AUTHORIZATION TO DISCHARGE UNDER THE
RHODE ISLAND POLLUTANT DISCHARGE ELIMINATION SYSTEM

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

**RHODE ISLAND RESOURCE RECOVERY CORPORATION**
65 SHUN PIKE
JOHNSTON, RI 02919

is authorized to discharge from a facility located at

**RHODE ISLAND RESOURCE RECOVERY CORPORATION**
65 SHUN PIKE
JOHNSTON, RI 02919

to receiving waters named

QUARRY STREAM, CEDAR SWAMP BROOK, AND THE UPPER SIMMONS RESERVOIR

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

This permit shall become effective _____.

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 28, 2007.

This permit consists of fourteen (14) pages in Part I including effluent limitations, monitoring requirements, etc. and ten (10) pages in Part II including General Conditions.

Signed this _____day of _____, 2014.

# DRAFT #3

_____
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 of this permit and lasting through the date of permit expiration, the permittee is authorized to discharge from outfall serial numbers: 004A (Pond 4 Outlet immediately below the spillway from the pond), 005A (Pond 5 Outlet immediately below the spillway from the pond) and 006A (Pond 6 Outlet immediately below the spillway from the pond). 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 | Average Weekly | Maximum Daily | Measurement Frequency | Sample Type |
| Flow | --- GPD | | | | | See Footnote 1 | Calculated[2] |
| TSS | | | --- mg/L | | --- mg/L | See Footnote 1 | Grab[3] |

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

[1]Samples shall be taken at a minimum frequency of monthly April – June and quarterly July – March.

[2]Flow shall be calculated using the drainage area, runoff coefficient, and the amount of rainfall.

[3]The Grab or "First Flush" value shall be obtained using a grab sample, consisting of an individual sample of at least 100 mL, collected during the first thirty (30) minutes of a discharge. If it is not possible to collect the sample within the first thirty (30) minutes of a measureable storm event, the sample must be collected as soon as possible after the first thirty (30) minutes, and RIRRC shall submit a description of why a sample during the first thirty (30) minutes was impracticable.

A grab sample can be taken during the first hour of discharge, and the discharger shall submit a description of why a sample during the first thirty (30) minutes was impracticable.

Samples must be obtained from a discharge which is the result of a representative storm event that occurs at least seventy-two (72) hours after the previously measurable (greater than 0.1 inches in magnitude) storm event. A representative storm event should be within 50% of the average Rhode Island storm event (0.7 inches in depth and 12 hours in duration) for both depth and duration, but in no case less than 0.1 inches per twenty-four (24) hours.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

2. During the period beginning on the effective date of this permit and lasting through the date of permit expiration, the permittee is authorized to discharge from outfall serial numbers: 002A (Pond 2 Outlet immediately below the spillway from the pond and upstream of any influence of road runoff), and 015A (Pond 11 Outlet immediately below the spillway from the pond). 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 | --- GPD | | | | | See Footnote 1 | Calculated[2] |
| $BOD_5$ | | | 37 mg/L | | 140 mg/L | See Footnote 1 | Grab[3] |
| TSS | | | 27 mg/L | | 88 mg/L | See Footnote 1 | Grab[3] |
| Ammonia, Total (as N) | | | 4.9 mg/L | | 10 mg/L | See Footnote 1 | Grab[3] |
| pH | | | (6.0 S.U.) | | (9.0 S.U.) | See Footnote 1 | Grab[3] |
| alpha-Terpineol | | | 16 ug/L | | 33 ug/L | See Footnote 1 | Grab[3] |
| Benzoic Acid | | | 71 ug/L | | 120 ug/L | See Footnote 1 | Grab[3] |
| p-Cresol | | | 14 ug/L | | 25 ug/L | See Footnote 1 | Grab[3] |
| Phenol | | | 15 ug/L | | 26 ug/L | See Footnote 1 | Grab[3] |
| Zinc, Total | | | 110 ug/L | | 200 ug/L | See Footnote 1 | Grab[3] |
| Iron, Total | | | --- mg/L | | --- mg/L | See Footnote 1 | Grab[3] |

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

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

[1]Samples shall be taken at a minimum frequency of monthly April – June and quarterly July – March.

[2]Flow shall be calculated using the drainage area, runoff coefficient, and the amount of rainfall.

[3]The Grab or "First Flush" value shall be obtained using a grab sample, consisting of an individual sample of at least 100 mL, collected during the first thirty (30) minutes of a discharge. If it is not possible to collect the sample within the first thirty (30) minutes of a measureable storm event, the sample must be collected as soon as possible after the first thirty (30) minutes, and RIRRC shall submit a description of why a sample during the first thirty (30) minutes was impracticable.

Samples must be obtained from a discharge which is the result of a representative storm event that occurs at least seventy-two (72) hours after the previously measurable (greater than 0.1 inches in magnitude) storm event. A representative storm event should be within 50% of the average Rhode Island storm event (0.7 inches in depth and 12 hours in duration) for both depth and duration, but in no case less than 0.1 inches per twenty-four (24) hours.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

3. During the period beginning on the effective date of this permit and lasting through the date of permit expiration, the permittee is authorized to discharge from outfall serial number: 016A (Phase V underdrain treatment system). 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 | Maximum Daily (Maximum)* | Measurement Frequency | Sample Type |
| Flow | 91,000 GPD | 123,500 GPD | | | | 1/Month | Estimate |
| Ammonia, Total (as N) | | | | | | | |
| May- Oct | | | 2.73 mg/L | | 17.4 mg/L | 1/Month | 24 Hr Composite |
| Nov- April | | | 5.47 mg/L | | 17.4 mg/L | 1/Month | 24 Hr Composite |
| Phosphorus, Total | | | | | | | |
| April- Oct | | | 0.033 mg/L | | --- mg/L | 1/Month | 24 Hr Composite |
| Nov- March | | | 1.0 mg/L | | --- mg/L | 1/Month | 24 Hr Composite |
| Orthophosphorus (Nov – March) | | | --- mg/L | | --- mg/L | 1/Month | 24 Hr Composite |
| Iron, Total | | | 1.31 mg/L | | --- mg/L | 1/Month | 24 Hr Composite |

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

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: Outfall 016A - effluent from Phase V underdrain treatment system.

4. 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.

   c. The discharge shall not cause the receiving water's turbidity to be greater than 10 NTU above background.

   d. The permittee shall analyze its effluent from Outfall 016A (Phase V Landfill Stone Trench Discharge) semi-annually for the EPA Priority Pollutants as listed in 40CFR122, Appendix D, Tables II and III. The results of these analyses shall be submitted to the Department of Environmental Management on January 15th and July 15th of each year for the previous six month period with the Comprehensive Site Evaluation Reports required under part I.E. The Priority Pollutant Report must include the following information:

      (1) For any pollutants detected in the priority pollutant scans, the Priority Pollutant Report must identify if they are pollutants regulated under the Superfund Record of Decision (ROD).

      (2) If pollutants regulated under the ROD are detected, RIRRC must provide written notification to the EPA and DEM Superfund programs within seven (7) days of receiving the priority pollutant scan results and the Priority Pollutant Report must include a copy of the written notification.

      (3) If pollutants not regulated under the ROD are detected, the Priority Pollutant Report must include an evaluation of the potential for liner leakage/failure as being the source of the pollutant.

      (4) For all non-ROD pollutants detected, the Priority Pollutant Report must include a comparison of pollutant concentrations to water quality criteria using a dilution factor of 1.639 and, if any of the pollutants exceed the applicable water quality criteria, the report must include either a compliance schedule to eliminate the underdrain's discharge to surface waters or an application for an Order of Approval for an appropriate wastewater treatment system designed to remove the identified pollutant.

      (5) For all pollutants detected, the sampling frequency shall be increased from semi-annually to monthly and the Priority Pollutant Report shall include the results of the monthly sampling. If, after collecting adequate data demonstrating that the detected pollutants are no longer present in the Phase V Landfill Stone Trench Discharge, the permittee would like to decrease the sampling frequency to quarterly, the permittee may submit a written request to DEM. The permittee shall continue sampling monthly until written approval is granted to decrease sampling.

      (6) All sampling and analysis shall be in accordance with EPA Regulations, including 40 CFR; Part 136; grab samples and composites shall be taken as appropriate.

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 40CFR122.21(g)(7); or

(4) Any other notification level established by the Director in accordance with 40 C.F.R. 122.44(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 CFR 122.21(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.

6. If there is a change in the status of any outfall, notification must be provided as follows:

a. The Department of Environmental Management must be notified in writing if a permitted outfall, which was not constructed prior to the effective date of this permit will begin discharging. This notification must be provided a minimum of fourteen (14) days prior to the commencement of discharge.

b. The Department of Environmental Management must be notified in writing if the discharge from any permitted outfall has been eliminated, no later than thirty (30) days following the elimination of discharge.

c. Within thirty (30) days of the issuance of this permit, the permittee shall notify the Department of Environmental Management in writing of which outfalls are currently active.

7. The permittee shall comply with all of the terms and conditions of the approved *Erosion and Sedimentation Control Plan* as amended (the "Erosion and Sediment Control Plan").

8. The permittee shall immediately amend the Erosion and Sediment Control Plan and/or the Storm Water Pollution Prevention 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 Erosion and Sediment Control Plan proves to be ineffective in achieving the general objectives of controlling pollutants in storm water discharges.

   a. Changes must be noted and then submitted to the Department of Environmental Management - Office of Water Resources, for review.

   b. Once the amendments have been reviewed, the permittee may be notified that the Plan does not meet the Departments minimum requirements. After such notification, the permittee shall make changes to the Plan and shall submit written certification that the requested changes have been made.

   c. Unless otherwise provided by the Department, the permittee shall have thirty (30) days after such notification to make the necessary changes.

9. This permit does not authorize discharges from the vehicle wash areas.

10. The permittee shall implement measures to control the discharge of storm water from areas that do not have waste in them yet.

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

B. Phase V Underdrain Evaluation (outfall 016)

1. If outfall 016A's effluent limitations for Total Ammonia, Cyanide or Total Iron from Part I.A.3 are exceeded or if the priority pollutant scans required under Part I.A.4.d show exceedances of the applicable water quality criteria, the permittee shall notify the Department of Environmental Management within seven (7) calendar days and submit a written evaluation of the cause of the exceedance and a proposed schedule of the steps planned to be taken to reduce, eliminate, and prevent reoccurrence of the noncompliance.

C. INSPECTIONS AND MAINTENANCE

1. Inspections of the erosion control measures are to be conducted in a manner consistent with the Erosion and Sediment Control Plan. Results of all inspections must be documented and records retained on-site for a minimum period of five (5) years.

   a. The following inspections must be conducted immediately (within 24 hours) after all rainstorms which produce more than 1" of rainfall, or a minimum of weekly. During periods of continuous rain and/or melting, erosion control measures shall be inspected daily.

      (1) Inspect newly seeded surfaces to ensure that seed and mulch remain in place and are not washed from the soil surface.

(2) Inspect any mulch cover to identify any damage to the cover, failure of anchoring mechanisms, washouts, dislocation or other failures. Inspections of the mulch cover are to continue until a vegetative cover, of grasses with a minimum height of three (3) inches, has been established.

(3) Inspect any straw/hay bale barriers to ensure that the integrity of the barriers have not been breached and to check sediment accumulation. Sediment must be removed from behind the barriers when its accumulation reaches 1/2 the height of the barriers.

(4) Inspect any filter fences to ensure that the integrity of the fence has not been breached and to check sediment accumulation. Sediment must be removed from behind the fences when its accumulation reaches 1/3 the height of the fences.

(5) Inspect any stone barriers to verify their integrity and to ensure that the center of the barriers remain a minimum of six (6) inches lower in elevation than the ends of the barriers. Sediment must be removed when accumulation interferes with the function of the barriers.

(6) Inspect the silt booms to ensure that the anchoring systems are securely fastened, flotation is adequate, and panel joints remain intact. Note: silt booms must be inspected weekly not after all rainstorms which produce more than 1" of rainfall.

(7) Inspect riprap after each major storm event, for the first year after the placement of the riprap, to ensure that stone has not been dislodged and that scouring of the support material has not occurred. If the first year inspections verify the integrity of the riprap placement, inspection frequency can be reduced to annually.

(8) Daily visual inspections of sediment basins and weekly monitoring of sediment basin turbidity.

b. The following inspections must be conducted on at least a monthly basis:

(1) Sediment accumulation, behind any silt booms, must be evaluated. Sediment is to be removed, from the basin containing the booms, at such time that the sediment level contacts the bottom of the boom and/or if the sediment accumulation affects the normal movement of the boom "fans".

(2) Visually inspect all diversion benches and drainage swales to ensure that the benches remain intact and to determine if settling has affected the grade of the bench. Annual site mapping will be used to verify the visual inspections. Annual "photogrammetric mapping" may be used to satisfy this requirement. A copy of this mapping must be included with the semi-annual Comprehensive Site Evaluation Report that is due January 31st of each year (see Part I.E). The first copy is due by January 31, 2015.

c. Sediment basin inspection and maintenance requirements

(1) Sediment accumulation in sedimentation basins 4, 5, 6 and 10 must be measured at least once every 2 years and/or whenever there is a failure of sediment controls. Sediment levels for these ponds shall be measure during even numbered calendar years and submitted with the Comprehensive Site Evaluation Report due January 31st of odd

numbered years. Sediment accumulation in sedimentation basins 2, 3 and 11 must be measured every year and/or whenever there is a failure of sediment controls. Sediment levels for these ponds for the previous calendar year shall be submitted with the Comprehensive Site Evaluation Reports due January 31st of each year. When sedimentation basins 2, 3 and/or 11 on longer receive runoff from active areas of the landfill, then the permittee may request that sediment levels be measured once every 2 years and/or whenever there is a failure of sediment controls. Sediment measurement frequency shall remain once/year until DEM approves any frequency changes in writing.

(2) Sediment must be removed when the sediment depth in the basin reaches 2/3 of the available storage depth or when the sediment depth in the basin is causing the basins to be ineffective in removing sediment.

| *Pond No.* | *Bottom Elevation (ft)* | *Lowest Invert Elevation (ft)* | *Sediment Removal Average Elevation (ft)* |
|---|---|---|---|
| 2 | 293.50 | 297.02 | 295.85 |
| 3 | 296.00 | 299.00 | 298.00 |
| 4 | 375.50 | 382.25 | 380.00 |
| 5 | 358.50 | 361.20 | 360.30 |
| 6 | 345.00 | 348.31 | 347.21 |
| 10 | 366.00 | 370.00 | 368.67 |
| 11 | 328.00 | 331.00 | 330.00 |

Note: Pond elevations for existing ponds must be verified after sediment removal.

(3) Any ponds that have not been constructed must have their elevations verified within thirty (30) days after the completion of the pond's construction.

2. Sediment removal and erosion control maintenance must be performed in a manner consistent with the Erosion and Sedimentation Control Plan. Any sediment removal and/or maintenance performed must be documented and records retained on-site for a minimum period of five (5) years.

D. BENCHMARK MONITORING

1. The permittee shall compare Total Iron sampling results for outfalls 002A and 015A and TSS sampling results for outfalls 004A, 005A and 006A to the following benchmark monitoring concentrations. Benchmark monitoring concentrations may be subject to change by permit modification to be consistent with future revisions to EPA and / or State benchmarks:

| Parameter | Benchmark Concentration (mg/l) |
|---|---|
| TSS | 100 |
| Total Iron | 1.0 |

2 Any exceedances of either of the benchmark concentrations, which are not caused by natural background iron concentrations in the groundwater at the site, or of permit limits shall trigger an evaluation of the implementation of the existing storm water controls and facility operations to determine if there are possible problems with non-structural BMPs or maintenance that can be corrected. Storm water controls shall be promptly revised in

response to these evaluations and in no case later than thirty (30) calendar days following the receipt of monitoring results that exceed either the benchmark concentrations or the permit limits. A report of the permittee's comparison of monitoring results with the benchmark concentrations and permit limits shall be submitted with each DMR. If the permittee exceeds the benchmark concentrations or permit limits during the monitoring period the report shall include a detailed description of the possible causes of the exceedances and any modifications made to the storm water controls to reduce the pollutant levels. If the exceedance of the benchmark concentration is caused by the natural background iron concentrations in the groundwater at the site the report shall include a detailed characterization of the natural background concentration and supporting documentation which demonstrates that the uncontaminated groundwater was the cause of the benchmark exceedance.

3. On a yearly basis, the permittee shall calculate the annual average of all sampling data for Total Iron and TSS for each outfall for the previous calendar year (January 1 – December 31). When calculating the annual average concentration, pollutant concentrations that were reported as less than the minimum detection limit from Part I.H shall be replaced with zeros. If the annual average exceeds the applicable benchmark concentration and the exceedance is not caused by the natural background iron concentrations in the groundwater at the site, then the permittee shall perform a detailed review of all storm water controls, BMPs, and maintenance schedules and shall make all reasonable amendments to reduce the pollutant levels in the discharge. These amendments shall be submitted to the Department of Environmental Management - Office of Water Resources with the Comprehensive Site Evaluation Report that is required under Part I.E. If the amendments will include changes to structural controls, the report must include a schedule for the implementation of the proposed structural modifications. Proposed changes to structural storm water controls must be approved by the Department of Environmental Management prior to implementation. Upon Department of Environmental Management approval of the structural changes, the permittee shall implement them in accordance with the approved schedule.

## E. COMPREHENSIVE SITE EVALUATION

A semi-annual comprehensive site evaluation report must be prepared which summarizes the results of the site inspections required under Part I.C, the priority pollutant scans required under Part I.A.4.d, and the benchmark monitoring required under Part I.D. These reports shall be submitted to the Department of Environmental Management - Office of Water Resources by January 31$^{st}$, for the July 1 – December 31 period, and July 31$^{st}$, for the January 1 – June 30 period, of each year. These reports must include the names of the personnel who conducted the inspections, any major or recurring observations noted in the inspections, any maintenance performed on the erosion and sedimentation control measures, a summary of the results of all sediment soundings, and a tabulated summary of all turbidity monitoring.

## F. SAMPLING WAIVER

If unable to collect samples, for Outfalls 002A, 004A, 005A, 006A, and 015A, due to adverse climatic conditions that create dangerous conditions for personnel or otherwise make the collection of a sample impractical, the permittee may submit in lieu of sampling data a description of why samples could not be collected. This waiver applies to an individual reporting period. The permittee is prohibited from exercising this waiver more than twice during a two year period. If there are no discharges from an outfall during a given reporting period, it shall be reported as "no discharge" on the Discharge Monitoring Report and a sampling waiver is not required.

## G. SALT STORAGE PILES

Storage piles of salt must be enclosed/covered to prevent exposure to precipitation, except for exposure resulting from adding or removing material from the pile.

## H. DETECTION LIMITS

The permittee shall assure that all wastewater testing required by this permit, is performed in conformance with the method detection limits listed below. In accordance with 40 CFR Part 136, EPA approved analysis techniques, quality assurance procedures and quality control procedures shall be followed for all reports required to be submitted under the RIPDES program. These procedures are described in "Methods for the Determination of Metals in Environmental Samples" (EPA/600/4-91/010) and "Methods for Chemical Analysis of Water and Wastes" (EPA/600/4-79/020). The report entitled "Methods for the Determination of Metals in Environmental Samples" includes a test which must be performed in order to determine if matrix interferences are present, and a series of tests to enable reporting of sample results when interferences are identified. Each step of the series of tests becomes increasingly complex, concluding with the complete Method of Standard Additions analysis. The analysis need not continue once a result which meets the applicable quality control requirements has been obtained. Documentation of all steps conducted to identify and account for matrix interferences shall be documented and maintained onsite.

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

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

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

2. results reported as less than the MDL shall be reported as zero in accordance with the DEM's DMR Instructions, provided that all appropriate EPA approved methods were followed.

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

## 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) |
|---|---|
| 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 | 0.2 |
| 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 |
| Total Phosphorus | 10.0 |

** No Rhode Island Department of Environmental Management (RIDEM) MDL

**NOTE**:

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

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

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

I. REPORTING

1. Reporting

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

Monitoring shall be reported as follows:

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

2. Reporting of Priority Pollutant Testing

Priority Pollutant Testing shall be reported as follows:

| Semi-Annual Testing to be Performed | Report Due No Later Than |
|---|---|
| January 1 - June 30 | July 31 |
| July 1 - December 31 | January 31 |

Priority Pollutant Testing, following the protocol described herein, shall be conducted for outfalls 016A (Phase V Landfill Stone Trench Discharge). The priority pollutant scans shall be submitted with the comprehensive site evaluations required under Part I.E.

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

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

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

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

RIPDES PERMIT NO. **RI0023442**

NAME AND ADDRESS OF APPLICANT:
**RHODE ISLAND RESOURCE RECOVERY, CORPORATION**
65 SHUN PIKE
JOHNSTON, RI 02919

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:
**RHODE ISLAND RESOURCE RECOVERY, CORPORATION**
65 SHUN PIKE
JOHNSTON, RI 02919

RECEIVING WATER:
**QUARRY STREAM and CEDAR SWAMP BROOK [RI0006018R-01] AND UPPER SIMMONS RESERVOIR [RI0006018L-03]**

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 the reissuance of its RIPDES Permit to discharge into the designated receiving waters. The discharges are to Quarry Stream, Cedar Swamp Brook, and the Upper Simmons Reservoir. These water bodies are classified as Class B, and are designated as warm water fisheries according to the RI Water Quality Regulations. These waters are designated for fish and wildlife habitat and primary and secondary contact recreational activities. They shall be suitable for compatible industrial processes and cooling, hydropower, agricultural uses, navigation, and irrigation and other agricultural uses. Currently Cedar Swamp Brook is listed as impaired for Fecal Coliform, Iron, and Dissolved Oxygen. The Simmons Reservoir has been assessed by DEM as not meeting water quality standards for Total Phosphorus and Turbidity. The applicant's discharge consists of surface stormwater runoff that is treated by on-site sedimentation ponds and the phase V stone trench underdrain that was rerouted out of pond 2 and into a new treatment system that discharges into Cedar Swamp Brook.

A quantitative description of the discharges authorized under this permit based on DMR data from April 2011 through June 2013 is shown on Attachment A. Attachment B includes calculations of allowable acute and chronic discharge limitations. Attachment C includes a site map; Attachment D includes a line flow diagram depicting the authorized discharges and the outfall locations.

II. Limitations and Conditions

The effluent limitations, monitoring requirements, and any implementation schedule (if required) may be found in the draft permit. The permittee is currently constructing a groundwater treatment system, designed to remove Total Ammonia and Total Iron from outfall 016A, under an existing consent agreement. Based upon a review of the Phosphorus data for this outfall, the DEM has determined that limits for Phosphorus are needed for outfall 016A. Since the Phosphorus limits for this outfall are new limits, the permittee will have to determine if this treatment system will enable the

discharge to meet these new limits. If it is determined that additional treatment will be required, the permittee will have to enter into a new agreement that will establish an enforceable schedule to come into compliance with these limits.

III. Permit Basis and Explanation of Effluent Limitation Derivation

RIRRC owns and operates the State's central facilities for the recycling and disposal of solid waste. These facilities handle approximately 95 percent of the State's municipal solid waste and a significant amount of the commercial waste. Currently approximately 4,000 tons/day of waste are disposed of at this location. This permit establishes requirements for the existing outfalls.

The previous permit authorized discharges from the following outfalls: 002A (pond 2), 004A (pond 4), 005A (pond 5), 006A (pond 6), 0015A (pond 11). All of these ponds were on-site detention ponds designed to treat storm water for suspended solids and Ponds 6 and 11 are lined with a flexible high density polyethylene (HDPE) liner. Since Pond 10 will only receive off-site non-industrial storm water flows discharge limitations were not assigned for this pond. In addition, the previous permit also authorized the discharge from outfall 016A (Phase V Landfill Stone Trench Discharge). In the time since the final permit was issued to RIRRC the Phase V stone trench has been rerouted out of Pond 2 and into a treatment system. The treatment system will include equalization, pH adjustment, aeration, sedimentation and filtration, and biological nitrification.

*Limit Development*

DEM's primary authority over this permit comes from the EPA's delegation of the RIPDES program, in September 1984, under the Federal Clean Water Act. The requirements set fourth in this draft permit are from the State's Water Quality Regulations and the State's Regulations for the Rhode Island Pollutant Discharge Elimination System, both filed pursuant to Chapter 46-12 of the Rhode Island General Laws, as amended. This permit also requires that the permittee comply with the approved Erosion and Sediment Control Plan. This Plan includes, but is not limited to, a description of the sedimentation and erosion controls as well as maintenance activities necessary to properly control storm water runoff.

Development of RIPDES permit limitations is a multi-step process consisting of the following steps: calculating allowable technology-based limitations based on Federal categorical standards; calculating Best Professional Judgment (BPJ) limitations as appropriate; calculating allowable water-quality based discharge levels based on in stream criteria, background data and available dilution; and determining the most stringent limit between water quality-based, technology-based, BPJ-based, and previous permit limits and setting these as the final limits. A brief description of each of these steps is presented below.

*Technology-Based Effluent Limitations*

The RIRRC facility is a RCRA Subtitle D Non-Hazardous Waste Landfill that discharges Landfill Wastewater subject to federal effluent guidelines found at 40 CFR Part 445, Subparts B. 40 CFR Part 445 defines Landfill Wastewater as "all wastewater associated with, or produced by, landfilling activities except for sanitary wastewater, non-contaminated storm water, contaminated ground water, and wastewater from recovery pumping wells". It also specifically lists Landfill Wastewater as including, but not limited to, "leachate, gas collection condensate, drained free liquids, laboratory derived wastewater, contaminated storm water and contact washwater from washing truck, equipment, and railcar exteriors and surface areas which have come in direct contact with solid waste at the landfill facility". 40 CFR Part 445 further defines Contaminated Storm Water as "storm water which comes in direct contact with landfill wastes, the waste handling and treatment areas, or landfill wastewater...some specific areas of landfill that may produce contaminated storm water include (but are not limited to): the open face of an active landfill with exposed wastes (no cover added); the areas around wastewater treatment operations;

trucks, equipment or machinery that has been in direct contact with the waste; and waste dumping areas." Therefore, any storm water that comes into contact with the active areas of the landfill is considered Landfill Wastewater and is subject to 40 CFR Part 445.

Since Ponds 2 (outfall 002A) and Pond11 (outfall 015A) will receive storm water flows that are defined as Landfill Wastewater, according to 40 CFR Part 445, they are each subject to the previously mentioned federal effluent guidelines that include technology based limits for Biochemical Oxygen Demand (BOD), Total Suspended Solids (TSS), Total Ammonia, alpha – Terpineol, Benzoic Acid, p-Cresol, Phenol, Zinc, and pH found at 40 CFR Part 445 Subpart B. In addition, since these outfalls also receive contaminated storm water, which can have elevated levels of iron, the DEM has determined that it is appropriate to assign benchmark monitoring for Iron. Lastly, each of the ponds have been assigned monitoring for flow.

*BPJ-Based Effluent Limitations*

Ponds 4, 5 and 6 (outfalls 004A, 005A, and 006A) will not receive any flows from active landfill operations and they will only receive drainage from areas that have been closed. Since these ponds will not receive any Landfill Wastewater, as defined by 40 CFR Part 445, they are not subject to federal effluent guidelines. Therefore, based upon BPJ, these ponds have been assigned monitoring for flow and TSS to evaluate the effectiveness of the sedimentation and erosion controls in use at the site. TSS monitoring shall be compared to the benchmark monitoring cutoff concentrations.

*Water Quality-Based Permit Limitations*

Since outfall 016A contains non-stormwater discharges from the phase V stone trench underdrain treatment system, it is subject to numeric water quality based limits. Since this outfall only contains groundwater, it is not subject to the technology based limits from 40 CFR part 445. The allowable water quality-based effluent limitations were established based on the class B freshwater acute and chronic aquatic life criteria and human health criteria specified in Appendix B of the Rhode Island Water Quality Regulations using 80% allocation when no background data was available and 90% allocation when background data was available. Aquatic life criteria have been established to ensure the protection and propagation of aquatic life while human health criteria represent the pollutant levels that would not result in a significant risk to public health from ingestion of aquatic organisms. The more stringent of these two criteria was then used in establishing the allowable water quality-based discharge levels. Therefore, the following equation was used to calculate the allowable discharge limits:

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

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

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

Based on a July 14, 1997 letter from the DEM to RIRRC, the 7Q10 flow for Cedar Swamp Brook was estimated to be 0.09 cubic feet per second (cfs).The Brown and Caldwell report on the design of the phase V underdrain's treatment system that was submitted to the DEM calculated a flow of 91,000 gallons per day as the average design flow for the phase V underdrain treatment system (outfall 016A). Using an underdrain design flow of 91,000 gpd or 0.141 cfs and a Cedar Swamp Brook 7Q10 flow of 0.09 cfs, the dilution factor for outfall 016A was calculated to be 1.639. This is the dilution factor that was used when calculating water quality-based permit limits for this outfall. In addition, as background concentrations for the Cedar Swamp Brook are not known, the discharge limitations were calculated using an allocation factor of eighty (80) percent. Upon review of the RIRRC surface water sampling hardness results for the quarterly monitoring from 2012 through 2013, the DEM used the most stringent hardness (i.e. 59 mg/l) that was

reported at Cedar Swamp Brook (sample location SW-7) and Upper Simmons Reservoir to determine the appropriate metals criteria.

For water quality-based ammonia limitations, the Rhode Island Water Quality Regulations include ammonia criteria, which are dependent upon both pH and temperature. In the absence of site-specific data for 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 (as N) of 13.3 mg N/L and 2.08 mg N/L, respectively, which are used to calculate the summer discharge limitations. 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 4.17 mg N/L, respectively, which are used to calculate the winter discharge limitations. Using these Total Ammonia chronic water quality criteria and the above dilution factor and equation, the water quality-based monthly average limits for Total Ammonia are 2.7 mg/l (summer) and 5.4 mg/l (winter). Similarly, using the acute water quality criteria, the daily maximum limits for Total Ammonia are 17.4 mg/l (summer and winter).

In accordance with 40 CFR Part 122.44(d)(1)(iii), it is only necessary to establish limitations for those pollutants in the discharge which have the "reasonable potential" to cause or contribute to the exceedance of the in-stream criteria. In order to evaluate the need for permit limitations, the permit limits were compared to the Discharge Monitoring Report (DMR) data and the semi-annually priority pollutants data for outfall 016A (Phase V landfill stone trench discharge). An assessment was made to determine if limits were necessary, using the DMR data (April 2011 – June 2013) and the priority pollutant data (January 2011 – June 2013) that was collected by RIRRC. Based on this analysis, the following pollutants had "reasonable potential" to cause or contribute to a water quality exceedance: Ammonia, Iron, Arsenic, Beryllium, Benzene, Chlorobenzene and 1,4-Dichlorobenzene. Out of these pollutants, Arsenic, Beryllium, Benzene, Chlorobenzene, and 1,4-Dichlorobenzene are all contaminates of concern under the superfund record of decision (ROD). Therefore, these pollutants are regulated under the DEM's and EPA's superfund program and are not regulated under the RIPDES program. As a result, outfall 016A includes water quality-based limits of Ammonia and Total Iron.

RIRRC recently notified the DEM that it has begun using phosphoric acid for pH adjustment in order to lower the phase V underdrain's pH and to compensate for the lack of phosphorus that the phase V underdrain treatment system's nitrifying bacteria require. Because of this, the DEM has determined that the phase V underdrain's discharge has "reasonable potential" to cause and exceedance of the Total Phosphorus water quality criteria of 0.025 mg/l for lakes, ponds, kettleholes, and reservoirs. Using the treatment system's design flow and the 7Q10 flow of the Brook, the DEM determined that the applicable dilution factor is 1.639. Using this dilution factor and allocating 80% of the criteria, due to the lack of background Total Phosphorus data, the Total Phosphorus permit limit for outfall 016A was calculated to be 0.033 mg/l (i.e. the limit = 0.8 * 0.025 mg/l * 1.639). In addition to the 0.033 mg/l Total Phosphorus limit in effect from April through October, the permit also contains a Total Phosphorus limit of 1.0 mg/l from November through March. The November – March limit is necessary to ensure that the levels of phosphorus discharged in the winter period do not result in the accumulation of phosphorus in the sediments. This limitation assumes that the dissolved fraction of the Total Phosphorus will pass through the system. To verify that the particulate fraction is low (i.e., the Total Phosphorus being discharged is in the dissolved form), a monitoring requirement for orthophosphorus has been included for the November – March period in order to determine the particulate fraction.

*Benchmark Monitoring*

In addition to the above permit limits; the permit also includes benchmark monitoring cutoff concentrations for Total Iron and TSS that are equivalent to the concentrations from the MSGP. The benchmark monitoring concentrations are not directly correlated to water quality standards.

They are pollutant levels that EPA developed to be protective of water quality under nearly all scenarios. Exceedances of the benchmark values, which are not caused by natural background ground water, shall trigger a review of the facility's storm water controls by the permittee and modification as necessary.

*Additional Permit Requirements*

The permit requires that RIRRC conduct semi-annual priority pollutant scans of outfall 016A to evaluate any groundwater contamination that may be discharged through this outfall. If any pollutants that are regulated under the ROD are detected in these scans, RIRRC is required to provide notice to the Federal and State Superfund Programs so that the contamination can be addressed. If any pollutants, not regulated under the ROD, are detected that also cause an exceedance of water quality criteria, RIRRC is required to either eliminate the discharge to surface waters or provide appropriate treatment to remove the detected pollutant. In addition, any pollutants detected in the priority pollutant scan will have their monitoring frequency increased from semi-annual to monthly.

The permit requires that inspections of the erosion control measures shall be conducted in a manner consistent with the Erosion and Sediment Control Plan and identifies some of the key inspections that must be conducted along with their minimum frequencies. The permit also includes a requirement that RIRRC complete a semi-annual comprehensive site evaluation report and submit it to the DEM by July 31st and January 31st of each year, for the previous six (6) calendar months. These reports must summarize the results of the site inspections required under the permit.

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 requirements common to all storm water permits.

IV. 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 Camara
Office of Water Resources
Department of Environmental Management
235 Promenade Street
Providence, Rhode Island 02908
Telephone: (401) 222-4700; Extension: 7640
e-mail: joseph.camara@dem.ri.gov

11/7/14
Date

Joseph B. Haberek, P.E.
Principal Sanitary Engineer
RIPDES Permitting Section

## ATTACHMENT A

Effluent Characteristics:

| Parameter | Outfall 002A (Pond 2) Monthly (Average)* | Outfall 002Q (Pond 2) Quarterly (Average)** |
|---|---|---|
| Flow | 174,037 gal/day | 166,256 gal/day |
| BOD | 15.7 mg/l | 47 mg/l |
| TSS | 20.2 mg/l | 25.5 mg/l |
| Ammonia Total | 28.5 mg/l | 28.6 mg/l |
| pH | 7.2 SU | 7.3 SU |
| Alpha-Terpineol | 1.3 ug/l | ND |
| Benzoic Acid | 2.6 ug/l | 0.5 ug/l |
| p-Cresol | ND | ND |
| Phenol | ND | ND |
| Zinc, Total | 22.1 ug/l | 26.0 ug/l |
| Iron, Total | 3.7 mg/l | 4.7 mg/l |

| Parameter | Outfall 004A (Pond 4) Monthly (Average)* | Outfall 004Q (Pond 4) Quarterly (Average)** |
|---|---|---|
| Flow | 148,064 gal/day | 185,737 gal/day |
| TSS | 13.2 mg/l | 45.3 mg/l |
| Iron, Total | 0.9 mg/l | 2.6 mg/l |

| Parameter | Outfall 005A (Pond 5) Monthly (Average)* | Outfall 005Q (Pond 5) Quarterly (Average)** |
|---|---|---|
| Flow | 102,298 gal/day | 126,254 gal/day |
| TSS | 2.4 mg/l | 4.8 mg/l |
| Iron, Total | 0.3 mg/l | 0.2 mg/l |

| Parameter | Outfall 006A (Pond 6) Monthly (Average)* | Outfall 006Q (Pond 6) Quarterly (Average)** |
|---|---|---|
| Flow | 60,998 gal/day | 71,916 gal/day |
| TSS | 18.1 mg/l | 27.2 mg/l |
| Iron, Total | 0.9 mg/l | 2.0 mg/l |

* The monthly average data is from April 2011 – June 2013.
**The quarterly average data is from July 2011 – March 2013.

| Parameter | Outfall 015A (Pond 15) Monthly (Average)* | Outfall 015Q (Pond 15) Quarterly (Average)** |
|---|---|---|
| Flow | 177,622 gal/day | 169,719 gal/day |
| BOD | 20.1 mg/l | 18.2 mg/l |
| TSS | 14.4 mg/l | 19.8 mg/l |
| Ammonia Total | 15.9 mg/l | 4.3 mg/l |
| pH | 7.5 SU | 7.1 SU |
| Alpha-Terpineol | 0.9 ug/l | 0.4 ug/l |
| Benzoic Acid | 0.3 ug/l | 4.5 ug/l |
| p-Cresol | ND | ND |
| Phenol | 0.5 ug/l | ND |
| Zinc, Total | 21.0 ug/l | 21.7 ug/l |
| Iron, Total | 1.1 mg/l | 0.7 mg/l |

| Parameter | Outfall 0016A (Phase V Landfill Stone Trench Discharge) Monthly (Average)* |
|---|---|
| Flow | 71,678 gal/day |
| Iron, Total | 27.2 mg/l |
| Ammonia, Total | 44.1 mg/l |

*The monthly average data is from April 2011 – June 2013.
**The quarterly average data is from July 2011 – March 2013.

# ATTACHMENT B

## Calculation of Allowable Acute and Chronic Discharge Limitations

# *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: **RIRRC**

RIPDES PERMIT #: **RI0023442**

| | DISSOLVED BACKGROUND DATA (ug/L) | ACUTE METAL TRANSLATOR | CHRONIC METAL TRANSLATOR |
|---|---|---|---|
| ALUMINUM | NA | NA | NA |
| ARSENIC | NA | 1 | 1 |
| CADMIUM | NA | 0.966075988 | 0.931075988 |
| CHROMIUM III | NA | 0.316 | 0.86 |
| CHROMIUM VI | NA | 0.982 | 0.962 |
| COPPER | NA | 0.96 | 0.96 |
| LEAD | NA | 0.867883864 | 0.867883864 |
| 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 = | 59.0 (mg/L as CaCO3) |

| FLOW DATA | |
|---|---|
| DESIGN FLOW = | 0.091 MGD |
| = | 0.141 CFS |
| 7Q10 FLOW = | 0.090 CFS |
| 7Q10 (JUNE-OCT) = | 0.090 CFS |
| 7Q10 (NOV-MAY) = | 0.090 CFS |
| 30Q5 FLOW = | 0.090 CFS |
| HARMONIC FLOW = | 0.090 CFS |

| DILUTION FACTORS | |
|---|---|
| ACUTE = | 1.639 |
| CHRONIC = | 1.639 |
| (MAY-OCT) = | 1.639 |
| (NOV-APR) = | 1.639 |
| 30Q5 FLOW = | 1.639 |
| HARMONIC FLOW = | 1.639 |

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

FACILITY NAME: RIRRC RIPDES PERMIT #: RI0023442

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 | 590.1012396 | 10 | 640 | 13.11336088 |
| ARSENIC (limits are total recoverable) | 7440382 | NA | 340 | 445.8542699 | 150 | 1.4 | 1.835870523 |
| ASBESTOS | 1332214 | | | No Criteria | | | No Criteria |
| BERYLLIUM | 7440417 | | 7.5 | 9.835020659 | 0.17 | | 0.222927135 |
| CADMIUM (limits are total recoverable) | 7440439 | NA | 1.20527985 | 1.636027582 | 0.170440862 | | 0.240050496 |
| CHROMIUM III (limits are total recoverable) | 16065831 | NA | 369.8472569 | 1534.791313 | 48.10952954 | | 73.35786309 |
| CHROMIUM VI (limits are total recoverable) | 18540299 | NA | 16 | 21.36596477 | 11 | | 14.99448749 |
| COPPER (limits are total recoverable) | 7440508 | NA | 8.174616343 | 11.16632231 | 5.705517855 | | 7.793595274 |
| CYANIDE | 57125 | | 22 | 28.84939393 | 5.2 | 140 | 6.818947657 |
| LEAD (limits are total recoverable) | 7439921 | NA | 36.19814214 | 54.69387332 | 1.410589632 | | 2.131341722 |
| MERCURY (limits are total recoverable) | 7439976 | NA | 1.4 | 2.159847674 | 0.77 | 0.15 | 0.231412251 |
| NICKEL (limits are total recoverable) | 7440020 | NA | 299.6438716 | 393.7212649 | 33.28118321 | 4600 | 43.77413901 |
| SELENIUM (limits are total recoverable) | 7782492 | NA | 20 | 26.22672176 | 5 | 4200 | 6.55668044 |
| SILVER (limits are total recoverable) | 7440224 | NA | 1.392144653 | 2.147728851 | NA | | No Criteria |
| THALLIUM | 7440280 | | 46 | 60.32146004 | 1 | 0.47 | 0.616327961 |
| ZINC (limits are total recoverable) | 7440666 | NA | 74.93730775 | 100.4785235 | 75.55029186 | 26000 | 100.4785235 |
| VOLATILE ORGANIC COMPOUNDS | | | | | | | |
| ACROLEIN | 107028 | | 2.9 | 3.802874655 | 0.06 | 290 | 0.078680165 |
| ACRYLONITRILE | 107131 | | 378 | 495.6850412 | 8.4 | 2.5 | 3.27834022 |
| BENZENE | 71432 | | 265 | 347.5040633 | 5.9 | 510 | 7.736882919 |
| BROMOFORM | 75252 | | 1465 | 1921.107369 | 33 | 1400 | 43.2740909 |
| CARBON TETRACHLORIDE | 56235 | | 1365 | 1789.97376 | 30 | 16 | 20.98137741 |
| CHLOROBENZENE | 108907 | | 795 | 1042.51219 | 18 | 1600 | 23.60404958 |
| CHLORODIBROMOMETHANE | 124481 | | | No Criteria | | 130 | 170.4736914 |
| CHLOROFORM | 67663 | | 1445 | 1894.880647 | 32 | 4700 | 41.96275481 |
| DICHLOROBROMOMETHANE | 75274 | | | No Criteria | | 170 | 222.9271349 |
| 1,2DICHLOROETHANE | 107062 | | 5900 | 7736.882919 | 131 | 370 | 171.7850275 |
| 1,1DICHLOROETHYLENE | 75354 | | 580 | 760.574931 | 13 | 7100 | 17.04736914 |
| 1,2DICHLOROPROPANE | 78875 | | 2625 | 3442.257231 | 58 | 150 | 76.0574931 |
| 1,3DICHLOROPROPYLENE | 542756 | | | No Criteria | | 21 | 27.53805785 |
| ETHYLBENZENE | 100414 | | 1600 | 2098.137741 | 36 | 2100 | 47.20809916 |
| BROMOMETHANE (methyl bromide) | 74839 | | | No Criteria | | 1500 | 1967.004132 |
| CHLOROMETHANE (methyl chloride) | 74873 | | | No Criteria | | | No Criteria |
| METHYLENE CHLORIDE | 75092 | | 9650 | 12654.39325 | 214 | 5900 | 280.6259228 |

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

FACILITY NAME: RIRRC RIPDES PERMIT #: RI0023442

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 | 611.082617 | 10 | 40 | 13.11336088 |
| TETRACHLOROETHYLENE | 127184 | | 240 | 314.7206611 | 5.3 | 33 | 6.950081266 |
| TOLUENE | 108883 | | 635 | 832.6984158 | 14 | 15000 | 18.35870523 |
| 1,2TRANSDICHLOROETHYLENE | 156605 | | | No Criteria | | 10000 | 13113.36088 |
| 1,1,1TRICHLOROETHANE | 71556 | | | No Criteria | | | No Criteria |
| 1,1,2TRICHLOROETHANE | 79005 | | 900 | 1180.202479 | 20 | 160 | 26.22672176 |
| TRICHLOROETHYLENE | 79016 | | 1950 | 2557.105371 | 43 | 300 | 56.38745178 |
| VINYL CHLORIDE | 75014 | | | No Criteria | | 2.4 | 3.147206611 |
| ACID ORGANIC COMPOUNDS | | | | | | | |
| 2CHLOROPHENOL | 95578 | | 129 | 169.1623553 | 2.9 | 150 | 3.802874655 |
| 2,4DICHLOROPHENOL | 120832 | | 101 | 132.4449449 | 2.2 | 290 | 2.884939393 |
| 2,4DIMETHYLPHENOL | 105679 | | 106 | 139.0016253 | 2.4 | 850 | 3.147206611 |
| 4,6DINITRO2METHYL PHENOL | 534521 | | | No Criteria | | 280 | 367.1741046 |
| 2,4DINITROPHENOL | 51285 | | 31 | 40.65141873 | 0.69 | 5300 | 0.904821901 |
| 4NITROPHENOL | 88755 | | | No Criteria | | | No Criteria |
| PENTACHLOROPHENOL | 87865 | | 0.058191123 | 0.076308119 | 0.044644576 | 30 | 0.058544043 |
| PHENOL | 108952 | | 251 | 329.1453581 | 5.6 | 1700000 | 7.343482092 |
| 2,4,6TRICHLOROPHENOL | 88062 | | 16 | 20.98137741 | 0.36 | 24 | 0.472080992 |
| BASE NEUTRAL COMPOUNDS | | | | | | | |
| ACENAPHTHENE | 83329 | | 85 | 111.4635675 | 1.9 | 990 | 2.491538567 |
| ANTHRACENE | 120127 | | | No Criteria | | 40000 | 52453.44352 |
| BENZIDINE | 92875 | | | No Criteria | | 0.002 | 0.002622672 |
| POLYCYCLIC AROMATIC HYDROCARBONS | | | | No Criteria | | 0.18 | 0.236040496 |
| BIS(2CHLOROETHYL)ETHER | 111444 | | | No Criteria | | 5.3 | 6.950081266 |
| BIS(2CHLOROISOPROPYL)ETHER | 108601 | | | No Criteria | | 65000 | 85236.84571 |
| BIS(2ETHYLHEXYL)PHTHALATE | 117817 | | 555 | 727.7915288 | 12 | 22 | 15.73603305 |
| BUTYL BENZYL PHTHALATE | 85687 | | 85 | 111.4635675 | 1.9 | 1900 | 2.491538567 |
| 2CHLORONAPHTHALENE | 91587 | | | No Criteria | | 1600 | 2098.137741 |
| 1,2DICHLOROBENZENE | 95501 | | 79 | 103.5955509 | 1.8 | 1300 | 2.360404958 |
| 1,3DICHLOROBENZENE | 541731 | | 390 | 511.4210743 | 8.7 | 960 | 11.40862396 |
| 1,4DICHLOROBENZENE | 106467 | | 56 | 73.43482092 | 1.2 | 190 | 1.573603305 |
| 3,3DICHLOROBENZIDENE | 91941 | | | No Criteria | | 0.28 | 0.367174105 |
| DIETHYL PHTHALATE | 84662 | | 2605 | 3416.030509 | 58 | 44000 | 76.0574931 |
| DIMETHYL PHTHALATE | 131113 | | 1650 | 2163.704545 | 37 | 1100000 | 48.61943525 |
| DI-n-BUTYL PHTHALATE | 84742 | | | No Criteria | | 4500 | 5901.012396 |
| 2,4DINITROTOLUENE | 121142 | | 1550 | 2032.570936 | 34 | 34 | 44.58542699 |

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

FACILITY NAME: RIRRC RIPDES PERMIT #: RI0023442

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 | 18.35870523 | 0.31 | 2 | 0.406514187 |
| FLUORANTHENE | 206440 | | 199 | 260.9558815 | 4.4 | 140 | 5.769878787 |
| FLUORENE | 86737 | | | No Criteria | | 5300 | 6950.081266 |
| HEXACHLOROBENZENE | 118741 | | | No Criteria | | 0.0029 | 0.003802875 |
| HEXACHLOROBUTADIENE | 87683 | | | No Criteria | | 180 | 236.0404958 |
| HEXACHLOROCYCLOPENTADIENE | 77474 | | 0.35 | 0.458967631 | 0.008 | 1100 | 0.010490689 |
| HEXACHLOROETHANE | 67721 | | 49 | 64.25546831 | 1.1 | 33 | 1.442469697 |
| ISOPHORONE | 78591 | | 5850 | 7671.316114 | 130 | 9600 | 170.4736914 |
| NAPHTHALENE | 91203 | | 115 | 150.8036501 | 2.6 | | 3.409473829 |
| NITROBENZENE | 98953 | | 1350 | 1770.303719 | 30 | 690 | 39.34008264 |
| N-NITROSODIMETHYLAMINE | 62759 | | | No Criteria | | 30 | 39.34008264 |
| N-NITROSODI-N-PROPYLAMINE | 621647 | | | No Criteria | | 5.1 | 6.687814048 |
| N-NITROSODIPHENYLAMINE | 86306 | | 293 | 384.2214738 | 6.5 | 60 | 8.523684571 |
| PYRENE | 129000 | | | No Criteria | | 4000 | 5245.344352 |
| 1,2,4trichlorobenzene | 120821 | | 75 | 98.35020659 | 1.7 | 70 | 2.229271349 |
| PESTICIDES/PCBS | | | | | | | |
| ALDRIN | 309002 | | 3 | 3.934008264 | | 0.0005 | 0.000655668 |
| Alpha BHC | 319846 | | | No Criteria | | 0.049 | 0.064255468 |
| Beta BHC | 319857 | | | No Criteria | | 0.17 | 0.222927135 |
| Gamma BHC (Lindane) | 58899 | | 0.95 | 1.245769284 | | 1.8 | 2.360404958 |
| CHLORDANE | 57749 | | 2.4 | 3.147206611 | 0.0043 | 0.0081 | 0.005638745 |
| 4,4DDT | 50293 | | 1.1 | 1.442469697 | 0.001 | 0.0022 | 0.001311336 |
| 4,4DDE | 72559 | | | No Criteria | | 0.0022 | 0.002884939 |
| 4,4DDD | 72548 | | | No Criteria | | 0.0031 | 0.004065142 |
| DIELDRIN | 60571 | | 0.24 | 0.314720661 | 0.056 | 0.00054 | 0.000708121 |
| ENDOSULFAN (alpha) | 959988 | | 0.22 | 0.288493939 | 0.056 | 89 | 0.073434821 |
| ENDOSULFAN (beta) | 33213659 | | 0.22 | 0.288493939 | 0.056 | 89 | 0.073434821 |
| ENDOSULFAN (sulfate) | 1031078 | | | No Criteria | | 89 | 116.7089118 |
| ENDRIN | 72208 | | 0.086 | 0.112774904 | 0.036 | 0.06 | 0.047208099 |
| ENDRIN ALDEHYDE | 7421934 | | | No Criteria | | 0.3 | 0.393400826 |
| HEPTACHLOR | 76448 | | 0.52 | 0.681894766 | 0.0038 | 0.00079 | 0.001035956 |
| HEPTACHLOR EPOXIDE | 1024573 | | 0.52 | 0.681894766 | 0.0038 | 0.00039 | 0.000511421 |
| POLYCHLORINATED BIPHENYLS3 | 1336363 | | | No Criteria | 0.014 | 0.00064 | 0.000839255 |
| 2,3,7,8TCDD (Dioxin) | 1746016 | | | No Criteria | | 0.000000051 | 6.68781E-08 |
| TOXAPHENE | 8001352 | | 0.73 | 0.957275344 | 0.0002 | 0.0028 | 0.000262267 |
| TRIBUTYLTIN | | | 0.46 | 0.6032146 | 0.072 | | 0.094416198 |

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

FACILITY NAME: RIRRC RIPDES PERMIT #: RI0023442

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 | 983.5020659 | 87 | | 114.0862396 |
| AMMONIA as N(winter/summer) | 7664417 | | 13.3 \| 13.3 | 17441 \| 17441 | 4.17 \| 2.08 | | 5468.27 \| 2727.58 |
| 4BROMOPHENYL PHENYL ETHER | | | 18 | 23.60404958 | 0.4 | | 0.524534435 |
| CHLORIDE | 16887006 | | 860000 | 1127749.036 | 230000 | | 301607.3002 |
| CHLORINE | 7782505 | | 19 | 31.14423209 | 11 | | 18.03087121 |
| 4CHLORO2METHYLPHENOL | | | 15 | 19.67004132 | 0.32 | | 0.419627548 |
| 1CHLORONAPHTHALENE | | | 80 | 104.906887 | 1.8 | | 2.360404958 |
| 4CHLOROPHENOL | 106489 | | 192 | 251.7765289 | 4.3 | | 5.638745178 |
| 2,4DICHLORO6METHYLPHENOL | | | 22 | 28.84939393 | 0.48 | | 0.629441322 |
| 1,1DICHLOROPROPANE | | | 1150 | 1508.036501 | 26 | | 34.09473829 |
| 1,3DICHLOROPROPANE | 142289 | | 303 | 397.3348346 | 6.7 | | 8.785951789 |
| 2,3DINITROTOLUENE | | | 17 | 22.29271349 | 0.37 | | 0.485194353 |
| 2,4DINITRO6METHYL PHENOL | | | 12 | 15.73603305 | 0.26 | | 0.340947383 |
| IRON | 7439896 | | | No Criteria | 1000 | | 1311.336088 |
| pentachlorobenzene | 608935 | | 13 | 17.04736914 | 0.28 | | 0.367174105 |
| PENTACHLOROETHANE | | | 362 | 474.7036638 | 8 | | 10.4906887 |
| 1,2,3,5tetrachlorobenzene | | | 321 | 420.9388842 | 7.1 | | 9.310486224 |
| 1,1,1,2TETRACHLOROETHANE | 630206 | | 980 | 1285.109366 | 22 | | 28.84939393 |
| 2,3,4,6TETRACHLOROPHENOL | 58902 | | 7 | 9.179352615 | 0.16 | | 0.209813774 |
| 2,3,5,6TETRACHLOROPHENOL | | | 8.5 | 11.14635675 | 0.19 | | 0.249153857 |
| 2,4,5TRICHLOROPHENOL | 95954 | | 23 | 30.16073002 | 0.51 | | 0.668781405 |
| 2,4,6TRINITROPHENOL | 88062 | | 4235 | 5553.508332 | 94 | | 123.2655923 |
| XYLENE | 1330207 | | 133 | 174.4076997 | 3 | | 3.934008264 |

**Facility Name:** *RIRRC*

**RIPDES Permit #:** *RI0023442*

**Outfall #:** *0016A*

NOTE: METALS LIMITS ARE TOTAL METALS

| Parameter | CAS # | Concentration Limits (ug/L) Based on WQ Criteria | | Antideg. Limits (ug/L) | PP Scan Data (ug/l) 1/2011 - 12/2013 | | Ave. DMR Data (ug/L) 4/2011 - 6/2013 | | Potential Permit Limits (ug/L) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Daily Max | Monthly Ave | Monthly Ave | Max | Ave | Daily Max | Monthly Ave | Daily Max | Monthly Ave |
| PRIORITY POLLUTANTS | | | | | | | | | | |
| TOXIC METALS AND CYANIDE | | | | | | | | | | |
| ANTIMONY | 7440360 | 590.10 | 13.11 | — | — | — | — | — | 590.1 | 13.11 |
| ARSENIC (limits are total recoverable) | 7440382 | 445.85 | 1.84 | — | 5.3 | 0.88 | — | — | 445.85 | 1.84 |
| ASBESTOS | 1332214 | No Criteria | No Criteria | — | — | — | — | — | — | — |
| BERYLLIUM | 7440417 | 9.84 | 0.22 | — | 8.9 | 1.66 | — | — | 9.84 | 0.22 |
| CADMIUM (limits are total recoverable) | 7440439 | 1.64 | 0.24 | | | | | | 1.64 | 0.24005 |
| CHROMIUM III (limits are total recoverable) | 16065831 | 1534.79 | 73.36 | — | — | — | — | — | 1534.79 | 73.36 |
| CHROMIUM VI (limits are total recoverable) | 18540299 | 21.37 | 14.99 | | 18 | 7.63 | | | 21.37 | 14.99 |
| COPPER (limits are total recoverable) | 7440508 | 11.17 | 7.79 | | 11 | 2.93 | | | 11.17 | 7.79 |
| CYANIDE | 57125 | 28.85 | 6.82 | | 150 | 26.5 | | | 28.85 | 6.82 |
| LEAD (limits are total recoverable) | 7439921 | 54.69 | 2.13 | | | | | | 54.69 | 2.13 |
| MERCURY (limits are total recoverable) | 7439976 | 2.16 | 0.23 | | — | — | | | 2.16 | 0.23 |
| NICKEL (limits are total recoverable) | 7440020 | 393.72 | 43.77 | | 21 | 15.27 | | | 393.72 | 43.77 |
| SELENIUM (limits are total recoverable) | 7782492 | 26.23 | 6.56 | — | — | — | — | — | 26.23 | 6.56 |
| SILVER (limits are total recoverable) | 7440224 | 2.15 | No Criteria | | 1.3 | 0.22 | | | 2.15 | 2.15 |
| THALLIUM | 7440280 | 60.32 | 0.62 | — | 11 | 1.83 | — | — | 60.32 | 0.62 |
| ZINC (limits are total recoverable) | 7440666 | 100.48 | 100.48 | | 38 | 15.79 | | | 100.48 | 100.48 |
| VOLATILE ORGANIC COMPOUNDS | | | | | | | | | | |
| ACROLEIN | 107028 | 3.80 | 0.08 | — | — | — | — | — | 3.8 | 0.07868 |
| ACRYLONITRILE | 107131 | 495.69 | 3.28 | — | — | — | — | — | 495.69 | 3.28 |
| BENZENE | 71432 | 347.50 | 7.74 | — | 23 | 13.88 | — | — | 347.5 | 7.74 |
| BROMOFORM | 75252 | 1921.11 | 43.27 | — | — | — | — | — | 1921.11 | 43.27 |
| CARBON TETRACHLORIDE | 56235 | 1789.97 | 20.98 | — | | | — | — | 1789.97 | 20.98 |
| CHLOROBENZENE | 108907 | 1042.51 | 23.60 | — | 150 | 89.45 | — | — | 1042.51 | 23.6 |
| CHLORODIBROMOMETHANE | 124481 | No Criteria | 170.47 | — | | | — | — | — | 170.47 |
| CHLOROFORM | 67663 | 1894.88 | 41.96 | — | | | — | — | 1894.88 | 41.96 |
| DICHLOROBROMOMETHANE | 75274 | No Criteria | 222.93 | — | | | — | — | — | 222.93 |
| 1,2DICHLOROETHANE | 107062 | 7736.88 | 171.79 | — | | — | — | — | 7736.88 | 171.79 |
| 1,1DICHLOROETHYLENE | 75354 | 760.57 | 17.05 | — | — | — | — | — | 760.57 | 17.05 |
| 1,2DICHLOROPROPANE | 78875 | 3442.26 | 76.06 | — | — | — | — | — | 3442.26 | 76.06 |
| 1,3DICHLOROPROPYLENE | 542756 | No Criteria | 27.54 | — | — | — | — | — | — | 27.54 |
| ETHYLBENZENE | 100414 | 2098.14 | 47.21 | — | 0.67 | 0.11 | — | — | 2098.14 | 47.21 |
| BROMOMETHANE (methyl bromide) | 74839 | No Criteria | 1967.00 | — | — | — | — | — | — | 1967 |

**Facility Name:** *RIRRC*

**RIPDES Permit #:** *RI0023442*

**Outfall #:** *0016A*

NOTE: METALS LIMITS ARE TOTAL METALS

| Parameter | CAS # | Concentration Limits (ug/L) Based on WQ Criteria | | Antideg. Limits (ug/L) | PP Scan Data (ug/l) 1/2011 - 12/2013 | | Ave. DMR Data (ug/L) 4/2011 - 6/2013 | | Potential Permit Limits (ug/L) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Daily Max | Monthly Ave | Monthly Ave | Max | Ave | Daily Max | Monthly Ave | Daily Max | Monthly Ave |
| CHLOROMETHANE (methyl chloride) | 74873 | No Criteria | No Criteria | --- | --- | --- | --- | --- | --- | --- |
| METHYLENE CHLORIDE | 75092 | 12654.39 | 280.63 | --- | --- | --- | --- | --- | 12654.39 | 280.63 |
| 1,1,2,2TETRACHLOROETHANE | 79345 | 611.08 | 13.11 | --- | --- | --- | --- | --- | 611.08 | 13.11 |
| TETRACHLOROETHYLENE | 127184 | 314.72 | 6.95 | --- | | | --- | --- | 314.72 | 6.95 |
| TOLUENE | 108883 | 832.70 | 18.36 | --- | | | --- | --- | 832.7 | 18.36 |
| 1,2TRANSDICHLOROETHYLENE | 156605 | No Criteria | 13113.36 | --- | | | --- | --- | --- | 13113.36 |
| 1,1,1TRICHLOROETHANE | 71556 | No Criteria | No Criteria | --- | --- | --- | | | --- | --- |
| 1,1,2TRICHLOROETHANE | 79005 | 1180.20 | 26.23 | --- | --- | --- | --- | --- | 1180.2 | 26.23 |
| TRICHLOROETHYLENE | 79016 | 2557.11 | 56.39 | --- | | | --- | --- | 2557.11 | 56.39 |
| VINYL CHLORIDE | 75014 | No Criteria | 3.15 | --- | --- | --- | --- | --- | --- | 3.15 |
| ACID ORGANIC COMPOUNDS | | | | | | | | | | |
| 2CHLOROPHENOL | 95578 | 169.16 | 3.80 | --- | --- | --- | --- | --- | 169.16 | 3.8 |
| 2,4DICHLOROPHENOL | 120832 | 132.44 | 2.88 | --- | | | --- | --- | 132.44 | 2.88 |
| 2,4DIMETHYLPHENOL | 105679 | 139.00 | 3.15 | --- | | | --- | --- | 139 | 3.15 |
| 4,6DINITRO2METHYL PHENOL | 534521 | No Criteria | 367.17 | --- | | | --- | --- | --- | 367.17 |
| 2,4DINITROPHENOL | 51285 | 40.65 | 0.90 | --- | | | --- | --- | 40.65 | 0.9 |
| 4NITROPHENOL | 88755 | No Criteria | No Criteria | --- | | | --- | --- | --- | --- |
| PENTACHLOROPHENOL | 87865 | 0.08 | 0.06 | --- | | | --- | --- | 0.08 | 0.05854 |
| PHENOL | 108952 | 329.15 | 7.34 | --- | | | --- | --- | 329.15 | 7.34 |
| 2,4,6TRICHLOROPHENOL | 88062 | 20.98 | 0.47 | --- | --- | --- | --- | --- | 20.98 | 0.47 |
| BASE NEUTRAL COMPOUNDS | | | | | | | | | | |
| ACENAPHTHENE | 83329 | 111.46 | 2.49 | --- | --- | --- | --- | --- | 111.46 | 2.49 |
| ANTHRACENE | 120127 | No Criteria | 52453.44 | --- | | | --- | --- | --- | 52453.44 |
| BENZIDINE | 92875 | No Criteria | 0.00 | --- | | | --- | --- | --- | 0.00262 |
| POLYCYCLIC AROMATIC HYDROCARBONS | | No Criteria | 0.24 | --- | | | --- | --- | --- | 0.24 |
| BIS(2CHLOROETHYL)ETHER | 111444 | No Criteria | 6.95 | --- | | | --- | --- | --- | 6.95 |
| BIS(2CHLOROISOPROPYL)ETHER | 108601 | No Criteria | 85236.85 | --- | | | --- | --- | --- | 85236.85 |
| BIS(2ETHYLHEXYL)PHTHALATE | 117817 | 727.79 | 15.74 | --- | | | | | 727.79 | 15.74 |
| BUTYL BENZYL PHTHALATE | 85687 | 111.46 | 2.49 | --- | | | --- | --- | 111.46 | 2.49 |
| 2CHLORONAPHTHALENE | 91587 | No Criteria | 2098.14 | --- | --- | --- | --- | --- | --- | 2098.14 |
| 1,2DICHLOROBENZENE | 95501 | 103.60 | 2.36 | --- | 0.73 | 0.05 | --- | --- | 103.6 | 2.36 |
| 1,3DICHLOROBENZENE | 541731 | 511.42 | 11.41 | --- | --- | --- | --- | --- | 511.42 | 11.41 |
| 1,4DICHLOROBENZENE | 106467 | 73.43 | 1.57 | --- | 3.2 | 1.81 | --- | --- | 73.43 | 1.57 |
| 3,3DICHLOROBENZIDENE | 91941 | No Criteria | 0.37 | --- | --- | --- | --- | --- | --- | 0.37 |

**Facility Name:** *RIRRC*

**RIPDES Permit #:** *RI0023442*

**Outfall #:** *0016A*

NOTE: METALS LIMITS ARE TOTAL METALS

| Parameter | CAS # | Concentration Limits (ug/L) Based on WQ Criteria | | Antideg. Limits (ug/L) | PP Scan Data (ug/l) 1/2011 - 12/2013 | | Ave. DMR Data (ug/L) 4/2011 - 6/2013 | | Potential Permit Limits (ug/L) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Daily Max | Monthly Ave | Monthly Ave | Max | Ave | Daily Max | Monthly Ave | Daily Max | Monthly Ave |
| DIETHYL PHTHALATE | 84662 | 3416.03 | 76.06 | — | — | — | — | — | 3416.03 | 76.06 |
| DIMETHYL PHTHALATE | 131113 | 2163.70 | 48.52 | — | — | — | — | — | 2163.7 | 48.52 |
| DInBUTYL PHTHALATE | 84742 | No Criteria | 5901.01 | — | — | — | — | — | — | 5901.01 |
| 2,4DINITROTOLUENE | 121142 | 2032.57 | 44.59 | — | — | — | — | — | 2032.57 | 44.59 |
| 1,2DIPHENYLHYDRAZINE | 122667 | 18.36 | 0.41 | — | — | — | — | — | 18.36 | 0.41 |
| FLUORANTHENE | 206440 | 260.96 | 5.77 | — | — | — | — | — | 260.96 | 5.77 |
| FLUORENE | 86737 | No Criteria | 6950.08 | — | — | — | — | — | — | 6950.08 |
| HEXACHLOROBENZENE | 118741 | No Criteria | 0.00 | — | — | — | — | — | — | 0.0038 |
| HEXACHLOROBUTADIENE | 87683 | No Criteria | 236.04 | — | — | — | — | — | — | 236.04 |
| HEXACHLOROCYCLOPENTADIENE | 77474 | 0.46 | 0.01 | — | — | — | — | — | 0.46 | 0.01049 |
| HEXACHLOROETHANE | 67721 | 64.26 | 1.44 | — | — | — | — | — | 64.26 | 1.44 |
| ISOPHORONE | 78591 | 7671.32 | 170.47 | — | — | — | — | — | 7671.32 | 170.47 |
| NAPHTHALENE | 91203 | 150.80 | 3.41 | — | — | — | — | — | 150.8 | 3.41 |
| NITROBENZENE | 98953 | 1770.30 | 39.34 | — | — | — | — | — | 1770.3 | 39.34 |
| NNITROSODIMETHYLAMINE | 62759 | No Criteria | 39.34 | — | — | — | — | — | — | 39.34 |
| NNITROSODINPROPYLAMINE | 621647 | No Criteria | 6.69 | — | — | — | — | — | — | 6.69 |
| NNITROSODIPHENYLAMINE | 86306 | 384.22 | 8.52 | — | — | — | — | — | 384.22 | 8.52 |
| PYRENE | 129000 | No Criteria | 5245.34 | — | — | — | — | — | — | 5245.34 |
| 1,2,4trichlorobenzene | 120821 | 98.35 | 2.23 | — | — | — | — | — | 98.35 | 2.23 |
| PESTICIDES/PCBs | | | | | | | | | | |
| ALDRIN | 309002 | 3.93 | 0.00 | — | — | — | — | — | 3.93 | 0.00066 |
| Alpha BHC | 319846 | No Criteria | 0.06 | — | — | — | — | — | — | 0.06 |
| Beta BHC | 319857 | No Criteria | 0.22 | — | — | — | — | — | — | 0.22 |
| Gamma BHC (Lindane) | 58899 | 1.25 | 2.36 | — | — | — | — | — | 1.25 | 2.36 |
| CHLORDANE | 57749 | 3.15 | 0.01 | — | — | — | — | — | 3.15 | 0.00564 |
| 4,4DDT | 50293 | 1.44 | 0.001 | — | — | — | — | — | 1.44 | 0.00131 |
| 4,4DDE | 72559 | No Criteria | 0.003 | — | — | — | — | — | — | 0.00288 |
| 4,4DDD | 72548 | No Criteria | 0.004 | — | — | — | — | — | — | 0.00407 |
| DIELDRIN | 60571 | 0.31 | 0.001 | — | — | — | — | — | 0.31 | 0.00071 |
| ENDOSULFAN (alpha) | 959988 | 0.29 | 0.073 | — | — | — | — | — | 0.29 | 0.07343 |
| ENDOSULFAN (beta) | 33213659 | 0.29 | 0.07 | — | — | — | — | — | 0.29 | 0.07343 |
| ENDOSULFAN (sulfate) | 1031078 | No Criteria | 116.71 | — | — | — | — | — | — | 116.71 |
| ENDRIN | 72208 | 0.11 | 0.05 | — | — | — | — | — | 0.11 | 0.05 |
| ENDRIN ALDEHYDE | 7421934 | No Criteria | 0.39 | — | — | — | — | — | — | 0.39 |

**Facility Name:** ***RIRRC***

**RIPDES Permit #:** ***RI0023442***

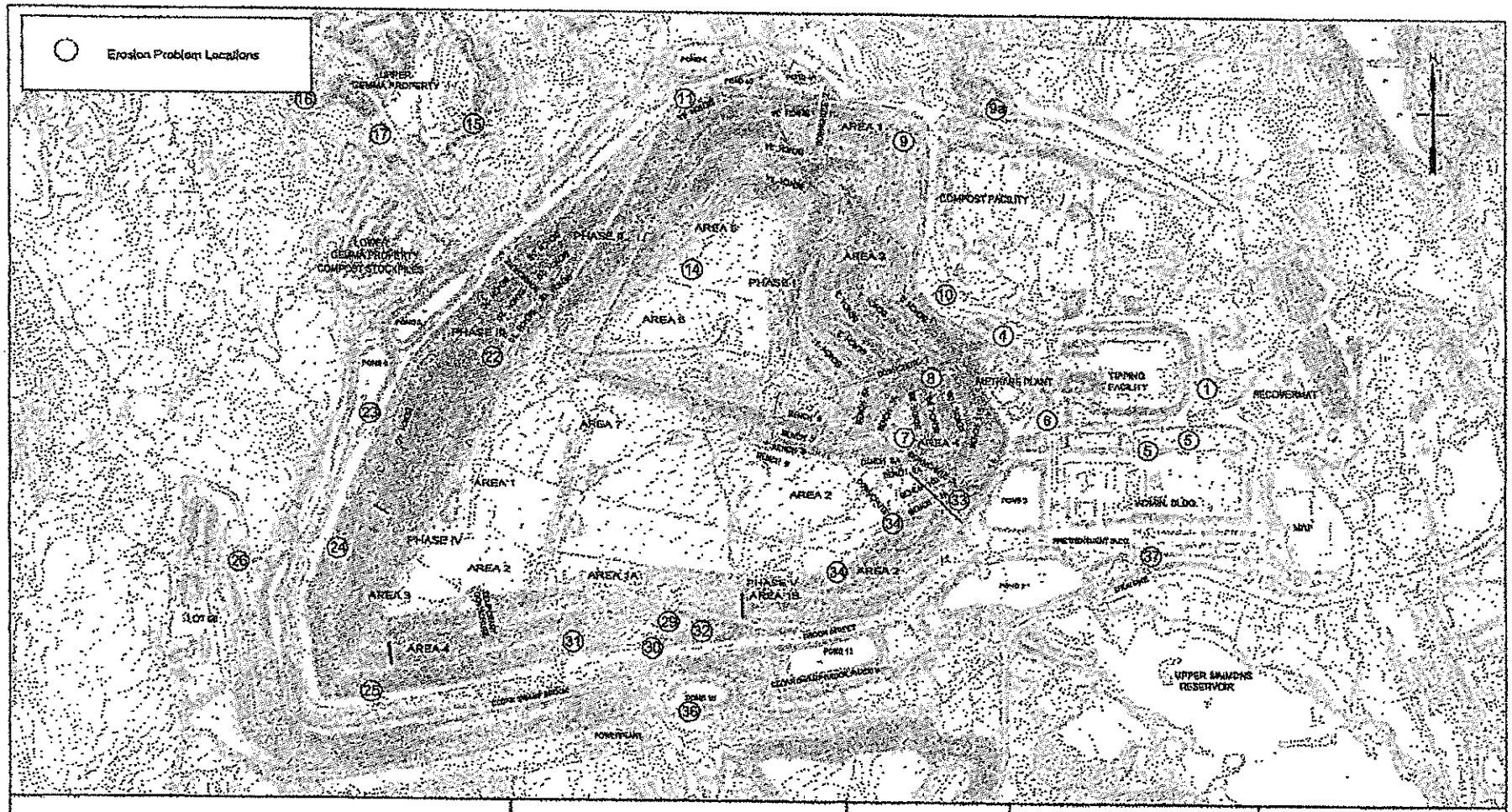
**Outfall #:** ***0016A***

NOTE: METALS LIMITS ARE TOTAL METALS

| Parameter | CAS # | Concentration Limits (ug/L) Based on WQ Criteria | | Antideg. Limits (ug/L) | PP Scan Data (ug/l) 1/2011 - 12/2013 | | Ave. DMR Data (ug/L) 4/2011 - 6/2013 | | Potential Permit Limits (ug/L) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Daily Max | Monthly Ave | Monthly Ave | Max | Ave | Daily Max | Monthly Ave | Daily Max | Monthly Ave |
| HEPTACHLOR | 76448 | 0.68 | 0.0010 | --- | --- | --- | --- | --- | 0.68 | 0.001 |
| HEPTACHLOR EPOXIDE | 1024573 | 0.68 | 0.0005 | --- | --- | --- | --- | --- | 0.68 | 0.0005 |
| POLYCHLORINATED BIPHENYLS3 | 1336363 | No Criteria | 0.0008 | --- | --- | --- | --- | --- | --- | 0.0008 |
| 2,3,7,8TCDD (Dioxin) | 1746016 | No Criteria | 0.0000 | --- | --- | --- | --- | --- | --- | 0 |
| TOXAPHENE | 8001352 | 0.96 | 0.0003 | --- | --- | --- | --- | --- | 0.96 | 0.00026 |
| TRIBUTYLTIN | | 0.60 | 0.0940 | | | | | | 0.6 | 0.094 |
| NON-PRIORITY POLLUTANTS | | | | | | | | | | |
| OTHER SUBSTANCES | | | | | | | | | | |
| ALUMINUM (limits are total recoverable) | 7429905 | 983.50 | 114.09 | --- | --- | --- | --- | --- | 983.5 | 114.09 |
| AMMONIA (winter) | 7664417 | 17440.77 | 5468.27 | --- | --- | --- | 72500 | 46000 | 17440.77 | 5468.27 |
| AMMONIA (summer) | 7664417 | 17440.77 | 2727.58 | --- | --- | --- | 68000 | 42500 | 17440.77 | 2727.58 |
| 4BROMOPHENYL PHENYL ETHER | | 23.60 | 0.52 | --- | --- | --- | --- | --- | 23.6 | 0.52 |
| CHLORIDE | 16887006 | 1127749.04 | 301607.30 | | | | | | 1127749.04 | 301607.3 |
| CHLORINE | 7782505 | 31.14 | 18.03 | --- | --- | --- | | --- | 31.14 | 18.03 |
| 4CHLORO2METHYLPHENOL | | 19.67 | 0.42 | --- | --- | --- | --- | --- | 19.67 | 0.42 |
| 1CHLORONAPHTHALENE | | 104.91 | 2.36 | --- | --- | --- | --- | --- | 104.91 | 2.36 |
| 4CHLOROPHENOL | 106489 | 251.78 | 5.64 | --- | --- | --- | --- | --- | 251.78 | 5.64 |
| 2,4DICHLORO6METHYLPHENOL | | 28.85 | 0.63 | --- | --- | --- | --- | --- | 28.85 | 0.63 |
| 1,1DICHLOROPROPANE | | 1508.04 | 34.09 | --- | --- | --- | --- | --- | 1508.04 | 34.09 |
| 1,3DICHLOROPROPANE | 142289 | 397.33 | 8.79 | --- | --- | --- | --- | --- | 397.33 | 8.79 |
| 2,3DINITROTOLUENE | | 22.29 | 0.49 | --- | --- | --- | --- | --- | 22.29 | 0.49 |
| 2,4DINITRO6METHYL PHENOL | | 15.74 | 0.34 | --- | --- | --- | --- | --- | 15.74 | 0.34 |
| IRON | 7439896 | | 1311.34 | | | | 27200 | 27200 | --- | 1311.34 |
| pentachlorobenzene | 608935 | 17.05 | 0.37 | --- | --- | --- | --- | --- | 17.05 | 0.37 |
| PENTACHLOROETHANE | | 474.70 | 10.49 | --- | --- | --- | --- | --- | 474.7 | 10.49 |
| 1,2,3,5tetrachlorobenzene | | 420.94 | 9.31 | --- | --- | --- | --- | --- | 420.94 | 9.31 |
| 1,1,1,2TETRACHLOROETHANE | 630206 | 1285.11 | 28.85 | --- | --- | --- | --- | --- | 1285.11 | 28.85 |
| 2,3,4,6TETRACHLOROPHENOL | 58902 | 9.18 | 0.21 | --- | --- | --- | --- | --- | 9.18 | 0.21 |
| 2,3,5,6TETRACHLOROPHENOL | | 11.15 | 0.25 | --- | --- | --- | --- | --- | 11.15 | 0.25 |
| 2,4,5TRICHLOROPHENOL | 95954 | 30.16 | 0.67 | --- | --- | --- | --- | --- | 30.16 | 0.67 |
| 2,4,6TRINITROPHENOL | 88062 | 5553.51 | 123.27 | --- | --- | --- | --- | --- | 5553.51 | 123.27 |
| XYLENE | 1330207 | 174.41 | 3.93 | | | | | | 174.41 | 3.93 |

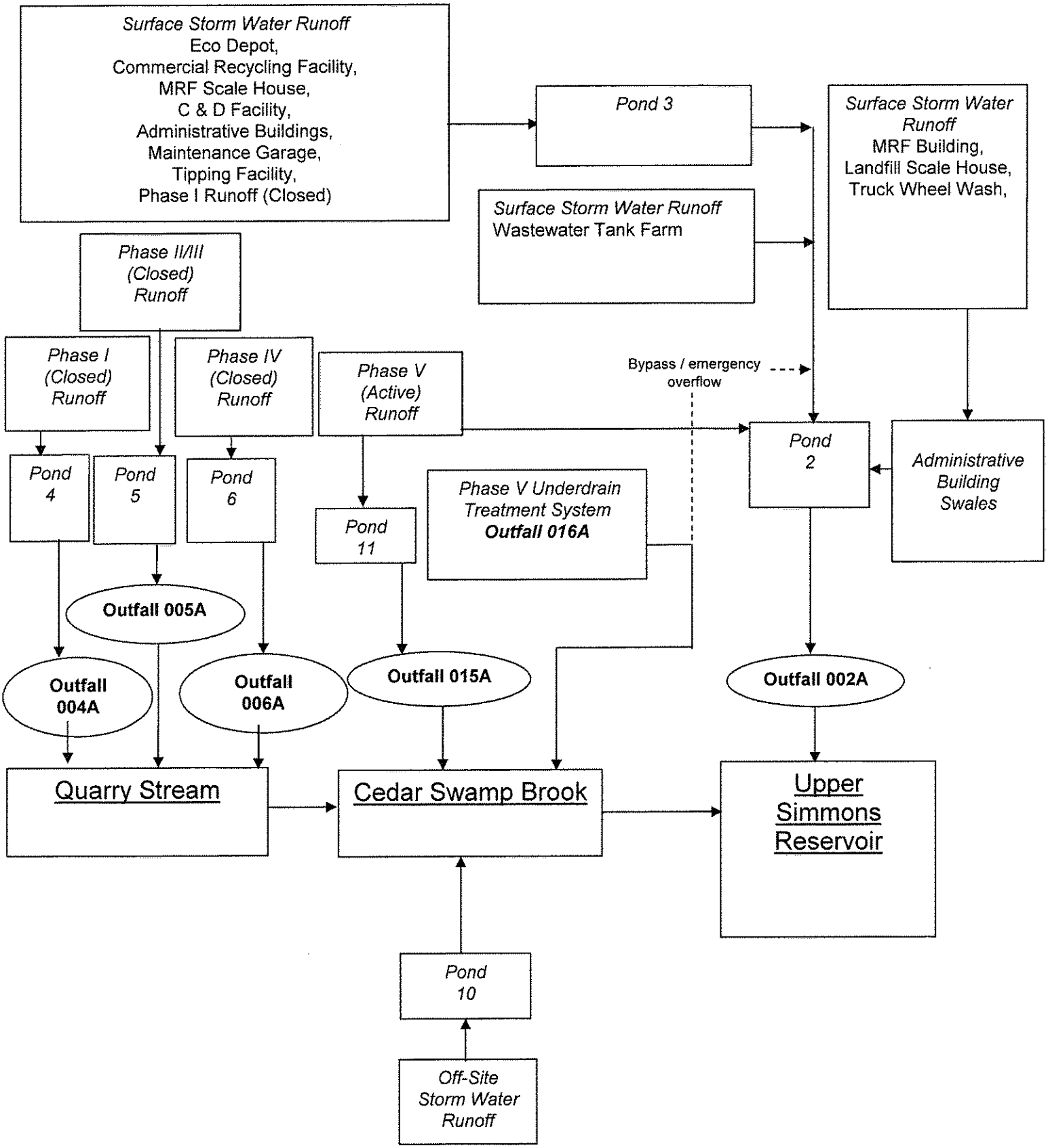
# ATTACHMENT C

**Site Map**




| | | | | |
|---|---|---|---|---|
| RI RESOURCE RECOVERY CORP. | RIRRC<br>65 SHUN PIKE<br>JOHNSTON, RI 02919 | RHODE ISLAND RESOURCE RECOVERY CORPORATION | Scale: 1" = 550'<br>SCALE IN FEET | Project No.<br>DWG File Name: |
| CENTRAL LANDFILL<br>EROSION AND SEDIMENTATION LOCATION PLAN<br>REPORT DATE: 12/27/13 | | | DESIGN BY: DATE 9/03<br>DRAWN BY:<br>CHECKED BY: PJC<br>APP'VD BY: | SHEET 1 OF 1 |

**ATTACHMENT D**



PART II
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DEFINITIONS

GENERAL REQUIREMENTS

(a) Duty to Comply

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

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

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

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

(b) Duty to Reapply

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

(c) Need to Halt or Reduce Not a Defense

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

(d) Duty to Mitigate

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

(e) Proper Operation and Maintenance

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

(f) Permit Actions

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

(g) Property Rights

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

(h) Duty to Provide Information

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

(i) Inspection and Entry

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

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

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

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

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

(j) Monitoring and Records

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

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

(3) Records of monitoring information shall include:

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

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

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

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

(v) The analytical techniques or methods used; and

(vi) The results of such analyses.

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

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

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

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

(k) Signatory Requirement

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

(l) Reporting Requirements

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

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

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

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

(5) Twenty-four hour reporting. The permittee shall immediately report any noncompliance which may endanger health or the environment by calling DEM at (401) 222-4700 or (401) 222-3070 at night.

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

The following information must be reported immediately:

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

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

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

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

(6) Other noncompliance. The permittee shall report all instances of noncompliance not reported under paragraphs (1), (2), and (5), of this section, at the time monitoring reports are submitted. The reports shall contain the information required in paragraph (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 |
| $Cl_2$ | total residual chlorine |