has 45 Hazwoper-certified employees that are trained at the "awareness level" in order to assist first responders that would be contacted in the event of a chemical emergency at NBC and within NBC's District. This OSHA training requires an annual 8 hour refresher course. Congratulations to all Lab and EMDA employees who completed this important safety training!

December EH&S Trainings (obtain supervisor's permission and please register through the new Training Central link on BayNet)

• **Hazcom/GHS Refresher Training (FP O&M employees):** 12/1, 12/2/ & 12/8

-- Submitted by Dave Aucoin

Welcome...

Kevin Burke, Legal Counsel

Alice Marchessault, Finance Temp.

Congratulations...

To **Timothy Isom** #88, son of NBC Customer Service Representative **Jerilyn Isom**. Tim is one of five Johnston Panthers football players selected to join the Blackstone Valley Youth Football Conference All-Star team. Tim has been apart of the Johnston Panthers Football team for the last 7 years and is an outstanding athlete.

The All-star team will be traveling to Kissimmee, Florida next month to compete with the best eigth-graders throughout the country. This 16-team tournament will crown a National Champion from American Youth Football.

The Blacksone Valley All-star team consists of 32 youth football players from Rhode Island and Southeastern Massachusetts. Johnston had the most players from any orgranization represented. Great job Tim, NBC will be wishing you and the boys the best of luck!

-- Submitted by Renee Patterson

Turkey Tries to make a get-away at Bucklin Point

This turkey in the photo to the right is trying to make a get-away in the back of one of Bucklin Point's EZ-carts! The turkey has been hanging around Bucklin Point's facility for over a year and has survived another Thanksgiving!

-- Submitted by Carmine Goneconte

Holiday Recipe: Candy Cane Rice Krispee Treats

Prep time: 15 mins
Cook time: 10 mins
Total time: 25 mins

Ingredients:
6 cups Rice Krispie Cereal
3 Tablespoons Butter
4 cups mini marshmallows
4-6 full size candy canes {to taste}
Wilton White Chocolate Candy Melts {to taste}

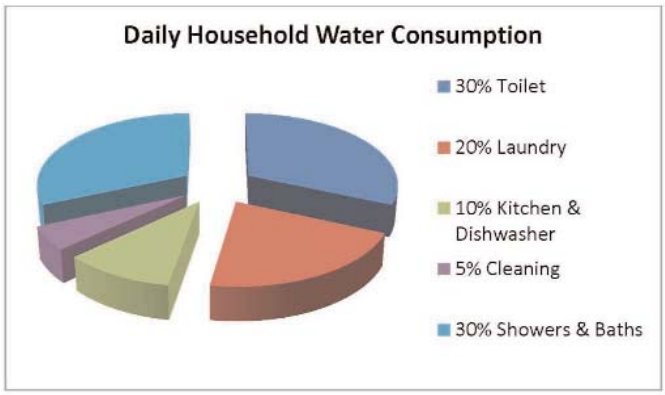
Directions:
In a double boiler (or the microwave, per Wilton's directions on the packaging) melt your white chocolate. Crush your candy canes into small pieces. In a tall stock pot melt your butter and toss in your marshmallows. Stir, and while your marshmallows are melting, add in about half (to taste) of your candy cane crumbles. Toss in your melted white chocolate and stir.
Stir in your rice krispie cereal. Sprinkle in the remainder of your crushed candy canes. Place your treat mix in a cake pan or casserole dish. Cover your warm treats with parchment paper and gently press your treats down into the pan.

Allow your treats to cool before enjoying!

-- Essentiallyeclectic.com

Did You Know?

The average household toilet is flushed five times daily per person. Newer high efficiency toilets use as little as 1 gallon of water per flush, whereas the standard for older toilets is 3.5-5 gallons per flush. On average a person is flushing 21-26 gallons of high quality drinking water down the pipes everyday using these older toilets. Which also amounts to 30% of an individual's daily water consumption.



Facts above are from the book "Your Water Footprint" by Stephen leahy

Check out *"Your Water Footprint"* by Stephen Leahy for more shocking facts about how much water we use to make everyday products.

Port of Providence Toy Drive

NBC will be joining other businesses in the Port of Providence in a toy collection for underprivileged children. Please consider donating an unwrapped, new toy which will make the holidays a little brighter for a local child.

Toys can be dropped off at the COB Employee Appreciation Event on Thursday, December 10th in the main conference room.

EDUCATIONAL DOCUMENTS

Narragansett Bay Commission's Pretreatment Program

What is the Narragansett Bay Commission?

The Narragansett Bay Commission, or the NBC, was created in 1980 to reduce the amount of pollutants the Field's Point Wastewater Treatment Facility, in Providence, was discharging into Narragansett Bay and its tributaries. At that time, nearly 65 million gallons of untreated sewage flowed into Rhode Island's waterways everyday, resulting in temporary and permanent closures of shellfishing beds in Upper Narragansett Bay, violations of federal laws, and most importantly, threatened the region's environmental and economic well-being. The NBC acquired the facility from the City of Providence in 1982, and has spent the last decade transforming the once failing, antiquated facility into the highly sophisticated, award winning facility it is today.

In 1992, the NBC assumed ownership of the Bucklin Point Wastewater Treatment Facility in East Providence. The NBC now owns and operates the state's two largest wastewater treatment facilities and provides quality wastewater collection and treatment services to about 300,000 persons and 8,000 commercial and industrial customers in Providence, North Providence, Johnston, Pawtucket, Central Falls, Cumberland, Lincoln, the northern portion of East Providence and small sections of Cranston and Smithfield.

What is the purpose of a Pretreatment Program?

Since wastewater treatment facilities are not designed to remove heavy metals, cyanide and other toxic chemicals, the federal Environmental Protection Agency (EPA) requires that wastewater agencies implement Pretreatment Programs to control toxic discharges. The NBC's Pretreatment Program staff is responsible for protecting its treatment facilities and Narragansett Bay from the discharge of such contaminants. To satisfy EPA requirements, a program was put in place by the NBC to monitor and regulate the many electroplaters, metal finishers, chemical manufacturers, machine shops, laboratories, hospitals, laundromats, restaurants, and other firms that are tied into the NBC's sewer system.

Depending upon what kind of business or industry is discharging into the system, certain substances can do a lot of damage to the sewer system, the wastewater treatment facility, the environment and, ultimately, to people. The discharge of metals and other toxics into the sewer system jeopardizes the health and safety of NBC personnel, clogs sewer lines, can be extremely toxic, if dumped in high concentrations, and can mix with other chemicals to form toxic gases in the sewer system.

Heavy metals and other toxics interfere with the operation of the wastewater treatment process by upsetting the biological process at the facilities and killing the microorganisms needed for proper treatment. This prevents the NBC from meeting its effluent limits that are established by EPA and RI DEM. Approximately 40 to 60 percent of the heavy metals and toxics in wastewater can settle out in the sludge, contaminating the sludge, and preventing its reuse, while the remainder of the toxics empty into Narragansett Bay and its tributaries. Once this happens, marine life is exposed to toxic substances, which may enter the food chain and eventually expose people to these toxic substances. While our mission at the NBC is to protect the environment, our top priority is to protect human health. Our pretreatment program helps us accomplish this goal.

How effective is the Pretreatment Program?

To date, this program has had a major positive impact on the quality of treatment and discharges from the Field's Point and Bucklin Point facilities. By taking steps to permit, monitor and regulate the thousands of sewer users in the NBC District, the NBC has dramatically reduced the amount of metals and toxics being dumped into the sewer system and ultimately into Narragansett Bay. For example, in 1981, local industries discharged 954,099 pounds of heavy metals and 80,440 pounds of cyanide to the Field's Point Wastewater Treatment Facility. Data for 2006 indicates that significant reductions in metals (96.6%) and cyanide (96.7%) were achieved. Additionally, nearly 95.6% of all our regulated users are adhering to these environmental regulations.

Why do I have to pay sewer user fees and permit fees?

Sewer user fees are necessary for the NBC to recover the cost to transport and treat wastewater discharged from commercial, industrial, and residential users. The user fees are based, in part, on the amount of water discharged to the sewer system and are regulated by the Public Utilities Commission (PUC). Part of the fee charged to users is a fixed amount, the other part is based on how much water is used. By conserving water, a sewer user can reduce the portion of the fee associated with the amount of water used.

In May, 1990, the PUC issued an order requiring that the expense of the NBC's Pretreatment Program must be paid for entirely by the permitted user. These permit fees are necessary to recover costs associated with satisfying all EPA and State mandates and to ensure the protection of the treatment facilities and Narragansett Bay. The rates charged are PUC approved and cover the cost of program administration, facility inspection and facility sampling conducted by the NBC.

How were permit fees determined?

Discharge permit fees range from $217 - $14,492 per year. Individual rates are based on the effort necessary for the NBC to regulate a user. The level of effort is dependent on the size of a facility, the volume of discharge, the toxicity of the chemicals used, etc. Budget plans are available for any business demonstrating financial hardship. Simply contact the NBC Customer Service Section at 461-8828 to discuss a budget payment plan.

What if I don't get a permit?

Failure to apply for a wastewater discharge permit may subject you to administrative, civil and/or criminal penalties of up to $25,000 per violation per day and you may lose your privilege to discharge into the NBC sewer system. The NBC is strict about the enforcement of this requirement because we need to know what is going into the sewers so we can protect our treatment facilities and the bay. Further, inconsistent permitting would be unfair to other permitted users and ultimately increase the cost to all other users.

What if I need technical assistance?

The NBC has available free, non-regulatory technical assistance through its Environmental, Safety & Technical Assistance (ESTA) Section, formerly known as Pollution Prevention. Pollution prevention is any practice that reduces or eliminates the amount of hazardous materials entering a waste system. Elimination of pollution at the source will not only help you remain in compliance with discharge standards, but will save you money by taking full advantage of all your resources. Pollution Prevention engineers and chemists are available to assist you incorporate the latest source reduction technologies into your manufacturing operations. We will evaluate your operating procedures and general practices and recommend alternatives, such as chemical substitution, that will generate less waste without sacrificing quality production. This program is confidential; no regulatory repercussions will occur by taking advantage of this program. If you wish to have NBC's ESTA staff visit your facility, or if you wish to find out more about this program, please contact James McCaughey, P.E., Environmental, Safety & Technical Assistance Manager, at 461-8848 ext. 352. This program is meant to be one alternative or a step a business can take to meet pretreatment requirements. It may be necessary for a business to seek additional professional guidance from an outside consultant.

What if I have more questions?

Ask us. The NBC has well-trained and capable chemical engineers, technicians and others who would be happy to answer any questions or concerns you may have regarding your permit, or any other program relating to the NBC. For questions regarding the Pretreatment Program, please contact Kerry M. Britt, Pretreatment Manager at 461-8848 ext. 490. For other questions, contact our Public Affairs Office at 461-8848/TDD 461-6540 or email at jsamons@narrabay.com.

NARRAGANSETT BAY COMMISSION

ENVIRONMENTAL BEST MANAGEMENT PRACTICES *for* the Management of Waste Dental Amalgam

The Narragansett Bay Commission (NBC) has developed the following set of Environmental Best Management Practices (BMPs) for the Management of Waste Dental Amalgam to help the dental community safely and economically reduce the amount of mercury released into the environment. Dental facilities serviced by the NBC have two procedural options available to them regarding the proper management and compliant discharge of dental process wastewater to the NBC sewer system.

Dental facilities choosing Option 1 must install, use and maintain an amalgam separator with a separation efficiency of 99% when tested according to ISO 11143 standards and must demonstrate compliance with the "Mandatory" portion of the enclosed BMPs. Dental facilities choosing Option 1 will be excluded from conducting costly end-of-pipe wastewater sampling monitoring requirements.

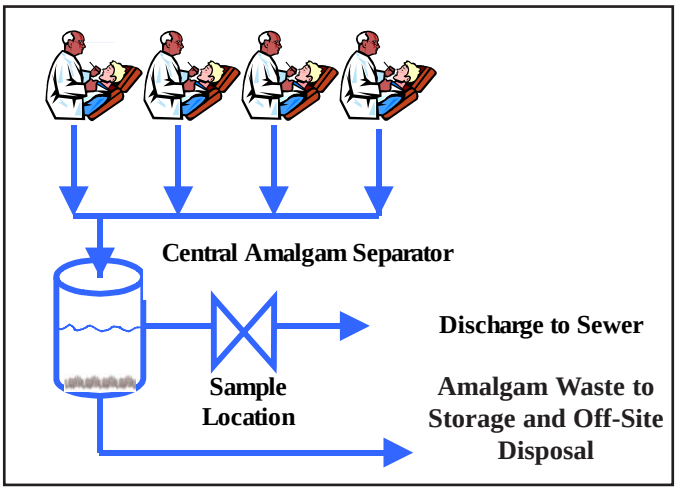
Dental offices utilizing Option 2 are not required to install an amalgam separator but will be required to implement all other applicable Mandatory BMPs, and will be required to monitor and sample their process wastewater discharges on a regular basis in order to demonstrate continuous compliance with all applicable NBC discharges limits.

The NBC strongly encourages the use of ISO 11143 certified amalgam separators (Option 1). These separators help to remove most mercury from dental wastewater without being overly burdensome to operate or maintain. Based on NBC's current discharge limit for mercury, as little as 1/10,000 of a gram of amalgam in one gallon of wastewater would place your office in non-compliance resulting in additional sampling and monitoring costs. Continued non-compliance with NBC discharge limits can result in having your name published in the newspaper as being in significant non-compliance and/or the issuance of fines and penalties.

OPTION 1

NBC BMP Implementation with the Installation of an Amalgam Separator

Option 1 is the preferred approach and requires the installation and operation of an amalgam separator and implementation of the attached NBC BMPs. Through Option 1, all amalgam-contaminated wastewater, including wastewaters from cuspidors and vacuum systems, must flow through an amalgam separator and through a sample location prior to sewer discharge.



Typical wastewater plumbing diagram for dental office with an amalgam separator

Specific Requirements for NBC Dental BMP Option

Installation of Amalgam Separator

Amalgam Separators must be ISO 11143 certified and capable of handling flow from vacuum pumps and chair side cuspidors. Separators vary in complexity, capabilities and cost. Here are some criteria that should be considered when selecting an amalgam separator:

1. The vendor of the equipment must be able to provide ISO 11143 documentation certifying that the equipment has been proven capable of removing at least 99% of amalgam during certification tests.

2. There should be minimal loss of suction power within the vacuum system.

3. A system that is low maintenance is preferred over one that requires manual operation and frequent cleaning and/or servicing.

4. The unit should operate quietly.

5. The unit should be centrally installed so as to service a whole office or a series of chairs in order to minimize the cost and maintenance associated with individual units that service only one chair.

6. The unit or units must be capable of handling flow from:
   a. Vacuum Systems,
   b. Cuspidors and
   c. Sinks if applicable.

7. Plans of the dental office and amalgam separator must be approved by NBC prior to installation

Maintenance of Amalgam Separator

1. Amalgam separators must be installed and maintained such that all flow from vacuum systems; cuspidors and applicable sinks receive proper treatment.

2. Amalgam separators must be operational at all times.

3. Follow the manufacturer's specification for maintenance of the separator.

4. Inspect the separator weekly to ensure proper operation.

Certification and Record Keeping

1. The dental office must document all separator and trap inspections, cleaning and maintenance activities in a bound logbook.

2. Information in the logbooks must include:

- Date (mm/dd/yy) of each trap/separator inspection/service activity;
- A clear indication of which trap/separator is being serviced;
- All routine and non-routine activities conducted (i.e., cleaning, maintenance, repairs, etc.);
- Signature of person conducting activity.

Best Management Practices

Dental offices choosing this Option must adhere to all of the required BMPs detailed in this brochure.

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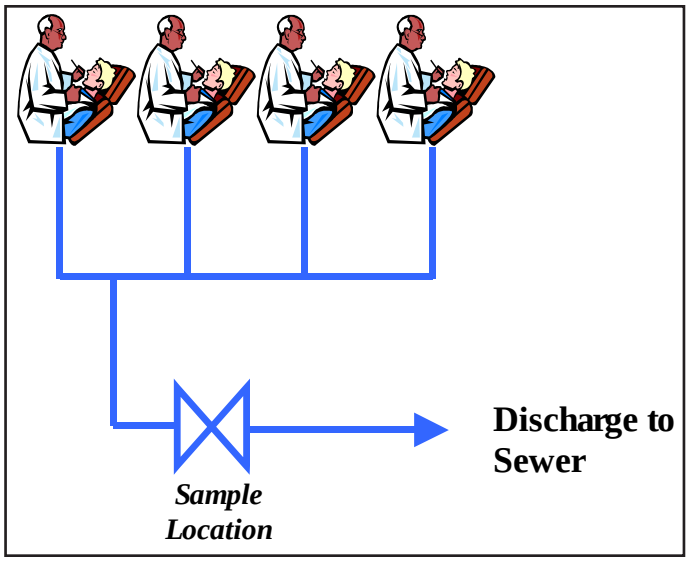
1. *While regular sampling of wastewater effluent, on the part of the dental facility, is not required as part of Option 1 of the NBC BMP Program, installation of a sampling location is required.*

OPTION 2

NBC BMP Implementation without Separation Equipment

(Routine Wastewater Sampling and Compliance Required)

Under Option 2, Dental Offices must implement all applicable NBC Dental BMPs, and regularly sample and analyze the wastewater to demonstrate compliance for silver and mercury. All amalgam waste must flow through a central sample location or multiple sample locations if necessary. If the monitoring results show the dental office to be out of compliance with the discharge limitations, additional pretreatment may be required to attain compliance. The office may elect to modify operations and install separation equipment and participate in Option 1of this BMP.



Specific BMP Requirements for NBC Dental BMP Option 2

Installation of Sampling Location

Dental facilities choosing this option must collect and analyze samples of their wastewater discharges in order to demonstrate compliance with NBC discharge limits. This will require the separation of sanitary flow from dental process wastewater and the installation of a wastewater sample collection valve.

The wastewater sample collection valve must be configured and installed in such a manner that a representative sample of all and any amalgam containing wastewater can be collected at any time during normal operating hours. This will require the installation of a single central sampling location for all flow from vacuum systems and cuspidors or sampling locations for individual wastewater streams. Please note that separate sampling locations will increase sampling and analysis costs.

Sampling and Monitoring

Samples must be properly collected and preserved and sent to an approved laboratory for mercury and silver analysis on a quarterly basis. The analytical results must be submitted to NBC within the specified time frame along with a completed Self Monitoring Compliance Report.

Effluent Discharge Compliance

The dental facility must maintain compliance with NBC's discharge limits for mercury and silver. Facilities found to be in non-compliance must immediately notify NBC and initiate and continue to conduct weekly sampling of their wastewater discharges until compliance is established for four consecutive weeks. Facilities found to be in Significant Non-Compliance may have their names published in a local newspaper at the end of the calendar year. Continued non-compliance may result in the issuance of fines.

Typical Effluent Wastewater Sampling

1. Approved sample valve

2. Always flush valve briefly and safely before sampling

3. Sample collection in progress

Mandatory Best Management Practices

Chair Side Traps

1. Equip all dental chairs with chair side traps to capture large amalgam particles from cuspidors and vacuum systems.
2. Use traps with the smallest screen size that your vendor says will work.
3. While not required as a condition for participation in this program, disposable chair side traps are preferred to reusable traps due to the difficulty of cleaning traps for reuse without releasing captured amalgam particles to the sewer system during the cleaning process.

Maintenance of Chair Side Traps

1. Check to make sure all chair-side traps are in place when chair is in use.
2. Inspect chair-side traps on a daily basis and clean or replace as necessary.
3. If using disposable chair side traps, place spent traps directly into a labeled amalgam waste storage container. Never rinse a used trap over a sink that is directly connected to the sewer or place in trash.
4. If using a reusable trap remove all visible amalgam particles from the trap by emptying the contents into a labeled storage container.
5. Never dispose of the collected amalgam down the drain, in the trash or with sharps and/or biohazard waste.
6. Rinse reusable traps only if necessary and only in sinks plumbed into an amalgam separator using a minimum amount of water.

Maintenance of Vacuum Pump Filters

1. Check to make sure your vacuum pumps are equipped with filters. Talk to your equipment vendor to upgrade all such equipment not equipped with filters.
2. Talk to your equipment vendor to make sure you are using the smallest available vacuum filter screen that will not compromise the efficiency of the vacuum system.
3. Dry-turbine vacuums - Check to make sure the air/water separator is free of built-up sludge. Manage collected sludge as you would a mercury containing waste - do not wash down drain.
4. Change vacuum pump filters at least once per month or more frequently in accordance with the manufacturer's recommendations.
5. After removing the filter hold it over a spill tray or other type of container that can catch any water that has collected in the trap. Carefully decant the water without losing any visible amalgam. The decanted water, if it contains no visible amalgam, may be discharged to the sewer through an amalgam separator.
6. Place spent filters in their original container or in another sealed container and properly store prior to disposal/recycling as a mercury-containing waste.

Storage, Management and Disposal of Scrap Amalgam

1. Collect and store all contact and non-contact amalgam in separate appropriate labeled and closed containers.
2. Label all containers used to store waste amalgam with the words "Hazardous Waste" and "Waste Mercury/Amalgam."
3. Wastes containing mercury are regulated as hazardous waste by the RIDEM and EPA - comply with all state and federal hazardous waste management regulations (see section on Hazardous Waste Management).
4. Do not mix waste streams, including contact and non-contact amalgam waste, without checking with your waste hauler and disposal/recycling facility first. Mixing of waste streams may limit disposal and/or recycling options and increase waste management costs.
5. Do not put mercury-containing waste in medical waste containers. Disposal methods used for medical waste, such as incineration, will release mercury into the environment.

Please note: "empty" prepackaged amalgam capsules may contain enough residual amalgam to be classified as a hazardous waste. While not a Mandatory BMP, it is recommended that empty capsules be collected and stored separate from other amalgam waste. This will allow for testing of the spent capsules in order to determine an ultimate disposal method.

Line Cleaners

Dental clinics may regularly use a liquid cleaner to disinfect the pipes in their vacuum system. Certain brands of line cleaners that are corrosive or oxidizers must be avoided because they dissolve solid mercury. Never use bleach (sodium hypochlorite) or a bleach-containing product to clean vacuum lines, instruments or equipment that may be contaminated with mercury or amalgam. Mercury that is mobilized in this way is very difficult to trap and can easily travel to the sewer plant or into the receiving waters. The following brands of cleaners and disinfectants are acceptable:

- Green and Clean (Metasys)
- GC Spray-Cide (GC America)
- Sani-Treet Plus (Enzyme Industries, Inc.)
- VacuCleanse Evacuation (Infection Control Tech)

The above list is not all-inclusive and NBC may give written approval to use other cleaners. The NBC will review requests to use other cleaners upon receipt of a Material Safety Data Sheet (MSDS) for the proposed cleaner.

Mandatory Best Management Practices

Clean Plumbing and Sink Traps

Due to the potential past use of sinks as disposal outlets for contact and non-contact scrap amalgam, all sink traps in the vicinity of mercury use (past or present) must be removed, inspected and cleaned.

1. Remove sink traps/elbows and inspect for sludge build-up.
2. Collect any sludge in a container separate from scrap amalgam waste.
3. Install new traps/elbows or replace the existing traps/elbows after cleaning with an appropriate line cleaner.
4. Dispose of the sludge as a mercury containing waste or have samples of each waste stream tested by a licensed analytical laboratory prior to ultimate disposal. Guidance on testing waste samples can be obtained through NBC's Pollution Prevention Program.

Sinks Located in Operatories

Sinks located in operatories have the potential to discharge amalgam waste to the sewer from the cleaning and rinsing of dental instruments, chair side traps and other equipment or devices that may come into contact with amalgam. Two Sink Use Alternatives are available to dental offices participating in these Best Management Practices.

Sink Use Alternative A: Designate all sinks for "Sanitary Use Only" by eliminating the cleaning of amalgam contaminated instruments, traps and other equipment in all sinks. This is the simplest and least expensive of the two options.

For sinks designated for "Sanitary Use Only" the following conditions and procedures will apply:

1. Washing of instruments, filters from chair-side traps and used amalgam capsules will be strictly prohibited.
2. Sign stating: "Sinks to Be Used for Sanitary Purposes Only - No Chemical or Amalgam Disposal" must be clearly posted at each sink.
3. All employees must be trained on this policy and certification of training maintained on site.

Sink Use Alternative B: Designate certain sinks for "Sanitary Use Only" and other sinks for "Equipment Cleaning Only." This alternative requires sinks in which equipment cleaning will take place be plumbed into an amalgam separator - if you choose to not install an amalgam separator you will have to comply with Alternative A. If you choose to install an amalgam separator, please note that some separators may not allow for the connection of sinks. Discuss this with your separator equipment vendor before purchasing a separator.

For sinks designated for "Sanitary Use Only" all conditions and procedures noted above will apply.

For sinks used for "Equipment Cleaning Only" the following conditions and procedures will apply:

1. Plumb each of these sinks into to the amalgam separator.
2. Install flow restricting orifices in each sink discharge line in order to limit and control the flow rate to the separator and prevent washout of the amalgam separator
3. Submit plans of each of these sinks and the amalgam separator to NBC for approval prior to installation.
4. Manage all debris removed from these sinks and drain lines as mercury contaminated waste.
5. Post signs stating: "Washing of Instruments and Filters Contaminated with Amalgam only - Sanitary Use Prohibited" at each sink.
6. Train all employees on these policies and procedures and maintain certification of training on site.

Please note: if flow can not be adequately controlled using flow constrictors a surge tank capable of handling peak flow from these sinks may need to be installed up stream of the amalgam separator.

Annual Certification and Record Keeping

1. Document all separator (if applicable) and trap inspections, cleaning and maintenance activities in a bound logbook.
2. Include the following information in the logbooks:
    a. Date (mm/dd/yy) of each trap/separator inspection/service activity,
    b. A clear indication of which trap/separator is being serviced,
    c. All routine and non-routine activities conducted (i.e. cleaning, maintenance, etc.)
    d. Signature of person conducting activity.
3. Maintain all Hazardous Waste Manifest documents and/or shipping papers of mercury waste sent off-site for disposal or recycling on-site and have them immediately available for inspection by NBC.
4. Submit an annual certification statement to NBC attesting to compliance with all Mandatory BMPs and any specific BMPs required by the chosen option.

Personnel Training Requirements

All personnel associated with the handling and management of amalgam and/or mercury containing materials/ wastes must be trained with respect to:

- the hazards associated with mercury
- hazardous waste management regulations
- procedures to follow in the event of a spill or an accident including spill-reporting requirements.

Waste Management and Spill Response

If any elemental mercury is used or is present in the dental office, including mercury from historical use and mercury in any medical instruments such as thermometers, a mercury spill kit must be maintained on site and all appropriate staff trained in its use.

Please note: even very small amounts of metallic mercury (for example, a few drops) can raise air concentrations of mercury to levels that may be harmful to human health. The longer people breathe the contaminated air, the greater the risk to their health. Metallic mercury and its vapors are extremely difficult to remove from clothes, furniture, carpets, floors, walls, and other such items. If these items are not properly cleaned, the mercury can remain for months or years, and continue to be a source of exposure.

Steps to take in case of a spill:

- Contact your local poison control center, fire department, the RIDEM or the RIDOH for advice on cleanup the spill.
- Ask everyone to leave the area.
- Close -off the area while unoccupied.
- Shut off conditioning and air circulation to the room
- Open windows and doors in the area of the spill to ventilate the area while clean-up activities are taking place.
- Wear rubber or latex gloves to prevent skin contact with metallic mercury.
- Use a dry sponge, paper towel or paper to clean up the spill.
- Place all collected mercury in a sealed glass jar.
- In the event of a large mercury spill (more than a broken thermometer's worth), immediately evacuate everyone from the area, seal off the area as well as possible, and call local and state authorities for assistance.

What Not to do when there is a spill:

- Do NOT use a vacuum cleaner to clean up a mercury spill. A vacuum cleaner will spread the mercury vapors throughout the area, thereby increasing the chance of exposure.
- Do NOT attempt to sweep the spill with a broom.
- Never dispose of mercury down the drain.
- Never throw materials used to clean up a spill in the trash - contact the RIDEM for guidance.

Dental Amalgam Information on the World Wide Web

ADA Best Management Practices for Amalgam Waste:
www.ada.org/prof/resources/topics/topics_amalgamwaste.pdf

Dental Amalgam Recycling Facilities - Northeast Region:
www.des.state.nh.us/nhppp/amalgam_recycling_facilities.htm

Great Lakes Pollution Prevention Roundtable:
www.glrppr.org/contacts/gltopichub.cfm?sectorid=131

Mercury Spill Kit Comparative Information:
www.brooks.af.mil/dis/DIS60/sec6b.htm

Naval Institute for Dental and Biomedical Research:
www.dentalmercury.com/home.cfm

NEWMOA Dental Mercury Topic Hub:
www.newmoa.org/prevention/topichub/toc.cfm?hub=103&subsec=7&na=7

Waste Reduction Resource Center's Dental Hub:
http://wrrc.p2pays.org/industry/dental.htm

Pollution Prevention

The goal of pollution prevention is to reduce or eliminate the use of toxic substances at the source. This minimizes the release of toxic compounds and serves to protect human health by ultimately reducing exposure to solid, dissolved or gaseous toxic compounds. Although source reduction is most efficient, it is often combined with control-based approaches such as end-of-pipe treatment to achieve desired results. Pollution Prevention activities and recycling in dental offices are essential in order to minimize releases of polluting substances into the sewer system, medical waste, ordinary trash or environment. Recommended activities include the use of the following materials, processes or practices:

1. Use non-amalgam substitutes where appropriate as determined by general dental practice procedures.
2. Utilize prepackaged, single-use amalgam capsules to eliminate larger bulk quantities of elemental mercury (also referred to as free, bulk, or raw mercury).
3. Stock amalgam materials in a range of capsule sizes. Use the smallest capsule required for the job at hand to minimize the amount of scrap non-contact amalgam produced.
4. Properly seal all amalgam capsules before amalgamation. Reassemble capsules immediately after dispensing amalgam. Disassemble and clean the amalgamator on a regular basis.
5. If a small amount of elemental mercury is to be disposed of, initiate a reaction with amalgam alloy to form scrap amalgam, which can then be recycled through your amalgam recycler.
6. When removing an existing amalgam, attempt to remove it in chunks so that it is more likely to be caught in the chairside trap.
7. Consider using techniques that eliminate the need for cuspidors in the operatory when possible.
8. Do not mix different types of wastes, such as contact and non-contact amalgam, when it impacts wastewater treatment or waste disposal. Whenever possible, collect waste amalgam solids for proper storage before they mix with wastewater.
9. Do not discharge solutions that mobilize mercury such as certain vacuum line cleaners that are corrosive or contain bleach or other oxidizing compounds. Neutral, enzymatic cleaners are preferred.
10. During office renovations, alert renovators to the possibility of historical mercury spills that may have resulted in the presence of mercury in carpets, floor cracks, behind moldings and other areas where amalgam capsules may have been spilled. A waste is considered hazardous if TCLP tests indicate a mercury concentration over 0.2 mg/l. Seamless and impermeable floors are easiest to keep clean.

Hazardous Waste Management

Mercury is one of eight "heavy metals" regulated by EPA and the Rhode Island Department of Environmental Management (RIDEM) as a "Characteristically Toxic" Hazardous Waste. This means wastes containing mercury, over established Regulatory Levels (0.2 mg/l for mercury using the Toxicity Characteristic Leaching Procedure), must be handled in strict compliance with federal and state hazardous waste regulatory requirements. A detailed overview of these regulations is outside the scope of this BMP document and the reader is referred to the document "Hazardous Waste Compliance Workbook for Rhode Island Generators" at http://www.state.ri.us for a comprehensive description of Rhode Island's hazardous waste management regulations. The following general guidelines, however, should be followed as part of generating and managing wastes containing amalgam:

Waste Generation

1. Apply for an EPA Identification Number through the RIDEM,
2. Inform all employees of the hazards associated with handling waste amalgam, and
3. Write a brief procedure to be followed in case of a spill of waste amalgam and familiarize all applicable employees with these procedures.

Waste Storage

1. Keep all containers closed except when adding or removing waste amalgam,
2. Label containers with the words "Waste Mercury Amalgam",
3. Inspect containers on a weekly basis, and
4. Store containers in a safe and secure location away from office traffic.

Waste Shipment

1. Become familiar with hazardous waste manifesting requirements,
2. Utilize only properly licensed/permitted waste haulers, and
3. Utilize only properly licensed/permitted waste recycling/disposal firms.
4. Contact the state environmental regulatory agency from which a waste hauler, recycler and/or disposal company resides in order to assure they are in compliance with all applicable regulations. A list of contacts for all state environmental agencies can be found at www.epa.gov.

Record-keeping

1. Maintain a readily accessible file on employee training with respect to hazardous waste management, and
2. Maintain a readily assessable file with all copies of Hazardous Waste Manifests.

Note: EPA regulations allow for certain exemptions from strict hazardous waste management regulations when a waste is being sent off-site for recycling. These exemptions, however, are not always adopted by individual state environmental agencies and are often open to interpretation. It is a good idea to comply with all hazardous waste management regulatory requirements even if the waste is being recycled.

Narragansett Bay Commission
One Service Road
Providence, RI 02905

NARRAGANSETT BAY COMMISSION

BEST MANAGEMENT PRACTICES

Emergency Contacts

Rhode Island Department of Environmental Management: 401/222-6822

Narragansett Bay Commission: 401/461-8848

Rhode Island Poison Control Center: 401/444-5727

National Response Center: 800/424-8802

Rhode Island Emergency Management Agency: 401/946-9996

Local Hospital: _____

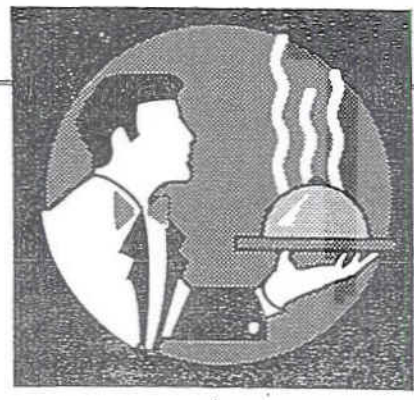
Fire Department: _____

Useful Web Sites

www.narrabay.com
www.epa.gov/mercury/index.html
www.state.ri.us/dem
www.newmoa.org

Narragansett Bay Commission's

Restaurant & Food Preparation Facility Grease Removal Program



What is the Narragansett Bay Commission?

The NBC owns and operates the State's two largest wastewater treatment facilities and provides quality wastewater collection and treatment services to about 300,000 persons and 8,000 commercial and industrial customers in Providence, North Providence, Johnston, Pawtucket, Central Falls, Cumberland, Lincoln, the northern portion of East Providence and small sections of Cranston and Smithfield.

What is the purpose of a Pretreatment Program?

Since wastewater treatment facilities are not designed to remove heavy metals, toxic chemicals, grease, etc., the federal Environmental Protection Agency (EPA) requires that wastewater agencies implement Pretreatment Programs to control toxic discharges. The NBC's Pretreatment Program staff is responsible for protecting its treatment facilities and Narragansett Bay from the discharge of such contaminants. To satisfy EPA requirements, the Pretreatment Program was put in place by the NBC to monitor and regulate the many electroplaters, metal finishers, chemical manufacturers, laboratories, hospitals, laundromats, restaurants and other firms that are tied into the NBC's sewer system.

What is a Grease Removal Program?

The Grease Removal Program was initiated by the NBC's Pretreatment Section to control the discharge of grease and animal fats from restaurants and food preparation facilities into the sewer system.

Why is the discharge of grease and animal fats a problem?

The presence of grease, fats, and oils in wastewater results in major operational problems both in the NBC sewers and at the wastewater treatment facilities. Grease from food preparation operations solidifies on the inside of sewers restricting the flow of sewage, similar to the way that cholesterol restricts the flow of blood through arteries and veins. Sewer blockages have resulted from this grease build up, causing raw sewage to back up into the basements of homes and businesses. Further, grease has fouled equipment and controls at treatment facilities, and high concentrations of grease and oils in wastewater inhibits the biological processes used to treat domestic sewage.

What kitchen operations are responsible for grease entering the sewer system?

Grease discharges are predominantly generated from washing and cleaning operations and not from fryolators or deep frying units as most people might think. The pot washing sink, dishwasher pre-rinse station, and garbage grinder are the major sources of grease discharges to the sewer system.

How can grease discharges be controlled and minimized?

There is only one way -- by installing and maintaining a grease removal or recovery unit (GRU).

What is a GRU?

A GRU is a device designed to collect and remove grease form wastewater discharged from restaurants and food preparation facilities. Most GRU's separate grease from water by gravity. Since grease weighs less than water, the grease floats and can be skimmed from the surface of the wastewater.

What types of Grease Removal Units are acceptable to the NBC?

There are two (2) types of GRU's that are acceptable for installation in the NBC districts. One type of GRU is the automatic electrical/mechanical grease removal unit. This type of GRU is small, which allows installation in the kitchen under a sink or elsewhere. This type of GRU removes grease daily, collecting it neatly in a bucket from which it can be disposed in a dumpster or recycled through a rendering firm. Maintenance must be performed daily consisting of checking the grease collection bucket and cleaning a solids removal strainer.

Another acceptable GRU is the large in-ground passive type grease interceptor. This type of GRU must have a capacity of at least 15 gallons per seat in the restaurant with a minimum capacity of 500 gallons. This type of GRU is so large that it must be installed underground outside the facility. Maintenance requirements include weekly inspections to determine grease layer thickness and regular pumping of the grease by a certified

waste hauler. Pumped-out grease must be hauled to special facilities for processing or incineration.

Is the small, under the sink passive type grease interceptor acceptable to the NBC?

No, the NBC has found that these small, passive grease traps are not effective at removing grease because these units are considerably undersized, resulting in insufficient time for oil/ water separation. In addition, the small size of these passive units allows hot water from the pot wash sink to dissolve trapped grease in the unit and flush it into the sewer system. This type of grease trap is also maintenance intensive, requiring time consuming effort to perform system inspections or remove collected grease. Due to these intensive maintenance requirements this type of GRU is often neglected and does not perform properly. Therefore, the NBC does not allow installation of this type of GRU.

Can a garbage grinder or garbage disposal unit be used in the restaurant or food preparation facility?

Only if the garbage disposal unit discharges to a large in-ground passive type grease interceptor that has been properly sized for removal of settleable solids. Garbage disposal units may not be used in facilities with automatic under the sink type grease interceptors.

Should a restaurant just go ahead and install a grease interceptor?

Definitely not. Anyone proposing to install a grease interceptor must contact the NBC pretreatment staff at 461-8848 prior to purchasing or installing a grease interceptor. NBC staff will provide the guidance necessary to ensure that the GRU chosen meets all NBC criteria. Contacting the NBC in advance may prevent your company from purchasing expensive GRU retrofits should the initial installation not satisfy NBC criteria.

Is there anything else that is required of restaurants or food preparation facilities?

Yes. All restaurants and food preparation establishments must obtain a wastewater discharge permit from the NBC. A permit application can be obtained by contacting the pretreatment staff at 461-8848 or by visiting the Pretreatment Office at 2 Ernest Street in Providence.

What is required by the Wastewater Discharge Permit?

The restaurant discharge permit requires the restaurant or food preparation facility to maintain the GRU in a proper operating condition. A log book must also be maintained at the facility documenting the date of each GRU inspection and each GRU maintenance activity.

What if I have more questions?

Just ask us. The NBC has well trained and capable engineers, technicians, and others who would be happy to answer any question or concerns you may have regarding the Grease Removal Program, the permitting process, or the NBC in general. Feel free to call us! ■

valves on the truck, and hosing down the discharge area where spillage occurred.

•After cleaning up, the hauler is to proceed in a forward direction, since backing up is not allowed, and must be sure to exit the facility at a slow speed.

WHAT ELSE SHOULD I KNOW?

•The NBC runs the Septage facility as a service to Rhode Island's non-sewered residents. As such, only septage from within the state of Rhode Island may be brought to the facility. Any loads, or partial loads, from outside the state will not be accepted.

•The hauler must establish and maintain an account with a positive cash balance with the NBC Customer Service Section. The hauler will not be allowed to discharge without sufficient funds.

•Trucks with capacities less than 4,500 gallons are permitted to discharge between the hours of 8:00AM and 2:00PM, Monday through Friday and 8:00AM and 12:00 noon on Saturdays. Larger capacity trucks may discharge between the hours of 2:00PM and 4:00PM weekdays and 12:00 noon to 2:00PM on Saturdays.

•Once the NBC septage station receives 100,000 gallons of septage for any given day, only those trucks with full loads, all originating in the NBC primary service district, will be allowed to discharge. The NBC may only accept 116,000 gallons of septage daily, at which point the facility will close.

•Firms found to be falsifying paperwork submitted to the NBC and/or bringing non-residential quality septage to the facility may be subject to civil, criminal and/or administrative penalties. These penalties could include fines of up to $25,000 per violation per day, revocation of permit and 30 days imprisonment for criminal violations.

•Haulers who discharge grease or other waste that causes the processing equipment to foul and/or breakdown will be immediately suspended from using the station for a minimum of a two-week period while NBC investigates the cause of the incident.

•Inquiries regarding permitting may be made to the NBC Pretreatment Section by calling (401) 461-8848 Ext. 483.

Narragansett Bay Commission
Corporate Headquarters:
1 Service Road, Providence, RI 02905
Phone (401) 461-8848
Fax (401) 461-6540

Pretreatment Office
2 Ernest Street
Providence, RI 02905
Phone (401) 461-8848
Fax (401) 461-0170

Lincoln Septage Receiving Facility:
692 Washington Highway
Lincoln, RI 02865
Phone (401) 333-5610
Fax (401) 333-5610

NARRAGANSETT BAY COMMISSION

LINCOLN SEPTAGE RECEIVING FACILITY

Septage Acceptance Policy Summary

OVERVIEW

The Narragansett Bay Commission (NBC) has upgraded the Lincoln Septage receiving station, installing new wastewater treatment equipment to reduce odors and remove solids contained in the septage. A six (6) inch hose connection has been installed to speed-up the discharge process and a computer tracking system has been installed for identification and billing streamlining purposes. This informational brochure provides an outline of procedures and practices which must be strictly followed to ensure the acceptance of your septage loads and the proper operation of the NBC facility.

PERMITTING REQUIREMENTS

•All trucks and/or trailers must be permitted with the NBC prior to bringing septage wastewater for disposal. Any changes, such as new or deleted vehicles, must be made known to the NBC Pretreatment office by submitting a new permit application with the correct information. It is the haulers' responsibility to ensure all registrations, insurance and DEM permits for vehicles are obtained and maintained in a valid state.

•Each permitted truck and/or trailer must be weighed empty and full to determine the capacity of the vehicle. This process must be overseen by NBC Pretreatment personnel. Appointments must be scheduled in advance at 461-8848 Ext. 483 for this purpose.

•All trucks and/or trailers must have a NBC computer tracking chip programmed with identification and capacity information affixed to it.

•All trucks and/or trailers must have Permit Fee Paid and Permitted Volume stickers affixed.

MANIFEST REQUIREMENTS

•The manifest form must be completed in its entirety prior to arriving at the facility. The manifest requires the hauler to certify that only residential quality septage is contained in the truck that shall discharge.

•The manifest must clearly identify the origin of the load. The customer name, address and telephone number for that customer must be indicated for every load which is contained in the truck.

•A signature by the customer that your firm pumped must be on the manifest. If the customer was not home to sign the manifest, additional confirmation information regarding the customer is required in order to discharge the load. This could include a copy of the customer's signed check for the pump out or a photocopy of your company invoice to the customer. These documents must be attached to the manifest in lieu of a customer signature.

•Information provided on manifests is routinely checked by Pretreatment staff to verify the origin of the load. Pretreatment staff will routinely contact your customers.

PROCEDURES TO BE FOLLOWED AT THE STATION

•Upon arriving at the station, the driver is to wait in line to use the facility.

•When it is your turn, the facility operator will inspect the stickers on your vehicle, scan your computer chip and take your manifest and other associated information. If anything is not in order, the load will be refused.

•Prior to discharging you must take a sample under the perview of the station operator. This sample will be checked for pH and visual indications for grease or other suspected pollutants. The pH must be in the range of 5.5 to 12.0 standard units or the load will be refused. Detection of other suspected pollutants will also result in the load being refused.

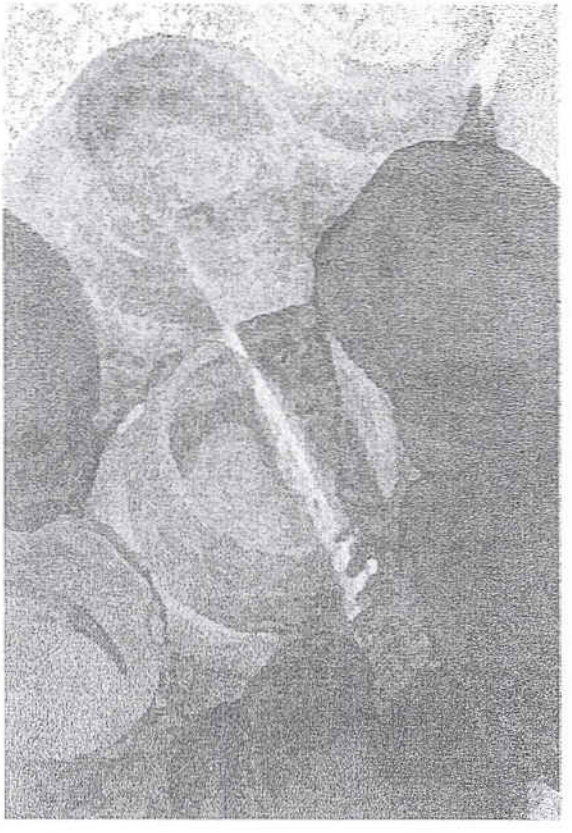
•When given the OK to discharge, the hauler is to hook up to the six (6) inch discharge connection and proceed to empty the truck. Grease and/or gravel will foul the solids handling equipment and will be readily detected. **If your load contains grease and/or other dense solid material, such as gravel or rocks, do not bring it to the Lincoln facility**. It must be brought elsewhere for proper disposal.

•Upon completing the discharge, the hauler must properly clean up and make the station neat and safe for the next hauler. This includes putting away all hoses, shutting all

NARRAGANSETT BAY COMMISSION

Environmental, Health & Safety

BEST MANAGEMENT PRACTICES *for* FINE ART PAINTING STUDIOS



The purpose of this brochure is to guide you in protecting your health and preserving the environment as you work with various supplies and materials in your studio. It is also intended to help you save money and to comply with existing environmental regulations.

Following these guidelines will keep you and your environment safe.

Sources of health & safety information on the Internet for artists

Disposal of household hazardous waste in RI:
www.riric.org/site/ecodepot/eco_depot_hroc.pdf

A searchable health & safety database by medium: www.ci.tucson.az.us/arthazards/home.html

List of references and more:
www.library.unisa.edu.au/internet/pathfind/arthazards.htm

Comprehensive list of articles covering many mediums:
www.croetweb.com/outreach/croetweb/links.cfm?topicID=2

List of books, periodicals and organizations:
http://wally.rit.edu/pubs/guides/healthhaz.html

Comprehensive list of articles:
www.library.wwu.edu/ref/subjguides/art/arthazards.html

Article entitled *Art Painting and Drawing*
www.uic.edu/sph/glakes/harts/HARTS_library/paintdrw.txt

Very comprehensive list of resources for many media:
www.trueart.info/hazards.htm

Safety Primer with references:
www.tmr.unl.edu/pubs/consumered/nf126.htm

Safety Primers:
www.artspaceseattle.org/solutions/safety.html

www.uwlax.edu/ehs/arthaz.html

www.gamblincolors.com/safety.html

Studio Ventilation:
www.craftsreport.com/may00/studioissues.html

How to manage contaminated rags:
www.cabq.gov/p2/shoptow1.pdf

Technical leaflets:
http://www.danielsmith.com/leaflets.html

Paint MSDSs available under Health & Safety section:
www.winsornewton.com/index2.php

Primers about how to read a MSDS:
www.lehigh.edu/~kaf3/guides/msds.html

Primers about how to read a MSDS:
http://offices.colgate.edu/chemmgt/msdsfactsheet.htm

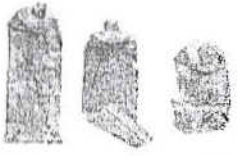
Studio tips:
www.liquitex.com/healthsafety/safestudiotips.cfm

NARRAGANSETT BAY COMMISSION

Environmental, Health & Safety

BEST MANAGEMENT PRACTICES *for*

FINE ART PAINTING STUDIOS



As you are probably aware, many art materials contain ingredients that are toxic to your health and the environment. The paints, pigments, colorants and glazes you use may contain toxic metals. Commonly-used paints, like oil, acrylic, watercolor and gouache, may contain heavy metals such as cadmium, chromium, and lead, which can be hazardous to your health and the environment. Also, oil paints contain solvents and require cleanup with solvents, such as turpentine, mineral spirits, or other paint thinners. Oil paints, resins, and solvents each pose fire safety hazards. Many solvents are toxic and flammable, and their use contributes to the formation of ground-level ozone, contaminating the air we breathe, and a few can deplete the ozone layer in our stratosphere, potentially increasing our exposure to harmful effects of the sun. If improperly disposed of, these materials pose environmental and community health hazards. You can reduce these risks by determining which materials contain hazardous ingredients, and by finding and using safer alternatives. If an alternative is not available, then you must know how to use and dispose of the hazardous materials safely. Remember that even less toxic alternatives must be handled safely and disposed of properly.

Use of many of these materials can produce wastes controlled by a variety of local, state and federal requirements, such as Rhode Island's Hazardous Waste Management Act, which authorizes the RI Department of Environmental Management (RIDEM) to regulate hazardous waste management and disposal, and the federal Clean Water Act which authorizes both RIDEM and local sewer authorities such as the Narragansett Bay Commission (NBC) to regulate wastewater disposal to Publicly-Owned Treatment Works (POTWs). Sewer authorities have obligations under the Clean Water Act to regulate sources (such as painting studios) that discharge process wastewater into the sewer system. The practices recommended in this guidance document can help you to understand, and minimize or eliminate hazardous materials and wastes from your work. This may eliminate the need for you to obtain permits from these government agencies

Wise purchasing choices will help you reduce or eliminate hazards in your studio. Tables 1 and 2 provide information about metals and solvents in pigments to help you choose safer materials for your work. You may be able to choose less toxic paints by comparing the information from the Material Safety Data Sheet (MSDS) about the types and amounts of metals contained in your paints (see Table 2). For example, you may select a paint containing an iron-based pigment rather than a more toxic lead chromate or cadmium pigment. You can also compare properties of available solvents to decide which is best for your purpose and which is a safer choice.

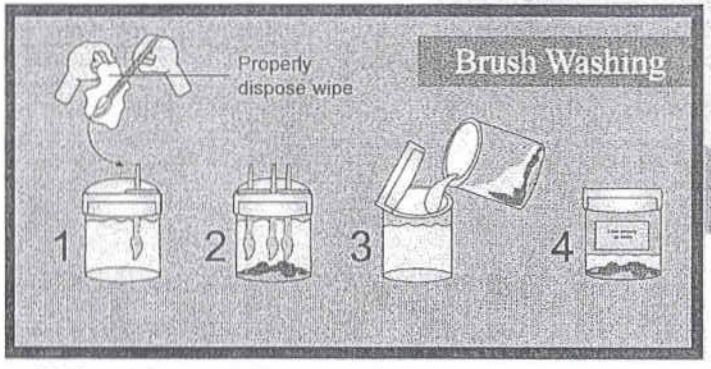
When you are deciding which solvent to use, consider that you may reduce your health risks by using solvents with low values for any or all of the following characteristics: toxicity, evaporation rate, flammability, photochemical reactivity, ozone depleting potential, Worker Exposure Value and Environmental Hazard Value. Also look for a low Vapor Pressure, which indicates how quickly the solvent will evaporate into the air you breathe (see Table 1). Low-odor mineral spirits would be a safer choice than regular mineral spirits or turpentine. Finally, buy only as much material as you need to complete your work so that you are not unnecessarily storing large amounts of hazardous materials in your studio.

Store supplies and materials properly by following the manufacturer's instructions. Incompatible materials must be stored separately, in covered and labeled containers, so they do not react (see Table 1). For example, products containing oxidizers, such as bleach, should be stored in a location separate from flammable materials to reduce potential fire hazards and other dangerous reactions. Label all products with the date of purchase and the date you open the container. Use an indelible marker or graphite pencil to label each container, and replace the label if it becomes illegible. Maximize the shelf life of your materials by keeping air out of paint cans and tubes. Use oldest supplies first and do not keep supplies that you will never use again. Donate excess stock to someone who can use it, such as another artist, local theater group, art schools or a materials exchange (www.riric.org/site/sneme).

Exposure to solvents and toxic metals can be dangerous to your health. Common routes of exposure include ingestion, inhalation and absorption through the skin. Less toxic substitutes can often be used both in your painting process and for clean-up. Oil paint can be cleaned off hands and brushes with baby oil, followed by soap and water. Soap and water alone may be adequate if you are using acrylic paints, gouache or watercolors. Solvents such as mineral spirits, turpentine or other paint thinners may be needed for more demanding jobs. Before you use straight solvent, try a 50:50 mixture of baby oil and solvent. If using a mixture doesn't work, and you need to use a straight solvent, read the product information for alternative products to choose a less toxic solvent.

To use these paints and solvents safely, follow recommendations on the product's label, MSDS and Technical Data Sheet. Ventilate the work area whenever possible to remove airborne pollutants. Avoid using powders that generate airborne dusts. The dust may contain toxic metals, which cause serious harm when inhaled, absorbed, or ingested. If you are unable to remove these hazards from your workplace, you should eliminate or reduce bodily contact by using personal protective equipment such as gloves, safety glasses/goggles, aprons and other barriers to avoid absorption of metals and solvents through the skin. In addition, consider using appropriate respiratory protection when spray painting or working with powders, and always when recommended on a product's MSDS, to prevent inhalation of toxic materials. There may be certain health considerations when choosing a respirator, so please consult with a medical professional before making your purchase.

To expedite clean up and to reduce solvent use, squeeze excess paint off brushes, rollers or tray-liners, and when possible, put it back into the original labeled paint container. To minimize the amount of water or solvent needed to clean brushes, paint-out the paint remaining on a brush after a project is complete. Other water conservation methods include wash water reuse and counter-current rinsing. Sometimes, clean-up will require a strong solvent such as mineral spirits, turpentine or other paint thinners. To clean brushes and reuse solvent, hang your brush so that the bristles are covered by solvent but do not touch the bottom of the container. Most pigment solids will separate from the solvent, falling to the bottom of the container. When the brush is clean, remove it and slowly pour the solvent into a clean container, being careful not to disturb the solids at the bottom of the original container. This will allow you to reuse the solvent and properly dispose of the solids in the bottom of the original container. (See the disposal paragraph below.) Remember to cover all solvent containers, even while your brushes are soaking, to reduce fumes in your work area and to prevent fire and personal exposure. Use a temporary aluminum foil cover, perforated plastic cover or other cover (your brush handle may stick out through the cover) to cut down on the amount of vapors that escape into your work environment. This option should be for short term storage only while you are working with the materials. These tops will fail to prevent spills if the container tips over. Some plastic tops are fine for solvent storage. Many paint solvents are sold by the manufacturer in plastic containers. Remember to check containers periodically to ensure they will hold up for extended periods of time.
The best solution for long-term solvent storage is to put it back into its original container.



REMOVE excess paint from brush. SOAK the suspended brush vertically in paint thinner

SETTLE pigments

DECANT the good thinner into a new container so it can be used again

LABEL and properly manage the residue

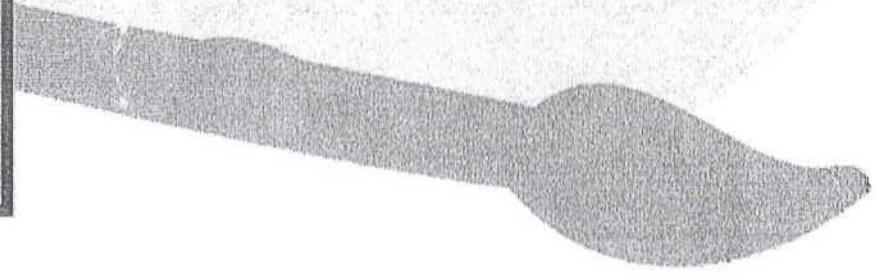
Do not put even small amounts of waste oil paint or solvents down the drain, because they can ultimately reach Narragansett Bay. Sewage treatment plants are not designed to treat these substances. These materials harm sewer workers, cripple the biological sewage treatment process, and can cause fish-kills in the receiving waters. If as part of doing business you put rinse-water, wash-water or other process wastewater down a drain to the sewer system, you must contact your local sewer authority (i.e. NBC) to determine if a wastewater discharge permit is required. The practices recommended in this guidance document can help you to understand and minimize or eliminate hazardous materials and wastes from your work. This may eliminate the need for you to obtain permits or it may reduce your permit requirements and costs.

Properly dispose of spent solvents, paint wastes, aerosol paint cans, and other wastes generated in your studio. Hazardous wastes generated by household sources (including non-commercial artists) in Rhode Island, can be dropped off free of charge at the Rhode Island Resource Recovery Corporation's Eco-Depot in Johnston. Non-hazardous waste can be disposed of with your municipal trash. In Rhode Island, a waste is considered hazardous if it is flammable/ignitable with a flashpoint less than 200 F (see MSDS), or if it contains toxic heavy metals above a TCLP concentration. Toxic heavy metals include Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Silver, and Selenium (see Table 2 for more information). If you are using these types of materials then you should consider the wastes to be hazardous and dispose of them as such. They should be stored in covered and labeled fireproof containers. Wipes must be handled as hazardous waste if they are saturated (dripping) with liquids that are considered hazardous wastes. If you use wipes in your clean-up, you need to drain any liquid or solvent from them and then dispose of the wipes separately from other trash. Otherwise dispose of dry non-hazardous wipes as municipal trash. Small amounts of non-hazardous waste paint can be air-dried and also disposed of as municipal trash.

Commercial artists are considered a small business and must abide by different regulations for hazardous waste disposal than home hobbyists. Commercial artists cannot use the RIRRC's Eco-Depot to dispose of hazardous wastes. If you are a commercial artist who generates hazardous waste, you must register with the RIDEM as a hazardous waste generator. You must also hire a licensed hazardous waste transporter to remove waste for proper recycling, treatment and disposal at an approved site. For more information on your hazardous waste responsibilities, see RIDEM's "Hazardous Waste Compliance Workbook for Rhode Island Generators" at: http://www.state.ri.us/dem/programs/benviron/waste/pdf/hwgenbk.pdf, or call RIDEM at (401) 222-6800.

Pick up spills promptly and then safely reuse or properly dispose of the recovered material. Keep adequately stocked spill kits at locations where they will be needed, and know how to use them. When you are using powders, wipe up small areas with a damp cloth instead of using a wet-mop or broom. Clean larger areas with a vacuum cleaner equipped with a high-efficiency particulate air (HEPA) filter. Following these suggestions will help you avoid undesirable wastewater and airborne dusts. Never use a wet-vac to clean a solvent spill, because the vapors can explode in the vacuum. Instead, wipe up the small solvent spill with a rag, drain the rag, then dispose of it and the waste solvent as if it were hazardous waste. Use personal protective equipment such as gloves and respirators. Be sure to contact the RIDEM in the case of a large solvent spill to request assistance and spill clean-up guidance.

Practice good housekeeping to promote a safe and efficient work environment. Properly manage shop towels, wipes and rags in your studio. Store wipes that have been in contact with flammable materials (such as certain paints and solvents) in a self-closing fireproof canister until ready for disposal. Wash dirty studio clothing separately from your other laundry to avoid cross-contamination. Be aware that your shoes can become a source of toxic metal contamination in your home, because you may track paints and dusts from the studio into your living area. **Wipe your feet or have separate studio shoes for your work.** Always wash your hands before eating or smoking, and wash your hands periodically during the day as you work. Do not put your hands near your eyes, nose, or mouth while working. Never put a paint brush in your mouth.



E,H & S Reference Information

Table 1 - Environmental and Health Hazards of Solvents

Organic Compound	EHV	WHV	HV_{avg}	Exposure Limit (ppm)	Flash Point (F)	Vapor Pressure (mmHg)	Water Solubility (%)	Fire Hazard Classification	Notes:
Acetone	1.6	1.6	2	250	0	180	100	IB flammable	solvent, incomp. w/acids
2-Butoxyethanol	2.5	1.6	2	5	143	1	100	IIIA combustible	miscibility agent, skin adsorbs, incomp. w/caustics
D-Limonene	1.1	0.5	1	30	120	20	0	II combustible	has citrus odor
Ethyl Acetate	3.6	2.6	3	400	24	73	10	IB flammable	solvent, incomp. w/nitrates, alkalis & acids
Isopropyl Alcohol	1.4	1.5	1	400	53	33	100	IB flammable	solvent, incomp. w/ acids and chlorine
Methyl Ethyl Ketone	3.9	1.6	3	200	16	78	28	IB flammable	paint remover, waste may fail TCLP, incomp. w/ ammonia
Methylene Chloride	3.3	2.8	3	25	none	350	2	— combustible	paint remover and carcinogen, TTO, ODS, skin adsorbs
Mineral Spirits	1.5	1.9	2	100	104	2	0	II combustible	thinner, may contain 2, 8 or 22% aromatics
VM & P Naptha	1.3	1.3	1	350	40	20	0	IB flammable	may contain 1, 2 or 20% aromatics
Odorless Mineral Spirits	1.1	1.2	1	200	104	1	0	II combustible	thinner, may contain up to 0.25% aromatics
Toluene	3.7	2.1	3	100	40	21	0	IB flammable	solvent, aromatic TTO, skin adsorbs
Turpentine	na	na	na	100	95	4	0	IC flammable	thinner, skin adsorbs, incomp. w/ chlorine
Xylene	3.9	1.3	3	100	80	8	0	IC flammable	aromatic, skin adsorbs, incomp. w/ strong acids

- Organic compounds, such as those listed above, can be found alone or in mixtures which are used to dilute (thin) paint, strip paint, dissolve resin, make medium or for cleanup. The health and environmental values of greatest concern are bolded.
- Environmental Hazard Value (EHV) accounts for impacts on aquatic ecosystems, air quality and land contamination.
- Worker Hazard Value (WHV) accounts for impacts on human health in a work environment. Although a low WHV is safest, the release, inhalation, ingestion,
  skin/eye and other contact with organic solvents should be avoided.
- Average Hazard Value (HVavg, where 1 is safest) is equal to the average of the EHV and the WHV.
- Sewer regulations prohibit businesses from discharging flammable liquids, hazardous waste, solvents, paint thinner or stripper, methylene chloride, naptha, toluene, and xylene and also limit the amount of other organic and inorganic compounds that can be discharged into the sewer.
- When solvent use is necessary, maximize safety by choosing one that has a high exposure limit, high flash point, low vapor pressure and a low hazard value.

Table 2 - Environmental and Health Hazards of Metals

Metal	EHV	WHV	HV_{avg}	NBC limit (mg/l)	RCRA TCLP (mg/l)	PBT	Exposure Limit (mg/m^3)	Carcinogen	Used in Paint Colors including:	Notes
Arsenic	3.9	2.2	3	0.10	5		0.002	Y	Y G	skin absorbs
Barium	0.4	0.8	1	none	100		0.5		Y O W R B	PEL is for soluble barium compounds
Cadmium	4.1	2.4	3	0.07	1	Y	0.005	Y	Y O R	a PBT according to the Ecology PBT Working List
Chromium	4.7	1.9	3	1.63	5		0.5		Y O W B G	Hex chrome is more toxic than trivalent form
Copper	3.0	2.9	3	1.20	none		1.0		B G B	prevent skin & eye contact
Lead	4.1	2.6	3	0.29	5	Y	0.05		Y O W R B G	prevent skin & eye contact
Mercury	4.0	1.7	3	0.005	0.2	Y	0.05		O R	volatile; prevent skin contact
Nickel	4.0	2.4	3	1.62	none		0.015	Y	B	insoluble Ni compounds carcinogen per ACGIH
Selenium	2.4	1.9	2	0.20	1		0.2		Y	prevent skin contact
Silver	1.4	1.9	2	0.20	5		0.01			prevent skin & eye contact
Tin	0.1	1.8	1	2.00	none		2.0			M incompatible with turpentine
Zinc	0.4	1.7	1	1.39	none		5		Y W	PEL is for zinc oxide

- The health and environmental values of greatest concern are bolded. The lowest NBC wastewater discharge limit for each metal is shown.
- The average of the Environmental (EHV) and the Worker Exposure Hazard (WHV) values is equal to the Average Hazard Value (HVavg, where 1 is safest).
- A substantial portion of metal in dry paint is relatively immobile when used as intended.
- Metals that tend to have a relatively high PEL (ex. 15 mg/m3) include calcium, aluminum and iron.
- The risk of inhaling metals are highest for fine art painting operations involving spray painting, airbrushing, sanding, dry powders & chalks and torching.
- Other metals of concern that can be found in oil, watercolor and other paints include antimony, cobalt, manganese, molybdate, strontium and titanium.

EH&S Best Management Practices for Fine Art Painting Studios

Useful Information and Definitions

Corrosives Corrosives are acids (e.g. nitric acid, hydrochloric acids or ferric chloride) that have a pH below 2 and alkalis (e.g. sodium hydroxide or lye) that have a pH above 12.5 standard units.

Environmental, Health and Safety (EH&S) agendas protect our environments and human health. Note that certain substances that are relatively safe to work with may still be harmful to the environment.

Flash Point is the lowest temperature at which a solvent will flame when an ignition source is present.

Halogenated compounds contain chlorine, bromine or flurine. In the upper atmosphere, halogenated organic compounds are most notorious for being ozone depleting substances (ODS). Certain halogenated compounds are also direct (i.e. methyl chloroform) or indirect (i.e. methylene chloride) greenhouse gases (GHG). Many halogenated organic compounds are carcinogens and do not have a flash point.

Material Safety Data Sheet (MSDS) chemical manufacturers supply a MSDS to inform industrial purchasers and users of hazardous chemicals of the reasonably foreseeable physical and chemical hazards that may arise from the use of those chemicals.

Oxidizing compound is a reactive chemical such as bleach, chlorine, hydrogen peroxide and nitric acid.

Permissible Exposure Limit (PEL) is the maximum concentration of a chemical in air that a worker can be exposed to without health consequences.

Persistent Bioaccumulative Toxics (PBT) are highly toxic compounds that last a long time and build-up to high levels in the food chain.

Publicly Owned Treatment Works (POTW) is a sewage treatment facility.

Resource Conservation and Recovery Act (RCRA) is the federal law that governs the disposal of hazardous waste.

Solvent is a typically volatile, organic (aliphatic, aromatic or unsaturated) liquid capable of dissolving other compounds such as paints, oils or resins. Organic solvents are incompatible with oxidizers.

Total Toxic Organics (TTO), including methylene chloride and toluene, are listed in 40 CFR Section 433.11(e), Total Toxic Organics definition (Appendix 9.1).

Toxicity Characteristic Leaching Procedure (TCLP) is one of the tests for 40 compounds that can characterize a waste as hazardous.

Vapor Pressure is a direct indication of how quickly a substance will evaporate. An organic compound with a vapor pressure over 2 mmHg is considered volatile.

Volatile Organic Compounds (VOCs), especially aromatics (i.e. toluene and xylene) that are the most photochemically reactive VOCs, are notorious for causing smog (ozone in the lower atmosphere). Certain VOCsare also direct (i.e. ether) or indirect (i.e. aromatics) greenhouse gases.

RI Agencies Providing Further Information

Narragansett Bay Commission (NBC)
(401) 461-8848 - www.narrabay.com

RI Department of Environmental Management (RIDEM)
(401) 222-6822 - www.state.ri.us/dem

RI Dept. of Health, Occupational Health & Safety Consultation Services
(401) 222-2438 -
www.health.state.ri.us/environment/occupational/Home.htm

RI Resource Recovery Corporation (RIRRC)
(401) 942-1430 - www.rirrc.org

RI School of Design (RISD)
(401) 454-6780 - http://intranet.risd.edu/departments/default.asp?department=Environmental_Health_and_Safety

RI State Council on the Arts (RISCA)
(401) 222-3880 - www.risca.state.ri.us

Other Agencies

Art and Creative Materials Institute (ACMI)
(617) 426-6639 - www.acminet.org

Arts, Crafts, and Theater Safety (ACTS)
(212) 777-0062 - www.caseweb.com/acts

Massachusetts and Rhode Island Poison Center
(800) 222-1212 - www.maripoisoncenter.com

National Institute for Occupational Safety and Health (NIOSH)
(800) 356-5674 - www.niosh.com.my

Occupational Safety and Health Administration (OSHA)
(202) 523-7075 - www.osha.gov

RCRA Hotline
(800) 424-9346 - www.epa.gov/epaoswer/hotline

This brochure was funded in part by a US EPA Region 1 grant and the Narragansett Bay Commission and was produced by a working group of art and environmental professionals including: Pamela Galli (RIDEM), Alan Cantara (RISD), Rafael Cuello (NBC), Kathie Florsheim (Photographer), Rebecca Pena (RISD), Randall Rosenbaum (RISCA), and Barry Wenskowicz (NBC).

Narragansett Bay Commission
One Service Road
Providence, RI 02905

NARRAGANSETT BAY COMMISSION

Environmental, Health & Safety

BEST MANAGEMENT PRACTICES *for* FINE ART PAINTING STUDIOS

Narragansett Bay Commission

Electroplaters, Metal Finishers, Chemical Processing Firms and Other Industries:

Vacation Shutdown
Prohibited Sewer Discharges

Typically many industries shut down their operation for a period of time during the holiday months. Past operating experiences in the Narragansett Bay Commission (NBC) District have shown that large quantities of toxic and hazardous wastes have been indiscriminately dumped in significant quantities into the sewer as part of an industry's "clean-up" procedure prior to their shutdown. This usually occurs in the last two weeks of June and throughout the month of July, as well as in December. Pursuant to Title 46 Chapter 25 of the Rhode Island General Laws, the NBC has adopted regulations which prohibit the discharge of wastes which could:

- create a fire or explosion (example: solvents such as trichloroethylene, xylene or gasoline);
- cause corrosive damage to our facilities (example: acids or bases);
- hinder the flow or causes obstructions to our facilities (example: fats, waxes, greases, oils, solids);
- result in an excessive hydraulic/pollutant flow rate (example: slug discharge from the dumping of plating or other baths);
- interfere with treatment facility operations (example: dumping cyanide or heavy metal containing solutions) and;
- cause pass through of the wastewater treatment facility (example: dumping of dyes or pigments).

Other wastes are also regulated specifically by type of waste and concentration by the NBC's Rules and Regulations. Copies of these regulations may be obtained at the NBC's Pretreatment office. In addition, it is illegal to discharge any non-sanitary wastewaters into the NBC sewer system prior to being issued a discharge permit. Please dispose of spent solutions properly. It is less costly than being caught illegally disposing of these wastes. Industries found to be in violation of the NBC's Rules and Regulations may be subject to a fine of up to $25,000 per violation per day and/or up to thirty (30) days of imprisonment. In general, industries located in the NBC service area are to be commended for the fine job to date at reducing toxic discharges to the sewer. In 1981, local industries discharged 954,099 pounds of heavy metals such as copper, nickel, and zinc, and 80,440 pounds of cyanide to the Field's Point Treatment Facility. A portion of these toxics would eventually pass through the treatment plant and enter Narragansett Bay. There has been a 97.0% reduction in heavy metal discharges to the Field's Point Facility since 1981. The cyanide loadings to this treatment facility were also reduced by 97.6% over this same period. This impressive reduction in toxic discharges by industry has also been noted at the Bucklin Point Wastewater Treatment Facility. The level of toxics entering Narragansett Bay from the NBC facilities has been similarly reduced.

The NBC will continue to be a leader in the field of wastewater treatment and environmental protection to ensure a cleaner Narragansett Bay for all to enjoy. For more information on the proper disposal of wastes from your facility, contact the pretreatment program staff at 461-8848 ext. 490 / TDD 461-6549.

Vincent J. Mesolella, *Chairman* Raymond J. Marshall, P.E., *Executive Director*

ATTACHMENT VOLUME I

SECTION 2

TYPICAL NBC WASTEWATER DISCHARGE PERMITS

TYPICAL METALFINISHER WASTEWATER DISCHARGE PERMIT

WASTEWATER DISCHARGE PERMIT

Permit Number: P1112-236-0620
Company Name: **MONARCH METAL FINISHING CO., INC.**
Facility Address: 189 Georgia Avenue, Providence, RI 02905
Mailing Address: 189 Georgia Avenue, Providence, RI 02905
Facility President: Mr. Marc Marandola
Facility Authorized Agents: Mr. Stephen DiPrete, Mr. Fernando Vieira
User Classification: Metal Finisher
Categorical Standards Applicable: 40 CFR §433.17, Pretreatment Standards for New Sources

By virtue of Rhode Island's General Laws Title 46 Chapter 25 (Act) and in accordance with the Rules And Regulations For The Use Of Wastewater Facilities Within The Narragansett Bay Water Quality Management District (Rules and Regulations), **Mr. Marc Marandola and Monarch Metal Finishing Co., Inc.**, hereinafter jointly referred to as **Permittee**, is hereby authorized to discharge process wastewater from the above identified facility in accordance with the terms and conditions set forth in this permit.

All discharges authorized herein must be consistent with the effluent limitations, monitoring requirements and other conditions set forth in this permit. The discharge of any pollutant not identified in this permit or any pollutant identified in this permit at a level in excess of that authorized shall constitute a violation of the permit. This permit consists of 19 pages with conditions A - X.

This permit is effective on July 1, 2015
and expires on June 30, 2020.

Noncompliance with any term or condition of this permit shall constitute a violation of the NBC's Rules and Regulations and may subject the user to an **Administrative or Civil Penalty** of up to $25,000 per violation per day as defined in R.I.G.L. §46-25-25.2. Willful or criminally negligent violations shall be punishable by the aforementioned fine and/or imprisonment as defined in R.I.G.L. §46-25-25.3.

For the **Narragansett Bay Commission:**

/s/ Kerry M. Britt — June 30, 2015
Kerry M. Britt, Pretreatment Manager — Date
Narragansett Bay Commission

NOTE: The NBC will accept the person(s) named on this permit as the **Permittee's** authorized agent(s) until notified otherwise.

An authorized agent or authorized company representative is a person who is a principal executive officer or other corporate officer with signatory powers as per the **Permittee's** by-laws or per a vote of the directors if the **Permittee** is a corporation; a general partner or proprietor if the **Permittee** is a partnership or sole proprietorship respectively; or a duly authorized representative of an individual designated above if such representative is responsible for the overall operation of the facility and has the authority to sign contracts, permits, permit applications, monitoring results and other documents in the company's name and otherwise bind the **Permittee**. The **Permittee** may designate additional or new authorized agents by completing and submitting the enclosed Designation of Authorized Agent form.

The NBC will not accept documents signed by persons other than the Company's authorized agent(s) or authorized representative(s).

CONDITIONS TO PERMIT

A. Effluent Discharge Limitations:

1. The permittee shall at all times comply with the effluent limitations specified in Table 1 on page 18, attached hereto and incorporated herein.

2. The permittee shall comply with all discharge limitations and prohibitions contained in Article 5 of the NBC's Rules and Regulations, as well as all other provisions of those Rules, and any other applicable State or Federal standards, including but not limited to the Federal Water Pollution Control Act, 33 U.S.C. §1251 et seq. and R.I.G.L. §46-12-1 et seq. The permittee shall at all times comply with 40 CFR §403.5 and may not introduce into the NBC's facilities any pollutants which shall violate the general or specific prohibitions including but not limited to discharges resulting in pass through or interference situations at the NBC's facilities.

3. The permittee shall not increase the use of process water or dilute a discharge in any way as a partial or complete substitute for adequate treatment to achieve compliance with the above standards.

4. The permittee agrees that the average discharge per calendar day of metal finishing process wastewater is greater than or equal to 10,000 gallons but less than 50,000 gallons. Decreasing or increasing the average daily water usage may affect the annual permit fee and/or the monitoring frequency. The permittee must notify the NBC of any deviations from the aforementioned average flow range so that required permit modifications may be made.

5. The permittee is classified as a Metal Finisher and, therefore, must at all times comply with EPA Categorical Regulations 40 CFR §433.17, Pretreatment Standards for New Sources. EPA regulations require that Metal Finishers maintain full compliance with the EPA Total Cyanide Metal Finishing maximum limit of 1.20 ppm and the monthly average limitation of 0.65 ppm at the combined point of cyanide process discharge, prior to combining with non-cyanide bearing wastewater streams, and at the discharge from the cyanide treatment system. Upon conducting an engineering review of the facility, it has been determined that the discharges from the continuous cyanide oxidation tank are the only waste streams contaminated with cyanide. A sampling location has been installed downstream of the continuous cyanide oxidation tank. The EPA Total Cyanide Metal Finishing limitations will be enforced at this sampling location. The NBC Total Cyanide limitations will be enforced at the final discharge location.

B. Permitted Discharges:

1. The permittee is authorized to discharge the following tanks, solutions, or process wastewater streams to the NBC's facilities:

    a. Treated Non-Cyanide Bearing Metal Finishing Rinsewaters;
    b. Treated Cyanide Bearing Metal Finishing Rinsewaters;
    c. Treated Acid Cleaner Solutions;
    d. Treated Zinc Brite Solution;
    e. Treated Alkaline Cleaner Solutions;
    f. Treated Hot Soak Solution;
    g. Treated Ultrasonic Solution;
    h. Treated Electrocleaner Solution;
    i. Treated Wet Tubbing Solution;
    j. Treated Vibratory Solution;
    k. Treated Non-Cyanide Bearing Floor Spills and Floor Washwater;
    l. Treated Cyanide Bearing Floor Spills and Floor Washwater;
    m. Boiler Blowdown.

2. No other process wastewater is to be discharged to the sewer unless specifically approved by the NBC in writing.

C. Prohibitions:

1. The permittee is strictly prohibited from discharging any prohibited substances detailed in the Rules and Regulations of the Narragansett Bay Commission. Prohibited discharges include, but are not limited to, the following:

    a. Concentrated Electroplating Solutions;
    b. Concentrated Cyanide Solutions;
    c. Acidic Solutions with a pH less than 5.0 standard units;
    d. Caustic Solutions with a pH greater than 11.0 standard units;
    e. Gold Plating Solution;
    f. Gold Plating Rinses and Dragouts;
    g. Silver Plating Solution;
    h. Silver Plating Rinses and Dragouts;
    i. Degreasing Solutions;
    j. Solvents;
    k. Sludges;
    l. Fuel or Lubricating Oils.

2. The permittee is strictly prohibited from discharging any process wastewater streams other than those specified in Section B(1) of this permit or wastestreams containing pollutants with concentrations in excess of the effluent limitations specified in Table 1 on page 18, attached hereto and incorporated herein.

3. The permittee may only treat and/or discharge those solutions that were indicated as such on plans received by the NBC from the permittee on November 2, 2012, December 3, 2012, February 5, 2013, July 15, 2013, July 29, 2013, May 13, 2014, July 16, 2014, November 26, 2014, January 23, 2015, and April 10, 2015. The permittee is strictly prohibited from discharging any other tanks, solutions, chemicals or materials, including all prohibited substances as defined in the Rules and Regulations of the Narragansett Bay Commission, without written approval from the NBC.

4. The permittee is strictly prohibited from using portable pumps and/or flexible hose to transfer solutions directly to the pretreatment system or to bypass the pretreatment system and/or discharge solutions directly to the sewer without written approval from the NBC.

D. Pretreatment Requirements:

1. The permittee must provide and maintain an easily accessible sample location downstream of each process discharge specified in Section B(1) of this permit. A total of two (2) sample locations must be provided and must collect wastewater from the process operations indicated as follows:

   Sample Location #1 - Sample port on the final discharge line located near the polishing area, collecting all process discharges specified in Section B(1)(a through m) of this permit.

   Sample Location #2 - Sample port on the discharge line of the continuous cyanide oxidation tank, collecting all process discharges specified in Section B(1)(b and l) of this permit.

   The permittee is prohibited from discharging dilution wastestreams, such as sanitary and non-contact cooling water into any process wastewater sampling location. Dilution wastestreams must discharge downstream of the process wastewater sampling location. The discharge through Sample Location #1 must be in compliance with the effluent limitations specified in Section A and Table 1 of this permit. The discharge through Sample Location #2 must be in compliance with the EPA Metal Finishing Standards referenced in Section A(5) of the permit.

2. The permittee shall operate and maintain a pretreatment system in conformance with plans received by the NBC on November 2, 2012, December 5, 2012, and March 29, 2013. This pretreatment system shall be fully operational whenever process discharges to the sewer occur.

3. The permittee is responsible for properly operating and maintaining the pretreatment system to achieve and ensure compliance with the conditions of this permit. Proper operation and maintenance shall include but not be limited to: effective performance, adequate funding, adequate operator staffing and training, adequate laboratory and process controls, including appropriate quality assurance procedures.

E. Boiler Facility Requirements:

1. The permittee has hard plumbed all boiler blowdown discharges to the pretreatment system. Daily visual inspections of steam condensate must be documented in the logbook as required in Section H of this permit.

2. The permittee has permanently sealed all open floor drains and any other open process wastewater and sewer discharge connections, so as to prevent an incidental or accidental discharge from the boiler room.

3. The permittee has permanently sealed all open drains within oil storage tank vaults or located under buried tanks which connect to the sewer, so as to prevent an incidental or accidental discharge.

4. The permittee shall oversee each oil tank filling to ensure fuel oil does not spill from the fill, overflow or vent locations and discharge to the sewer. Each tank filling operation must be documented in the logbook required in Section H of this permit.

5. The permittee is strictly prohibited from discharging spilled oil contained in the boiler facility, fuel storage area(s), etc. into the sewer. Spilled oil must be collected for proper off-site disposal. The permittee must take appropriate measures as described above and any others necessary to ensure a spill will not discharge to the sewer system.

F. Zero Discharge/Recycle Operation Requirements:

1. The permittee shall operate and maintain a zero process discharge wastewater evaporation and recycle pretreatment system as illustrated in the plans that have been received by the NBC on April 9, 2004 by Monarch Metal Finishing Company, Inc. This system shall be used specifically for the purpose of eliminating discharges from the following process operations:

    a. Gold Plating Solution;
    b. Gold Plating Rinses and Dragouts;
    c. Silver Plating Solution;
    d. Silver Plating Rinses and Dragouts.

2. The permittee shall make no changes to the aforementioned process tanks or evaporation and/or recycle systems without first submitting plans to the NBC for approval. Only those solutions indicated as being discharged to the treatment systems on the plans received by the NBC on April 9, 2004 by Monarch Metal Finishing Company, Inc. may be treated on-site in the pretreatment equipment.

3. If any problems with the evaporation and/or recycle systems arise or if the permittee would like to connect to the sewer for the purpose of discharging gold plating solutions or silver plating solutions, the permittee must notify the NBC, in writing, and obtain written approval from the NBC before resuming discharge or making any physical changes to the process tanks, the evaporation system, or associated piping.

4. The permittee has capped-off and sealed all sewer drain lines associated with the gold plating solution, silver plating solution, associated rinses and/or dragouts. They must remain capped-off and sealed so that no process wastewater may be discharged to the sewer through sanitary or any other sewer connection from the zero discharge operations, excluding permitted satellite process discharge locations.

5. The permittee shall post signs at all sanitary sewer connections stating the following: "Discharge of Chemicals Prohibited by Rhode Island Law".

6. Failure to notify NBC personnel prior to resuming gold plating or silver plating process wastewater discharges to the sewer may be considered an intentional violation of the NBC's Rules and Regulations and may subject the permittee to civil and/or criminal penalties as defined in R.I.G.L. §46-25-25.2 and §46-25-25.3.

G. Monitoring Requirements:

1. The permittee shall monitor the pH of the effluent discharge and record it continuously. The permittee shall report the results monthly in a summary report giving the maximum, minimum and average pH readings for each day of operation (see sample copy enclosed). The data must be reported directly from the recording chart to an accuracy of 0.1 standard units. The pH Monitoring Report must be received by the NBC within thirty (30) days from the end of the month in which the data is recorded. The original recording chart must be maintained on site for a period of at least three (3) years.

2. The permittee shall conduct sampling over one (1) full normal operating day during the months of January, February, March, April, May, June, July, August, September, October, November, and December until the expiration date of this permit.

    a. A composite sample is to be collected which must consist of equal volume grab samples collected at least every half hour over the operating day or collected continuously with a composite sampler. The samples are to be collected from

sample port on the final discharge line located near the polishing area, Sample Location #1. The composite samples collected in April and October are to be collected, preserved, and analyzed in accordance with EPA protocols for the following parameters:

Cadmium (Total)	Copper (Total)	Silver (Total)
Chromium (Total)	Lead (Total)	Zinc (Total)
	Nickel (Total)	

The composite samples collected during all other sampling months are to be collected, preserved, and analyzed in accordance with EPA protocols for the following parameters:

Copper (Total)	Nickel (Total)	Zinc (Total)

b. On the same day that the composite samples listed in Section G(2)(a) above are being collected, the permittee shall collect a minimum of four (4) grab samples at equidistant time intervals over the entire operating day from sample port on the final discharge line located near the polishing area, Sample Location #1 (i.e., one (1) grab sample collected every two (2) hours over an eight (8) hour operating day). Each grab sample must be preserved immediately upon sample collection in accordance with EPA regulations. The grab sample must immediately be tested for residual chlorine with potassium iodide paper. If residual chlorine is present in the sample, then 0.6 grams of ascorbic acid must be added. The sample should then be retested for chlorine residual, and if it is present, the addition of ascorbic acid should be repeated. Once residual chlorine has been eliminated from the sample, the pH of the sample must be checked and elevated to greater than 12.0 standard units by the addition of sodium hydroxide, if necessary. Once the grab sample has been preserved to a pH greater than 12.0 standard units and no chlorine residual is detected, it may be composited with the other grab samples collected on that operating day. The composite of preserved grab samples must be refrigerated until analysis and must be analyzed within fourteen (14) days of collection for **Total Cyanide**.

c. On the same day that the composite samples during the months of January and July are being collected, the permittee shall collect a minimum of four (4) grab samples over the entire operating day from the sample port on the discharge line of the continuous cyanide oxidation tank, Sample Location #2, prior to combining with any other non-cyanide bearing wastestream. Each grab sample must be preserved immediately upon sample collection in accordance with EPA regulations. The grab sample must immediately be tested for residual chlorine with potassium iodide paper. If residual chlorine is present in the sample, then 0.6 grams of ascorbic acid must be added. The sample should then be retested for chlorine residual, and if it is present, the addition of ascorbic acid should be repeated. Once residual chlorine

has been eliminated from the sample, the pH of the sample must be checked and elevated to greater than 12.0 standard units by the addition of sodium hydroxide, if necessary. Once the grab sample has been preserved to a pH greater than 12.0 standard units and no chlorine residual is detected, it may be composited with the other grab samples collected on that operating day. The composite of preserved grab samples must be refrigerated until analysis and must be analyzed within fourteen (14) days of collection for **Total Cyanide**. This sample must be in compliance with the EPA Metal Finishing Total Cyanide Standards referenced in Section A(5) of this permit.

Table 2 attached hereto summarizes the sampling requirements for this facility.

3. All water meters measuring flows, which ultimately discharge to the sampling locations specified previously, are to be read at the start of sampling and at the end of sampling. These readings and the resultant total flow are to be submitted with the sampling results.

4. The analytical results for each sampling month listed above must be received by the NBC within thirty (30) days after the end of the month in which the samples are to be collected. All sampling and analyses are to be done in accordance with EPA approved procedures (40 CFR §403 and 40 CFR §136). The permittee must complete and submit a Self-Monitoring Compliance Report (copy enclosed) with each certified laboratory analysis sheet including chain of custody documentation. The laboratory analysis report must indicate the EPA approved test procedure for each parameter listed. All Self-Monitoring Compliance Reports must be signed by the permittee or authorized agent and certify that the information submitted is accurate and complete to the best of their knowledge.

5. The permittee must compare the analytical report results with the NBC's effluent discharge limitations listed in Table 1. If there are any violations of the NBC's standards, the permittee must notify the NBC within twenty-four (24) hours of becoming aware of the violation by contacting pretreatment staff at 461-8848 or by using the twenty-four (24) hour violation notification FAX form and must resample and analyze for the parameter(s) in violation of the NBC's standards, excluding BOD, TSS and pH. The resampling results must be received by the NBC no later than thirty (30) days following the date that the permittee became aware of the initial violation of the standards.

6. The NBC may, at any time, require more frequent monitoring than specified in this permit. Conditions that may result in the imposition of more frequent monitoring include, but are not limited to, the following:

    a. Failure to meet effluent limitations;
    b. Change in production processes;
    c. Expansion or reduction of production;
    d. Change in water usage;
    e. Discovery of additional information on monitoring or production unavailable to the NBC at the time this permit was prepared.

H. Record Keeping Requirements:

1. The permittee shall be responsible for maintaining a logbook documenting all records pertaining to the operation of the pretreatment system including, but not limited to, the following:

    a. Amount of chemicals used on a monthly basis to provide pretreatment;

    b. Amount of sludge generated on a monthly basis;

    c. Completed manifest forms for hazardous materials;

    d. A listing of all batch discharges including the date of the discharge and a description of the tank from which the discharge occurred;

    e. The amount of chemicals added to provide pretreatment of batch discharges;

    f. pH and chlorine residual readings taken during the course of providing batch treatment of any process wastewater and the amount of sludge generated, where applicable;

    g. Maintenance performed on the pretreatment system including weekly probe cleaning, monthly probe calibration and other maintenance requests specified by inspectors of the NBC.

2. The permittee shall be responsible for maintaining a logbook documenting all records pertaining to the boiler operation including, but not limited to, the following:

    a. A listing of each boiler facility blowdown visual inspection documenting the date, time, person conducting the blowdown and the appearance of the blowdown. This procedure ensures that a prohibited material is not discharged;

    b. A listing of the date of each fuel tank filling.

3. Records which substantiate any information supplied in permit applications, Self-Monitoring Compliance Reports and any other informational requirements of the Rules and Regulations or any applicable State or Federal law are to be kept by the permittee for a period of at least three (3) years unless a dispute or litigation involving the subject of those records is pending, in which case these records are to be kept by the permittee for a period of at least three (3) years following resolution of such litigation or dispute.

I. Spill and Slug Prevention Control Plan:

The permittee must maintain an approved Spill and Slug Prevention Control Plan and all associated facilities to ensure that incidental and accidental spills are unable to enter the NBC sewer system.

J. Toxic Organic/Solvent Management Plan:

The permittee must ensure that toxic organic compounds are not routinely discharged or spilled into the sewer system and must at all times maintain associated spill control facilities to ensure proper containment and disposal of toxic organic compounds. A list of toxic organic compounds is enclosed.

K. Emergency/Routine Notification Requirements:

1. Emergency Notification of Accidental/Incidental Discharge

In the case of an accidental discharge into the NBC facilities, including any discharge that would violate a Federal prohibition under 40 CFR §403.5(b), it is the responsibility of the permittee to notify the NBC of the incident immediately by calling the Pretreatment Section at 461-8848 or during non-business hours at its twenty-four (24) hour Emergency Hotline Number, 222-6781. Within five (5) days following an accidental discharge, the permittee shall submit to the NBC a detailed written report describing the cause and volume of the discharge and the measures to be taken by the user to prevent similar future occurrences by the permittee.

2. Routine Notification of Operational Changes

The permittee must notify the NBC in writing at least thirty (30) days prior to instituting any changes in operations that may affect the quality or quantity of the process wastestream discharged to the sewer system or may affect the adequacy of spill control measures. Operational changes that may affect the quality or quantity of the process wastestream or the adequacy of spill control measures include, but are not limited to, the following:

a. Addition, removal, or relocation of process tanks or solutions;
b. Installation of new wastewater generating process operations;
c. Relocation of process operation piping or valving resulting in a new or different point of discharge;
d. Modification of any pretreatment process or procedure;
e. Installation or modification of pretreatment equipment or associated piping;

Should the permittee be unsure as to whether an operational change requires written NBC notification, it is strongly recommended that the permittee contact the NBC by telephone prior to instituting the proposed change in operations. This will ensure that the proper notification is provided to the NBC. With respect to the thirty (30) day written notification requirement, should the permittee require immediate approval to make an operational change in order to accommodate business, the NBC will make every effort to accommodate the permittee so as to not impede operations at the facility. The discretion used by the NBC with respect to this issue is dependent on the magnitude of the proposed operational changes and the resulting effect on the characteristics of the wastestream and/or the spill control measures at the facility. The permittee may notify the NBC of the following operational changes by telephone rather than in writing as required above:

f. Change from the hours of facility operation specified in the discharge permit application;
g. Change in the personnel responsible for the proper operation of pretreatment equipment.

3. Routine Notification of Pretreatment Equipment Malfunctions

In the event of pretreatment equipment failure or malfunction, the permittee must notify the NBC of the incident by the close of the next full business day by calling the NBC's Pretreatment Section at 461-8848. Pretreatment equipment failure includes, but is not limited to, the following:

a. pH monitoring equipment failure;
b. pH probe failure;
c. pH chart recorder failure;
d. Chemical feed pump failure;
e. Pretreatment system pump, filter, or mixer failure.

Any equipment failure or malfunction which results in a spill and/or accidental discharge must be reported immediately in accordance with the NBC Emergency Spill Notification Procedure. Should a pretreatment equipment failure or malfunction occur, the permittee is strictly responsible for complying with all other permit conditions, including, but not limited to, maintaining full compliance with effluent limitations and monitoring requirements.

L. Right of Entry:

The NBC, upon presenting identification and appropriate credentials, is authorized to enter the premises of the permittee during working hours and at other reasonable times for the purposes of inspection, sampling, reading water meters, records inspecting and copying and as otherwise authorized under R.I.G.L. §46-25-25.1. Reasonable hours in the context of inspection and sampling include any time the NBC has reason to believe that violation of the permit or of the Rules and Regulations is occurring.

M. Permit Fee:

The permittee agrees to pay an annual permit fee and all sewer user fees assessed by the NBC in accordance with rates and fees approved by the Public Utilities Commission pursuant to R.I.G. L. §39-1-1 et seq. and §46-25-1 et seq. The permittee agrees to reimburse the NBC for the cost of the collection of any and all fees associated with the permit, including reasonable attorney's fees.

N. Authorization To Do Business:

The permittee is a corporation. The permittee shall ensure the corporation be registered with the Rhode Island Secretary of State Corporations Division. Monarch Metal Finishing Co., Inc. shall remain in good standing with the Rhode Island Secretary of State Corporations Division at all times. In the event Monarch Metal Finishing Co., Inc. has its charter or existence revoked by the Rhode Island Secretary of State, the permittee shall notify the NBC in writing within thirty (30) days of notice of such revocation.

In the event Monarch Metal Finishing Co., Inc. is no longer in good standing with the Rhode Island Secretary of State or the charter is revoked for any reason, any individual named as a co-permittee or any individual exercising ownership of Monarch Metal Finishing Co., Inc. shall be subject to the terms and conditions of the permit as if named herein.

O. Closing, Selling, Moving the Business:

If the permittee intends to close, liquidate, sell or move the permitted premises, located as referenced on page 1 of this permit, the permittee must notify the NBC in writing at least thirty (30) days prior to disposing of any process waste associated with the move or the cessation of business.

P. Transfer of Permit Prohibited:

Wastewater discharge permits are issued to a specific user for a specific operation. This permit may not be reassigned, transferred or sold to a new owner, new user, different premises, or a new or changed operation without the express written permission from the NBC. The permittee shall provide a copy of this permit to any prospective purchaser of said facility referenced on page 1 of this permit at least fourteen (14) days prior to closing on the business or property.

Q. Permit Violations:

1. Enforcement Costs

   The permittee agrees to reimburse the NBC for the cost of enforcing the permit, including reasonable attorneys' fees, if violations of the permit are found by a hearing officer during the course of an administrative hearing or if such decision is appealed, then in a court of competent jurisdiction.

2. Damage to the Facilities

   The permittee agrees to indemnify and hold harmless the NBC from and against any liability, loss, cost, expense or actual damage (including reasonable attorneys' and accountants' fees incurred in defending or prosecuting any claim for any such liability, loss, cost, expense or damage) suffered by the NBC and caused by discharges from the permittee, either singly or by interaction with other wastes.

3. Violations of the NBC's Permit

   The permittee agrees to reimburse the NBC for any penalty and additional operating expense incurred by the NBC for violations of the NBC's NPDES, RIPDES, or any other state or federal permit which were caused by discharges from the permittee, either singly or by interaction with other wastes.

4. Penalties for Violations

   Article 10 of the NBC's Rules and Regulations provides that any person who violates a permit condition is subject to an administrative or civil penalty of up to $25,000 per violation per day as defined in R.I.G.L. §46-25-25.2. Willful or criminally negligent violations shall be punishable by the aforementioned fine and/or imprisonment as defined in R.I.G.L. §46-25-25.3.

R. Revocation/Suspension of Permit:

1. Violations of the conditions of this permit, the NBC's Rules and Regulations, Act, and applicable state or Federal regulations may result in the revocation of this permit in accordance with the due process requirements of the NBC's Rules and Regulations. Violations that may result in revocation of this permit include, but are not limited to, the following:

   a. Failure to accurately report the wastewater constituents and characteristics of the discharge;
   b. Failure to report changes in operations or wastewater constituents;

   c. Failure to allow NBC personnel statutorily authorized access for the purposes of inspection or monitoring;

d. Failure to adhere to an approved compliance schedule;
e. Failure to comply with administrative orders or settlement agreements;
f. Failure to pay authorized fees and user charges;
g. Violation of any other applicable permit conditions.

This list is for illustrative purposes and is not intended to be inclusive.

2. The Executive Director may suspend this wastewater discharge permit should the permittee cease operations for any period exceeding one (1) month. The suspension will not act as a revocation of the permit, but rather as a temporary suspension of the user's rights under the permit while operations have ceased. During such suspension, the user's connection to the facilities shall be plugged. The user shall still be required to pay the permit fee, since the permit itself will not be revoked. During such suspension, the user shall be disconnected from the facility. The Commission shall have the authority to make periodic inspections during this time to determine whether the user is continuing to discharge regulated wastewater. Such discharge may be considered grounds for revocation of the wastewater discharge permit.

S. Civil and Criminal Liability:

Nothing in this permit shall be construed to relieve the permittee from civil and/or criminal penalties for noncompliance with the NBC's Rules and Regulations or State or Federal laws or regulations.

T. Duty to Comply:

1. The permittee must comply with all conditions of this permit. Failure to comply with the requirements of this permit may be grounds for enforcement proceedings including administrative, civil and/or criminal penalties, injunctive relief and summary abatements.

2. Compliance with this permit does not relieve the permittee of its obligation to comply with any or all pretreatment regulations, standards or requirements under local, State and Federal laws, including any such regulations, standards, requirements, or laws that may become effective during the term of this permit.

U. Removed Substances:

Solids, sludges, filter residue or other pollutants removed in the course of treatment or control of waters or wastewaters shall be disposed of in accordance with §405 of the Clean Water Act and subtitles C and D of the Resource Conservation and Recovery Act. A Resource Conservation and Recovery Act (RCRA) informational brochure is attached to this permit to inform you of your RCRA obligations.

V. Permit Modification/Renewal:

1. This permit may be modified for various reasons, including but not limited to the following:

    a. To incorporate any new or revised Federal, State, or local pretreatment standards or requirements;

    b. Material or substantial alterations or additions to permittee's process operations, discharge volume or discharge characteristics which were not considered in the drafting of this permit;

    c. A change in any condition regarding either the industrial user or the POTW that requires either a temporary or permanent reduction or elimination of the authorized discharge;

    d. Information indicating that the permitted discharge poses a threat to the NBC collection or treatment system, POTW personnel, the general public, or the receiving waters;

    e. Violation of any terms or conditions of the permit;

    f. Misrepresentation or failure to disclose fully all relevant facts in the permit application or in any required reporting;

    g. Revision of or a grant of variance from such categorical standards pursuant to 40 CFR §403.13;

    h. To correct typographical or other errors in the permit;

    i. To reflect transfer of the facility ownership and/or operation to a new owner/operator;

    j. Upon request of the permittee, provided such request does not create a violation of any applicable requirements, standards, laws, or rules and regulations.

The filing of a request by the permittee for a permit modification, revocation and reissuance, termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

2. If the permittee wishes to continue to discharge after the expiration date of this permit, an application must be filed for a permit renewal in accordance with the requirements of Article 8 of the NBC's Rules and Regulations a minimum of ninety (90) days prior to the expiration date.

W. Integration:

This permit represents the entire agreement and understanding of the parties hereto to those matters contained herein. No prior oral or written understanding shall be of any force or effect with respect to those matters covered hereunder. This permit may not be modified or altered except in accordance with the provisions of Article 8 of the Rules and Regulations. All terms used in this permit shall be construed as defined under Article 2 of the Rules and Regulations.

X. Jurisdiction:

This permit shall be administered and interpreted under the laws of the State of Rhode Island. Jurisdiction of litigation arising from this permit shall be in the State of Rhode Island. If any part of this permit is found to be in conflict with applicable laws, such part shall be inoperative, null and void insofar as it is in conflict with said law, but the remainder of this permit shall be in full force and effect.

IEJ:AB:smb

Attachments:

Self-Monitoring Compliance Report Form
Continuous pH Monitoring Report Form
Designation of Authorized Agent Form
RCRA Handbook
Twenty-four (24) Hour Violation Notification Fax Form
List of Licensed Laboratories
List of Toxic Organic Compounds

Table 1

NBC Effluent Discharge Limitations
Field's Point District

Parameter	Limitation (Max)
Total Toxic Organics (TTO)	2.13
Biochemical Oxygen Demand (BOD_5)	300.00*
Total Suspended Solids (TSS)	300.00*
Total Oil and Grease (fats, oils and grease)	125.0
Oil and Grease (mineral origin)	25.0
Oil and Grease (animal/vegetable origin)	100.0
pH range (at all times)	5.0 - 11.0 s.u.

Parameter	Daily Maximum Composite for 1 day (mg/l)	Average 10 day (mg/l)
Cadmium (Total)	0.11	0.07
Chromium (Total)	2.77	1.71
Copper (Total)	1.20	1.20
Cyanide (Total)	0.58	0.58
Lead (Total)	0.60	0.40
Mercury (Total)	0.005	0.005
Nickel (Total)	1.62	1.62
Silver (Total)	0.43	0.24
Zinc (Total)	2.61	1.48

All limitations are in units of mg/l unless otherwise specified.

* Exceeding this discharge limitation may be permitted but would be subject to a surcharge in accordance with rates approved by the Public Utilities Commission and in accordance with R.I.G.L. §39-1-1 et seq.

Table 2

Monarch Metal Finishing Co., Inc.
Sampling Requirements

	Sample Location #1 Sample Port on the Final Discharge Line Located Near the Polishing Area		Sample Location #2 Sample Port on the Discharge Line of the Continuous Cyanide Oxidation Tank	
Month	**Composite Sample**	**Parameters**	**Grab Sample***	**Parameters**
January	X	Cu, Ni, Zn, CN	X	EPA-CN
February	X	Cu, Ni, Zn, CN		
March	X	Cu, Ni, Zn, CN		
April	X	Cd, Cr, Cu, Ni, Pb, Ag, Zn, CN		
May	X	Cu, Ni, Zn, CN		
June	X	Cu, Ni, Zn, CN		
July	X	Cu, Ni, Zn, CN	X	EPA-CN
August	X	Cu, Ni, Zn, CN		
September	X	Cu, Ni, Zn, CN		
October	X	Cd, Cr, Cu, Ni, Pb, Ag, Zn, CN		
November	X	Cu, Ni, Zn, CN		
December	X	Cu, Ni, Zn, CN		

Legend
Cd - Cadmium
Cr - Chromium
Cu - Copper
CN - Cyanide
Pb - Lead
Ni - Nickel
Ag - Silver
Zn - Zinc

*These grab samples are to be collected on the same day that the composite sample is collected and tank is to be discharged while composite sample is being collected.

CERTIFICATE TO DISCHARGE

the following types of process water:

TREATED METAL FINISHING WASTEWATER

into the facilities of the

Narragansett Bay Commission

is hereby granted to:

Monarch Metal Finishing Co., Inc.
189 Georgia Avenue
Providence, RI 02905

PERMIT NUMBER: P1112-236-0620

PERMIT EXPIRATION DATE: 06/30/2020

The discharge permit must be kept at the above address for inspection. Failure to comply with the rules and regulations of the Narragansett Bay Commission or with the conditions of the discharge permit will subject the permittee to fines of up to $25,000 per violation per R.I.G.L. 46-25-25.3.

June 30, 2015
Initial Date of Issuance

/s/ Kerry M. Britt
Kerry M. Britt, Pretreatment Manager

TYPICAL PHARMACEUTICAL WASTEWATER DISCHARGE PERMIT

WASTEWATER DISCHARGE PERMIT

Permit Number: B1404-015-0317
Company Name: **DENISON ACQUISITION COMPANY, LLC D/B/A DENISON PHARMACEUTICALS, LLC**
Facility Address: 1 Powder Hill Road, Lincoln, RI 02865
Mailing Address: 1 Powder Hill Road, Lincoln, RI 02865
Facility President: Mr. Bradley S. Stone
Facility Authorized Agent: Mr. Bradley S. Stone
User Classification: Pharmaceutical Manufacturing Operations
Categorical Standards Applicable: 40 CFR §439.47, Pretreatment Standards for New Sources

By virtue of Rhode Island's General Laws Title 46 Chapter 25 (Act) and in accordance with the Rules And Regulations For The Use Of Wastewater Facilities Within The Narragansett Bay Water Quality Management District (Rules and Regulations), **Mr. Bradley S. Stone and Denison Acquisition Company, LLC d/b/a Denison Pharmaceuticals, LLC**, hereinafter jointly referred to as **Permittee**, is hereby authorized to discharge process wastewater from the above identified facility in accordance with the terms and conditions set forth in this permit.

All discharges authorized herein must be consistent with the effluent limitations, monitoring requirements and other conditions set forth in this permit. The discharge of any pollutant not identified in this permit or any pollutant identified in this permit at a level in excess of that authorized shall constitute a violation of the permit. This permit consists of 21 pages with conditions A - V.

This permit is effective on April 1, 2012
and expires on March 31, 2017.

Noncompliance with any term or condition of this permit shall constitute a violation of the NBC's Rules and Regulations and may subject the user to an **Administrative or Civil Penalty** of up to $25,000 per violation per day as defined in R.I.G.L. §46-25-25.2. Willful or criminally negligent violations shall be punishable by the aforementioned fine and/or imprisonment as defined in R.I.G.L. §46-25-25.3.

For the **Narragansett Bay Commission:**

/s/ Kerry M. Britt
Kerry M. Britt, Pretreatment Manager
Narragansett Bay Commission

March 23, 2012
Date

NOTE: The NBC will accept the person(s) named on this permit as the **Permittee's** authorized agent(s) until notified otherwise.

An authorized agent or authorized company representative is a person who is a principal executive officer or other corporate officer with signatory powers as per the **Permittee's** by-laws or per a vote of the directors if the **Permittee** is a corporation; a general partner or proprietor if the **Permittee** is a partnership or sole proprietorship respectively; or a duly authorized representative of an individual designated above if such representative is responsible for the overall operation of the facility and has the authority to sign contracts, permits, permit applications, monitoring results and other documents in the company's name and otherwise bind the **Permittee**. The **Permittee** may designate additional or new authorized agents by completing and submitting the enclosed Designation of Authorized Agent form.

The NBC will not accept documents signed by persons other than the Company's authorized agent(s) or authorized representative(s).

CONDITIONS TO PERMIT

A. Effluent Discharge Limitations:

1. The permittee shall at all times comply with the effluent limitations specified in Table 1 on page 19, attached hereto and incorporated herein.

2. The permittee shall comply with all discharge limitations and prohibitions contained in Article 5 of the NBC's Rules and Regulations, as well as all other provisions of those Rules, and any other applicable State or Federal standards, including but not limited to the Federal Water Pollution Control Act, 33 U.S.C. §1251 et seq. and R.I.G.L. §46-12-1 et seq. The permittee shall at all times comply with 40 CFR §403.5 and may not introduce into the NBC's facilities any pollutants which shall violate the general or specific prohibitions including but not limited to discharges resulting in pass through or interference situations at the NBC's facilities.

3. The permittee shall not increase the use of process water or dilute a discharge in any way as a partial or complete substitute for adequate treatment to achieve compliance with the above standards.

4. The permittee is classified as a pharmaceutical manufacturing firm and therefore must at all times comply with EPA Categorical Regulations 40 CFR §439.47, Subpart D, Pretreatment Standards for New Sources. EPA regulations require pharmaceutical manufacturers to maintain full compliance with the maximum daily discharge limit of 20.7 ppm and the monthly average of 8.2 ppm for n-amyl acetate, ethyl acetate, and isopropyl acetate. Subpart D of the pharmaceutical regulations also requires categorical pharmaceutical manufacturers to maintain full compliance with the maximum daily discharge limit of 3.0 ppm and the monthly average limit of 0.7 ppm for methylene chloride. NBC discharge limits for the Bucklin Point Treatment Facility do not exist for n-amyl acetate, ethyl acetate, and isopropyl acetate. The categorical limits are therefore in effect for these parameters. Methylene chloride and acetone are included in the NBC list of Total Toxic Organics and must meet the more stringent local limit of 2.13 mg/L. NBC discharge limits for all other parameters in this permit are more stringent than the EPA categorical limitations. Therefore, NBC local limits will be applied and enforced for all other parameters.

B. Permitted Discharges:

1. The permittee is authorized to discharge the following tanks, solutions or process wastewater streams to the NBC facilities:

    a. Treated Process Tank Washwater;
    b. Treated Laboratory Glassware Washwater;
    c. Reverse Osmosis Reject Wastewater;

d. Carbon Filter Backwash;
e. Softener Regenerant Wastewater;
f. Treated Air Compressor Condensate;
g. Non-Contact Cooling Water.

2. No other process wastewater is to be discharged to the sewer unless specifically approved by the NBC in writing.

C. Prohibitions:

1. The permittee is strictly prohibited from discharging any prohibited substances detailed in the Rules and Regulations of the Narragansett Bay Commission. Prohibited discharges include, but are not limited to, the following:

    a. Off-specification Product Batches;
    b. Concentrated Raw Materials and Solutions;
    c. Acidic Solutions with a pH less than 5.0 standard units;
    d. Caustic Solutions with a pH greater than 11.0 standard units;
    e. Degreasing Solutions;
    f. Solvents;
    g. Sludges;
    h. Fuel or Lubricating Oils;
    i. Laboratory Chemicals.

2. The permittee is strictly prohibited from discharging any process wastewater streams other than those specified in Section B(1) of this permit or wastestreams containing pollutants with concentrations in excess of the effluent limitations specified in Table 1 on page 19, attached hereto and incorporated herein.

3. The permittee may only treat and/or discharge those solutions that were indicated as such on plans submitted to the NBC by the permittee on February 13, 2012. The permittee is strictly prohibited from discharging any other tanks, solutions, chemicals or materials, including all prohibited substances as defined in the Rules and Regulations of the Narragansett Bay Commission, without written approval from the NBC.

4. The permittee is strictly prohibited from using portable pumps and/or flexible hose to transfer solutions directly to the pretreatment system or to bypass the pretreatment system and/or discharge solutions directly to the sewer without written approval from the NBC.

D. Pretreatment Requirements:

1. The permittee must provide and maintain an easily accessible sample location downstream of each process discharge specified in Section B(1) of this permit. A total of one sample location must be provided and must collect wastewater from the process operations indicated as follows:

   Sample Location #1 - Effluent monitoring station, collecting all process discharges specified in Section B(1)(a and b) of this permit.

   The permittee is prohibited from discharging dilution wastestreams, such as sanitary and non-contact cooling water into any process wastewater sampling location. Dilution wastestreams must discharge downstream of the process wastewater sampling location. The discharge through Sample Location #1 must be in compliance with the effluent limitations specified in Section A and Table 1 of this permit and with the EPA Pharmaceutical Manufacturing Standards referenced in Section A(4) of this permit.

2. The permittee shall provide additional pretreatment of the process wastewater discharges listed in Section B(1) above if determined necessary by the NBC to ensure that effluent limitations are met at all times. Plans of additional pretreatment systems must be submitted to the NBC for approval before beginning construction.

3. The permittee shall operate and maintain a pretreatment system in conformance with plans submitted to the NBC on February 13, 2012. This pretreatment system shall be fully operational whenever process discharges to the sewer occur.

4. The permittee is responsible for properly operating and maintaining the pretreatment system to achieve and ensure compliance with the conditions of this permit. Proper operation and maintenance shall include but not be limited to: effective performance, adequate funding, adequate operator staffing and training, adequate laboratory and process controls, including appropriate quality assurance procedures.

E. Monitoring Requirements:

1. The permittee shall monitor the final pH, and volume of each treated batch discharge and shall record the data in the pretreatment system logbook referenced in Section F(1) of this permit. The final pH, and volume of each batch discharge is to be reported to the NBC monthly on a summary report within thirty (30) days from the end of the month in which the data was recorded. (See sample copy enclosed).

2. During the first four batch discharges, the permittee shall collect seven (7) grab samples from the effluent monitoring station, Sample Location #1, after treatment and just prior to discharge.

a. The first grab sample from each batch discharge is to be collected, preserved, and analyzed in accordance with EPA protocols separately for the following parameters:

Cadmium (Total)	Copper (Total)	Silver (Total)
Chromium (Total)	Lead (Total)	Zinc (Total)
	Nickel (Total)	

b. The second grab sample from each batch discharge must be preserved immediately upon sample collection in accordance with EPA Regulations. The grab sample must immediately be tested for residual chlorine with potassium iodide paper. If the sample is known to contain residual chlorine, add sodium thiosulfate preservative (10 mg/40ml) to the empty sample bottles just prior to shipment to the sample site. If the sample is tested and residual chlorine is present then 0.008% by volume of sodium thiosulfate must be added (i.e., 2 mg per 25 ml of sample collected). The sample should then be retested for chlorine residual; if it is present, the addition of sodium thiosulfate should be repeated. Once chlorine residual has been eliminated from the sample, the sample should be stored in the dark and refrigerated at a temperature of 0-4° C until analysis. No air bubbles may be present in any grab sample or that sample must be discarded. The grab sample is to be analyzed within fourteen (14) days of collection by EPA Method 1666 for the following **Volatile Organic Compounds** specific to the Pharmaceutical Manufacturing Industry:

n-Amyl acetate
Ethyl acetate
Isopropyl acetate

c. The third grab sample from each batch discharge is to be collected, preserved, and analyzed in accordance with analytical method number D3695, D4763, 524.2, or 1624 and with EPA protocols for the following parameter:

Acetone

d. The fourth grab sample from each batch discharge is to be collected in a glass bottle with a Teflon lined cap with a volume of either 25 or 40 ml. The grab sample must be preserved immediately upon sample collection in accordance with EPA Regulations. The grab sample must immediately be tested for residual chlorine with potassium iodide paper. If residual chlorine is present in the sample, then 0.008% by volume of sodium thiosulfate must be added (i.e., 2 mg per 25 ml of sample collected). The sample should then be retested for chlorine residual; if it is present, the addition of sodium thiosulfate should be repeated. Once chlorine residual has been eliminated from the sample, the sample should be stored in the dark and refrigerated at a temperature of 0-4° C until analysis. No air bubbles may be present in the grab sample or that sample must be discarded. The grab sample is to be analyzed within three (3) days of collection for the **Volatile Organic Compounds (purgeables)** fraction of the Total Toxic Organics (TTO) list enclosed.

e. The fifth grab sample from each batch discharge is to be collected in a 1000 ml (minimum) glass amber bottle with a Teflon lined cap. The grab sample must be preserved immediately upon sample collection according to EPA Regulations. The sample must be tested for residual chlorine with potassium iodide paper. If chlorine residual is present in the sample, 0.008% by volume of sodium thiosulfate must be added (i.e., 80 mg per liter of sample collected). The sample should then be retested for chlorine residual; if it is present, the addition of sodium thiosulfate shall be repeated. Once chlorine residual has been eliminated from the sample, the pH of the sample must be adjusted to between 6.0 and 9.0 standard units and the sample must be stored in the dark until analysis. The sample must be extracted within seven (7) days of collection and must be analyzed within forty (40) days of extraction for the **Acid, Base and Neutral fraction** of the Total Toxic Organics (TTO) list enclosed.

f. The sixth grab sample from each batch discharge must be collected in a glass bottle, preserved according to EPA protocols and must be analyzed for the following parameter:

Total Oil and Grease (fats, oils, and grease)

g. The seventh grab sample from each batch discharge is to be collected, preserved, and analyzed according to EPA protocols for the following parameters:

Biochemical Oxygen Demand (BOD)
Total Suspended Solids (TSS)

h. The analytical results are to be received by the NBC by May 30, 2012. All sampling and analyses are to be done in accordance with EPA approved procedures (40 CFR §403 and 40 CFR §136). These results are to be accompanied by a certified laboratory analysis sheet including chain of custody documentation, indicating the EPA approved test procedure for each parameter listed. A completed Self-Monitoring Compliance Report form must also accompany each set of results (see sample copy enclosed).

3. During the months of January, April, July, and October, until the expiration date of this permit, the permittee must conduct sampling from the effluent monitoring station, Sample Location #1, while a batch discharge is occurring.

a. During the months of January, April, July, and October, one grab sample is to be collected in a glass container having a total volume greater than 20 ml. The grab sample must be preserved immediately upon sample collection in accordance with EPA Regulations. The grab sample must immediately be tested for residual chlorine with potassium iodide paper. If the sample is known to contain residual chlorine, add sodium thiosulfate preservative (10 mg/40ml) to the empty sample bottles just prior to shipment to the sample site. If the sample is tested and residual

chlorine is present then 0.008% by volume of sodium thiosulfate must be added (i.e., 2 mg per 25 ml of sample collected). The sample should then be retested for chlorine residual; if it is present, the addition of sodium thiosulfate should be repeated. Once chlorine residual has been eliminated from the sample, the sample should be stored in the dark and refrigerated at a temperature of 0-4° C until analysis. No air bubbles may be present in any grab sample or that sample must be discarded. The grab sample is to be analyzed within fourteen (14) days of collection by EPA Method 1666 for the following **Volatile Organic Compounds** specific to the Pharmaceutical Manufacturing Industry:

n-Amyl acetate
Ethyl acetate
Isopropyl acetate

b. During the months of January, April, July, and October, during the same batch discharge that samples in Section E(3)(a) are collected, one grab sample is to be collected, preserved, and analyzed in accordance with analytical method number D3695, D4763, 524.2, or 1624 and with EPA protocols for the following parameter:

Acetone

c. During the months of April and October, during the same batch discharge that samples in Section E(3)(a) are collected, one grab sample is to be collected in a glass bottle with a Teflon lined cap with a volume of either 25 or 40 ml. The grab sample must be preserved immediately upon sample collection in accordance with EPA Regulations. The grab sample must immediately be tested for residual chlorine with potassium iodide paper. If residual chlorine is present in the sample, then 0.008% by volume of sodium thiosulfate must be added (i.e., 2 mg per 25 ml of sample collected). The sample should then be retested for chlorine residual; if it is present, the addition of sodium thiosulfate should be repeated. Once chlorine residual has been eliminated from the sample, the sample should be stored in the dark and refrigerated at a temperature of 0-4° C until analysis. No air bubbles may be present in the grab sample or that sample must be discarded. The grab sample is to be analyzed within three (3) days of collection for the **Volatile Organic Compounds (purgeables)** fraction of the Total Toxic Organics (TTO) list enclosed.

d. During the months of April and October, during the same batch discharge that samples in Section E(3)(a) are collected, one grab sample is to be collected in a 1000 ml (minimum) glass amber bottle with a Teflon lined cap. The grab sample must be preserved immediately upon sample collection according to EPA Regulations. The sample must be tested for residual chlorine with potassium iodide paper. If chlorine residual is present in the sample, 0.008% by volume of sodium thiosulfate must be added (i.e., 80 mg per liter of sample collected). The sample should then be retested for chlorine residual; if it is present, the addition of sodium thiosulfate shall be repeated. Once chlorine residual has been eliminated from the sample, the pH of the sample must be adjusted to between 6.0 and 9.0 standard units

and the sample must be stored in the dark until analysis. The sample must be extracted within seven (7) days of collection and must be analyzed within forty (40) days of extraction for the **Acid, Base and Neutral fraction** of the Total Toxic Organics (TTO) list enclosed.

e. During the months of January, April, July, and October, until the expiration date of this permit, one grab sample must be collected in a glass bottle. The samples collected during April and October must be collected from the same batch discharge that is being sampled in Section E(3)(a). The sample must be collected and preserved according to EPA protocols and must be analyzed for the following parameter:

Total Oil and Grease (fats, oils, and grease)

f. During the months of January, April, July, and October, until the expiration date of this permit, the permittee must collect one grab sample. The samples collected during April and October must be collected from the same batch discharge that is being sampled in Section E(3)(a). The grab sample is to be collected, preserved, and analyzed according to EPA protocols for the following parameters:

Copper (Total) Zinc (Total)

g. During the months of January, April, July, and October, until the expiration date of this permit, the permittee must collect one grab sample. The samples collected during April and October must be collected from the same batch discharge that is being sampled in Section E(3)(a). The grab sample is to be collected, preserved, and analyzed according to EPA protocols for the following parameter:

Biochemical Oxygen Demand (BOD)
Total Suspended Solids (TSS)

Table 3 attached hereto summarizes the sampling requirements for this facility.

4. All water meters measuring flows, which ultimately discharge to the sampling locations specified previously, are to be read at the start of sampling and at the end of sampling. These readings and the resultant total flow are to be submitted with the sampling results.

5. The analytical results for each sampling month listed above must be received by the NBC within thirty (30) days after the end of the month in which the samples are to be collected. All sampling and analyses are to be done in accordance with EPA approved procedures (40 CFR §403 and 40 CFR §136). The permittee must complete and submit a Self-Monitoring Compliance Report (copy enclosed) with each certified laboratory analysis sheet including chain of custody documentation. The laboratory analysis report must indicate the EPA approved test procedure for each parameter listed. All Self-Monitoring Compliance Reports must be signed by the permittee or authorized agent and certify that the information submitted is accurate and complete to the best of their knowledge.

6. The permittee must compare the analytical report results with the NBC's effluent discharge limitations listed in Table 1. If there are any violations of the NBC's standards, the permittee must notify the NBC within twenty-four (24) hours of becoming aware of the violation by contacting pretreatment staff at 461-8848 or by using the twenty-four (24) hour violation notification FAX form and must resample and analyze for the parameter(s) in violation of the NBC's standards, excluding BOD, TSS and pH. The resampling results must be received by the NBC no later than thirty (30) days following the date that the permittee became aware of the initial violation of the standards.

7. The NBC may, at any time, require more frequent monitoring than specified in this permit. Conditions that may result in the imposition of more frequent monitoring include, but are not limited to, the following:

    a. Failure to meet effluent limitations;
    b. Change in production processes;
    c. Expansion or reduction of production;
    d. Change in water usage;
    e. Discovery of additional information on monitoring or production unavailable to the NBC at the time this permit was prepared.

F. Record Keeping Requirements:

1. The permittee shall be responsible for maintaining a logbook documenting all records pertaining to the operation of the pretreatment system including, but not limited to, the following:

    a. Amount of chemicals used on a monthly basis to provide pretreatment;
    b. Amount of sludge generated on a monthly basis;
    c. Completed manifest forms for hazardous materials;
    d. A listing of all batch discharges including the date of the discharge and a description of the tank from which the discharge occurred;
    e. The amount of chemicals added to provide pretreatment of batch discharges;
    f. pH and chlorine residual readings taken during the course of providing batch treatment of any process wastewater and the amount of sludge generated, where applicable;
    g. Maintenance performed on the pretreatment system including weekly probe cleaning, monthly probe calibration and other maintenance requests specified by inspectors of the NBC.

2. Records which substantiate any information supplied in permit applications, Self-Monitoring Compliance Reports and any other informational requirements of the Rules and Regulations or any applicable State or Federal law are to be kept by the permittee for a period of at least three (3) years unless a dispute or litigation involving the subject of those records is pending, in which case these records are to be kept by the permittee for a period of at least three (3) years following resolution of such litigation or dispute.

G. Spill and Slug Prevention Control Plan:

Within one (1) month from the effective date of this permit, the permittee must complete and submit the NBC guidance document entitled Spill and Slug Prevention Control Plan for NBC Sewer Users. This plan shall include detailed plans of equipment and structures that have been or will be installed to prevent incidental or accidental spills of untreated wastewater, raw materials, and/or hazardous materials from entering the NBC facilities. This plan shall include a description of the operating procedures to contain and handle the spill and shall address all items in the enclosed copy of the plan. The permittee must obtain NBC approval of the Spill and Slug Prevention Control Plan. Within one (1) month from the approval date of the Spill and Slug Prevention Control Plan, the permittee must implement the NBC approved Spill and Slug Prevention Control Plan and must maintain the plan in effect at all times.

H. Toxic Organic/Solvent Management Plan:

Within one (1) month from the effective date of this permit, the permittee must submit the NBC guidance document entitled Toxic Organic/Solvent Management Plan. This plan must specify the toxic organic compounds used, the method of disposal used instead of dumping, and procedures for ensuring that toxic organic compounds do not routinely spill or leak into the NBC wastewater system. The permittee must obtain NBC approval of the Toxic Organic/Solvent Management Plan. Within one (1) month from the approval date of the Toxic Organic/Solvent Management Plan the permittee must implement the approved Toxic Organic/Solvent Management Plan and maintain all associated facilities to ensure that toxic organic compounds are not routinely discharged or spilled into the NBC sewer system. A list of toxic organic compounds and a sample Toxic Organic/Solvent Management Plan are enclosed.

I. Emergency/Routine Notification Requirements:

1. Emergency Notification of Accidental/Incidental Discharge

In the case of an accidental discharge into the NBC facilities, including any discharge that would violate a Federal prohibition under 40 CFR 403.5(b), it is the responsibility of the permittee to notify the NBC of the incident immediately by calling the Pretreatment Section at 461-8848 or during non-business hours at its twenty-four (24) hour Emergency Hotline Number, 434-6350. Within five (5) days following an accidental discharge, the permittee shall submit to the NBC a detailed written report describing the cause and volume of the discharge and the measures to be taken by the user to prevent similar future occurrences by the permittee.

2. Routine Notification of Operational Changes

The permittee must notify the NBC in writing at least thirty (30) days prior to instituting any changes in operations that may affect the quality or quantity of the process wastestream discharged to the sewer system or may affect the adequacy of spill control measures. Operational changes that may affect the quality or quantity of the process wastestream or the adequacy of spill control measures include, but are not limited to, the following:

a. Addition, removal, or relocation of process tanks or solutions;
b. Installation of new wastewater generating process operations;
c. Relocation of process operation piping or valving resulting in a new or different point of discharge;
d. Modification of any pretreatment process or procedure;
e. Installation or modification of pretreatment equipment or associated piping;

Should the permittee be unsure as to whether an operational change requires written NBC notification, it is strongly recommended that the permittee contact the NBC by telephone prior to instituting the proposed change in operations. This will ensure that the proper notification is provided to the NBC. With respect to the thirty (30) day written notification requirement, should the permittee require immediate approval to make an operational change in order to accommodate business, the NBC will make every effort to accommodate the permittee so as to not impede operations at the facility. The discretion used by the NBC with respect to this issue is dependent on the magnitude of the proposed operational changes and the resulting effect on the characteristics of the wastestream and/or the spill control measures at the facility. The permittee may notify the NBC of the following operational changes by telephone rather than in writing as required above:

f. Change from the hours of facility operation specified in the discharge permit application;
g. Change in the personnel responsible for the proper operation of pretreatment equipment.

3. Routine Notification of Pretreatment Equipment Malfunctions

In the event of pretreatment equipment failure or malfunction, the permittee must notify the NBC of the incident by the close of the next full business day by calling the NBC's Pretreatment Section at 461-8848. Pretreatment equipment failure includes, but is not limited to, the following:

a. pH monitoring equipment failure;
b. pH probe failure;
c. pH chart recorder failure;
d. Chemical feed pump failure;
e. Pretreatment system pump, filter, or mixer failure.

Any equipment failure or malfunction which results in a spill and/or accidental discharge must be reported immediately in accordance with the NBC Emergency Spill Notification Procedure. Should a pretreatment equipment failure or malfunction occur, the permittee is strictly responsible for complying with all other permit conditions, including, but not limited to, maintaining full compliance with effluent limitations and monitoring requirements.

J. Right of Entry:

The NBC, upon presenting identification and appropriate credentials, is authorized to enter the premises of the permittee during working hours and at other reasonable times for the purposes of inspection, sampling, reading water meters, records inspecting and copying and as otherwise authorized under R.I.G.L. §46-25-25.1. Reasonable hours in the context of inspection and sampling include any time the NBC has reason to believe that violation of the permit or of the Rules and Regulations is occurring.

K. Permit Fee:

The permittee agrees to pay an annual permit fee and all sewer user fees assessed by the NBC in accordance with rates and fees approved by the Public Utilities Commission pursuant to R.I.G.L. §39-1-1 et seq. and §46-25-1 et seq. The permittee agrees to reimburse the NBC for the cost of the collection of any and all fees associated with the permit, including reasonable attorney's fees.

L. Authorization To Do Business:

The permittee is a corporation. The permittee shall ensure the corporation be registered with the Rhode Island Secretary of State Corporations Division. Denison Acquisition Company, LLC d/b/a Denison Pharmaceuticals, LLC shall remain in good standing with the Rhode Island Secretary of State Corporations Division at all times. In the event Denison Acquisition Company, LLC d/b/a Denison Pharmaceuticals, LLC has its charter or existence revoked by the Rhode Island Secretary of State, the permittee shall notify the NBC in writing within thirty (30) days of notice of such revocation.

In the event Denison Acquisition Company, LLC d/b/a Denison Pharmaceuticals, LLC is no longer in good standing with the Rhode Island Secretary of State or the charter is revoked for any reason, any individual named as a co-permittee or any individual exercising ownership of Denison Acquisition Company, LLC d/b/a Denison Pharmaceuticals, LLC shall be subject to the terms and conditions of the permit as if named herein.

M. Closing, Selling, Moving the Business:

If the permittee intends to close, liquidate, sell or move the permitted premises, located as referenced on page 1 of this permit, the permittee must notify the NBC in writing at least thirty (30) days prior to disposing of any process waste associated with the move or the cessation of business.

N. Transfer of Permit Prohibited:

Wastewater discharge permits are issued to a specific user for a specific operation. This permit may not be reassigned, transferred or sold to a new owner, new user, different premises, or a new or changed operation without the express written permission from the NBC. The permittee shall provide a copy of this permit to any prospective purchaser of said facility referenced on page 1 of this permit at least fourteen (14) days prior to closing on the business or property.

O. Permit Violations:

1. Enforcement Costs

   The permittee agrees to reimburse the NBC for the cost of enforcing the permit, including reasonable attorneys' fees, if violations of the permit are found by a hearing officer during the course of an administrative hearing or if such decision is appealed, then in a court of competent jurisdiction.

2. Damage to the Facilities

   The permittee agrees to indemnify and hold harmless the NBC from and against any liability, loss, cost, expense or actual damage (including reasonable attorneys' and accountants' fees incurred in defending or prosecuting any claim for any such liability, loss, cost, expense or damage) suffered by the NBC and caused by discharges from the permittee, either singly or by interaction with other wastes.

3. Violations of the NBC's Permit

   The permittee agrees to reimburse the NBC for any penalty and additional operating expense incurred by the NBC for violations of the NBC's NPDES, RIPDES, or any other state or federal permit which were caused by discharges from the permittee, either singly or by interaction with other wastes.

4. Penalties for Violations

Article 10 of the NBC's Rules and Regulations provides that any person who violates a permit condition is subject to an administrative or civil penalty of up to $25,000 per violation per day as defined in R.I.G.L. §46-25-25.2. Willful or criminally negligent violations shall be punishable by the aforementioned fine and/or imprisonment as defined in R.I.G.L. §46-25-25.3.

P. Revocation/Suspension of Permit:

1. Violations of the conditions of this permit, the NBC's Rules and Regulations, Act, and applicable state or Federal regulations may result in the revocation of this permit in accordance with the due process requirements of the NBC's Rules and Regulations. Violations that may result in revocation of this permit include, but are not limited to, the following:

    a. Failure to accurately report the wastewater constituents and characteristics of the discharge;
    b. Failure to report changes in operations or wastewater constituents;
    c. Failure to allow NBC personnel statutorily authorized access for the purposes of inspection or monitoring;
    d. Failure to adhere to an approved compliance schedule;
    e. Failure to comply with administrative orders or settlement agreements;
    f. Failure to pay authorized fees and user charges;
    g. Violation of any other applicable permit conditions.

    This list is for illustrative purposes and is not intended to be inclusive.

2. The Executive Director may suspend this wastewater discharge permit should the permittee cease operations for any period exceeding one (1) month. The suspension will not act as a revocation of the permit, but rather as a temporary suspension of the user's rights under the permit while operations have ceased. During such suspension, the user's connection to the facilities shall be plugged. The user shall still be required to pay the permit fee, since the permit itself will not be revoked. During such suspension, the user shall be disconnected from the facility. The Commission shall have the authority to make periodic inspections during this time to determine whether the user is continuing to discharge regulated wastewater. Such discharge may be considered grounds for revocation of the wastewater discharge permit.

Q. Civil And Criminal Liability:

Nothing in this permit shall be construed to relieve the permittee from civil and/or criminal penalties for noncompliance with the NBC's Rules and Regulations or State or Federal laws or regulations.

R. Duty To Comply:

1. The permittee must comply with all conditions of this permit. Failure to comply with the requirements of this permit may be grounds for enforcement proceedings including administrative, civil and/or criminal penalties, injunctive relief and summary abatements.

2. Compliance with this permit does not relieve the permittee of its obligation to comply with any or all pretreatment regulations, standards or requirements under local, State and Federal laws, including any such regulations, standards, requirements, or laws that may become effective during the term of this permit.

S. Removed Substances:

Solids, sludges, filter residue or other pollutants removed in the course of treatment or control of waters or wastewaters shall be disposed of in accordance with §405 of the Clean Water Act and subtitles C and D of the Resource Conservation and Recovery Act. A Resource Conservation and Recovery Act (RCRA) informational brochure is attached to this permit to inform you of your RCRA obligations.

T. Permit Modification/Renewal:

1. This permit may be modified for various reasons, including but not limited to the following:

    a. To incorporate any new or revised Federal, State, or local pretreatment standards or requirements;

    b. Material or substantial alterations or additions to permittee's process operations, discharge volume or discharge characteristics which were not considered in the drafting of this permit;

    c. A change in any condition regarding either the industrial user or the POTW that requires either a temporary or permanent reduction or elimination of the authorized discharge;

    d. Information indicating that the permitted discharge poses a threat to the NBC collection or treatment system, POTW personnel, the general public, or the receiving waters;

e. Violation of any terms or conditions of the permit;

f. Misrepresentation or failure to disclose fully all relevant facts in the permit application or in any required reporting;

g. Revision of or a grant of variance from such categorical standards pursuant to 40 CFR §403.13;

h. To correct typographical or other errors in the permit;

i. To reflect transfer of the facility ownership and/or operation to a new owner/operator;

j. Upon request of the permittee, provided such request does not create a violation of any applicable requirements, standards, laws, or rules and regulations.

The filing of a request by the permittee for a permit modification, revocation and reissuance, termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

2. If the permittee wishes to continue to discharge after the expiration date of this permit, an application must be filed for a permit renewal in accordance with the requirements of Article 8 of the NBC's Rules and Regulations a minimum of ninety (90) days prior to the expiration date.

U. Integration:

This permit represents the entire agreement and understanding of the parties hereto to those matters contained herein. No prior oral or written understanding shall be of any force or effect with respect to those matters covered hereunder. This permit may not be modified or altered except in accordance with the provisions of Article 8 of the Rules and Regulations. All terms used in this permit shall be construed as defined under Article 2 of the Rules and Regulations.

V. Jurisdiction:

This permit shall be administered and interpreted under the laws of the State of Rhode Island. Jurisdiction of litigation arising from this permit shall be in the State of Rhode Island. If any part of this permit is found to be in conflict with applicable laws, such part shall be inoperative, null and void insofar as it is in conflict with said law, but the remainder of this permit shall be in full force and effect.

NPD:NJD:smb

Attachments:

Self Monitoring Compliance Report Form
Batch pH Monitoring Report Form
Designation of Authorized Agent Form
RCRA Handbook
Twenty-four (24) Hour Violation Notification Fax Form
List of Licensed Laboratories
Toxic Organic/Solvent Management Plan
List of Toxic Organic Compounds
Spill and Slug Prevention Control Plan

Table 1

NBC Effluent Discharge Limitations
Bucklin Point District

Parameter	Limitation (Max)
Total Toxic Organics (TTO)	2.13
Biochemical Oxygen Demand (BOD_5)	300.00*
Total Suspended Solids (TSS)	300.00*
Total Oil and Grease (fats, oils and grease)	125.0
Oil and Grease (mineral origin)	25.0
Oil and Grease (animal/vegetable origin)	100.0
pH range (at all times)	5.0 - 11.0 s.u.

Parameter	Daily Maximum Concentration Limit (mg/l)	Monthly Average Concentration (mg/l)
Arsenic (Total)	0.20	0.10
Cadmium (Total)	0.11	0.07
Chromium (Total)	2.77	1.63
Copper (Total)	1.20	1.20
Cyanide (Total)	0.50	0.50
Lead (Total)	0.69	0.29
Mercury (Total)	0.06	0.03
Nickel (Total)	1.62	1.62
Selenium (Total)	0.40	0.20
Silver (Total)	0.40	0.20
Tin	4.00	2.00
Zinc (Total)	1.67	1.39

All limitations are in units of mg/l unless otherwise specified.

* Exceeding this discharge limitation may be permitted but would be subject to a surcharge in accordance with rates approved by the Public Utilities Commission and in accordance with R.I.G.L. §39-1-1 et seq.

Table 2

Denison Acquisition Company, LLC d/b/a Denison Pharmaceuticals, LLC

Pharmaceutical Manufacturing Pretreatment Standards for New Sources (PSNS) 40 CFR §439.47

Subpart D PSNS for Mixing, Compounding, and Formulating Subcategory D		
Pollutant or Pollutant Property	Maximum for Any One Day (mg/L)	Maximum for Monthly Average (mg/L)
n-Amyl acetate	20.7	8.2
Ethyl acetate	20.7	8.2
Isopropyl acetate	20.7	8.2
Acetone*	20.7	8.2
Methylene Chloride*	3.0	0.7

Must meet the combined total TTO discharge limit of 2.13 mg/L.

Table 3

Denison Acquisition Company, LLC d/b/a
Denison Pharmaceuticals, LLC
Sampling Requirements

	Sample Location #1 Effluent Monitoring Station	
Month	**Grab Sample**	**Parameters**
January	X	Cu, Zn, O&G, Acetone, n-Amyl Acetate, Ethyl Acetate, Isopropyl Acetate, Methylene Chloride, BOD, TSS
February		
March		
April	X	Cu, Zn, O&G, VOC, EXT, Acetone, n-Amyl Acetate, Ethyl Acetate, Isopropyl Acetate, Methylene Chloride, BOD, TSS
May		
June		
July	X	Cu, Zn, O&G, Acetone, n-Amyl Acetate, Ethyl Acetate, Isopropyl Acetate, Methylene Chloride, BOD, TSS
August		
September		
October	X	Cu, Zn, O&G, VOC, EXT, Acetone, n-Amyl Acetate, Ethyl Acetate, Isopropyl Acetate, Methylene Chloride, BOD, TSS
November		
December		

Legend

Cd - Cadmium	Pb - Lead	BOD - Biochemical Oxygen Demand
Cr - Chromium	Ni - Nickel	TSS - Total Suspended Solids
Cu - Copper	Ag - Silver	O & G - Total Oil and Grease (fats, oils, and grease)
CN - Cyanide	Zn - Zinc	VOC - Volatile Organic compounds Portion of TTO List
		EXT - Extractable Portion of TTO List

CERTIFICATE TO DISCHARGE

the following types of process water:

TREATED PROCESS TANK WASHWATER, LABORATORY GLASSWARE WASHWATER, REVERSE OSMOSIS WASTEWATER, AIR COMPRESSOR CONDENSATE, NON-CONTACT COOLING WATER

into the facilities of the

Narragansett Bay Commission

is hereby granted to:

Denison Acquisition Company, LLC d/b/a Denison Pharmaceuticals, LLC

1 Powder Hill Road

Lincoln, RI 02865

PERMIT NUMBER: B1404-015-0317

PERMIT EXPIRATION DATE: 03/31/2017

The discharge permit must be kept at the above address for inspection. Failure to comply with the rules and regulations of the Narragansett Bay Commission or with the conditions of the discharge permit will subject the permittee to fines of up to $25,000 per violation per R.I.G.L. 46-25-25.3.

March 23, 2012
Initial Date of Issuance

/s/ Nathan J. Dean
Nathan J. Dean, Assistant Pretreatment Manager

TYPICAL METAL FORMER WASTEWATER DISCHARGE PERMIT

WASTEWATER DISCHARGE PERMIT

Permit Number: B1506-016-0418
Company Name: **TIFFANY AND COMPANY**
Facility Address: 300 Maple Ridge Drive, Cumberland, RI 02864
Mailing Address: 300 Maple Ridge Drive, Cumberland, RI 02864
Facility President: Mr. Michael J. Kowalski
Facility Authorized Agents: Mr. Michael Kane, Mr. Gregory J. Gongaware, Mr. Christopher Lepore,
Mr. P. Adrian Medrano
User Classification: Non-Ferrous Precious Metal Forming Operations
Categorical Standards Applicable: 40 CFR §471.45, Pretreatment Standards for New Sources

By virtue of Rhode Island's General Laws Title 46 Chapter 25 (Act) and in accordance with the Rules And Regulations For The Use Of Wastewater Facilities Within The Narragansett Bay Water Quality Management District (Rules and Regulations), **Mr. Michael J. Kowalski and Tiffany and Company**, hereinafter jointly referred to as **Permittee**, is hereby authorized to discharge process wastewater from the above identified facility in accordance with the terms and conditions set forth in this permit.

All discharges authorized herein must be consistent with the effluent limitations, monitoring requirements and other conditions set forth in this permit. The discharge of any pollutant not identified in this permit or any pollutant identified in this permit at a level in excess of that authorized shall constitute a violation of the permit. This permit consists of 19 pages with conditions A - W and Attachment A.

This permit is effective on May 1, 2013
and expires on April 30, 2018.

Noncompliance with any term or condition of this permit shall constitute a violation of the NBC's Rules and Regulations and may subject the user to an **Administrative or Civil Penalty** of up to $25,000 per violation per day as defined in R.I.G.L. §46-25-25.2. Willful or criminally negligent violations shall be punishable by the aforementioned fine and/or imprisonment as defined in R.I.G.L. §46-25-25.3.

For the **Narragansett Bay Commission:**

/s/ Kerry M. Britt — April 26, 2013
Kerry M. Britt, Pretreatment Manager — Date
Narragansett Bay Commission

NOTE: The NBC will accept the person(s) named on this permit as the **Permittee's** authorized agent(s) until notified otherwise.

An authorized agent or authorized company representative is a person who is a principal executive officer or other corporate officer with signatory powers as per the **Permittee's** by-laws or per a vote of the directors if the **Permittee** is a corporation; a general partner or proprietor if the **Permittee** is a partnership or sole proprietorship respectively; or a duly authorized representative of an individual designated above if such representative is responsible for the overall operation of the facility and has the authority to sign contracts, permits, permit applications, monitoring results and other documents in the company's name and otherwise bind the **Permittee**. The **Permittee** may designate additional or new authorized agents by completing and submitting the enclosed Designation of Authorized Agent form.

The NBC will not accept documents signed by persons other than the Company's authorized agent(s) or authorized representative(s).

CONDITIONS TO PERMIT

A. Effluent Discharge Limitations:

1. The permittee shall at all times comply with the effluent limitations specified in Table 1 on page 17, attached hereto and incorporated herein.

2. The permittee shall comply with all discharge limitations and prohibitions contained in Article 5 of the NBC's Rules and Regulations, as well as all other provisions of those Rules, and any other applicable State or Federal standards, including but not limited to the Federal Water Pollution Control Act, 33 U.S.C. §1251 et seq. and R.I.G.L. §46-12-1 et seq. The permittee shall at all times comply with 40 CFR §403.5 and may not introduce into the NBC's facilities any pollutants which shall violate the general or specific prohibitions including but not limited to discharges resulting in pass through or interference situations at the NBC's facilities.

3. The permittee shall not increase the use of process water or dilute a discharge in any way as a partial or complete substitute for adequate treatment to achieve compliance with the above standards.

4. The permittee is classified as a non-ferrous precious metal former and, therefore, must at all times comply with EPA Categorical Regulations 40 CFR §471.45, Pretreatment Standards for New Sources. EPA regulations require that non-ferrous precious metal formers maintain production and flow data to ensure full compliance with categorical limitations for cadmium, copper, cyanide, and silver. Table 2 attached to the permit provides concentration based limits calculated from EPA production based limitations and facility production and flow data. The calculations are outlined in Attachment A. Since the EPA limitations in Table 2 are more stringent than the NBC limitations in Table 1, the EPA limitations will be enforced at the final discharge location. Local limitations will be enforced for all other parameters as categorical limitations do not apply.

B. Permitted Discharges:

1. The permittee is authorized to discharge the following tanks, solutions, or process wastewater streams to the NBC's facilities:

    a. Treated Pickling Rinsewaters;
    b. Treated Ion Exchange Regenerant;
    c. Treated Backwash from Filters;
    d. Treated Investing Wastewaters;
    e. Treated Divesting Wastewaters;

f. Treated Sanding and Grinding Area Floor Spills;
g. Treated Wastewater Treatment Room Floor Spills;
h. Treated Hand Wash Sink Wastewaters;
i. Treated Annealing Quench Contact Cooling Water;
j. Treated Shot Casting Contact Cooling Water;
k. Non-Contact Cooling Water;
l. Air Compressor Condensate;
m. Eye Wash Station Discharge.

2. No other process wastewater is to be discharged to the sewer unless specifically approved by the NBC in writing.

C. Prohibitions:

1. The permittee is strictly prohibited from discharging any prohibited substances detailed in the Rules and Regulations of the Narragansett Bay Commission. Prohibited discharges include, but are not limited to, the following:

a. Concentrated Pickling Solutions;
b. Mass Finishing Wastewaters;
c. Soak Cleaner Solutions;
d. Soak Cleaner Rinsewaters;
e. Ultrasonic Cleaner Solutions;
f. Ultrasonic Cleaner Rinsewaters;
g. Wet Air Scrubber Wastewater;
h. Casting Department Chiller Unit Solutions;
i. Stamp & Strike Annealing Oven Non-Contact Cooling Water;
j. Wet Grinding/Sanding Wastewaters;
k. Filtered Polishing Wastewaters;
l. Cooling Tower Discharges;
m. Electroplating Solutions;
n. Acetone Dip Tank Solutions;
o. Isopropyl Alcohol;
p. Isopropyl Alcohol-Castor Oil Solutions;
q. Cyanide Solutions;
r. Acidic Solutions with a pH less than 5.0 standard units;
s. Caustic Solutions with a pH greater than 11.0 standard units;
t. Degreasing Solutions;
u. Solvents;
v. Sludges;
w. Fuel or Lubricating Oils.

2. The permittee is strictly prohibited from discharging any process wastewater streams other than those specified in Section B(1) of this permit or wastestreams containing pollutants with concentrations in excess of the effluent limitations specified in Table 1 on page 17, attached hereto and incorporated herein.

3. The permittee may only treat and/or discharge those solutions that were indicated as such on plans received by the NBC from the permittee on August 15, 2000, June 2, 2003, January 29, 2004, October 20, 2009, March 25, 2010, August 16, 2010, December 15, 2010, March 5, 2012, May 31, 2012, and December 12, 2012. The permittee is strictly prohibited from discharging any other tanks, solutions, chemicals, or materials, including all prohibited substances as defined in the Rules and Regulations of the Narragansett Bay Commission, without written approval from the NBC.

4. The permittee is strictly prohibited from using portable pumps and/or flexible hose to transfer solutions directly to the pretreatment system or to bypass the pretreatment system and/or discharge solutions directly to the sewer without written approval from the NBC.

D. Pretreatment Requirements:

1. The permittee must provide and maintain an easily accessible sample location downstream of each process discharge specified in Section B(1) of this permit. A total of two (2) sample locations must be provided and must collect wastewater from the process operations indicated as follows:

   Sample Location #1 - Sample port on the discharge line of the final pH adjustment tank, collecting all process discharges specified in Section B(1) (a through j) of this permit.

   Sample Location #2 - Sample port on the discharge line of the oil/water separator, collecting all process discharges specified in Section B(1)(l) of this permit.

   The permittee is prohibited from discharging dilution wastestreams, such as sanitary and non-contact cooling water into any process wastewater sampling location. Dilution wastestreams must discharge downstream of the process wastewater sampling location. The discharge through Sample Locations #1 and #2 must be in compliance with the effluent limitations specified in Section A and Table 1 of this permit. The discharge through Sample Location #1 must be in compliance with the EPA Non-Ferrous Precious Metal Former Standards referenced in Section A(4) and Table 2 of this permit.

2. The permittee shall operate and maintain a pretreatment system in conformance with plans received by the NBC on April 24, 2002, January 29, 2004, October 19, 2006, and July 16, 2012. This pretreatment system shall be fully operational whenever process discharges to the sewer occur.

3. The permittee is responsible for properly operating and maintaining the pretreatment system to achieve and ensure compliance with the conditions of this permit. Proper operation and maintenance shall include but not be limited to: effective performance, adequate funding, adequate operator staffing and training, adequate laboratory and process controls, including appropriate quality assurance procedures.

E. Zero Discharge/Recycle Operation Requirements:

1. The permittee shall operate and maintain a Zero Process Discharge Wastewater Recycle Pretreatment System as illustrated in the plans that have been received by the NBC on January 29, 2004, October 12, 2004, November 8, 2004, March 16, 2006, October 19, 2006, March 18, 2008, July 10, 2009, August 31, 2009, March 23, 2010, December 15, 2010, July 11, 2011, December 2, 2011, April 26, 2012, June 18, 2012, July 2, 2012, July 12, 2012, and May 1 2013. This system shall be used specifically for the purpose of recycling wastewater or eliminating discharges from the following operations:

    a. Ultrasonic Cleaner Rinsing Operations;
    b. Soak Cleaner Rinsewaters;
    c. Mass Finishing Wastewaters;
    d. Casting Department Chiller Units;
    e. Wet Grinding/Sanding Operations;
    f. Filtered Polishing Operations;
    g. Polishing Department Cleaning Lines;
    h. Isopropyl Alcohol Recycling Operations;
    i. Solvent Cleaning Unit Operations;
    j. Rhodium Plating Operations;
    k. Stamp & Strike Annealing Oven Non-Contact Cooling Water;
    l. Castor Oil-Isopropyl Alcohol Operations;
    m. Acetone Dip Tank Operations.

2. The permittee shall make no changes to the process tanks or zero discharge system without first submitting plans to the NBC for approval. Only those solutions indicated as being discharged to the zero discharge system on the plans received by the NBC on January 29, 2004, October 12, 2004, November 8, 2004, March 16, 2006, October 19, 2006, March 18, 2008, July 10, 2009, August 31, 2009, March 23, 2010, December 15, 2010, July 11, 2011, December 2, 2011, April 26, 2012, June 18, 2012, July 2, 2012, July 12, 2012, and May 1, 2013 may be treated on-site in the pretreatment equipment.

3. If any problems with the zero discharge systems arise, or if the permittee would like to connect to the sewer for the purpose of discharging wastestreams referenced in Section E(1) above, the permittee must notify the NBC, in writing, and obtain written approval from the NBC before resuming discharge or making any physical changes to the process tanks, recycle systems, evaporation systems, or associated piping.

4. The permittee has capped off and sealed all sewer drain lines associated with the process operations identified in Section E(1) above. They must remain capped off and sealed so that no process wastewater may be discharged to the sewer through sanitary or any other sewer connections from the zero discharge operations.

5. The permittee shall post signs at all sanitary sewer connections stating the following: "Discharge of Chemicals Prohibited by Rhode Island Law".

6. Failure to notify NBC personnel prior to resuming process wastewater discharges to the sewer from the process operations listed in Section E(1) above may be considered an intentional violation of the NBC's Rules and Regulations and may subject the permittee to civil and/or criminal penalties as defined in R.I.G.L. §46-25-25.2 and §46-25-25.3.

F. Monitoring Requirements:

1. The permittee shall monitor the pH of the effluent discharge and record it continuously. The permittee shall report the results monthly in a summary report giving the maximum, minimum and average pH readings for each day of operation (see sample copy enclosed). The data must be reported directly from the recording chart to an accuracy of 0.1 standard units. The permittee must submit the pH Monitoring Report within thirty (30) days from the end of the month in which the data is recorded. The original recording chart must be maintained on site for a period of at least three (3) years.

2. The permittee shall conduct sampling over one (1) full normal operating day during the months of February, April, June, August, October, and December until the expiration date of this permit.

    a. A composite sample is to be collected which must consist of equal volume grab samples collected at least every half hour over the operating day or collected continuously with a composite sampler. The samples are to be collected from the sample port on the discharge line of the final pH adjustment tank, Sample Location #1. The composite samples collected in April and October are to be preserved and analyzed in accordance with EPA protocols for the following parameters:

Cadmium (Total)	Lead (Total)	Silver (Total)
Chromium (Total)	Nickel (Total)	Zinc (Total)
Copper (Total)		

        The composite samples collected during all other sampling months are to be preserved and analyzed in accordance with EPA protocols for the following parameters:

        Copper (Total) Silver (Total)

    b. During the months of April and October, on the same day that the composite samples listed in Section F(2)(a) above are being collected, the permittee shall collect a minimum of four (4) grab samples at equidistant time intervals over the entire operating day from the sample port on the discharge line of the final pH adjustment tank, Sample Location #1 (i.e., one (1) grab sample collected every two (2) hours over an eight (8) hour operating day). Each grab sample must be

preserved immediately upon sample collection in accordance with EPA regulations. The grab sample must immediately be tested for residual chlorine with potassium iodide paper. If residual chlorine is present in the sample, then 0.6 grams of ascorbic acid must be added. The sample should then be retested for chlorine residual, and if it is present, the addition of ascorbic acid should be repeated. Once residual chlorine has been eliminated from the sample, the pH of the sample must be checked and elevated to greater than 12.0 standard units by the addition of sodium hydroxide, if necessary. Once the grab sample has been preserved to a pH greater than 12.0 standard units and no chlorine residual is detected, it may be composited with the other grab samples collected on that operating day. The composite of preserved grab samples must be refrigerated until analysis and must be analyzed within fourteen (14) days of collection for **Total Cyanide**.

3. During the month of October, until the expiration date of this permit, the permittee shall collect one (1) grab sample from the sample port on the discharge line of the oil/water separator in the Mechanical Room, Sample Location #2. The grab sample for each month is to be collected in a glass bottle and must be preserved and analyzed in accordance with EPA protocols for the following parameter:

   Total Oil and Grease (fats, oils, and grease)

   Table 3 attached hereto summarizes the sampling requirements for this facility.

4. All water meters measuring flows, which ultimately discharge to the sampling locations specified previously, are to be read at the start of sampling and at the end of sampling. These readings and the resultant total flow are to be submitted with the sampling results.

5. The analytical results for each sampling month listed above must be received by the NBC within thirty (30) days after the end of the month in which the samples are to be collected. All sampling and analyses are to be done in accordance with EPA approved procedures (40 CFR §403 and 40 CFR §136). The permittee must complete and submit a Self-Monitoring Compliance Report (copy enclosed) with each certified laboratory analysis sheet including chain of custody documentation. The laboratory analysis report must indicate the EPA approved test procedure for each parameter listed. All Self-Monitoring Compliance Reports must be signed by the permittee or authorized agent and certify that the information submitted is accurate and complete to the best of their knowledge.

6. The permittee must compare the analytical report results with the NBC's effluent discharge limitations listed in Table 1. If there are any violations of the NBC's standards, the permittee must notify the NBC within twenty-four (24) hours of becoming aware of the violation by contacting pretreatment staff at 461-8848 or by using the twenty-four (24) hour violation notification FAX form and must resample and analyze for the parameter(s) in violation of the NBC's standards, excluding BOD, TSS and pH. The resampling results must be received by the NBC no later than thirty (30) days following the date that the permittee became aware of the initial violation of the standards.

7. The NBC may, at any time, require more frequent monitoring than specified in this permit. Conditions that may result in the imposition of more frequent monitoring include, but are not limited to, the following:

    a. Failure to meet effluent limitations;
    b. Change in production processes;
    c. Expansion or reduction of production;
    d. Change in water usage;
    e. Discovery of additional information on monitoring or production unavailable to the NBC at the time this permit was prepared.

G. Record Keeping Requirements:

1. The permittee shall be responsible for maintaining a logbook documenting all records pertaining to the operation of the pretreatment system including, but not limited to, the following:

    a. Amount of chemicals used on a monthly basis to provide pretreatment;

    b. Amount of sludge generated on a monthly basis;

    c. Completed manifest forms for hazardous materials;

    d. Maintenance performed on the pretreatment system including weekly probe cleaning, monthly probe calibration and other maintenance requests specified by inspectors of the NBC.

2. The permittee shall be responsible for maintaining production and flow data for all categorical processes, as defined in 40 CFR §471.45 which discharge to the sewer. These records must be maintained at the facility and be available at all times for NBC review. The permittee shall report the production and flow data monthly to the NBC within thirty (30) days from the end of the month in which the data is recorded.

3. Records which substantiate any information supplied in permit applications, Self-Monitoring Compliance Reports and any other informational requirements of the Rules and Regulations or any applicable State or Federal law are to be kept by the permittee for a period of at least three (3) years unless a dispute or litigation involving the subject of those records is pending, in which case these records are to be kept by the permittee for a period of at least three (3) years following resolution of such litigation or dispute.

H. Spill and Slug Prevention Control Plan:

The permittee must maintain an approved Spill and Slug Prevention Control Plan and all associated facilities to ensure that incidental and accidental spills are unable to enter the NBC sewer system.

I. Toxic Organic/Solvent Management Plan:

The permittee must maintain an approved Toxic Organic/Solvent Management Plan to ensure that toxic organic compounds are not routinely discharged or spilled into the sewer system and must at all times maintain associated spill control facilities to ensure proper containment and disposal of toxic organic compounds. A list of toxic organic compounds is enclosed.

J. Emergency/Routine Notification Requirements:

1. Emergency Notification of Accidental/Incidental Discharge

In the case of an accidental discharge into the NBC facilities, including any discharge that would violate a Federal prohibition under 40 CFR §403.5(b), it is the responsibility of the permittee to notify the NBC of the incident immediately by calling the Pretreatment Section at 461-8848 or during non-business hours at its twenty-four (24) hour Emergency Hotline Number, 434-6350. Within five (5) days following an accidental discharge, the permittee shall submit to the NBC a detailed written report describing the cause and volume of the discharge and the measures to be taken by the user to prevent similar future occurrences by the permittee.

2. Routine Notification of Operational Changes

The permittee must notify the NBC in writing at least thirty (30) days prior to instituting any changes in operations that may affect the quality or quantity of the process wastestream discharged to the sewer system or may affect the adequacy of spill control measures. Operational changes that may affect the quality or quantity of the process wastestream or the adequacy of spill control measures include, but are not limited to, the following:

a. Addition, removal, or relocation of process tanks or solutions;
b. Installation of new wastewater generating process operations;
c. Relocation of process operation piping or valving resulting in a new or different point of discharge;
d. Modification of any pretreatment process or procedure;
e. Installation or modification of pretreatment equipment or associated piping;

Should the permittee be unsure as to whether an operational change requires written NBC notification, it is strongly recommended that the permittee contact the NBC by telephone prior to instituting the proposed change in operations. This will ensure that the proper notification is provided to the NBC. With respect to the thirty (30) day written notification requirement, should the permittee require immediate approval to make an operational change in order to accommodate business, the NBC will make every effort to accommodate the permittee so as to not impede operations at the facility. The discretion used by the NBC with respect to this issue is dependent on the magnitude of the proposed operational changes and the resulting effect on the characteristics of the wastestream and/or the spill control measures at the facility. The permittee may notify the NBC of the following operational changes by telephone rather than in writing as required above:

f. Change from the hours of facility operation specified in the discharge permit application;
g. Change in the personnel responsible for the proper operation of pretreatment equipment.

3. Routine Notification of Pretreatment Equipment Malfunctions

In the event of pretreatment equipment failure or malfunction, the permittee must notify the NBC of the incident by the close of the next full business day by calling the NBC's Pretreatment Section at 461-8848. Pretreatment equipment failure includes, but is not limited to, the following:

a. pH monitoring equipment failure;
b. pH probe failure;
c. pH chart recorder failure;
d. Chemical feed pump failure;
e. Pretreatment system pump, filter, or mixer failure.

Any equipment failure or malfunction which results in a spill and/or accidental discharge must be reported immediately in accordance with the NBC Emergency Spill Notification Procedure. Should a pretreatment equipment failure or malfunction occur, the permittee is strictly responsible for complying with all other permit conditions, including, but not limited to, maintaining full compliance with effluent limitations and monitoring requirements.

K. Right of Entry:

The NBC, upon presenting identification and appropriate credentials, is authorized to enter the premises of the permittee during working hours and at other reasonable times for the purposes of inspection, sampling, reading water meters, records inspecting and copying and as otherwise authorized under R.I.G.L. §46-25-25.1. Reasonable hours in the context of inspection and sampling include any time the NBC has reason to believe that violation of the permit or of the Rules and Regulations is occurring.

L. Permit Fee:

The permittee agrees to pay an annual permit fee and all sewer user fees assessed by the NBC in accordance with rates and fees approved by the Public Utilities Commission pursuant to R.I.G. L. §39-1-1 et seq. and §46-25-1 et seq. The permittee agrees to reimburse the NBC for the cost of the collection of any and all fees associated with the permit, including reasonable attorney's fees.

M. Authorization To Do Business:

The permittee is a corporation. The permittee shall ensure the corporation be registered with the Rhode Island Secretary of State Corporations Division. Tiffany and Company shall remain in good standing with the Rhode Island Secretary of State Corporations Division at all times. In the event Tiffany and Company has its charter or existence revoked by the Rhode Island Secretary of State, the permittee shall notify the NBC in writing within thirty (30) days of notice of such revocation.

In the event Tiffany and Company is no longer in good standing with the Rhode Island Secretary of State or the charter is revoked for any reason, any individual named as a co-permittee or any individual exercising ownership of Tiffany and Company shall be subject to the terms and conditions of the permit as if named herein.

N. Closing, Selling, Moving the Business:

If the permittee intends to close, liquidate, sell or move the permitted premises, located as referenced on page 1 of this permit, the permittee must notify the NBC in writing at least thirty (30) days prior to disposing of any process waste associated with the move or the cessation of business.

O. Transfer of Permit Prohibited:

Wastewater discharge permits are issued to a specific user for a specific operation. This permit may not be reassigned, transferred or sold to a new owner, new user, different premises, or a new or changed operation without the express written permission from the NBC. The permittee shall provide a copy of this permit to any prospective purchaser of said facility referenced on page 1 of this permit at least fourteen (14) days prior to closing on the business or property.

P. Permit Violations:

1. Enforcement Costs

   The permittee agrees to reimburse the NBC for the cost of enforcing the permit, including reasonable attorneys' fees, if violations of the permit are found by a hearing officer during the course of an administrative hearing or if such decision is appealed, then in a court of competent jurisdiction.

2. Damage to the Facilities

   The permittee agrees to indemnify and hold harmless the NBC from and against any liability, loss, cost, expense or actual damage (including reasonable attorneys' and accountants' fees incurred in defending or prosecuting any claim for any such liability, loss, cost, expense or damage) suffered by the NBC and caused by discharges from the permittee, either singly or by interaction with other wastes.

3. Violations of the NBC's Permit

   The permittee agrees to reimburse the NBC for any penalty and additional operating expense incurred by the NBC for violations of the NBC's NPDES, RIPDES, or any other state or federal permit which were caused by discharges from the permittee, either singly or by interaction with other wastes.

4. Penalties for Violations

   Article 10 of the NBC's Rules and Regulations provides that any person who violates a permit condition is subject to an administrative or civil penalty of up to $25,000 per violation per day as defined in R.I.G.L. §46-25-25.2. Willful or criminally negligent violations shall be punishable by the aforementioned fine and/or imprisonment as defined in R.I.G.L. §46-25-25.3.

Q. Revocation/Suspension of Permit:

1. Violations of the conditions of this permit, the NBC's Rules and Regulations, Act, and applicable state or Federal regulations may result in the revocation of this permit in accordance with the due process requirements of the NBC's Rules and Regulations. Violations that may result in revocation of this permit include, but are not limited to, the following:

   a. Failure to accurately report the wastewater constituents and characteristics of the discharge;
   b. Failure to report changes in operations or wastewater constituents;
   c. Failure to allow NBC personnel statutorily authorized access for the purposes of inspection or monitoring;
   d. Failure to adhere to an approved compliance schedule;

e. Failure to comply with administrative orders or settlement agreements;
f. Failure to pay authorized fees and user charges;
g. Violation of any other applicable permit conditions.

This list is for illustrative purposes and is not intended to be inclusive.

2. The Executive Director may suspend this wastewater discharge permit should the permittee cease operations for any period exceeding one (1) month. The suspension will not act as a revocation of the permit, but rather as a temporary suspension of the user's rights under the permit while operations have ceased. During such suspension, the user's connection to the facilities shall be plugged. The user shall still be required to pay the permit fee, since the permit itself will not be revoked. During such suspension, the user shall be disconnected from the facility. The Commission shall have the authority to make periodic inspections during this time to determine whether the user is continuing to discharge regulated wastewater. Such discharge may be considered grounds for revocation of the wastewater discharge permit.

R. Civil and Criminal Liability:

Nothing in this permit shall be construed to relieve the permittee from civil and/or criminal penalties for noncompliance with the NBC's Rules and Regulations or State or Federal laws or regulations.

S. Duty to Comply:

1. The permittee must comply with all conditions of this permit. Failure to comply with the requirements of this permit may be grounds for enforcement proceedings including administrative, civil and/or criminal penalties, injunctive relief and summary abatements.

2. Compliance with this permit does not relieve the permittee of its obligation to comply with any or all pretreatment regulations, standards or requirements under local, State and Federal laws, including any such regulations, standards, requirements, or laws that may become effective during the term of this permit.

T. Removed Substances:

Solids, sludges, filter residue or other pollutants removed in the course of treatment or control of waters or wastewaters shall be disposed of in accordance with §405 of the Clean Water Act and subtitles C and D of the Resource Conservation and Recovery Act. A Resource Conservation and Recovery Act (RCRA) informational brochure is attached to this permit to inform you of your RCRA obligations.

U. Permit Modification/Renewal:

1. This permit may be modified for various reasons, including but not limited to the following:

    a. To incorporate any new or revised Federal, State, or local pretreatment standards or requirements;

    b. Material or substantial alterations or additions to permittee's process operations, discharge volume or discharge characteristics which were not considered in the drafting of this permit;

    c. A change in any condition regarding either the industrial user or the POTW that requires either a temporary or permanent reduction or elimination of the authorized discharge;

    d. Information indicating that the permitted discharge poses a threat to the NBC collection or treatment system, POTW personnel, the general public, or the receiving waters;

    e. Violation of any terms or conditions of the permit;

    f. Misrepresentation or failure to disclose fully all relevant facts in the permit application or in any required reporting;

    g. Revision of or a grant of variance from such categorical standards pursuant to 40 CFR §403.13;

    h. To correct typographical or other errors in the permit;

    i. To reflect transfer of the facility ownership and/or operation to a new owner/operator;

    j. Upon request of the permittee, provided such request does not create a violation of any applicable requirements, standards, laws, or rules and regulations.

    The filing of a request by the permittee for a permit modification, revocation and reissuance, termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

2. If the permittee wishes to continue to discharge after the expiration date of this permit, an application must be filed for a permit renewal in accordance with the requirements of Article 8 of the NBC's Rules and Regulations a minimum of ninety (90) days prior to the expiration date.

V. Integration:

This permit represents the entire agreement and understanding of the parties hereto to those matters contained herein. No prior oral or written understanding shall be of any force or effect with respect to those matters covered hereunder. This permit may not be modified or altered except in accordance with the provisions of Article 8 of the Rules and Regulations. All terms used in this permit shall be construed as defined under Article 2 of the Rules and Regulations.

W. Jurisdiction:

This permit shall be administered and interpreted under the laws of the State of Rhode Island. Jurisdiction of litigation arising from this permit shall be in the State of Rhode Island. If any part of this permit is found to be in conflict with applicable laws, such part shall be inoperative, null and void insofar as it is in conflict with said law, but the remainder of this permit shall be in full force and effect.

IEJ:NJD:smb

Attachments:

Self Monitoring Compliance Report Form
Continuous pH Monitoring Report Form
Designation of Authorized Agent Form
RCRA Handbook
Twenty-Four (24) Hour Violation Notification Fax Form
List of Licensed Laboratories
List of Toxic Organic Compounds

Table 1

NBC Effluent Discharge Limitations
Bucklin Point District

Parameter	Limitation (Max)
Total Toxic Organics (TTO)	2.13
Biochemical Oxygen Demand (BOD_5)	300.00*
Total Suspended Solids (TSS)	300.00*
Total Oil and Grease (Fats, Oils, and Grease)	125.0
Oil and Grease (mineral origin)	25.0
Oil and Grease (animal/vegetable origin)	100.0
pH range (at all times)	5.0 - 11.0 s.u.

Parameter	Daily Maximum Concentration Limit (mg/1)	Monthly Average Concentration (mg/1)
Arsenic (Total)	0.20	0.10
Cadmium (Total)	0.11	0.07
Chromium (Total)	2.77	1.63
Copper (Total)	1.20	1.20
Cyanide (Total)	0.50	0.50
Lead (Total)	0.69	0.29
Mercury (Total)	0.06	0.03
Nickel (Total)	1.62	1.62
Selenium (Total)	0.40	0.20
Silver (Total)	0.40	0.20
Tin (Total)	4.00	2.00
Zinc (Total)	1.67	1.39

All limitations are in units of mg/l unless otherwise specified.

* Exceeding this discharge limitation may be permitted but would be subject to a surcharge in accordance with rates approved by the Public Utilities Commission and in accordance with R.I.G.L. §39-1-1 et seq.

Table 2
Tiffany and Company

US EPA Effluent Discharge Limitations for Parameters with Categorical Standards

Parameter	Daily Max. (mg/L)	Monthly Average (mg/L)
Cadmium (Total)*	0.06	0.04
Copper (Total)*	0.60	0.59
Cyanide (Total)*	0.24	0.24
Silver (Total)*	0.20	0.10

EPA discharge limits are based upon average production and flow data for the facility and the Non-Ferrous Precious Metal Forming Pretreatment Standards for New Sources 40 CFR §471.45. See Attachment A of this permit for more details.

*The US EPA Discharge Limitations are more stringent than NBC Effluent Discharge Limitations listed in Table 1. Permittee will be periodically reviewed and discharge limitations may change as production and water usage change.

Table 3

Tiffany and Company
Sampling Requirements

	Sample Location #1 Sample Port on the Discharge Line of the Final pH Adjustment Tank		Sample Location #2 Sample Port on the Discharge Line of the Oil/Water Separator in the Mechanical Room	
Month	**Composite Sample**	**Parameters**	**Grab Sample**	**Parameters**
January				
February	X	Cu, Ag		
March				
April	X	Cd, Cr, Cu, Pb, Ni, Ag, Zn, CN		
May				
June	X	Cu, Ag		
July				
August	X	Cu, Ag		
September				
October	X	Cd, Cr, Cu, Pb, Ni, Ag, Zn, CN	X	O&G
November				
December	X	Cu, Ag		

Legend

Cd - Cadmium
Cr - Chromium
Cu - Copper
CN - Cyanide
Pb - Lead
Ni - Nickel
Ag - Silver
Zn - Zinc
O&G - Total Oil and Grease (fats, oils, and grease)

Attachment A

Tiffany and Company
Basis for EPA Discharge Limitations

Production Based Standards

Subpart D PSNS for Surface Treatment Rinse		
Pollutant or Pollutant Property	Maximum for Any One (1) Day	Maximum for Monthly Average
	mg/off-kg (pounds per million off-pounds) of precious metals surface treated	
Cadmium	0.21	0.093
Copper	1.17	0.616
Cyanide	0.179	0.074
Silver	0.253	0.105

Subpart D PSNS for Heat Treatment Contact Cooling Water		
Pollutant or Pollutant Property	Maximum for Any One (1) Day	Maximum for Monthly Average
	mg/off-kg (pounds per million off-pounds) of precious metals surface treated	
Cadmium	0.142	0.063
Copper	0.793	0.417
Cyanide	0.121	0.050
Silver	0.171	0.071

Subpart D PSNS for Shot Casting Contact Cooling Water		
Pollutant or Pollutant Property	Maximum for Any One (1) Day	Maximum for Monthly Average
	mg/off-kg (pounds per million off-pounds) of precious metals surface treated	
Cadmium	0.125	0.055
Copper	0.698	0.367
Cyanide	0.107	0.044
Silver	0.151	0.0631

Attachment A
(continued)

Tiffany and Company
Basis for EPA Discharge Limitations

Combined Wastestream Formula (CWF)
Alternative Mass Limit Formula
$M_{cwf} = (\Sigma M_i)*((F_t-F_d) / (\Sigma F_i))$

M_{cwf} = alternate mass limit for pollutant
M_i = categorical pretreatment standard mass limit for pollutant in stream i
F_i = average daily flow of stream i (minimum 30 day average)
F_d = average daily flow of dilute wastestream (minimum 30 day average)
F_t = average daily flow through the combined treatment facility (minimum 30 day average)

Conversion to mg/l ($C_{mg/l}$)
$C_{mg/l}$ = M_{cwf} /F
F = Average monthly flow through this combined treatment facility

CERTIFICATE TO DISCHARGE

the following types of process water:

TREATED NON-FERROUS PRECIOUS METAL FORMING WASTEWATER

into the facilities of the

Narragansett Bay Commission

is hereby granted to:

Tiffany and Company
300 Maple Ridge Drive
Cumberland, RI 02964

PERMIT NUMBER: B1506-016-0418

PERMIT EXPIRATION DATE: 04/30/2018

The discharge permit must be kept at the above address for inspection. Failure to comply with the rules and regulations of the Narragansett Bay Commission or with the conditions of the discharge permit will subject the permittee to fines of up to $25,000 per violation per R.I.G.L. 46-25-25.3.

April 26, 2013
Initial Date of Issuance

/s/ Kerry M. Britt
Kerry M. Britt, Pretreatment Manager

TYPICAL STEAM ELECTRIC POWER GENERATOR WASTEWATER DISCHARGE PERMIT

WASTEWATER DISCHARGE PERMIT

Permit Number: B1604-007-0417
Company Name: **PAWTUCKET POWER ASSOCIATES, L.P.**
Facility Address: 181 Concord Street, Pawtucket, RI 02860
Mailing Address: 181 Concord Street, Pawtucket, RI 02860
Facility Vice-President of Operations: Mr. Jamie Urquhart
Facility Authorized Agents: Mr. Todd Annarummo; Mr. Michael Baier; Ms. Susan Flash
User Classification: Steam Electric Power Generation
Categorical Standards Applicable: 40 CFR §423.17, Pretreatment Standards for New Sources

By virtue of Rhode Island's General Laws Title 46 Chapter 25 (Act) and in accordance with the Rules And Regulations For The Use Of Wastewater Facilities Within The Narragansett Bay Water Quality Management District (Rules and Regulations), **Mr. Jamie Urquhart and Pawtucket Power Associates, L.P.**, hereinafter jointly referred to as **Permittee**, is hereby authorized to discharge process wastewater from the above identified facility in accordance with the terms and conditions set forth in this permit.

All discharges authorized herein must be consistent with the effluent limitations, monitoring requirements and other conditions set forth in this permit. The discharge of any pollutant not identified in this permit or any pollutant identified in this permit at a level in excess of that authorized shall constitute a violation of the permit. This permit consists of 21 pages with conditions A - X and Attachment A.

This permit is effective upon receipt
and expires on April 30, 2017.

Noncompliance with any term or condition of this permit shall constitute a violation of the NBC's Rules and Regulations and may subject the user to an **Administrative or Civil Penalty** of up to $25,000 per violation per day as defined in R.I.G.L. §46-25-25.2. Willful or criminally negligent violations shall be punishable by the aforementioned fine and/or imprisonment as defined in R.I.G.L. §46-25-25.3.

For the **Narragansett Bay Commission:**

/s/ Kerry M. Britt — July 26, 2013

Kerry M. Britt, Pretreatment Manager — Date
Narragansett Bay Commission

NOTE: The NBC will accept the person(s) named on this permit as the **Permittee's** authorized agent(s) until notified otherwise.

An authorized agent or authorized company representative is a person who is a principal executive officer or other corporate officer with signatory powers as per the **Permittee's** by-laws or per a vote of the directors if the **Permittee** is a corporation; a general partner or proprietor if the **Permittee** is a partnership or sole proprietorship respectively; or a duly authorized representative of an individual designated above if such representative is responsible for the overall operation of the facility and has the authority to sign contracts, permits, permit applications, monitoring results and other documents in the company's name and otherwise bind the **Permittee**. The **Permittee** may designate additional or new authorized agents by completing and submitting the enclosed Designation of Authorized Agent form.

The NBC will not accept documents signed by persons other than the Company's authorized agent(s) or authorized representative(s).

A. Effluent Discharge Limitations:

1. The permittee shall at all times comply with the effluent limitations specified in Table 1 on page 19, attached hereto and incorporated herein.

2. The permittee shall comply with all discharge limitations and prohibitions contained in Article 5 of the NBC's Rules and Regulations, as well as all other provisions of those Rules, and any other applicable State or Federal standards, including but not limited to the Federal Water Pollution Control Act, 33 U.S.C. §1251 et seq. and R.I.G.L. §46-12-1 et seq. The permittee shall at all times comply with 40 CFR §403.5 and may not introduce into the NBC's facilities any pollutants which shall violate the general or specific prohibitions including but not limited to discharges resulting in pass through or interference situations at the NBC's facilities.

3. The permittee shall not increase the use of process water or dilute a discharge in any way as a partial or complete substitute for adequate treatment to achieve compliance with the above standards.

4. The permittee is classified as a Steam Electric Power Generator and, therefore must at all times comply with EPA Categorical Regulations 40 CFR §423.17, Pretreatment Standards for New Sources. EPA regulations require that Steam Electric Power Generators maintain full compliance with the EPA Total Copper maximum limit of 1.0 ppm for chemical metal cleaning wastes. In addition, EPA regulations require that the 126 pollutants listed in Table 2 of this permit shall not be discharged in any detectable amount in cooling tower blowdown as a result of cooling tower chemical additives, with exception to Total Chromium and Total Zinc. Cooling tower wastestreams contaminated with Chromium or Zinc as a result of chemical additives must be in full compliance with the EPA Total Chromium maximum limit of 0.2 ppm and the EPA Total Zinc maximum limit of 1.0 ppm for all cooling tower blowdown discharges. To demonstrate compliance with this requirement, the permittee may conduct an engineering study to verify that the chemicals added to the cooling tower will not result in the 126 pollutants listed in Table 2 of this permit being detectable in the cooling tower blowdown. If the engineering study is submitted and determined to be acceptable to the NBC, then the NBC local discharge limitations specified in Table 1 would become more stringent and the permittee must then maintain full compliance with these limits.

5. EPA Categorical Standards require that 126 Pollutants listed in Table 2 of this permit shall not be discharged in any detectable amount in the cooling tower blowdown as the result of cooling tower chemicals added. In lieu of monitoring, the permittee has submitted an engineering study on June 29, 2012, August 14, 2012, and August 17, 2012 demonstrating that the chemicals added to the cooling tower will not result in the 126 pollutants listed in Table 2 of this permit being detectable in the cooling tower blowdown. Therefore the permittee must maintain full compliance with the NBC local limits specified in Table 1 of this permit which are more stringent.

B. Permitted Discharges:

1. The permittee is authorized to discharge the following tanks, solutions, or process wastewater streams to the NBC's facilities:

    a. Treated Regenerant from Demineralization Equipment;
    b. Heat Recovery Steam Generator Blowdown;
    c. Equipment Washdown;
    d. Floor Washdown;
    e. Carbon Filter Backwash;
    f. Cooling Tower Discharges.

2. The permittee may continuously purge up to 60,000 gallons per day of cooling tower wastewater to the NBC's facilities provided that the discharge criteria referenced in Section A(4) are met at all times.

3. No other process wastewater is to be discharged to the sewer unless specifically approved by the NBC in writing.

C. Prohibitions:

1. The permittee is strictly prohibited from discharging any prohibited substances detailed in the Rules and Regulations of the Narragansett Bay Commission. Prohibited discharges include, but are not limited to, the following:

    a. Polychlorinated Biphenyl Compounds (PCB);
    b. Fly Ash Transport Wastewaters;
    c. Chemical Metal Cleaning Wastewaters;
    d. Acidic Solutions with a pH less than 5.0 standard units;
    e. Caustic Solutions with a pH greater than 11.0 standard units;
    f. Degreasing Solutions;
    g. Solvents;
    h. Sludges;
    i. Fuel or Lubricating Oils.

2. The permittee is prohibited from batch discharging the entire contents of the cooling tower or greater than 60,000 gallons per day of cooling tower wastewater without first obtaining approval from the NBC. In order to obtain approval, the contents of the cooling tower must be sampled in accordance with Section G(6) of this permit.

3. The permittee is prohibited from batch discharging the entire contents of the heat recovery steam generator without first obtaining approval from the NBC. In order to obtain approval, the contents of the heat recovery steam generator must be sampled in accordance with Section G(7) of this permit.

4. The permittee is strictly prohibited from discharging any process wastewater streams other than those specified in Section B(1) of this permit or wastestreams containing pollutants with concentrations in excess of the effluent limitations specified in Table 1 on page 19, attached hereto and incorporated herein.

5. The permittee may only treat and/or discharge those solutions that were indicated as such on plans received by the NBC from the permittee on February 17, 1994. The permittee is strictly prohibited from discharging any other tanks, solutions, chemicals, or materials, including all prohibited substances as defined in the Rules and Regulations of the Narragansett Bay Commission, without written approval from the NBC.

6. The permittee is strictly prohibited from using portable pumps and/or flexible hose to transfer solutions directly to the pretreatment system or to bypass the pretreatment system and/or discharge solutions directly to the sewer without written approval from the NBC.

D. Pretreatment Requirements:

1. The permittee must provide and maintain an easily accessible sample location downstream of each process discharge specified in Section B(1) of this permit. A total of five (5) sample locations must be provided and must collect wastewater from the process operations indicated as follows:

   Sample Location #1 - Sample port on the effluent discharge pipe of the oil/water separator, collecting all process discharges specified in Section B(1)(b, c and d) of this permit.

   Sample Location #2 - Final pH adjustment tank sample port, collecting all process discharges specified in Section B(1)(a) of this permit.

   Sample Location #3 - Sample port on the effluent discharge pipe of the carbon filter backwash line, collecting all process discharges specified in Section B(1)(e) of this permit.

   Sample Location #4 - Sample port on the discharge pipe of the cooling tower, collecting all process discharges specified in Section B(1)(f) of this permit.

   Sample Location #5 - Sample port on the discharge pipe of the heat recovery steam generator blowdown line, collecting all process discharges specified in Section B(1)(b) of this permit.

The permittee is prohibited from discharging dilution wastestreams, such as sanitary and non-contact cooling water into any process wastewater sampling location. Dilution wastestreams must discharge downstream of the process wastewater sampling location. The discharge through Sample Locations #1, #2, #3, #4, and #5 must be in compliance with the effluent limitations specified in Section A and Table 1 of this permit. The discharge through Sample Location #4 must be in compliance with the EPA Steam Electric Power Generating Standards referenced in Sections A(4) and A(5) of the permit.

2. The permittee shall operate and maintain a pretreatment system in conformance with plans received by the NBC on February 14, 1994, October 27, 1995, and December 18, 1995. This pretreatment system shall be fully operational whenever process discharges to the sewer occur.

3. The permittee is responsible for properly operating and maintaining the pretreatment system to achieve and ensure compliance with the conditions of this permit. Proper operation and maintenance shall include but not be limited to: effective performance, adequate funding, adequate operator staffing and training, adequate laboratory and process controls, including appropriate quality assurance procedures.

E. Boiler Facility Requirements:

1. The permittee shall maintain permanent seals on all floor drains and any other process wastewater and sewer discharge connections within the boiler facility, so as to prevent an incidental or accidental discharge from the boiler room.

2. The permittee has permanently sealed all open floor drains within oil storage tank vaults or located under buried tanks which connect to the sewer. The drains must remain sealed so as to prevent an incidental or accidental discharge.

3. The permittee shall oversee each oil tank filling to ensure fuel oil does not spill from the fill, overflow or vent locations and discharge to the sewer. Each tank filling operation must be documented in the logbook required in Section H(2) of this permit.

4. The permittee is strictly prohibited from discharging spilled oil contained in the boiler facility, fuel storage area(s), etc. into the sewer. Spilled oil must be collected for proper off-site disposal. The permittee must take appropriate measures as described above and any others necessary to ensure a spill will not discharge to the sewer system.

F. Cooling Tower Blowdown Requirements:

1. The permittee shall submit written certification monthly stating that the permittee has made no changes to the chemicals or dosage of chemicals routinely added to the cooling tower, as documented to the NBC in the engineering study referenced in Section A of this permit, during the previous one (1) month period. This certification must be made on the form designated Cooling Tower Chemical Certification, Attachment A.

2. Whenever the permittee changes the cooling tower chemicals, or alters the dosage of cooling tower chemicals added to the cooling tower, the permittee must conduct an engineering study to determine if the chemicals added to the cooling tower will cause detectable amounts in the cooling tower blowdown of the 126 pollutants listed in Table 2 of this permit.

G. Monitoring Requirements:

1. The permittee shall monitor the pH of the effluent discharge through Sample Locations #1 and #2 and record it continuously. The permittee shall report the results monthly in a summary report for each location giving the maximum, minimum and average pH readings for each day of operation (see sample copy enclosed). The data must be reported directly from the recording chart to an accuracy of 0.1 standard units. The pH Monitoring Reports must be received by the NBC within thirty (30) days from the end of the month in which the data is recorded. The original recording charts must be maintained on site for a period of at least three (3) years.

2. The permittee shall conduct sampling over one (1) full normal operating day during the months of January, April, July, and October, until the expiration date of this permit.

    a. A composite sample is to be collected which must consist of equal volume grab samples collected at least every half hour over the operating day or collected continuously with a composite sampler. The samples are to be collected from the sample port on the effluent discharge pipe of the oil/water separator, Sample Location #1. The composite samples are to be collected, preserved and analyzed in accordance with EPA protocols for the following parameters:

Cadmium (Total)	Copper (Total)	Nickel (Total)
Chromium (Total)	Lead (Total)	Zinc (Total)

    b. On the same day that the composite sampling listed in Section G(2)(a) is being conducted, the permittee shall collect four (4) grab samples from the sample port on the effluent discharge pipe of the oil/water separator, Sample Location #1. The grab samples must be collected in glass bottles, preserved and analyzed separately in accordance with EPA protocols for the following parameter:

Total Oil and Grease (fats, oils and grease)

The mathematical average of the four grab samples will be used to determine compliance with the NBC discharge limitation for Total Oil and Grease (fats, oils, and grease).

If no discharges occur from heat recovery/steam generating, equipment washing, and/or floor washing operations during the required sampling month, the permittee must notify the NBC in writing and sample the next heat recover/steam generating, equipment washing, and/or floor washing event.

3. During the months of January, April, July, and October, until the expiration date of the permit, the permittee shall collect one (1) grab sample from the final pH adjustment tank sample port, Sample Location #2. The grab sample must be collected, preserved, and analyzed in accordance with EPA protocols for the following parameters:

Cadmium (Total)	Copper (Total)	Nickel (Total)
Chromium (Total)	Lead (Total)	Zinc (Total)

If the tank is not discharged during the required sampling month, the permittee must notify the NBC in writing and sample during the next discharge of the tank.

4. During the months of January, April, July, and October, until the expiration date of the permit, the permittee shall collect one (1) grab sample from the ample port on the effluent discharge pipe of the carbon filter backwash line, Sample Location #3. The grab sample must be collected, preserved, and analyzed in accordance with EPA protocols for the following parameters:

Cadmium (Total)	Copper (Total)	Nickel (Total)
Chromium (Total)	Lead (Total)	Zinc (Total)

If no discharges occur from backwashing operations during the required sampling month, the permittee must notify the NBC in writing and sample during the next backwash event.

5. The permittee shall conduct sampling of the cooling tower over one full operating day during the months of January, April, July, and October, until the expiration date of the permit. A composite sample is to be collected which must consist of equal volume grab samples collected at least every half hour over the operating day or collected continuously with a composite sampler. The samples are to be collected from the sample port on the discharge pipe of the cooling tower, Sample Location #4. The composite samples are to be collected, preserved and analyzed in accordance with EPA protocols for the following parameters:

Cadmium (Total)	Copper (Total)	Nickel (Total)
Chromium (Total)	Lead (Total)	Zinc (Total)

If the cooling tower is not discharged during the required sampling month, the permittee must notify the NBC in writing and sample during the next discharge of the cooling tower.

6. Prior to batch discharging the contents of the cooling tower or greater than 60,000 gallons per day of cooling tower wastewater, the permittee must collect one (1) grab sample from the sample port on the discharge pipe of the cooling tower, Sample Location #4. The grab sample must be collected, preserved, and analyzed in accordance with EPA protocols for the following parameters:

Cadmium (Total)	Copper (Total)	Nickel (Total)
Chromium (Total)	Lead (Total)	Zinc (Total)

Analytical results must be submitted to the NBC with a properly completed Self-Monitoring Compliance Report and chain of custody documentation requesting permission to discharge the contents of the cooling tower. The permittee may only batch discharge the contents of the cooling tower once approval is received from the NBC.

7. Prior to batch discharging the contents of the heat recovery steam generator, the permittee must collect two (2) grab samples from the sample port on the discharge pipe of the heat recovery steam generator blowdown line, Sample Location #5. One grab sample must be collected, preserved, and analyzed in accordance with EPA protocols for the following parameters:

Cadmium (Total)	Copper (Total)	Nickel (Total)
Chromium (Total)	Lead (Total)	Zinc (Total)

The other grab sample must be collected in a glass bottle, preserved, and analyzed separately in accordance with EPA protocols for the following parameter:

Total Oil and Grease (fats, oils, and grease)

Analytical results must be submitted to the NBC with a properly completed Self-Monitoring Compliance Report and chain of custody documentation requesting permission to discharge the contents of the heat recovery steam generator. The permittee may only batch discharge the contents of the heat recovery steam generator once approval is received from the NBC.

Table 3 attached hereto summarizes the sampling requirements for this facility.

8. All water meters measuring flows, which ultimately discharge to the sampling locations specified previously, are to be read at the start of sampling and at the end of sampling. These readings and the resultant total flow are to be submitted with the sampling results.

9. The analytical results for each sampling month listed above must be received by the NBC within thirty (30) days after the end of the month in which the samples are to be taken. All sampling and analyses are to be done in accordance with EPA approved procedures (40 CFR §403 and 40 CFR §136). The permittee must complete and submit a Self-Monitoring Compliance Report (copy enclosed) with each certified laboratory analysis sheet including chain of custody documentation. The laboratory analysis report must indicate the EPA approved test procedure for each parameter listed. All Self-Monitoring Compliance Reports must be signed by the permittee or authorized agent and certify that the information submitted is accurate and complete to the best of their knowledge.

10. The permittee must compare the analytical report results with the NBC's effluent discharge limitations listed in Table 1. If there are any violations of the NBC's standards, the permittee must notify the NBC within twenty-four (24) hours of becoming aware of the violation by contacting pretreatment staff at 461-8848 or by using the twenty-four (24) hour violation notification FAX form and must resample and analyze for the parameter(s) in violation of the NBC's standards, excluding BOD, TSS and pH. The resampling results must be submitted to the NBC no later than thirty (30) days following the date that the permittee became aware of the initial violation of the standards.

11. The NBC may, at any time, require more frequent monitoring than specified in this permit. Conditions that may result in the imposition of more frequent monitoring include, but are not limited to, the following:

    a. Failure to meet effluent limitations;
    b. Change in production processes;
    c. Expansion or reduction of production;
    d. Change in water usage;
    e. Discovery of additional information on monitoring or production unavailable to the NBC at the time this permit was prepared.

H. Record Keeping Requirements:

1. The permittee shall be responsible for maintaining a logbook documenting all records pertaining to the operation of the pretreatment system including, but not limited to, the following:

    a. Amount of chemicals used on a monthly basis to provide pretreatment;
    b. Amount of sludge generated on a monthly basis;
    c. Completed manifest forms for hazardous materials;
    d. A listing of all batch discharges including the date of the discharge and a description of the tank from which the discharge occurred;
    e. The amount of chemicals added to provide pretreatment of batch discharges;
    f. Maintenance performed on the pretreatment system including weekly probe cleaning, monthly probe calibration and other maintenance requests specified by inspectors of the NBC.

2. The permittee shall be responsible for maintaining a logbook documenting all records pertaining to the boiler operation including, but not limited to, the following:

A listing of the date of each fuel tank filling

3. Records which substantiate any information supplied in permit applications, Self-Monitoring Compliance Reports and any other informational requirements of the Rules and Regulations or any applicable State or Federal law are to be kept by the permittee for a period of at least three (3) years unless a dispute or litigation involving the subject of those records is pending, in which case these records are to be kept by the permittee for a period of at least three (3) years following resolution of such litigation or dispute.

I. Spill and Slug Prevention Control Plan:

The permittee must maintain an approved Spill and Slug Prevention Control Plan and all associated facilities to ensure that incidental and accidental spills are unable to enter the NBC sewer system.

J. Toxic Organic/Solvent Management Plan:

The permittee must ensure that toxic organic compounds are not routinely discharged or spilled into the sewer system and must at all times maintain associated spill control facilities to ensure proper containment and disposal of toxic organic compounds. A list of toxic organic compounds is enclosed.

K. Emergency/Routine Notification Requirements:

1. Emergency Notification of Accidental/Incidental Discharge

In the case of an accidental discharge into the NBC facilities, including any discharge that would violate a Federal prohibition under 40 CFR §403.5(b), it is the responsibility of the permittee to notify the NBC of the incident immediately by calling the Pretreatment Section at 461-8848 or during non-business hours at its twenty-four (24) hour Emergency Hotline Number, 434-6350. Within five (5) days following an accidental discharge, the permittee shall submit to the NBC a detailed written report describing the cause and volume of the discharge and the measures to be taken by the user to prevent similar future occurrences by the permittee.

2. Routine Notifications of Operational Changes

The permittee must notify the NBC in writing at least thirty (30) days prior to instituting any changes in operations that may affect the quality or quantity of the process wastestream discharged to the sewer system or may affect the adequacy of spill control measures. Operational changes that may affect the quality or quantity of the process wastestream or the adequacy of spill control measures include, but are not limited to, the following:

a. Addition, removal, or relocation of process tanks or solutions;
b. Installation of new wastewater generating process operations;
c. Relocation of process operation piping or valving resulting in a new or different point of discharge;
d. Modification of any pretreatment process or procedure;
e. Installation or modification of pretreatment equipment or associated piping;

Should the permittee be unsure as to whether an operational change requires written NBC notification, it is strongly recommended that the permittee contact the NBC by telephone prior to instituting the proposed change in operations. This will ensure that the proper notification is provided to the NBC. With respect to the thirty (30) day written notification requirement, should the permittee require immediate approval to make an operational change in order to accommodate business, the NBC will make every effort to accommodate the permittee so as to not impede operations at the facility. The discretion used by the NBC with respect to this issue is dependent on the magnitude of the proposed operational changes and the resulting effect on the characteristics of the wastestream and/or the spill control measures at the facility. The permittee may notify the NBC of the following operational changes by telephone rather than in writing as required above:

f. Change from the hours of facility operation specified in the discharge permit application;
g. Change in the personnel responsible for the proper operation of pretreatment equipment.

3. Routine Notification of Pretreatment Equipment Malfunctions

In the event of pretreatment equipment failure or malfunction, the permittee must notify the NBC of the incident by the close of the next full business day by calling the NBC's Pretreatment Section at 461-8848. Pretreatment equipment failure includes, but is not limited to, the following:

a. pH monitoring equipment failure;
b. pH probe failure;
c. pH chart recorder failure;
d. Chemical feed pump failure;
e. Pretreatment system pump, filter, or mixer failure.

Any equipment failure or malfunction which results in a spill and/or accidental discharge must be reported immediately in accordance with the NBC Emergency Spill Notification Procedure. Should a pretreatment equipment failure or malfunction occur, the permittee is strictly responsible for complying with all other permit conditions, including, but not limited to, maintaining full compliance with effluent limitations and monitoring requirements.

L. Right of Entry:

The NBC, upon presenting identification and appropriate credentials, is authorized to enter the premises of the permittee during working hours and at other reasonable times for the purposes of inspection, sampling, reading water meters, records inspecting and copying and as otherwise authorized under R.I.G.L. §46-25-25.1. Reasonable hours in the context of inspection and sampling include any time the NBC has reason to believe that violation of the permit or of the Rules and Regulations is occurring.

M. Permit Fee:

The permittee agrees to pay an annual permit fee and all sewer user fees assessed by the NBC in accordance with rates and fees approved by the Public Utilities Commission pursuant to R.I.G.L. §39-1-1 et seq. and §46-25-1 et seq. The permittee agrees to reimburse the NBC for the cost of the collection of any and all fees associated with the permit, including reasonable attorney's fees.

N. Authorization To Do Business:

The permittee is a limited partnership. The permittee shall ensure the limited partnership be registered with the Rhode Island Secretary of State Corporations Division. Pawtucket Power Associates, L.P. shall remain in good standing with the Rhode Island Secretary of State Corporations Division at all times. In the event Pawtucket Power Associates, L.P. has its charter or existence revoked by the Rhode Island Secretary of State, the permittee shall notify the NBC in writing within thirty (30) days of notice of such revocation.

In the event Pawtucket Power Associates, L.P. is no longer in good standing with the Rhode Island Secretary of State or the charter is revoked for any reason, any individual named as a co-permittee or any individual exercising ownership of Pawtucket Power Associates, L.P. shall be subject to the terms and conditions of the permit as if named herein.

O. Closing, Selling, Moving the Business:

If the permittee intends to close, liquidate, sell or move the permitted premises, located as referenced on page 1 of this permit, the permittee must notify the NBC in writing at least thirty (30) days prior to disposing of any process waste associated with the move or the cessation of business.

P. Transfer of Permit Prohibited:

Wastewater discharge permits are issued to a specific user for a specific operation. This permit may not be reassigned, transferred or sold to a new owner, new user, different premises, or a new or changed operation without the express written permission from the NBC. The permittee shall provide a copy of this permit to any prospective purchaser of said facility referenced on page 1 of this permit at least fourteen (14) days prior to closing on the business or property.

Q. Permit Violations:

1. Enforcement Costs

   The permittee agrees to reimburse the NBC for the cost of enforcing the permit, including reasonable attorneys' fees, if violations of the permit are found by a hearing officer during the course of an administrative hearing or if such decision is appealed, then in a court of competent jurisdiction.

2. Damage to the Facilities

   The permittee agrees to indemnify and hold harmless the NBC from and against any liability, loss, cost, expense or actual damage (including reasonable attorneys' and accountants' fees incurred in defending or prosecuting any claim for any such liability, loss, cost, expense or damage) suffered by the NBC and caused by discharges from the permittee, either singly or by interaction with other wastes.

3. Violations of the NBC's Permit

   The permittee agrees to reimburse the NBC for any penalty and additional operating expense incurred by the NBC for violations of the NBC's NPDES, RIPDES, or any other state or federal permit which were caused by discharges from the permittee, either singly or by interaction with other wastes.

4. Penalties for Violations

Article 10 of the NBC's Rules and Regulations provides that any person who violates a permit condition is subject to an administrative or civil penalty of up to $25,000 per violation per day as defined in R.I.G.L. §46-25-25.2. Willful or criminally negligent violations shall be punishable by the aforementioned fine and/or imprisonment as defined in R.I.G.L. §46-25-25.3.

R. Revocation/Suspension of Permit:

1. Violations of the conditions of this permit, the NBC's Rules and Regulations, Act, and applicable state or Federal regulations may result in the revocation of this permit in accordance with the due process requirements of the NBC's Rules and Regulations. Violations that may result in revocation of this permit include, but are not limited to, the following:

    a. Failure to accurately report the wastewater constituents and characteristics of the discharge;
    b. Failure to report changes in operations or wastewater constituents;
    c. Failure to allow NBC personnel statutorily authorized access for the purposes of inspection or monitoring;
    d. Failure to adhere to an approved compliance schedule;
    e. Failure to comply with administrative orders or settlement agreements;
    f. Failure to pay authorized fees and user charges;
    g. Violation of any other applicable permit conditions.

    This list is for illustrative purposes and is not intended to be inclusive.

2. The Executive Director may suspend this wastewater discharge permit should the permittee cease operations for any period exceeding one (1) month. The suspension will not act as a revocation of the permit, but rather as a temporary suspension of the user's rights under the permit while operations have ceased. During such suspension, the user's connection to the facilities shall be plugged. The user shall still be required to pay the permit fee, since the permit itself will not be revoked. During such suspension, the user shall be disconnected from the facility. The Commission shall have the authority to make periodic inspections during this time to determine whether the user is continuing to discharge regulated wastewater. Such discharge may be considered grounds for revocation of the wastewater discharge permit.

S. Civil and Criminal Liability:

Nothing in this permit shall be construed to relieve the permittee from civil and/or criminal penalties for noncompliance with the NBC's Rules and Regulations or State or Federal laws or regulations.

T. Duty to Comply:

1. The permittee must comply with all conditions of this permit. Failure to comply with the requirements of this permit may be grounds for enforcement proceedings including administrative, civil and/or criminal penalties, injunctive relief and summary abatements.

2. Compliance with this permit does not relieve the permittee of its obligation to comply with any or all pretreatment regulations, standards or requirements under local, State and Federal laws, including any such regulations, standards, requirements, or laws that may become effective during the term of this permit.

U. Removed Substances:

Solids, sludges, filter residue or other pollutants removed in the course of treatment or control of waters or wastewaters shall be disposed of in accordance with §405 of the Clean Water Act and subtitles C and D of the Resource Conservation and Recovery Act. A Resource Conservation and Recovery Act (RCRA) informational brochure is attached to this permit to inform you of your RCRA obligations.

V. Permit Modification/Renewal:

1. This permit may be modified for various reasons, including but not limited to the following:

    a. To incorporate any new or revised Federal, State, or local pretreatment standards or requirements;

    b. Material or substantial alterations or additions to permittee's process operations, discharge volume or discharge characteristics which were not considered in the drafting of this permit;

    c. A change in any condition regarding either the industrial user or the POTW that requires either a temporary or permanent reduction or elimination of the authorized discharge;

    d. Information indicating that the permitted discharge poses a threat to the NBC collection or treatment system, POTW personnel, the general public, or the receiving waters;

e. Violation of any terms or conditions of the permit;

f. Misrepresentation or failure to disclose fully all relevant facts in the permit application or in any required reporting;

g. Revision of or a grant of variance from such categorical standards pursuant to 40 CFR §403.13;

h. To correct typographical or other errors in the permit;

i. To reflect transfer of the facility ownership and/or operation to a new owner/operator;

j. Upon request of the permittee, provided such request does not create a violation of any applicable requirements, standards, laws, or rules and regulations.

The filing of a request by the permittee for a permit modification, revocation and reissuance, termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

2. If the permittee wishes to continue to discharge after the expiration date of this permit, an application must be filed for a permit renewal in accordance with the requirements of Article 8 of the NBC's Rules and Regulations a minimum of ninety (90) days prior to the expiration date.

W. Integration:

This permit represents the entire agreement and understanding of the parties hereto to those matters contained herein. No prior oral or written understanding shall be of any force or effect with respect to those matters covered hereunder. This permit may not be modified or altered except in accordance with the provisions of Article 8 of the Rules and Regulations. All terms used in this permit shall be construed as defined under Article 2 of the Rules and Regulations.

X. Jurisdiction:

This permit shall be administered and interpreted under the laws of the State of Rhode Island. Jurisdiction of litigation arising from this permit shall be in the State of Rhode Island. If any part of this permit is found to be in conflict with applicable laws, such part shall be inoperative, null and void insofar as it is in conflict with said law, but the remainder of this permit shall be in full force and effect.

IEJ:NJD:smb

Attachments:

Self Monitoring Compliance Report Form
Continuous pH Monitoring Report Form
Designation of Authorized Agent Form
RCRA Handbook
Twenty-four (24) Hour Violation Notification Fax Form
List of Licensed Laboratories
List of Toxic Organic Compounds

Table 1

NBC Effluent Discharge Limitations
Bucklin Point District

Parameter	Limitation (Max)
Total Toxic Organics (TTO)	2.13
Biochemical Oxygen Demand (BOD_5)	300.00*
Total Suspended Solids (TSS)	300.00*
Total Oil and Grease (Fats, Oils, and Grease)	125.0
Oil and Grease (mineral origin)	25.0
Oil and Grease (animal/vegetable origin)	100.0
pH range (at all times)	5.0 - 11.0 s.u.

Parameter	Daily Maximum Concentration Limit (mg/1)	Monthly Average Concentration (mg/1)
Arsenic (Total)	0.20	0.10
Cadmium (Total)	0.11	0.07
Chromium (Total)	2.77	1.63
Copper (Total)	1.20	1.20
Cyanide (Total)	0.50	0.50
Lead (Total)	0.69	0.29
Mercury (Total)	0.06	0.03
Nickel (Total)	1.62	1.62
Selenium (Total)	0.40	0.20
Silver (Total)	0.40	0.20
Tin (Total)	4.00	2.00
Zinc (Total)	1.67	1.39

All limitations are in units of mg/l unless otherwise specified.

* Exceeding this discharge limitation may be permitted but would be subject to a surcharge in accordance with rates approved by the Public Utilities Commission and in accordance with R.I.G.L. §39-1-1 et seq.

Table 2
List of 126 Priority Pollutants
40 CFR §423.17 Appendix A

Volatiles

Acrolein
Acrylonitrile
Benzene
Bromoform
carbon tetrachloride
Chlorobenzene
Chlorodibromomethane
Chloroethane
2-chloroethylvinyl ether
Chloroform
Dichlorobromomethane
1,1-dichloroethane
1,2-dichloroethane
1,1-dichloroethylene
1,2-dichloropropane
1,3-dichloropropylene
Ethylbenzene
methyl bromide
methyl chloride
methylene chloride
1,1,2,2-tetrachloroethane
Tetrachloroethylene
Toluene
1,2-trans-dichloroethylene
1,1,1-trichloroethane
1,1,2-trichloroethane
Trichloroethylene
vinyl chloride

Acid Compounds

2-chlorophenol
2,4-dichlorophenol
2,4-dimethylphenol
4,6-dinitro-o-cresol
2,4-dinitrophenol
2-nitrophenol
4-nitrophenol
p-chloro-m-cresol
Pentachlorophenol
Phenol
2,4,6-trichlorophenol

Base/Neutral

Acenaphthene*
Acenaphthylene*
Anthracene*
Benzidine
benzo (a) anthracene*
benzo (a) pyrene*
3,4-benzofluoranthene*
benzo (ghi) perylene*
benzo (k) fluoranthene
Bis (2-chloroethoxy) methane
Bis (2-chloroethyl) ether
Bis (2-chloroisopropyl) ether
Bis (2-ethylhexyl) phthalate
4-bromophenyl phenyl ether
butylbenzul phthalate
2-chloronaphthalene
4-chlorophenyl phenyl ether
Chrysene*
dibenzo (a, h) anthracene*
1,2-dichlorobenzene
1,3-dichlorobenzene
1,4-dichlorobenzene
3,3-dichlorobenzidine
diethyl phthalate
dimethyl phthalate
di-n-butyl phthalate
2,4-dinitrotoluene
2,6-dinitrotoluene
di-n-octyl phthalate
1,2-diphenylhydrazine (as azobenzene)
fluoranthene*
fluorene*
hexachlorobenzene
hexachlorobutadiene
hexachlorocyclopentadiene
hexachloroethane
indeno (1,2,3-cd) pyrene*
isophorone
nitrobenzene
n-nitrosodimethylamine
n-nitrosodi-n-propylamine
n-nitrosodiphenylamine
Phenanthrene*
Pyrene*
1,2,4-trichlorobenzene
Naphthalene*

* = Polynuclear Aromatic Hydrocarbons

Pesticides

aldrin
alpha – BHC
beta – BHC
gamma – BHC
delta – BHC
chlordane
4,4’ – DDT
4,4’ – DDE
4,4’ – DDD
dieldrin
alpha-endosulfan
beta-endosulfan
endosulfan sulfate
endrin
endrin aldelyde
heptachlor
heptachlor epoxide
toxaphene

Polychlorinated Biphenyls

PCB-1242
PCB-1254
PCB-1221
PCB-1232
PCB-1248
PCB-1260
PCB-1016

Other Toxic Pollutants and Total Phenol

Antimony, Total
Arsenic, Total
Beryllium, Total
Cadmium, Total
Chromium, Total
Chromium, Hexavalent
Copper, Total
Lead, Total
Mercury, Total
Nickel, Total
Selenium, Total
Silver, Total
Thallium, Total
Zinc, Total
Asbestos
Cyanide, Total
Phenols, Total
TCDD (Dioxin)

Table 3

Pawtucket Power Associates, L.P.
Sampling Requirements

	Sample Location #1 Sample Port on the Effluent Discharge Pipe of the Oil/Water Separator				Sample Location #2 Final pH Adjustment Tank Sample Port		Sample Location #3 Sample Port on the Effluent Discharge Pipe of the Carbon Filter Backwash Line		Sample Location #4 Sample Port on the Discharge Pipe of the Cooling Tower	
Month	**Composite Sample**	**Parameters**	**Grab Sample***	**Parameters**	**Grab Sample**	**Parameters**	**Grab Sample**	**Parameters**	**Composite Sample**	**Parameters**
January	X	Cd, Cr, Cu, Ni, Pb, Zn	X	O & G	X	Cd, Cr, Cu, Ni, Pb, Zn	X	Cd, Cr, Cu, Ni, Pb, Zn	X	Cd, Cr, Cu, Ni, Pb, Zn
February										
March										
April	X	Cd, Cr, Cu, Ni, Pb, Zn	X	O & G	X	Cd, Cr, Cu, Ni, Pb, Zn	X	Cd, Cr, Cu, Ni, Pb, Zn	X	Cd, Cr, Cu, Ni, Pb, Zn
May										
June										
July	X	Cd, Cr, Cu, Ni, Pb, Zn	X	O & G	X	Cd, Cr, Cu, Ni, Pb, Zn	X	Cd, Cr, Cu, Ni, Pb, Zn	X	Cd, Cr, Cu, Ni, Pb, Zn
August										
September										
October	X	Cd, Cr, Cu, Ni, Pb, Zn	X	O & G	X	Cd, Cr, Cu, Ni, Pb, Zn	X	Cd, Cr, Cu, Ni, Pb, Zn	X	Cd, Cr, Cu, Ni, Pb, Zn
November										
December										

Legend

Cd - Cadmium
Cr - Chromium
Cu - Copper
CN - Cyanide
Pb - Lead
Ni - Nickel
Ag - Silver
Zn - Zinc

O & G – Total Oil and Grease (fats, oils, and grease)

*These grab samples are to be collected on the same day that the composite sample is collected. Each grab must be collected, preserved, and analyzed separately.

Attachment A

Cooling Tower Chemical Certification

For the Month of _____, 20___

Company Name: _____

Address: _____
_____
_____

RETURN TO:
Narragansett Bay Commission
Pretreatment Program
2 Ernest Street
Providence, RI 02905-5502

I, _____, as authorized representative of

_____, do hereby decree that the cooling tower

chemicals used and the cooling tower chemical dosages were not altered in any way during the past

month. I am aware that if the chemicals used or the additive dosages are altered, then an engineering

study must be immediately conducted to demonstrate that the changes will not cause detectable

amounts of the 126 priority pollutants in the cooling tower blowdown.

I certify under penalty of law that this document and all attachments were properly prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for known violations.

_____ _____

Authorized Representative Signature Date

CERTIFICATE TO DISCHARGE

the following types of process water:

STEAM ELECTRIC POWER GENERATING WASTEWATER

into the facilities of the

Narragansett Bay Commission

is hereby granted to:

Pawtucket Power Associates, L.P.
181 Concord Street
Pawtucket, RI 02860

PERMIT NUMBER: B1604-007-0417

PERMIT EXPIRATION DATE: 04/30/2017

The discharge permit must be kept at the above address for inspection. Failure to comply with the rules and regulations of the Narragansett Bay Commission or with the conditions of the discharge permit will subject the permittee to fines of up to $25,000 per violation per R.I.G.L. 46-25-25.3.

July 26, 2013
Initial Date of Issuance

/s/ Kerry M. Britt
Kerry M. Britt, Pretreatment Manager

TYPICAL LANDFILL LEACHATE FACILITY WASTEWATER DISHCHARGE PERMIT

WASTEWATER DISCHARGE PERMIT

Permit Number: P3412-004-1019
Company Name: **RHODE ISLAND RESOURCE RECOVERY CORPORATION**
Facility Address: 65 Shun Pike, Johnston, R.I. 02919
Mailing Address: 65 Shun Pike, Johnston, R.I. 02919
Facility Executive Director: Mr. Michael O'Connell
Facility Authorized Agents: Mr. William Anderson, Mr. Peter Connell, Mr. Brian Card
User Classification: Landfill Operations
Categorical Standards Applicable: None

By virtue of Rhode Island's General Laws Title 46 Chapter 25 (Act) and in accordance with the Rules And Regulations For The Use Of Wastewater Facilities Within The Narragansett Bay Commission (NBC) District (Rules and Regulations), **Mr. Michael O'Connell**, in his capacity as Executive Director of Rhode Island Resource Recovery Corporation, and **Rhode Island Resource Recovery Corporation.**, hereinafter jointly referred to as **Permittee**, is hereby authorized to discharge process wastewater from the above identified facility in accordance with the terms and conditions set forth in this permit.

All discharges authorized herein must be consistent with the effluent limitations, monitoring requirements and other conditions set forth in this permit. The discharge of any pollutant not identified in this permit or any pollutant identified in this permit at a level in excess of that authorized shall constitute a violation of the permit. This permit consists of 23 pages with conditions A - U and Attachments 1 and 2.

This permit is effective upon receipt
and expires on October 31, 2019.

Noncompliance with any term or condition of this permit shall constitute a violation of the NBC's Rules and Regulations and may subject the user to an **Administrative or Civil Penalty** of up to $25,000 per violation per day as defined in R.I.G.L. §46-25-25.2. Willful or criminally negligent violations shall be punishable by the aforementioned fine and/or imprisonment as defined in R.I.G.L. §46-25-25.3.

For the **Narragansett Bay Commission:**

/s/ Kerry M. Britt — November 7, 2014
Kerry M. Britt, Pretreatment Manager — Date
Narragansett Bay Commission

Michael O'Connell, in his capacity as Executive Director of Rhode Island Resource Recovery Corporation, and Rhode Island Resource Recovery Corporation hereby consent to all requirements and wastewater discharge limitations detailed within this Wastewater Discharge Permit. In so consenting, the appropriate officers of Rhode Island Resource Recovery Corporation have personally read and understand each of the provisions and wastewater discharge limitations in this Wastewater Discharge Permit. This permit allows Rhode Island Resource Recovery Corporation to discharge sanitary and permitted discharges specified in Section B(1) of this permit from landfill operations to the Narragansett Bay Commission sewer system.

_____ _____ _____
Michael O'Connell, Executive Director — Signature — Date
Rhode Island Resource Recovery Corporation

I have read and understood the NBC Rules and Regulations and the conditions and procedures contained in this permit.

NOTE: The NBC will accept the person(s) named on this permit as the **Permittee's** authorized agent(s) until notified otherwise.

An authorized agent or authorized company representative is a person who is a principal executive officer or other corporate officer with signatory powers as per the **Permittee's** by-laws or per a vote of the directors if the **Permittee** is a corporation; a general partner or proprietor if the **Permittee** is a partnership or sole proprietorship respectively; or a duly authorized representative of an individual designated above if such representative is responsible for the overall operation of the facility and has the authority to sign contracts, permits, permit applications, monitoring results and other documents in the company's name and otherwise bind the **Permittee**. The **Permittee** may designate additional or new authorized agents by completing and submitting the enclosed Designation of Authorized Agent form.

The NBC will not accept documents signed by persons other than the Company's authorized agent(s) or authorized representative(s).

CONDITIONS TO PERMIT

A. Effluent Discharge Limitations:

1. The Permittee shall at all times comply with the effluent limitations specified in Table 1 on page 19, and Table 2 on page 20, attached hereto and incorporated herein.

2. The Permittee shall comply with all discharge limitations and prohibitions contained in Article 5 of the NBC's Rules and Regulations, as well as all other provisions of those Rules, and any other applicable State or Federal standards, including but not limited to the Federal Water Pollution Control Act, 33 U.S.C. §1251 et seq. and R.I.G.L. §46-12-1 et seq. The Permittee shall at all times comply with 40 CFR §403.5 and may not introduce into the NBC's facilities any pollutants which shall violate the general or specific prohibitions including but not limited to discharges resulting in pass through or interference situations at the NBC's facilities.

3. The Permittee shall not increase the use of process water or dilute a discharge in any way as a partial or complete substitute for adequate treatment to achieve compliance with the above standards.

4. The Permittee shall not discharge more than 464,000 gallons per day. The Permittee shall not exceed a maximum discharge flow rate of 30,000 gallons per hour. The daily average flow rate shall not exceed 22,500 gallons per hour. The Permittee agrees not to exceed the specified maximum daily and hourly flow restrictions and must notify the NBC in advance of any exceedances of the aforementioned flow rates.

5. The Permittee shall comply with interim discharge limitations specified in this section. The NBC may revise the interim limitations at any time. The NBC is performing a local discharge limitation analysis to determine parameter concentrations that will replace the interim limitations. Until such time the local discharge limitations for the Field's Point district are established by the NBC and approved by the DEM, the Permittee must comply with the interim limitations in effect. The Permittee shall comply with the following interim discharge limitations:

	Daily Maximum Limitation	**Monthly Average**
Arsenic (Total)	0.60 mg/L	0.40 mg/L
Ammonia*	5.0 mg/L	
Nitrate + Nitrite*	10.0 mg/L	
Non-Biodegradable Organic Nitrogen*	100.0 mg/L	

*The interim effluent discharge limitations for Ammonia, Nitrate+Nitrite and Non-Biodegradable Organic Nitrogen are seasonal limitations. These interim limits are effective May 1st through October 31st of every year.

The interim discharge limitations are specified in Table 2 on page 20.

B. Permitted Discharges:

1. The Permittee is authorized to discharge the following tanks, solutions, or process wastewater streams to the NBC's facilities:

    a. Treated Landfill Leachate;
    b. Treated Discharges from the OU1/Phase 1 Site;
    c. Gas Line Condensate;
    d. Oil/Water Separator Discharges.

2. No other process wastewater is to be discharged to the sewer unless specifically approved by the NBC in writing.

C. Prohibitions:

1. The Permittee is strictly prohibited from discharging any prohibited substances detailed in the Rules and Regulations of the Narragansett Bay Commission. Prohibited discharges include, but are not limited to, the following:

    a. Electroplating Solutions;
    b. Cyanide Solutions;
    c. Acidic Solutions with a pH less than 5.0 standard units;
    d. Caustic Solutions with a pH greater than 11.0 standard units;
    e. Degreasing Solutions;
    f. Solvents;
    g. Sludges;
    h. Fuel or Lubricating Oils;
    i. Gasoline;
    j. Benzene;
    k. Radioactive Wastes;
    l. Hazardous Wastes;
    m. Trucked or hauled waste of any type.

2. The Permittee is strictly prohibited from accepting wastewater from the combustion condensate and gas conditioning and compression operations conducted by Rhode Island LFG Genco, LLC without receiving written approval from the NBC. The valve in Manhole Number 5 must remain locked out at all times.

3. The Permittee is strictly prohibited from accepting and treating wastewater from any other source or business through Pump Station #1 or the SBR pretreatment system without first obtaining written approval from the NBC on any such discharge.

4. New or existing companies located on Rhode Island Resource Recovery Corporation property are strictly prohibited from connecting to the NBC sewer system without obtaining a NBC Sewer Connection Permit or discharging to the NBC system via the Rhode Island Resource Recovery Corporation discharge system without prior NBC approval.

5. The Permittee is strictly prohibited from discharging any process wastewater streams other than those specified in Section B(1) of this permit or waste streams containing pollutants with concentrations in excess of the effluent limitations specified in Table 1 on page 19, and Table 2 on page 20, attached hereto and incorporated herein.

6. The Permittee may only treat and/or discharge those solutions that were indicated as such on plans submitted to the NBC by the Permittee on July 14, 2014, September 19, 2014, and September 26, 2014. The Permittee is strictly prohibited from discharging any other tanks, solutions, chemicals, or materials, including all prohibited substances as defined in the Rules and Regulations of the Narragansett Bay Commission, without written approval from the NBC.

7. The Permittee is strictly prohibited from using portable pumps and/or flexible hose to transfer solutions directly to the pretreatment system or to bypass the pretreatment system and/or discharge solutions directly to the sewer without written approval from the NBC.

D. Pretreatment Requirements:

1. The Permittee must provide and maintain an easily accessible sample location downstream of each process discharge specified in Section B(1) of this permit. A total of three sample locations must be provided and must collect wastewater from the process operations indicated as follows:

   Sample Location #1 - Sample port on the discharge line of the final equalization tank, collecting all process discharges specified in Section B(1) (a and b) of this permit.

   Sample Location #2 - Sample port on the discharge line of the oil/water separator located near the SBR Administration Building, collecting all process discharges specified in Section B(1)(c) of this permit.

   Sample Location #3 - Interim Sample Location at Pump Station #1, collecting all process discharges specified in Section B(1)(a and b) of this permit.

The Permittee is prohibited from discharging dilution waste streams into any process wastewater sampling location. Dilution wastestreams must discharge downstream of the process wastewater sampling location. The discharge through Sample Locations #1, #2 and #3 must be in compliance with the effluent limitations specified in Section A, Table 1 and Table 2 of this permit.

2. The Permittee shall install, operate, and maintain pretreatment systems in conformance with plans submitted to the NBC on July 14, 2014, September 19, 2014, and September 26, 2014. The sequencing batch reactor pretreatment system shall be fully operational by April 30, 2015.

3. The Permittee shall add a carbon source to the SBR pretreatment system throughout April of each year to accelerate biological nutrient removal processes and shall operate the system to the fullest extent necessary to achieve and maintain compliance with the interim discharge limitations for nitrogen compounds specified in Table 2 of this permit.

4. The Permittee has installed a resettable magnetic water meter on Pump Station #1. This magnetic water meter will be used for NBC billing purposes and is prohibited from being reset by Rhode Island Resource Recovery Corporation. The reset code for the magnetic meter must be given solely to the NBC Customer Service Section. This meter is approved for billing purposes from the effective date of this permit until the SBR pretreatment system is operational. A mechanical, non-resettable discharge meter is required to be installed on the discharge line of the SBR pretreatment system.

5. The Permittee is responsible for properly operating and maintaining the pretreatment systems to achieve and ensure compliance with the conditions of this permit. Proper operation and maintenance shall include but not be limited to: effective performance, adequate funding, adequate operator staffing and training, adequate laboratory and process controls, including appropriate quality assurance procedures.

E. Monitoring Requirements:

1. The Permittee shall monitor the pH of the effluent discharge and record it continuously. The Permittee shall report the results monthly in a summary report giving the maximum, minimum, and average pH readings for each day of operation (see sample copy enclosed). The data must be reported directly from the recording chart to an accuracy of 0.1 standard units. The Permittee shall record the volume of landfill leachate discharged to the NBC sewer system on a daily basis on the pH Monitoring Report. The pH Monitoring Report must be received by the NBC within thirty (30) days from the end of the month in which the data is recorded. The original recording chart must be maintained on site for a period of at least three (3) years.

2. ***Initial Start-Up Monitoring Requirements***: During the first full normal week of discharge into the NBC system, the Permittee shall conduct wastewater sampling on the first four (4) consecutive operating days from the Interim Sample Location at Pump Station #1, Sample Location #3. The samples must be collected, preserved, and analyzed separately in accordance with EPA protocols for the following parameters:

Metals:

Arsenic (Total)	Copper (Total)	Nickel (Total)
Cadmium (Total)	Lead (Total)	Silver (Total)
Chromium (Total)	Mercury (Total)	Zinc (Total)

Nitrogen Parameters:

Ammonia (Total)	Nitrate + Nitrite	Total Kjeldahl Nitrogen
	Total Nitrogen	

Other Parameters:
Cyanide
Total Oil & Grease (fats, oils, and grease)
Total Toxic Organics (TTO)
Biochemical Oxygen Demand (BOD_5)
Total Suspended Solids (TSS)

The sampling protocols for the parameters listed above are detailed in Attachment 1 of this permit.

The analytical results are to be received by the NBC by December 30, 2014. All sampling and analyses are to be done in accordance with EPA approved procedures (40 CFR §403 and 40 CFR §136). These results are to be accompanied by a certified laboratory analysis sheet including chain of custody documentation, indicating the EPA approved test procedure for each parameter listed. A completed Self-Monitoring Compliance Report form must also accompany each set of results (see sample copy enclosed).

3. ***Intermediate Monitoring Requirements:*** Effective December 2014 and continuing until the SBR pretreatment system becomes operational, the Permittee shall conduct composite sampling from the Interim Sample Location at Pump Station #1, Sample Location #3, one day each week for arsenic and nitrogen compounds and one day each month for the other parameters. Composite samples must be collected one day each week, preserved, and analyzed separately in accordance with EPA protocols for the following parameters:

Metals:
Arsenic (Total)*

Nitrogen Parameters:

Ammonia (Total)	Nitrate + Nitrite	Total Kjeldahl Nitrogen
	Total Nitrogen	

Samples must be collected one day each month, preserved, and analyzed in accordance with EPA protocols for the following parameters:

Metals:

Cadmium (Total)	Lead (Total)	Nickel (Total)
Chromium (Total)	Mercury (Total)	Silver (Total)
Copper (Total)		Zinc (Total)

Other Parameters:

Cyanide
Total Oil & Grease (fats, oils, and grease)
Total Toxic Organics (TTO)
Biochemical Oxygen Demand (BOD_5)
Total Suspended Solids (TSS)

The sampling protocols for the parameters listed above are detailed in Attachment 1 of this permit.

*The sampling conducted for the Arsenic Study may be used to satisfy the weekly sampling requirements for Arsenic (Total).

Table 3 attached hereto summarizes the sampling requirements for this facility for the period of December 2014 until the SBR pretreatment system is operational.

4. ***SBR Pretreatment System Start-Up Monitoring Requirements:*** During the first full normal week of operations of the SBR pretreatment system, the Permittee shall conduct wastewater sampling on the first four (4) consecutive operating days from the sample port on the discharge line of the final equalization tank, Sample Location #1. The samples must be collected, preserved, and analyzed separately in accordance with EPA protocols for the following parameters:

Metals:

Arsenic (Total)	Copper (Total)	Nickel (Total)
Cadmium (Total)	Lead (Total)	Silver (Total)
Chromium (Total)	Mercury (Total)	Zinc (Total)

Nitrogen Parameters:

Ammonia (Total)	Nitrate + Nitrite	Total Kjeldahl Nitrogen
	Total Nitrogen	

Other Parameters:

Cyanide
Total Oil & Grease (fats, oils, and grease)
Total Toxic Organics (TTO)
Biochemical Oxygen Demand (BOD5)
Total Suspended Solids (TSS)

The sampling protocols for the parameters listed above are detailed in Attachment 1 of this permit.

The analytical results are to be received by the NBC by June 30, 2015. All sampling and analyses are to be done in accordance with EPA approved procedures (40 CFR §403 and 40 CFR §136). These results are to be accompanied by a certified laboratory analysis sheet including chain of custody documentation, indicating the EPA approved test procedure for each parameter listed. A completed Self-Monitoring Compliance Report form must also accompany each set of results (see sample copy enclosed).

5. ***Routine Monitoring Requirements:*** Upon completion of the four day SBR Pretreatment System Start-Up monitoring, the Permittee shall conduct routine monitoring from the sample port on the discharge line of the final equalization tank, Sample Location #1, one day each week for arsenic and nitrogen compounds and monthly for other parameters. The weekly composite samples must be collected, preserved, and analyzed separately in accordance with EPA protocols for the following parameters:

Metals:
Arsenic (Total)*

Nitrogen Parameters:

Ammonia (Total)	Nitrate + Nitrite	Total Kjeldahl Nitrogen
	Total Nitrogen	

The monthly samples must be collected, preserved, and analyzed in accordance with EPA protocols for the following parameters:

Metals:

Cadmium (Total)	Lead (Total)	Nickel (Total)
Chromium (Total)	Mercury (Total)	Silver (Total)
Copper (Total)		Zinc (Total)

Other Parameters:
Cyanide
Total Oil & Grease (fats, oils, and grease)
Total Toxic Organics (TTO)
Biochemical Oxygen Demand (BOD_5)
Total Suspended Solids (TSS)

The sampling protocols for the parameters listed above are detailed in Attachment 1 of this permit.

*The sampling conducted for the Arsenic Study may be used to satisfy the weekly sampling requirements for Arsenic (Total).

Table 4 attached hereto summarizes the sampling requirements for this facility.

8. All discharge meters measuring flows, which ultimately discharge to the sampling locations specified previously, are to be read at the start of sampling and at the end of sampling. These readings and the resultant total flow are to be submitted with the sampling results.

9. The analytical results for each sampling month listed above must be received by the NBC within thirty (30) days after the end of the month in which the samples are to be collected. All sampling and analyses are to be done in accordance with EPA approved procedures (40 CFR §403 and 40 CFR §136). The Permittee must complete and submit a Self-Monitoring Compliance Report (copy enclosed) with each certified laboratory analysis sheet including chain of custody documentation. The laboratory analysis report must indicate the EPA approved test procedure for each parameter listed. All Self-Monitoring Compliance Reports must be signed by the Permittee or authorized agent and certify that the information submitted is accurate and complete to the best of their knowledge.

10. The Permittee must compare the analytical report results with the NBC effluent discharge limitations listed in Table 1 and Table 2. If there are any violations of the NBC's standards, the Permittee must notify the NBC within twenty-four (24) hours of becoming aware of the violation by contacting pretreatment staff at 461-8848 or by using the twenty-four (24) hour violation notification FAX form and must resample and analyze for the parameter(s) in violation of the NBC's standards, excluding BOD, TSS and pH. The resampling results must be received by the NBC no later than thirty (30) days following the date that the Permittee became aware of the initial violation of the standards.

11. The NBC may, at any time, require more frequent monitoring than specified in this permit. Conditions that may result in the imposition of more frequent monitoring include, but are not limited to, the following:

    a. Failure to meet effluent limitations;
    b. Change in production processes;
    c. Expansion or reduction of production;
    d. Change in wastewater flows;
    e. Discovery of additional information on monitoring or production unavailable to the NBC at the time this permit was prepared.

F. Arsenic Study Requirements:

1. The Permittee has agreed to conduct a study to evaluate the impact of arsenic discharges from Rhode Island Resource Recovery Corporation to the Field’s Point Wastewater Treatment Facility and the Providence River as outlined in the plan dated June 10, 2014. The study is attached hereto and incorporated herein as Attachment 2. All requirements of the study must be completed in accordance with the timeline outlined in the study.

2. The Permittee agrees to conduct monitoring at the Rhode Island Resource Recovery Corporation facility and of influent and effluent at the Field's Point Wastewater Treatment Facility in accordance with the Arsenic Study. The monitoring at Rhode Island Resource Recovery Corporation and the Field's Point Wastewater Treatment Facility must be conducted on the same day. The Permittee must coordinate the Arsenic Study sampling with the NBC Environmental Monitoring Manager. The NBC will provide split samples of the Field's Point influent and effluent to the Permittee. Table 5 attached hereto summarizes the sampling requirements of the Arsenic Study.

3. The Permittee shall submit quarterly Arsenic Study status reports to the Narragansett Bay Commission. The reports are to be submitted by the last day of February 2015, May 2015, August 2015, November 2015, and February 2016. The status reports are to include the analytical data collected during the quarter, an evaluation of the data and the steps to be taken during the next quarter.

4. The Permittee shall submit a summary report to the Narragansett Bay Commission and the Rhode Island Department of Environmental Management after the SBR pretreatment system is fully operational. The report shall evaluate the impact of Rhode Island Resource Recovery Corporation discharges on the Field's Point Wastewater Treatment Facility as they relate to arsenic. The report shall be submitted by the last day of May 2016.

G. Record Keeping Requirements:

1. The Permittee shall be responsible for maintaining a logbook documenting all records pertaining to the operation of the pretreatment system including, but not limited to, the following:

    a. Amount of chemicals used on a monthly basis to provide pretreatment;
    b. Amount of sludge generated on a monthly basis;
    c. Completed manifest forms for hazardous materials;
    d. Maintenance performed on the pretreatment system including weekly probe cleaning, monthly probe calibration and other maintenance requests specified by inspectors of the NBC.

2. Records which substantiate any information supplied in permit applications, Self-Monitoring Compliance Reports and any other informational requirements of the Rules and Regulations or any applicable State or Federal law are to be kept by the Permittee for a period of at least three (3) years unless a dispute or litigation involving the subject of those records is pending, in which case these records are to be kept by the Permittee for a period of at least three (3) years following resolution of such litigation or dispute.

H. Spill and Slug Prevention Control Plan:

The Permittee must maintain an approved Spill and Slug Prevention Control Plan and all associated facilities to ensure that incidental and accidental spills are unable to enter the NBC sewer system.

I. Emergency/Routine Notification Requirements:

1. Emergency Notification of Accidental/Incidental Discharge

In the case of an accidental discharge into the NBC facilities, including any discharge that would violate a Federal prohibition under 40 CFR 403.5(b), it is the responsibility of the Permittee to notify the NBC of the incident immediately by calling the Pretreatment Section at 461-8848 or during non-business hours at its twenty-four (24) hour Emergency Hotline Number, 434-6350. Within five (5) days following an accidental discharge, the Permittee shall submit to the NBC a detailed written report describing the cause and volume of the discharge and the measures to be taken by the user to prevent similar future occurrences by the Permittee.

2. Routine Notification of Operational Changes

The Permittee must notify the NBC in writing at least thirty (30) days prior to instituting any changes in operations that may affect the quality or quantity of the process wastestream discharged to the sewer system or may affect the adequacy of spill control measures. Operational changes that may affect the quality or quantity of the process wastestream or the adequacy of spill control measures include, but are not limited to, the following:

a. Addition, removal, or relocation of process tanks or solutions;
b. Installation of new wastewater generating process operations;
c. Relocation of process operation piping or valving resulting in a new or different point of discharge;
d. Modification of any pretreatment process or procedure;
e. Installation or modification of pretreatment equipment or associated piping;

Should the Permittee be unsure as to whether an operational change requires written NBC notification, it is strongly recommended that the Permittee contact the NBC by telephone prior to instituting the proposed change in operations. This will ensure that the proper notification is provided to the NBC. With respect to the thirty (30) day written notification requirement, should the Permittee require immediate approval to make an operational change in order to accommodate business, the NBC will make every effort to accommodate the Permittee so as to not impede operations at the facility. The discretion used by the

NBC with respect to this issue is dependent on the magnitude of the proposed operational changes and the resulting effect on the characteristics of the wastestream and/or the spill control measures at the facility. The Permittee may notify the NBC of the following operational changes by telephone rather than in writing as required above:

f. Change from the hours of facility operation specified in the discharge permit application;
g. Change in the personnel responsible for the proper operation of pretreatment equipment.

3. Routine Notification of Pretreatment Equipment Malfunctions

In the event of pretreatment equipment failure or malfunction, the Permittee must notify the NBC of the incident by the close of the next full business day by calling the NBC's Pretreatment Section at 461-8848. Pretreatment equipment failure includes, but is not limited to, the following:

a. pH monitoring equipment failure;
b. pH probe failure;
c. pH chart recorder failure;
d. Chemical feed pump failure;
e. Pretreatment system pump, filter, or mixer failure;
f. Carbon treatment unit failure;
g. Cell liner failure.

Any equipment failure or malfunction which results in a spill and/or accidental discharge must be reported immediately in accordance with the NBC Emergency Spill Notification Procedure. Should a pretreatment equipment failure or malfunction occur, the Permittee is strictly responsible for complying with all other permit conditions, including, but not limited to, maintaining full compliance with effluent limitations and monitoring requirements.

J. Right of Entry:

The NBC, upon presenting identification and appropriate credentials, is authorized to enter the premises of the Permittee during working hours and at other reasonable times for the purposes of inspection, sampling, reading water meters, records inspecting and copying and as otherwise authorized under R.I.G.L. §46-25-25.1. Reasonable hours in the context of inspection and sampling include any time the NBC has reason to believe that violation of the permit or of the Rules and Regulations is occurring.

K. Permit Fee:

The Permittee agrees to pay an annual permit fee and all sewer user fees assessed by the NBC in accordance with rates and fees approved by the Public Utilities Commission pursuant to R.I.G.L. §39-1-1 et seq. and §46-25-1 et seq. The Permittee agrees to reimburse the NBC for the cost of the collection of any and all fees associated with the permit, including reasonable attorney's fees.

L. Closing, Selling, Moving the Business:

If the Permittee intends to close, liquidate, sell or move the permitted premises, located as referenced on page 1 of this permit, the Permittee must notify the NBC in writing at least thirty (30) days prior to disposing of any process waste associated with the move or the cessation of business.

M. Transfer of Permit Prohibited:

Wastewater discharge permits are issued to a specific user for a specific operation. This permit may not be reassigned, transferred or sold to a new owner, new user, different premises, or a new or changed operation without the express written permission from the NBC. The Permittee shall provide a copy of this permit to any prospective purchaser of said facility referenced on page 1 of this permit at least fourteen (14) days prior to closing on the business or property.

N. Permit Violations:

1. Enforcement Costs

   The Permittee agrees to hold harmless and indemnify and/or reimburse the NBC for the cost of enforcing the permit, including reasonable attorneys' fees, if violations of the permit are found by a hearing officer during the course of an administrative hearing or if such decision is appealed, then in a court of competent jurisdiction.

2. Damage to the Facilities

   The Permittee agrees to hold harmless and indemnify and/or reimburse the NBC from and against any liability, loss, cost, expense or actual damage (including reasonable attorneys' and accountants' fees incurred in defending or prosecuting any claim for any such liability, loss, cost, expense or damage) suffered by the NBC and caused by discharges from the Permittee, either individually or by interaction with other wastes.

3. Violations of the NBC's Permit

   The Permittee agrees to hold harmless and indemnify and/or reimburse the NBC for any penalty and additional operating expense incurred by the NBC for violations of the NBC's NPDES, RIPDES, or any other state or federal permit which were caused by discharges from the Permittee, either individually or by interaction with other wastes.

4. Penalties for Violations

   Article 10 of the NBC's Rules and Regulations provides that any person who violates a permit condition is subject to an administrative or civil penalty of up to $25,000 per violation per day as defined in R.I.G.L. §46-25-25.2. Willful or criminally negligent violations shall be punishable by the aforementioned fine and/or imprisonment as defined in R.I.G.L. §46-25-25.3.

O. Revocation/Suspension of Permit:

1. Violations of the conditions of this permit, the NBC's Rules and Regulations, Act, and applicable state or Federal regulations may result in the revocation of this permit in accordance with the due process requirements of the NBC's Rules and Regulations. Violations that may result in revocation of this permit include, but are not limited to, the following:

   a. Failure to accurately report the wastewater constituents and characteristics of the discharge;
   b. Failure to report changes in operations or wastewater constituents;
   c. Failure to allow NBC personnel statutorily authorized access for the purposes of inspection or monitoring;
   d. Failure to adhere to an approved compliance schedule;
   e. Failure to comply with administrative orders or settlement agreements;
   f. Failure to pay authorized fees and user charges;
   g. Violation of any other applicable permit conditions.

   This list is for illustrative purposes and is not intended to be inclusive.

2. The Executive Director may suspend this wastewater discharge permit should the Permittee cease operations for any period exceeding one (1) month. The suspension will not act as a revocation of the permit, but rather as a temporary suspension of the user's rights under the permit while operations have ceased. During such suspension, the user's connection to the facilities shall be plugged. The user shall still be required to pay the permit fee, since the permit itself will not be revoked. During such suspension, the user shall be disconnected from the facility. The Narragansett Bay Commission shall have the authority to make periodic inspections during this time to determine whether the user is continuing to discharge regulated wastewater. Such discharge may be considered grounds for revocation of the wastewater discharge permit.

P. Civil And Criminal Liability:

Nothing in this permit shall be construed to relieve the Permittee from civil and/or criminal penalties for noncompliance with the NBC's Rules and Regulations or State or Federal laws or regulations.

Q. Duty To Comply:

1. The Permittee must comply with all conditions of this permit. Failure to comply with the requirements of this permit may be grounds for enforcement proceedings including administrative, civil and/or criminal penalties, injunctive relief and summary abatements.

2. Compliance with this permit does not relieve the Permittee of its obligation to comply with any or all pretreatment regulations, standards or requirements under local, State and Federal laws, including any such regulations, standards, requirements, or laws that may become effective during the term of this permit.

R. Removed Substances:

Solids, sludges, filter residue or other pollutants removed in the course of treatment or control of waters or wastewaters shall be disposed of in accordance with §405 of the Clean Water Act and subtitles C and D of the Resource Conservation and Recovery Act. A Resource Conservation and Recovery Act (RCRA) informational brochure is attached to this permit to inform you of your RCRA obligations.

S. Permit Modification/Renewal:

1. This permit may be modified for various reasons, including but not limited to the following:

    a. To incorporate any new or revised Federal, State, or local pretreatment standards or requirements;

    b. Material or substantial alterations or additions to Permittee's process operations, discharge volume or discharge characteristics which were not considered in the drafting of this permit;

    c. A change in any condition regarding either the industrial user or the POTW that requires either a temporary or permanent reduction or elimination of the authorized discharge;

d. Information indicating that the permitted discharge poses a threat to the NBC collection or treatment system, POTW personnel, the general public, or the receiving waters;

e. Violation of any terms or conditions of the permit;

f. Misrepresentation or failure to disclose fully all relevant facts in the permit application or in any required reporting;

g. Revision of or a grant of variance from such categorical standards pursuant to 40 CFR §403.13;

h. To correct typographical or other errors in the permit;

i. To reflect transfer of the facility ownership and/or operation to a new owner/operator;

j. Upon request of the Permittee, provided such request does not create a violation of any applicable requirements, standards, laws, or rules and regulations.

The filing of a request by the Permittee for a permit modification, revocation and reissuance, termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

2. If the Permittee wishes to continue to discharge after the expiration date of this permit, an application must be filed for a permit renewal in accordance with the requirements of Article 8 of the NBC's Rules and Regulations a minimum of ninety (90) days prior to the expiration date.

T. Integration:

This permit represents the entire agreement and understanding of the parties hereto to those matters contained herein. No prior oral or written understanding shall be of any force or effect with respect to those matters covered hereunder. This permit may not be modified or altered except in accordance with the provisions of Article 8 of the Rules and Regulations. All terms used in this permit shall be construed as defined under Article 2 of the Rules and Regulations.

U. Jurisdiction:

This permit shall be administered and interpreted under the laws of the State of Rhode Island. Jurisdiction of litigation arising from this permit shall be in the State of Rhode Island. If any part of this permit is found to be in conflict with applicable laws, such part shall be inoperative, null and void insofar as it is in conflict with said law, but the remainder of this permit shall be in full force and effect.

NPD:KMB:smb

Attachments:

Self-Monitoring Compliance Report Form
Continuous pH Monitoring Report Form
Designation of Authorized Agent Form
RCRA Handbook
Twenty-four (24) Hour Violation Notification Fax Form
List of Licensed Laboratories

Table 1

NBC Effluent Discharge Limitations
Field's Point District

Parameter	Limitation (Max)
Total Toxic Organics (TTO)	2.13
Biochemical Oxygen Demand (BOD_5)	300.00*
Total Suspended Solids (TSS)	300.00*
Total Oil and Grease (fats, oils and grease)	125.0
Oil and Grease (mineral origin)	25.0
Oil and Grease (animal/vegetable origin)	100.0
pH range (at all times)	5.0 - 11.0 s.u.

Parameter	Daily Maximum Composite for 1 day (mg/l)	Average 10 day (mg/l)
Cadmium (Total)	0.11	0.07
Chromium (Total)	2.77	1.71
Copper (Total)	1.20	1.20
Cyanide (Total)	0.58	0.58
Lead (Total)	0.60	0.40
Mercury (Total)	0.005	0.005
Nickel (Total)	1.62	1.62
Silver (Total)	0.43	0.24
Zinc (Total)	2.61	1.48

All limitations are in units of mg/l unless otherwise specified.

* Exceeding this discharge limitation may be permitted but may be subject to a surcharge in accordance with rates approved by the Public Utilities Commission and in accordance with R.I.G.L. §39-1-1 et seq.

Table 2

NBC Interim Effluent Discharge Limitations

Parameter	Daily Maximum Limitation	Monthly Average
Arsenic (Total)	0.60 mg/L	0.40 mg/L
Ammonia*	5.0 mg/L	
Nitrate + Nitrite*	10.0 mg/L	
Non-Biodegradable Organic Nitrogen*	100.0 mg/L	
Maximum Daily Flow	464,000 gallons/day	
Maximum Flow Rate	30,000 gallons/hour	
Daily Average Flow Rate	22,500 gallons/hour	

*The interim effluent discharge limitations for Ammonia, Nitrate+Nitrite and Non-Biodegradable Organic Nitrogen are seasonal limitations. These interim limits are effective May 1st through October 31st of every year.

Table 3

Rhode Island Resource Recovery Corporation
Sampling Requirements for November 2014 to the Start-Up of the SBR Pretreatment System

	Sample Location #3 Interim Sample Location at Pump Station #1			
	Monthly		Weekly	
Month	**Composite Sample**	**Parameters**	**Composite Sample**	**Parameters**
November 2014	X	Cd, Cr, Cu, Pb, Hg, Ni, Ag, Zn, CN*, O&G*, TTO, BOD, TSS	X	As, Ammonia, Nitrate+Nitrite, TKN, TN
December 2014	X	Cd, Cr, Cu, Pb, Hg, Ni, Ag, Zn, CN*, O&G*, TTO, BOD, TSS	X	As, Ammonia, Nitrate+Nitrite, TKN, TN
January 2015	X	Cd, Cr, Cu, Pb, Hg, Ni, Ag, Zn, CN, O&G, TTO, BOD, TSS	X	As, Ammonia, Nitrate+Nitrite, TKN, TN
February 2015	X	Cd, Cr, Cu, Pb, Hg, Ni, Ag, Zn, CN, O&G, TTO, BOD, TSS	X	As, Ammonia, Nitrate+Nitrite, TKN, TN
March 2015	X	Cd, Cr, Cu, Pb, Hg, Ni, Ag, Zn, CN, O&G, TTO, BOD, TSS	X	As, Ammonia, Nitrate+Nitrite, TKN, TN
April 2015	X	Cd, Cr, Cu, Pb, Hg, Ni, Ag, Zn, CN, O&G, TTO, BOD, TSS	X	As, Ammonia, Nitrate+Nitrite, TKN, TN

Legend

Cd – Cadmium
Cr – Chromium
Cu – Copper
CN – Cyanide
Pb – Lead
Hg – Mercury
Ni – Nickel
Ag - Silver (Total)
Zn - Zinc (Total)
O&G - Total Oil & Grease (fats, oils & grease)
BOD - Biochemical Oxygen Demand
TSS - Total Suspended Solids
TTO - Total Toxic Organics
TKN - Total Kjeldahl Nitrogen
TN - Total Nitrogen

*Cyanide and Total Oil & Grease samples are to be collected as four grab samples over the course of the day in accordance with Attachment 1.

Table 4

Rhode Island Resource Recovery Corporation
Sampling Requirements Upon Start-Up of SBR Pretreatment System

	Sample Location #1 Sample Port on the Discharge Line of the Final Equalization Tank			
	Monthly		Weekly	
Month	**Composite Sample**	**Parameters**	**Composite Sample**	**Parameters**
January	X	As, Cd, Cr, Cu, Pb, Hg, Ni, Ag, Zn, CN, O&G, TTO, BOD, TSS, Ammonia, Nitrate+Nitrite, TKN, TN	X	As, Ammonia, Nitrate+Nitrite, TKN, TN
February	X	As, Cd, Cr, Cu, Pb, Hg, Ni, Ag, Zn, CN, O&G, TTO, BOD, TSS, Ammonia, Nitrate+Nitrite, TKN, TN	X	As, Ammonia, Nitrate+Nitrite, TKN, TN
March	X	As, Cd, Cr, Cu, Pb, Hg, Ni, Ag, Zn, CN, O&G, TTO, BOD, TSS, Ammonia, Nitrate+Nitrite, TKN, TN	X	As, Ammonia, Nitrate+Nitrite, TKN, TN
April	X	As, Cd, Cr, Cu, Pb, Hg, Ni, Ag, Zn, CN, O&G, TTO, BOD, TSS, Ammonia, Nitrate+Nitrite, TKN, TN	X	As, Ammonia, Nitrate+Nitrite, TKN, TN
May	X	As, Cd, Cr, Cu, Pb, Hg, Ni, Ag, Zn, CN, O&G, TTO, BOD, TSS, Ammonia, Nitrate+Nitrite, TKN, TN	X	As, Ammonia, Nitrate+Nitrite, TKN, TN
June	X	As, Cd, Cr, Cu, Pb, Hg, Ni, Ag, Zn, CN, O&G, TTO, BOD, TSS, Ammonia, Nitrate+Nitrite, TKN, TN	X	As, Ammonia, Nitrate+Nitrite, TKN, TN
July	X	As, Cd, Cr, Cu, Pb, Hg, Ni, Ag, Zn, CN, O&G, TTO, BOD, TSS, Ammonia, Nitrate+Nitrite, TKN, TN	X	As, Ammonia, Nitrate+Nitrite, TKN, TN
August	X	As, Cd, Cr, Cu, Pb, Hg, Ni, Ag, Zn, CN, O&G, TTO, BOD, TSS, Ammonia, Nitrate+Nitrite, TKN, TN	X	As, Ammonia, Nitrate+Nitrite, TKN, TN
September	X	As, Cd, Cr, Cu, Pb, Hg, Ni, Ag, Zn, CN, O&G, TTO, BOD, TSS, Ammonia, Nitrate+Nitrite, TKN, TN	X	As, Ammonia, Nitrate+Nitrite, TKN, TN
October	X	As, Cd, Cr, Cu, Pb, Hg, Ni, Ag, Zn, CN, O&G, TTO, BOD, TSS, Ammonia, Nitrate+Nitrite, TKN, TN	X	As, Ammonia, Nitrate+Nitrite, TKN, TN
November	X	As, Cd, Cr, Cu, Pb, Hg, Ni, Ag, Zn, CN, O&G, TTO, BOD, TSS, Ammonia, Nitrate+Nitrite, TKN, TN	X	As, Ammonia, Nitrate+Nitrite, TKN, TN
December	X	As, Cd, Cr, Cu, Pb, Hg, Ni, Ag, Zn, CN, O&G, TTO, BOD, TSS, Ammonia, Nitrate+Nitrite, TKN, TN	X	As, Ammonia, Nitrate+Nitrite, TKN, TN

Legend

Cd – Cadmium
Cr – Chromium
Cu – Copper
CN – Cyanide
Pb – Lead
Hg – Mercury
Ni – Nickel
Ag - Silver (Total)
Zn - Zinc (Total)
O&G - Total Oil & Grease (fats, oils & grease)
BOD – Biochemical Oxygen Demand
TSS – Total Suspended Solids
TTO – Total Toxic Organics
TKN - Total Kjeldahl Nitrogen
TN - Total Nitrogen

*Cyanide and Total Oil & Grease samples are to be collected as four grab samples over the course of the day in accordance with Attachment 1.

Table 5

Rhode Island Resource Recovery Corporation
Sampling Requirements for Arsenic Study

	RIRRC				Field's Point WWTF			
	Total Arsenic		Speciation		Total Arsenic		Speciation	
	Influent Frequency	Effluent Frequency	Influent Frequency	Effluent Frequency	Influent Frequency	Effluent Frequency	Influent Frequency	Effluent Frequency
November 2014		1x/week			1x/week	1x/month		1x/month
December 2014		1x/week			1x/week	1x/month		1x/month
January 2015		1x/week			1x/week	1x/month		1x/month
February 2015		1x/week			1x/week	1x/month		1x/month
March 2015		1x/week			1x/week	1x/month		1x/month
April 2015		1x/week			1x/week	1x/month		1x/month
May 2015	1x/week	2x/week		1x/month	1x/week	1x/week	1x/month	1x/month
June 2015	1x/week	2x/week			1x/week	1x/week		
July 2015	1x/week	2x/week		1x/month	1x/week	1x/week	1x/month	1x/month
August 2015	1x/week	2x/week			1x/week	1x/week		
September 2015	1x/week	2x/week		1x/month	1x/week	1x/week	1x/month	1x/month
October 2015	1x/week	2x/week			1x/week	1x/week		
November 2015	1x/week	2x/week		1x/month	1x/week	1x/week	1x/month	1x/month
December 2015	1x/week	2x/week			1x/week	1x/week		
January 2016	1x/week	2x/week		1x/month	1x/week	1x/week	1x/month	1x/month
February 2016	1x/week	2x/week			1x/week	1x/week		
March 2016	1x/week	2x/week		1x/month	1x/week	1x/week	1x/month	1x/month
April 2016	1x/week	2x/week			1x/week	1x/week		

Arsenic Study sampling at RIRRC for each month must be conducted on the same day as the sampling at the Field's Point Wastewater Treatment Facility. The monthly sampling is to be coordinated with the NBC Environmental Monitoring Manager. The NBC will provide RIRRC with split samples from the influent and effluent of the Field's Point Wastewater Treatment Facility.

Attachment 1

Monitoring Protocols

There are two types of samples that can be collected, composites and grab samples.

Composite samples are to consist of equal volume grab samples collected every half hour or collected continuously with a composite sampler.

Grab samples are samples collected at one time.

Metals samples are to be collected as composite samples. The pH of the metals sample is to be adjusted to below 2.0 standard units (s.u.) by the addition of nitric or sulfuric acid and refrigerated until analysis. The parameters for metals analysis are:

Arsenic (Total)	Copper (Total)	Nickel (Total)
Cadmium (Total)	Lead (Total)	Silver (Total)
Chromium (Total)	Mercury (Total)	Zinc (Total)

Nutrient samples are to be collected as composite samples. Nutrient samples are to be preserved immediately upon collection by adding sulfuric acid to the sample to lower the pH to below 2.0 s.u. The samples must be refrigerated until analysis which must be completed within 28 days. The parameters that must be analyzed are:

Ammonia (Total)	Nitrate + Nitrite	Total Kjeldahl Nitrogen

Samples for Biochemical Oxygen Demand (BOD_5) and Total Suspended Solids (TSS) are to be collected as composite samples. No preservation chemicals are needed for these parameters.

The Permittee may collect one composite sample for the aforementioned parameters. The composite sample may be poured off into three separate bottles. One bottle each for metals, nutrient, and BOD/TSS.

Cyanide: Four (4) grab samples shall be collected at equidistant time intervals over the entire operating day (i.e. one (1) sample every two (2) hours over the course of an eight (8) hour operating day). Each grab sample must be preserved immediately upon sample collection in accordance with EPA regulations. The grab sample must immediately be tested for residual chlorine with potassium iodide paper. If residual chlorine is present in the sample, then 0.6 grams of ascorbic acid must be added. The sample should then be retested for chlorine residual, and if it is present, the addition of ascorbic acid should be repeated. Once residual chlorine has been eliminated from the sample, the pH of the sample must be checked and elevated to greater than 12.0 standard units by the addition of sodium hydroxide, if necessary. Once the grab sample has been preserved to a pH greater than 12.0 standard units and no chlorine residual is

detected, it may be composited with the other grab samples collected on that operating day. The composite of the four (4) preserved grab samples must be refrigerated until analysis and must be analyzed within fourteen (14) days of collection.

Total Oil and Grease (fats, oils, and grease): Four (4) grab samples shall be collected at equidistant time periods over the entire operating day (i.e. one (1) sample every two (2) hours over the course of an eight (8) hour operating day). Each grab sample must be collected in a glass bottle, preserved, and analyzed separately in accordance with EPA protocols. The mathematical average of the four results must be reported to determine compliance with the NBC discharge limitation of 125 ppm for Total Oil and Grease.

Total Toxic Organics (TTO) shall be conducted by collecting two separate samples according to the following procedures:

a. ***Volatile Organic Compounds Sampling*** - Four (4) grab samples are to be collected at equidistant time periods over the entire operating day (i.e. one (1) sample every two (2) hours over the course of an eight (8) hour operating day). Each grab sample is to be collected in a glass bottle with a Teflon lined cap with a volume of either 25 or 40 ml. Each grab sample must immediately be tested for residual chlorine with potassium iodide paper. If residual chlorine is present in the sample, then 0.008% by volume of sodium thiosulfate must be added (i.e. 2 mg per 25 ml of sample collected). The sample should then be retested for chlorine residual; if it is present, the addition of sodium thiosulfate should be repeated. Once chlorine residual has been eliminated from the sample, the sample should be stored in the dark and refrigerated at a temperature of 0 - 4°C until analysis. No air bubbles may be present in any grab sample or that sample must be discarded. Each grab sample is to be analyzed separately and the mathematical average reported. Alternatively, the grab samples may be composited in the laboratory at a temperature of 0 - 0-4°C immediately before analysis. All samples must be analyzed within three (3) days of collection for the Volatile Organic Compounds (purgeables) fraction of the Total Toxic Organics (TTO) list enclosed.

b. ***Acid, Base, and Neural Fraction Sampling*** - Collect a composite sample, which is to consist of equal volume grab samples collected at least every half hour over the operating day or collected continuously with a composite sampler. A minimum of 1,000 ml (1L) of wastewater is to be collected in an amber glass bottle with a Teflon lined cap and submitted for analysis. Each grab sample must be preserved immediately upon sample collection according to EPA protocols prior to compositing with other preserved grab samples. If an automatic composite sampler is used, it must be as free as possible of plastic tubing and other potential sources of contamination; if the sampler includes a peristaltic pump, use a minimum length of properly cleaned

silicone rubber tubing. The sampler must utilize glass sampling containers. The samples must be refrigerated to a temperature of 0-4^{o}C during sample collection and must be immediately preserved once the sample collection process is completed. The samples must be tested for residual chlorine with potassium iodide paper. If chlorine residual is present in the sample, then 0.008% by volume of sodium thiosulfate must be added (i.e. 80mg per liter of sample collected). The sample should then be retested for chlorine residual, if it is present, the addition of sodium thiosulfate should be repeated. Once chlorine residual has been eliminated from the sample, the sample must be stored in the dark until analysis. All samples must be extracted within seven (7) days of collection and must be analyzed within forty (40) days of extraction for the **Acid, Base and Neutral** fraction of the Total Toxic Organics (TTO) list enclosed.

Attachment 2

Proposed Work Plan
Evaluation of Impacts on NBC Field's Point WWTF Effluent and Evaluation of Pretreatment Alternatives
Arsenic in Wastewater Generated at Central Landfill

Introduction

Starting in November 2014, the Rhode Island Resource Recovery Corporation (RIRRC) will begin discharging its wastewater to the Narragansett Bay Commission's (NBC) collection system for treatment at the Field's Point wastewater treatment facility (WWTF). RIRRC's wastewater will initially be discharged untreated until it completes construction and start-up of its new Pretreatment Plant. During the interim period, RIRRC will discharge a maximum of 325,000 gallons per day (gpd) of wastewater to the NBC and control flow using two new storage tanks with a total capacity of 1.5 million gallons.

RIRRC's Pretreatment Plant is scheduled to be operational in May 2015 and is designed to remove nitrogen-containing compounds to acceptable concentrations and loadings for discharge to the Field's Point WWTF. It is designed for a maximum flow of 650,000 gpd at the concentrations of nitrogen compounds anticipated over the next 20 years of RIRRC's landfilling operations. The higher design flow anticipates increased wastewater flows from RIRRC as new landfill cells are constructed as approved by the Rhode Island Department of Environmental Management (RIDEM).

RIRRC has prepared this draft Work Plan at the request of NBC and RIDEM to establish a process: (1) to evaluate the potential for RIRRC's wastewater to cause NBC's effluent to exceed the water quality standards for arsenic as flow increases over time; and (2) to evaluate whether arsenic removal is necessary and, if it is necessary, to evaluate the efficacy of pre-treatment alternatives to address arsenic.

Approach

As an initial step in developing this Work Plan, CDM Smith Inc. (CDM Smith) reviewed the extensive available historic data on arsenic concentrations both at the Field's Point WWTF and in RIRRC's wastewater. Table 1, below, shows the recent concentrations of arsenic in RIRRC's wastewater. Monthly average flow rates are provided as well. Previously, some preliminary calculations performed by RIDEM, NBC and RIRRC, considered the potential for RIRRC's wastewater to cause an exceedance of the established water quality standard for arsenic in the receiving water for the Field's Point WWTF when at maximum flow levels.

CDM Smith's calculations, based on this extensive historic data, show that the concentration of arsenic in the Field's Point WWTF receiving water will be in compliance with the arsenic water quality standard for at least several years after addition of RIRRC's wastewater. This multi-year window provides an opportunity to assess arsenic within the Pretreatment Plant and the Field's Point WWTF system. If removal of arsenic from RIRRC's wastewater is required at a future date, RIRRC will have both specific information [based on actual data from measurements of the impact of both the Pretreatment Plant and the Field's Point WWTF on the RIRRC effluent] and adequate time to design and implement a supplemental treatment system at the Pretreatment Plant based on the new effluent, if necessary.

Table 1

Summary of Recent Historic Flow and Arsenic Data in RIRRC Wastewater since January 2013

Year	Month	Average Flow Rate (gallons/day)	Average Arsenic Concentration (mg/L)	Loading (Pounds per day) (Note 2)
2013	January	265,279	0.28	0.62
	February	300,942	0.24	0.60
	March	257,027	0.28	0.60
	April	237,313	0.29	0.57
	May	206,107	0.33	0.57
	June	275,368	0.31	0.71
	July	231,317	0.21	0.41
	August	218,524	0.38	0.69
	September	207,124	0.40	0.69
	October	173,261	0.46	0.66
	November	160,108	0.48	0.64
	December	212,188	0.36	0.64
2014	January	264,445	0.27	0.60
	February	264,989	0.28	0.62
	March	256,477	0.3	0.64
	April	304,239	0.25	0.63
Average Monthly		**239,669**	**0.32**	**0.62**

Notes

1. Monthly flows and arsenic concentrations as shown on averages from daily total readings (flow) and from weekly samples collected during the month (arsenic concentration).
2. Loading calculated from monthly average flows and concentrations.

The Work Plan to evaluate the arsenic discharges, as summarized below, will consist of two steps.

First, starting in the summer of 2014, RIRRC will conduct a focused sampling and analysis program to assess the concentrations of arsenic both from RIRRC and at the Field's Point WWTF. This program is intended to confirm the assumptions used to estimate effluent concentrations and the form of arsenic (e.g., organic or inorganic) in the Field's Point effluent. This information will then be used to evaluate whether RIRRC's wastewater will potentially cause water quality standard violations related to arsenic.

Second, if additional treatment is determined to be required, RIRRC will evaluate alternative treatment approaches to reduce arsenic loadings from the Pretreatment Plant. RIRRC will initiate this work six months after the Pretreatment Plant is operational and treating the nitrogen compounds to the permit standard. The work will initially include bench scale evaluations of treatment alternatives in an effort to determine the best treatment technology, followed by a pilot scale evaluation, and then the development of a conceptual and final design for a supplemental treatment system.

The details of the Work Plan items are provided below.

Figure 1 is provided with the Work Plan to provide a schematic of the combined system at RIRRC as its wastewater is collected from the landfill-related sources, the location of the on-site equalization tanks and Pretreatment Plant currently under construction, and the Field's Point WWTF.

As RIRRC works with NBC to implement this Work Plan, there will be a series of alternative outcomes that may be implemented based on the results of the proposed tasks. CDM Smith has prepared Figure 2 which outlines an overall decision-tree and schedule for the proposed tasks to outline outcomes from each of the two tasks.

Estimated Arsenic Concentrations in Field's Point WWTF Effluent Discharge

CDM Smith has prepared the following calculation of the anticipated concentrations of arsenic in the Field's Point WWTF effluent and overall water quality standard in the receiving water after it begins to receive effluent from RIRRC.

Peak flows will be attenuated by the use of the on-site storage tanks. Based on detailed flow analysis performed by RIRRC and CDM Smith, the three future flow scenarios for RIRRC's wastewater are summarized in Table 2.

Table 2
Summary of Flow Scenarios of RIRRC Wastewater

Scenario	Average Daily Flow (gpd)	Peak Daily Flow (gpd)	Basis
Current Flow Conditions Including operation of Pretreatment Plant starting in May 2015 (Nov 2014 through May 2016)	240,000	325,000	Review of historic data for last two years incorporating use of new storage tanks to attenuate peaks
Initial Pretreatment Plant Operations and Initial Area of Phase VI Liner On-Line (May 2016 through Summer 2019)	320,000	450,000	Historic data review plus anticipated increases for initial Phase VI cell incorporating use of storage tanks
Long-Term Conditions (2019 to completion of Phase VI)	390,000	650,000	Long-term design flows for Pretreatment Plant

Note: Current flows rounded to nearest thousand.

Figure 1
Schematic Component Flowchart – RIRRC Wastewater and NBC System

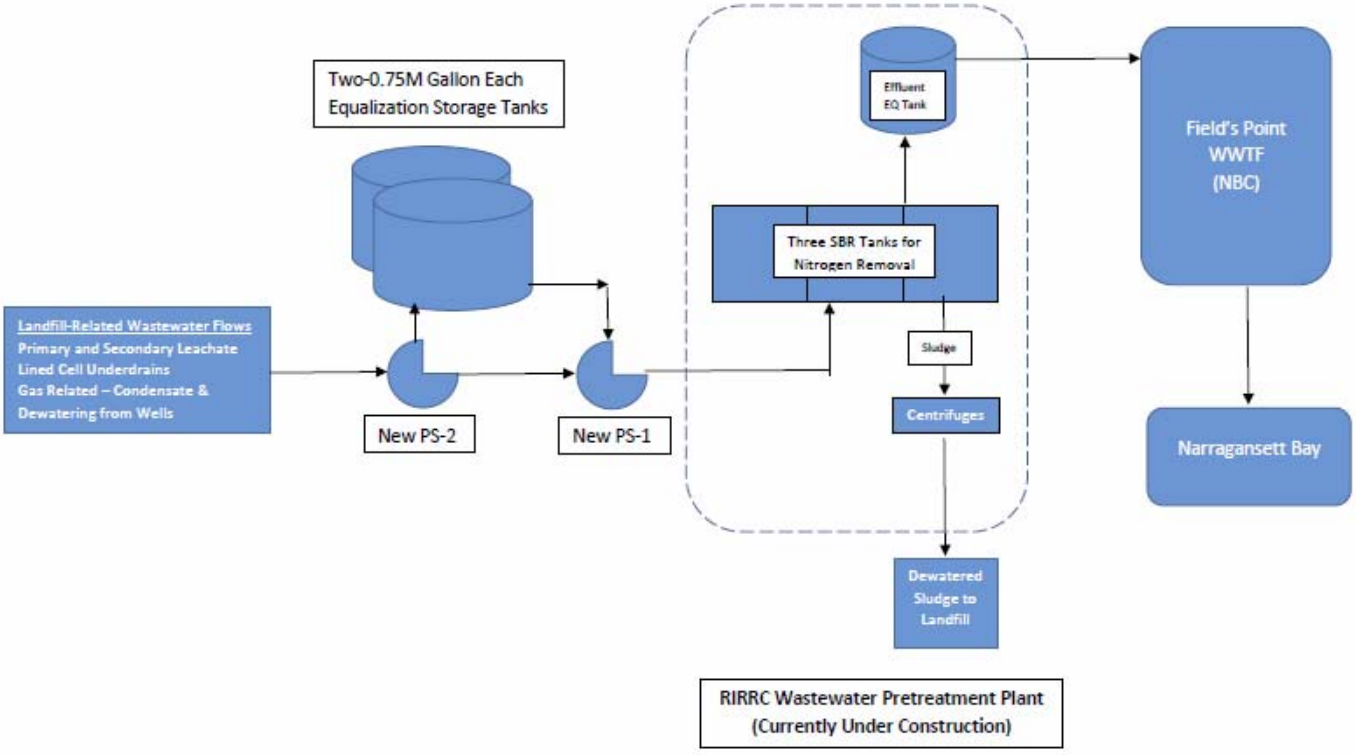
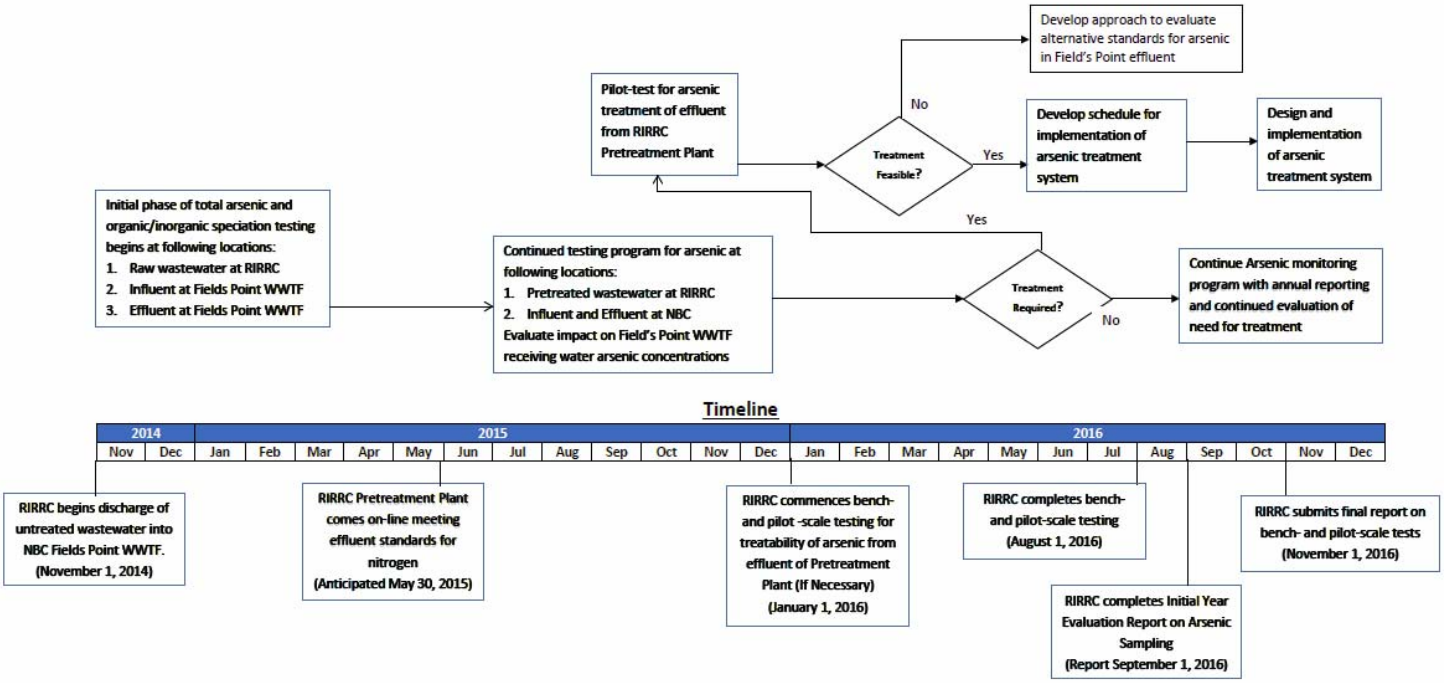


Figure 2
Decision Flowchart – Arsenic in RIRRC Wastewater and Impacts on NBC Fields Point WPCF Effluent



Timeline

Currently, the NBC samples for total arsenic in its influent and effluent at Field's Point WWTF at a frequency of one sample per week (influent) and one sample per month (effluent). Based on the NBC's published monitoring reports[1], the highest arsenic concentration in the discharge in the last two years is 1.49 µg/L, with typical levels being approximately 1.1 µg/L. The average flow at Field's Point WWTF in 2012 and 2013 is 40.06 and 42.7 million gallons per day (MGD), respectively. Using the 2013 average flow and the peak concentration of arsenic detected over the past two years, the estimated current amount of arsenic being discharged by the Field's Point WWTF is calculated as follows:

Flow (MGD) x Concentration (mg/L) x 8.34 conversion factor = pounds arsenic per day discharged
(42.7 MGD) x (.00149 mg/L) x 8.34 = 0.53 pounds arsenic per day discharged by Field's Point WWTF

Using the assumptions outlined in Table 3, below, CDM Smith estimated that the future allowable concentration of arsenic in the effluent from the NBC Field's Point WWTF is 3.54 µg/L. This estimate correlates to the separate prior calculations performed by NBC and RIDEM.[2]

Table 3
Summary of Assumptions Used to Develop Allowable Field's Point Effluent Concentrations for Arsenic

Calculation Criteria	Value	Basis
Background Concentration in Receiving Water	1.14 µg/L	RIDEM Letter dated June 10, 2011
Dilution Factor	20	
Allocation Factor	90%	
Water Quality Criteria	1.4 µg/L	Human Health criteria for Aquatic Organisms Only listed in Table 1, RIDEM's Ambient Water Quality Criteria and Guidelines Water Quality Regulations July 2006, Amended April 2013.
Removal of Arsenic in Field's Point WWTF or RIRRC Pretreatment Plant	10%	Conservative assumption based on current NBC data and results of RIRRC pilot tests

The estimated concentrations of the effluent from the Field's Point WWTF for the varying flow scenarios of RIRRC's wastewater is shown on Table 4 below. For the current flow condition, the arsenic loading from RIRRC was calculated based on the monthly average loading of arsenic since January 2013.

[1] Pretreatment Program Annual Reports Field's Point and Bucklin Point Districts, January 1, 2012 - December 31, 2012 and January 1, 2013 - December 31, 2013 (NBC, March 2013 and 2014, respectively).
[2] RIDEM Letter to Raymond Marshall, NBC Executive Director dated June 10, 2011 and NBC Memorandum to Thomas P. Uva, NBC Director for Planning, Policy & Regulation from James Kelly, Assistant Environmental Monitoring Manager dated March 14, 2013.

Estimated future loadings of arsenic from RIRRC are calculated using the average daily flow shown on Table 2 and a proportion of the current monthly average loading.

This conservative analysis indicates that the NBC will be in compliance with the effluent standard for arsenic during the initial two flow stages (see Table 2) that RIRRC will operate at over the next several years. Even if the maximum current loading is utilized for the existing average flows from RIRRC, NBC will remain within the allowable effluent limit.

Table 4
Summary of Estimated Final Concentration of Arsenic in Field's Point WWTF Receiving Water

Scenario	Average Daily Flow (gpd)	Loading of Arsenic from RIRRC (pound/day)	Calculated Final Concentration of Arsenic in NBC Field's Point Effluent (µg/L)	Field's Point WWTF Effluent in Compliance for Arsenic?
Current Flow Conditions Including operation of Pretreatment Plant starting in May 2015 (Nov 2014 through May 2016)	240,000	0.62	3.0	Yes
Initial Pretreatment Plant Operations and Initial Area of Phase VI Liner On-Line (May 2016 through Summer 2019)	320,000	0.62 x (320,000/240,000) =0.83	3.5	Yes
Long-Term Conditions (2019 to completion of Phase VI)	390,000	0.62 x (390,000/240,000) = 1.01	4.0	Potentially No

Based on these estimates, CDM Smith believes that the effluent from the NBC's Field's Point WWTF will be in compliance with the RIDEM established regulatory standard for arsenic when the initial lined cells from Phase VI become operational.

Detailed Work Plan

The following details the work proposed by RIRRC to assess the potential for arsenic in RIRRC's wastewater to cause an exceedance in NBC's effluent as RIRRC's wastewater flows increase to the maximum discharge level.

Task 1: Future Wastewater Monitoring Program

RIRRC's current wastewater discharge permit with the City of Cranston requires extensive sampling of the RIRRC's wastewater. Over the past several years, RIRRC has performed significant sampling of the

individual sources that comprise the total wastewater flow as well as specific speciation testing of the combined influent arsenic to determine if the arsenic is in an inorganic form or bound with organic molecules. Separately, NBC has been conducting sampling of its influent and effluent for total arsenic on a weekly and monthly frequency, respectively. This effort provides a significant database on the current arsenic concentrations seen at the Field's Point WWTF. The information collected to date by both RIRRC and NBC has been used to develop the estimates of future arsenic discharges provided above.

CDM Smith proposes to augment the current program for arsenic testing of wastewater streams at both RIRRC and Field's Point as RIRRC connects to the NBC system, to fulfill the following objectives:

1. Confirm the assumptions made in the calculations presented above regarding the incremental impact of RIRRC's wastewater on meeting the regulatory water quality standard for arsenic in the Field's Point WWTF receiving water. Estimate an approximate timeline when increased flows from RIRRC caused by additional lined landfill cells coming on-line may create a water quality standard violation at the NBC discharge;

2. Develop an understanding of the changes in the type of arsenic (e.g., organic or inorganic) that occur as RIRRC's wastewater is treated at both Field's Point WWTF and the Pretreatment Plant;

3. Utilize the additional sampling to determine a removal efficiency for each treatment plant, since information from the pilot-testing performed at RIRRC, for the new pre-treatment plant, and a review of the data collected by NBC indicates that the treatment plant(s) will remove some amount of arsenic from the influent streams.

4. Determine acceptable arsenic loading conditions from RIRRC to keep NBC effluent in compliance by using the arsenic information gathered during the augmented monitoring program.

5. Augment the currently available information to evaluate potential treatment technologies that could be evaluated as part of a bench- and/or pilot-scale program.

The sampling program at both the Field's Point WWTF and RIRRC's Pretreatment Plant as proposed by CDM Smith is summarized in Table 5.

As the data is being collected and presented, RIRRC will provide NBC with a status report on a quarterly (e.g., every three months) frequency. These status reports will provide the data collected to date as well as a preliminary evaluation of the available information. One year after the Pretreatment Plant is fully operational, RIRRC will provide NBC and RIDEM with a summary report that will evaluate the data collected to date and provide an updated assessment of the impact of the addition of RIRRC's wastewater on the effluent concentrations from the Field's Point WWTF and make recommendations as to the future monitoring program.

Table 5
Summary of Proposed Sampling Program

Scenario	Sampling at RIRRC				Sampling at NBC			
	Sample Location	Sample Type	Frequency	Reason	Sample Location	Sample Type	Frequency	Reason
Pre-RIRRC Discharge to NBC Field's Point WWTF (July 2014 through October 2014)	Influent	N/A	N/A	N/A	Influent	Total As	1x/week	Current Frequency
	Effluent	Total As	1x/week	Current Cranston IPP Requirements	Effluent	Total As	1x/month	Current Permit Requirement
						Speciation	Two samples during period	Evaluate any changes in speciation from treatment at Field's Point
Before RIRRC Pretreatment Plant Operational (Nov 2014 through May 2015)	Influent			Same as Effluent	Influent	Total As	1x/week	Current Frequency
	Effluent	Total As	1x/week	Monitor As concentrations leaving RIRRC	Effluent	Total As	1x/month	Current Frequency
						Speciation	1x/month	Evaluate any changes in speciation from treatment at Field's Point
Initial Operations of RIRRC Pretreatment Plant (May 2015 through May 2016) See Note 2	Influent	Total As	1x/week	Monitor removal efficiency of Pretreatment Plant	Influent	Total As	1x/week	Current Permit Requirement
		Speciation	None	Not relevant		Speciation	Every 2 months	Assess influent arsenic types
	Effluent	Total As	2x/week	Develop database of concentrations in treated effluent	Effluent	Total As	1x/week	Evaluate compliance with water quality standard. Determine any removal in Field's Point WWTF
		Speciation	Bi-monthly	Confirm preliminary findings in full-scale		Speciation	Every 2 months	Assess arsenic type discharging from Field's Point WWTF
Long-Term	Sampling program to be established by NBC in IPP				Influent	Total As	1x/week	Current Frequency
					Effluent	Total As	1x/month	Current Frequency

Notes

1. Total arsenic testing shall be by EPA Method 200.7. Speciation testing shall be by Method IC-ICP-DRC-MS.
2. Sampling frequency at RIRRC Pretreatment Plant may be reduced based on review of results as program proceeds.
3. Speciation sampling at NBC may be reduced based on review of results as program proceeds.

Task 2: Bench- and Pilot-Scale Treatment Evaluation of Pretreated RIRRC Wastewater

If it is determined based on Task 1 that further potential for arsenic removal at RIRRC is required, RIRRC will initiate the second task of this Work Plan as outlined below. If required, Task 2 is anticipated to start approximately six months after the Pretreatment Plant is fully operational and meeting its discharge standards for nitrogen, and the evaluation of the arsenic data to date has been completed (Task 1), RIRRC proposes to commence with a bench- and pilot-scale testing program to determine methods for the reduction of arsenic from the pretreated wastewater prior to its discharge into the NBC system.

The following is a brief description of CDM Smith's outline of the proposed bench- and pilot-scale programs:

First, CDM Smith will evaluate the implementation of the arsenic removal in the existing SBR tanks. This evaluation will incorporate an analysis of the impact of arsenic treatment in the SBR tanks on cycle-times and treatment efficiency for nitrogen.

Second, if use of the SBR tanks is not successful or feasible, CDM Smith will conduct a series of evaluations of additional processes after the SBR's, which may include arsenic-specific adsorption media, additional separation tanks for chemical precipitation and coagulation, and select proprietary technologies.

The following preliminary work plan for Task 2 has been provided as an example of the approach that CDM Smith proposes, if needed. Based on the sampling performed in Task 1 and initial evaluations of the arsenic concentrations and form in RIRRC's treated effluent, RIRRC will prepare a detailed Work Plan for the bench- and pilot-testing that will evaluate potential doses of iron or aluminum salt coagulants required to produce a floc and the impacts of the high chemical oxygen demand (COD) of RIRRC's wastewater; the impact of the use of these coagulants on the pH of the wastewater and floc separation; and the amount of sludge generated per pound of arsenic removed.

Work Plan to Evaluate Arsenic Removal Integrated with Activated Sludge Treatment in the SBRs

Partial arsenic removal may be achieved by adding low to moderate doses of iron salts directly to the SBR activated sludge. If successful, this concept would avoid the need for a separate physical chemical treatment system. Instead, co-precipitated arsenic would be removed from the SBR with the waste activated sludge. Iron may provide a collateral benefit of improved activated sludge settling.

To evaluate this approach at bench scale, samples of the full scale activated sludge would be treated with several concentrations of ferric sulfate, supplemented with alkali as needed to compensate for the acidity and maintain a pH of approximately 7.5. Target iron doses for the initial tests would be between 20 to 80 mg/L. This concentration range is less than the prior bench scale tests, considering that:

- Not all of the arsenic has to be removed to reach the target effluent concentration
- Co-settling with the activated sludge solids will likely enhance colloid removal.

For the bench scale tests, the iron would be added and the pH adjusted, followed by aeration of the activated sludge to maintain an aerobic oxidation-reduction potential for approximately 30 minutes.

Then the sample would be allowed to settle for 30 minutes prior to collecting a supernate sample for analysis. This model could be readily adaptable to the full scale SBR sequence and an analysis of the overall impact of cycle times will be completed.

Anionic polymer (at a few mg/L) may be needed to enhance settling, as was the case in the bench scale tests.

Samples will primarily be analyzed for total and soluble arsenic, and total and soluble phosphorous.

Raw RIRRC wastewater	(control)
SBR treated wastewater supernate	(control- no iron)
SBR activated sludge (fully mixed)	(control- no iron)
SBR activated sludge supernate	20 mg/L Fe
SBR activated sludge supernate	40 mg/L Fe
SBR activated sludge supernate	60 mg/L Fe
SBR activated sludge supernate	80 mg/L Fe

Soluble arsenic samples will require filtration prior to preservation. RIRRC's wastewater samples with activated sludge solids are difficult to filter. Filtration can be achieved with a sandwich of a 10 micron nominal glass fiber pre-filter on top of a 0.45 micron membrane filter.

Evaluation of test results

If arsenic removal is sufficient to meet the target effluent concentration, the next step would be to begin adding the appropriate dose to the full scale system, along with the compensating alkali dose required to maintain the target pH. Iron also precipitates phosphorous. If the bench scale test analyses show a significant loss of soluble phosphorous in the activated sludge, it may be necessary to increase the phosphorous supplement feed rate in conjunction with iron addition.

If the bench scale tests show that arsenic removal is insufficient to meet the target effluent concentration

- Much of the remaining arsenic is soluble, the iron dose was probably inadequate to achieve co-precipitation; and
- Low soluble arsenic is coincident with high total arsenic, 30 minutes of settling was not adequate to provide the liquid-solids separation necessary. This would indicate that more coagulant and/or polymer, and/or filtration may be necessary. Based on the results, CDM Smith may run bench-scale isotherm tests on the wastewater.

Evaluation of Full Scale Implementation

Initial full scale tests should feed the iron salt and compensating alkali from 300 gallon totes. The iron dose would be increased to the target concentration in four steps (e.g., 25%, 50%, 75%, and 100%) at two week intervals while monitoring the impact on the activated sludge soluble phosphorous concentration, and the removal of COD, nitrogen and arsenic.

If the full scale tests are successful, the system could be upgraded with bulk-storage tanks for the chemicals.

Schedule

If necessary, the work for Task 2 outlined above will be completed according to the schedule shown on Figure 2. The schedule for any bench- and pilot-testing will commence in January 2016, after the Pretreatment Plant is anticipated to be fully operational for a period of six months, with a final report in November 2016.

CERTIFICATE TO DISCHARGE

the following types of process water:

LANDFILL LEACHATE DISCHARGES

into the facilities of the

Narragansett Bay Commission

is hereby granted to:

Rhode Island Resource Recovery Corporation
65 Shun Pike
Johnston, RI 02919

PERMIT NUMBER: P3412-004-1019

PERMIT EXPIRATION DATE: 10/31/2019

The discharge permit must be kept at the above address for inspection. Failure to comply with the rules and regulations of the Narragansett Bay Commission or with the conditions of the discharge permit will subject the permittee to fines of up to $25,000 per violation per R.I.G.L. 46-25-25.3.

November 7, 2014
Initial Date of Issuance

/s/ Kerry M. Britt
Kerry M. Britt, Pretreatment Manager

TYPICAL ZERO PROCESS WASTEWATER-SANITARY DISCHARGE PERMIT

ZERO PROCESS WASTEWATER - SANITARY DISCHARGE PERMIT

Permit Number: P4100-099-0520
Company Name: **MORGAN MILL METALS, LLC**
Facility Address: 25 Morgan Mill Road, Johnston, RI 02919
Mailing Address: 25 Morgan Mill Road, Johnston, RI 02919
Facility President: Mr. Cameron McElroy
Facility Authorized Agent: Mr. Joseph Vallese
User Classification: Zero Discharge Precious Metal Refining and Laboratory Operations
Categorical Standards Applicable: None

In accordance with R.I.G.L. §46-25-1 et. seq. and the Rules and Regulations For The Use Of Wastewater Facilities Within The Narragansett Bay Water Quality Management District, the Narragansett Bay Commission hereby grants a Zero Process Wastewater-Sanitary Discharge Permit to **Mr. Cameron McElroy and Morgan Mill Metals, LLC**, hereinafter jointly referred to as **Permittee.** This permit authorizes the permittee to discharge only sanitary wastewater into the NBC's facilities in accordance with the terms and conditions of this permit. The discharge of any process wastewater streams to the NBC's sewer system shall constitute a violation of the permit. This permit consists of 13 pages with conditions A - T and Attachment A.

This permit is effective on June 1, 2015
and expires on May 31, 2020.

Noncompliance with any term or condition of this permit shall constitute a violation of the NBC's Rules and Regulations and may subject the user to an **Administrative or Civil Penalty** of up to $25,000 per violation per day as defined in R.I.G.L. §46-25-25.2. Willful or criminally negligent violations shall be punishable by the aforementioned fine and/or imprisonment as defined in R.I.G.L. §46-25-25.3.

For the **Narragansett Bay Commission:**

/s/ Kerry M. Britt
Kerry M. Britt, Pretreatment Manager
Narragansett Bay Commission

May 22, 2015
Date

Mr. Cameron McElroy and Morgan Mill Metals, LLC hereby consents to this Zero Process Wastewater-Sanitary Discharge Permit. In so consenting, appropriate officers of **Morgan Mill Metals, LLC** have personally read and understood each of the numbered provisions in this Zero Discharge Permit. This permit allows **Morgan Mill Metals, LLC** to continue to discharge sanitary wastewater into the Narragansett Bay Commission sewer system while operating a process wastewater recycle system on the premises.

A corporation organized under the laws of _____,
composed of officers as follows:

Please Type or Print	**Signature**	
_____	_____	_____
President		Date
_____	_____	_____
Vice President		Date
_____	_____	_____
Secretary		Date
_____	_____	_____
Treasurer		Date

I have read and understood the NBC's Rules and Regulations and the conditions and procedures contained in this permit.

Company Authorized Agent(s) _____ **Company Seal**

Title _____

Signature _____

NOTE: The NBC will accept the person(s) named on page 2 of this permit as the company's authorized agent(s) until notified otherwise.

An authorized agent or authorized company representative is a person who is a principal executive officer or other corporate officer with signatory powers as per the company's by-laws or per a vote of the directors if the company is a corporation; a general partner or proprietor if the company is a partnership or sole proprietorship respectively; or a duly authorized representative, the individual designated above if such representative is responsible for the overall operation of the facility and has the authority to sign contracts, permits, permit applications, monitoring results and other documents in the company's name and otherwise bind the company. The **Permittee** may designate additional or new authorized agents by completing and submitting the enclosed Designation of Authorized Agent form.

The NBC will not accept documents signed by persons other than the Company's authorized agent(s) or authorized representative(s).

CONDITIONS TO PERMIT

A. Zero Process Discharge-Wastewater Recycle Pretreatment System Requirements:

1. The permittee shall operate and maintain a Zero Process Discharge Wastewater Recycle Pretreatment System as proposed in the plans that have been received by the NBC on May 11, 2010, March 29, 2012, and May 16, 2013. This pretreatment system shall be used specifically for the use of recycling wastewater or eliminating discharges from the following operations:

    a. Precious Metal Reclaiming and Refining;
    b. Analytical Laboratory.

2. The permittee shall make no changes to the process tanks or pretreatment system without first submitting plans to the NBC for approval. Only those solutions indicated as being discharged to the treatment system on the plans received by the NBC on May 11, 2010, March 29, 2012, and May 16, 2013 may be treated on-site in the pretreatment equipment.

3. If any problems with the evaporation and recycle systems arise or if the permittee would like to connect to the sewer for the purpose of discharging any process wastewater streams, the permittee must notify the NBC, in writing, and obtain written approval from the NBC before resuming discharge or making any physical changes to process tanks, the pretreatment evaporation and recycle systems, or associated piping.

4. The permittee shall cap off and seal all process wastewater sewer drain lines in the facility and no process wastewater may be discharged to the sewer through sanitary or any other sewer connection.

5. The permittee shall post signs at all sanitary sewer connections stating the following: "Discharge of Chemicals Prohibited by Rhode Island Law".

6. Failure to notify NBC personnel prior to resuming process wastewater discharges to the sewer may be considered an intentional violation of the NBC's Rules and Regulations.

B. Prohibitions:

1. The permittee is strictly prohibited from discharging any type of process wastewater streams to the NBC sewer system including all prohibited substances as defined in the Rules and Regulations of the Narragansett Bay Commission. Prohibited discharges include but are not limited to the following:

a. Precious Metal Reclaiming and Refining Wastestreams;
b. Analytical Laboratory Discharges;
c. Cooling Wastewaters;
d. Rinse Solutions;
e. Soap Cleaning Solutions;
f. Cyanide Solutions;
g. Acid/Alkaline Solutions;
h. Metal Cleaning Solutions;
i. Degreasing Solutions;
j. Solvents;
k. Sludges.

2. The permittee is strictly prohibited from discharging any process wastewater or sanitary wastestreams containing pollutants with concentrations in excess of the effluent limitations specified in Table 1 on page 13, attached hereto and incorporated herein.

3. The permittee shall not use portable pumps and flexible hoses within the facility for transfer of solutions without written authorization from the NBC.

4. The permittee is strictly prohibited from discharging any process wastestreams from the precious metal reclaiming and refining operations. Discharging these process wastestreams will result in the facility being classified as a Centralized Waste Treatment Facility and, therefore, must at all times comply with EPA Categorical Regulations 40 CFR §437.16, Subpart A - Metals Treatment and Recovery Pretreatment Standard for New Sources. The permittee must notify the NBC, in writing, at least sixty (60) days and obtain written approval from the NBC prior to discharging categorical wastestreams so that the required permit modifications may be made.

C. Record Keeping Requirements:

1. The permittee shall be responsible for maintaining a logbook documenting all records pertaining to the operation of the pretreatment system including, but not limited to, the following:

    a. Amount of sludge generated on a monthly basis;
    b. Completed manifest forms for hazardous materials;
    c. Maintenance performed on the pretreatment system and other maintenance requests specified by inspectors of the NBC.

2. Records which substantiate any information supplied in permit applications, Self-Monitoring Compliance Reports and any other informational requirements of the Rules and Regulations or any applicable State or Federal law are to be kept by the permittee for a period of at least three (3) years unless a dispute or litigation involving the subject of those records is pending, in which case these records are to be kept by the permittee for a period of at least three (3) years following resolution of such litigation or dispute.

D. Certification of No Discharge:

The permittee shall submit written certification monthly stating that the permittee has made no process wastewater discharges to the sewer during the previous one (1) month period. This certification must be received within thirty (30) days from the end of the required reporting month. This certification must contain monthly water meter readings and must be made on the form designated as Zero Process Wastewater Discharge Certification, Attachment A.

E. Spill and Slug Control Plans:

The permittee must maintain an approved Spill and Slug Prevention Control Plan and all associated facilities to ensure that incidental and accidental spills are unable to enter the NBC sewer system.

F. Toxic Organic/Solvent Management Plan:

The permittee must ensure that toxic organic compounds are not routinely discharged or spilled into the sewer system and must at all times maintain associated spill control facilities to ensure proper containment and disposal of toxic organic compounds. A list of toxic organic compounds is enclosed.

G. Emergency/Routine Notification Requirements:

1. Emergency Notification of Accidental/Incidental Discharge

   In the case of an accidental discharge into the NBC facilities, including any discharge that would violate a Federal prohibition under 40 CFR 403.5(b), it is the responsibility of the permittee to notify the NBC of the incident immediately by calling the Pretreatment Section at 461-8848 or during non-business hours at its twenty-four (24) hour Emergency Hotline Number, 222-6781. Within five (5) days following an accidental discharge, the permittee shall submit to the NBC a detailed written report describing the cause and volume of the discharge and the measures to be taken by the user to prevent similar future occurrences by the permittee.

2. Routine Notification of Operational Changes

   The permittee must notify the NBC in writing at least thirty (30) days prior to instituting any changes in operations that may affect the quality or quantity of the process wastestream discharged to the sewer system or may affect the adequacy of spill control measures. Operational changes that may affect the quality or quantity of the process wastestream or the adequacy of spill control measures include, but are not limited to, the following:

a. Addition, removal, or relocation of process tanks or solutions;
b. Installation of new wastewater generating process operations;
c. Relocation of process operation piping or valving resulting in a new or different point of discharge;
d. Modification of any pretreatment process or procedure;
e. Installation or modification of pretreatment equipment or associated piping;

Should the permittee be unsure as to whether an operational change requires written NBC notification, it is strongly recommended that the permittee contact the NBC by telephone prior to instituting the proposed change in operations. This will ensure that the proper notification is provided to the NBC. With respect to the thirty (30) day written notification requirement, should the permittee require immediate approval to make an operational change in order to accommodate business, the NBC will make every effort to accommodate the permittee so as to not impede operations at the facility. The discretion used by the NBC with respect to this issue is dependent on the magnitude of the proposed operational changes and the resulting effect on the characteristics of the wastestream and/or the spill control measures at the facility. The permittee may notify the NBC of the following operational changes by telephone rather than in writing as required above:

f. Change from the hours of facility operation specified in the discharge permit application;
g. Change in the personnel responsible for the proper operation of pretreatment equipment.

H. Right of Entry:

The NBC, upon presenting identification and appropriate credentials, is authorized to enter the premises of the permittee during working hours and at other reasonable times for the purposes of inspection, sampling, reading water meters, records inspecting and copying and as otherwise authorized under R.I.G.L. §46-25-25.1. Reasonable hours in the context of inspection and sampling include any time the NBC has reason to believe that violation of the permit or of the Rules and Regulations is occurring.

I. Permit Fee:

The permittee agrees to pay an annual permit fee and all sewer user fees assessed by the NBC in accordance with rates and fees approved by the Public Utilities Commission pursuant to R.I.G.L. §39-1-1 et seq. and §46-25-1 et seq. The permittee agrees to reimburse the NBC for the cost of the collection of any and all fees associated with the permit, including reasonable attorney's fees.

J. Authorization To Do Business:

The permittee is a limited liability company. The permittee shall ensure the limited liability company be registered with the Rhode Island Secretary of State Corporations Division. Morgan Mill Metals, LLC shall remain in good standing with the Rhode Island Secretary of State Corporations Division at all times. In the event Morgan Mill Metals, LLC has its charter or existence revoked by the Rhode Island Secretary of State, the permittee shall notify the NBC in writing within thirty (30) days of notice of such revocation.

In the event Morgan Mill Metals, LLC is no longer in good standing with the Rhode Island Secretary of State or the charter is revoked for any reason, any individual named as a co-permittee or any individual exercising ownership of Morgan Mill Metals, LLC shall be subject to the terms and conditions of the permit as if named herein.

K. Closing, Selling, Moving the Business:

If the permittee intends to close, liquidate, sell or move the permitted premises, located as referenced on page 1 of this permit, the permittee must notify the NBC in writing at least thirty (30) days prior to selling or ceasing business and/or disposing of any process waste associated with the move or the cessation of business.

L. Transfer of Permit Prohibited:

Wastewater discharge permits are issued to a specific user for a specific operation. This permit may not be reassigned, transferred or sold to a new owner, new user, different premises, or a new or changed operation without the express written permission from the NBC. The permittee shall provide a copy of this permit to any prospective purchaser of said facility referenced on page 1 of this permit at least fourteen (14) days prior to closing on the business or property.

M. Permit Violations:

1. Enforcement Costs

The permittee agrees to reimburse the NBC for the cost of enforcing the permit, including reasonable attorneys' fees, if violations of the permit are found by a hearing officer during the course of an administrative hearing or if such decision is appealed, then in a court of competent jurisdiction.

2. Damage to the Facilities

   The permittee agrees to indemnify and hold harmless the NBC from and against any liability, loss, cost, expense or actual damage (including reasonable attorneys' and accountants' fees incurred in defending or prosecuting any claim for any such liability, loss, cost, expense or damage) suffered by the NBC and caused by discharges from the permittee, either singly or by interaction with other wastes.

3. Violations of the NBC's Permit

   The permittee agrees to reimburse the NBC for any penalty and additional operating expense incurred by the NBC for violations of the NBC's NPDES, RIPDES, or any other state or federal permit which were caused by discharges from the permittee, either singly or by interaction with other wastes.

4. Penalties for Violations

   Article 10 of the NBC's Rules and Regulations provides that any person who violates a permit condition is subject to an administrative or civil penalty of up to $25,000 per violation per day as defined in R.I.G.L. §46-25-25.2. Willful or criminally negligent violations shall be punishable by the aforementioned fine and/or imprisonment as defined in R.I.G.L. §46-25-25.3.

N. Revocation/Suspension of Permit:

1. Violations of the conditions of this permit, the NBC's Rules and Regulations, Act, and applicable state or Federal regulations may result in the revocation of this permit in accordance with the due process requirements of the NBC's Rules and Regulations. Violations that may result in revocation of this permit include, but are not limited to, the following:

   a. Failure to accurately report the wastewater constituents and characteristics of the discharge;
   b. Failure to report changes in operations or wastewater constituents;
   c. Failure to allow NBC personnel statutorily authorized access for the purposes of inspection or monitoring;
   d. Failure to adhere to an approved compliance schedule;
   e. Failure to comply with administrative orders or settlement agreements;
   f. Failure to pay authorized fees and user charges;
   g. Violation of any other applicable permit conditions.

   This list is for illustrative purposes and is not intended to be inclusive.

2. The Executive Director may suspend this wastewater discharge permit should the permittee cease operations for any period exceeding one (1) month. The suspension will not act as a revocation of the permit, but rather as a temporary suspension of the user's rights under the permit while operations have ceased. During such suspension, the user's connection to the facilities shall be plugged. The user shall still be required to pay the permit fee, since the permit itself will not be revoked. During such suspension, the user shall be disconnected from the facility. The Commission shall have the authority to make periodic inspections during this time to determine whether the user is continuing to discharge regulated wastewater. Such discharge may be considered grounds for revocation of the wastewater discharge permit.

O. Civil and Criminal Liability:

Nothing in this permit shall be construed to relieve the permittee from civil and/or criminal penalties for noncompliance with the NBC's Rules and Regulations or State or Federal laws or regulations.

P. Duty To Comply:

1. The permittee must comply with all conditions of this permit. Failure to comply with the requirements of this permit may be grounds for enforcement proceedings including administrative, civil and/or criminal penalties, injunctive relief and summary abatements.

2. Compliance with this permit does not relieve the permittee of its obligation to comply with any or all pretreatment regulations, standards or requirements under local, State and Federal laws, including any such regulations, standards, requirements, or laws that may become effective during the term of this permit.

Q. Removed Substances:

Solids, sludges, filter residue or other pollutants removed in the course of treatment or control of waters or wastewaters shall be disposed of in accordance with §405 of the Clean Water Act and subtitles C and D of the Resource Conservation and Recovery Act. A Resource Conservation and Recovery Act (RCRA) informational brochure is attached to this permit to inform you of your RCRA obligations.

R. Permit Modification/Renewal:

1. This permit may be modified for various reasons, including but not limited to the following:

    a. To incorporate any new or revised Federal, State, or local pretreatment standards or requirements;

    b. Material or substantial alterations or additions to permittee's process operations, discharge volume or discharge characteristics which were not considered in the drafting of this permit;

    c. A change in any condition regarding either the industrial user or the POTW that requires either a temporary or permanent reduction or elimination of the authorized discharge;

    d. Information indicating that the permitted discharge poses a threat to the NBC collection or treatment system, POTW personnel, the general public, or the receiving waters;

    e. Violation of any terms or conditions of the permit;

    f. Misrepresentation or failure to disclose fully all relevant facts in the permit application or in any required reporting;

    g. Revision of or a grant of variance from such categorical standards pursuant to 40 CFR §403.13;

    h. To correct typographical or other errors in the permit;

    i. To reflect transfer of the facility ownership and/or operation to a new owner/operator;

    j. Upon request of the permittee, provided such request does not create a violation of any applicable requirements, standards, laws, or rules and regulations.

    The filing of a request by the permittee for a permit modification, revocation and reissuance, termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

2. If the permittee wishes to continue to discharge after the expiration date of this permit, an application must be filed for a permit renewal in accordance with the requirements of Article 8 of the NBC's Rules and Regulations a minimum of ninety (90) days prior to the expiration date.

S. Integration:

This permit represents the entire agreement and understanding of the parties hereto to those matters contained herein. No prior oral or written understanding shall be of any force or effect with respect to those matters covered hereunder. This permit may not be modified or altered except in accordance with the provisions of Article 8 of the Rules and Regulations. All terms used in this permit shall be construed as defined under Article 2 of the Rules and Regulations.

T. Jurisdiction:

This permit shall be administered and interpreted under the laws of the State of Rhode Island. Jurisdiction of litigation arising from this permit shall be in the State of Rhode Island. If any part of this permit is found to be in conflict with applicable laws, such part shall be inoperative, null and void insofar as it is in conflict with said law, but the remainder of this permit shall be in full force and effect.

IEJ:NJD:smb

Attachments:

Designation of Authorized Agent Form
RCRA Handbook
Monthly Zero Process Wastewater Discharge Certification

Table 1

NBC Effluent Discharge Limitations
Field's Point District

Parameter	Limitation (Max)
Total Toxic Organics (TTO)	2.13
Biochemical Oxygen Demand (BOD_5)	300.00*
Total Suspended Solids (TSS)	300.00*
Total Oil and Grease (fats, oils and grease)	125.0
Oil and Grease (mineral origin)	25.0
Oil and Grease (animal/vegetable origin)	100.0
pH range (at all times)	5.0 - 11.0 s.u.

Parameter	Daily Maximum Composite for 1 day (mg/l)	Average 10 day (mg/l)
Cadmium (Total)	0.11	0.07
Chromium (Total)	2.77	1.71
Copper (Total)	1.20	1.20
Cyanide (Total)	0.58	0.58
Lead (Total)	0.60	0.40
Mercury (Total)	0.005	0.005
Nickel (Total)	1.62	1.62
Silver (Total)	0.43	0.24
Zinc (Total)	2.61	1.48

All limitations are in units of mg/l unless otherwise specified.

* Exceeding this discharge limitation may be permitted but would be subject to a surcharge in accordance with rates approved by the Public Utilities Commission and in accordance with R.I.G.L. §39-1-1 et seq.

Attachment A

Zero Process Wastewater Discharge Certification

For the Month of _____, 20___

Company Name: _____

Address: _____
_____
_____

RETURN TO:
Narragansett Bay Commission
Pretreatment Program
2 Ernest Street
Providence, RI 02905-5502

I, _____, as authorized representative of

_____, do hereby decree that no process wastewater was discharged into

the Narragansett Bay Commission sewer system for the past month.

Date of Meter Readings: _____

Meter Number	Water Meter Readings	Units (cf, gal.)
Meter #1	_____	_____
Meter #2	_____	_____
Meter #3	_____	_____

I certify under penalty of law that this document and all attachments were properly prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for known violations.

_____ _____
Authorized Representative Signature Date

TYPICAL SEPTAGE HAULER WASTEATER DISCHARGE PERMIT

NARRAGANSETT BAY COMMISSION
SEPTAGE DISCHARGE PERMIT

Permit Number: B8000-132-0520
Company Name: **SCHOFIELD SANITATION**
Company President: Mr. Ronald W. Schofield
Facility Address: 4420 Diamond Hill Road, Cumberland, RI 02864
Mailing Address: P. O. Box 7614, Cumberland, RI 02864
DEM License Number: RI-338

In accordance with Title 46, Chapter 25 (Act) of Rhode Island General Laws and in accordance with the Rules and Regulations For The Use Of Wastewater Facilities Within The Narragansett Bay Water Quality Management District (Rules and Regulations), the Narragansett Bay Commission (NBC) hereby authorizes **Mr. Ronald W. Schofield and Schofield Sanitation,** hereinafter jointly referred to as **Permittee**, to discharge residential quality septage to the NBC Lincoln Septage Receiving Station. The Permittee must adhere to the terms, conditions, and procedures of this permit, the Rules and Regulations of the NBC, and all other applicable federal, state, and local regulations. Any changes to the information initially provided to the NBC by the Permittee in the permit application must immediately be reported to the NBC. This permit is not transferable without the written consent of the NBC. If the Permittee wishes to continue to discharge after the expiration date of this permit, an application must be filed for a permit renewal in accordance with the requirements of Article 8 of the NBC's Rules and Regulations a minimum of ninety (90) days prior to the expiration date.

The permittee is authorized to discharge residential quality septage to the NBC Lincoln Septage Receiving Station from the vehicles listed in Attachment A of this permit. This permit consists of two pages with Conditions 1 through 15 and Septage Permit Attachment A.

The permittee shall at all times follow the procedures specified in Attachment A of this permit for adding new septage vehicles and for discharging at the NBC Lincoln Septage Receiving Station.

This permit becomes effective on June 1, 2015
and expires on May 31, 2020.

Noncompliance with any terms or conditions of this permit shall constitute a violation of the NBC's Rules and Regulations and may subject the user to an **Administrative or Civil Penalty** of up to $25,000 per violation per day as defined in R.I.G.L. §46-25-25.2. Willful or criminally negligent violations shall be punishable by fines and/or imprisonment as defined in R.I.G.L. §46-25-25.3.

For the **Narragansett Bay Commission:**

/s/ Kerry M. Britt
Kerry M. Britt, Pretreatment Manager
Narragansett Bay Commission

May 22, 2015
Date

CONDITIONS

All terms used herein unless otherwise indicated shall be construed as defined under Article 2 of the NBC Rules and Regulations.

1. Location of Discharge: Septage may be discharged only at the NBC Lincoln Septage Receiving Station or other authorized location as the Commission may designate.

2. Origins of Septage: Septage to be discharged to the Commission's facilities must originate from domestic sources within the geographic boundaries of the State of Rhode Island.

3. Prohibitions: The permittee is strictly prohibited from discharging any prohibited substances detailed in the Rules and Regulations of the Narragansett Bay Commission. The discharge of grease or septage loads containing grease is strictly prohibited by this permit. Mixing or blending of grease with septage loads is strictly prohibited. The permittee is strictly responsible for ensuring that loads containing grease are not taken to the NBC Lincoln Septage Receiving Station or enforcement action may result against the permittee.

4. Procedures for Discharging Septage: The permittee agrees to adhere to the NBC Septage Discharge Procedures, as detailed in Septage Discharge Permit Attachment A.

5. Permit Fee: The permittee agrees to pay an annual permit fee if applicable and all other fees assessed by the Commission in accordance with rates and fees approved by the Public Utilities Commission pursuant to R.I. General Law 39-1-1 et seq. and §46-25-1 et seq. The permittee agrees to reimburse the NBC for the cost of the collection of any and all fees associated with the permit, including reasonable attorney's fees.

6. Records Retention: Records which substantiate any information supplied in permit applications, load manifest forms and any other informational requirements of the Rules and Regulations, or any applicable state or federal law, are to be kept by the permittee for a period of three (3) years, unless a dispute or litigation involving the subject of those records is pending, in which case these records are to be kept by the permittee for a period of three (3) years following resolution of such litigation or dispute.

7. Jurisdiction: This permit shall be administered and interpreted under the laws of the State of Rhode Island. Jurisdiction of litigation arising from this permit shall be in the State of Rhode Island. If any part of this permit is found to be in conflict with applicable laws, such part shall be inoperative, null and void insofar as it is in conflict with said law, but the remainder of this permit shall be in full force and effect.

8. Integration: This permit represents the entire agreement and understanding of the parties hereto to those matters contained herein. No prior oral or written understanding shall be of any force or effect with respect to those matters covered hereunder. This permit may not be modified or altered except in accordance with the provisions of the NBC Rules and Regulations.

9. Transfer of Permit Prohibited: Wastewater discharge permits are issued to a specific user for a specific operation. This permit may not be reassigned, transferred, or sold to a new owner, new user, or different vehicle without the express written permission from the NBC. The permittee shall provide a copy of this permit to any prospective purchaser of said business referenced on page 1 of this permit at least fourteen (14) days prior to closing on the business or property. The new owner must apply for and be issued a new permit before discharges will be allowed.

10. Enforcement Costs: The permittee agrees to reimburse the Commission for the cost of enforcing the permit, including reasonable attorneys' fees, if violations of the permit are found by a hearing officer during the course of an administrative hearing or if such decision is appealed, then in a Court of competent jurisdiction.

11. Damage to the Facilities: The permittee agrees to indemnify and hold harmless the Commission from and against any liability, loss, cost, expense or actual damage (including reasonable attorneys' and accountants' fees incurred in defending or prosecuting any claim for any such liability, loss, cost, expense or damage) suffered by the Commission and caused by discharges from the permittee, either singly or by interaction with other wastes. If, after the discharge, further analysis of the waste shows it to be in violation of the Commission's wastewater discharge limitations, the Commission may impose fines, pursuant to R.I. General Laws 46-25.

12. Violation of the Commission's Permit: The permittee agrees to reimburse the Commission for any penalty and additional operating expense incurred by the Commission for violations of the Commission's NPDES, RIPDES, or any other state or federal permit which were caused by discharges from the permittee, either singly or by interaction with other wastes. Violations of this permit include but are not limited to the following: unauthorized discharge into Commission facilities, discharge without a load ticket or properly completed manifest form, failure to pay fees, and violation of any other applicable laws or regulations.

13. Penalties for Violations: Article 10 of the NBC's Rules and Regulations provides that any person who violates a permit condition is subject to an administrative or civil penalty of up to $25,000 per violation per day as defined in R.I.G.L. §46-25-25.2. Willful or criminally negligent violations shall be punishable by the aforementioned fine and/or imprisonment as defined in R.I.G.L. §46-25-25.3.

14. Revocation of Permit: Violations of the conditions of this permit, the NBC's Rules and Regulations, Act, and applicable state or Federal regulations may result in the revocation of this permit in accordance with the due process requirements of the NBC's Rules and Regulations. Violations that may result in revocation of this permit include, but are not limited to, discharging or dumping grease, discharging septage into unauthorized locations, falsification of documents, including permit applications or manifest, etc.

15. Duty to Comply/Civil and Criminal Liability: The permittee must comply with all conditions of this permit. Failure to comply with the requirements of this permit may be grounds for enforcement proceedings including administrative, civil and/or criminal penalties, injunctive relief and summary abatements. Nothing in this permit shall be construed to relieve the permittee from civil and/or criminal penalties for noncompliance with the NBC's Rules and Regulations or State or Federal laws or regulations.

Septage Discharge Permit Number B8000-132-0520
Attachment A
Schofield Sanitation

PERMITTED VEHICLES:

VEHICLE TYPE	REGISTRATION NUMBER	TRUCK VIN NUMBER	CAPACITY (GALLONS)
TANKER - PETERBILT	RI-65033	2NP2HN6X5DM201090	2,122

Procedure for Adding Vehicle(s) to the Permit

1. The permittee must obtain appropriate registrations, insurance and DEM permits for the vehicle(s).
2. The permittee must make an appointment with the NBC Pretreatment personnel to determine the volume of the vehicle(s).
3. The volume of the vehicle is to be determined under NBC oversight as follows:
    a. The empty vehicle is to be brought to the NBC treatment plant at a scheduled time to be inspected to ensure that it is empty.
    b. The vehicle will then be weighed empty.
    c. The vehicle will then be brought back to the NBC plant to be filled with plant water.
    d. The vehicle will then be reweighed full.
    e. The vehicle may discharge this water back at the NBC plant.
    The difference in weight will be used to determine the volume of the vehicle in gallons.
4. The permittee will be responsible to pay any costs associated with weighing the vehicle(s).
5. NBC personnel will affix a computer chip and volume sticker to the vehicle(s).
6. The Wastewater Discharge Permit will then be revised to include the additional vehicle(s).
7. The permittee may not discharge septage to the NBC receiving station from the new vehicle(s) until the revised permit is issued.

Septage Facility Discharge Procedures

1. The permittee must establish and maintain an account with a positive cash balance with the NBC Customer Service Section.
2. The permittee must ensure each vehicle permitted to discharge must have a computer chip, permitted vehicle decal and volume decal affixed to it.
3. The permittee must ensure the manifest form is completed in its entirety prior to proceeding to the septage facility and submitted to the NBC operator when the vehicle is checked in.
4. The permittee must ensure the volume of the vehicle meets NBC volume/time restrictions.
5. The NBC operator must scan the computer chip affixed to the vehicle.
6. Activate the gate and enter the facility.
7. Obtain a sample of the load from the discharge line of the vehicle.
8. The NBC operator will test the sample and may approve truck for discharge or may reject the load.
9. After NBC approval is granted, the permittee must connect the hose to the station receiving port and may begin discharge.
10. After the discharge is complete, disconnect the hose.
11. The permittee must wash any drippage and/or spillage into drains.
12. The permittee must exit the station.

MM:AB:smb

TYPICAL RESTAURANT WASTEWATER DISCHARGE PERMIT

WASTEWATER DISCHARGE PERMIT

Permit Number: P8500-210-1219
Company Name: **NEW CHINA**
Facility Address: 1331 Broad Street, Providence, RI 02905
Mailing Address: 1331 Broad Street, Providence, RI 02905
Facility Owner: Mr. Jing Ni
Facility Authorized Agent: Mr. Jing Ni
User Classification: Restaurant/Food Preparation Operations
Categorical Standards Applicable: None

By virtue of Rhode Island's General Laws Title 46 Chapter 25 (Act) and in accordance with the Rules And Regulations For The Use Of Wastewater Facilities Within The Narragansett Bay Water Quality Management District (Rules and Regulations), **Mr. Jing Ni and New China**, hereinafter jointly referred to as **Permittee**, is hereby authorized to discharge process wastewater from the above identified facility in accordance with the terms and conditions set forth in this permit.

All discharges authorized herein must be consistent with the effluent limitations, monitoring requirements and other conditions set forth in this permit. The discharge of any pollutant not identified in this permit or any pollutant identified in this permit at a level in excess of that authorized shall constitute a violation of the permit. This permit consists of 13 pages with conditions A - T.

This permit becomes effective on January 1, 2015
and expires on December 31, 2019.

Noncompliance with any term or condition of this permit shall constitute a violation of the NBC's Rules and Regulations and may subject the user to an **Administrative or Civil Penalty** of up to $25,000 per violation per day as defined in R.I.G.L. §46-25-25.2. Willful or criminally negligent violations shall be punishable by the aforementioned fine and/or imprisonment as defined in R.I.G.L. §46-25-25.3.

For the **Narragansett Bay Commission:**

/s/ Kerry M. Britt
Kerry M. Britt, Pretreatment Manager
Narragansett Bay Commission

December 19, 2014
Date

NOTE: The NBC will accept the person(s) named on this permit as the **Permittee's** authorized agent(s) until notified otherwise.

An authorized agent or authorized company representative is a person who is a principal executive officer or other corporate officer with signatory powers as per the **Permittee's** by-laws or per a vote of the directors if the **Permittee** is a corporation; a general partner or proprietor if the **Permittee** is a partnership or sole proprietorship respectively; or a duly authorized representative of an individual designated above if such representative is responsible for the overall operation of the facility and has the authority to sign contracts, permits, permit applications, monitoring results and other documents in the company's name and otherwise bind the **Permittee**. The **Permittee** may designate additional or new authorized agents by completing and submitting the enclosed Designation of Authorized Agent form.

The NBC will not accept documents signed by persons other than the Company's authorized agent(s) or authorized representative(s).

CONDITIONS TO PERMIT

A. Effluent Discharge Limitations:

1. The permittee shall at all times comply with the effluent limitations specified in Table 1 on page 13, attached hereto and incorporated herein. The permittee shall comply with all discharge limitations and prohibitions contained in Article 5 of the NBC's Rules and Regulations, as well as all other provisions of those Rules, and any other applicable State or Federal standards, including but not limited to the Federal Water Pollution Control Act, 33 U.S.C. §1251 et seq. and R.I.G.L. §46-12-1 et seq. The permittee shall at all times comply with 40 CFR §403.5 and may not introduce into the NBC's facilities any pollutants which shall violate the general or specific prohibitions including but not limited to discharges resulting in pass through or interference situations at the NBC's facilities.

2. The permittee shall not increase the use of process water or dilute a discharge in any way as a partial or complete substitute for adequate treatment to achieve compliance with the above standards.

B. Permitted Discharges:

1. The permittee is authorized to discharge the following waste, solutions, or process wastewater streams to the NBC's facilities:

    a. Treated Food Preparation Wastewater;
    b. Treated Dish, Pot, and Equipment Washwater.

2. No other process wastewater is to be discharged to the sewer unless specifically approved by the NBC in writing.

C. Prohibitions:

1. The permittee is strictly prohibited from discharging any prohibited substances detailed in the Rules and Regulations of the Narragansett Bay Commission. Prohibited discharges include, but are not limited to, the following:

    a. Fryolator/Cooking Oils and Grease;
    b. Ground Food, Food Products, or Solid Kitchen Waste;
    c. Degreasing Solutions;
    d. Solvents;
    e. Sludges;
    f. Fuel or Lubricating Oils.

2. The permittee is strictly prohibited from discharging any process wastewater streams other than those specified in Section B(1) of this permit or wastestreams containing pollutants with concentrations in excess of the effluent limitations specified in Table 1, attached hereto and incorporated herein.

3. The permittee is prohibited from discharging any solution or chemicals which might interfere with the proper operation of the automatic grease removal unit or may cause a violation of the NBC's Rules and Regulations.

4. The use of garbage grinders, food macerators, or other equipment used for the purpose of discharging solid waste to the sewer system is strictly prohibited.

D. Pretreatment Requirements:

1. The permittee must provide and maintain an easily accessible sample location downstream of each process discharge specified in Section B(1) of this permit. A total of one (1) sample location must be provided and must collect wastewater from the process operations indicated as follows:

   Sample Location #1 - Sample port on the discharge pipe from the automatic grease removal unit, collecting all process discharges specified in Section B(1)(a and b) of this permit.

   The permittee is prohibited from discharging dilution wastestreams, such as sanitary and non-contact cooling water into any process wastewater sampling location. Dilution wastestreams must discharge downstream of the process wastewater sampling location. The discharge through Sample Location #1 must be in compliance with the effluent limitations specified in Section A and Table 1 of this permit.

2. The permittee has installed an automatic grease removal unit in conformance with the plans approved by the NBC on May 21, 2008. The grease removal unit shall be fully operational on a twenty-four (24) hour basis whenever kitchen operations are being conducted.

3. The permittee is responsible for operating and maintaining the automatic grease removal unit so that the effluent limitations are met at all times. The permittee shall also be responsible for maintaining all records pertaining to the operation of the grease removal unit including, but not limited to, the following:

   a. The automatic grease removal unit with all associated strainers must be inspected every workday to determine whether the system is functioning normally or in need of cleaning, grease disposal or any corrective measures;

   b. A grease removal unit logbook must be maintained at the permittee's facility and must be located near the grease removal unit. The logbook must include such information as outlined under Section F, Record Keeping Requirements. The

logbook must be kept on the premises at all times and available to NBC personnel for their review;

c. Only kitchen wastewater from pot sinks, wok stations, and dinnerware/utensil prerinsing operations may be discharged into the automatic grease removal unit. Sanitary waste, dishwasher wastewater and other wastewater may not be discharged to the grease removal unit.

4. The permittee must install additional grease removal equipment that conforms with Article 4.15 of the NBC Rules and Regulations if determined necessary by the NBC to ensure that effluent limitations are met at all times. Plans of the pretreatment system must be submitted to the NBC for approval before beginning construction, should installation of additional grease removal system be required.

E. Monitoring Requirements:

No regularly scheduled wastewater monitoring reports are required of the permittee. The NBC may, at any time, change the monitoring requirements specified in this permit. Conditions that may result in the imposition of monitoring requirements include, but are not limited to, the following:

a. Inspections or samplings performed by NBC personnel;
b. An increase in the seating capacity of the facility;
c. An increase in flow to the grease removal unit;
d. Discovery of additional information unavailable to the NBC at the time this permit was prepared;
e. Improper maintenance of a grease removal unit;
f. Failure to meet the NBC effluent discharge limitations.

F. Record Keeping Requirements:

1. The permittee must inspect and maintain the automatic grease removal unit at least once per day and record in a logbook the time and date (month, day, and year) of the inspection, each grease removal activity, and the name of the individual conducting the activity. Maintenance activities which must be documented in a logbook include the following:

a. Cleaning and emptying of the solids basket;
b. Cleaning of the wiper blades;
c. Cleaning of the trough;
d. The estimated amount of grease removed;
e. Wet vacuuming of the grease removal unit.

2. Records which substantiate any information supplied in permit applications, Self-Monitoring Compliance Reports and any other informational requirements of the Rules and Regulations or any applicable state or federal law are to be kept by the permittee for a period of at least three (3) years unless a dispute or litigation involving the subject of those records is pending, in which case these records are to be kept by the permittee for a period of at least three (3) years following resolution of such litigation or dispute.

G. Emergency/Routine Notification Requirements:

1. Emergency Notification of Accidental/Incidental Discharge

   The permittee must maintain all associated facilities to ensure that incidental and accidental spills are not able to enter the NBC sewer system. **In the case of an accidental discharge into the NBC facilities, including any discharge that would violate a Federal prohibition under 40 CFR 403.5(b), it is the responsibility of the permittee to notify the NBC of the incident immediately by calling the Pretreatment Section at 461-8848 or during non-business hours at its twenty-four (24) hour Emergency Hotline Number, 222-6781**. Within five (5) days following an accidental discharge, the permittee shall submit to the NBC a detailed written report describing the cause and volume of the discharge and the measures to be taken by the user to prevent similar future occurrences by the permittee.

2. Routine Notification of Operational Changes

   The permittee must notify the NBC in writing at least thirty (30) days prior to instituting any changes in operations that may affect the quality or quantity of the process wastestream discharged to the sewer system. Operational changes that may affect the quality or quantity of the process wastestream include, but are not limited to, the following:

   a. Restaurant expansion;
   b. Removal of equipment or installation of additional equipment;

   Should the permittee be unsure as to whether an operational change requires written NBC notification, it is strongly recommended that the permittee contact the NBC by telephone prior to instituting the proposed change in operations. This will ensure that the proper notification is provided to the NBC. With respect to the thirty (30) day written notification requirement, should the permittee require immediate approval to make an operational change in order to accommodate business, the NBC will make every effort to accommodate the permittee so as to not impede operations at the facility. The discretion used by the NBC with respect to this issue is dependent on the magnitude of the proposed operational

changes and the resulting effect on the characteristics of the wastestream and/or the spill control measures at the facility. The permittee may notify the NBC of the following operational changes by telephone rather than in writing as required above:

c. Change in restaurant menu;
d. Change from the hours of facility operation specified in the discharge permit application;
e. Changes in food preparation methods.

3. Routine Notification of Pretreatment Equipment Malfunctions

In the event of pretreatment equipment failure or malfunction, the permittee must notify the NBC of the incident by the close of the next full business day by calling the NBC's Pretreatment Section at 461-8848. Pretreatment equipment failure includes, but is not limited to, the following:

a. Grease removal unit heating element failure;
b. Grease removal unit timing unit failure;
c. Grease removal unit wiper blade failure.

Any equipment failure or malfunction which results in a spill and/or accidental discharge must be reported immediately in accordance with the NBC Emergency Spill Notification Procedure. Should a pretreatment equipment failure or malfunction occur, the permittee is strictly responsible for complying with all other permit conditions, including, but not limited to, maintaining full compliance with effluent limitations and monitoring requirements.

H. Right of Entry:

The NBC, upon presenting identification and appropriate credentials, is authorized to enter the premises of the permittee during working hours and at other reasonable times for the purposes of inspection, sampling, reading water meters, records inspecting and copying and as otherwise authorized under R.I.G.L. §46-25-25.1. Reasonable hours in the context of inspection and sampling include any time the NBC has reason to believe that violation of the permit or of the Rules and Regulations is occurring.

I. Permit Fee:

The permittee agrees to pay an annual permit fee and all sewer user fees assessed by the NBC in accordance with rates and fees approved by the Public Utilities Commission pursuant to R.I.G.L. §39-1-1 et seq. and §46-25-1 et seq. The permittee agrees to reimburse the NBC for the cost of the collection of any and all fees associated with the permit, including reasonable attorney's fees.

J. Authorization To Do Business:

The permittee is an individual doing business as New China. As such the permittee shall be personally responsible for compliance with the terms and conditions in this permit. In the event the permittee subsequently incorporates or changes ownership to an entity created by the Rhode Island Secretary of State, the permittee shall notify the NBC in writing within thirty (30) days of the change.

K. Closing, Selling, Moving the Business:

If the permittee intends to close, liquidate, sell or move the permitted premises, located as referenced on page 1 of this permit, the permittee must notify the NBC in writing at least thirty (30) days prior to selling or ceasing business and/or disposing of any process waste associated with the move or the cessation of business.

L. Transfer of Permit Prohibited:

Wastewater discharge permits are issued to a specific user for a specific operation. This permit may not be reassigned, transferred or sold to a new owner, new user, different premises, or a new or changed operation without the express written permission from the NBC. The permittee shall provide a copy of this permit to any prospective purchaser of said facility referenced on page 1 of this permit at least fourteen (14) days prior to closing on the business or property.

M. Permit Violations:

1. Enforcement Costs

The permittee agrees to reimburse the NBC for the cost of enforcing the permit, including reasonable attorneys' fees, if violations of the permit are found by a hearing officer during the course of an administrative hearing or if such decision is appealed, then in a court of competent jurisdiction.

2. Damage to the Facilities

   The permittee agrees to indemnify and hold harmless the NBC from and against any liability, loss, cost, expense or actual damage (including reasonable attorneys' and accountants' fees incurred in defending or prosecuting any claim for any such liability, loss, cost, expense or damage) suffered by the NBC and caused by discharges from the permittee, either singly or by interaction with other wastes.

3. Violations of the NBC's Permit

   The permittee agrees to reimburse the NBC for any penalty and additional operating expense incurred by the NBC for violations of the NBC's NPDES, RIPDES, or any other state or federal permit which were caused by discharges from the permittee, either singly or by interaction with other wastes.

4. Penalties for Violations

   Article 10 of the NBC's Rules and Regulations provides that any person who violates a permit condition is subject to an administrative or civil penalty of up to $25,000 per violation per day as defined in R.I.G.L. §46-25-25.2. Willful or criminally negligent violations shall be punishable by the aforementioned fine and/or imprisonment as defined in R.I.G.L. §46-25-25.3.

N. Revocation/Suspension of Permit:

1. Violations of the conditions of this permit, the NBC's Rules and Regulations, Act, and applicable state or Federal regulations may result in the revocation of this permit in accordance with the due process requirements of the NBC's Rules and Regulations. Violations that may result in revocation of this permit include, but are not limited to, the following:

   a. Failure to accurately report the wastewater constituents and characteristics of the discharge;
   b. Failure to report changes in operations or wastewater constituents;
   c. Failure to allow NBC personnel statutorily authorized access for the purposes of inspection or monitoring;
   d. Failure to adhere to an approved compliance schedule;
   e. Failure to comply with administrative orders or settlement agreements;
   f. Failure to pay authorized fees and user charges;
   g. Violation of any other applicable permit conditions.

   This list is for illustrative purposes and is not intended to be inclusive.

2. The Executive Director may suspend this wastewater discharge permit should the permittee cease operations for any period exceeding one (1) month. The suspension will not act as a revocation of the permit, but rather as a temporary suspension of the user's rights under the permit while operations have ceased. During such suspension, the user's connection to the facilities shall be plugged. The user shall still be required to pay the permit fee, since the permit itself will not be revoked. During such suspension, the user shall be disconnected from the facility. The Commission shall have the authority to make periodic inspections during this time to determine whether the user is continuing to discharge regulated wastewater. Such discharge may be considered grounds for revocation of the wastewater discharge permit.

O. Civil And Criminal Liability:

Nothing in this permit shall be construed to relieve the permittee from civil and/or criminal penalties for noncompliance with the NBC's Rules and Regulations or State or Federal laws or regulations.

P. Duty To Comply:

1. The permittee must comply with all conditions of this permit. Failure to comply with the requirements of this permit may be grounds for enforcement proceedings including administrative, civil and/or criminal penalties, injunctive relief and summary abatements.

2. Compliance with this permit does not relieve the permittee of its obligation to comply with any or all pretreatment regulations, standards or requirements under local, State and Federal laws, including any such regulations, standards, requirements, or laws that may become effective during the term of this permit.

Q. Removed Substances:

Solids, sludges, filter residue or other pollutants removed in the course of treatment or control of waters or wastewaters shall be disposed of in accordance with §405 of the Clean Water Act and subtitles C and D of the Resource Conservation and Recovery Act. A Resource Conservation and Recovery Act (RCRA) informational brochure is attached to this permit to inform you of your RCRA obligations.

R. Permit Modification/Renewal:

1. This permit may be modified for various reasons, including but not limited to the following:

    a. To incorporate any new or revised Federal, State, or local pretreatment standards or requirements;
    b. Material or substantial alterations or additions to permittee's process operations, discharge volume or discharge characteristics which were not considered in the drafting of this permit;
    c. A change in any condition regarding either the industrial user or the POTW that requires either a temporary or permanent reduction or elimination of the authorized discharge;
    d. Information indicating that the permitted discharge poses a threat to the NBC collection or treatment system, POTW personnel, the general public, or the receiving waters;
    e. Violation of any terms or conditions of the permit;
    f. Misrepresentation or failure to disclose fully all relevant facts in the permit application or in any required reporting;
    g. Revision of or a grant of variance from such categorical standards pursuant to 40 CFR §403.13;
    h. To correct typographical or other errors in the permit;
    i. To reflect transfer of the facility ownership and/or operation to a new owner/operator;
    j. Upon request of the permittee, provided such request does not create a violation of any applicable requirements, standards, laws, or rules and regulations.

    The filing of a request by the permittee for a permit modification, revocation and reissuance, termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

2. If the permittee wishes to continue to discharge after the expiration date of this permit, an application must be filed for a permit renewal in accordance with the requirements of Article 8 of the NBC's Rules and Regulations a minimum of ninety (90) days prior to the expiration date.

S. Integration:

This permit represents the entire agreement and understanding of the parties hereto to those matters contained herein. No prior oral or written understanding shall be of any force or effect with respect to those matters covered hereunder. This permit may not be modified or altered except in accordance with the provisions of Article 8 of the Rules and Regulations. All terms used in this permit shall be construed as defined under Article 2 of the Rules and Regulations.

T. Jurisdiction:

This permit shall be administered and interpreted under the laws of the State of Rhode Island. Jurisdiction of litigation arising from this permit shall be in the State of Rhode Island. If any part of this permit is found to be in conflict with applicable laws, such part shall be inoperative, null and void insofar as it is in conflict with said law, but the remainder of this permit shall be in full force and effect.

BES:AB:smb

Attachments:

Designation of Authorized Agent Form
RCRA Handbook
Automatic Grease Removal Unit Logsheet

Table 1

NBC Effluent Discharge Limitations
Field's Point District

Parameter	Limitation (Max)
Total Toxic Organics (TTO)	2.13
Biochemical Oxygen Demand (BOD_5)	300.00*
Total Suspended Solids (TSS)	300.00*
Total Oil and Grease (fats, oils and grease)	125.0
Oil and Grease (mineral origin)	25.0
Oil and Grease (animal/vegetable origin)	100.0
pH range (at all times)	5.0 - 11.0 s.u.

Parameter	Daily Maximum Composite for 1 day (mg/l)	Average 10 day (mg/l)
Cadmium (Total)	0.11	0.07
Chromium (Total)	2.77	1.71
Copper (Total)	1.20	1.20
Cyanide (Total)	0.58	0.58
Lead (Total)	0.60	0.40
Mercury (Total)	0.005	0.005
Nickel (Total)	1.62	1.62
Silver (Total)	0.43	0.24
Zinc (Total)	2.61	1.48

All limitations are in units of mg/l unless otherwise specified.

* Exceeding this discharge limitation may be permitted but would be subject to a surcharge in accordance with rates approved by the Public Utilities Commission and in accordance with R.I.G.L. §39-1-1 et seq.

CERTIFICATE TO DISCHARGE

the following types of process water:

TREATED DISH, POT, AND EQUIPMENT WASHWATER AND TREATED FOOD PREPARATION WASTEWATER

into the facilities of the

Narragansett Bay Commission

is hereby granted to:

New China
1331 Broad Street
Providence, RI 02905

PERMIT NUMBER: P8500-210-1219

PERMIT EXPIRATION DATE: 12/31/2019

The discharge permit must be kept at the above address for inspection. Failure to comply with the rules and regulations of the Narragansett Bay Commission or with the conditions of the discharge permit will subject the permittee to fines of up to $25,000 per violation per R.I.G.L. 46-25-25.3.

December 19, 2014
Initial Date of Issuance

/s/ Kerry M. Britt
Kerry M. Britt, Pretreatment Manager

TYPICAL DENTAL FACILITY WASTEWATER DISCHARGE PERMIT

WASTEWATER DISCHARGE PERMIT

Permit Number: P9400-372-0320
Company Name: **CITYLINE DENTAL**
Facility Address: 400 Reservoir Avenue, Suite 1D, Providence, RI 02907
Mailing Address: 400 Reservoir Avenue, Suite 1D, Providence, RI 02907
Facility President: Dr. Michael Furia
Facility Authorized Agent: Dr. Michael Furia
User Classification: Dental Operations
Categorical Standards Applicable: None

By virtue of Rhode Island's General Laws Title 46 Chapter 25 (Act) and in accordance with the Rules And Regulations For The Use Of Wastewater Facilities Within The Narragansett Bay Water Quality Management District (Rules and Regulations), **Dr. Michael Furia and Cityline Dental**, hereinafter jointly referred to as **Permittee**, is hereby authorized to discharge process wastewater from the above identified facility in accordance with the terms and conditions set forth in this permit.

All discharges authorized herein must be consistent with the effluent limitations, monitoring requirements and other conditions set forth in this permit. The discharge of any pollutant not identified in this permit or any pollutant identified in this permit at a level in excess of that authorized shall constitute a violation of the permit. This permit consists of 15 pages with conditions A - U and Attachment A.

This permit is effective upon receipt
and expires on March 31, 2020.

Noncompliance with any term or condition of this permit shall constitute a violation of the NBC Rules and Regulations and may subject the user to an **Administrative or Civil Penalty** of up to $25,000 per violation per day as defined in R.I.G.L. §46-25-25.2. Willful or criminally negligent violations shall be punishable by the aforementioned fine and/or imprisonment as defined in R.I.G.L. §46-25-25.3.

For the **Narragansett Bay Commission:**

/s/ Kerry M. Britt — July 17, 2015
Kerry M. Britt, Pretreatment Manager — Date
Narragansett Bay Commission

NOTE: The NBC will accept the person(s) named on this permit as the **Permittee's** authorized agent(s) until notified otherwise.

An authorized agent or authorized company representative is a person who is a principal executive officer or other corporate officer with signatory powers as per the **Permittee's** by-laws or per a vote of the directors if the **Permittee** is a corporation; a general partner or proprietor if the **Permittee** is a partnership or sole proprietorship respectively; or a duly authorized representative of an individual designated above if such representative is responsible for the overall operation of the facility and has the authority to sign contracts, permits, permit applications, monitoring results and other documents in the company's name and otherwise bind the **Permittee**. The **Permittee** may designate additional or new authorized agents by completing and submitting the enclosed Designation of Authorized Agent form.

The NBC will not accept documents signed by persons other than the Company's authorized agent(s) or authorized representative(s).

CONDITIONS TO PERMIT

A. Effluent Discharge Limitations:

1. The permittee shall at all times comply with the effluent limitations specified in Table 1 on page 14, attached hereto and incorporated herein.

2. The permittee shall comply with all discharge limitations and prohibitions contained in Article 5 of the NBC Rules and Regulations, as well as all other provisions of those Rules, and any other applicable State or Federal standards, including but not limited to the Federal Water Pollution Control Act, 33 U.S.C. §1251 et seq. and R.I.G.L. §46-12-1 et seq. The permittee shall at all times comply with 40 CFR §403.5 and may not introduce into the NBC facilities any pollutants which shall violate the general or specific prohibitions including but not limited to discharges resulting in pass through or interference situations at the NBC facilities.

3. The permittee shall not increase the use of process water or dilute a discharge in any way as a partial or complete substitute for adequate treatment to achieve compliance with the above standards.

4. The permittee is classified as a dentist and therefore, must at all times comply with the NBC Best Management Practices for the Management of Waste Dental Amalgam.

B. Permitted Discharges:

1. The permittee is authorized to discharge the following tanks, solutions or process wastewater streams to the NBC facilities:

    a. Treated Dental Wastewater Containing Amalgam;
    b. Dental Process Wastewaters;
    c. Plaster Grinding Wastewater.

2. No other process wastewater is to be discharged to the sewer unless specifically approved by the NBC in writing.

C. Prohibitions:

1. The permittee is strictly prohibited from discharging any prohibited substances as detailed in the Rules and Regulations of the Narragansett Bay Commission. Prohibited discharges include, but are not limited to, the following:

a. X-Ray Processing Rinsewater, Developer, and Fixer Solutions;
b. Dental Amalgam;
c. Elemental Mercury;
d. Untreated Dental Wastewater Containing Amalgam;
e. Acidic Solutions with a pH less than 5.0 standard units;
f. Caustic Solutions with a pH greater than 11.0 standard units;
g. Solvents;
h. Sludges;
i. Solids greater than 1/2 inch in size.

2. The permittee is strictly prohibited from discharging any process wastewater streams other than those specified in Section B(1) of this permit or wastestreams containing pollutants with concentrations in excess of the effluent limitations specified in Table 1 on page 14, attached hereto and incorporated herein.

3. Non-sanitary discharges other than those specified in Section B of this permit are prohibited unless specifically approved by the NBC in writing.

4. No chemicals, oils, solutions and/or materials including solid substances such as towels, casts, etc. in quantities or of such size capable of causing obstruction to the flow in sewers may be discharged to the sewer unless specifically approved by the NBC in writing.

5. Discharging of chemicals or solutions containing materials listed in the attached List of Toxic Pollutants (Table 2) is strictly prohibited if said discharge would result in violation of NBC limitations in Table 1.

D. Pretreatment Requirements:

1. The permittee must provide and maintain an easily accessible sample location downstream of each process discharge specified in Section B(1) of this permit. A total of one (1) sample location must be provided and must collect wastewater from the process operations indicated as follows:

Sample Location #1 - Sample port on the discharge line of the amalgam separator, collecting all process discharges specified in Section B(1) (a and b) of this permit.

The permittee is prohibited from discharging dilution wastestreams, such as sanitary and non-contact cooling water into any process wastewater sampling location. Dilution wastestreams must discharge downstream of the process wastewater sampling location. The discharge through Sample Location #1 must be in compliance with the effluent limitations specified in Section A and Table 1 of this permit.

2. The permittee is responsible for properly operating and maintaining the pretreatment system to achieve and ensure compliance with the conditions of this permit. Proper operation and maintenance shall include but not be limited to: effective performance, adequate funding, adequate operator staffing and training, adequate laboratory and process controls, including appropriate quality assurance procedures.

3. The permittee shall adhere to Option 1 and all mandatory best management practices of the NBC Best Management Practices on the management of Waste Dental Amalgam.

4. In accordance with Option 1 of the NBC Best Management Practice for the Management of Waste Dental Amalgam, the permittee shall install, operate and maintain an amalgam separator which is ISO 11143 certified to an efficiency of 99% removal in accordance with the plans submitted to the NBC on March 19, 2015. The amalgam separator shall be fully operational whenever discharges from dental procedures are occurring.

5. The permittee shall maintain the amalgam separator. Maintenance activities include, but are not limited to, the following:

    a. The permittee must inspect the separator weekly to ensure proper operation;
    b. The permittee must adhere to all manufacturers specifications for maintenance of the separator;
    c. The maintenance activities must be documented in a logbook as required by Section G(1) of this permit.

6. The permittee shall maintain chair side traps on all dental chairs to capture large amalgam particles from cuspidors and vacuum systems. Chair side traps must be inspected daily and cleaned or replaced as necessary. Disposable traps or material from reusable traps must be placed in a labeled storage container. The permittee may only rinse a trap if necessary and only in a designated sink that is plumbed with appropriate flow restriction to an NBC approved amalgam separator.

7. The permittee shall ensure that all vacuum pumps are equipped with filters. The permittee shall replace the filter at least once per month or more frequently if necessary. Removed filters should be held over a spill tray to capture any accumulated water from the trap. The water should be carefully decanted without losing any visible amalgam. The decant water, if free of visible amalgam, may be discharged to the sewer through an NBC approved amalgam separator. Dry-turbine vacuums must be inspected to ensure there is no built up sludge in the air/water separator. Collected sludge must be disposed of properly as a mercury containing waste.

8. The permittee shall use a NBC approved cleaner for disinfection of amalgam and/or mercury contaminated vacuum lines, instruments or equipment. The use of bleach or bleach containing cleaners is strictly prohibited as methyl mercury may be evolved. Corrosive and oxidizing cleaners are also prohibited to ensure methyl mercury is not evolved.

9. The permittee has designated all sinks for sanitary use only. The permittee shall post signs at these sinks stating "Sanitary Use Only". Washing of equipment, instruments, filters, and capsules in these sinks is strictly prohibited.

E. Certification of Compliance with Best Management Practice:

The permittee shall submit written annual certification of compliance with Best Management Practices for the Management of Waste Dental Amalgam for the period from January to December. The certification must be made on the form designated as Best Management Practice Certification, Attachment A, and must be received within thirty (30) days after the period for which the certification is being made.

F. Monitoring Requirements:

No wastewater sampling will be required by this permit. The NBC may, at any time, require monitoring. Conditions that may result in the imposition of monitoring include, but are not limited to, the following:

a. Failure to meet effluent limitations;
b. Change in production processes;
c. Expansion or reduction of production;
d. Change in water usage;
e. Discovery of additional information on monitoring or production unavailable to the NBC at the time this permit was prepared.

G. Record Keeping Requirements:

1. The permittee shall be responsible for maintaining a logbook documenting all records pertaining to the amalgam separator including, but not limited to, the following:

    a. Date (month, day and year) of each trap and separator inspection and service activity;
    b. The location of each trap and separator being serviced;
    c. All routine and non-routine activities conducted (i.e. cleaning, maintenance, filter replacement);
    d. Signature of person conducting activity.

2. Records which substantiate any information supplied in permit applications, Self-Monitoring Compliance Reports and any other informational requirements of the Rules and Regulations or any applicable State or Federal law are to be kept by the permittee for a period of at least three (3) years unless a dispute or litigation involving the subject of those records is pending, in which case these records are to be kept by the permittee for a period of at least three (3) years following resolution of such litigation or dispute.

H. Emergency/Routine Notification Requirements:

1. Emergency Notification of Accidental/Incidental Discharge

   The permittee must maintain all associated facilities to ensure that incidental and accidental spills are not able to enter the NBC sewer system. **In the case of an accidental discharge into the NBC facilities, including any discharge that would violate a Federal prohibition under 40 CFR 403.5(b), it is the responsibility of the permittee to notify the NBC of the incident immediately by calling the Pretreatment Section at 461-8848 or during non-business hours at its twenty-four (24) hour Emergency Hotline Number, 222-6781**. Within five (5) days following an accidental discharge, the permittee shall submit to the NBC a detailed written report describing the cause and volume of the discharge and the measures to be taken by the user to prevent similar future occurrences by the permittee.

2. Routine Notification of Operational Changes

   The permittee must notify the NBC in writing at least thirty (30) days prior to instituting any changes in operations that may affect the quality or quantity of the process wastestream discharged to the sewer system or may affect the adequacy of spill control measures. Operational changes that may affect the quality or quantity of the process wastestream or the adequacy of spill control measures include, but are not limited to, the following:

   a. Addition, removal, or relocation of process tanks or solutions;
   b. Installation of new wastewater generating process operations;
   c. Relocation of process operation piping or valving resulting in a new or different point of discharge;
   d. Modification of any pretreatment process or procedure;
   e. Installation or modification of pretreatment equipment or associated piping;

   Should the permittee be unsure as to whether an operational change requires written NBC notification, it is strongly recommended that the permittee contact the NBC by telephone prior to instituting the proposed change in operations. This will ensure that the proper notification is provided to the NBC. With respect to the thirty (30) day written notification requirement, should the permittee require immediate approval to make an operational change in order to accommodate business, the NBC will make every effort to accommodate the permittee so as to not impede operations at the facility. The discretion used by the NBC with respect to this issue is dependent on the magnitude of the proposed operational changes and the resulting effect on the characteristics of the wastestream and/or the spill control measures at the facility. The permittee may notify the NBC of the following operational changes by telephone rather than in writing as required above:

   f. Change from the hours of facility operation specified in the discharge permit application;
   g. Change in the personnel responsible for the proper operation of pretreatment equipment.

3. Routine Notification of Pretreatment Equipment Malfunctions

In the event of pretreatment equipment failure or malfunction, the permittee must notify the NBC of the incident by the close of the next full business day by calling the NBC Pretreatment Section at 461-8848. Pretreatment equipment failure includes, but is not limited to, the following:

Amalgam Separator Failure

Any equipment failure or malfunction which results in a spill and/or accidental discharge must be reported immediately in accordance with the NBC Emergency Spill Notification Procedure. Should a pretreatment equipment failure or malfunction occur, the permittee is strictly responsible for complying with all other permit conditions, including, but not limited to, maintaining full compliance with effluent limitations and monitoring requirements.

I. Right of Entry:

The NBC, upon presenting identification and appropriate credentials, is authorized to enter the premises of the permittee during working hours and at other reasonable times for the purposes of inspection, sampling, reading water meters, records inspecting and copying and as otherwise authorized under R.I.G.L. §46-25-25.1. Reasonable hours in the context of inspection and sampling include any time the NBC has reason to believe that violation of the permit or of the Rules and Regulations is occurring.

J. Permit Fee:

The permittee agrees to pay an annual permit fee and all sewer user fees assessed by the NBC in accordance with rates and fees approved by the Public Utilities Commission pursuant to R.I.G.L. §39-1-1 et seq. and §46-25-1 et seq. The permittee agrees to reimburse the NBC for the cost of the collection of any and all fees associated with the permit, including reasonable attorney's fees.

K. Authorization To Do Business:

The permittee is a corporation. The permittee shall ensure the corporation be registered with the Rhode Island Secretary of State Corporations Division. Cityline Dental shall remain in good standing with the Rhode Island Secretary of State Corporations Division at all times. In the event Cityline Dental has its charter or existence revoked by the Rhode Island Secretary of State, the permittee shall notify the NBC in writing within thirty (30) days of notice of such revocation.

In the event Cityline Dental is no longer in good standing with the Rhode Island Secretary of State or the charter is revoked for any reason, any individual named as a co-permittee or any individual exercising ownership of Cityline Dental shall be subject to the terms and conditions of the permit as if named herein.

L. Closing, Selling, Moving the Business:

If the permittee intends to close, liquidate, sell or move the permitted premises, located as referenced on page 1 of this permit, the permittee must notify the NBC in writing at least thirty (30) days prior to disposing of any process waste associated with the move or the cessation of business.

M. Transfer of Permit Prohibited:

Wastewater discharge permits are issued to a specific user for a specific operation. This permit may not be reassigned, transferred or sold to a new owner, new user, different premises, or a new or changed operation without the express written permission from the NBC. The permittee shall provide a copy of this permit to any prospective purchaser of said facility referenced on page 1 of this permit at least fourteen (14) days prior to closing on the business or property.

N. Permit Violations:

1. Enforcement Costs

   The permittee agrees to reimburse the NBC for the cost of enforcing the permit, including reasonable attorneys' fees, if violations of the permit are found by a hearing officer during the course of an administrative hearing or if such decision is appealed, then in a court of competent jurisdiction.

2. Damage to the Facilities

   The permittee agrees to indemnify and hold harmless the NBC from and against any liability, loss, cost, expense or actual damage (including reasonable attorneys' and accountants' fees incurred in defending or prosecuting any claim for any such liability, loss, cost, expense or damage) suffered by the NBC and caused by discharges from the permittee, either singly or by interaction with other wastes.

3. Violations of the NBC Permit

   The permittee agrees to reimburse the NBC for any penalty and additional operating expense incurred by the NBC for violations of the NBC NPDES, RIPDES, or any other state or federal permit which were caused by discharges from the permittee, either singly or by interaction with other wastes.

4. Penalties for Violations

   Article 10 of the NBC Rules and Regulations provides that any person who violates a permit condition is subject to an administrative or civil penalty of up to $25,000 per violation per day as defined in R.I.G.L. §46-25-25.2. Willful or criminally negligent violations shall be punishable by the aforementioned fine and/or imprisonment as defined in R.I.G.L. §46-25-25.3.

O. Revocation/Suspension of Permit:

1. Violations of the conditions of this permit, the NBC Rules and Regulations, Act, and applicable state or Federal regulations may result in the revocation of this permit in accordance with the due process requirements of the NBC Rules and Regulations. Violations that may result in revocation of this permit include, but are not limited to, the following:

   a. Failure to accurately report the wastewater constituents and characteristics of the discharge;
   b. Failure to report changes in operations or wastewater constituents;
   c. Failure to allow NBC personnel statutorily authorized access for the purposes of inspection or monitoring;
   d. Failure to adhere to an approved compliance schedule;
   e. Failure to comply with administrative orders or settlement agreements;
   f. Failure to pay authorized fees and user charges;
   g. Violation of any other applicable permit conditions.

   This list is for illustrative purposes and is not intended to be inclusive.

2. The Executive Director may suspend this wastewater discharge permit should the permittee cease operations for any period exceeding one (1) month. The suspension will not act as a revocation of the permit, but rather as a temporary suspension of the user's rights under the permit while operations have ceased. During such suspension, the user's connection to the facilities shall be plugged. The user shall still be required to pay the permit fee, since the permit itself will not be revoked. During such suspension, the user shall be disconnected from the facility. The Commission shall have the authority to make periodic inspections during this time to determine whether the user is continuing to discharge regulated wastewater. Such discharge may be considered grounds for revocation of the wastewater discharge permit.

P. Civil and Criminal Liability:

Nothing in this permit shall be construed to relieve the permittee from civil and/or criminal penalties for noncompliance with the NBC Rules and Regulations or State or Federal laws or regulations.

Q. Duty To Comply:

1. The permittee must comply with all conditions of this permit. Failure to comply with the requirements of this permit may be grounds for enforcement proceedings including administrative, civil and/or criminal penalties, injunctive relief and summary abatements.

2. Compliance with this permit does not relieve the permittee of its obligation to comply with any or all pretreatment regulations, standards or requirements under local, State and Federal laws, including any such regulations, standards, requirements, or laws that may become effective during the term of this permit.

R. Removed Substances:

Solids, sludges, filter residue or other pollutants removed in the course of treatment or control of waters or wastewaters shall be disposed of in accordance with §405 of the Clean Water Act and subtitles C and D of the Resource Conservation and Recovery Act. A Resource Conservation and Recovery Act (RCRA) informational brochure is attached to this permit to inform you of your RCRA obligations.

S. Permit Modification/Renewal:

1. This permit may be modified for various reasons, including but not limited to the following:

    a. To incorporate any new or revised Federal, State, or local pretreatment standards or requirements;

    b. Material or substantial alterations or additions to permittee's process operations, discharge volume or discharge characteristics which were not considered in the drafting of this permit;

    c. A change in any condition regarding either the industrial user or the POTW that requires either a temporary or permanent reduction or elimination of the authorized discharge;

    d. Information indicating that the permitted discharge poses a threat to the NBC collection or treatment system, POTW personnel, the general public, or the receiving waters;

e. Violation of any terms or conditions of the permit;

f. Misrepresentation or failure to disclose fully all relevant facts in the permit application or in any required reporting;

g. Revision of or a grant of variance from such categorical standards pursuant to 40 CFR §403.13;

h. To correct typographical or other errors in the permit;

i. To reflect transfer of the facility ownership and/or operation to a new owner/operator;

j. Upon request of the permittee, provided such request does not create a violation of any applicable requirements, standards, laws, or rules and regulations.

The filing of a request by the permittee for a permit modification, revocation and reissuance, termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

2. If the permittee wishes to continue to discharge after the expiration date of this permit, an application must be filed for a permit renewal in accordance with the requirements of Article 8 of the NBC Rules and Regulations a minimum of ninety (90) days prior to the expiration date.

T. Integration:

This permit represents the entire agreement and understanding of the parties hereto to those matters contained herein. No prior oral or written understanding shall be of any force or effect with respect to those matters covered hereunder. This permit may not be modified or altered except in accordance with the provisions of Article 8 of the Rules and Regulations. All terms used in this permit shall be construed as defined under Article 2 of the Rules and Regulations.

U. Jurisdiction:

This permit shall be administered and interpreted under the laws of the State of Rhode Island. Jurisdiction of litigation arising from this permit shall be in the State of Rhode Island. If any part of this permit is found to be in conflict with applicable laws, such part shall be inoperative, null and void insofar as it is in conflict with said law, but the remainder of this permit shall be in full force and effect.

THC:AB:smb

Attachments:

Designation of Authorized Agent Form
RCRA Handbook
Best Management Practice Certification

Table 1

NBC Effluent Discharge Limitations
Field's Point District

Parameter	Limitation (Max)
Total Toxic Organics (TTO)	2.13
Biochemical Oxygen Demand (BOD_5)	300.00*
Total Suspended Solids (TSS)	300.00*
Total Oil and Grease (fats, oils and grease)	125.0
Oil and Grease (mineral origin)	25.0
Oil and Grease (animal/vegetable origin)	100.0
pH range (at all times)	5.0 - 11.0 s.u.

Parameter	Daily Maximum (Composite for 1 day) (mg/l)	Average (10 day) (mg/l)
Cadmium (Total)	0.11	0.07
Chromium (Total)	2.77	1.71
Copper (Total)	1.20	1.20
Cyanide (Total)	0.58	0.58
Lead (Total)	0.60	0.40
Mercury (Total)	0.005	0.005
Nickel (Total)	1.62	1.62
Silver (Total)	0.43	0.24
Zinc (Total)	2.61	1.48

All limitations are in units of mg/l unless otherwise specified.

* Exceeding this discharge limitation may be permitted but would be subject to a surcharge in accordance with rates approved by the Public Utilities Commission and in accordance with R.I.G.L. §39-1-1 et seq.

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Table 2

List of Toxic Pollutants

The following list of Toxic Pollutants has been designated pursuant to Section 307(a)(1) of the Clean Water Act.

VOLATILES EPA METHOD 624

acrolein
acrylonitrile
benzene
bromoform
carbon tetrachloride
chlorobenzene
chlorodibromomethane
chloroethane
2-chloroethylvinyl ether
chloroform
dichlorobromomethane
1,1-dichloroethane
1,2-dichloroethane
1,1-dichloroethylene
1,2-dichloropropane
1,3-dichloropropylene
ethylbenzene
methyl bromide
methyl chloride
methylene chloride
1,1,2,2-tetrachloroethane
tetrachloroethylene
toluene
1,2-trans-dichloroethylene
1,1,1-trichloroethane
1,1,2-trichloroethane
trichloroethylene
vinyl chloride

ACID COMPOUNDS - EPA METHOD 625

2-chlorophenol
2,4-dichlorophenol
2,4-dimethylphenol
4,6-dinitro-o-cresol
2,4-dinitrophenol
2-nitrophenol
4-nitrophenol
p-chloro-m-cresol
pentachlorophenol
phenol
2,4,6-trichlorophenol

BASE/NEUTRAL - EPA METHOD 625

acenaphthene *
acenaphthylene *
anthracene *
benzidine
benzo (a) anthracene *
benso (a) pyrene *
3,4-benzofluoranthene *
benzo (ghi) perylene *
benzo (k) fluoranthene
bis (2-chloroethoxy) methane
bis (2-chloroethyl) ether
bis (2-chloroisopropyl) ether
bis (2-ethylhexyl) phthalate
4-bromophenyl phenyl ether
butylbenzyl phthalate
2-chloronaphthalene
4-chlorophenyl phenyl ether
chrysene *
dibenzo (a,h) anthracene *
1,2-dichlorobenzene
1,3-dichlorobenzene
1,4-dichlorobenzene
3,3'-dichlorobenzidine
diethyl phthalate
dimethyl phthalate
di-n-butyl phthalate
2,4-dinitrotoleune
2,6-dinitrotoleune
di-n-octyl phthalate
1,2-diphenylhydrazine
(as asobenzene)
fluoranthene *
fluorene *
hexachlorobenzene
hexachlorobutadiene
hexachlorocyclopentadiene
hexachloroethane
indeno (1,2,3-cd) pyrene *
isophorone
naphthalene *
nitrobenzene
N-nitrodimethylamine
N-nitrosodi-n-propylamine
N-nitrosodiphenylamine
phenanthrene *
pyrene *
1,2,4-trichlorobenzene
* = Polynuclear Aromatic Hydrocarbons

PESTICIDES - EPA METHOD 625

aldrin
alpha-BHC
beta-BHC
gamma-BHC
delta-BHC
chlordane
4,4'-DDT
4,4'-DDE
4,4'-DDD
dieldrin
alpha-endosulfan
beta-endosulfan
endosulfan sulfate
endrin
endrin aldelyde
heptachlor
heptachlor epoxide
PCB-1242
PCB-1254
PCB-1221
PCB-1232
PCB-1248
PCB-1260
PCB-1016
toxaphene

OTHER TOXIC POLLUTANTS AND TOTAL PHENOL

Antimony, Total
Arsenic, Total
Beryllium, Total
Cadmium, Total
Chromium, Total
Chromium, Hexavalent
Copper, Total
Lead, Total
Mercury, Total
Nickel, Total
Selenium, Total
Silver, Total
Thallium, Total
Zinc, Total
Asbestos
Cyanide, Total
Phenols, Total
TCDD (Dioxin)

Attachment A

Best Management Practice Certification

For the 12-month period from _____, 20___ to _____, 20___

Company Name: _____

Address: _____
_____
_____

RETURN TO:
Narragansett Bay Commission
Pretreatment Program
2 Ernest Street
Providence, RI 02905-5502

I, _____, as authorized representative of _____, do hereby decree that the Narragansett Bay Commission Best Management Practices for the Management of Waste Dental Amalgam have been fully complied with for the past twelve month period.

I certify under penalty of law that this document and all attachments were properly prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for known violations.

_____ _____
Authorized Representative Signature Date

CERTIFICATE TO DISCHARGE

the following types of process water:

DENTAL PROCESS WASTEWATER AND PLASTER GRINDING WASTEWATER

into the facilities of the

Narragansett Bay Commission

is hereby granted to:

Cityline Dental
400 Reservoir Avenue - Suite 1D
Providence, RI 02907

PERMIT NUMBER: P9400-372-0320

PERMIT EXPIRATION DATE: 03/31/2020

The discharge permit must be kept at the above address for inspection. Failure to comply with the rules and regulations of the Narragansett Bay Commission or with the conditions of the discharge permit will subject the permittee to fines of up to $25,000 per violation per R.I.G.L. 46-25-25.3.

July 17, 2015
Initial Date of Issuance

/s/ Kerry M. Britt
Kerry M. Britt, Pretreatment Manager

ATTACHMENT VOLUME I

SECTION 3

VARIOUS PRETREATMENT PROGRAM DOCUMENTS

NBC SPILL AND SLUG PREVENTION CONTROL & COUNTERMEASURES PLAN GUIDANCE DOCUMENT

SPILL AND SLUG PREVENTION CONTROL PLAN FOR NARRAGANSETT BAY COMMISSION SEWER USERS

COMPANY NAME: _____

FACILITY ADDRESS: _____

MAILING ADDRESS: _____

PRIMARY PERSON RESPONSIBLE FOR SPILL CONTROL PREVENTION: _____

DAYTIME EMERGENCY PHONE NUMBER: _____

AFTER HOURS EMERGENCY PHONE NUMBER: _____

The Narragansett Bay Commission's (NBC) Rules and Regulations for the Use of Wastewater Facilities (Article 8.9) require each user to provide protection from accidental discharge of prohibited materials and substances to the sewer. The user is required to provide detailed plans showing equipment and a brief description of operating procedures utilized to prevent these discharges.

This document was developed to assist you in determining what measures you need to implement and to properly document the spill prevention control procedures utilized at your facility; therefore, you must complete this document.

2 Ernest Street • Providence, Rhode Island 02905 • 401 461-8848 • Fax 401 461-0170

Section A: Description of Discharge Practices and Storage Areas

1. List all sources of routine sewer discharges and describe the method of discharge:

Source of Discharge	Method of Discharge
Example: Electroplating Discharges	Pumped to sewer via pretreatment system

2. List all sources of non-routine sewer discharges of an infrequent nature such as batch discharges, which may occur only once per year:

Source of Discharge	Method of Discharge
Example: Annual Power Washing of Plating Room Floors	Gravity flow to pretreatment system

3. List each room or area inside or outside of your facility in which chemicals, solvents, liquids, fuel or lubricating oils, hazardous waste, etc. may be used or stored and indicate if spill control facilities are in place to prevent a spill from reaching the sewer system.

Room/Area	Spill Control Facilities in Place Yes/No

Attachment A must be completed for each area listed above with the exception of boiler facilities.

4. Attach a sketch of your entire facility showing each area/room listed above. This sketch must show the location of all floor drains, open sewer connections, berms, etc. in relation to the rooms listed above. Be sure to include outside yard drains located near loading docks or storage areas. For multilevel facilities a sketch must be provided for each level of the facility.

Section B: Spill Control Training, Equipment and Routine Inspections

1. The NBC recommends all employees working in areas specified in Section A(3) be thoroughly trained annually in spill control procedures for their respective work areas. List all spill control training that has been conducted at your facility and indicate the frequency of training:

_____

_____

_____

2. What procedures are utilized to prevent adverse impacts on the NBC sewage facility due to accidental spills? Examples of these procedures may include periodic inspection and maintenance of storage areas, and special procedures utilized during loading and unloading operations.

_____

_____

_____

3. List emergency response equipment available and procedures to be utilized in the event of a spill.

_____

_____

_____

Section C: Spills From Boiler and Fuel Depot Areas

This section must be completed if fuels, or fuel oils are stored at your facility or chemicals are stored in the boiler area. Be sure to show the location of any floor drains, trenches, yard drains or other connections to the sewer or pretreatment system from the boiler facility and fuel storage area(s) in the sketch required in Section A(4). Also, show any berms or sumps that would be used to contain spills. Indicate the capacity of each holding area in gallons.

1. What types of fuel are stored in these areas? (i.e., gasoline, diesel, kerosene, #4 fuel oil, #6 fuel oil, etc.)

_____

_____

_____

2. Are the fuel tanks above ground_____ or below ground_____? Provide the capacity of each tank in gallons:

_____

_____

_____

3. Indicate provisions (i.e., alarms, sight glasses, etc.) and filling procedures that will minimize the risk of overfilling a tank.

_____

_____

_____

4. Is the storage tank equipped with an overflow pipe or relief valve or some other equipment in the tank or pipe chase network that would allow fuel to spill during a filling procedure?___Yes _____No

5. If a tank is overfilled and fuel escapes through the tank vent pipe, where would the spilled fuel discharge?

_____

_____

_____

6. What measures and spill containment equipment are in place to contain spillage from an overfilled tank?

_____

_____

_____

7. Are boiler treatment or other chemicals stored in the boiler facility or fuel depot areas? _____Yes _____No

   If yes describe chemicals:

_____

_____

_____

8. Detail spill containment provided for chemicals stored in this area.

_____

_____

_____

9. If a spill should occu r in the fuel depot or boiler facility, how would it be cleaned up and disposed?

_____

_____

_____

10. Are there any normal process discharges such as boiler blowdown or steam condensate to the sewer or pretreat ment system fro m physical plant operations? _____Yes _____No

11. Does the boiler utilize a hot water or steam operated oil preheater? _____Yes _____No

    If so, does the condensate from the preheater discharge to the sewer? ____Yes ____No

    If so, what measures are in place to detect an oil discharge to the sewer resulting from a leak within the preheater core?

_____

_____

_____

Section D: Spills That Discharge to Pretreatment Systems

This section must be completed in the case where a s pill will dis charge to a pretreatment system.

1. For each area listed in Sectio n A(3) that a spill would d ischarge to the pretreatment system, you must provide the following information:

Area	Solution	Pretreatment Collection Vessel
Example: Plating	CN Bearing Solutions	CN Destruct Tank
Example: Plating	Non-CN Bearing Solution	Batch A/A Tank

2. During non-working hours, what procedures will be followed to prevent spills from discharging directly through pretreatment to the sewer without proper treatment? (e.g., shut off sump pump, close valve to sump, etc.)

_____

_____

_____

_____

_____

3. What procedures or facilities are in place to prevent highly concentrated or incompatible solutions (such as plating baths, oils, solvents, etc.), which the pretreatment system was not designed to treat, from reaching the pretreatment system?

_____

_____

_____

_____

_____

Section E: Notification Procedures

1. The sewer user must maintain an approved Spill and Slug Prevention Control and Countermeasure Plan and all associated facilities at all times to ensure that incidental and accidental spills are not able to enter the NBC sewer system. In the case of a slug or accidental discharge to the facilities, it is the responsibility of the sewer user to notify the NBC of the incident immediately by calling the NBC's Pretreatment Section at 461-8848. During non-business hours contact the NBC at its 24 Hour Emergency Hotline number, 222-6781 if located in the Field's Point District or at 434-6350 if located in the Bucklin Point District.

2. Within five days following an accidental discharge, the sewer user shall submit to the NBC a detailed written report describing the cause and volume of the discharge and the measures to be taken by the user to prevent similar future occurrences.

Section F: Certification

I certify under penalt y of law that th is Spill and Slug Control Plan and all attachments were prepared under my dire ction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Ba sed on my i nquiry of the person or persons who maintain the system, or th ose persons directly responsible f or gathering t he information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I certify that this facility will fully implement and maintain the Spill and Slug Control Plan at all times.

_____

SIGNATURE AND TITLE OF AUTHORIZED COMPANY REPRESENTATIVE

_____

DATE

Attachment A*

Area/Room: _____

List Chemicals Stored in Area: _____

_____ _____

_____ _____

_____ _____

_____ _____

List the Volume of the Largest Container in Area: _____

Are there open floor drains or sewer connections in this area? _____

List spill control measures in place: _____

_____

_____

List capacity of spill containment area(s). Please note, the capacity of the containment area must be a minimum of 110% the volume of the largest container.

_____

_____

Detail how a spill would contained during working hours. _____

_____

_____

Detail how a spill would be contained during non-working hours. _____

_____

_____

How will spills from this area be cleaned up and disposed? _____

_____

_____

If currently there are no spill containment measures in this area, detail proposed measures to provide spill containment for chemicals and solutions in this area and the timeframe necessary to implement these measures.

_____

_____

_____

_____

* Please make additional copies of this attachment for all areas of your facility.

NBC TOXIC ORGANIC/SOLVENT MANAGEMENT PLAN GUIDANCE DOCUMENT

NARRAGANSETT BAY COMMISSION
TOXIC ORGANIC/SOLVENT
MANAGEMENT PLAN

COMPANY NAME: _____

MAILING ADDRESS: _____

PHONE NUMBER: _____

PLAN PREPARED BY: _____

In accordance with Section 7.2 of the Narragansett Bay Commission's (NBC) Rules and Regulations for the Use of Wastewater Facilities, the NBC may require any user who discharges into the facilities to provide information relating to discharges into the facilities to ensure compliance with prescribed pretreatment methods and regulations. Federal pretreatment standards, including those for metal finishers and electroplaters (40 CFR 413.03 and 433.12), require many industrial users to periodically monitor their wastestream for Total Toxic Organics (TTO's). Federal law allows the Industrial User to develop, implement and maintain a Toxic Organic/Solvent

2 Ernest Street • Providence, Rhode Island 02905 • 401 461-8848 • Fax 401 461-0170

Management Plan, which once approved by the NBC, allows the Industrial User a waiver from performing the expensive and routine TTO monitoring.

In order to provide for the control of solvents and toxic organics which are not permitted to be discharged to the NBC sewerage facilities, the NBC is requiring, as a condition of the industrial sewer user's Wastewater Discharge Permit, that a Toxic Organic/Solvent Management Plan be prepared and submitted to the NBC in lieu of the regular monitoring for toxic organic compounds and solvents.

This form has been developed as a guidance document by the NBC Pretreatment Section to assist sewer users who must prepare a Toxic Organic/Solvent Management Plan. When completed, submitted and approved by the NBC this document will constitute the facility's Toxic Organic/Solvent Management Plan. The user will then be responsible to maintain all items indicated in this plan to ensure that solvents and toxic organic compounds are not discharged into the NBC sewerage system.

Section A – Estimated Annual Solvent Purchases and Usages:

Does your firm use any solvents, chemicals or compounds containing any of the toxic organic compounds listed on the EPA table of toxic organics attached to this document, or any other solvents, such as xylene, acetone, etc., not listed on the attached table? _____

If yes, you must complete all sections of this Toxic Organic/Solvent Management Plan. If no, you must sign the certification Section F of this plan.

List the type and estimated amount of solvents or toxic organic chemicals purchased and used yearly at this facility and provide a brief description detailing the usage of the chemical. A list of EPA toxic organic compounds is attached for your information. In addition to the compounds on this list, any other solvents purchased or used on the premises must be included (i.e. Acetone, 100 gallons/yr., used for paint removal).

Solvent	Use of Solvent	Estimated Gallons Annually Purchased

Section B – Estimate of Solvents Stored and Annually Disposed:

You must account for the total gallons of each solvent or toxic organic chemical listed in Section A. Indicate the estimated volume of each chemical presently stored on site and the estimated volume disposed of annually by

each method of disposal (e.g. reclamation, contract hauler, consumption in product, evaporation, sewer discharge or other) and the total estimated gallons on site and disposed of annually. **The total gallons listed here for each chemical must equal the total gallons listed in Section A for the same chemical.**

Solvent	Gallons Typically Stored On Site	GALLONS DISPOSED ANNUALLY						Total Gallons Stored, Used, or Disposed Annually
		Discharged In Wastewater	Evaporated During Usage	Reclaimed On-site	Shipped Off-site	Consumed or Retained In Product	Other (Indicate Gallons & Disposal Method)	

Section C – Wastewater Analysis:

Has your process wastewater ever been analyzed for any or all of the t oxic organic compounds or solvents listed in Section A?

_____Yes _____No

If yes, please attach a copy of the analysis. If no, this monitoring must be conducted and the analytical results for each toxic organic compound and solvent listed in Section A must be attached to the plan.

Section D – Solvent Process Operations:

1. For each of the toxic organic compounds or solvents listed in Section A, provide a brief description of the process in which the chemical is used and describe in detail the work methods used to prevent and prohibit toxic organic and solvent dragout, drippage and spillage from entering the wastewater discharged from the facility.

   _____
   _____
   _____
   _____
   _____
   _____
   _____

2. For any solvent listed in Section B as being discharged in the wastewater, please provide a brief description detailing the discharge method, practice, procedure, or process operation resulting in each solvent discharge.

   _____
   _____
   _____
   _____
   _____
   _____
   _____

Section E – Spill Control Procedures:

Describe the spill control procedures in effect for the toxic organic compounds and solvent on the premises. This would include measures taken in both the chemical storage area and in the work area to prevent incidental and accidental spillage from entering the NBC sewerage system. Measures to prevent and control spillage may include berms, sealed floor drains, absorbent material, etc. Indicate the volume of the largest vessel within each storage area and the capacity of the storage area itself. Please note that a storage area is required to contain a minimum of 110% the capacity of the largest vessel stored within it.

_____

_____

_____

_____

_____

Section F – Certification Statement:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry or the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, concluding the possibility of fine

and imprisonment for knowing violations. I hereby certify that based on my inquiry of the person or persons directly responsible for managing compliance with the permit limitation for Total Toxic Organics (TTO), to the best of my knowledge and belief, no dumping of concentrated toxic organic compounds into the wastewaters has or does occur. I further certify that this facility is implementing and will abide by this Toxic Organic/Solvent Management Plan as submitted to the NBC.

_____ _____

SIGNATURE OF AUTHORIZED COMPANY REPRESENTATIVE TITLE

_____

DATE

List of Toxic Pollutants

The following List of Toxic Pollutants has been designated pursuant to Section 307(a)(1) of the Clean Water Act.

Volatiles
EPA Method 624

arolein
acrylonitrile
benzene
bromoform
carbon tetrachloride
chlorobenzene
chlorodibromomethane
chloroethane
2-chloroethylvinyl ether
chloroform
dichlorobromomethane
1,1-dichloroethane
1,2-dichloroethane
1,1-dichloroethylene
1,2-dichloropropane
1,3-dichloropropylene
ethylbenzene
methyl bromide
methyl chloride
methylene chloride
1,1,2,2-tetrachloroethane
tetrachloroethylene
toluene
1,2-trans-dichloroethylene
1,1,1-trichloroethane
1,1,2-trichloroethane
trichloroethylene
vinyl chloride

Acid Compounds
EPA Method 625

2-chlorophenol
2,4-dichlorophenol
2,4-dimethylphenol
4,6-dinitro-o-cresol
2,4-dinitrophenol
2-nitrophenol
4-nitrophenol
p-chloro-m-cresol
pentachlorophenol
phenol
2,4,6-trichlorophenol

Base/Neutral
EPA Method 625

* acenaphthene
* acenaphthylene
* anthracene
benzidine
* benzo (a) anthracene
* benzo (a) pyrene
* 3,4-benzofluoranthene
* benzo (ghi) perylene
benzo (k) fluoranthene
bis (2-chloroethoxy) methane
bis (2-chloroethyl) ether
bis (2-chloroisopropyl) ether
bis (2-ethylhexyl) phthalate
4-bromophenyl phenyl ether
butylbenzul phthalate
2-chloronaphthalene
4-chlorophenyl phenyl ether
* chrysene
* dibenzo (a, h) anthracene
1,2-dichlorobenzene
1,3-dichlorobenzene
1,4-dichlorobenzene
3,3-dichlorobenzidine
diethyl phthalate
dimethyl phthalate
di-n-butyl phthalate
2,4-dinitrotoluene
2,6-dinitrotoluene
di-n-octyl phthalate
1,2-diphenylhydrazine (as azobenzene)
***** fluoranthene
* fluorene
hexachlorobenzene
hexachlorobutadiene
hexachlorocyclopentadiene
hexachloroethane
* indeno (1,2,3-cd) pyrene
isophorone
* naphthalene
* nitrobenzene
N-nitrosodimethylamine
N-nitrosodi-n-propylamine
N-nitrosodiphenylamine
* phenanthrene
* pyrene
1,2,4-trichlorobenzene

*= Polynuclear Aromatic Hydrocarbons

Pesticides
EPA Method 625

aldrin
alpha – BHC
beta – BHC
gamma – BHC
delta – BHC
chlordane
4,4’ – DDT
4,4’ – DDE
4,4’ – DDD
dieldrin
alpha-endosulfan
beta-endosulfan
endosulfan sulfate
endrin
endrin aldelyde
heptachlor
heptachlor epoxide
PCB-1242
PCB-1254
PCB-1221
PCB-1232
PCB-1248
PCB-1260
PCB-1016
toxaphene

Other Toxic Pollutants and Total Phenol

Antimony, Total
Arsenic, Total
Beryllium, Total
Cadmium, Total
Chromium, Total
Chromium, Hexavalent
Copper, Total
Lead, Total
Mercury, Total
Nickel, Total
Selenium, Total
Silver, Total
Thallium, Total
Zinc, Total
Asbestos
Cyanide, Total
Phenols, Total
TCDD (Dioxin)

NBC SIGNIFICANT INDUSTRIAL USER ANNUAL INSPECTION CHECKLIST

NARRAGANSETT BAY COMMISSION

Annual Inspection Checklist
For Significant Industrial Sewer Users

Company Name: _____ **Eng/Tech:** _____
Contact Person(s): _____ **Date:** _____
Other Person(s) in Attendance: _____
Company Classification: Electroplater_____ **Metalfinisher**_____
Other (specify): _____

Part I - Outstanding Requirements/Progress Since Last Inspection

(a) What progress was required of the firm since the last annual inspection?

_____
_____
_____
_____
_____
_____
_____

(b) Has required work been completed? Yes No N/A
If no, when will it be completed? _____

_____
_____
_____
_____

(c) What work has facility initiated on its own to improve wastewater discharge?

_____
_____
_____

(d) Has facility expanded/scaled down operations? Yes No
If yes, describe. _____

_____
_____

(e) Have all monitoring reports been submitted on time? Yes No
If no, discuss ramifications of late submittals/SNC with user. _____

_____
_____
_____
_____

(f) Has firm been in compliance for the past twelve (12) month period? Yes No
If no, list problem parameter(s) and discuss with user. _____

(g) Are samples being taken at the frequency required in the permit (i.e., monthly, bimonthly), analyzed for all parameters required, and all resampling results submitted? Yes No N/A

If no, explain. _____

Part II - Pretreatment Equipment and Process Operations

(a) List all water using process operations and describe each process operation.

(b) Is there a pretreatment system in operation? Yes No
Describe, in full, the pretreatment technology presently being provided for each treated wastestream. _____

(c) Who operates the pretreatment system? _____

(d) List all water using operations that are **not** pretreated (e.g. casting, tubbing, boiler blowdown, cooling water, etc.). _____

(e) Is there an operation and maintenance manual maintained on site for pretreatment system? Yes No N/A

(f) Are there any spare parts maintained on site for the pretreatment equipment? Yes No N/A

If yes, list spare parts. _____

(g) Has system been installed according the NBC specifications? Yes No N/A

If no, what needs to be corrected? _____

* Check pretreatment system piping, decant ports, transfer pumps, pH recording probe location, etc.

(h) Has system been installed according to NBC approved plans? Yes No N/A

If no, what needs to be corrected? _____

* Compare plans with existing system.

(i) Have changes been made to process operations or pretreatment system without NBC notification and approval? Yes No

If yes, detail changes. _____

(j) Are any hydroxide sludges or other sludges produced at this facility from pretreatment operations? Yes No

If so, indicate type of sludge, volume, and source (e.g. Hydroxide sludge from clarifier, etc.) _____

(k) Is any type of sludge discarded in the trash? Yes No
If yes, specify. _____

(l) Are any concentrates or other hazardous materials removed by hazardous waste contractors (e.g. spent solvents, etc.)? Yes No

If yes, list types and amounts. _____

(m) Does the facility utilize ion-exchange resins? Yes No
If yes, are ion-exchange columns regenerated on site? Yes No
If yes, how often are columns regenerated? _____

How is regenerate material disposed of? _____

How are columns regenerated? _____

Has the Pretreatment staff obvserved and sampled during the regeneration procedure? Yes No

If no, be sure to observe and arrange sampling of the regenerant.

Part III - Maintenance and Record Keeping

(a) Is pH recording/reporting required? Yes No

(i) Are pH charts being maintained? Yes No N/A

(ii) Do pH charts agree with monthly reports? Yes No N/A
If no, detail inaccuracies. _____

(iii) Are the pH charts being dated properly (month, day, and year)?
Yes No N/A

(b) Provide the following pre-inspection pH calibration data:

NBC pH Pen # _____ Date of Calibration: _____
(mm/dd/yy)

(c) Are facility pH probes in calibration at the time of the inspection?
Yes No N/A

pH readings: NBC _____s.u. Company _____s.u.

* If discrepancy is greater than 0.5 s.u., and NBC instrument is verified to be in calibration, deficiency should be noted.

(d) How often are pH and/or ORP probes cleaned and calibrated? _____

(e) If discrepancy was observed, check instruments using the company's buffer solutions and complete the following:

	#1	**#2**	**#3**
pH of buffer			
pH using NBC instrument			
pH registered by facility instrument			
Expiration date of buffer			

If discrepancy was observed, a post inspection calibration check must be performed at Pretreatment lab on the same day as the inspection and the following must be completed:

a) NBC Instrument pH in buffer 4.0: _____
b) NBC Instrument pH in buffer 7.0: _____
c) NBC Instrument pH in buffer 10.0: _____

(f) Is the facility required to maintain a logbook? Yes No

If yes, is the logbook being maintained? Yes No

Does the logbook properly document the following?

(i) Batch discharges? Yes No N/A

(ii) Chemicals used for pretreatment system? Yes No N/A

(iii) Sludge generated on a daily, weekly or monthly basis? Yes No N/A

(iv) Maintenance performed on pretreatment system? Yes No N/A

(v) Visual inspecting data for boiler room discharges? Yes No N/A

(vi) Grease interceptor inspection? Yes No N/A

(vii) Other special logbook requirements Yes No N/A

If yes, please specify _____

_____

_____

(g) Have Hazardous Waste Manifest forms been properly maintained on site? Yes No N/A

Part IV - Spill, Slug and Solvent Discharge Control

(a) Is a Spill & Slug Prevention Control Plan (SSPCP) necessary based upon the facility inspection? Yes No

(b) Has a SSPCP been submitted? Yes No N/A

(c) Has a SSPCP been approved? Yes No N/A

(d) Detail how a spill in the process and pretreatment areas would be contained.

_____

_____

_____

_____

_____

_____

(e) Detail how a spill in the chemical storage area(s) would be contained: (Be sure to check both inside and outside storage areas, outside solvent holding tanks, etc.). _____

_____

_____

_____

(f) Are spill control measures physically in place as stated in SSPCP? Yes No N/A

* Check for open drains or other direct sewer access points.

(g) Is spill control in the boiler room satisfactory? Yes No N/A
If no, what will be required to ensure proper containment in the boiler room.

_____
_____
_____
_____

(h) Based upon the facility inspection and observations noted in d, e, f, and g above, is the existing SSPCP accurate and sufficient? Yes No N/A
If no, why? _____
_____
_____
_____

(i) Is submission of a Toxic Organic/Solvent Management Plan (TO/SMP) necessary? Yes No

(j) Has TO/SMP been submitted? Yes No N/A

(k) Has TO/SMP been approved? Yes No N/A

(l) Is there proper containment of solvents as stated in the TO/SMP? Yes No N/A

(m) Is the existing TO/SMP accurate and sufficient? Yes No N/A
_____
_____
_____

Part V - Process Flow Measurement

(a) How many flow meters are used to measure process wastewater discharges?
_____

(b) Complete the following table for each process

Location	Process Operation Monitored	Readings	Units
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

(c) Are these flow meter readings an accurate measurement of process flows? Yes No N/A

(d) If not, list user's estimate of the percent of total flow used for process water.
_____%

(e) Based upon_____, for the period from _____ to _____, the average daily process flow is _____GPD.

(f) Based upon daily flow calculation, is user properly classified for permit fee billing purposes? Yes No N/A

Part VI - Sampling Procedures

(a) Where should representative samples be taken for NBC and self-monitoring?

_____

(b) Are samples taken here presently? Yes No
If no, why not? _____
_____
_____
_____

(c) Are non-contact cooling water or other dilution streams discharged upstream of the sampling location? Yes No

* Check degreaser cooling water and steam condensate discharge lines.

(d) Must the combined wastestream formula be used to determine compliance with EPA categorical pretreatment standards? (e.g. Does wastewater discharge through more than one (1) location?) Yes No

(e) Does the firm conduct its own sample collection? Yes No
If not, specify: _____

(f) Is method of sample collection acceptable? Yes No
If no, why not? _____
_____
_____
_____

(g) If firm is a metalfinisher, does cyanide sampling satisfy EPA requirements? Yes No N/A
If no, what must be changed? _____
_____
_____
_____

(h) Are sample collection procedures adequate?

(i) Samples refrigerated after collection? Yes No N/A

(ii) Proper preservation techniques used? Yes No N/A

(iii) How long are samples held before delivery to the laboratory for analysis?

_____

_____

_____

PART VII - LABORATORY ANALYSIS

(a) Is a commercial laboratory used? Yes No

If so, which lab? _____

(b) Is commercial lab state certified? Yes No N/A

(c) For in-house analysis:

(i) Are duplicate samples analyzed? Yes No N/A

(ii) Are spiked samples used? Yes No N/A

(iii) Are equipment and instruments calibrated and maintained? Yes No N/A

(iv) Is there a quality assurance plan in effect? Yes No N/A

(v) Is in-house lab state certified? Yes No N/A

(vi) If yes, request and attach copy of in-house lab certification and approved parameters.

Part VIII - User Education

(a) Educate users about each of the following:

Significant Non-Compliance (SNC) Criteria: Yes No
NBC Mission Statement: Yes No
Purpose and Types of NBC Inspections: Yes No
Monitoring and Reporting Requirements/Procedures: Yes No
Comments: _____

_____

_____

Engineers Comments: _____

What will be required of firm? _____

NBC INDUSTRIAL USER INSPECTION CHECKLIST

NARRAGANSETT BAY COMMISSION

Inspection Checklist
For Industrial Users

Company Name: _____Tech./Eng.: _____
Person(s) Met With: _____Date:_____
Company Classification: _____

Part I – Requirements/Progress Since Last Inspection

(a) What was required of the firm since last inspection? _____
_____
_____

(b) Has required work been completed? __Yes __No
If no, when will it be completed? _____
_____

Part II –Pretreatment Equipment and Process Operations

(a) List areas of the facility that were inspected:
__ Process Operations
__ Pretreatment Operations
__ Other: _____

(b) Have changes been without NBC notification and approval __Yes __No
If yes, detail changes._____
_____
_____

Part III – Maintenance and Record Keeping

(a) Is pH recording required? __Yes __No
(b) Are facility pH probes in calibration at the time of the inspection?
__Yes __No __N/A

pH readings: NBC _____s.u. Company _____s.u

* If discrepancy is greater than 0.5 s.u., and NBC instrument is verified to be in calibration, deficiency should be noted.

(c) How often are pH probes cleaned and calibrated? _____

(d) Is the facility required to maintain a logbook? __Yes __No
If yes, is the logbook being maintained? __Yes __No __N/A
If no, please specify_____
_____
_____

Part IV – Spill, Slug, and Solvent Discharge Control

(a) Does the facility have a Spill & Slug Prevention Control Plan (SSPCP)?
__Yes __No __N/A

(b) Has a SSPCP been approved? __Yes __No __N/A

(c) Are spill control measures physically in place as stated in SSPCP?
__Yes __No __N/A

If no, Explain_____
_____

* Check for open drains or other direct sewer access points.

(d) Does the facility have a Toxic Organic/Solvent Management Plan (TO/SMP)?
__Yes __No __N/A

(e) Has TO/SMP been submitted? __Yes __No __N/A

(f) Has TO/SMP been approved? __Yes __No __ N/A

(g) Is the existing TO/SMP accurate and sufficient? __Yes __No __ N/A

If no, Explain_____
_____

Part V - Process Flow Measurement:

(a) How many flow meters are used to measure process wastewater discharges?
____

(b) Complete the following table for each process

Location	Process Operation Monitored	Readings	Units
_____	_____	_____	___
_____	_____	_____	___
_____	_____	_____	___

Part VI – Comments/Requirements:

Engineers Comments: _____
_____
_____
_____

What will be required of the firm? _____
_____
_____
_____

If this is an industrial vacation shutdown inspection, please provide a copy of the NBC notice detailing the proper disposal methods that should be used during the annual facility vacation shutdown.

Is the facility shutting down for vacation? __Yes __No __N/A

If yes, provide dates _____

NBC DENTAL FACILITY INSPECTION CHECKLIST

NARRAGANSETT BAY COMMISSION

Inspection Checklist
For Dental Facilities

Company Name: _____
Facility Address: _____
Inspection Date: _____ **NBC Inspector(s):** _____
Person(s) met with: _____

Part I – Facility Information

(1) Company Owner: _____
(2) Contact Person: _____
(3) Phone Number: _____
(4) Hours of Operation: _____
(5) Type of Dental Facility: _____
(6) Make/Model of Amalgam Separator: _____

Part II - Requirements/Progress Since Last Inspection

(1) What was required of the firm since the last inspection? _____
_____
_____
_____

(2) Has required work been completed? Yes No
If no, when will it be completed? _____
_____
_____
_____

(3) Have all required reports (BMP Certification, SMCRs) been submitted on time?
Yes No
If no, discuss the ramifications of late submittals and SNC with the user _____
_____
_____

(4) Has the firm been in compliance for the past 12 month period? Yes No
If no, detail the compliance issues and discuss with the user. _____
_____
_____

Part III – Amalgam Separator Maintenance/Installation Information

(1) Has the amalgam separator been installed according to NBC approved plans? * Yes No

If no, what needs to be corrected? _____

_____

_____

* Compare plans with existing system.

(2) Have changes been made without NBC notification and approval? Yes No

If yes, detail changes. _____

_____

_____

(3) Unit accessible? Yes No

(4) Solids container was present and operational? Yes No

(5) Level of sediment in solids collection container: _____

(6) Date solids container was last replaced/emptied: _____

(7) Sample port was properly installed? Yes No

(8) Unit has been properly maintained? Yes No

(9) How is waste amalgam disposed of? _____

_____

(10) Type of vacuum pumps installed: _____
Verify that vacuum pump is equipped with a filter.

(11) Number of sinks discharging to the separator: _____
Verify that all sinks discharging to the separator are properly designated for equipment washing only.

(12) Are chair side traps present on all dental chairs? Yes No
Verify that chair side traps are being inspected daily and cleaned or replaced as necessary.

(13) Type of line cleaner used: _____

(14) Is elemental mercury stored onsite? If yes, how is it stored and disposed of? _____

_____

Part IV – X-Ray Processor System Information

(1) Is x-ray processing performed at this facility? Yes No

(2) Are there discharges to the sewer from x-ray processing operations? Yes No
If yes, detail discharges. _____

_____

(3) Is there a silver recovery unit in place? Yes No

(4) Has silver recovery unit been installed according to NBC approved plans?* Yes No
If no, what needs to be corrected? _____

_____

*Compare plans with existing system.

(5) Sample port was properly installed? Yes No

(6) Unit has been properly maintained? Yes No

Part V – Record Keeping

(1) Is the facility required to maintain an amalgam separator logbook? Yes No

(2) Does the amalgam separator logbook properly document the following?

a. The date of each separator inspection and service activity? Yes No

b. The location of each trap and separator being serviced? Yes No

c. All routine and non routine activities conducted (i.e. cleaning, maintenance, filter replacement)? Yes No

d. Signature of person conducting activity? Yes No

(3) Is the facility required to maintain a x-ray processor system logbook? Yes No

(4) Does the x-ray processor system logbook properly document the following?

a. Amount of chemicals used (i.e. fixer, developer)? Yes No N/A

b. Completed manifest forms for hazardous materials? Yes No N/A

c. A listing of all batch discharges including the date of the discharge and a description of the tank from which the discharge occurred? Yes No N/A

d. Maintenance performed on the pretreatment system? Yes No N/A

Part VI - User Education

(1) Educate users about each of the following:

NBC Dental BMP Program:	Yes	No
Permit/Logbook Requirements:	Yes	No
Monitoring and Reporting Requirements/Procedures:	Yes	No

Comments: _____

What will be required of firm? _____

NBC FOOD PREPARATION ESTABLISHMENTS INSPECTION CHECKLIST

NARRAGANSETT BAY COMMISSION

Inspection Checklist
For Food Preparation Establishments

Inspection Date: _____

Company Name: _____

Facility Address: _____

Technician/Engineer: _____

Person(s) met with: _____

Part I – Facility Information

(1) Company Owner**:** _____
(2) Contact Person: _____
(3) Type of GRU: _____
(4) Brand of GRU: _____
(5) Size of GRU: _____
(6) Type of food served: _____
(7) Hours of Operation: _____
(8) Seating Capacity: _____
(9) Based upon seating capacity, is user properly classified for permit fee billing purposes? Yes No
(10) Menu on file? Yes No
(11) Drive through window? Yes No

Part II - Requirements/Progress Since Last Inspection

(1) What was required of the firm since the last inspection? _____

(2) Has required work been completed? Yes No N/A
If no, when will it be completed? _____

Part III – GRU Maintenance/Installation Information

(1) Has grease removal system been installed according to NBC approved plans? *
Yes No N/A

If no, what needs to be corrected? _____

_____

* Compare plans with existing system.

(2) Have changes been made without NBC notification and approval? (kitchen fixtures, menu, grease removal unit, etc.) Yes No N/A

If yes, detail changes. _____

_____

(3) Unit accessible? Yes No N/A

(4) Power supplied to GRU? Yes No N/A

(5) GRU solids basket was present and operational? Yes No N/A

(6) Solids basket had been emptied? Yes No N/A

(7) GRU wiper blades were fully operational? Yes No N/A

(8) GRU trough was clean and operational? Yes No N/A

(9) GRU timer was fully operational? Yes No N/A

(10) GRU installed in accordance with NBC requirements? Yes No N/A

(11) Sample port was properly installed? Yes No N/A

(12) Grease container present? Yes No N/A

(13) Unit has been properly cleaned? Yes No N/A

(14) How is waste grease disposed of? _____

_____

Part IV – Record Keeping

(1) Is the facility required to maintain a logbook? Yes No N/A

If yes, logbook is required to be maintained Daily Weekly Monthly
Is the logbook being maintained at the required frequency? Yes No

(2) Does the logbook properly document the following?

a. Cleaning and emptying of solids basket? Yes No N/A

b. Cleaning of wiper blades? Yes No N/A

c. Cleaning of trough? Yes No N/A

d. Estimated amount of grease removed? Yes No N/A

e. Wet vacuuming of the GRU? Yes No N/A

f. Thickness of the grease layer (passive)? Yes No N/A

g. Mandatory monthly cleanings incl. amount of grease removed, date, time (passive)? Yes No N/A

h. Maintenance performed? Yes No N/A

i. Physical receipts for each pump-out retained? Yes No N/A

Part V - User Education

(1) Educate users about each of the following:

NBC Grease Removal Program: Yes No N/A
Permit/Logbook Requirements: Yes No N/A
Monitoring and Reporting Requirements/Procedures: Yes No N/A

Comments: _____

What will be required of firm? _____

NBC SEPTAGE TRUCK INSPECTION CHECKLIST

Lincoln Septage Facility
Septage Truck Inspection Checklist

Inspector : _____
Inspection Date: _____
Septage Hauler: _____
Vehicle Inspected: _____
Drivers Name: _____

Vehicle Inspection

Registration OK?	☐ Yes ☐ No – Call State Police
Insurance Card Ok?	☐ Yes ☐ No
NBC Volume Sticker In Place	☐ Yes ☐ No – Issued NOV
NBC Permitted User Sticker in Place	☐ Yes ☐ No – Issued NOV
NBC Computer Chip In Place	☐ Yes ☐ No – Issued NOV

Paperwork Review

Manifest Properly Completed ☐ Yes ☐ No – Issued Nov and Refuse Load.

If No, List Problems: _____
_____
_____

Waste Discharge Inspection

pH of Waste: _____ **s.u.**

Was grease observed in Sample? ☐ Yes ☐ No - **If yes, Refuse Load and Collect Sample for Evidence.**

Was grease observed in lakeside? ☐ Yes ☐ No - **If yes, Stop Load Discharge and Collect Sample.**

Educational Procedure Review

Manifest Paperwork Completion procedure was reviewed with driver	☐ Yes ☐ No
Grease Policy reviewed with driver	☐ Yes ☐ No

Other Comments: _____
_____
_____
_____

NBC SAMPLING, REPORTING, AND CHAIN OF CUSTODY FORMS

The Narragansett Bay Commission
Pretreatment Program
2 Ernest Street
Providence, RI 02905

Field's Point District
Self-Monitoring Compliance Report

Company Name: _____
Address of Premises Sampled: _____
Date(s) Sampled: _____
Permit Sampling Month Satisfied: _____
Samples Taken By: _____ _____
(Name) (Company)
Samples Analyzed By: _____
(Company)
Type of Sample: Grab_____ Composite_____
If Grab Sample, what time(s) was sample taken? _____
If Composite Sample, describe how composite was taken _____
_____
Where was sample taken? _____
_____

Water Meter Readings (List readings for all meters discharging to sampling location)

	#1	**#2**	**#3**
Closing Reading:	_____	_____	_____
Opening Reading:	_____	_____	_____
Total:	_____	_____	_____
Units (Circle One):	Cubic Feet/Gallons Other (Specify):____	Cubic Feet/Gallons Other (Specify):____	Cubic Feet/Gallons Other (Specify):____

Were any batch discharges sampled? _____ Yes _____ No
What tank was sample taken from?_____
Indicate volume of batch discharge:_____

Is this analysis a resampling required to demonstrate compliance with a previous violation?
_____ Yes _____ No

What is the sample identification number(s) or the analytical report identification number(s) indicated on the analytical report(s) being submitted?_____
_____

Is this analysis in full compliance with NBC standards listed on the back of this form?
_____ Yes _____ No

If your firm was in violation, what was the cause of the violation? _____
_____

What steps will be taken by your firm to ensure full compliance with NBC standards on a continuous basis?_____
_____

When will these steps be implemented?_____

If your firm is not in full compliance with the NBC standards, U.S. EPA Regulations, 40 CFR 403.12g (2) requires that you notify the NBC at 461-8848 within 24 hours of becoming aware of the violation and that your firm resample and analyze for the parameter(s) in violation of the NBC standards. The results after resampling must be submitted to the NBC no later than thirty (30) days following the date that you became aware of the initial violation of the standards.

Please attach the laboratory analysis sheet. Indicate on this sheet the method of analysis used for each parameter listed. Sampling and analysis shall be performed in accordance with the techniques prescribed by federal regulations (40 CFR, Part 136).

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. In lieu of monitoring for Total Toxic Organics, I hereby certify that based on my inquiry of the person or persons directly responsible for managing compliance with the permit limitations for Total Toxic Organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing of the last discharge monitoring report. I further certify that this facility is implementing the toxic organic/solvent management plan submitted to the NBC.

_____ _____

Signature of Authorized Company Representative Date

Report will be returned if form is not properly completed and signed.

NBC Field's Point Effluent Discharge Limitations*

Parameter	Maximum Daily Concentration Limit (mg/l)	Monthly Average Concentration (mg/l)
Cadmium (Total)	0.11	0.07
Chromium (Total)	2.77	1.71
Copper (Total)	1.20	1.20
Cyanide (Total)	0.58	0.58
Lead (Total)	0.60	0.40
Mercury (Total)	0.005	0.005
Nickel (Total)	1.62	1.62
Silver (Total)	0.43	0.24
Zinc (Total)	2.61	1.48

Parameter	Limitation (Maximum)
Total Toxic Organics (TTO)	2.13
Biochemical Oxygen Demand (BOD)	300.00 **
Total Suspended Solids (TSS)	300.00 **
Total Oil and Grease (fats, oils and grease)	125.00
Oil and Grease (mineral origin)	25.00
Oil and Grease (vegetable origin)	100.00
pH range (at all times)	5.0 - 11.0 s.u.

* All parameters in mg/l unless otherwise specified.

** Exceeding this discharge limitation may be permitted but would be subject to a surcharge in accordance with rates approved by the Public Utilities Commission and in accordance with R.I.G.L. §39-1-1 et seq.

The Narragansett Bay Commission
Pretreatment Program
2 Ernest Street
Providence, RI 02905

Bucklin Point District
Self-Monitoring Compliance Report

Company Name: _____
Address of Premises Sampled: _____
Date(s) Sampled: _____
Permit Sampling Month Satisfied: _____
Samples Taken By: _____ (Name) _____ (Company)
Samples Analyzed By: _____ (Company)
Type of Sample: Grab_____ Composite_____
If Grab Sample, what time(s) was sample taken? _____
If Composite Sample, describe how composite was taken _____
_____
Where was sample taken? _____
_____

Water Meter Readings (List readings for all meters discharging to sampling location)

	#1	**#2**	**#3**
Closing Reading:	_____	_____	_____
Opening Reading:	_____	_____	_____
Total:	_____	_____	_____
Units (Circle One):	Cubic Feet/Gallons Other (Specify):____	Cubic Feet/Gallons Other (Specify):____	Cubic Feet/Gallons Other (Specify):____

Were any batch discharges sampled? _____ Yes _____ No
What tank was sample taken from?_____
Indicate volume of batch discharge:_____

Is this analysis a resampling required to demonstrate compliance with a previous violation?
_____ Yes _____ No

What is the sample identification number(s) or the analytical report identification number(s) indicated on the analytical report(s) being submitted?_____
_____

Is this analysis in full compliance with NBC standards listed on the back of this form?
_____ Yes _____ No

If your firm was in violation, what was the cause of the violation? _____
_____

What steps will be taken by your firm to ensure full compliance with NBC standards on a continuous basis?_____
_____

When will these steps be implemented?_____

If your firm is not in full compliance with the NBC standards, U.S. EPA Regulations, 40 CFR 403.12g (2) requires that you notify the NBC at 461-8848 within 24 hours of becoming aware of the violation and that your firm resample and analyze for the parameter(s) in violation of the NBC standards. The results after resampling must be submitted to the NBC no later than thirty (30) days following the date that you became aware of the initial violation of the standards.

Please attach the laboratory analysis sheet. Indicate on this sheet the method of analysis used for each parameter listed. Sampling and analysis shall be performed in accordance with the techniques prescribed by federal regulations (40 CFR, Part 136).

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. In lieu of monitoring for Total Toxic Organics, I hereby certify that based on my inquiry of the person or persons directly responsible for managing compliance with the permit limitations for Total Toxic Organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing of the last discharge monitoring report. I further certify that this facility is implementing the toxic organic/solvent management plan submitted to the NBC.

_____ _____

Signature of Authorized Company Representative Date

Report will be returned if form is not properly completed and signed.

NBC Bucklin Point Effluent Discharge Limitations*

Parameter	Maximum Daily Concentration Limit (mg/l)	Monthly Average Concentration (mg/l)
Arsenic (Total)	0.20	0.10
Cadmium (Total)	0.11	0.07
Chromium (Total)	2.77	1.63
Copper (Total)	1.20	1.20
Lead (Total)	0.69	0.29
Mercury (Total)	0.06	0.03
Nickel (Total)	1.62	1.62
Selenium (Total)	0.40	0.20
Silver (Total)	0.40	0.20
Tin (Total)	4.00	2.00
Zinc (Total)	1.67	1.39
Cyanide (Total)	0.50	0.50

Parameter	Limitation (Maximum)
Total Toxic Organics (TTO)	2.13
Biochemical Oxygen Demand (BOD)	300.00 **
Total Suspended Solids (TSS)	300.00 **
Total Oil and Grease (fats, oils and grease)	125.00
Oil and Grease (mineral origin)	25.00
Oil and Grease (vegetable origin)	100.00
pH range (at all times)	5.0 - 11.0 s.u.

* All parameters in mg/l unless otherwise specified.

** Exceeding this discharge limitation may be permitted but would be subject to a surcharge in accordance with rates approved by the Public Utilities Commission and in accordance with R.I.G.L. §39-1-1 et seq.

TWENTY-FOUR (24) HOUR
VIOLATION NOTIFICATION FAX FORM

Fax To: Narragansett Bay Commission
(401) 461-0170

Company Name: _____

Facility Address: _____

_____

This is to notify the Narragansett Bay Commission (NBC) that the above-referenced facility violated the NBC discharge limitations for the following parameter(s):

Sampling Date of Violation	**Parameter**	**Concentration**

I certify that I have just become aware of the above-referenced violation(s) within the past twenty-four (24) hours and will immediately resample this wastestream for the parameter(s) exceeding the NBC discharge limitations.* I certify under penalty of law that this document and all attachments were properly prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations.

Initial sampling and all resampling results must be submitted within 30 days of the sample date. Please note, resampling must continue until four consecutive samples show compliance with NBC discharge limitations.

_____
Signature of Authorized Agent

* Resampling is not required for exceeding BOD or TSS limits.

CONTINUOUS DISCHARGE
PH MONITORING REPORT
MONTH OF: _____ 20 ___

Company Name: _____
Address: _____
_____
_____

Return to: **Narragansett Bay Commission**
Pretreatment Section
2 Ernest Street
Providence, RI 02905

Date	MAXIMUM pH	MINIMUM pH	AVERAGE pH (VISUAL)	VOLUME/WATER METER READING IF REQUIRED*	COMMENTS
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					

I certify under penalty of law that this document and all attachments were properly prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. I certify the above data has been reported directly from the recording chart of the final pH recorder and is reported to an accuracy of 0.1 standard units.

_____ _____ _____
Signature Date

_____ _____ _____
Name (Print) Title

*INDICATE IF GALLONS OR CUBIC FEET

BATCH DISCHARGE
Ph MONITORING REPORT
MONTH OF: _____ 20 ___

Company Name: _____
Address: _____
_____
_____

Return to: **Narragansett Bay Commission**
Pretreatment Section
2 Ernest Street
Providence, RI 02905

	Batch Discharge I		Batch Discharge II		Batch Discharge III		Batch Discharge IV		
Date	Final pH	Vol.	Final pH	Vol.	Final pH	Vol.	Final pH	Vol.	COMMENTS
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
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19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									

Please indicate the method used to measure pH: _____

I certify under penalty of law that this document and all attachments were properly prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations.

_____ _____ _____
Signature Date

_____ _____ _____
Name (Print) Title

Zero Process Wastewater Discharge Certification

For the Month of _____, 20___

Company Name: _____

Address: _____
_____
_____

RETURN TO:
Narragansett Bay Commission
Pretreatment Program
2 Ernest Street
Providence, RI 02905

I, _____, as authorized representative of

_____, do hereby decree that no process wastewater was discharged into

the Narragansett Bay Commission sewer system for the past six (6) month period.

Date of Meter Readings: _____

Meter Number	Water Meter Readings	Units (cf, gal.)
Meter #1	_____	_____
Meter #2	_____	_____
Meter #3	_____	_____

I certify under penalty of law that this document and all attachments were properly prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations.

_____ _____
Authorized Representative Signature Date

Attachment A

Zero Process Wastewater Discharge Certification

For the Six (6) Month Period from

_____ to _____

Company Name: _____

Address: _____
_____
_____

RETURN TO:
Narragansett Bay Commission
Pretreatment Program
2 Ernest Street
Providence, RI 02905-5502

I, _____, as authorized representative of

_____, do hereby decree that no process wastewater was discharged into

the Narragansett Bay Commission sewer system for the past six (6) month period.

Date of Meter Readings: _____

Meter Number	Water Meter Readings	Units (cf, gal.)
Meter #1	_____	_____
Meter #2	_____	_____
Meter #3	_____	_____

I certify under penalty of law that this document and all attachments were properly prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for known violations.

_____ _____
Authorized Representative Signature Date

Attachment A

Best Management Practice Certification

For the 12-month period from _____, 20___ to _____, 20___

Company Name: _____

Address: _____
_____
_____

RETURN TO:
Narragansett Bay Commission
Pretreatment Program
2 Ernest Street
Providence, RI 02905-5502

I, _____, as authorized representative of _____, do hereby decree that the Narragansett Bay Commission Best Management Practices for the Management of Waste Dental Amalgam have been fully complied with for the past twelve month period.

I certify under penalty of law that this document and all attachments were properly prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for known violations.

_____ _____
Authorized Representative Signature Date

NARRAGANSETT BAY COMMISSION SAMPLE SUBMISSION SHEET

SOURCE: _____ EMDA# _____ DATE: _____
STREET: _____ SAMPLER # _____ TIME: _____
CITY/STATE: _____ COLLECTED BY: _____
SAMPLE LOCATION: _____ FACILITY CONTACT : _____
INSTRUCTIONS: _____

PARAMETERS FOR ANALYSIS*

___Cd_____	___Ag_____	___BOD (5 day)_____
___Cr (Total) _____	___Zn _____	___TSS_____
___Cr (Hex.) _____	___Hg _____	___FOG_____
___Cu _____	___CN (Total) _____	___TPH_____
___Pb _____	___VOC_____	___(_____)_____
___Ni _____	___Ext_____	___(_____)_____

*All analyses done according to 40 CFR part 136. Results reported in mg/l unless specified otherwise.

FIELD AND PRESERVATION DATA

Sample Information					Preservation Chemicals Added								
Sample No.	Sample Time Start/Stop	Analyze For	Sample Type (G) or (C)	Initial pH	Nitric Acid (ml)	Hydro-Chloric Acid (ml)	Res. Cl (+) or (-)	Lead Acetate (+) or (-)	NaOH (ml)	Ascorbic Acid (g)	Other	Final pH	Sealed By
A													
B													
C													
D													
E													
F													
G													
H													
I													
J													
K													
L													
M													

Did user accept a split or replicate sample?

Sample	A	B	C	D	E	F	G	H	I	J	K	L	M	Signature
Yes														
No														

Meter Readings	Meter #1	Meter #2	Meter #3	Meter #4
Close				
Open				
Total	(c.f., gals)	(c.f., gals)	(c.f., gals)	(c.f., gals)

CHAIN OF CUSTODY

Samples transferred by: _____
Samples received by: _____
DATE: _____ TIME: _____
Samples transferred by: _____
Samples received by: _____
DATE: _____ TIME: _____
Samples transferred by: _____
Samples received by: _____
DATE: _____ TIME: _____

REMARKS _____

RESULTS REPORTED BY: _____

RESULTS REPORTED ON: _____

NARRAGANSETT BAY COMMISSION

Source _____

Sample ID _____

Initials of Collectors: _____

Place of Collection: _____

Date Sampled _____ Time Sampled _____

Analysis Requested _____

Rec'd From _____ Date _____

Rec'd By _____ Time _____

NARRAGANSETT BAY COMMISSION

Source _____

Sample ID _____

Initials of Collectors: _____

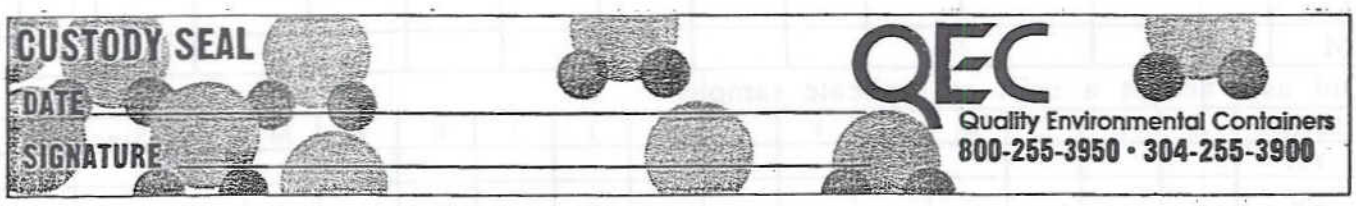
Place of Collection: _____

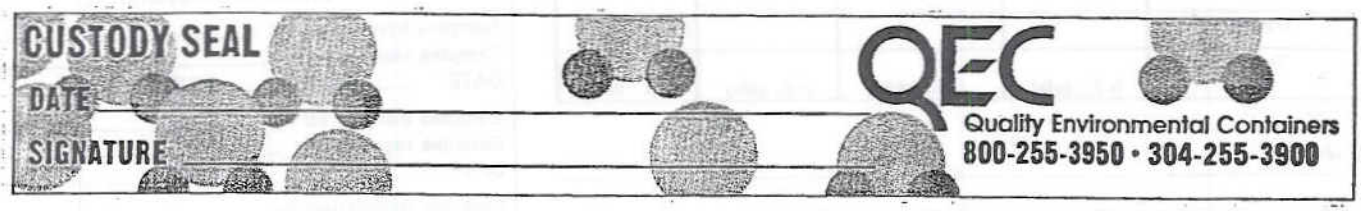
Date Sampled _____ Time Sampled _____

Analysis Requested _____

Rec'd From _____ Date _____

Rec'd By _____ Time _____





DEFINITION OF AN AUTHORIZED AGENT

An authorized agent or authorized company representative is a person who is a principal executive officer or other corporate officer with signatory powers as per the company's by-laws or per a vote of the directors if the company is a corporation; a general partner or proprietor if the company is a partnership or sole proprietorship respectively; or a duly authorized representative, the individual designated on the permit application or permit cover page, if such representative is responsible for the overall operation of the facility and has the authority to sign contracts, permits, permit applications, monitoring results and other documents in the company's name and otherwise bind the company. Please complete the Designation Of Authorized Agent section below if you wish to designate additional authorized agents. The Narragansett Bay Commission will not accept documents signed by persons other than the company's authorized agent(s) or authorized representative(s).

DESIGNATION OF AUTHORIZED AGENT

I, _____ certify that I am the _____ of _____ and that _____ is authorized to make submittals to the Narragansett Bay Commission on behalf of _____ and that said submittals are duly signed for and in behalf of said corporation by authority of its governing body, and are within the scope of its corporate powers.

_____ _____

Corporate Seal **Signature of Corporation Official**

_____

Date

ATTACHMENT VOLUME I

SECTION 4

SAMPLE NBC ENFORCEMENT LETTERS, NOTICES, AND ORDERS

NOTICE OF VIOLATION
FAILURE TO MEET STANDARDS (USER SAMPLE)

December 18, 2015

Mr. Joseph Accaoui
Tanury Industries
6 New England Way
Lincoln, RI 02865

Dear Mr. Accaoui:

The sample results for November which were received by this office on December 17, 2015 indicate that you are in violation of discharge limitations for the following:

Sample Location # 1

Sample Date	Chemical	Sample Type	Sample Result	Standard Type	Max. Limit	Avg. Limit
11/19/2015	CYANIDE	Composite	16.1	EPA	1.20	0.65
11/19/2015	CYANIDE	Composite	16.1	LOCAL	0.50	0.50
11/19/2015	COPPER	Composite	3.39	EPA	3.38	2.07
11/19/2015	COPPER	Composite	3.39	LOCAL	1.20	1.20

As a condition of your Wastewater Discharge Permit, these discharge limitations must be met at all times. Failure to meet the standards may result in the Commission initiating enforcement action against your firm and the publication of your company's name in the Commission's annual list of firms in Significant Non-Compliance which is published each year in the PROVIDENCE JOURNAL. Based upon these results, you must immediately resample your process discharge for the parameter(s) in violation noted above. You must continue this weekly sampling until four (4) consecutive weekly reports indicate full compliance with NBC discharge limitations. Results must be submitted for NBC review within three (3) weeks from the sampling date.

Please note that the NBC Office of Pollution Prevention is available to provide free technical assistance to your firm. For information regarding how the Pollution Prevention Program can help your firm achieve and maintain compliance, contact Mr. James McCaughey at 461-8848. If you should have any questions regarding this letter, contact me at 461-8848.

Sincerely,

Abigail Bernier
Principal Pretreatment Eng.

NOTICE OF VIOLATION
FAILURE TO MEET STANDARDS (NBC SAMPLE)

May 29, 2015

Mr. Frank DeFruscio
DFI-EP, LLC
20 Starr Street
Johnston, RI 02919-6246

Certified Mail
Return Receipt Requested

91 7108 2133 3937 9740 4537

Dear Mr. DeFruscio:

Enclosed please find the results of the analyses performed by the Narragansett Bay Commission (NBC) Laboratory on a sample collected by NBC personnel at your facility on May 6, 2015. These results indicate that you are in violation of NBC discharge limitations for the following:

Sample Location #1

Sample Date	Chemical	Sample Type	Sample Result	Standard Type	Max. Limit	Avg. Limit
05/06/15	CADMIUM	Composite	1.82	EPA	0.69	0.26
05/06/15	CADMIUM	Composite	1.82	LOCAL	0.11	0.07
05/06/15	NICKEL	Composite	3.82	LOCAL	1.62	1.62
05/06/15	CYANIDE	Composite	73.2	EPA	1.20	0.65
05/06/15	CYANIDE	Composite	73.2	LOCAL	0.58	0.58
05/06/15	COPPER	Composite	2.17	LOCAL	1.20	1.20

As a condition of your Wastewater Discharge Permit, these discharge limitations must be met at all times. Failure to meet the standards may result in the Commission initiating enforcement action against your firm and the publication of your company's name in the Commission's annual list of firms in Significant Non-Compliance which is published each year in the PROVIDENCE JOURNAL. Based upon these results, you must immediately resample your process discharge for the parameter(s) in violation noted above. You must continue this weekly sampling until four (4) consecutive weekly reports indicate full compliance with NBC discharge limitations. Results must be submitted for NBC review within three (3) weeks from the sampling date.

In addition, you must submit a report by June 15, 2015 detailing the cause of the high concentrations of metals and cyanide and a proposal to ensure that wastewater from your facility is in compliance at all times.

The Narragansett Bay Commission

WASTEWATER SAMPLE ANALYSIS

Company Name:	DFI-EP, LLC
Company Address:	50 Waterman Avenue North Providence, RI 02911
Location Name:	Sample Location # 1
Type of Sample:	Composite
Date of Sample:	May 06, 2015

Parameter	Concentration (mg/l)
ARSENIC	0.013
CADMIUM	1.82
CHROMIUM	0.075
COPPER	2.17
CYANIDE	73.2
LEAD	0.075
NICKEL	3.82
SILVER	0.086
Seasonal Ammonia	1.92
ZINC	1.76

Review By:

Nathan P. Daggett
Pretreatment Engineer

NOTICE OF VIOLATION
AVERAGE LIMIT VIOLATION

The Narragansett Bay Commission

December 01, 2015

Mr. Norman Bernson
Vogue Industries LP
PO Box 200
Central Falls, RI 02863

Dear Mr. Bernson:

The results of sampling conducted at your firm for the month of October-2015 show that you are in violation of average discharge limitations for the following:

Sample Location # 1

Parameter	# of Analyses	Standard Type	Avg. Conc.	Avg. Limit	Type
ZINC	1	LOCAL	1.41	1.39	NBC MONTHLY

As a condition of your Wastewater Discharge Permit and as required by U.S. EPA regulations, monthly average discharge limitations must be met at all times. Failure to meet the monthly average standards may result in the NBC initiating enforcement action against your firm and the possible publication of your company"s name in the NBC annual list of firms in Significant Non-Compliance which is published each year in the PROVIDENCE JOURNAL. Therefore it is important to always be in compliance with the monthly average discharge concentration, in addition to the maximum discharge limit. It is strongly recommended that you sample early each required sampling month to allow adequate time to resample in that month, should the initial result indicate that the monthly average limit was exceeded.

Please note that the NBC Office of Pollution Prevention is available to provide free technical assistance to your firm. For information regarding how the Pollution Prevention Program can help your firm achieve and maintain compliance, contact Mr. James McCaughey at 461-8848 Ext. 352. If you should have any questions regarding this letter, contact me at 461-8848 Ext. 490.

Sincerely,

Ian E. Jardin
Pretreatment Engineer

Notice of Violation
Failure to Meet Standards (Manhole)

June 1, 2015

Mr. George Tanury
G. Tanury Plating Company
100 Railroad Avenue
Johnston, RI 02919

Dear Mr. Tanury:

The Narragansett Bay Commission (NBC) regularly conducts surveillance monitoring of its users. This monitoring is done by installing automatic samplers in manholes located up and down stream of a company, effectively isolating that company. The samplers are programmed to collect composite samples of the wastewater discharging through the manhole.

On April 29 through April 30, 2015 the NBC conducted surveillance manhole sampling up and down stream of your facility. The analytical results from the down stream manhole indicate noncompliance with the following parameters:

Parameter	Sampling Type	Results (mg/L)	Daily Maximum (mg/L)	Average (mg/L)
Copper	Composite	1.23	1.20	1.20

It has been determined that your firm is the source of the non-compliant wastewater since the upstream results were in compliance for these parameters. You must submit a report by June 30, 2015 detailing the cause of the high concentration of metals and a proposal to ensure that wastewater from your facility is in compliance at all times.

Please note that the NBC is available to provide free technical assistance to your firm. For information regarding how the Pollution Prevention Program can help firm achieve and maintain compliance, contact Mr. James McCaughey at 461-8848.

If you have any questions regarding this letter, please contact me at 461-8848 ext. 490.

Sincerely,

Nathan Daggett
Pretreatment Engineer

Attachment

The Narragansett Bay Commission

Manhole Sample Analysis

Company: G. Tanury Plating Company
Address: 100 Railroad Avenue
Johnston, RI 02919

Date of Sample: April 29-30, 2015
Type of Sample: Composite

Parameter	Upstream Manhole Concentration (mg/L)	Downstream Manhole Concentration (mg/L)
Cadmium	<0.015	<0.015
Chromium	<0.075	<0.075
Copper	<0.020	1.23
Lead	<0.075	<0.075
Nickel	<0.050	0.969
Silver	<0.025	<0.250
Zinc	<0.060	0.263
Cyanide	<0.0040	0.0265

Reviewed by:

Nathan J. Dean
Assistant Pretreatment Manager

Notice of Violation
Failure to Immediately Report Violation

December 30, 2015

The Narragansett Bay Commission

Mr. Doug Kasefang
Shaw's Supermarket Store #7443
P.O. Box 20, Dept. # 72405
Boise, ID 83726

Dear Mr. Kasefang:

The Self-Monitoring Compliance report which was received by this office on December 09, 2015 indicated non-compliance with the NBC discharge limitations. EPA regulations, 40CFR. 403.12g(2), require that you notify the Narragansett Bay Commission (NBC) within 24 hours of becoming aware of this violation.

You failed to comply with this regulation since you did not notify the NBC within the 24 hour reporting period. This is not acceptable. In the future you must report any discharge violation within 24 hours by contacting me at 461-8848 or by using the attached FAX notification form.

In addition to notifying the NBC immediately regarding the violation, EPA regulations require that you repeat the sampling and analyses for the parameter(s) in violation and submit the resample results within thirty (30) days of becoming aware of the initial violation of the standards. Please note that the NBC requires that you begin weekly wastewater sampling for the parameter(s) in violation until such time that four (4) consecutive weekly sampling reports indicate full compliance with the NBC discharge limits. Failure to comply with these regulations and requirements may result in the initiation of enforcement action against your firm.

If you should have any questions regarding this matter, contact me at 461-8848 ext. 490.

Sincerely,

Brian E. Steere
Pretreatment Technician

NOTICE OF VIOLATION
NOTICE OF PH VIOLATIONS

August 14, 2015

Mr. Thomas Perkins
R. E. Sturdy Company, Inc.
928 Eddy Street
Providence, RI 02905

Dear Mr. Perkins:

I have reviewed the July pH Monitoring Report submitted on August 13, 2015. Based upon this report, your facility has exceeded the pH discharge limitation as follows:

LOW LIMIT VIOLATIONS	HIGH LIMIT VIOLATIONS
5	1

Effluent discharge to the Narragansett Bay Commission (NBC) sewer system must have a pH between the range of 5.0 - 11.0 standard units (s.u.) at all times. Discharging effluent with a pH value of less than 5.0 s.u. or higher then 11.0 s.u. is prohibited. pH effluent, that does not fall in the accepted range, may not be discharged to the NBC sewer system, even if the discharge is only for a short period of time. You must immediately take the steps necessary to prevent future violations from occurring. We will review future monitoring reports to ensure compliance with this parameter.

Please note that the NBC Office of Pollution Prevention is available to provide free technical assistance to your firm. For information regarding how the Pollution Prevention Program can help your firm achieve and maintain compliance, contact Mr. James McCaughey at 461-8848.

Please feel free to contact me at 461-8848 if you have any questions regarding this matter.

Sincerely,

Abigail Bernier
Principal Pretreatment Eng.

November 27, 2015

Mr. Ron Larivee
Murdock Webbing Co., Inc.
27 Foundry Street
Central Falls, RI 02863

Dear Mr. Larivee:

Enclosed please find the results of the analyses performed by the Narragansett Bay Commission (NBC) Laboratory on a sample collected by NBC personnel at your facility on October 21, 2015. These results indicate that your firm has exceeded NBC surcharge limitations for the following:

Sample Location # 1

Sample Date	Parameter	Sample Type	Sample Results	Surcharge Limitation
10/21/2015	TSS	COMPOSITE	634	300
10/21/2015	BOD	COMPOSITE	623.5	300

Exceeding the BOD or TSS standards of 300 ppm will be permitted but may be subject to a surcharge. The NBC does not require resampling for the BOD or TSS parameters when exceeding these surcharge limits.

You may contact me at 461-8848 if you have any questions on this matter.

Sincerely,

Kyle C. Gannon
Pretreatment Technician

The Narragansett Bay Commission

WASTEWATER SAMPLE ANALYSIS

Company Name:	Murdock Webbing Co., Inc.
Company Address:	27 Foundry Street Central Falls, RI 02863
Location Name:	Sample Location # 1
Type of Sample:	Composite
Date of Sample:	October 21, 2015

Parameter	Concentration (mg/l)
AMMONIA	1.79
BOD	623.5
CADMIUM	0.015
CHROMIUM	0.075
COPPER	0.029
LEAD	0.075
NICKEL	0.05
NO3+NO2	2.5
OIL & GREASE-T	51.7
SILVER	0.025
TKN	85.6
TSS	634
Total Nitrogen	85.6
ZINC	0.06

Review By:

Kyle C. Gannon
Pretreatment Technician

NOTICE OF VIOLATION
FAILURE TO SUBMIT COMPLIANCE REPORT

August 03, 2015

Mr. Fred D'Agostino
Eagle Laundry Inc.
411 Charles Street
Providence, RI 02904

Dear Mr. D'Agostino:

In accordance with your Wastewater Discharge Permit, it is necessary for you to submit compliance monitoring results for the month(s) of:

Sample Location # 1
June-2015

To date, the Commission has not received a copy of these analytical results. Until a certified copy of the results and a Self-Monitoring Compliance Report are received, you are in violation of the terms of your permit. Failure to submit compliance monitoring results within thirty (30) days of the due date will result in your firm being in Significant Non-Compliance with the NBC and EPA regulations and will automatically result in the publication of the name of your firm in the Providence Journal. Please note that the NBC will bill you for the cost of this public notice. In addition, the Commission may initiate enforcement action against your firm for failing to submit reports on time. Should such an enforcement action be initiated, administrative penalties of up to $25,000 per violation per day can be assessed.

Sincerely

Abigail Bernier
Principal Pretreatment Eng.

NOTICE OF VIOLATION
FAILURE TO SUBMIT PH MONITORING REPORT

The Narragansett Bay Commission

June 01, 2015

Mr. Frank A. DiFruscio
DiFruscia Industries, Inc.
20-A Starr Street
Johnston, RI 02919

Dear Mr. DiFruscio:

In accordance with your Wastewater Discharge Permit, it is necessary for you to submit pH results for the month(s) of:

Sample Location # 1
April 2015

To date, the Commission has not received a copy of the above referenced pH monitoring report(s). Until a signed copy of the above referenced pH monitoring report(s) are received, you are in violation of the terms of your permit. Failure to submit pH monitoring results within thirty (30) days of the due date will result in your firm being in Significant Non-Compliance (SNC) with the NBC and EPA regulations and will automatically result in the publication of the name of your firm in the NBC annual list of violators published in the Providence Journal. Please note that the NBC will bill you for the cost of this public notice. In addition, the Commission may initiate enforcement action against your firm for failing to submit reports on time. Should such an enforcement action be initiated, administrative penalties of up to $25,000 per violation per day can be assessed.

Sincerely,

Abigail Bernier
Principal Pretreatment Eng.

NOTICE OF VIOLATION
FAILURE TO SUBMIT CERTIFICATION OF NO DISCHARGE

July 2, 2015

Mr. Modesto Montufar
Bella's Jewelry
225 Dupont Drive
Providence, RI 02907-3138

Dear Mr. Montufar:

In accordance with your permit issued by the Narragansett Bay Commission (NBC), it is necessary for you to submit Certification of No Discharge for the month of:

May 2015

To date, the NBC has not received a copy of the above referenced certification. Until a signed copy of the above referenced certification is received, you are in violation of the terms of your permit. Failure to submit Certification of No Discharge within thirty (30) days of the due date will result in your firm being in Significant Non-Compliance (SNC) with the NBC and EPA regulations and will automatically result in the publication of the name of your firm in the NBC annual list of violators published in the Providence Journal. Please note that the NBC will bill you for the cost of this public notice. In addition, the Commission may initiate enforcement action against your firm for failing to submit reports on time. Should such an enforcement action be initiated, administrative penalties of up to $25,000 per violation per day can be assessed.

Sincerely,

Ian E. Jardin
Pretreatment Engineer

IEJ:smb

NOTICE OF VIOLATION
FAILURE TO SUBMIT BMP CERTIFICATION

May 4, 2015

Dr. David I. Konicov
David I. Konicov, DDS
189 Governor Street, Suite 201
Providence, RI 02906-3124

Dear Dr. Konicov:

In accordance with your Wastewater Discharge Permit, it is necessary for you to submit Best Management Practice (BMP) Certification for the period ending:

March 2015

To date, the Narragansett Bay Commission (NBC) has not received a copy of the above referenced certification. Until a signed copy of the above referenced certification is received, you are in violation of the terms of your permit. Failure to submit BMP Certification within thirty (30) days of the due date will result in your firm being in Significant Non-Compliance (SNC) with the NBC and EPA regulations and will automatically result in the publication of the name of your firm in the NBC annual list of violators published in the Providence Journal. Please note that the NBC will bill you for the cost of this public notice. In addition, the Commission may initiate enforcement action against your firm for failing to submit reports on time. Should such an enforcement action be initiated, administrative penalties of up to $25,000 per violation per day can be assessed.

Sincerely,

Nathan P. Daggett
Pretreatment Engineer

NPD:smb

NOTICE OF VIOLATION
FAILURE TO SATISFY NBC REQUIREMENTS

November 02, 2015

Dr. Kristopher Haggarty
CGHE Dental, LLC
1196 Smith Street
Providence, RI 02908

Dear Dr. Haggarty:

Per the requirements of letter(s) from this office, the following item was required to be completed and/or submitted by the due date indicated below:

Required Submittal	Notice	Issue Date	Due Date
Permit Application	Letter	9/11/2015	10/9/2015

You must satisfy the past due NBC requirement as detailed in the above referenced documents. Your failure to complete the aforementioned requirement within thirty (30) days from the specified due date will place your firm in Significant Non-Compliance (SNC) with Commission regulations and will automatically result in the publication of the name or your firm as a violator in the PROVIDENCE JOURNAL. Your continued failure to complete this requirement may result in the initiation of enforcement action against your firm. Please note that the Commission can assess administrative and civil penalties of up to $25,000 per violation per day should an enforcement action be initiated.

If you should have any questions regarding this matter, contact me at 461-8848 ext 490.

Sincerely,

Kyle C. Gannon
Pretreatment Technician

NOTICE OF VIOLATION
LETTER OF DEFICIENCY

The Narragansett Bay Commission

May 15, 2015

Mr. Marc Marandola
Monarch Metal Finishing, Inc.
189 Georgia Avenue
Providence, RI 02905-4516

Certified Mail
Return Receipt Requested
91 7108 2133 3937 9649 7394

RE: 189 Georgia Avenue, Providence Facility

Dear Mr. Marandola:

During the follow-up Narragansett Bay Commission (NBC) annual inspection of your firm, conducted on April 28, 2015, the following deficiencies were noted:

1. Your firm has added a soak tank to the Sampling Line Area without first submitting plans to and receiving NBC approval. This is a violation of the terms of your permit. Plans on file with the NBC were amended to document this change. Making changes to your process operations and/or pretreatment system without prior NBC approval may result in your firm incurring additional retrofit costs if the installation does not satisfy NBC requirements.

2. Your firm has not been reporting effluent pH values as accurately as required by the NBC. Effluent pH values must be reported directly from the chart to an accuracy of 0.1 standard units (s.u.). Please do not hesitate to contact this office if you have any questions regarding the NBC pH reporting requirements. NBC staff is available to provide assistance regarding this matter.

Failure to correct the above-mentioned deficiencies can result in the initiation of enforcement action against your firm. Please note that the NBC can assess administrative penalties of up to $25,000 per violation per day. In addition to aforementioned deficiencies, you must do the following:

3. It has been noted that your firm has made continuous changes to process operations since the last facility layout was submitted to the NBC on November 2, 2012. In addition, you stated that your firm would be proposing changes to the Automatic Plating Line Area shortly. Therefore, your firm must submit "as-built" plans of your facility as well as an updated tank schedule. These plans must include the proposed changes to the Automatic Plating Line Area. Enclosed please find the Process Operations and Pretreatment Systems Checklists. All the information indicated on these checklists must be shown on the plans. The plans and tank schedule must be received by June 30, 2015.

Please note that the NBC is available to provide free technical assistance to your firm. For information regarding how the Pollution Prevention Program can help your firm achieve and maintain compliance, contact Mr. James McCaughey at 461-8848, ext. 352.

If you have any questions, please contact me at 461-8848, ext. 490.

Sincerely,

Ian Jardin

Ian E. Jardin
Pretreatment Engineer

IEJ:smb

Enclosures

Monarch Metal Finishing, Inc.
PLANS OF PROCESS OPERATIONS

The information with an "X" before it must be shown on the plan or submitted before the plans of the wet process operations can be approved.

1. X All tanks, their contents and volume. Please note compartmentalized tanks must be indicated as such.

2. X Any other water using processes (i.e. rectifiers, tubbing, cooling water, etc.).

3. X Whether each tank will be batch discharged, continuously discharged, or not discharged.

4. X Where the tank discharges to (i.e. pH neutralization, cyanide destruct, A/A treatment, process operation tank, etc.).

5. X The volume and dump frequency of each batch discharge.

6. X The flow rate for continuous discharges.

7. X All floor drains, trenches, berms, sumps, pump stations, piping, valves, and the point of discharge of each tank or pipe.

Please note, process operation and pretreatment system plans must be at least 11" x 17" and cannot exceed 36" x 24" in size.

Monarch Metal Finishing, Inc.
PRETREATMENT SYSTEM PLANS

The information with an "X" before it must be shown on the plan or submitted before the pretreatment system plans can be approved.

1. X All wastewater treatment tanks/component equipment, including filters, ion exchange columns, membrane-type equipment etc., their size, material of construction, and the projected daily flows to each treatment process including backwash, regeneration rinse, maintenance, and cleaning flow rates and duration of each.

2. X All pumps, piping, valves, mixers, controls, instrument probes, etc. Valve schedules referencing all operational modes of equipment, etc. All tanks and discharges must be hard-piped with PVC, CPVC or other chemically compatible piping. The firm may apply for special case variances to use short sections of flexible hose. These requests will be reviewed on a case by case basis.

3. X A description of the treatment procedure for each treatment process including but not limited to acid/alkali, cyanide destruct, pH adjustment, ion exchange column regeneration, and backwash procedures. Procedures must include valve sequences showing all operational modes.

4. X A process schematic of the pretreatment system. For pretreatment systems which utilize filter and/or ion exchange columns, include all pretreatment operations and components thereof.

5. X The type, volume and/or quantity of ion exchange resin or other media must be provided. Manufacturer's specification data for all pretreatment process components (i.e. resins, membranes, etc.) must be provided for all pretreatment components utilized.

6. X A plant layout showing the pretreatment system, water using process tanks, and location of each in the facility.

7. X All sump pumps or effluent transfer stations, including size of transfer station, flow rate, and pump capacity.

8. X The wastewater sampling location.

9. X Views or elevations of all inlet and outlet connections on treatment tanks. This information must be provided for the internal components of pretreatment systems including but not limited to all filter and ion exchange columns in the form of cut-away views, including all distribution manifolds and resin/media heights.

10. _ A Rhode Island Professional Engineer's (P.E.) stamp and signature (a xerox copy is not acceptable).

Please note, process operation and pretreatment system plans must be at least 11" x 17" and cannot exceed 36" x 24" in size.

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

401 • 461 • 8848
401 • 461 • 6540 FAX
TTY (RI RELAY OPERATOR) 711

http://www.narrabay.com

Vincent J. Mesolella
Chairman

Raymond J. Marshall, P.E.
Executive Director

October 27, 2015

Mr. Athanasios Meltsakos
Hope Street Pizza
772 Hope Street
Providence, RI 02906

RE: Hope Street Pizza – Narragansett Bay Commission Pretreatment Inspection – Grease Removal Unit

Dear Mr. Meltsakos:

As a result of the inspection of your facility conducted by Narragansett Bay Commission ("NBC") Pretreatment staff on August 18, 2015, it came to the attention of the NBC Legal Department that your NBC approved grease removal unit ("GRU") had been removed from the discharge line. As stated in your Wastewater Discharge Permit, the GRU must be fully operational whenever discharges from kitchen operations are occurring. In addition, Article 4.15 of the NBC Rules and Regulations for Use of Wastewater Facilities Within the Narragansett Bay Commission District ("Rules and Regulations") states businesses conducting food preparation operations must install a GRU. Since the GRU was removed you violated the terms of your permit and the Rules and Regulations.

During a subsequent inspection conducted on October 7, 2015, it was noted by NBC Pretreatment staff that the GRU had been reinstalled in the kitchen and is currently fully operational. By reinstalling the unit you are now in compliance with your permit and the Rules and Regulations.

If you remove the GRU in the future, escalated enforcement action may be initiated against your facility. Please note NBC can assess administrative penalties of up to $25,000 per day per violation.

If you have any questions, please contact me at 401-461-8848 ext. 320.

Sincerely,

Mark Patrick McGuire, Esq.
Associate Legal Counsel

Cc: Kerry M. Britt

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

401 • 461 • 8848
401 • 461 • 6540 FAX
TTY (RI RELAY OPERATOR) 711

http://www.narrabay.com

Vincent J. Mesolella
Chairman

Raymond J. Marshall, P.E.
Executive Director

October 6, 2015

Stephen Quill, CEO
Ecological Fibers, Inc.
730 York Avenue
Pawtucket, RI 02861

CERTIFIED MAIL
RETURN RECEIPT
REQUESTED

Re: Administrative Order #BP-01-15

Dear Mr. Quill:

Enclosed please find Administrative Order #BP-01-15 (the "Order") issued to your company by the Narragansett Bay Commission ("NBC") for violating your company's Permit with NBC, NBC's Rules and Regulations, and Rhode Island General Laws Title 46 Chapter 25 (the "Act").

In accordance with the Order, your company must submit a proposal to NBC regarding a plan to reduce zinc concentrations to comply with your company's Permit, NBC's Rules and Regulations, and the Act within twenty-one (21) days of receipt of this Order. After NBC's review and approval of your proposal, within ninety (90) days after receipt of NBC's approval, your company must implement said plan.

Furthermore, your company must pay an Administrative Penalty to NBC of **TWENTY-TWO THOUSAND DOLLARS ($22,000.00)** within twenty-one (21) days of receipt of this Order.

Pursuant to R.I.G.L. 46-25-25.4, 42-17.1-2(21), and the NBC's Rules and Regulations, you have the right to preserve your right to hearing by filing a written request within ten (10) days of service to NBC's Executive Director. You may also request a status conference at this time.

Should you have any questions concerning this matter, please contact my office at (401) 461-8848 extension 320.

Sincerely,

Mark Patrick McGuire, Esquire
Associate Legal Counsel

cc: John Quill – Ecological Fibers, Inc.
Michael O'Keefe – Ecological Fibers, Inc.
Laurie Horridge, Esquire – NBC
Thomas Uva – NBC
Kerry Britt – NBC
Jennifer Harrington, Esquire – NBC

Enclosure

NARRAGANSETT BAY COMMISSION

ADMINISTRATIVE ORDER #BP-01-15

IN THE MATTER OF:

ECOLOGICAL FIBERS, INC.

Ecological Fibers, Inc.
730 York Avenue
Pawtucket, 02861

COMPLIANCE ORDER
AND
PENALTY ASSESSMENT

LEGAL AUTHORITY

The following findings are made and order issued pursuant to the authority vested in the Narragansett Bay Commission ("NBC") under Rhode Island General Laws ("RIGL") Title 46 Chapter 25, the Narragansett Bay Commission Act (the "Act") as amended and the NBC *Rules and Regulations for Use of Wastewater Facilities within the Narragansett Bay Commission District* ("Rules and Regulations"). The Act established NBC to acquire, plan, construct, extend, improve, operate and maintain the sewerage system and treatment facilities in the district. The Act authorizes NBC to collect fees, charges, and assessments from any person so assessed. Further, the Act states that each person so assessed shall pay the fees, charges, or assessments within the time frame prescribed by the rules and regulations of NBC. The Act also authorizes NBC to establish a sewage pretreatment program and to enforce any violations of the Act and any rule, regulation, permit, or order issued pursuant thereto.

RIGL § 46-25-25.2 prescribes that persons violating provisions § 46-25-25 through § 46-25-25.3 of the Act or of any permit, rule, regulation, or order issued pursuant thereto shall be subject to a civil penalty of not more than twenty-five thousand ($25,000) dollars per day for each violation and authorizes NBC to obtain actual costs and reasonable attorney's fees incurred by NBC in seeking compliance, penalties or damages. Furthermore, RIGL § 46-25-25.3 provides that any person found guilty of violating, willfully or with criminal negligence, any of the aforementioned provisions or of any permit, rule, or regulation issued pursuant thereto shall be punished by a fine of not more than twenty-five thousand ($25,000)

dollars and/or imprisonment of not more than one year for each enumerated violation.

Section 10.1 of the Rules and Regulations prescribes that NBC may implement administrative and/or judicial responses if a user is in violation of any provision of state or Federal requirements, the Act, the Rules and Regulations, a permit, or an order issued by NBC. Administrative penalties are assessed based on the penalty matrix contained in the Rules and Regulations Article 10.

STATEMENT OF FACTS

1. Ecological Fibers, Inc. ("EF") is a corporation organized under the laws of the Commonwealth of Massachusetts operating in the State of Rhode Island as a foreign corporation registered with the Rhode Island Secretary of State.

2. EF is a user of NBC's facilities as defined by Article 2 of the Rules and Regulations.

3. NBC issued EF's most recent Wastewater Discharge Permit (B2404-043-0116) (the "Permit") on February 1, 2011.

4. According to the Permit, EF is required to monitor zinc concentrations by collecting a composite sample over one full normal operating day during the months of January, April, July, and October until the expiration of the Permit. The sample is to consist of equal volume grab samples collected at least every half hour over the operating day or collected continuously with a composite sampler. The samples are to be collected from EF's treated wastewater receiving tank at Sample Location #1.

5. According to Section 5.4(B) of the Rules and Regulations, NBC's Effluent Discharge Limitations for the Bucklin Point District for zinc are 1.67 mg/l for daily maximum concentration and 1.39 mg/l for monthly average concentration.

6. EF has exceeded the NBC daily maximum concentration discharge limitation for zinc on thirty (30) occasions since August 1, 2013 (see Exhibit 1).

7. These thirty (30) exceedances resulted in numerous violations of the monthly average limitation.

8. EF previously stated it was in the process of investigating alternative coatings as well as additional pretreatment to bring its zinc discharges into compliance with NBC's limitations.

9. EF has continued to exceed the discharge limitation for zinc. Out of thirty-two (32) sampling events in 2015, EF had nineteen (19) violations. This equates to EF being out of compliance 59.4% of the time in 2015.

10. Section 10.1 of the Rules and Regulations prescribes that NBC may implement administrative and/or judicial responses if a user is in violation of any provision of state or Federal requirements, the Act, the Rules and Regulations, a permit, or an order issued by NBC.

THEREFORE, based on the above findings, Ecological Fibers, Inc. is hereby notified of the following violations:

Violation A: Failure to meet the daily maximum concentration discharge limitation for zinc on thirty (30) occasions in violation of the Permit, the Rules and Regulations, and the Act. Furthermore, these thirty (30) exceedances resulted in numerous violations of the monthly average limitation.

THE FOLLOWING LAWS AND REGULATIONS APPLY TO THE ABOVE VIOLATIONS:

(The citations listed below represent only selected excerpts from the referenced statutes, codes, rules and regulations. Actual documents should be consulted for complete texts.)

EPA - CODE OF FEDERAL REGULATIONS

40 CFR § 403.2 Objectives of general pretreatment regulations

By establishing the responsibilities of government and industry to implement National Pretreatment Standards this regulation fulfills three objectives:

(a) To prevent the introduction of pollutants into POTWs which will interfere with the operation of a POTW, including interference with its use or disposal of municipal sludge;

(b) To prevent the introduction of pollutants into POTWs which will pass through the treatment works or otherwise be incompatible with such works; and

(c) To improve opportunities to recycle and reclaim municipal and industrial wastewaters and sludges.

GENERAL LAWS OF RHODE ISLAND

General Powers: § 46-25-5:

(10) To establish a sewage pretreatment program, and to require as a condition, to the grant or reissuance of any approval, license, or permit required under the program, that the person applying for the approval, license, or permit, pay to the commission a reasonable fee based on the cost of reviewing and acting upon the application and based on the costs of implementing the program...

(16) To issue orders of general or specific applicability to carry out the purposes of the project.

(17) To have and exercise all powers necessary or convenient to effect its purposes.

(18) To impose administrative penalties in accordance with the provisions of § 46-25-25.4.

Orders as to pretreatment of sewage: § 46-25-25:

(a) Without limiting the generality of the foregoing, the authority hereby vested in the commission shall include the authority to limit, reject, or prohibit any direct or indirect discharge of pollutants or combination of pollutants, as defined by applicable federal or state law, into the facilities of the project; to require that any person or class of user shall cause pollutants from his or her property, prior to their entry into the facilities of the project, to be submitted to such pretreatment standards and requirements as the commission may prescribe by rule or regulation. The commission shall prescribe such rules and regulations for pretreatment as in the opinion of the commission,

(1) Are required by applicable federal or state law,

(2) Are required under the terms of the project's federal permit(s), or

(3) Are necessary and appropriate for the project.

(b) The commission shall have the authority to issue or deny permits to any person for the direct or indirect discharge of any pollutants into the facilities of the project; to require the development of a compliance schedule by each person to insure compliance with such pretreatment as the commission may prescribe. No person shall discharge any pollutant into the facilities, except as in compliance with the provisions of this section, and any rules and regulations promulgated hereunder, and pursuant to the terms and conditions of a permit.

(c) The commission may, by regulation, order, permit, or otherwise require any person who discharges into the facilities of the project to:

(1) Establish and maintain such records;

(2) Make such reports;

(3) Install, calibrate, use, and maintain such monitoring equipment or methods, including where appropriate, biological monitoring methods;

(4) Sample such discharges and effluents, in accordance with such methods, at such locations, at such intervals, and in such manner as the commission shall prescribe; and

(5) Provide such other information relating to discharges into the facilities of the project as the commission may reasonably require to insure compliance with prescribed pretreatment. The information shall include, but not be limited to, those records, reports, and procedures required by applicable federal law.

(d) Notwithstanding any other provision of this section, the commission shall have the authority, and shall prescribe the appropriate procedures, after informal notice to the discharger, immediately and effectively to halt or prevent any discharge of pollutants into the facilities of the project which reasonably appears to present an imminent endangerment to the health or welfare of persons...

Inspection powers: §46-25-25.1:

(a) The commission is authorized to carry out all inspection, surveillance, and monitoring procedures necessary to determine, independent of information supplied by any person who discharges into the facilities of the project, compliance or noncompliance by the person with the pretreatment requirements prescribed by the commission.

(b) The commission or the duly authorized employees and agents of the commission, upon presenting identification and appropriate credentials, is authorized:

(1) To enter, without delay and at reasonable times, those premises (public or private) of any person or class of user, either receiving services from the commission or applying to services from the commission, in which a discharge source or treatment system is located or in which records required to be maintained pursuant to §46-25-25, are kept;

(2) During regular working hours and at other reasonable times, and within reasonable limits and in a reasonable manner, to have access to and to copy any records, inspect any monitoring equipment or method required pursuant to §46-25-25, and sample any effluents which the owner or operator of the discharge source is required to sample under §46-25-25, and any rules and regulations adopted pursuant thereto.

(c) Any person obstructing, hindering, or in any way causing to be obstructed or hindered the commission or any of its employees or agents in the performance of their duties, or who shall refuse to permit the commission or any of its employees or agents entrance into any premises, buildings, plant, or equipment, or other places belonging to or controlled by the person, in the performance of his or her duties as such, shall be subject to the civil and criminal penalties set forth in §§ 46-25-25.2 and 46-25-25.3.

Civil penalties: §46-25-25.2:

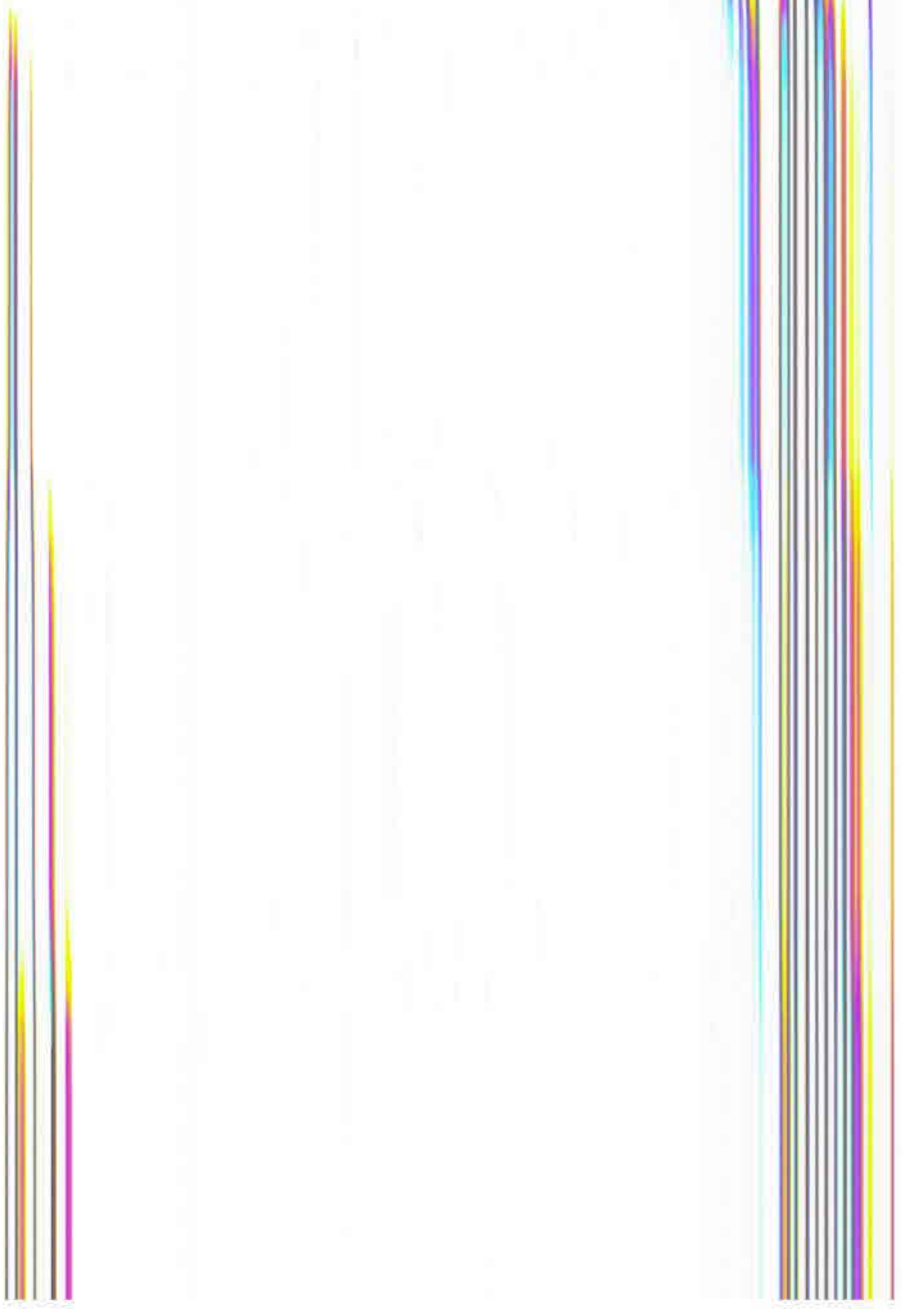
(a) Any person who shall violate the provisions of §§ 46-25-25 — 26-25-25.3, or of any permit, rule, regulation, or order issued pursuant thereto, shall be subject to a civil penalty of not more than twenty-five thousand dollars ($25,000) per day for each violation.

(b) The commission shall, in the same manner as cities and towns authorized under the provisions of §45-6-2.3(4), issue regulations to obtain actual costs and reasonable attorney's fees incurred by the commission in seeking compliance, penalties, or damages.

Criminal penalties: §46-25-25.3:

(a) Any person who shall be found guilty of violating, willfully or with criminal negligence, any of the provisions of §§ 46-25-25 -- 46-25-25.3 or of any permit, rule, or regulation issued pursuant thereto, or an order of the commission, shall be punished by a fine of not more than twenty-five thousand dollars ($ 25,000) or by imprisonment for not more than one year, or by both a fine or imprisonment; and every person shall be deemed guilty of a separate and distinct offense for each day during which the violation shall be repeated or continued. Further, the person shall be liable for all damages directly related to the violation, including additional costs of handling and treating any prohibited wastes, and shall

reimburse the commission for actual enforcement costs incurred by the commission, including reasonable attorney's fees and
costs.



reimburse the commission for actual enforcement costs incurred by the commission, including reasonable attorney's fees and administrative costs.

(b) No person shall knowingly make any false statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under § 46-25-25 or 46-25-25.1 or by any permit, rule, regulation, or order issued under those sections, or shall falsify, tamper with, or knowingly render inaccurate any monitoring device or method required to be maintained under those sections or by any permit, rule, regulation, or order issued under those sections.

(c) No person shall discharge into any outlet within the district any sewage waste or other pollutants without a permit, except where suitable treatment has been provided in accordance with this chapter or the rules and regulations of the commission.

(d) No person shall construct or maintain any privy, privy vault, septic tank, cesspool, or other facility intended or used for the disposal of sewage waste or other pollutants within the district, except as otherwise provided by law or the rules and regulations of the commission.

(e) No person shall maliciously, willfully, or negligently breach, damage, destroy, uncover, deface, or tamper with any structure, appurtenance, or equipment or dump garbage, refuse, or other material on land or right-of-way which is a part of the facilities of the project.

(f) No person shall uncover, make any connection with, or opening into, use, alter, or disturb any interceptor or appurtenance thereof, without first obtaining a written permit from the commission.

(g) No person shall discharge or cause to be discharged any unpolluted waters such as stormwater, groundwater, roof runoff, subsurface drainage, uncontaminated cooling water, or unpolluted industrial process waters to any facilities of the project other than those discharges as are connected to an existing (prior to May 1, 1982) combined sewer in those areas in which a combined sewer is the only available means for disposal of unpolluted waters.

Enforcement authority and procedure: § 46-25-25.4:

(a) The commission shall have authority to seek legal or equitable relief in the federal court or in the superior court of Providence county to enforce the requirements of §§ 307(b) and (c), 402(b)(8) and other applicable sections of the Federal Water Pollution Control Act, also known as the Clean Water Act, 33 U.S.C. § 1251 et seq., and any regulations implementing those sections or authorized by this chapter and/or by chapter 12 of this title. Whenever, on the basis of any information available to the commission, the commission has reasonable grounds to believe that a person has violated any provision of §§ 46-25-25 through 46-25-25.6 or any permit, rule, regulation or order issued pursuant thereto the commission may institute administrative, civil or criminal proceedings in the name of the commission. The commission shall not be required to enter into any recognizance or to give surety for costs prior to instituting such proceedings. The commission has the authority to order any person who violates any provision of §§ 46-25-25 through 46-25-25.6, any permit, rule, regulation or order issued pursuant thereto to cease and desist the violation, or to remedy the violation and to impose administrative penalties.

RULES AND REGULATIONS FOR THE USE OF WASTEWATER FACILITIES WITHIN NARRAGANSETT BAY COMMISSION DISTRICT

ARTICLE 2-DEFINITIONS

USER means any person, firm, corporation, government or other entity that discharges, causes or permits the discharge of wastewater into the NBC's facilities

ARTICLE 5-DISCHARGE REQUIREMENTS, LIMITATIONS, AND PROHIBITIONS

5.4 Specific Facility Limitations

No person shall discharge or cause or allow to be discharged either directly or indirectly into the facilities, any substance, water or wastewater which has concentrations of the substances listed below in excess of the assigned discharge

limitations. There will be no waivers or exceptions granted with respect to compliance with any of the limits listed below.

* All Parameters are for total metals, organics and cyanide

B. Bucklin Point Discharge Limitations

Parameter*	Daily Maximum Concentration Limit (mg/l)	Monthly Average (mg/l)
Arsenic (As)	0.20	0.10
Cadmium (Cd)	0.11	0.07
Chromium (Cr)	2.77	1.63
Copper (Cu)	1.20	1.20
Cyanide (CN)	0.50	0.50
Lead (Pb)	0.69	0.29
Mercury (Hg)	0.06	0.03
Nickel (Ni)	1.62	1.62
pH Range at all times	5.0-11.0 std. units	
Selenium (Se)	0.40	0.20
Silver (Ag)	0.40	0.20
Tin (Sn)	4.00	2.00
TTO	2.13	2.13
Zinc (Zn)	1.67	1.39

ARTICLE 8-WASTEWATER DISCHARGE PERMIT SYSTEM

8.5 Permit Conditions

Wastewater discharge permits shall be expressly subject to specific permit provisions contained therein as well as to provisions of these Rules and Regulations and all other regulations, user charges and fees established by the NBC. Wastewater discharge permits may include such conditions as are reasonably deemed necessary by the NBC to prevent Pass Through or Interference, protect the quality of the water body receiving the treatment plant's effluent, protect worker health and safety, facilitate sludge management and disposal, protect ambient air quality, and protect against damage to the NBC's facilities. Such conditions may include, but are not limited to, the following:

A. The average and maximum wastewater constituents and characteristics permitted in the process water discharges;

B. Limits on rate and time of discharge or requirements for flow regulation and equalization;

C. Requirements for installation of inspection and sampling facilities and specifications for self-monitoring;

D. Requirements for the submission of periodic self-monitoring compliance reports which shall include, but not be limited to, volume or rates of flow, concentrations of controlled pollutants or other information which relates to the generation of waste;

E. Requirements for maintaining and submitting technical reports and plant records relating to wastewater discharges;

F. Daily average and daily maximum discharge rates, or other appropriate conditions when pollutants subject to limitations and prohibitions are proposed or present in the user's wastewater discharge permit;

G. Compliance schedules;

H. Requirements for installation of pretreatment systems, spill and slug-prevention control plans and solvent-management plans;

I. Provisions for authorized NBC employees and agents to enter and inspect the premises, including provisions for copying records, inspecting monitoring equipment and sampling effluent;

J. Compliance with Federal, state and other governmental laws, rules and regulations;

K. Fees and costs including supplemental fees assessed because of the special nature of the user's effluent in accordance with the provisions of Article 5 and additional costs and fees based on the costs of enforcing these regulations or the permit, as in accordance with R.I.G.L. §46-25-5 (j);

L. Signatory requirements; and

M. Any other reasonable conditions necessary to ensure compliance with the provisions of R.I.G.L.§46-25-1 et seq., or any state and Federal laws, rules and regulations.

ARTICLE 9-WASTEWATER MONITORING AND REPORTING

10.3 Monitoring And Analysis of Process Wastewater

Sampling and analysis of industrial wastewater for the purpose of compliance determinations with respect to Article 5 prohibitions and limitations shall be done through industry self-monitoring and through monitoring done by the NBC. All analyses, including sampling results submitted in support of any application

reports, evidence or required by any permit or order shall be performed in accordance with the techniques prescribed in 40 CFR Part 136 and amendments thereto or, if 40 CFR Part 136 does not contain sampling or analytical techniques for the pollutant in question, in accordance with procedures approved by EPA. The NBC may, at its discretion, require an independent laboratory to conduct the sampling and analysis at the user's own cost.

A. **Self-Monitoring Requirements:**

1) Self-monitoring results must be accompanied by a certified laboratory analysis sheet, indicating the EPA approved test Rules and Regulations for Use of Wastewater Facilities Within the Narragansett Bay Commission District procedure for each parameter analyzed. The user must also submit a self -monitoring report with the results on a form prescribed by the NBC.
2) All Self-Monitoring Reports must be signed and certified in accordance with Section 9.10....
3) If any sampling performed by a user indicates any violation(s) of discharge limitations, the user shall notify the NBC within twenty-four (24) hours of becoming aware of the violation(s). The user shall repeat the analysis immediately for the parameters determined to be in violation and submit the resampling results to the NBC within thirty (30) days after becoming aware of the violation(s).

B. **Sample Collection:**

1) Except as indicated in (3) below, wastewater samples collected for purposes of determining user compliance with pretreatment standards and requirements must be obtained using flow proportional composite sample collection techniques. In the event that flow proportional sampling is not feasible, the NBC may authorize the use of a time proportional sampling.
2) For automatic samplers, the intake line hose must be at least 1/4 in. (0.6 cm) internal diameter and the velocity in the intake line must be maintained at least at 2 feet per second.
3) Samples for oil and grease, temperature, pH, cyanide, phenols, toxicity, sulfides, and volatile organic chemicals must be obtained using a grab sample.

C. **Analysis of Wastewater Samples:**

1) Laboratory analysis and sample preservation of industrial wastewater samples for user self-monitoring and compliance monitoring by the NBC shall be performed in accordance with EPA approved methods. Where applicable, the laboratory must be certified by the state in which it is located.

ARTICLE 10-ENFORCEMENT

10.1 Administrative Enforcement Options

The NBC may implement any combination of the following administrative and/ or judicial responses if a user is in violation of any provision of state or Federal requirements, the Rhode Island General Laws Title 46 Chapter 25 (the Act), these Rules and Regulations, a permit or an order issued by the NBC.

(1) Issue a Notice of Violation;
(2) Require the User to attend a mandatory compliance meeting at the NBC Corporate Office during business hours, or at any other reasonable time, to discuss its violations or alleged violations, the remedial actions that it might take, and the actions that the NBC might take under the Act and the Rules and Regulations;
(3) Issue an Administrative Order requiring any action that the NBC is authorized to require;
(4) Enter into a Consent Order or Settlement Agreement with the user;
(5) Revoke, modify, deny, suspend, or refuse to renew a Permit issued under the Act;
(6) Terminate or suspend sewer services provided to the user;
(7) Assess a civil administrative penalty;
(8) Institute a court action for civil penalties, criminal fines and/or other criminal punishment, injunctive relief, reimbursement of costs and/ or damages resulting from a violation or threatened violation; and/ or any other relief authorized by law or regulation.

10.3 Administrative Orders

A. Immediate Compliance Order

When the NBC finds that a user has violated or continues to violate these Rules and Regulations, the Act, a permit or order issued by the NBC, or any other pretreatment standard or requirement, the NBC may issue an order to the user responsible for the discharge, directing that the user come into compliance within a reasonable time period established by the NBC. Compliance Orders may also contain such other requirements as might be reasonably necessary and appropriate to address the noncompliance, including, but not limited to, the installation of pretreatment technology and/ or additional self-monitoring and management practices designed to minimize the

amount of pollutants discharged to the sewer. A Compliance Order does not relieve the user of liability for any violation, including any continuing violation. Issuance of a Compliance Order shall not be a prerequisite to taking any other action against the user, including, but not limited to, assessment of an Administrative Penalty.

ORDER

THEREFORE, based on the above findings and violations, Ecological Fibers, Inc. is hereby ORDERED to:

1. Submit a proposal to NBC regarding a plan to reduce zinc concentrations to comply with the Permit, the Rules and Regulations, and the Act within twenty-one (21) days of receipt of this Order.

2. After NBC's review and approval of EF's proposal, within ninety (90) days after receipt of NBC's approval, implement its plan to reduce zinc concentrations to comply with the Permit, the Rules and Regulations, and the Act.

3. Pay an Administrative Penalty to NBC of **TWENTY-TWO THOUSAND DOLLARS ($22,000.00)** within twenty-one (21) days of receipt of this Order.

Pursuant to R.I.G.L. § 46-25-25(4) and § 42-17.1-2(u) and Article 10 of NBC's Rules and Regulations, EF has the right to file a written request with the Executive Director for a hearing on said alleged violations within ten (10) days of service of this notice to show cause why they should not be found in violation of NBC's Rules and Regulations and why enforcement action should not be taken against them. If a hearing is requested within the ten (10) day time period, NBC shall provide written notice to EF of the date, time and place for the hearing. If NBC fails to request a hearing within the aforementioned time frame, this Order shall automatically become an immediate compliance order and NBC shall be deemed to have waived the right to an adjudicatory hearing on the above cited violations.

IF ECOLOGICAL FIBERS, INC. WAIVES THEIR RIGHT TO AN ADMINISTRATIVE HEARING WITHIN TEN (10) DAYS, ECOLOGICAL FIBERS, INC. IS DEEMED TO BE IN DEFAULT AND NBC WILL IMMEDIATELY TAKE STEPS TO ENFORCE THIS MATTER IN COURT. BE ADVISED THAT FAILURE TO COMPLY WITH THE TERMS OF THIS ORDER MAY SUBJECT USER TO CIVIL AND/OR CRIMINAL PENALTIES OF UP TO $25,000 PER DAY PER VIOLATION PURSUANT TO R.I.G.L. § 46-25-25.2 AND § 46-25-25.3.

FOR THE NARRAGANSETT BAY COMMISSION:

10/6/2015
Date

Mark Patrick McGuire, Esquire
Associate Legal Counsel
Narragansett Bay Commission

CERTIFICATION

I hereby certify that on the 6th of October, 2015, true and accurate copies of the within ADMINISTRATIVE ORDER were sent by certified mail, return receipt requested to the following individual(s):

1. John Quill, President
   Ecological Fibers, Inc.
   8 Aquarius Lane
   Townsend, MA 01469

2. Stephen Quill, CEO
   Ecological Fibers, Inc.
   730 York Avenue
   Pawtucket, RI 02861

3. Michael O'Keefe
   Ecological Fibers, Inc.
   730 York Avenue
   Pawtucket, RI 02861

10-6-15
Date

Juriel Grande
Executive Paralegal
Narragansett Bay Commission

EXHIBIT 1

Ecological Fibers, Inc.

Sample Results August 1, 2013 through August 31, 2015

Sample Date	NBC Sample	Flow	Zn ppm	Violation
10/21/2013		6993	0.2	N
11/14/2013			0.04	N
12/11/2013	Y	5000	12.18	Y
12/19/2013			0.05	N
1/13/2014		3915	12	Y
1/20/2014		3955	0.98	N
1/30/2014		6122	12	Y
2/4/2014		5129	0.81	N
2/11/2014		3611	2.8	Y
2/20/2014		4085	0.67	N
2/24/2014		4542	9.8	Y
3/3/2014	Y	2700	1.06	N
3/3/2014		6202	0.95	N
3/6/2014		5393	1.8	Y
3/7/2014		4377	1	N
3/10/2014		5116	4	Y
3/14/2014		3710	0.22	N
3/18/2014		7526	0.1	N
3/19/2014		5163	0.18	N
3/20/2014		6097	1	N
4/2/2014		6579	0.84	N
7/15/2014			0.04	N
7/15/2014		3990	5.14	Y
8/4/2014		3875	0.46	N
8/5/2014		4075	0.69	N
8/6/2014		4380	0.73	N
8/7/2014		5998	0.28	N
9/29/2014	Y	3000	6.8	Y
10/7/2014	N	6705	1.8	Y
10/8/2014		4825	1.1	N
10/9/2014		1840	0.22	N
10/16/2014		5345	0.99	N
10/16/2014	Y	300	0.958	N
10/20/2014		4955	0.56	N
10/21/2014			0.1	N
12/9/2014	Y	2600	5.01	Y
12/19/2014			0.7	N
12/22/2014			1.5	N
12/23/2014			1.1	N
12/30/2014			1.6	N

EXHIBIT 1

Ecological Fibers, Inc.

Sample Results August 1, 2013 through August 31, 2015

Sample Date	NBC Sample	Flow	Zn ppm	Violation
1/14/2015	NBC Split	6475		N
1/14/2015	Y	3100	2.41	Y
2/5/2015		5610	1.79	Y
2/9/2015		4690	0.13	N
2/10/2015		6390	0.27	N
2/11/2015		4850	2.4	Y
2/20/2015		3350	0.56	N
2/23/2015		3370	0.44	N
2/24/2015		5715	0.43	N
2/25/2015		5000	1.07	N
4/14/2015		5345	1.54	N
4/30/2015	Y	2300	2.5	Y
5/15/2015		2930	3.95	Y
5/18/2015		5235	5.24	Y
5/19/2015		5380	1.42	N
5/20/2015		5240	1.05	N
6/2/2015	N	5400	5.38	Y
6/3/2015		3530	2.46	Y
6/16/2015		5460	2.42	Y
6/18/2015		4170	0.446	N
6/19/2015		1950	1.77	Y
6/22/2015		5400	0.244	N
7/6/2015		1825	3.34	Y
7/23/2015		5350	3.17	Y
7/28/2015	Y	2500	2.4	Y
8/5/2015		5950	2.16	Y
8/6/2015		6280	1.57	N
8/11/2015		5990	5.6	Y
8/12/2015		4370	4.53	Y
8/21/2015		3155	2.73	Y
8/24/2015		5990	1.14	N
8/25/2015		4770	3.88	Y
8/26/2015		5425	2.14	Y