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

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

DATE OF NOTICE: Tuesday, November 9, 2010

PUBLIC NOTICE NUMBER: PN-10-05

DRAFT RIPDES PERMIT MODIFICATION:

RIPDES PERMIT NUMBER: RI0100251

NAME AND MAILING ADDRESS OF APPLICANT:

Town of Smithfield
64 Farnum Pike
Smithfield, RI 02917

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Smithfield Wastewater Treatment Plant
Esmond Mill Drive
Smithfield, Rhode Island 02917

RECEIVING WATER: Woonasquatucket River

RECEIVING WATER CLASSIFICATION: B1

The Town of Smithfield owns the Regional Wastewater Treatment Facility located on Esmond Mill Drive in Smithfield, Rhode Island. The Discharge to the Woonasquatucket River consists of treated domestic and industrial wastewater. The 2007 RIPDES permit for the facility included provisions for a Zinc monitoring program to be undertaken by the Town in 2009 and 2010 with the goal of identifying the source or sources of an unknown Zinc discharge. After review of the 2009 data, the DEM has determined that 2010 sampling was not necessary. Therefore, in response to a request by the Town, the DEM is deleting Part I.C. from the Town's RIPDES permit so that the Town is not required to conduct the 2010 Zinc sampling specified in Part I.C of its RIPDES permit. All other permit requirements, including limits to ensure that the discharge will not cause a water quality violation, remain unchanged.

DRAFT RIPDES PERMITS:

RIPDES PERMIT NUMBER: RI0001643

NAME AND MAILING ADDRESS OF APPLICANT:

Lehigh Northeast Cement Company
55 Fields Point Drive
Providence, RI 02905

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Lehigh Northeast Cement Company
25 Terminal Road
Providence, RI 02905

RECEIVING WATER: Providence River

RECEIVING WATER CLASSIFICATION: SB1{a}

The facility, which is the source of the discharge, operates a Portland cement terminal located in the Port of Providence. The above referenced application is for reissuance of a RIPDES permit, to discharge truck wash water and storm water runoff to the Providence River. Truck wash water and storm water flow to a settling tank from which solids are periodically removed and then flows to outfall 001 which discharges into the Providence River. In addition to the monitoring requirements established for outfall 001, the permittee must also develop and implement a Storm Water Pollution Prevention Plan (SWPPP). The goals of the SWPPP are to identify potential sources of pollutants exposed to storm water and to ensure practices are being implemented to minimize or eliminate the potential for pollutants to mix with storm water. This permit includes limits to ensure that the discharge will not cause a water quality violation.

RIPDES PERMIT NUMBER: RI0023736

NAME AND MAILING ADDRESS OF APPLICANT:

Fox Island LLC
50 Park Row West, Suite 113
Providence, RI 02903

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Fox Island
North Kingstown, RI 02852

RECEIVING WATER: West Passage of Narragansett Bay

RECEIVING WATER CLASSIFICATION: SA

The facility, which is the source of the discharge, is an individual residence and catering building located on Fox Island. The applicant has installed a package desalination system at a residential home located on Fox Island with the sole purpose of providing potable water for the main residence and catering building to supplement water from the existing shallow fresh water well. The proposed desalination unit is owned and operated by the applicant, who is also the homeowner, and is located at

Fox Island off the coast of North Kingstown, Rhode Island. The discharge to the West Passage of Narragansett Bay consists of brine that has been concentrated by the reverse osmosis desalination system. Since the 2005 permit issuance the facility has not operated the desalination system or discharged concentrated brine through Outfall 001A. This permit includes limits to ensure that the discharge will not cause a water quality violation.

RIPDES PERMIT NUMBER: RI0000566

NAME AND MAILING ADDRESS OF APPLICANT:

Zions First National Bank
One South Main Street, Suite 500
Salt Lake City, Utah 84133

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Former ATP Manufacturing Facility
761 Great Road
North Smithfield, Rhode Island

RECEIVING WATER: Branch River

RECEIVING WATER CLASSIFICATION: B

The facility that is the source of the discharge is an advanced wastewater treatment plant located in North Smithfield which treats wastewater from the facility located at 761 Great Road. The site was previously owned and operated by ATP Manufacturing, which ceased operations on May 14, 2009. However, Zions Bank took over ownership as part of foreclosure actions and has applied for a discharge permit since the facility has no other means for the disposal of sanitary wastewater. Zions Bank is in the process of trying to sell the facility and, once sold, intends on transferring the permit to the new owner in accordance with the RIPDES Regulations. The wastewater treatment plant consists of settling, aeration, BioMatrix filtration, and chlorine disinfection. Although the site was formerly an industrial facility, the wastewater treatment plant only treated sanitary wastewater and the discharge of industrial wastewater was not authorized under the previous permit and is not being authorized under this permit. Therefore, the only discharge authorized by this permit consists entirely of treated sanitary wastewater. This permit includes limits to ensure that the discharge will not cause a water quality violation.

FURTHER INFORMATION ABOUT THE DRAFT PERMITS:

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

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

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

PUBLIC COMMENT AND REQUEST FOR PUBLIC HEARING:

Pursuant to Chapter 42-17.4 of the Rhode Island General Laws a public hearing has been scheduled to consider these permits if requested. Requests for a Public Hearing must be submitted in writing to the attention of Samuel Kaplan at the address indicated above. Notice should be taken that if DEM receives a request from twenty-five (25) people, a governmental agency or subdivision, or an association having no less than twenty-five (25) members on or before 4:00 PM, Friday, December 10, a public hearing will be held at the following time and place:

4:00 PM Wednesday, December 15, 2010
Room 280
235 Promenade Street
Providence, Rhode Island 02908

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

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

Interested parties may submit comments on the permit actions and the administrative record to the address above no later than 4:00 PM Thursday, December 16, 2010.

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

Any person, including the permittee/applicant, who believes these permit actions are inappropriate, must raise all reasonably ascertainable issues and submit all reasonably available arguments and factual grounds supporting their position, including all supporting material, by the close of the public comment period under Rule 41. The public comment period is from November 9, 2010 to December 16, 2010. Commenters may request a longer comment period if necessary to provide a reasonable opportunity to comply with these requirements. Comments should be directed to DEM as noted above.

Any person, prior to such date, may submit a request in writing to DEM for a public hearing to consider the above permit actions. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public hearing may be held after at least thirty days public notice whenever the Director finds that response to this notice indicates significant public interest. In reaching a final decision on the permit actions the Director will respond to all significant comments and make these responses available to the public at DEM's Providence office.

FINAL DECISION AND APPEALS:

Following the close of the comment period the Director will issue a final decision and forward a copy of the final decision to the permittee and each person who has submitted written comments or requested

notice. Within 30 days following the notice of the final decision, any interested person may submit a request for a formal hearing in accordance with the requirements of Rule 49.

11/3/10
Date

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

MODIFICATION

AUTHORIZATION TO DISCHARGE UNDER THE RHODE ISLAND POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of Chapter 46-12 of the Rhode Island General Laws, as amended, RIPDES Permit No. RI0100251 issued to the Town of Smithfield for the Smithfield Wastewater Treatment Facility on April 4, 2007, shall be modified as follows:

Part I.C. of the permit, entitled "Zinc Monitoring Program", shall be deleted.

The remaining effluent limitations, monitoring requirements and other conditions in the original permit are unchanged and in effect.

This modification shall become effective on _____.

This permit and authorization to discharge expire at midnight, April 30, 2012.

This change modifies the permit issued on April 4, 2007.

This modification consists of one (1) page.

Signed this _____ day of _____ , 2010.

_____

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

FACT SHEET

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

RIPDES PERMIT NO. **RI0100251**

NAME AND ADDRESS OF APPLICANT:

Town of Smithfield
64 Farnum Pike
Smithfield, RI 02917-3203

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Smithfield Wastewater Treatment Facility
20 Esmond Mill Drive
Smithfield, RI 02917

RECEIVING WATER: **Woonasquatucket River**

CLASSIFICATION: **B1**

I. Proposed Action

Part I.C. of the permit, entitled "Zinc Monitoring Program", shall be deleted.

II. Permit Limitations and Conditions

This modification eliminates the Zinc Monitoring Program found in Part I.C. of the permit issued April 4, 2007.

III. Permit Basis and Explanation of Effluent Limitation Derivation

The Town of Smithfield owns the Regional Wastewater Treatment Facility located on Esmond Mill Drive in Smithfield, Rhode Island. The Discharge to the Woonasquatucket River consists of treated domestic and industrial wastewater contributed by the municipality of Smithfield. Treatment consists of: Screening/Grinding, Primary Settling, Activated Sludge employing the A2O process, Secondary Clarification, Disc Filtration, Chlorination and Dechlorination. Treated wastewater is discharged from Outfall 001A to the Woonasquatucket River.

DEM's primary authority over the permit comes from EPA's delegation of the program in September 1984 under the Federal Clean Water Act (CWA).

Prior to the development of the 2007 permit, DEM's Office of Water Resources Total Maximum Daily Load (TMDL) Group identified a trend of dry weather in-stream Zinc levels increasing between two TMDL sampling locations downstream of the Smithfield WWTF. Therefore, DEM inferred that an illicit dry weather Zinc discharge may exist between those two sampling locations. The 2007 permit included provisions for a Zinc monitoring program to be undertaken by the Town in 2009 and 2010 with the goal of identifying the source or sources of the suspected illicit Zinc discharge. The goal of the Zinc monitoring program was to sample for Zinc immediately upstream of the Smithfield WWTF as well as at several locations downstream of the facility in the vicinity of the suspected Zinc discharge to determine whether or not such an illicit discharge existed. DEM agreed to conduct the 2009 Zinc sampling on behalf of the Town and to evaluate the data generated by the 2009 sampling. DEM stated that if the 2009 data did not reveal elevated dry weather Zinc concentrations, DEM would be willing to remove or reduce the 2010 in-stream sampling requirement. After review of the 2009 data, the DEM has determined that 2010 sampling is not necessary. Therefore, in response to a request by the Town, the DEM is deleting Part I.C. from the Town's RIPDES permit so that the Town is not required to conduct the 2010 Zinc sampling specified in Part I.C of its RIPDES permit.

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

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

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

V. **DEM Contact**

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

Samuel Kaplan, P.E.
Department of Environmental Management
Office of Water Resources
235 Promenade Street
Providence, Rhode Island 02908
Telephone: (401) 222-4700 ext. 7046

11/3/10
Date

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

AUTHORIZATION TO DISCHARGE UNDER THE
RHODE ISLAND POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of Chapter 46-12 of the Rhode Island General Laws, as amended,

Lehigh Northeast Cement Company
55 Fields Point Drive
Providence, Rhode Island 02905

is authorized to discharge from a facility located at

Lehigh Northeast Cement Company
25 Terminal Road
Providence, RI 02905

to receiving waters named

Providence River

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

This permit shall become effective on _____.

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

This permit supersedes the permit issued on March 23, 2005.

This permit consists of 7 pages in Part I including effluent limitations, monitoring requirements, etc. and 10 pages in Part II including General Conditions.

Signed this day of , 2010.

DRAFT

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

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

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

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

Effluent Characteristic	Discharge Limitations					Monitoring Requirement	
	Quantity - lbs./day		Concentration - specify units				
	Average Monthly	Maximum Daily	Average Monthly *(Minimum)	Average Weekly *(Average)	Maximum Daily *(Maximum)	Measurement Frequency	Sample Type
Flow	4,500 GPD	5,500 GPD				1/month	estimate
TSS	1.31	1.90	35 mg/l		50 mg/l	1/month	composite[1]
Settleable Solids					3.0 ml/l	1/month	composite[1]
pH influent[2]			--- s.u.		--- s.u.	1/month	4 Grabs[3]
pH effluent[2]			--- s.u.		--- s.u.	1/month	4 Grabs[3]
pH change[2]					0.5 s.u.[4]	1/month	Calculated

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

[1] All composite sampling must consist of a minimum of four (4) grabs spaced equally apart over the course of a normal operating day.

[2]Sampling for influent and effluent shall be conducted using appropriate allowances for hydraulic detention (flow-through) time. These values will then be used to calculate the pH change. The maximum value to be reported is the largest individual pH change calculated for the reporting period

[3] Compliance with these limitations shall be determined by taking a minimum of four (4) grab samples equally spaced over the course of a normal operating day. The grab samples must be analyzed for pH immediately (<15 minutes after sample collection). The maximum value to be reported is the highest individual measurement obtained during the monitoring period. The minimum value to be reported is the lowest individual measurement obtained during the monitoring period.

[4] In no case shall the discharge cause the receiving water's pH to be outside of the range of 6.5 – 8.5 s.u.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: Outfall 001.

2. The discharge shall not cause the pH of the receiving water to be less than 6.5 nor greater than 8.5 standard units at anytime, unless these values are exceeded due to natural causes or as a result of the approved treatment processes.

3. The discharge shall not cause visible discoloration of the receiving waters.

4. The effluent shall contain neither a visible oil sheen, foam, nor floating solids at any time.

5. All existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:

   a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

      (1) One hundred micrograms per liter (100 ug/l);

      (2) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitro-phenol; and one milligram per liter (1 mg/l) for antimony;

      (3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 C.F.R. s122.21(g)(7); or

      (4) Any other notification level established by the Director in accordance with 40 C.F.R. s122.44(f) and Rhode Island Regulations.

   b. That any activity has occurred or will occur which would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

      (1) Five hundred micrograms per liter (500 ug/l);

      (2) One milligram per liter (1 mg/l) for antimony;

      (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 C.F.R. s122.21(g)(7); or

      (4) Any other notification level established by the Director in accordance with 40 C.F.R. s122.44(f) and Rhode Island Regulations.

   c. That they have begun or expect to begin to use or manufacture as an intermediate or final product or by-product any toxic pollutant which was not reported in the permit application.

B. STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

1. A Storm Water Pollution Prevention Plan (SWPPP) shall be maintained by the permittee. The SWPPP shall be prepared in accordance with good engineering practices and identify potential sources of pollutants, which may reasonably be expected to affect the quality of storm water discharges associated with industrial activity from the facility. In addition, the Plan shall describe and ensure the implementation of Best Management Practices (BMPs) which are to be used to reduce or eliminate the pollutants in storm water discharges associated with industrial activity at the facility and to assure compliance with the terms and conditions of this permit.

2. The Plan shall be signed by the permittee in accordance with RIPDES Rule 12 and retained on-site for at least five (5) years. The Plan shall be made available upon request to the Director.

3. If the Plan is reviewed by the Director, he or she may notify the permittee at any time that the Plan does not meet one or more of the minimum requirements of this part. After such notification from the Director, the permittee shall make changes to the Plan and shall submit to the Director a written certification that the requested changes have been made. Unless otherwise provided by the Director, the permittee shall have thirty (30) days after such notification to make the necessary changes.

4. The permittee shall immediately amend the Plan whenever there is a change in design, construction, operation, or maintenance, which has a significant effect on the potential for the discharge of pollutants to the waters of the State; a release of reportable quantities of hazardous substances and oil; or if the SWPPP proves to be ineffective in achieving the general objectives of controlling pollutants in storm water discharges associated with industrial activity. Changes must be noted and then submitted to this department. Amendments to the Plan may be reviewed by DEM in the same manner as Part B.3. of this permit.

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

   a. Description of Potential Pollutant Sources. The Plan must provide a description of potential sources which may be reasonably expected to add significant amounts of pollutants to storm water discharges or which may result in the discharge of pollutants during dry weather from separate storm sewers draining the facility. It must identify all activities and significant materials, which may potentially be significant pollutant sources. Each plan shall include:

      (1) A site map indicating: a delineation of the drainage area of each storm water outfall, each existing structural control measure to reduce pollutants in storm water runoff, locations where significant materials are exposed to storm water, locations where significant leaks or spills have occurred, a delineation of all impervious surfaces, all surface water bodies, all separate storm sewers, and the locations of the following activities where such areas are exposed to storm water: fueling stations, vehicle and equipment maintenance and/or cleaning areas, material handling areas, material storage areas, process areas, and waste disposal areas;

      (2) A topographic map extending one-quarter of a mile beyond the property boundaries of the facility;

(3) An estimate of the overall runoff coefficient for the site, determined by an acceptable method, such as, but not limited to, area weighting;

(4) A narrative description of significant materials that have been treated, stored, or disposed of in a manner to allow exposure to storm water between the time of three (3) years prior to the issuance of this permit to the present; method of on-site storage or disposal; materials management practices employed to minimize contact of these materials with storm water runoff between the time of three (3) years prior to the issuance of this permit and the present; materials loading and access areas; the location and description of existing structural and non-structural control measures to reduce pollutants in storm water runoff; and description of any treatment the storm water receives;

(5) A list of significant spills and significant leaks of toxic or hazardous pollutants that occurred at the facility three (3) years prior to the effective date of this permit to the present;

(6) A list of any pollutants limited in effluent guidelines to which a facility is subject under 40 CFR Subchapter N, any pollutants listed on a RIPDES permit to discharge process water, and any information required under RIPDES Rule 11.02(a)(14)(iii)-(v) or 40 CFR 122.21(g)(iii)-(v)

(7) For each area of the facility that generates storm water discharges associated with industrial activity with a reasonable potential for containing significant amounts of pollutants, a prediction of the direction of flow and an estimate of the types of pollutants, which are likely to be present in storm water associated with industrial activity;

(8) A summary of existing sampling data describing pollutants in storm water discharges from the facility; and

b. Storm Water Management Controls. The permittee must develop a description of storm water management controls appropriate for the facility and implement such controls. The appropriateness for implementing controls listed in the Plan must reflect identified potential sources of pollutants at the facility. The description of storm water management controls must address the following minimum components, including a schedule for implementing such controls:

(1) *Pollution Prevention Team.* The Plan must identify a specific individual(s) within the facility organization as members of a team that are responsible for developing the Plan and assisting the terminal manager in its implementation, maintenance, and revision. The Plan must clearly identify the responsibilities of each team member. The activities and responsibilities of the team must address all aspects of facility's Plan.

(2) *Risk Identification and Assessment/Material Inventory.* The Plan must assess the potential of various sources which contribute pollutants to storm water discharge associated with the industrial activity. The Plan must include an inventory of the types of materials handled. Each of the following must be evaluated for the reasonable potential for contributing pollutants to runoff: loading and unloading operations, outdoor manufacturing or processing activities, significant dust or particulate generating processes, and on-site waste disposal practices. Factors to consider include the toxicity of chemicals; quantity of chemicals used, produced, or discharged;

the likelihood of contact with storm water, and the history of significant leaks or spills of toxic or hazardous pollutants.

(3) *Preventative Maintenance.* A preventative maintenance program must involve inspection and maintenance of storm water management devices (i.e., oil/water separators, catch basins) as well as inspecting and testing plant equipment and systems to uncover conditions that could cause breakdown or failures resulting in discharges of pollutants to surface waters.

(4) *Good Housekeeping.* Good housekeeping requires the maintenance of a clean, orderly facility.

(5) *Spill Prevention and Response Procedure.* Areas where potential spills can occur, and their accompanying drainage points, must be identified clearly in the SWPPP. The potential for spills to enter the storm water drainage system must be eliminated wherever feasible. Where appropriate, specific material handling procedures, storage requirements, and procedures for cleaning up spills must be identified in the Plan and made available to the appropriate personnel. The necessary equipment to implement a clean up must also be made available to personnel. The permittee shall immediately notify the office of releases in excess of reportable quantities.

(6) *Storm Water Management.* The Plan must contain a narrative consideration of the appropriateness of traditional storm water management practices. Based on an assessment of the potential of various sources at the plant to contribute pollutants to storm water discharges associated with industrial activity (see Part B.5.b.2 of this permit), the Plan must provide that measures, determined to be reasonable and appropriate, must be implemented and maintained.

(7) *Sediment and Erosion Prevention.* The Plan must identify areas which; due to topography, activities, or other factors; have a high potential for significant soil erosion and identify measures to limit erosion.

(8) *Employee Training.* Employee training programs must inform personnel responsible for implementing activities identified in the Plan, or otherwise responsible for storm water management at all levels, of the components and goals of the Plan. Training should address topics such as spill response, good housekeeping, and material management practices. The Plan must identify periodic dates for such training.

(9) *Visual Inspections.* Qualified plant personnel must be identified to inspect designated equipment and plant areas. Material handling areas must be inspected for evidence of, or the potential for, pollutants entering the drainage system. A tracking or follow up procedure must be used to ensure that the appropriate action has been taken in response to the inspection. Records of inspections must be maintained on site for at least five (5) years.

(10) *Recordkeeping and Internal Reporting Procedures.* Incidents such as spills, or other discharges, along with other information describing the quality and quantity of storm water discharges must be included in the records. All inspections and maintenance activities must be documented and maintained on site for at least five (5) years.

c. Site Inspection. An annual site inspection must be conducted by appropriate personnel named in the SWPPP to verify that the description of potential pollutant sources required under Part B.5.a is accurate, that the drainage map has been updated or otherwise modified to reflect current conditions, and controls to reduce pollutants in storm water discharges associated with industrial activity identified in the Plan are being implemented and are adequate. A tracking or follow up procedure must be used to ensure that the appropriate action has been taken in response to the inspection. Records documenting significant observations made during the site inspection must be retained as part of the SWPPP for a minimum of five (5) years.

d. Consistency with Other Plans. Storm water management controls may reflect requirements for Spill Prevention Control and Counter-measure (SPCC) plans under Section 311 of the CWA or Best Management Practices (BMP) Programs otherwise required by a RIPDES permit and may incorporate any part of such plans into the SWPPP by reference.

C. MONITORING AND REPORTING

1. Monitoring

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

2. Reporting

Monitoring results obtained during the previous six (6) months shall be summarized and reported on Discharge Monitoring Report (DMR) Forms, postmarked no later than the 15th day of the month following the completed reporting period. The first report is due on _____. Testing shall be reported as follows:

Semi-annual testing to be Performed	Report Due No Later Than
January 1 – June 30	July 15
July 1 - December 31	January 15

Signed copies of these, and all other reports required herein, shall be submitted to:

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

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

STATEMENT OF BASIS

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

RIPDES PERMIT NO. **RI0001643**

NAME AND ADDRESS OF APPLICANT:

Lehigh Northeast Cement Company
55 Fields Point Drive
Providence, RI 02905

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Lehigh Northeast Cement Company
25 Terminal Road
Providence, RI 02905

RECEIVING WATER: Providence River

CLASSIFICATION: SB1 {a}

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

The above named applicant has applied to the Rhode Island Department of Environmental Management for reissuance of a RIPDES Permit to discharge into the designated receiving water.

II. Limitations and Conditions

The effluent limitations of the draft permit, the monitoring requirements, and any implementation schedule (if required) may be found in the draft permit. A summary of historical effluent data may be found in Attachment A. A discharge flow schematic is provided in Attachment B.

III. Permit Basis and Explanation of Effluent Limitation Derivation

Lehigh Northeast Cement Company's 25 Terminal Road facility is currently used for the transfer of Type I and Type II Portland Cement. Transportation of the cement products may occur via tanker trucks or ships along the Providence River. Lehigh Northeast Cement Company rents a portion of the site to Hudson Terminal Corporation, which stores empty tankers on site and conducts minor equipment maintenance indoors. Miscellaneous vehicle and equipment storage also occurs on site. The discharge consists of truck wash water that passes through a settling basin before entering the Providence River. A small amount of storm water also flows from this shipping depot and truck wash area into the settling basin before being discharged to the Providence River. The maximum permitted combined effluent flow rate is 5500 GPD. Periodically

settled cement product accumulates in the settling basins and the cement must be dredged from the tanks and are placed in a stockpile area to dry. Once the dredged cement has dried it is taken off site by an outside contractor and recycled.

The proposed discharge is to the Providence River (Water Body ID No. RI0007020E-01B) which has a Water Use Classification of SB1{a}. The RI Water Quality Regulations designates these waters for primary and secondary contact recreational activities and fish and wildlife habitat. They shall be suitable for aquacultural uses, navigation, and industrial cooling. These waters shall have good aesthetic value. Primary contact recreational activities may be impacted due to pathogens from approved wastewater discharges. However all Class SB criteria must be met. These waters will likely be impacted by combined sewer overflows in accordance with approved CSO Facilities Plans and in compliance with rule 19.E.1 of these regulations and the Rhode Island CSO Policy. Therefore, primary contact recreational activities; shellfishing uses; and fish and wildlife habitat will likely be restricted.

The State of Rhode Island 2008 303(d) List of Impaired Waters dated April 1, 2008 lists the Providence River as impaired for total nitrogen, dissolved oxygen, and fecal coliform.

The requirements set forth in this draft permit are based on the State's Water Quality Regulations, the Rhode Island Pollution Discharge Elimination System (RIPDES) Regulations, both filed pursuant to Chapter 46-12, as amended, and EPA guidelines.

DEM's primary authority over the permit comes from EPA's delegation of the program in September 1984 under the Federal Clean Water Act (CWA).

The effluent limitation for maximum daily TSS is technology-based and is derived from the cement manufacturing point source category within 40 CFR 411.37, best conventional pollution control technology (BCT). The TSS limit of 35 mg/L (average monthly) is carried over from the previous permit. These more stringent effluent limits for average monthly TSS found in the original permit are to be retained to prevent a degradation in the quality of the receiving water. The average monthly mass limitation for TSS was calculated by multiplying the average monthly concentration for TSS multiplied by the average monthly flow rate multiplied by a conversion factor of 8.34. The maximum daily mass discharge limitation for TSS was calculated by multiplying the maximum daily concentration for TSS multiplied by the average monthly flow rate multiplied by a conversion factor of 8.34. The effluent limits for settleable solids are retained from the previous permit to prevent degradation of water quality. The effluent limitations for pH are taken from the Water Quality Regulations for salt water, which limit pH to between 6.5 and 8.5. These pH limitations are more stringent than the pH limitations found in 40 CFR Part 411.37.

Rule 31 of the RIPDES Regulations classifies stormwater discharges from facilities with SIC codes of 3241 as "industrial stormwater". Because the application submitted to DEM on October 26, 1990 identified the SIC code of this facility as 3241 and indicated that the facility has a discharge of stormwater, this facility has been subject to the requirements of Rule 31. This rule requires that a Storm Water Pollution Prevention Plan (SWPPP) must be developed and as a result a SWPPP requirement was added to the previous permit issued in March of 2005. The requirement to have a SWPPP in place has been carried forward in this permit. The SWPPP shall be prepared in accordance with good engineering practices and identify potential sources of pollutants, which may reasonably be expected to affect the quality of storm water discharges associated with industrial activity from the facility and the controls in place to minimize the contamination of storm water.

IV. **DEM Contact**

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

Brian Lafaille, P.E.
RIPDES Program
Office of Water Resources
Department of Environmental Management
235 Promenade Street
Providence, Rhode Island 02908
Telephone: (401) 222-4700 x7046

11/1/10
Date

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

ATTACHMENT A: HISTORICAL EFFLUENT DATA

DESCRIPTION OF DISCHARGE: Discharge from settling tanks 001

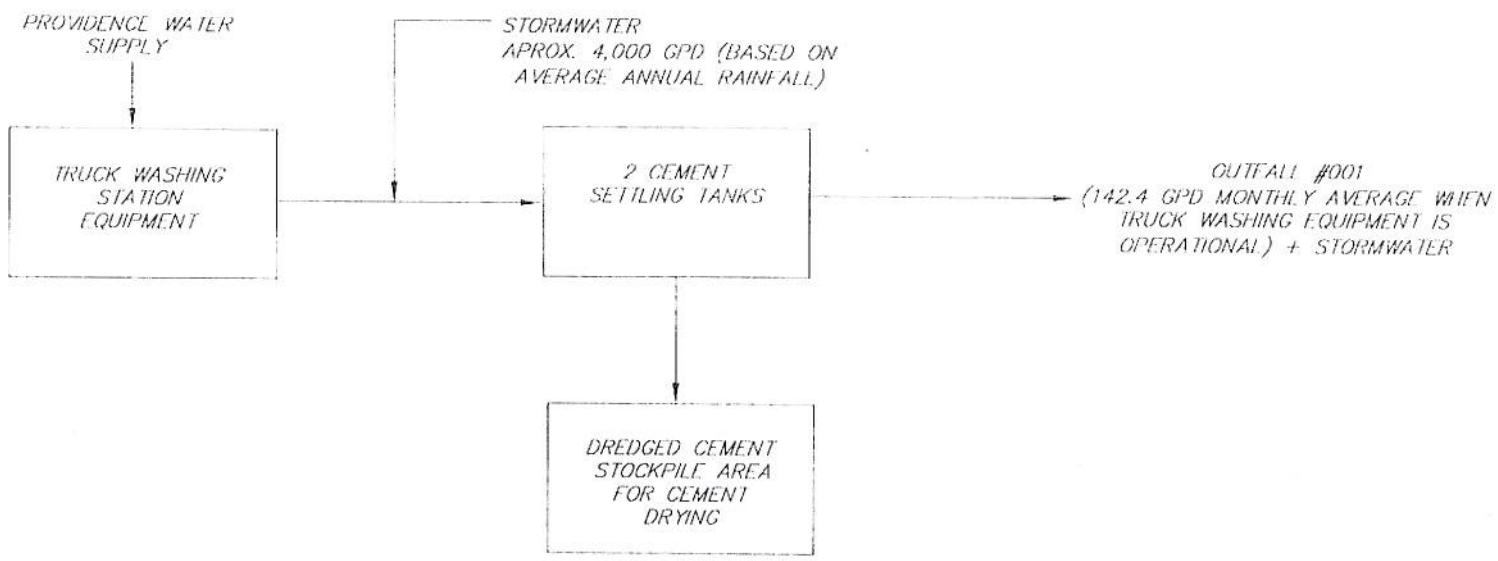
AVERAGE EFFLUENT CHARACTERISTICS AT POINT OF DISCHARGE

PARAMETER	AVERAGE[1]	MAXIMUM[1]
FLOW (GPD), AVERAGE MONTHLY	250	404
FLOW (GPD), MAXIMUM DAILY	404	543
TSS (LBS/DAY)	0.0122	0.0245
TSS (MG/L) AVERAGE MONTHLY	33	82
TSS (MG/L) MAXIMUM DAILY	33	82
SETTLEABLE SOLIDS (ML/L)	0.6	0.6
pH Influent (s.u.)	10.8 (Minimum)	13.8 (Maximum)
pH Effluent (s.u.)	10.9 (Minimum)	12.3 (Maximum)
pH Change (s.u.)	0.5	0.9

[1] Data reflects Discharge Monitoring Report data submitted from May 1, 2005 to September 1, 2010.

ATTACHMENT B

Lehigh Northeast Cement Company
25 Terminal Road, Providence, RI Facility
Flow Schematic



NOTE: FLOWS PROVIDED WERE TAKEN FROM DMR DATASHEET FOR THE PERIOD OF JANUARY 2008 THROUGH JUNE 2008.

FUSS & O'NEILL
Discipline to Deliver

LEHIGH NORTHEAST CEMENT COMPANY
FORM 2C - SCHEMATIC OF WATER FLOW
TERMINAL ROAD FACILITY
PROVIDENCE RHODE ISLAND

ATT.

AUTHORIZATION TO DISCHARGE UNDER THE
RHODE ISLAND POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of Chapter 46-12 of the Rhode Island General Laws, as amended,

Fox Island LLC
50 Park Row West, Suite 113
Providence, RI 02903

is authorized to discharge from a facility located at

Fox Island
North Kingstown, RI

to receiving waters named

West Passage of Narragansett Bay

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

This permit shall become effective on _____.

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

This permit supersedes the permit issued on September 27, 2005.

This permit consists of 4 pages in Part I including effluent limitations, monitoring requirements, etc. and 10 pages in Part II including General Conditions.

Signed this day of , 2010.

DRAFT

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

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

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

Effluent Characteristic	Discharge Limitations					Monitoring Requirement	
	Quantity - lbs./day		Concentration - specify units				
	Average Monthly	Maximum Daily	Average Monthly *(Minimum)	Average Weekly *(Average)	Maximum Daily *(Maximum)	Measurement Frequency	Sample Type
Flow	6240 GPD					1/Quarter	Recorder[1]

[1]Flow shall be determined by taking an initial flow totalizer reading on the first day of the quarter and a final totalizer reading on the last day of the quarter, using the difference between these two readings as the total flow over the quarter, and dividing the total flow by the total number of calendar days during the quarter. This final value will be the average flow per day. The totalizer must be installed on the discharge line.

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

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: Outfall 001A (the brine discharge from the Newport 1000 Water Maker).

2. a. The discharge shall not cause visible discoloration of the receiving waters.

   b. The effluent shall contain neither a visible oil sheen, foam, nor floating solids at any time.

3. All existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:

   a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

      (1) One hundred micrograms per liter (100 ug/l);

      (2) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitro-phenol; and one milligram per liter (1 mg/l) for antimony;

      (3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 C.F.R. s122.21(g)(7); or

      (4) Any other notification level established by the Director in accordance with 40 C.F.R. s122.44(f) and Rhode Island Regulations.

   b. That any activity has occurred or will occur which would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

      (1) Five hundred micrograms per liter (500 ug/l);

      (2) One milligram per liter (1 mg/l) for antimony;

      (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 C.F.R. s122.21(g)(7); or

      (4) Any other notification level established by the Director in accordance with 40 C.F.R. s122.44(f) and Rhode Island Regulations.

   c. That they have begun or expect to begin to use or manufacture as an intermediate or final product or by-product any toxic pollutant which was not reported in the permit application.

4. The permittee is not authorized to use any chemical additive(s)/cleaner(s) in the operation of the desalination system. The permittee shall obtain Department approval prior to using any additive(s)/cleaner(s).

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

B. MONITORING AND REPORTING

1. Monitoring

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

2. Reporting

Monitoring results obtained during the previous calendar year shall be summarized and reported on Discharge Monitoring Report (DMR) Forms, postmarked no later than January 15th. A copy of the analytical laboratory report, specifying analytical methods used, shall be included with each report submission.

The first report is due on _____.

Signed copies of these, and all other reports required herein, shall be submitted to:

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

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

STATEMENT OF BASIS

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

RIPDES PERMIT NO.

RI0023736

NAME AND ADDRESS OF APPLICANT:

Fox Island LLC
50 Park Row West, Suite 113
Providence, RI 02903

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Fox Island
North Kingstown, RI 02852

RECEIVING WATER:

West Passage of Narragansett Bay

CLASSIFICATION:

SA

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

The above named applicant has applied to the Rhode Island Department of Environmental Management for reissuance of a RIPDES Permit to discharge into the designated receiving water. The applicant's discharge consists of brine from a reverse osmosis desalination system, used to provide potable water to an individual residence and catering building.

II. Limitations and Conditions

The effluent limitations of the permit, the monitoring requirements and any implementation schedule (if required) may be found in the draft permit.

III. Permit Basis and Explanation of Effluent Limitation Derivation

The applicant has installed a package desalination system at a residential home located on Fox Island with the sole purpose of providing potable water for the main residence and catering building to supplement water from the existing shallow fresh water well. The desalination unit is owned and operated by the applicant, who is also the homeowner, and is located at Fox Island off the coast of

North Kingstown, Rhode Island. The discharge to the West Passage of Narragansett Bay consists of brine that has been concentrated by the reverse osmosis desalination system.

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

Development of RIPDES permit limitations is a multi-step process consisting of: determining if Federal effluent guidelines apply; calculation of allowable discharge levels based on background data and available dilution; comparing existing and proposed limits; comparing discharge data to proposed limits; and developing interim limits as appropriate. A description of these steps is presented below.

Water Quality Based Permit Limitations

Mixing Zones and Dilution Factors:

In order to evaluate the need for water quality based limits, it is necessary to determine the mixing which occurs in the immediate vicinity of the discharge (initial dilution). It has been determined that mixing zones and corresponding dilution factors are acceptable for the proposed desalination system.

The size of the acute mixing zone was determined using the EPA's recommended criteria from the "Technical Support Document for Water Quality-based Toxics Control" (TSD). EPA's TSD indicates that the most stringent of the following criteria should be used:

a) The CMC must be met within 10% of the distance from the edge of the outfall to the edge of the regulatory mixing zone. This is dependent upon the size of the regulatory (chronic) mixing zone. Since the EPA has not provided specific guidance regarding the sizing of chronic mixing zones, this criteria was not considered when evaluating the size of the acute mixing zone.

b) The CMC must be met within a distance of fifty times (50x) the discharge length scale in any spatial direction. The discharge length scale equals the square root of the cross-sectional area of the discharge outlet. For a 1" diameter outfall pipe:

$$Radius = 50 * \sqrt{(\tfrac{\pi}{4})(1'' * \tfrac{.3048\,m}{12''})^2} = 1.13\,meters$$

This criteria yields an acute mixing zone radius of 1.13 meters.

c) The CMC must be met within a distance of five times (5x) the local water depth in any horizontal direction. Using a local water depth of 9.84 feet (3 meters):

$$Radius = 5 * 9.84\,ft * (\frac{.3048\,m}{1\,ft}) = 15\,meters$$

This criteria gives an acute mixing zone radius of 15 meters.

The most stringent of the above criteria would be condition b, an acute mixing zone radius of 1.13 meters.

By using the CORMIX mixing zone model to model the dilution that would be achieved at a distance of 1.13 meters from the discharge, it was determined that a dilution of 6.5:1 would be realized. Due to the fact that the reverse osmosis unit operates on the principal of osmotic pressure to allow water to pass through the reverse osmosis membrane and will only concentrate any background "contaminants" (e.g., salts, minerals, and other ions, etc.) in the brine discharge, it does not add any new pollutants to the discharge. Therefore, to determine the resulting increase in instream pollutant concentrations that could be expected at the edge of the acute mixing zone, a mass balance calculation was used. Assuming a background concentration of 31.0 parts per thousand (ppt) and using a dilution factor of 6.5:1, it was determined that there would be a 2.06% increase in background concentration at the edge of the acute mixing zone.

Rule 8.D.1.g, of the Rhode Island Water Quality Regulations, identifies four minimum narrative criteria which must be met by all non-thermal mixing zones. At a minimum, when evaluating the size of chronic mixing zones, DEM policy has been to follow the thermal mixing zone requirement of a zone of safe passage greater than or equal to three-quarters (3/4) of the width of the river, stream or estuary. This would result in a mixing zone width of 750 meters, based on a total width of 3000 meters. However, criteria a, noted above, limits the chronic mixing zone to being 10x that of the acute mixing zone. Therefore, the DEM evaluated dilutions achieved within a chronic mixing zone limited to 10x the radius of the acute mixing zone or 11.3 meters.

By using the CORMIX mixing zone model to model the dilution that would be achieved at a distance of 11.3 meters from the discharge, it was determined that a dilution of 191.9:1 would be realized. Again, to determine the resulting increase in instream pollutant concentrations that could be expected at the edge of the chronic mixing zone, a mass balance calculation was used. Assuming a background concentration of 31.0 ppt and using a dilution factor of 191.9:1, it was determined that there would be a 0.08% increase in background concentration at the edge of the chronic mixing zone.

It should be noted that the calculated percent increase in background concentrations were conservative. The following elements of conservatism were built into the calculations: 1) It was assumed that the desalination unit would reject 100% of the background contaminants; 2) It was assumed that the desalination unit would have to produce 960 gallons per day, when in actuality average household water usage is estimated to be 300 gallons per day; and 3) Conservative settings (e.g., wind speed, receiving water velocity, etc.) were used in the CORMIX model. All of these conservative assumptions have the effect of limiting dilution and increasing the calculated percent increase in instream concentrations. Therefore, the calculated percent increases are considered to be "worst case" values.

In accordance with 40 CFR Part 122.4(d)(1)(iii), it is only necessary to establish limitations for those pollutants in the discharge which have the reasonable potential to cause or contribute to the exceedance of the in-stream criteria. As a result of the low calculated percent increases in background concentrations and the high degree of conservatism, it has been determined that water quality-based permit limits are not necessary for this discharge since it will not have the reasonable potential to cause an exceedance of the in-stream criteria.

The permit prohibits the use of chemical additives (used for cleaning, preservation, or any other purposes) without prior written approval from the Department per Part I.A.4.

Provided in Attachment A is the mass balance spreadsheet used to determine the percent increases in background concentrations at the edges of the acute and chronic mixing zones.

Antidegradation

The RIDEM document entitled "Policy on the Implementation of the Antidegradation Provisions of the Rhode Island Water Quality Regulations August 6, 1997" (the Policy) establishes four tiers of water quality protection:

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

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

Tier 2½. Where high quality waters constitute Special Resource Protection Waters SRPWs[1], there shall be no measurable degradation of the existing water quality necessary to protect the characteristics which cause the waterbody to be designated a SRPW. The new or increased discharge or activity will not be allowed unless the applicant can provide adequate evidence that specific pollution controls and/or other mitigation measures will completely eliminate any measurable impacts to the water quality necessary to protect the characteristics that cause the waterbody to be designated a SRPW. Notwithstanding that all public drinking water supplies are SRPWs, public drinking water suppliers may undertake temporary and short-term activities within the boundary perimeter of a public drinking water supply impoundment for essential maintenance or to address emergency conditions in order to prevent adverse effect on public health or safety. These activities must comply with the requirements set fourth in Tier 1 and Tier 2.

Tier 3. Where high quality waters constitute an Outstanding Natural Resource ONRWs[2], that water quality shall be maintained and protected. The State may allow some limited activities that result in temporary and short-term changes in the water quality of an ONRW. Such activities must not permanently degrade water quality or result in water quality lower than necessary to protect the existing uses in the ONRW.

In terms of the applicability of Tier 2 of the Policy, a water body is assessed as being high quality on a parameter-by-parameter basis. In accordance with Part II of the Policy, "Antidegradation applies to all new or increased projects or activities which may lower water quality or affect existing water uses, including but not limited to all 401 Water Quality Certification reviews and any new, reissued, or modified RIPDES permits." Part VI.A of the Policy indicates that it is not applicable to activities which result in insignificant (i.e.: short-term minor) changes in water quality and that significant changes in water quality will only be allowed if it is necessary to accommodate important economic and social development in the area in which the receiving waters are located (important benefits demonstration). Part VI.B.4 of the Policy states that: "Theoretically, any new or increased discharge or activity could lower existing water quality and thus require the important benefits demonstration.

[1]SRPWs are surface waters identified by the Director as having significant recreational or ecological uses.

[2]ONRWs are a special subset of high quality water bodies, identified by the State as having significant recreational or ecological water uses.

However, RIDEM will: 1) evaluate applications on a case-by-case basis, using BPJ and all pertinent and available facts, including scientific and technical data and calculations as provided by the applicant; and 2) determine whether the incremental loss is significant enough to require the important benefits demonstration described below. [If not then as a general rule RIDEM will allocate no more than 20%.] Some of the considerations which will be made to determine if an impact is significant in each site specific decision are: 1) percent change in water quality parameter value and their temporal distribution; 2) quality and value of the resource; 3) cumulative impact of discharges and activities on water quality to-date; 4) measurability of the change; 5) visibility of the change; 6) impact on fish and wildlife habitat; and 7) impact on potential and existing uses. As a general guide, any discharge or activity which consumes greater than 20% of the remaining assimilative capacity (See Section VI.B.2) will be considered a significant impact and will be required to demonstrate important economic or social benefits to justify the activity (See Section VI.C. below). However, on a case-by-case basis, any proposed percent consumption of the remaining assimilative capacity may be deemed significant and invoke full requirements to demonstrate important economic or social benefits."

Based on the analysis presented above, calculating the percent increase in background concentration as being much less than 20%, the RIDEM has determined that the quality of the receiving water shall be maintained and protected. Therefore, it has been determined that all permit limitations are consistent with the Rhode Island Antidegradation policy.

There are currently no technology-based limits for this discharge. Effluent monitoring requirements have been specified in accordance with RIPDES regulations as well as 40 CFR 122.41 (j), 122.44 (i), and 122.48 to yield data representative of the discharge. The remaining general and specific conditions of the permit are based on the RIPDES regulations as well as 40 CFR Parts 122 through 125 and consist primarily of management requirements common to all permits.

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

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

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

V. **DEM Contact**

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

Aaron Mello
RIPDES Program
Office of Water Resources
Department of Environmental Management
235 Promenade Street
Providence, Rhode Island 02908
Telephone: (401) 222-6820x7405

11/3/10
Date

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

Attachment A

Fox Island LLC - Desalination Discharge

Mass Balance Calculations

Initial Condition Assumption:

Assume inlet concentration = 31000.00 ppm

From Application:

Intake Flow =	5	gpm	=	7200	gpd
Discharge Flow =	4.33	gpm	=	6235.2	gpd
Clean Water Used =	0.67	gpm	=	964.8	gpd

Assume 100% Rejection:

Discharge Concentration = 35796.77 ppm

Acute Mixing Zone

From EPA Technical Support Document:

Acute Mixing Zone (AMZ) = 5 * Local Water Depth or 50 * Discharge Length Scale

Discharge Length Scale = (3.174*Discharge Pipe's Radius^2)^.5

Local Water Depth =	9.843	feet	=	3	meters
Discharge Pipe's Radius =	0.5	inches	=	0.0126994	meters
AMZ =	15	meters	or	1.13	meters
Most Stringent AMZ =	1.13	meters			

From CORMIX Mixing Zone Model

At a AMZ of 1.13 meters, Dilution =	6.5	: 1
Instream Concentration at the Edge of the AMZ =	31639.569	ppm

Expected Increase in Concentration at Edge of AMZ

Background Concentration =	31000	ppm
AMZ Concentration =	31639.569	ppm
Percent Increase =	2.06	%

Chronic Mixing Zone

From EPA Technical Support Document:

Chronic Mixing Zone (CMZ) = 1/4 * Estuary Width or 10 * Acute Mixing Zone

Local Water Width =	1.864205	miles	=	3000	meters
Acute Mixing Zone =	1.13	meters			
CMZ =	750	meters	or	11.31	meters
Most Stringent CMZ =	11.3	meters			

From CORMIX Mixing Zone Model

At a CMZ of 11.3 meters, Dilution =	191.9	: 1
Instream Concentration at the Edge of the CMZ =	31024.867	ppm

Expected Increase in Concentration at Edge of CMZ

Background Concentration =	31000.00	ppm
CMZ Concentration =	31024.867	ppm
Percent Increase =	0.08	%

AUTHORIZATION TO DISCHARGE UNDER THE
RHODE ISLAND POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of Chapter 46-12 of the Rhode Island General Laws, as amended,

Zions First National Bank
One South Main Street, Suite 500
Salt Lake City, Utah 84133

is authorized to discharge from a facility located at

761 Great Road
North Smithfield, Rhode Island

to receiving waters named

Branch River

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

This permit shall become effective on _____.

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

This permit supersedes the permit issued on September 15, 2004 and modified on August 29, 2005.

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

Signed this day of , 2010.

DRAFT

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

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

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

Effluent Characteristic	Discharge Limitations					Monitoring Requirement	
	Quantity - lbs./day		Concentration - specify units				
	Average Monthly	Maximum Daily	Average Monthly *(Minimum)	Average Weekly *(Average)	Maximum Daily *(Maximum)	Measurement Frequency	Sample Type
Flow	0.004 MGD	--- MGD				Continuous	Recorder
BOD_5	1.00		30 mg/l	45 mg/l	50 mg/l	1/Week	24-Hr. Comp.
BOD_5 -% Removal	85 %					1/Month	Calculated
TSS	1.00		30 mg/l	45 mg/l	50 mg/l	1/Week	24-Hr. Comp.
TSS - % Removal	85 %					1/Month	Calculated
Settleable Solids[1]			--- ml/l	--- ml/l	--- ml/l	1/Day	Grab

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

All BOD_5 and TSS samples shall be taken on the influent and effluent with appropriate allowances for hydraulic detention (flow-through) time.
Sampling for BOD_5, TSS and SS shall be performed Monday through Friday.

[1] Settleable solids monitoring has been included as a process-control parameter to aid in the assessment of the operation of the plant but no effluent limit has been established.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: Outfall 001A (final discharge from the treatment facility prior to discharge into the Branch River).

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

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

Effluent Characteristic	Discharge Limitations					Monitoring Requirement	
	Quantity - lbs./day		Concentration - specify units				
	Average Monthly	Maximum Daily	Average Monthly *(Minimum)	Average Weekly *(Average)	Maximum Daily *(Maximum)	Measurement Frequency	Sample Type
Fecal Coliform			200 MPN[1] 100 ml	400 MPN 100 ml	400 MPN 100 ml	1/Week	Grab
Total Residual Chlorine (TRC)[2]			1.06 mg/l		1.84 mg/l	1/Day	Grab
pH			(6.5 S.U)		(9.0 S.U)	2/Day	Grab

[1]The Geometric Mean shall be used to obtain the "monthly average."

[2]Compliance with these limitations shall be determined by taking one (1) grab sample per day, Monday - Friday (except holidays). The maximum daily and average monthly values are to be computed from the grab sample results for each day. The following methods may be used to analyze the grab samples: (1) DPD spectrophotometric, EPA No. 330.5 or Standard Methods (18th Edition) No.4500-Cl G; (2) DPD Titrimetric, EPA No. 330.4 or Standard Methods (18th Edition) No. 4500-Cl F; (3) Amperometric Titration, EPA No. 330.1 or Standard Methods (18th Edition) No. 4500-Cl D or ASTM No. D1253-86(92); (4) Iodometric Direct Titration, EPA No. 330.3 or Standard Methods (18th Edition) No. 4500-Cl B; (5) Iodometric Back Titration (either end-point), EPA No. 330.2 or Standard Methods (18th Edition) No. 4500-Cl C.

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

Sampling for Fecal Coliform, pH and Chlorine Residual shall be performed Monday-Friday.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: Outfall 001A (final discharge from the treatment facility prior to discharge into the Branch River).

PART I

A. **EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

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

Effluent Characteristic	Discharge Limitations					Monitoring Requirement	
	Quantity - lbs./day		Concentration - specify units				
	Average Monthly	Maximum Daily	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
Phosphorus, Total			--- mg/l		--- mg/l	1/Quarter	24-Hr. Comp.
TKN			--- mg/l		--- mg/l	1/Quarter	24-Hr. Comp.
Nitrate, Total (as N)			--- mg/l		--- mg/l	1/Quarter	24-Hr. Comp.
Nitrite, Total (as N)			--- mg/l		--- mg/l	1/Quarter	24-Hr. Comp.
Nitrogen, Total (TKN + Nitrate + Nitrite, as N)			--- mg/l		--- mg/l	1/Quarter	Calculated
Ammonia, Total (as N)			--- mg/l		--- mg/l	1/Quarter	24-Hr. Comp.

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

Samples taken in compliance with the monitoring requirements specified above shall be taken Monday through Friday at the following locations: Outfall 001A (final discharge from the treatment facility prior to discharge into the Branch River).

PART I

A. **EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

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

Effluent Characteristic	Discharge Limitations					Monitoring Requirement	
	Quantity - lbs./day		Concentration - specify units				
	Average Monthly	Maximum Daily	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
Cyanide[1]			402 ug/l[5]		1701 ug/l	1/Year	Grab
Nickel, Total			1248 ug/l		11227 ug/l	1/ Year	24-Hr. Comp.
Aluminum, Total			6727 ug/l		57989 ug/l	1/ Year	24-Hr. Comp.
Lead, Total			42.1 ug/l[5]		1081 ug/l	1/ Year	24-Hr. Comp.
Copper, Total			221 ug/l[5]		293 ug/l	1/ Year	24-Hr. Comp.
Zinc, Total			2862 ug/l[5]		2862 ug/l	1/ Year	24-Hr. Comp.
Cadmium, Total			7.5 ug/l[5]		40.3 ug/l[5]	1/ Year	24-Hr. Comp.
Ceriodaphnia Sp. LC_{50}[2]					100% or Greater[3]	1/Year	24-Hr. Comp.
Pimephales promelas LC_{50}[2]					100% or Greater[3]	1/Year	24-Hr. Comp.

[1] Compliance with these limitations shall be determined by taking a grab sample, preserving it immediately upon collection, and analyzing it for available Cyanide.

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

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

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: Outfall 001A (final discharge from the treatment facility prior to discharge into the Branch River).

5. The pH of the effluent shall not be less than 6.5 nor greater than 9.0 standard units at any time, unless these values are exceeded due to natural causes or as a result of the approved treatment processes.

6. The discharge shall not cause visible discoloration of the receiving waters.

7. The effluent shall contain neither a visible oil sheen, foam, nor floating solids at any time.

8. The permittee's treatment facility shall maintain a minimum of 85 percent removal of both total suspended solids and 5-day biochemical oxygen demand. The percent removal shall be based on monthly average values.

9. When the effluent discharged for a period of 90 consecutive days exceeds 80 percent of the designed flow, the permittee shall submit to the permitting authorities a projection of loadings up to the time when the design capacity of the treatment facility will be reached, and a program for maintaining satisfactory treatment levels consistent with approved water quality management plans.

10. All existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:

    a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

        (1) One hundred micrograms per liter (100 ug/l);

        (2) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitro-phenol; and one milligram per liter (1 mg/l) for antimony;

        (3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 C.F.R. s122.21(g)(7); or

        (4) Any other notification level established by the Director in accordance with 40 C.F.R. s122.44(f) and Rhode Island Regulations.

    b. That any activity has occurred or will occur which would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

        (1) Five hundred micrograms per liter (500 ug/l);

        (2) One milligram per liter (1 mg/l) for antimony;

        (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 C.F.R. s122.21(g)(7); or

        (4) Any other notification level established by the Director in accordance with 40 C.F.R. s122.44(f) and Rhode Island Regulations.

c. That they have begun or expect to begin to use or manufacture as an intermediate or final product or by-product any toxic pollutant which was not reported in the permit application.

11. The permittee shall analyze its effluent for the EPA Priority Pollutants once every five (5) years. The results of these analyses shall be submitted to the Department of Environmental Management one hundred eighty (180) days prior to the expiration date of this permit with the re-application. All sampling and analysis shall be done in accordance with EPA Regulations, including 40 CFR, Part 136; grab and composite samples shall be taken as appropriate.

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

B. BIOMONITORING REQUIREMENTS AND INTERPRETATION OF RESULTS

1. General

Beginning on the effective date of the permit, the permittee shall perform two (2) acute toxicity tests, one (1) for daphnids and one (1) for fathead minnows, per year on effluent collected from discharge outfall 001A. The permittee shall conduct the tests during dry weather periods (no rain within forty-eight (48) hours prior to or during sampling unless approved by RIDEM) according to the following test frequency and protocols. Acute toxicity data shall be reported as outlined in Section I.B.10. The State may require additional screening, range finding, definitive acute or chronic bioassays as deemed necessary based on the results of the initial bioassays required herein. Indications of toxicity could result in requiring a Toxicity Reduction Evaluation (TRE) to investigate the causes and to identify corrective actions necessary to eliminate or reduce toxicity to an acceptable level.

2. Test Frequency

On an annual basis the permittee shall conduct 48 hour acute definitive toxicity tests on the two species listed below, for a total of two (2) acute toxicity tests per year. This requirement entails performing the two-species testing as follows:

Species	Test Type Two Species Test (Four Times Annually)	Frequency
Daphnid (Ceriodaphnia dubia) OR (Daphnid pulex)	Definitive 48-Hour Acute Static (LC_{50})	Quarterly
Fathead Minnows (Pimephales promelas)	Definitive 48-Hour Acute Static (LC_{50})	Quarterly

3. Testing Methods

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

4. Sample Collection

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

A: Chemical Analysis
B: Acute Toxicity Testing

All samples held overnight shall be refrigerated at 4°C.

5. Dilution Water

Dilution water used for freshwater acute toxicity analyses should be of sufficient quality to meet minimum acceptability of test results (see Sections I.B.6 and I.B.7). For both species, natural freshwater shall be used as the dilution water. This water shall be collected from the Pawtucket Reservoir. If this natural freshwater diluent is found to be, or suspected to be toxic or unreliable, an alternate or laboratory source of water of known quality with a hardness and pH similar to that of the receiving water may be substituted AFTER RECEIVING WRITTEN APPROVAL FROM RIDEM

6. Effluent Toxicity Test Conditions for the Daphnids (Ceriodaphnia dubia and Daphnia pulex)[1]

a.	Test Type	48-Hour Static Acute Definitive
b.	Temperature (C)	25° ± 1° C
c.	Light Quality	Ambient laboratory illumination
d.	Photoperiod	16 hours light, 8 hours dark
e.	Test Chamber Size	Minimum 30 ml
f.	Test Solution Volume	Minimum 25 ml
g.	Age of Test Organisms	1-24 Hours
h.	No. Daphnids per Test Chamber	5
i.	Number of Replicate Test Chamber Per Concentration	4
j.	Total No. Daphnids Per Test Concentration	20
k.	Feeding Regime	None
l.	Aeration	None
m.	Dilution Water	Pawtucket Reservoir, see Section 5.
n.	Dilutions	Five (5) dilutions plus a control: 100%, 50%, 25%, 12.5%, 6.25% and 0% effluent.

o.	Effect Measures and Test Duration	Mortality-no movement of body or appendages on gentle prodding, 48-hour LC_{50} and NOAEL.
p.	Test Acceptability	90% or greater survival of test organisms in control solution.
q.	Sampling Requriements	Samples are collected and used within 24 hours after the last sample of the composite is collected.
r.	Sample Volume Required	Minimum 2 liters/day

[1]Adapted from EPA/600/4-85/013

7. Effluent Toxicity Conditions for the Fathead Minnow (Pimephales promelas)[1]

a.	Test Type	48-hour Static Acute Definitive
b.	Temperature	$25^{\circ} \pm 1^{\circ}C$
c.	Light Quality	Ambient laboratory illumination
d.	Photoperiod	16 hours light, 8 hours dark
e.	Test Chamber Size	250-1000 ml
f.	Test Solution Volume	Minimum 200 ml/replicate
g.	Age of Fish	1 - 14 Days
h.	No. Fish Per Test Chamber	10 (Not to exceed loading limits).
i.	No. of Replicate Test Chambers Per Concentration	2
j.	Total No. of Fish Per Test Concentration	20
k.	Feeding Regime	None
l.	Aeration	None, unless DO concentration falls below 40% of saturation at which time gentle single bubble aeration should be started.
m.	Dilution Water	Pawtucket Reservoir, as discussed above.
n.	Number of Dilutions	Five dilutions plus a control: 100%, 50%, 25%, 12.5%, 6.25% and 0% effluent.
o.	Effect Measured and Test Duration	Mortality - no movement, 48-hour LC_{50} and NOAEL.
p.	Test Acceptability	90% or greater survival of test organisms in control solution.

q.	Sampling Requirements	Samples are collected and used within 24 hours after the last sample of the composite is collected.
r.	Sample Volume Required	Minimum 4 liters

[1]Adapted from EPA/600/4-85/013

8. Chemical Analysis

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

Parameter	Effluent	Freshwater Diluent	Minimum Detection Limit (mg/l)
Hardness[1]	X	X	0.5
Alkalinity	X	X	2.0
pH	X	X	---
Specific Conductance	X	X	---
Total Solids and Suspended Solids	X	X	---
Ammonia	X	X	0.1
Total Organic Carbon	X		0.5
Cyanide	X		0.01

[1]Method 314A (Hardness by Calculation) from APHA (1985) Standard Methods for the Examination of Water and Wastewater. 16th Edition

Total Metals	Effluent	Freshwater Diluent	Minimum Detection Limit (µg/l)
Total Nickel	X	X	1.0
Total Aluminum	X	X	20.0
Total Lead	X	X	1.0
Total Copper	X	X	1.0
Total Zinc	X	X	5.0
Total Cadmium	X	X	0.1

9. Toxicity Test Report Elements

A report of results will include the following:

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

- General description of tests: age of test organisms, origin, dates and results of standard toxicant tests (quality assurance); light and temperature regime; dilution water description; other information on test conditions if different than procedures recommended.

- The method used to adjust the salinity of the effluent must be reported.

- All chemical and physical data generated (include detection limits).

- Raw data and bench sheets.

- Any other observations or test conditions affecting test outcome.

Toxicity test data shall include the following:

- Survival for each concentration and replication at time 24 and 48 hours.

- LC_{50} and 95% confidence limits shall be calculated using one of the following methods in order of preference: Probit, Trimmed Spearman Karber, Moving Average Angle, or the graphical method. All printouts (along with the name of the program, the date, and the author(s)) and graphical displays must be submitted. When data is analyzed by hand, worksheets should be submitted. The report shall also include the No Observed Acute Effect Level (NOAEL) which is defined as the highest concentration of the effluent (in % effluent) in which 90% or more of the test animals survive.

- The Probit, Trimmed Spearman Karber, and Moving Average Angle methods of analyses can only be used when mortality of some of the test organisms are observed in at least two (2) of the (percent effluent) concentrations tested (i.e., partial mortality). If a test results in a 100% survival and 100% mortality in adjacent treatments ("all or nothing" effect), an LC_{50} may be estimated using the graphical method.

10. Reporting of Bioassay Testing

Bioassay reports shall be submitted, no later than January 15th for the previous calendar year, to:

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

C. SLUDGE

The permittee shall conform and adhere to all conditions, practices and regulations as contained in the State of Rhode Island Rules and Regulations for the Treatment, Disposal, Utilization and Transportation of Sewage Sludge.

D. DETECTION LIMITS

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

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

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

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

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

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

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

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

LIST OF TOXIC POLLUTANTS

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

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

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

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

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

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

OTHER TOXIC POLLUTANTS

	MDL ug/l (ppb)
Antimony, Total	3.0
Arsenic, Total	1.0
Beryllium, Total	0.2
Cadmium, Total	0.1
Chromium, total	1.0
Chromium, Hexavalent***	20.0
Copper, Total	1.0
Lead, Total	1.0
Mercury, Total	0.5
Nickel, Total	1.0
Selenium, Total	2.0
Silver, Total	0.5
Thallium, Total	1.0
Zinc, Total	5.0
Asbestos	**
Cyanide, Total	10.0
Phenols, Total***	50.0
TCDD	**
MTBE (Methyl Tert Butyl Ether)	1.0

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

NOTE:

The MDL for a given analyte may vary with the type of sample. MDLs which are determined in reagent water may be lower than those determined in wastewater due to fewer matrix interferences. Wastewater is variable in composition and may therefore contain substances (interferents) that could affect MDLs for some analytes of interest. Variability in instrument performance can also lead to inconsistencies in determinations of MDLs.

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

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

E. MONITORING AND REPORTING

1. Monitoring

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

2. Reporting

Monitoring results obtained during the previous month shall be summarized and reported on Discharge Monitoring Report (DMR) Forms, postmarked no later than the 15th day of the month following the completed reporting period. A copy of the analytical laboratory report, specifying analytical methods used, shall be included with each report submission. The first report is due on January 15, 2005. Signed copies of these, and all other reports required herein, shall be submitted to:

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

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

STATEMENT OF BASIS

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

RIPDES PERMIT NO. **RI0000566**

NAME AND ADDRESS OF APPLICANT:

Zions First National Bank
One South Main Street, Suite 500
Salt Lake City, Utah 84133

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

761 Great Road
North Smithfield, Rhode Island

RECEIVING WATER: **Branch River**

CLASSIFICATION: **B**

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

The above-named applicant has applied to the Rhode Island Department of Environmental Management (DEM) for reissuance of a RIPDES permit to discharge into the designated receiving water. The discharge permit was previously issued to ATP Manufacturing, LLC, which went out of business and stopped all activities at the site on May 14, 2009. Since all activities at the site ceased on May 14, 2009, the facility has not discharged since this date. Zions Bank took over ownership of the facility as part of foreclosure actions and, although the facility remains inactive and does not have a discharge, Zions Bank would like to have the DEM reissue the permit in order to maintain the value of the site. The reissuance of the permit is necessary since the facility has no other means for the disposal of sanitary wastewater.

The current permit expired on December 1, 2009 and, because a timely and complete reapplication was not submitted, the authorization to discharge expired on December 1, 2009. However, as indicated above, the facility has not discharged since the permit expired.

The facility is a package wastewater treatment plant located in North Smithfield, Rhode Island that treats wastewater from the facility located at 761 Great Road. Although the site was formerly an industrial facility, the wastewater treatment plant only treated sanitary wastewater. The discharge of industrial wastewater was not authorized under the previous permit and is not being authorized under this permit. Therefore, the only discharge authorized by this permit consists entirely of treated sanitary wastewater.

II. Limitations and Conditions

The proposed effluent limitations and monitoring requirements may be found in the draft permit. Historical average effluent concentrations may be found in attachment A.

III. Permit Basis and Explanation of Effluent Limitation Derivation

Facility

The wastewater treatment plant located at 761 Great Road, North Smithfield, Rhode Island is an advanced wastewater treatment facility that is permitted to treat 4,000 gallons per day (gpd), equivalent to 0.004 million gallon per day (MGD), of sanitary wastewater. The discharge, which flows into the Branch River consists entirely of treated sanitary wastewater and the discharge of industrial wastewater is not authorized by this permit. The wastewater treatment facility consists of settling, aeration, BioMatrix filtration, and chlorine disinfection. The facility was previously owned and operated by ATP Manufacturing, LLC, which ceased operations at the site on May 14, 2009. Zions Bank took over ownership of the facility as part of foreclosure actions and, although the facility remains inactive and does not have a discharge, Zions Bank would like to have the DEM reissue the permit since the facility has no other means for the disposal of sanitary wastewater. Zions Bank is in the process of trying to sell the facility and intends on transferring the permit to the new owner in accordance with the Regulations for the Rhode Island Pollutant Discharge Elimination System (RIPDES Regulations).

General Requirements

Development of RIPDES permit limitations is a multi-step process consisting of the following steps: identifying applicable technology-based limits; establishing Best Professional Judgment (BPJ) limits in accordance with Section 402 of the CWA; calculating allowable water-quality based limits based on instream criteria, background data and available dilution; and assigning the most stringent of these three limits as the final discharge limitations.

Technology-Based Effluent Limits

There are no Federal Effluent Limitation Guidelines (ELGs) that apply to this facility. Therefore, in the absence of technology-based ELGs, the DEM established permit limits based on BPJ and water quality.

BPJ-Based Effluent Limitations

Conventional Pollutants

Although the DEM has not promulgated effluent guidelines for privately owned treatment plants, the average monthly and average weekly Biochemical Oxygen Demand (BOD_5) and Total Suspended Solids (TSS) limitations and their percent removal requirements are based on secondary treatment requirements for publicly owned treatment works (POTWs) as specified in Section 301(b)(1)(B) of the CWA and as defined in 40 CFR 133.102(a)-(c). The maximum daily BOD_5 and TSS limits and the fecal coliform limits are based on Rhode Island requirements for Publicly Owned Treatment Works (POTWs) under Rule 17.04(b) of the RIPDES Regulations and as provided in 40 CFR 123.25. These limits have been assigned based on the DEM's Best Professional Judgment, as described in Section 401(a)(1) of the CWA.

The mass limits for BOD_5 and TSS were calculated using the permitted design flow and the average monthly concentration limits using the following equation:

Mass Limit = (8.34)(Average Monthly Limit in mg/l)(0.04 MGD)

Settleable Solids are a process-control parameter that can aid in the assessment of the operation of the plant but need not be an effluent limit. Therefore, based on BPJ, the permit requirements for Settleable Solids have been set as monitor only.

Nutrients

Based on BPJ, quarterly monitoring for Total Phosphorus, TKN, Total Nitrite, and Total Nitrate will be retained in the draft permit based on provisions of Section 308 of the Clean Water Act. The information submitted by the permittee will continue to establish a database of loadings, which can be used to quantitatively assess the impact of loading and transport of nutrients to the receiving water. This database may provide the basis for future permit limitations.

Water Quality-Based Effluent Limitations

In addition to the BPJ-based limitations established for Outfall 001, water quality-based limits were established for the final discharge based on the freshwater acute and chronic aquatic life criteria and human health criteria specified in Appendix B of the Rhode Island Water Quality Regulations, as amended, using 80% allocation when no background data was available and 90% allocation when background data was available. Since background data was not available, an 80% allocation was used for all pollutants. Aquatic life criteria have been established to ensure the protection and propagation of aquatic life while human health criteria represent the pollutant levels that would not result in a significant risk to public health from ingestion of aquatic organisms. The allowable effluent limitations were established based on the more stringent of the two criteria.

Appendix B of the Water Quality Regulations describes the flows used to determine compliance with the aquatic life criteria, specifying that the design flow to be utilized for aquatic life criteria shall not be exceeded at or above the lowest average 7 consecutive day low flow with an average recurrence frequency of once in 10 years (7Q10). For determination of the 7Q10 flow at ungaged sites, a regression equation is used which describes the relation between the 7Q10 flow at gaging stations and the percentage of the upstream drainage area underlain by coarse-grained stratified drift and till-covered bedrock. Using this procedure, the 7Q10 flow for this site was determined to be 0.592 ft^3/s. The dilution factor (DF) used to establish the allowable water quality based discharge concentrations was then determined using the following equation:

$$DF = \frac{Q_D + Q_{wwtf}}{Q_{wwtf}}$$

Where: DF = Dilution Factor
Q_D = Receiving Water 7Q10 Flow = 0.592 ft^3/s
Q_{wwtf} = Flow at WWTF = 0.004 MGD or 0.006 ft^3/s

For water quality-based limits, the allowable discharge levels were calculated as follows:

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

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

Where: DF = acute or chronic dilution factor = 96.6 from the DF equation

The formula noted above was applied for all pollutants except Total Residual Chlorine (TRC). TRC limits were established in accordance with the DEM's Effluent Disinfection Policy based on a 100% allocation, a zero background concentration, and the dilution factor of 96.648. The 100% allocation factor for TRC was used due to the non-conservative nature of chlorine and the improbability of the receiving water having a detectable background TRC concentration. Using this procedure, the average monthly and daily maximum TRC limits have been set at 1.06 mg/L and 1.84 mg/L.

For toxicity-based ammonia limitations, the Water Quality Regulations include ammonia criteria that are dependent on both pH and temperature. In the absence of site-specific data on the receiving water, the DEM evaluated USGS data for all freshwater rivers in the state for the 1999 water year to determine an appropriate assumption for the temperature and pH of the receiving water. This evaluation resulted in the conservative assumptions of 7.5 S.U. for pH and winter and summer water temperatures of 15°C and 26°C, respectively. The pH and summer temperature were used to determine the acute and chronic criteria for Total Ammonia Nitrogen of 13.3 mg N/L and 2.08 mg N/L, respectively, which translate into discharge limitations of 1,028 mg N/L and 160 mg N/L using the above-mentioned dilution factor and an 80% allocation. The pH and winter temperature were used to determine the acute and chronic criteria for Total Ammonia Nitrogen of 13.3 mg N/L and 4.23 mg N/L, respectively, which translate into the winter discharge limitations of 1,028 mg N/L and 327 mg N/L using the above-mentioned dilution factor and an 80% allocation.

Reasonable Potential

In accordance with 40 CFR 122.4(d)(1)(iii), water quality based effluent limitations are only required for those pollutants in the discharge that have the reasonable potential to cause or contribute to the exceedence of instream criteria. In order to evaluate the need for permit limits, the allowable monthly average (chronic) and allowable maximum daily (acute) discharge concentrations calculated using the above-mentioned equations are compared to the monthly average and maximum daily Discharge Monitoring Report (DMR) data and data that was collected during bioassay testing events from 2006 through 2009 to determine if reasonable potential exists for any pollutants detected in the discharge. Based on this review it was determined that, the only pollutant that has reasonable potential is Total Residual Chlorine. In addition, although historic effluent concentrations did not demonstrate reasonable potential for Total Ammonia, this is only due to the fact that the wastewater treatment plant has a BioMatrix filter that is being operated to remove ammonia. Therefore, the permit includes quarterly monitoring for Total Ammonia to ensure that the BioMatrix filter is being properly operated.

The pH limitations are equivalent to the water quality criteria for freshwater from the RI Water Quality Regulations.

A spreadsheet of the water quality-based limit calculations is presented in Attachment B.

Whole Effluent Toxicity (WET)

Biomonitoring requirements are set forth in 40 CFR 131.11 and in the State's Water Quality Regulations. The previous permit included WET testing requirements for *Ceriodaphnia* and *Pimephales promelas* with quarterly acute testing requirements and LC_{50} limits of ≥100%. The previous permit also allowed for the reduction in the frequency of toxicity testing if the facility achieved four consecutive quarters with results of 100% for the LC50 tests. Since the permit was issued in 2004 the facility was able to meet the conditions necessary to justify a reduction in the monitoring frequency and as a result bioassay testing is being reduced to a frequency of 1/year. Since Cyanide, Total Nickel, Total Aluminum, Total Lead, Total Copper, Total Zinc, and Total Cadmium are typically found in sanitary wastewater and can cause or contribute to toxicity, the permittee is required to monitor for these pollutants on an annual basis as part of the required Toxicity Testing.

Antibacksliding/Antidegradation

The Antibacksliding Provision of the Clean Water Act (found at Section 402(o) and repeated at 40 CFR 122.44(l)) prohibits reissuing a permit containing less stringent effluent limits than the comparable limits from the previous permit. Section 303(d)(4) of the Clean Water Act addresses water quality based antibacksliding in terms of water quality based limits. Since none of the permit limits, both concentration and mass loadings, are less stringent than in the previous permit, antibacksliding regulations are being met. Additionally, the draft permit is being reissued with limitations as stringent, or more stringent, than those in the existing permit with no change to the outfall location or increase in flow. Therefore, as there will be no increase in loadings or flow to the receiving waterbody, no additional antidegradation review is necessary.

Additional Requirements

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

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

The DEM has determined that all permit limitations are consistent with the Rhode Island Antidegradation/Antibacksliding Policy.

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

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

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

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

V. DEM Contact

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

Joseph B. Haberek, P.E.
Principal Sanitary Engineer
Department of Environmental Management
235 Promenade Street
Providence, Rhode Island 02908
Telephone: (401) 222-4700, extension 7715
e-mail: joseph.haberek@dem.ri.gov

11/3/10
Date

Eric A. Beck, P.E.
Supervising Sanitary Engineer
Department of Environmental Management

ATTACHMENT A

DESCRIPTION OF DISCHARGE: treated domestic wastewater.
DISCHARGE: 001A - Treatment Discharge

AVERAGE EFFLUENT CHARACTERISTICS AT POINT OF DISCHARGE OF SELECTED POLLUTANTS:

PARAMETER	MONTHLY AVERAGE	WEEKLY AVERAGE	DAILY MAXIMUM
FLOW (MGD)[1]	0.001078 MGD		0.002453 MGD
BOD_5 (concentration)[1]	4.35 mg/l	7.51 mg/l	7.59 mg/l
BOD_5 (quantity)[1]	0.0369 lbs/d		
BOD_5 - % Removal[1]	98.3 %		
TSS (concentration)[1]	6.65 mg/l	10.95 mg/l	11.01 mg/l
TSS (quantity)[1]	0.0594 lbs/d		5.8 lbs/d
TSS - % Removal[1]	99.1 %		
Settleable Solids[1]	0.1 ml/l	0.1 mL/l	0.1 ml/l
Fecal Coliform[1]	3.42 MPN/100 ml	95.56 MPN/100 ml	95.56 MPN/100ml
Total Residual Chlorine[1]	0.85 mg/l		1.01 mg/l
pH[1]	6.92 S.U. (Minimum)		7.41 S.U. (Maximum)
Phosphorus[1]	5.31 mg/l		5.31 mg/l
TKN[1]	3.13 mg/l		3.13 mg/l
Total Nitrate[1]	35.36 mg/l		35.36 mg/l
Total Nitrite[1]	0.12 mg/l		0.12 mg/l
Total Nitrogen[1]	38.44 mg/l		38.44 mg/l
Total Ammonia[1]	1.76 mg/l		1.76 mg/l
Total Cyanide[2]			<10 ug/l
Total Cadmium[2]			<0.2 ug/l
Total Lead[2]			<1.2 ug/l
Total Silver[2]			<1.0 ug/l
Total Zinc[2]			76.6 mg/l
Total Copper[2]			16.8 mg/l

[1]Data represents the mean of the monthly average, weekly average, and daily maximum data from August 2005 – August 2010

[2]Data represents the mean of the data reported with quarterly toxicity tests from 4th quarter 2006 – 1st quarter 2010

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

	2007 1st qtr.	2nd qtr.	3rd qtr.	4th qtr.	2008 1st qtr.	2nd qtr.	3rd qtr.	4th qtr.	2009 1st qtr.
Ceriodaphnia	100%	100%	100%	100%	100%	100%	100%	100%	100%
Pimephales	100%	100%	100%	100%	100%	100%	100%	100%	100%

ATTACHMENT B: WATER QUALITY-BASED LIMIT CALCULATIONS

CALCULATION OF WATER QUALITY BASED NON-CLASS AA FRESHWATER DISCHARGE LIMITS

FACILITY SPECIFIC DATA INPUT SHEET

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

FACILITY NAME: **Zions Bank (f/k/a ATP Manufacturing)**

RIPDES PERMIT #: **RI0000566**

	DISSOLVED BACKGROUND DATA (ug/L)	ACUTE METAL TRANSLATOR	CHRONIC METAL TRANSLATOR
ALUMINUM	**NA**	**NA**	**NA**
ARSENIC	**NA**	**1**	**1**
CADMIUM	**NA**	**1.002000673**	**0.967000673**
CHROMIUM III	**NA**	**0.316**	**0.86**
CHROMIUM VI	**NA**	**0.982**	**0.962**
COPPER	**NA**	**0.96**	**0.96**
LEAD	**NA**	**0.993001166**	**0.993001166**
MERCURY	**NA**	**0.85**	**0.85**
NICKEL	**NA**	**0.998**	**0.997**
SELENIUM	**NA**	**NA**	**NA**
SILVER	**NA**	**0.85**	**NA**
ZINC	**NA**	**0.978**	**0.986**
AMMONIA (as N)	**NA**		

USE NA WHEN NO DATA IS AVAILABLE

NOTE 1: METAL TRANSLATORS FROM RI WATER QUALITY REGS.

pH =	**7.5** S.U.
HARDNESS =	**25.0** (mg/L as CaCO3)

FLOW DATA	
DESIGN FLOW =	**0.004** MGD
=	0.006 CFS
7Q10 FLOW =	**0.592** CFS
7Q10 (JUNE-OCT) =	**0.592** CFS
7Q10 (NOV-MAY) =	**0.592** CFS
30Q5 FLOW =	**0.592** CFS
HARMONIC FLOW =	**0.592** CFS

DILUTION FACTORS	
ACUTE =	**96.648**
CHRONIC =	**96.648**
(MAY-OCT) =	**96.648**
(NOV-APR) =	**96.648**
30Q5 FLOW =	**96.648**
HARMONIC FLOW =	**96.648**

CALCULATION OF WATER QUALITY BASED NON-CLASS AA FRESHWATER DISCHARGE LIMITS

FACILITY NAME: Zions Bank (f/k/a ATP Manufacturing) RIPDES PERMIT #: RI0000566

Month	pH (S.U.)	Temp. (oC)	Acute Criteria* mg/L as N	Chronic Criteria* mg/L as N
May	**7.5**	**26.0**	**13.3**	**2.08**
Jun	**7.5**	**26.0**	**13.3**	**2.08**
Jul	**7.5**	**26.0**	**13.3**	**2.08**
Aug	**7.5**	**26.0**	**13.3**	**2.08**
Sep	**7.5**	**26.0**	**13.3**	**2.08**
Oct	**7.5**	**26.0**	**13.3**	**2.08**
Nov	**7.5**	**15.0**	**13.3**	**4.23**
Dec	**7.5**	**15.0**	**13.3**	**4.23**
Jan	**7.5**	**15.0**	**13.3**	**4.23**
Feb	**7.5**	**15.0**	**13.3**	**4.23**
Mar	**7.5**	**15.0**	**13.3**	**4.23**
Apr	**7.5**	**15.0**	**13.3**	**4.23**

**NOTE: Criteria from Appendix B of the RI Water Quality Regs., July 2006.*

CALCULATION OF WATER QUALITY BASED NON-CLASS AA FRESHWATER DISCHARGE LIMITS

FACILITY NAME: Zions Bank (f/k/a ATP Manufacturing) RIPDES PERMIT #: RI0000566

NOTE: METALS CRITERIA ARE EXPRESSED AS DISSOLVED, METALS LIMITS ARE EXPRESSED AS TOTAL

CHEMICAL NAME	CAS #	BACKGROUND CONCENTRATION (ug/L)	FRESHWATER CRITERIA ACUTE (ug/L)	DAILY MAX LIMIT (ug/L)	FRESHWATER CRITERIA CHRONIC (ug/L)	HUMAN HEALTH NON-CLASS A CRITERIA (ug/L)	MONTHLY AVE LIMIT (ug/L)
PRIORITY POLLUTANTS:							
TOXIC METALS AND CYANIDE							
ANTIMONY	7440360		450	34793.37216	10	640	773.186048
ARSENIC (limits are total recoverable)	7440382	NA	340	26288.32563	150	1.4	108.2460467
ASBESTOS	1332214			No Criteria			No Criteria
BERYLLIUM	7440417		7.5	579.889536	0.17		13.14416282
CADMIUM (limits are total recoverable)	7440439	NA	0.522206507	40.2956601	0.093696824		7.491729722
CHROMIUM III (limits are total recoverable)	16065831	NA	183.0659069	44792.40668	23.81311337		2140.926397
CHROMIUM VI (limits are total recoverable)	18540299	NA	16	1259.773602	11		884.1004707
COPPER (limits are total recoverable)	7440508	NA	3.640069619	293.1719837	2.739313654		220.6249061
CYANIDE	57125		22	1701.009306	5.2	140	402.056745
LEAD (limits are total recoverable)	7439921	NA	13.88217279	1080.91538	0.540968344		42.12172053
MERCURY (limits are total recoverable)	7439976	NA	1.4	127.3482903	0.77	0.15	13.64445967
NICKEL (limits are total recoverable)	7440020	NA	144.9178377	11227.29962	16.09589771	4600	1248.257125
SELENIUM (limits are total recoverable)	7782492	NA	20	1546.372096	5	4200	386.593024
SILVER (limits are total recoverable)	7440224	NA	0.31788916	28.91617215	NA		No Criteria
THALLIUM	7440280		46	3556.655821	1	0.47	36.33974426
ZINC (limits are total recoverable)	7440666	NA	36.20176511	2862.034733	36.49789406	26000	2862.034733
VOLATILE ORGANIC COMPOUNDS							
ACROLEIN	107028		2.9	224.2239539	0.06	290	4.639116288
ACRYLONITRILE	107131		378	29226.43261	8.4	2.5	193.296512
BENZENE	71432		265	20489.43027	5.9	510	456.1797683
BROMOFORM	75252		1465	113271.756	33	1400	2551.513958
CARBON TETRACHLORIDE	56235		1365	105539.8956	30	16	1237.097677
CHLOROBENZENE	108907		795	61468.29082	18	1600	1391.734886
CHLORODIBROMOMETHANE	124481			No Criteria		130	10051.41862
CHLOROFORM	67663		1445	111725.3839	32	4700	2474.195354
DICHLOROBROMOMETHANE	75274			No Criteria		170	13144.16282
1,2DICHLOROETHANE	107062		5900	456179.7683	131	370	10128.73723
1,1DICHLOROETHYLENE	75354		580	44844.79078	13	7100	1005.141862
1,2DICHLOROPROPANE	78875		2625	202961.3376	58	150	4484.479078
1,3DICHLOROPROPYLENE	542756			No Criteria		21	1623.690701
ETHYLBENZENE	100414		1600	123709.7677	36	2100	2783.469773
BROMOMETHANE (methyl bromide)	74839			No Criteria		1500	115977.9072
CHLOROMETHANE (methyl chloride)	74873			No Criteria			No Criteria
METHYLENE CHLORIDE	75092		9650	746124.5363	214	5900	16546.18143

CALCULATION OF WATER QUALITY BASED NON-CLASS AA FRESHWATER DISCHARGE LIMITS

FACILITY NAME: Zions Bank (f/k/a ATP Manufacturing) RIPDES PERMIT #: RI0000566

NOTE: METALS CRITERIA ARE EXPRESSED AS DISSOLVED, METALS LIMITS ARE EXPRESSED AS TOTAL

CHEMICAL NAME	CAS #	BACKGROUND CONCENTRATION (ug/L)	FRESHWATER CRITERIA ACUTE (ug/L)	DAILY MAX LIMIT (ug/L)	FRESHWATER CRITERIA CHRONIC (ug/L)	HUMAN HEALTH NON-CLASS A CRITERIA (ug/L)	MONTHLY AVE LIMIT (ug/L)
1,1,2,2TETRACHLOROETHANE	79345		466	36030.46984	10	40	773.186048
TETRACHLOROETHYLENE	127184		240	18556.46515	5.3	33	409.7886054
TOLUENE	108883		635	49097.31405	14	15000	1082.460467
1,2TRANSDICHLOROETHYLENE	156605			No Criteria		10000	773186.048
1,1,1TRICHLOROETHANE	71556			No Criteria			No Criteria
1,1,2TRICHLOROETHANE	79005		900	69586.74432	20	160	1546.372096
TRICHLOROETHYLENE	79016		1950	150771.2794	43	300	3324.700006
VINYL CHLORIDE	75014			No Criteria		2.4	185.5646515
ACID ORGANIC COMPOUNDS							
2CHLOROPHENOL	95578		129	9974.100019	2.9	150	224.2239539
2,4DICHLOROPHENOL	120832		101	7809.179085	2.2	290	170.1009306
2,4DIMETHYLPHENOL	105679		106	8195.772109	2.4	850	185.5646515
4,6DINITRO2METHYL PHENOL	534521			No Criteria		280	21649.20934
2,4DINITROPHENOL	51285		31	2396.876749	0.69	5300	53.34983731
4NITROPHENOL	88755			No Criteria			No Criteria
PENTACHLOROPHENOL	87865		0.058191123	4.49925643	0.044644576	30	3.451856304
PHENOL	108952		251	19406.9698	5.6	1700000	432.9841869
2,4,6TRICHLOROPHENOL	88062		16	1237.097677	0.36	24	27.83469773
BASE NEUTRAL COMPUNDS							
ACENAPHTHENE	83329		85	6572.081408	1.9	990	146.9053491
ANTHRACENE	120127			No Criteria		40000	3092744.192
BENZIDINE	92875			No Criteria		0.002	0.15463721
POLYCYCLIC AROMATIC HYDROCARBONS				No Criteria		0.18	13.91734886
BIS(2CHLOROETHYL)ETHER	111444			No Criteria		5.3	409.7886054
BIS(2CHLOROISOPROPYL)ETHER	108601			No Criteria		65000	5025709.312
BIS(2ETHYLHEXYL)PHTHALATE	117817		555	42911.82566	12	22	927.8232576
BUTYL BENZYL PHTHALATE	85687		85	6572.081408	1.9	1900	146.9053491
2CHLORONAPHTHALENE	91587			No Criteria		1600	123709.7677
1,2DICHLOROBENZENE	95501		79	6108.169779	1.8	1300	139.1734886
1,3DICHLOROBENZENE	541731		390	30154.25587	8.7	960	672.6718618
1,4DICHLOROBENZENE	106467		56	4329.841869	1.2	190	92.78232576
3,3DICHLOROBENZIDENE	91941			No Criteria		0.28	21.64920934
DIETHYL PHTHALATE	84662		2605	201414.9655	58	44000	4484.479078
DIMETHYL PHTHALATE	131113		1650	127575.6979	37	1100000	2860.788378
DI-n-BUTYL PHTHALATE	84742			No Criteria		4500	347933.7216
2,4DINITROTOLUENE	121142		1550	119843.8374	34	34	2628.832563

CALCULATION OF WATER QUALITY BASED NON-CLASS AA FRESHWATER DISCHARGE LIMITS

FACILITY NAME: Zions Bank (f/k/a ATP Manufacturing) RIPDES PERMIT #: RI0000566

NOTE: METALS CRITERIA ARE EXPRESSED AS DISSOLVED, METALS LIMITS ARE EXPRESSED AS TOTAL

CHEMICAL NAME	CAS #	BACKGROUND CONCENTRATION (ug/L)	FRESHWATER CRITERIA ACUTE (ug/L)	DAILY MAX LIMIT (ug/L)	FRESHWATER CRITERIA CHRONIC (ug/L)	HUMAN HEALTH NON-CLASS A CRITERIA (ug/L)	MONTHLY AVE LIMIT (ug/L)
1,2DIPHENYLHYDRAZINE	122667		14	1082.460467	0.31	2	23.96876749
FLUORANTHENE	206440		199	15386.40236	4.4	140	340.2018611
FLUORENE	86737			No Criteria		5300	409788.6054
HEXACHLOROBENZENE	118741			No Criteria		0.0029	0.224223954
HEXACHLOROBUTADIENE	87683			No Criteria		180	13917.34886
HEXACHLOROCYCLOPENTADIENE	77474		0.35	27.06151168	0.008	1100	0.618548838
HEXACHLOROETHANE	67721		49	3788.611635	1.1	33	85.05046528
ISOPHORONE	78591		5850	452313.8381	130	9600	10051.41862
NAPHTHALENE	91203		115	8891.639552	2.6		201.0283725
NITROBENZENE	98953		1350	104380.1165	30	690	2319.558144
N-NITROSODIMETHYLAMINE	62759			No Criteria		30	2319.558144
N-NITROSODI-N-PROPYLAMINE	621647			No Criteria		5.1	394.3248845
N-NITROSODIPHENYLAMINE	86306		293	22654.35121	6.5	60	502.5709312
PYRENE	129000			No Criteria		4000	309274.4192
1,2,4trichlorobenzene	120821		75	5798.89536	1.7	70	131.4416282
PESTICIDES/PCBs							
ALDRIN	309002		3	231.9558144		0.0005	0.038659302
Alpha BHC	319846			No Criteria		0.049	3.788611635
Beta BHC	319857			No Criteria		0.17	13.14416282
Gamma BHC (Lindane)	58899		0.95	73.45267456		1.8	139.1734886
CHLORDANE	57749		2.4	185.5646515	0.0043	0.0081	0.332470001
4,4DDT	50293		1.1	85.05046528	0.001	0.0022	0.077318605
4,4DDE	72559			No Criteria		0.0022	0.170100931
4,4DDD	72548			No Criteria		0.0031	0.239687675
DIELDRIN	60571		0.24	18.55646515	0.056	0.00054	0.041752047
ENDOSULFAN (alpha)	959988		0.22	17.01009306	0.056	89	4.329841869
ENDOSULFAN (beta)	33213659		0.22	17.01009306	0.056	89	4.329841869
ENDOSULFAN (sulfate)	1031078			No Criteria		89	6881.355827
ENDRIN	72208		0.086	6.649400013	0.036	0.06	2.783469773
ENDRIN ALDEHYDE	7421934			No Criteria		0.3	23.19558144
HEPTACHLOR	76448		0.52	40.2056745	0.0038	0.00079	0.061081698
HEPTACHLOR EPOXIDE	1024573		0.52	40.2056745	0.0038	0.00039	0.030154256
POLYCHLORINATED BIPHENYLS3	1336363			No Criteria	0.014	0.00064	0.049483907
2,3,7,8TCDD (Dioxin)	1746016			No Criteria		0.000000051	3.94325E-06
TOXAPHENE	8001352		0.73	56.4425815	0.0002	0.0028	0.015463721
TRIBUTYLTIN			0.46	35.56655821	0.072		5.566939546

CALCULATION OF WATER QUALITY BASED NON-CLASS AA FRESHWATER DISCHARGE LIMITS

FACILITY NAME: Zions Bank (f/k/a ATP Manufacturing) RIPDES PERMIT #: RI0000566

NOTE: METALS CRITERIA ARE EXPRESSED AS DISSOLVED, METALS LIMITS ARE EXPRESSED AS TOTAL

CHEMICAL NAME	CAS #	BACKGROUND CONCENTRATION (ug/L)	FRESHWATER CRITERIA ACUTE (ug/L)	DAILY MAX LIMIT (ug/L)	FRESHWATER CRITERIA CHRONIC (ug/L)	HUMAN HEALTH NON-CLASS A CRITERIA (ug/L)	MONTHLY AVE LIMIT (ug/L)
NON PRIORITY POLLUTANTS:							
OTHER SUBSTANCES							
ALUMINUM (limits are total recoverable)	7429905	NA	750	57988.9536	87		6726.718618
AMMONIA as N(winter/summer)	7664417		13.3 | 13.3	1E+06 | 1E+06	4.23 | 2.08		327058 | 160823
4BROMOPHENYL PHENYL ETHER			18	1391.734886	0.4		30.92744192
CHLORIDE	16887006		860000	66494000.13	230000		17783279.1
CHLORINE	7782505		19	1836.316864	11		1063.130816
4CHLORO2METHYLPHENOL			15	1159.779072	0.32		24.74195354
1CHLORONAPHTHALENE			80	6185.488384	1.8		139.1734886
4CHLOROPHENOL	106489		192	14845.17212	4.3		332.4700006
2,4DICHLORO6METHYLPHENOL			22	1701.009306	0.48		37.1129303
1,1DICHLOROPROPANE			1150	88916.39552	26		2010.283725
1,3DICHLOROPROPANE	142289		303	23427.53725	6.7		518.0346522
2,3DINITROTOLUENE			17	1314.416282	0.37		28.60788378
2,4DINITRO6METHYL PHENOL			12	927.8232576	0.26		20.10283725
IRON	7439896			No Criteria	1000		77318.6048
pentachlorobenzene	608935		13	1005.141862	0.28		21.64920934
PENTACHLOROETHANE			362	27989.33494	8		618.5488384
1,2,3,5tetrachlorobenzene			321	24819.27214	7.1		548.9620941
1,1,1,2TETRACHLOROETHANE	630206		980	75772.2327	22		1701.009306
2,3,4,6TETRACHLOROPHENOL	58902		7	541.2302336	0.16		12.37097677
2,3,5,6TETRACHLOROPHENOL			8.5	657.2081408	0.19		14.69053491
2,4,5TRICHLOROPHENOL	95954		23	1778.32791	0.51		39.43248845
2,4,6TRINITROPHENOL	88062		4235	327444.2913	94		7267.948851
XYLENE	1330207		133	10283.37444	3		231.9558144

CALCULATION OF WATER QUALITY BASED NON-CLASS AA FRESHWATER DISCHARGE LIMITS

FACILITY NAME: Zions Bank (f/k/a ATP Manufacturing) RIPDES PERMIT #: RI0000566

CHEMICAL NAME	CAS#	DAILY MAX LIMIT (ug/L)	MONTHLY AVE LIMIT (ug/L)
PRIORITY POLLUTANTS:			
TOXIC METALS AND CYANIDE			
ANTIMONY	7440360	34793.37	773.19
ARSENIC, TOTAL	7440382	26288.33	108.25
ASBESTOS	1332214	No Criteria	0.00000
BERYLLIUM	7440417	579.89	13.14
CADMIUM, TOTAL	7440439	40.30	7.49173
CHROMIUM III, TOTAL	16065831	44792.41	2140.93
CHROMIUM VI, TOTAL	18540299	1259.77	884.10
COPPER, TOTAL	7440508	293.17	220.62
CYANIDE	57125	1701.01	402.06
LEAD, TOTAL	7439921	1080.92	42.12
MERCURY, TOTAL	7439976	127.35	13.64
NICKEL, TOTAL	7440020	11227.30	1248.26
SELENIUM, TOTAL	7782492	1546.37	386.59
SILVER, TOTAL	7440224	28.92	28.92
THALLIUM	7440280	3556.66	36.34
ZINC, TOTAL	7440666	2862.03	2862.03
VOLATILE ORGANIC COMPOUNDS			
ACROLEIN	107028	224.22	4.63912
ACRYLONITRILE	107131	29226.43	193.30
BENZENE	71432	20489.43	456.18
BROMOFORM	75252	113271.76	2551.51
CARBON TETRACHLORIDE	56235	105539.90	1237.10
CHLOROBENZENE	108907	61468.29	1391.73
CHLORODIBROMOMETHANE	124481	No Criteria	10051.42
CHLOROFORM	67663	111725.38	2474.20
DICHLOROBROMOMETHANE	75274	No Criteria	13144.16
1,2DICHLOROETHANE	107062	456179.77	10128.74
1,1DICHLOROETHYLENE	75354	44844.79	1005.14
1,2DICHLOROPROPANE	78875	202961.34	4484.48
1,3DICHLOROPROPYLENE	542756	No Criteria	1623.69
ETHYLBENZENE	100414	123709.77	2783.47
BROMOMETHANE (methyl bromide)	74839	No Criteria	115977.91
CHLOROMETHANE (methyl chloride)	74873	No Criteria	0.00000
METHYLENE CHLORIDE	75092	746124.54	16546.18
1,1,2,2TETRACHLOROETHANE	79345	36030.47	773.19

CHEMICAL NAME	CAS#	DAILY MAX LIMIT (ug/L)	MONTHLY AVE LIMIT (ug/L)
TETRACHLOROETHYLENE	127184	18556.47	409.79
TOLUENE	108883	49097.31	1082.46
1,2TRANSDICHLOROETHYLENE	156605	No Criteria	773186.05
1,1,1TRICHLOROETHANE	71556	No Criteria	0.00000
1,1,2TRICHLOROETHANE	79005	69586.74	1546.37
TRICHLOROETHYLENE	79016	150771.28	3324.70
VINYL CHLORIDE	75014	No Criteria	185.56
ACID ORGANIC COMPOUNDS			
2CHLOROPHENOL	95578	9974.10	224.22
2,4DICHLOROPHENOL	120832	7809.18	170.10
2,4DIMETHYLPHENOL	105679	8195.77	185.56
4,6DINITRO2METHYL PHENOL	534521	No Criteria	21649.21
2,4DINITROPHENOL	51285	2396.88	53.35
4NITROPHENOL	88755	No Criteria	0.00000
PENTACHLOROPHENOL	87865	4.50	3.45186
PHENOL	108952	19406.97	432.98
2,4,6TRICHLOROPHENOL	88062	1237.10	27.83
BASE NEUTRAL COMPUNDS			
ACENAPHTHENE	83329	6572.08	146.91
ANTHRACENE	120127	No Criteria	3092744.19
BENZIDINE	92875	No Criteria	0.15464
PAHs		No Criteria	13.92
BIS(2CHLOROETHYL)ETHER	111444	No Criteria	409.79
BIS(2CHLOROISOPROPYL)ETHER	108601	No Criteria	5025709.31
BIS(2ETHYLHEXYL)PHTHALATE	117817	42911.83	927.82
BUTYL BENZYL PHTHALATE	85687	6572.08	146.91
2CHLORONAPHTHALENE	91587	No Criteria	123709.77
1,2DICHLOROBENZENE	95501	6108.17	139.17
1,3DICHLOROBENZENE	541731	30154.26	672.67
1,4DICHLOROBENZENE	106467	4329.84	92.78
3,3DICHLOROBENZIDENE	91941	No Criteria	21.65
DIETHYL PHTHALATE	84662	201414.97	4484.48
DIMETHYL PHTHALATE	131113	127575.70	2860.79
DI-n-BUTYL PHTHALATE	84742	No Criteria	347933.72
2,4DINITROTOLUENE	121142	119843.84	2628.83
1,2DIPHENYLHYDRAZINE	122667	1082.46	23.97
FLUORANTHENE	206440	15386.40	340.20

CALCULATION OF WATER QUALITY BASED NON-CLASS AA FRESHWATER DISCHARGE LIMITS

FACILITY NAME: Zions Bank (f/k/a ATP Manufacturing) RIPDES PERMIT #: RI0000566

CHEMICAL NAME	CAS#	DAILY MAX LIMIT (ug/L)	MONTHLY AVE LIMIT (ug/L)
FLUORENE	86737	No Criteria	409788.61
HEXACHLOROBENZENE	118741	No Criteria	0.22422
HEXACHLOROBUTADIENE	87683	No Criteria	13917.35
HEXACHLOROCYCLOPENTADIENE	77474	27.06	0.61855
HEXACHLOROETHANE	67721	3788.61	85.05
ISOPHORONE	78591	452313.84	10051.42
NAPHTHALENE	91203	8891.64	201.03
NITROBENZENE	98953	104380.12	2319.56
N-NITROSODIMETHYLAMINE	62759	No Criteria	2319.56
N-NITROSODI-N-PROPYLAMINE	621647	No Criteria	394.32
N-NITROSODIPHENYLAMINE	86306	22654.35	502.57
PYRENE	129000	No Criteria	309274.42
1,2,4trichlorobenzene	120821	5798.90	131.44
PESTICIDES/PCBs			
ALDRIN	309002	231.96	0.03866
Alpha BHC	319846	No Criteria	3.79
Beta BHC	319857	No Criteria	13.14
Gamma BHC (Lindane)	58899	73.45	73.45
CHLORDANE	57749	185.56	0.33247
4,4DDT	50293	85.05	0.07732
4,4DDE	72559	No Criteria	0.17010
4,4DDD	72548	No Criteria	0.23969
DIELDRIN	60571	18.56	0.04175
ENDOSULFAN (alpha)	959988	17.01	4.32984
ENDOSULFAN (beta)	33213659	17.01	4.32984
ENDOSULFAN (sulfate)	1031078	No Criteria	6881.36
ENDRIN	72208	6.65	2.78
ENDRIN ALDEHYDE	7421934	No Criteria	23.20
HEPTACHLOR	76448	40.21	0.06
HEPTACHLOR EPOXIDE	1024573	40.21	0.03
POLYCHLORINATED BIPHENYLS3	1336363	No Criteria	0.05
2,3,7,8TCDD (Dioxin)	1746016	No Criteria	0.00
TOXAPHENE	8001352	56.44	0.02
TRIBUTYLTIN		35.57	5.57

CHEMICAL NAME	CAS#	DAILY MAX LIMIT (ug/L)	MONTHLY AVE LIMIT (ug/L)
NON PRIORITY POLLUTANTS:			
OTHER SUBSTANCES			
ALUMINUM, TOTAL	7429905	57988.95	6726.72
AMMONIA (as N), WINTER	7664417	1028337.44	327057.70
AMMONIA (as N), SUMMER	7664417	1028337.44	160822.70
4BROMOPHENYL PHENYL ETHER		1391.73	30.93
CHLORIDE	16887006	66494000.13	17783279.10
CHLORINE	7782505	1836.32	1063.13
4CHLORO2METHYLPHENOL		1159.78	24.74
1CHLORONAPHTHALENE		6185.49	139.17
4CHLOROPHENOL	106489	14845.17	332.47
2,4DICHLORO6METHYLPHENOL		1701.01	37.11
1,1DICHLOROPROPANE		88916.40	2010.28
1,3DICHLOROPROPANE	142289	23427.54	518.03
2,3DINITROTOLUENE		1314.42	28.61
2,4DINITRO6METHYL PHENOL		927.82	20.10
IRON	7439896	No Criteria	77318.60
pentachlorobenzene	608935	1005.14	21.65
PENTACHLOROETHANE		27989.33	618.55
1,2,3,5tetrachlorobenzene		24819.27	548.96
1,1,1,2TETRACHLOROETHANE	630206	75772.23	1701.01
2,3,4,6TETRACHLOROPHENOL	58902	541.23	12.37
2,3,5,6TETRACHLOROPHENOL		657.21	14.69
2,4,5TRICHLOROPHENOL	95954	1778.33	39.43
2,4,6TRINITROPHENOL	88062	327444.29	7267.95
XYLENE	1330207	10283.37	231.96

PART II
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GENERAL REQUIREMENTS

DEFINITIONS

GENERAL REQUIREMENTS

(a) Duty to Comply

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

(1) The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

(2) The CWA provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the CWA is subject to a civil penalty not to exceed $10,000 per day of such violation. Any person who willfully or negligently violates permit conditions implementing Sections 301, 302, 306, 307 or 308 of the Act is subject to a fine of not less than $2,500 nor more than $25,000 per day of violation, or by imprisonment of not more than 1 year, or both.

(3) Chapter 46-12 of the Rhode Island General Laws provides that any person who violates a permit condition is subject to a civil penalty of not more than $5,000 per day of such violation. Any person who willfully or negligently violates a permit condition is subject to a criminal penalty of not more than $10,000 per day of such violation and imprisonment for not more than 30 days, or both. Any person who knowingly makes any false statement in connection with the permit is subject to a criminal penalty of not more than $5,000 for each instance of violation or by imprisonment for not more than 30 days, or both.

(b) Duty to Reapply

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

(c) Need to Halt or Reduce Not a Defense

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

(d) Duty to Mitigate

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

(e) Proper Operation and Maintenance

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

(f) Permit Actions

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

(g) Property Rights

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

(h) Duty to Provide Information

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

(i) Inspection and Entry

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

(1) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

(2) Have access to and copy, at reasonable times any records that must be kept under the conditions of this permit;

(3) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under this permit; and

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

(j) Monitoring and Records

(1) Samples and measurements taken for the purpose of monitoring shall be representative of the volume and nature of the discharge over the sampling and reporting period.

(2) The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings from continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 5 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.

(3) Records of monitoring information shall include:

(i) The date, exact place, and time of sampling or measurements;

(ii) The individual(s) who performed the sampling or measurements;

(iii) The date(s) analyses were performed;

(iv) The individual(s) who performed the analyses;

(v) The analytical techniques or methods used; and

(vi) The results of such analyses.

(4) Monitoring must be conducted according to test procedures approved under 40 CFR Part 136 and applicable Rhode Island regulations, unless other test procedures have been specified in this permit.

(5) The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall upon conviction, be punished by a fine of not more than $10,000 per violation or by imprisonment for not more than 6 months per violation or by both. Chapter 46-12 of the Rhode Island General Laws also provides that such acts are subject to a fine of not more than $5,000 per violation, or by imprisonment for not more than 30 days per violation, or by both.

(6) Monitoring results must be reported on a Discharge Monitoring Report (DMR).

(7) If the permittee monitors any pollutant more frequently than required by the permit, using test procedures approved under 40 CFR Part 136, applicable State regulations, or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.

(k) Signatory Requirement

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

(l) Reporting Requirements

(1) Planned changes. The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility.

(2) Anticipated noncompliance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with the permit requirements.

(3) Transfers. This permit is not transferable to any person except after written notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under State and Federal law.

(4) Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit.

(5) Twenty-four hour reporting. The permittee shall immediately report any noncompliance which may endanger health or the environment by calling DEM at (401) 222-3961, (401) 222-6519 or (401) 222-2284 at night.

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

The following information must be reported immediately:

(i) Any unanticipated bypass which causes a violation of any effluent limitation in the permit; or

(ii) Any upset which causes a violation of any effluent limitation in the permit; or

(iii) Any violation of a maximum daily discharge limitation for any of the pollutants specifically listed by the Director in the permit.

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

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

(7) Other information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, they shall promptly submit such facts or information.

(m) Bypass

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

(1) Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs (2) and (3) of this section.

(2) Notice.

(i) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten (10) days before the date of the bypass.

(ii) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Rule 14.18 of the RIPDES Regulations.

(3) Prohibition of bypass.

(i) Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:

(A) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage, where "severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production;

(B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

(C) The permittee submitted notices as required under paragraph (2) of this section.

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

(n) Upset

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

(1) Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of paragraph (2) of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

(2) Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

(a) An upset occurred and that the permittee can identify the cause(s) of the upset;

(b) The permitted facility was at the time being properly operated;

(c) The permittee submitted notice of the upset as required in Rule 14.18 of the RIPDES Regulations; and

(d) The permittee complied with any remedial measures required under Rule 14.05 of the RIPDES Regulations.

(3) Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

(o) Change in Discharge

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

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

(p) Removed Substances

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

(q) Power Failures

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

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

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

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

(r) Availability of Reports

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

(s) State Laws

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

(t) Other Laws

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

(u) Severability

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

(v) Reopener Clause

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

(w) Confidentiality of Information

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

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

(i) The name and address of any permit applicant or permittee;

(ii) Permit applications, permits and any attachments thereto; and

(iii) NPDES effluent data.

(x) Best Management Practices

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

(y) Right of Appeal

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

DEFINITIONS

1. For purposes of this permit, those definitions contained in the RIPDES Regulations and the Rhode Island Pretreatment Regulations shall apply.

2. The following abbreviations, when used, are defined below.

cu. M/day or M^3/day	cubic meters per day
mg/l	milligrams per liter
ug/l	micrograms per liter
lbs/day	pounds per day
kg/day	kilograms per day
Temp. °C	temperature in degrees Centigrade
Temp. °F	temperature in degrees Fahrenheit
Turb.	turbidity measured by the Nephelometric Method (NTU)
TNFR or TSS	total nonfilterable residue or total suspended solids
DO	dissolved oxygen
BOD	five-day biochemical oxygen demand unless otherwise specified
TKN	total Kjeldahl nitrogen as nitrogen
Total N	total nitrogen
NH_3-N	ammonia nitrogen as nitrogen
Total P	total phosphorus
COD	chemical oxygen demand
TOC	total organic carbon
Surfactant	surface-active agent
pH	a measure of the hydrogen ion concentration
PCB	polychlorinated biphenyl
CFS	cubic feet per second
MGD	million gallons per day
Oil & Grease	Freon extractable material
Total Coliform	total coliform bacteria
Fecal Coliform	total fecal coliform bacteria
ml/l	milliliter(s) per liter
NO_3-N	nitrate nitrogen as nitrogen
NO_2-N	nitrite nitrogen as nitrogen
NO_3-NO_2	combined nitrate and nitrite nitrogen as nitrogen
$C1_2$	total residual chlorine