

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

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

DATE OF NOTICE: Friday, September 20, 2024

PUBLIC NOTICE NUMBER: PN-24-05

DRAFT RIPDES PERMITS

RIPDES PERMIT NUMBER: RI0000949

NAME AND MAILING ADDRESS OF APPLICANT:

U.S. Environmental Protection Agency
Atlantic Coastal Environmental Sciences Division
27 Tarzwell Drive
Narragansett, RI 02882

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

U.S. Environmental Protection Agency
Atlantic Coastal Environmental Sciences Division
27 Tarzwell Drive
Narragansett, RI 02882

RECEIVING WATER: Narragansett Bay – West Passage
(Waterbody ID #: RI0007027E-03H)

RECEIVING WATER CLASSIFICATION: SB

The facility, which is the source of the discharge, is located in Narragansett and is engaged in measuring the effects of pollutants on marine and estuarine organisms and ecosystems. The facility has reapplied to the Rhode Island Department of Environmental Management (DEM) for reissuance of an individual RIPDES permit to discharge water that is circulated through aquaria used for raising marine organisms that are to be used in experiments. The discharge to Narragansett Bay through Outfall 001 consists of filtered seawater used in the wet labs, bypassed unfiltered seawater, and intermittent discharges of filter back wash and filter chlorination rinsate. A portion of the water is filtered before use and the filters are backwashed every 24 hours without disinfection (or more often as needed). The backwash is included in the discharge. The permit includes permit limits to ensure that the discharge will not cause a water

PN24-05

quality violation. The draft permit contains new requirements for monitoring enterococci to allow for evaluation of the effluent versus the current recreational criteria. This permit also authorizes the discharge of boat bottom wash water from aluminum and fiberglass boats that are not painted with anti-fouling paints provided that detergents are not used.

The DEM has determined that the proposed activities comply with the Policy on the Implementation of the Antidegradation Provisions of the Rhode Island Water Quality Regulations (250-RICR-150-1) and that existing uses will be maintained and protected. A detailed evaluation of the water quality impact from the proposed activities and any important benefits demonstrations, if required, may be found in statement of basis which is available as noted below.

FURTHER INFORMATION:

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

Samuel Kaplan, P.E.
Environmental Engineer II
Rhode Island Department of Environmental Management
Office of Water Resources
Permits Section
235 Promenade Street
Providence, Rhode Island 02908-5767
(401) 537-4240
samuel.kaplan@dem.ri.gov

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

PUBLIC COMMENT AND REQUEST FOR PUBLIC HEARING:

Pursuant to Chapter 42-17.4 of the Rhode Island General Laws a public hearing has been scheduled to consider these permits if requested. Requests for a Public Hearing must be submitted in writing to the attention of Samuel Kaplan at the address indicated above. Notice should be taken that if DEM receives a request from twenty-five (25) people, a governmental agency or subdivision, or an association having no less than twenty-five (25) members on or before 4:00PM, Wednesday, October 23, a public hearing will be held at the following time and place:

5:00 PM, Monday, October 28, 2024
Room 280
235 Promenade Street
Providence, Rhode Island 02908

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

235 Promenade Street is accessible to individuals who are handicapped. If communication assistance (readers/interpreters/captioners) is needed, or any other accommodation to ensure equal participation, please call Samuel Kaplan or RI Relay 711 at least three (3) business days prior

to the meeting so arrangements can be made to provide such assistance at no cost to the person requesting.

Interested parties may submit comments on the permit actions and the administrative record to the address above no later than 4:00 PM, Tuesday, October 29, 2024.

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

Any person, including the permittee/applicant, who believes these permit actions are inappropriate, must raise all reasonably ascertainable issues and submit all reasonably available arguments and factual grounds supporting their position, including all supporting material, by the close of the public comment period under 250-RICR-150-10-1.42 of the Regulations for the Rhode Island Pollutant Discharge Elimination System. The public comment period is from Friday, September 20, 2024 to Tuesday, October 29, 2024. Commenters may request a longer comment period if necessary to provide a reasonable opportunity to comply with these requirements. Comments should be directed to DEM as noted above.

FINAL DECISION AND APPEALS:

Following the close of the comment period, and after a public hearing, if such hearing is held, the Director will issue a final decision and forward a copy of the final decision to the permittee and each person who has submitted written comments or requested notice. Within 30 days following the notice of the final decision, any interested person may submit a request for a formal hearing in accordance with the requirements of 250-RICR-150-10-1.50 of the Regulations of the Rhode Island Pollutant Discharge Elimination System.

13 September 2024

Date

Heidi Traverso

Heidi Traverso, P.E.
Environmental Engineer IV
RIPDES, Office of Water Resources
Department of Environmental Management

AUTHORIZATION TO DISCHARGE UNDER THE
RHODE ISLAND POLLUTANT DISCHARGE ELIMINATION SYSTEM

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

U.S. Environmental Protection Agency
Atlantic Coastal Environmental Sciences Division
27 Tarzwell Drive
Narragansett, RI

is authorized to discharge from a facility located at

U.S. Environmental Protection Agency
Atlantic Coastal Environmental Sciences Division
27 Tarzwell Drive
Narragansett, Rhode Island

to receiving waters named

Narragansett Bay – West Passage

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

This permit shall become effective on _____.

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

This permit supersedes the permit issued on September 3, 2013.

This permit consists of 9 pages in Part I including effluent limitations, monitoring requirements, etc. and 10 pages in Part II including General Conditions.

Signed this _____ day of _____ 20__.

DRAFT

Joseph B. Haberek, P.E., Administrator for Surface Water Protection
Office of Water Resources
Rhode Island Department of Environmental Management
Providence, Rhode Island

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

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

Effluent Characteristic	Discharge Limitations					Monitoring Requirement	
	Quantity – lbs./day		Concentration – Specify Units			Measurement Frequency	Sample Type
Average Monthly	Maximum Daily	Average Monthly	Average Weekly	Maximum Daily			
Flow ¹ (MGD)	0.98					2/Quarter ²	Estimate
BOD ₅ ²					9.2 mg/l	2/Quarter ²	Composite ¹
Total Suspended Solids (TSS ²)					--- mg/l	2/Quarter ²	Composite ¹
Fecal Coliform					-- MPN/100 ml	2/Quarter ²	Grab
Enterococci					-- cfu/ 100 ml	2/Quarter ²	Grab
Dissolved Oxygen (DO)					--- mg/l	2/Quarter ²	3 Grabs/discharge
Total Residual Chlorine (TRC)			0.434 mg/l		0.434 mg/l	1/Quarter ³	3 Grab/discharge ⁴

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

¹The composite sample shall consist of sample aliquots taken a minimum of every 15 minutes during discharge.

²Sampling shall be done twice per quarter, one sampling event must take place concurrently with filter disinfection/rinsing and one sampling event must take place concurrently with filter backwash (no disinfection occurring).

³Sampling must take place concurrently with filter disinfection/rinsing.

⁴Compliance with these limitations shall be determined by taking three grab samples per monitoring day while a filter disinfection/rinsing event is taking place, equally spaced over the discharge period. The maximum daily and average monthly values are to be computed from the averaged grab sample results for each day. The following methods may be used to analyze the grab samples: (1) DPD spectrophotometric, EPA No. 330.5 or Standard Methods (18th Edition) No.4500-CI G; (2) DPD Titrimetric, EPA No. 330.4 or Standard Methods (18th Edition) No. 4500-CI F; (3) Amperometric Titration, EPA No. 330.1 or Standard Methods (18th Edition) No. 4500-CI D or ASTM No. D1253-86(92);

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): Outfall 001 (final discharge point located outside the facility that includes the following: filtered seawater used in the wet labs, bypassed unfiltered seawater, and intermittent discharges of filter backwash and filter chlorination rinsate).

2.
 - a. The pH of the effluent shall not be less than 6.5 nor greater than 8.5 standard units at anytime, unless these values are exceeded due to natural causes or as a result of the approved treatment processes.
 - b. The discharge shall not cause visible discoloration of the receiving waters.
 - c. The effluent shall contain neither a visible oil sheen, foam, nor floating solids at any time.
3. This permit authorizes the discharge of boat bottom wash water only from aluminum and fiberglass boats that do not have anti-fouling paint, provided that detergents are not used. Proper Best Management Practices (BMPs) must be used during the washing process to minimize exposure of the motors and their components to the wash water.
4. The permittee is not authorized to use any chemical additive(s)/cleaner(s) in the operation of the seawater filtration system, except the use of sodium hypochlorite during the disinfection process. The permittee shall obtain Department approval prior to using any additive(s)/cleaner(s).
5. The permittee shall assure the proper management of solid and hazardous waste in accordance with regulations promulgated under the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA) of 1978 (40 U.S.C. 6901 et seq.), or amendments thereto.
6. This permit does not authorize discharges to the separate storm sewer system or to waters of the State from floor drains and trench drains located inside of the EPA building and/or laboratories.
7. The discharge shall not contain any waste flows from experimental test systems.
8. 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 µg/l);
 - (2) Two hundred micrograms per liter (200 µg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitro-phenol; and one milligram per liter (1 mg/l) for antimony;
 - (3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 C.F.R. §122.21(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 µg/l);
- (2) One milligram per liter (1 mg/l) for antimony;
- (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 C.F.R. §122.21(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.

- 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

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

B. DETECTION LIMITS

All analyses of parameters under this permit must comply with the National Pollutant Discharge Elimination System (NPDES): *Use of Sufficiently Sensitive Test Methods for Permit Applications and Reporting* rule. Only sufficiently sensitive test methods may be used for analyses of parameters under this permit. 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 submitted along with the monitoring reports.

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

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

analysis shall be repeated using a lower degree of dilution.

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

1. "could not be analyzed" data shall be excluded, and shall not be considered as failure to comply with the permit sampling requirements;
2. results reported as less than the required MDL from this section shall be included as zeros.

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 µg/l (ppb)	Pesticides - EPA Method 608		MDL µg/l (ppb)
1V	acrolein	10.0	18P	PCB-1242	0.289
2V	acrylonitrile	5.0	19P	PCB-1254	0.298
3V	benzene	1.0	20P	PCB-1221	0.723
5V	bromoform	1.0	21P	PCB-1232	0.387
6V	carbon tetrachloride	1.0	22P	PCB-1248	0.283
7V	chlorobenzene	1.0	23P	PCB-1260	0.222
8V	chlorodibromomethane	1.0	24P	PCB-1016	0.494
9V	chloroethane	1.0	25P	toxaphene	1.670
10V	2-chloroethylvinyl ether	5.0			
11V	chloroform	1.0	Base/Neutral - EPA Method 625		MDL µg/l (ppb)
12V	dichlorobromomethane	1.0	1B	acenaphthene *	1.0
14V	1,1-dichloroethane	1.0	2B	acenaphthylene *	1.0
15V	1,2-dichloroethane	1.0	3B	anthracene *	1.0
16V	1,1-dichloroethylene	1.0	4B	benzidine	4.0
17V	1,2-dichloropropane	1.0	5B	benzo(a)anthracene *	0.013
18V	1,3-dichloropropylene	1.0	6B	benzo(a)pyrene *	0.023
19V	ethylbenzene	1.0	7B	3,4-benzofluoranthene *	0.018
20V	methyl bromide	1.0	8B	benzo(ghi)perylene *	2.0
21V	methyl chloride	1.0	9B	benzo(k)fluoranthene *	0.017
22V	methylene chloride	1.0	10B	bis(2-chloroethoxy)methane	2.0
23V	1,1,2,2-tetrachloroethane	1.0	11B	bis(2-chloroethyl)ether	1.0
24V	tetrachloroethylene	1.0	12B	bis(2-chloroisopropyl)ether	1.0
25V	toluene	1.0	13B	bis(2-ethylhexyl)phthalate	1.0
26V	1,2-trans-dichloroethylene	1.0	14B	4-bromophenyl phenyl ether	1.0
27V	1,1,1-trichloroethane	1.0	15B	butylbenzyl phthalate	1.0
28V	1,1,2-trichloroethane	1.0	16B	2-chloronaphthalene	1.0
29V	trichloroethylene	1.0	17B	4-chlorophenyl phenyl ether	1.0
31V	vinyl chloride	1.0	18B	chrysene *	0.15
Acid Compounds - EPA Method 625		MDL µg/l (ppb)	19B	dibenzo (a,h) anthracene *	0.03
1A	2-chlorophenol	1.0	20B	1,2-dichlorobenzene	1.0
2A	2,4-dichlorophenol	1.0	21B	1,3-dichlorobenzene	1.0
3A	2,4-dimethylphenol	1.0	22B	1,4-dichlorobenzene	1.0
4A	4,6-dinitro-o-cresol	1.0	23B	3,3' -dichlorobenzidine	2.0
5A	2,4-dinitrophenol	2.0	24B	diethyl phthalate	1.0
6A	2-nitrophenol	1.0	25B	dimethyl phthalate	1.0
7A	4-nitrophenol	1.0	26B	di-n-butyl phthalate	1.0
8A	p-chloro-m-cresol	2.0	27B	2,4-dinitrotoluene	2.0
9A	pentachlorophenol	1.0	28B	2,6-dinitrotoluene	2.0
10A	phenol	1.0	29B	di-n-octyl phthalate	1.0
11A	2,4,6-trichlorophenol	1.0	30B	1,2-diphenylhydrazine (as azobenzene)	1.0
Pesticides - EPA Method 608		MDL µg/l (ppb)	31B	fluoranthene *	1.0
1P	aldrin	0.059	32B	fluorene *	1.0
2P	alpha-BHC	0.058	33B	hexachlorobenzene	1.0
3P	beta-BHC	0.043	34B	hexachlorobutadiene	1.0
4P	gamma-BHC	0.048	35B	hexachlorocyclopentadiene	2.0
5P	delta-BHC	0.034	36B	hexachloroethane	1.0
6P	chlordan	0.211	37B	indeno (1,2,3-cd) pyrene *	0.043
7P	4,4' -DDT	0.251	38B	isophorone	1.0
8P	4,4' -DDE	0.049	39B	naphthalene *	1.0
9P	4,4' -DDD	0.139	40B	nitrobenzene	1.0
10P	dieldrin	0.082	41B	N-nitrosodimethylamine	1.0
11P	alpha-endosulfan	0.031	42B	N-nitrosodi-n-propylamine	1.0
12P	beta-endosulfan	0.036	43B	N-nitrosodiphenylamine	1.0
13P	endosulfan sulfate	0.109	44B	phenanthrene *	1.0
14P	endrin	0.050	45B	pyrene *	1.0
15P	endrin aldehyde	0.062	46B	1,2,4-trichlorobenzene	1.0
16P	heptachlor	0.029			
17P	heptachlor epoxide	0.040			

* Polynuclear Aromatic Hydrocarbons

OTHER TOXIC POLLUTANTS

	MDL µg/l (ppb)
BOD ₅	4.0 mg/l
TSS	2.0 mg/l
Enterococci**	10 MPN/100 mL
Fecal Coliform	2.0 MPN/100 ml
TRC	0.05 mg/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 Xylenes	0.5
Ethanol	2.0 mg/l

**Detection limit for marine water discharge when using the enterolert test method.

*** 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).

C. MONITORING AND REPORTING

1. Monitoring

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

2. Reporting

Unless otherwise specified in this permit, the permittee shall submit reports, requests, and

information and provide notices in the manner described in this section.

a. Submittal of DMRs Using NetDMR

The permittee shall continue to submit its monthly monitoring data in discharge monitoring reports (DMRs) to DEM electronically using NetDMR per the following schedule:

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

When the permittee submits DMRs using NetDMR, it is not required to submit hard copies of DMRs to DEM.

b. Submittal of Reports as NetDMR Attachments

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

- DMR Cover Letters
- Below Detection Limit summary tables

c. Submittal of Requests and Reports to DEM

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

- Transfer of Permit notice
- Request for changes in sampling location
- Request for reduction in testing frequency
- Request for reduction in WET testing requirement
- Report on unacceptable dilution water / request for alternative dilution water for WET testing

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

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

d. Submittal of Reports in Hard Copy Form

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

- A. Written notifications required under Part II
- B. Notice of unauthorized discharges

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

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

e. Verbal Reports and Verbal Notifications

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

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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 46-12-13 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 \$25,000 per day of such violation. Chapter 46-12-14(a) of the Rhode Island General Laws provides that any person who willfully or with criminal negligence violates a permit condition is subject to a criminal penalty of not more than \$25,000 per day of such violation or imprisonment for not more than five (5) years, or both. Chapter 46-12-14(b) of the Rhode Island General Laws provides that 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. Page 3 of 10

(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.
- (3) 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 46-12-14(b) 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 250-RICR-150-10-1.12 of the Rhode Island Pollutant Discharge Elimination System (RIPDES) Regulations. Rhode Island General Laws, Chapter 46-12-14(b) provides that any person who knowingly makes any false statement, representation, or certification in any application, record, report (including monitoring reports or reports of compliance or noncompliance), plan, or other document filed or required to be maintained under this permit, shall, upon conviction, be punished by a fine of not more than \$5,000 for each instance of violation, or by imprisonment for not more than 30 days per violation, or by both.

Error! Bookmark not defined. **(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 250-RICR-150-10-1.14(R) 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 250-RICR-150-10-1.14(R) of the RIPDES Regulations; and
 - (d) The permittee complied with any remedial measures required under 250-RICR-150-10-1.14(E) 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, 235 Promenade Street, Providence, Rhode Island 02908. 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 250-RICR-150-10-1.16 and 250-RICR-150-10-1.24 of the RIPDES Regulations, if any effluent standard or

prohibition, or water quality standard is promulgated under the CWA or under State law which is more stringent than any limitation on the pollutant in the permit, or controls a pollutant not limited in the permit, then the Director may promptly reopen the permit and modify or revoke and reissue the permit to conform to the applicable standard.

(w) Confidentiality of Information

- (1) Any information submitted to DEM pursuant to these regulations may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission in the manner prescribed on the application form or instructions or, in the case of other submissions, by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, DEM may make the information available to the public without further notice.
- (2) Claims of confidentiality for the following information will be denied:
 - (i) The name and address of any permit applicant or permittee;
 - (ii) Permit applications, permits and any attachments thereto; and
 - (iii) NPDES effluent data.

(x) Best Management Practices

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

(y) Right of Appeal

Within thirty (30) days of receipt of notice of a final permit decision, the permittee or any interested person may submit a request to the Director for an adjudicatory hearing to reconsider or contest that decision. The request for a hearing must conform to the requirements of 250-RICR-150-10-1.50 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
µg/l	micrograms per liter
lbs/day	pounds per day
kg/day	kilograms per day
Temp. °C	temperature in degrees Centigrade
Temp. °F	temperature in degrees Fahrenheit
Turb.	turbidity measured by the Nephelometric Method (NTU)
TNFR or TSS	total nonfilterable residue or total suspended solids
DO	dissolved oxygen
BOD	five-day biochemical oxygen demand unless otherwise specified
TKN	total Kjeldahl nitrogen as nitrogen
Total N	total nitrogen
NH ₃ -N	ammonia nitrogen as nitrogen
Total P	total phosphorus
COD	chemical oxygen demand
TOC	total organic carbon
Surfactant	surface-active agent
pH	a measure of the hydrogen ion concentration
PCB	polychlorinated biphenyl
CFS	cubic feet per second
MGD	million gallons per day
Oil & Grease	Freon extractable material
Total Coliform	total coliform bacteria
Fecal Coliform	total fecal coliform bacteria
ml/l	milliliter(s) per liter
NO ₃ -N	nitrate nitrogen as nitrogen
NO ₂ -N	nitrite nitrogen as nitrogen
NO ₃ -NO ₂	combined nitrate and nitrite nitrogen as nitrogen
C1 ₂	total residual chlorine

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

Statement of Basis

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

RIPDES PERMIT NO. RI0000949

NAME AND ADDRESS OF APPLICANT:

U.S. Environmental Protection Agency
Atlantic Coastal Environmental Sciences Division
27 Tarzwell Drive
Narragansett, Rhode Island 02882

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

U.S. Environmental Protection Agency
Atlantic Coastal Environmental Sciences Division
27 Tarzwell Drive
Narragansett, Rhode Island

RECEIVING WATER: Narragansett Bay – West Passage
WBID: RI0007027E-03H

CLASSIFICATION: SB

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

The above-named applicant has applied to the Rhode Island Department of Environmental Management for reissuance of a RIPDES Permit to discharge into the designated receiving water. The facility is engaged in measuring the effects of pollutants on marine and estuarine organisms and ecosystems. The discharge consists of filtered seawater used in the wet labs, bypassed unfiltered seawater, and intermittent discharges of filter back wash and filter chlorination rinsate. This permit also authorizes the discharge of boat bottom wash water from aluminum and fiberglass boats that are not painted with anti-fouling paints provided that detergents are not used. The discharge is to the West Passage of Narragansett Bay. A site location map and a line flow diagram for Outfall 001A are shown in Attachments A-1 and A-2 respectively.

II. Description of Discharge

A quantitative description of the discharge in terms of significant effluent parameters based on DMR data from October 2013 through December 2023 is shown on Attachment A-3.

III. Permit Limitations and Conditions

The final effluent limitations and monitoring requirements may be found in the permit.

IV. Permit Basis and Explanation of Effluent Limitation Derivation

Variances, Alternatives, and Justifications for Waivers of Application Requirements

No variances or alternatives to required standards were requested or granted.

No waivers were requested or granted for any application requirements per 40 CFR §122.21(j) or (q).

Facility Description

The U.S. Environmental Protection Agency owns and operates the Atlantic Coastal Environmental Sciences Division located on 27 Tarzwell Drive in Narragansett, Rhode Island. The discharge to the Narragansett Bay - West Passage consists of filtered seawater used in the wet labs, bypassed unfiltered seawater, and intermittent discharges of filter back wash and filter chlorination rinsate.

The Environmental Protection Agency (EPA) Atlantic Coastal Environmental Sciences Division (ACESD) in Narragansett, Rhode Island is engaged in measuring the effects of pollutants on marine and estuarine organisms and ecosystems. Research at the ACESD focuses on the ecological effects of human activities on the coastal waters and watersheds of the Atlantic seaboard, with particular emphasis on the effects of these activities on the populations of fish, shellfish, and aquatic dependent life. ACESD's research activities primarily fall within the disciplines of coastal marine ecology, aquatic toxicology, and marine chemistry. Using this expertise, ACESD researchers support the mission of EPA by (1) conducting scientific research, (2) providing scientific and organizational leadership, and (3) supplying technical advice to the EPA program offices and regions.

The discharge is composed of filtered seawater used in the wet labs, bypassed unfiltered seawater, and intermittent discharges of filter back wash and filter chlorination rinsate. Wastewater generated in experimental test systems is pretreated and discharged to the Narragansett Municipal Sewer System.

Prior to the issuance of the 2013 RIPDES Permit, the facility replaced sand as the filtration media with Perma-Bead Media. These beads eliminate clogging, channeling and compaction in sand filters and require no plumbing changes in the pre-existing filtration system. The very hard polymer

surface properties of Perma-Beads prevent microbial growth from etching into the surface and the slipperiness prevents growth from adhering onto the polymer substrate. Growth can be scrubbed off as the bed fluidizes during the backwash cycle. The discharge to Narragansett Bay consists of water that is drawn from the Bay, some of which is directed to the aquaria used for raising experimental organisms. No contaminants are introduced into these aquaria. Most of the flow is bypassed back to the Bay. A portion of the water is filtered before use and the filters are backwashed every 24 hours without disinfection (or more often as needed). The backwash is included in the discharge.

A site diagram is attached as Attachment A-1 and a process flow diagram is attached as Attachment A-2.

The U.S. Environmental Protection Agency Atlantic Coastal Environmental Sciences Division's most recent RIPDES permit, authorizing discharges from the above-mentioned facility, was issued on September 3, 2013. This permit became effective on October 1, 2013 and expired on September 30, 2018. The facility submitted an application for permit reissuance to the DEM on March 30, 2018. On May 9, 2018 the DEM issued an application complete letter to the facility. In accordance with 250-RICR-150-10-1 §13 of the Regulations for the Rhode Island Pollutant Discharge Elimination System, the facility's September 3, 2013 permit remains in effect since the DEM has determined that a timely and complete permit application was submitted. Once this permit is reissued, it will supersede the 2013 permit.

Receiving Water Description

The waterbody segment for Narragansett Bay – West Passage is RI0007027E-03H and is located in Narragansett, Rhode Island. This segment is delineated by the West Passage waters within a 700 foot radius of the extension of South Ferry Road at the URI Bay Campus, including the EPA dock located north of South Ferry Road and the GSO dock located south of South Narragansett. This segment is not listed as impaired on DEM's 2022 Integrated Report. Permit limits for the U.S. Environmental Protection Agency Atlantic Coastal Environmental Sciences Division were developed to be consistent with water quality regulations and the wasteload allocation.

This segment of the Narragansett Bay – West Passage has a Waterbody Classification of SB. SB waters are designated for primary and secondary contact recreational activities; shellfish harvesting for controlled relay and depuration; and fish and wildlife habitat. They shall be suitable for aquacultural uses (other than shellfish for direct human consumption), navigation, and industrial cooling. These waters shall have good aesthetic value.

Permit Limit Development

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

Development of RIPDES permit limitations is a multi-step process consisting of: determining if Federal effluent guidelines apply; calculation of allowable water quality-based discharge levels based on background data and available dilution; assigning appropriate Best Professional Judgement (BPJ) based limits; comparing existing and proposed limits; comparing discharge data to proposed limits; performing an antidegradation/antibacksliding analysis to determine the final permit limits; and developing interim limits as appropriate.

Water quality criteria are comprised of numeric and narrative criteria. Numeric criteria are scientifically derived ambient concentrations developed by EPA or the State for various pollutants of concern to protect human health and aquatic life. Narrative criteria are statements that describe the desired water quality goal. A water quality-based permit limit protects receiving water quality by ensuring that Water

Quality standards are met.

A technology-based limit is a numeric limit, which is determined by examining the capability of a treatment process to reduce or eliminate pollutants.

Conventional Pollutant Permit Limitations and Monitoring

Flow Limits

The flow limitation is based on the facility's maximum pumping capacity. The reapplication process and permit issued on May 18, 2005 identified the average flow intake/outtake was 0.6 MGD. This was the average design value that had been the permitted in terms of monthly average flow from the facility for the past two permits issued in 1986 and 2005. The reapplication for the permit reissued in 2012 identified conflicting average flows in the forms and in diagrams and schematics of the seawater intake system. A DEM comment letter from April 2011 required the EPA to amend its application and line drawings to reflect the correct average flows between intakes, operations, treatment units, and outfall. The June 2011 response by EPA noted that for total daily seawater flow that the pumps are rated for 680 gallons per minute, there are two (2) pumps that are alternated on a monthly basis with one pump running at a time, and that based on the rating of the pump it is calculated that 980,000 gallons per day (0.98 MGD) is pumped for intake. Therefore, the monthly average flow limit assigned in the permit is 0.98 MGD. The 0.98 MSG flow limit is being maintained in the 2024 draft permit.

BOD₅ Limits

Effluent limitations for Outfall 001A have been established for BOD₅. As a result of the design flow increase at the EPA ACESD from 0.6 MGD to 0.98 MGD in the 2012 permit, the DEM, in the 2012 permit, modified the allowable discharge limit for BOD₅ at Outfall 001A so the mass load remains constant. The 2012 permit reduced the daily maximum limit of BOD₅ from 15 mg/L to 9.2 mg/L. The constant mass loading is applied at Outfall 001A as this is the final discharge point into the receiving water. The daily maximum limit of BOD₅ at Outfall 001A has been maintained at 9.2 mg/L.

Dissolved Oxygen and TSS Monitoring

Outfall 001A must also be monitored for Total Suspended Solids (TSS) and dissolved oxygen twice per quarter, where one sampling event is concurrent with disinfection/rinsing and one sampling event is concurrent with filter backwash (no disinfection occurring). TSS and dissolved oxygen are sampled as the DEM has identified these parameters as being present in discharges from facilities with similar operations (indicators used to characterize contamination from the filter disinfection/rinsing, filter backwash, and aquatic organism wet testing processes) and to evaluate the loading of these pollutants from the EPA facility.

Bacteria Monitoring

The RI Water Quality Regulations (RICR 250-RICR-150-05-1) include enterococci criteria for the primary contact/swimming designated use and fecal coliform criteria for the shellfish harvesting designated use. Past permits required EPA to monitor Outfall 001A for fecal coliform as fecal coliform had been the indicator bacteria for recreational use. In the 2024 permit, DEM is adding a monitoring requirement for enterococci to allow for evaluation of the effluent versus the current recreational criteria. Fecal coliform monitoring is being maintained for continuity with past data sets and due to the adjacent shellfish harvesting areas. Monitoring is required twice per quarter, where the sampling event is concurrent with disinfection/rinsing.

Toxic Pollutant Limits

Water Quality-Based Limit (WQBEL) Calculations

The allowable effluent limitations were established on the basis of acute and chronic aquatic life criteria and human health criteria using the following: available instream dilution; an allocation factor; and background concentrations when available and/or appropriate. The aquatic life and human health criteria are specified in the Rhode Island Water Quality Regulations (250-RICR-150-05-1). Aquatic life criteria have been established to ensure the protection and propagation of aquatic life while human health criteria represent the pollutant levels that would not result in a significant risk to public health from ingestion of aquatic organisms. The more stringent of the two criteria was then used in establishing allowable effluent limitations. Details concerning the calculation of potential permit limitations, selection of factors, which influence their calculation, and the selection of final permit limitations are included below or in the attached documents. The 2013 permit also contained a WQBEL for Total Residual Chlorine (TRC). The facility's first permit to contain a WQBEL for TRC was issued in 2005.

Mixing Zones and Dilution Factors

In order to evaluate the need for water quality-based limits, it is necessary to determine the mixing which occurs in the immediate vicinity of the discharge (initial dilution). The procedure used to establish the size of the facility's mixing zone was detailed in the US Environmental Protection Agency's document entitled "Technical Support Document for Water Quality Based Toxics Control" (EPA/505/2-90-001) or the "TSD". The TSD proscribes a procedure to establish the size of a regulatory mixing zone by choosing the most restrictive of the following three cases:

1. 10% of the distance from the edge of the outfall structure to the edge of the regulatory mixing zone in any spatial direction.
2. 50 times the discharge length scale in any spatial direction where the discharge length scale equals the square root of the cross sectional area of the discharge outlet.
3. Five times the local water depth in any horizontal direction from any discharge outlet.

A regulatory mixing zone is not given for this outfall; so criteria 1 is not relevant here. Criteria 2 yields a distance from the outfall of 20.3 meters (66.47 feet). Criteria 3 is 5 times the local water depth of 2m (this number was provided by the USEPA lab) which yields 10 meters (32.81 feet). This third criteria is the most restrictive and so the distance of 10 meters was used as the acute mixing zone.

The next step in the process used to determine the size of the regulatory mixing zone is the use of the Cormix model to calculate the dilution factor at a given distance from the outfall, given a host of input parameters. Cormix is designed to simulate the dilution characteristics of submerged multiport diffuser discharges, submerged single port discharges, or above surface discharges. The ultimate goal of the use of Cormix is to determine the contaminant concentration and related dilution factor at a given distance from the outfall, which in this case is 10 meters, from the third TSD criteria, above. The input parameters for the Cormix run were as follows: average water depth (2m), depth at discharge (2m), Darcy-Weisbach friction factor for the bottom surface of the channel (calculated value of 0.0561 based on a Manning number of 0.03 [corresponding to a smooth channel with a surface roughness of 500mm]), a wind velocity of 4.52 m/s (median average monthly wind speed in Narragansett, Rhode Island), tidal simulation at time -3.1 hours, water speed/tidal velocity of 0.412 m/s, period of tidal reversal of 12.4 hours, water density of 1025 kg/m³, flush shoreline discharge, distance from bank to outlet of 0 meters (in fact there is an offset between the bank and the outlet, however the discharge was modeled as flowing from a channel into the bay), discharge angle of 90 degrees, depth near discharge outlet of 2 meters, bottom slope at discharge 41 degrees, rectangular pipe length and width of 0.4052 meters (equivalent to the cross sectional area

of the 18" pipe diameter), discharge flow rate 0.0429 m³/s, discharge density 1025 kg/m³, discharge concentration 0.434 mg/l. Given an area of interest with a radius of 10 meters, centered at the outfall, Cormix calculated that the corresponding dilution factor is 33.4. This dilution factor of 33.4 is considered to be the acute dilution factor. Cormix was again used to calculate the dilution factor at a distance of 100 meters from the outfall, keeping all other input parameters the same as the 10 meter case. A distance of 100 meters was chosen for the chronic mixing zone based on criteria 1 from the Technical Support Document that proposes that the acute mixing zone radius (10 meters in this case) is 10% of the size of the chronic mixing zone. Cormix calculated that dilution factor at 100 meters from the outfall to be 57.9. Therefore, the dilution factor of 57.9 is considered to be the chronic dilution factor.

The Rhode Island Water Quality Regulations at 250-RICR-150-05-1.18(N)(1) require instream concentrations of discharged pollutants to be determined by specific formulas, or other methods which may be found to be acceptable.

Using these dilution factors, the allowable discharge limits were calculated as follows:

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

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

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

- b) Using available background concentration data¹.

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

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

Since no new dissolved metals background data was available to DEM for the West Passage of Narragansett Bay, the dissolved metals background data used to calculate allowable limits was maintained from the 2013 RIPDES Permit for the facility. Additionally, background data for pH, seasonal temperature, and salinity were maintained from the 2013 RIPDES Permit for the facility. Attachment A-4 includes the calculations for allowable limits based on Aquatic Life and Human Health Criteria.

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

- I. Pollutants that, based on the acute and chronic dilution factors, have a higher allowable chronic limit than allowable acute limit. For this situation, both the "Monthly Average" and "Daily Maximum" limits were set at the allowable acute limit.
- II. Total residual chlorine. The limits for total residual chlorine (TRC) were established in accordance with the RIDEM Effluent Disinfection Policy. The "Monthly Average" and "Daily Maximum" were based on a 100% allocation, a zero background concentration, and the appropriate dilution factor(s). The 100% allocation factor for TRC was used due to the non-conservative nature of chlorine and the improbability of the receiving water having a detectable background TRC concentration.
- III. Pollutants with water quality based monthly average limits in the previous RIPDES permit. The relaxation of monthly average limits from the previous permit was restricted in

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

accordance with the antibacksliding provisions of the Clean Water Act and the Policy on the Implementation of the Antidegradation Provisions of the Rhode Island Water Quality Regulations.

Wasteload Allocation

In accordance with 40 CFR Part 122.4(d)(1)(iii), it is only necessary to establish limitations for those pollutants in the discharge which have the reasonable potential to cause or contribute to the exceedance of the in-stream criteria. Reasonable potential to cause an exceedance is determined using the dilution factors presented in the previous section as well as the saltwater aquatic life and non-Class AA human health criteria, from the Rhode Island Water Quality Regulations (250-RICR-150-05-1) to determine allowable discharge concentrations. Allowable discharge concentrations were established using an 80% allocation when background data was not available, a 90% allocation when background data was available, and a 100% allocation of total residual chlorine (TRC) because Chlorine is not expected to be found in ambient water and it is a non-conservative pollutant.

In order to evaluate the need for permit limitations, the allowable discharge levels (permit limits) were compared to Discharge Monitoring Report (DMR) data and data provided in the permit application. An assessment was made to determine if limits were necessary, using the data collected during the previous ten (10) years since the 2013 permit became effective in October 2013. When the monitoring data exceeds fifty percent of the allowable discharge concentration, there is “reasonable potential”, and DEM assigns a water-quality-based permit limit. When the monitoring data is less than twenty-five percent of the allowable discharge concentration, there is not “reasonable potential”, and DEM does not assign a water-quality-based permit limit. While DEM does not typically assign a permit limit when data is between twenty-five and fifty percent of the allowable discharge concentration, a water-quality-based permit limit may be assigned if it is determined that one is needed to be protective of human health and/or aquatic life (e.g., there is a significant variability in effluent data). Based on these comparisons, water quality limitations have been deemed necessary for Total Residual Chlorine.

Total Residual Chlorine Limits

Water quality-based limits were calculated for chlorine using the dilution at the edge of the mixing zones (10 meter radius and 100 meter radius) based on the dilution factors from Cormix and the RI Water Quality Criteria. Based on these calculations, the daily maximum limit for chlorine is 434.2 µg/L and the monthly average limit for chlorine is 434.25 µg/L. As the daily maximum limit is more stringent than the monthly average limit both limits are set equal to the daily maximum limit of 434.2 µg/L. The spreadsheet used to calculate water quality based limits is presented in Attachment A-4. DEM is maintaining TRC limits in this permit as the maximum monthly DMR data is generally more than twenty-five percent of the maximum monthly limit with most values greater than forty percent of the limit. Monitoring is required once per quarter, where sampling event is concurrent with disinfection/rinsing.

Antibacksliding and Antidegradation

Provided below is a brief introduction to Antibacksliding and Antidegradation; as well as a discussion on how the two policies were used to calculate water quality-based limits.

Antibacksliding

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

1. Standards not attained – For receiving waters that have not attained the applicable water quality standards, limits based on a TMDL or WLA can only be revised if the water quality

standards will be met. This may be done by (i) determining that the cumulative effect of all such revised limits would assure the attainment of such water quality standards; or (ii) removing the designated use which is not being attained in accordance with regulations under Section 303.

2. Standards attained – For receiving waters achieving or exceeding applicable water quality standards, limits can be relaxed if the revision is consistent with the State’s Antidegradation Policy.

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

Antidegradation

The DEM’s “*Policy on the Implementation of the Antidegradation Provisions of the Rhode Island Water Quality Regulations July 2006*” (the Policy) established four tiers of water quality protection:

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

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

Tier 2½. Where high quality waters constitute Special Resource Protection Waters SRPWs², there shall be no measurable degradation of the existing water quality necessary to protect the characteristics which cause the waterbody to be designated a SRPW. Notwithstanding that all public drinking water supplies are SRPWs, public drinking water suppliers may undertake temporary and short-term activities within the boundary perimeter of a public drinking water supply impoundment for essential maintenance or to address emergency conditions in order to prevent adverse effect on public health or safety. These activities must comply with the requirements set forth in Tier 1 and Tier 2.

Tier 3. Where high quality waters constitute an Outstanding Natural Resource ONRWs³, that water quality shall be maintained and protected. The State may allow some limited activities that result in temporary or short-term changes in the water quality of an ONRW. Such activities must not permanently degrade water quality or result in water quality lower than necessary to protect the existing uses in the ONRW.

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

In terms of the applicability of Tier 2 of the Policy, a waterbody is assessed as being high quality on a parameter-by-parameter basis. In accordance with Part II of the Policy, “Antidegradation applies to

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

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

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

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

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

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

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

where: C_b = background concentration⁴

C_d = discharge data⁵

DF = dilution factor

In this permit, all monthly average limitations are either the same as or more stringent than the limits in the 2013 permit. Therefore, the limits contained in this permit are consistent with the Department's anti-degradation policy.

Boat Bottom Pressure Wash Water

In the EPA ACESD's June 1, 2011 response to comments on the facility's reapplication it was identified that the facility was planning on washing EPA owned boats using a hot water/detergent

⁴ Data collected at a location that is unimpacted by significant point source discharges.

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

mixture after their return from field activities. The mixture would be at approximately 180 degrees Fahrenheit and could range from 5 to 20 gallons of solution per wash down. The number of wash downs per year would be approximately 75. It was noted that there is a nearby storm drain that discharges to Narragansett Bay, and the area where boats would be washed slopes towards this area. During a June 16, 2011 DEM inspection of the EPA ACESD, the building where boats are stored and where wash downs would occur was observed. EPA was informed that this wash water discharge is considered to be a “process” discharge and is not an allowed non-storm water discharge under the RIPDES Multi-Sector General Permit. In a post-inspection follow-up notification, the DEM noted that the Office of Customer and Technical Assistance has developed a draft Boat Bottom Pressure Washing Guidance document that recommends that facilities with this type of operation install a recycling system, collect, and ship wastewater to a treatment facility, or receive permission to discharge to a sewer system. Based on the inspection, Multi-Sector permit requirements, and guidance the DEM prohibited the discharge of boat bottom wash water to the Narragansett Bay due to the potential pollutants that may be present and the fact that treatment would be needed and requested EPA provide a proposal on which of the above methods would be most suitable for the facility. In following discussions between DEM and EPA’s Office of Research and Development it was determined that EPA would develop a procedure to perform pressure washing of boats and then collect samples of the wash water and analyze for oil and grease, aluminum, and total petroleum hydrocarbons. This procedure and the results are discussed below.

From the above discussion, the EPA ACESD’s fleet of boats (without anti-fouling paint) were grouped into those with motors and those without motors; boats in each group were washed down with hot water pressure washer or rinse water only without any detergents; wash water from each group was collected and the samples sent off-site for certified laboratory analysis of oil and grease, aluminum, and total petroleum hydrocarbons (TPH); and the sample results/summary forwarded to DEM for review of data. In an April 5, 2012 submittal the results for the above testing procedure were sent to the DEM for review. In this submittal the following was noted: the sampling represent the ACESD’s normal daily operations except that not all boats would be washed at one time since not all boats are used on a daily basis; at the end of each collection day approximately 20 gallons of water minus the sample volume was collected after the boats and tarp were washed; and the EPA ACESD understands that boats with anti-fouling paint will continue to be washed off-site at appropriately equipped marinas in the area that have been permitted by the local POTW for the treatment of such wash water. From review of the collection of boat washing effluent for analysis attached to the above submittal, below is a summary of data for the four groups of boats:

Boat Bottom Wash Water Sampling Results (samples taken March 14, 2012)

	Non-Motorized Fiberglass	Non-Motorized Aluminum	Motorized Fiberglass	Motorized Aluminum
Aluminum mg/L	0.56	4.25	1.18	1.84
Oil & Grease mg/L	3	3	12	12
TPH mg/L	<2	<2	7	7

Review of the above data displays elevated levels of oil and grease and Total Petroleum Hydrocarbons (TPH) in those boats that have motors. It should be noted that the DEM Water Quality Regulations for saltwater receiving waters do not have water quality criteria for aluminum. Therefore, this draft permit only authorizes the discharge of boat bottom wash water from aluminum and fiberglass boats/vessels that do not have anti-fouling paint, provided that detergents are not used, consistent with the requirements of the EPA ACESD’s 2013 Final RIPDES Permit. The permit also requires that appropriate Best Management Practices be used to minimize exposure of motors and their components to wash water. This will ensure that the wash water does not contain elevated levels of Oil and Grease or TPH.

Other Conditions

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

Permit Limit Summary

Table I. Permit Limits – Outfall 001A (final discharge)

Effluent Characteristic	Monthly Average Permit Limit	Daily Maximum Permit Limit	Sampling Frequency
Flow	0.98 MGD		2/Quarter
BOD ₅		9.2 mg/l	2/Quarter
Total Suspended Solids (TSS)		--- mg/l	2/Quarter
Fecal Coliform		-- MPN/100 ml	2/Quarter
Enterococci		-- cfu/ 100 ml	2/Quarter
Dissolved Oxygen (DO)		--- mg/l	2/Quarter
Total Residual Chlorine (TRC)	0.434 mg/l	0.434 mg/l	1/Quarter

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

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

All persons, including applicants, who believe any condition of the draft permit is inappropriate must raise all issues and submit all available arguments and all supporting material for their arguments in full by the close of the public comment period, to the Rhode Island Department of Environmental Management, Office of Water Resources, 235 Promenade Street, Providence, Rhode Island, 02908-5767. In accordance with Chapter 46-17.4 of Rhode Island General Laws, a public hearing will be held prior to the close of the public comment period. In reaching a final decision on the draft permit the Director will respond to all significant comments and make these responses available to the public at DEM's Providence office.

Following the close of the comment period, and after a public hearing, the Director will issue a final permit decision and forward a copy of the final decision to the applicant and each person who has submitted written comments, provided oral testimony, or requested notice. Within thirty (30) days following the notice of the final permit decision any interested person may submit a request for a formal hearing to reconsider or contest the final decision. Requests for formal hearings must satisfy the requirements of 250-RICR-150-10-1.50 of the Regulations for the Rhode Island Pollutant Discharge Elimination System.

VI. DEM Contact

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

Samuel Kaplan, P.E.
Environmental Engineer II
Department of Environmental Management/ Office of Water Resources
235 Promenade Street
Providence, Rhode Island 02908
Telephone: (401) 537-4240
Email: samuel.kaplan@dem.ri.gov

13 September 2024
Date

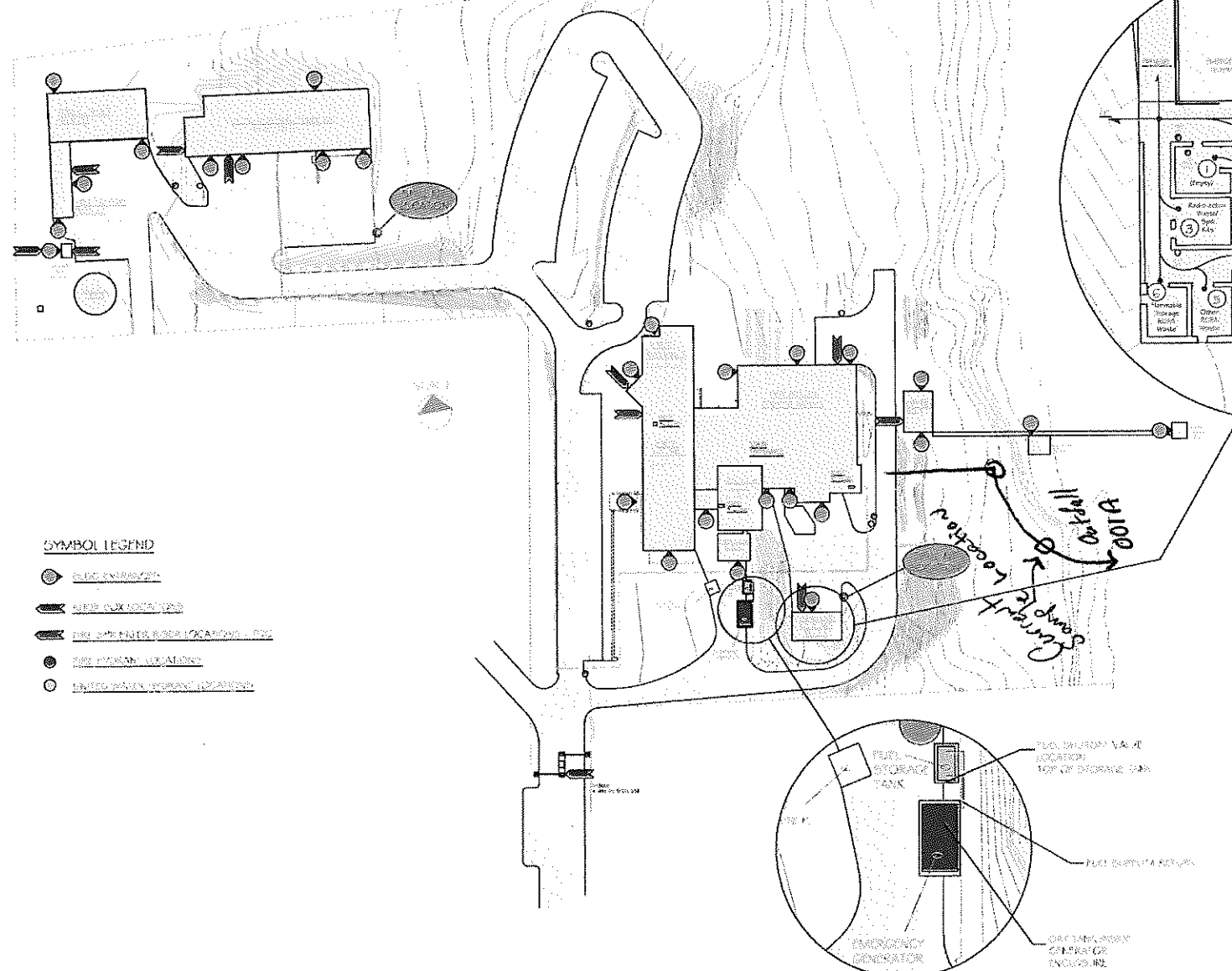
Heidi Travers
Heidi Travers, P.E.
Environmental Engineer IV
RIPDES Program
Office of Water Resources
Department of Environmental Management

Attachment A-1

**US E.P.A. – Atlantic Coastal Environmental Sciences Division
SITE LOCATION MAP**

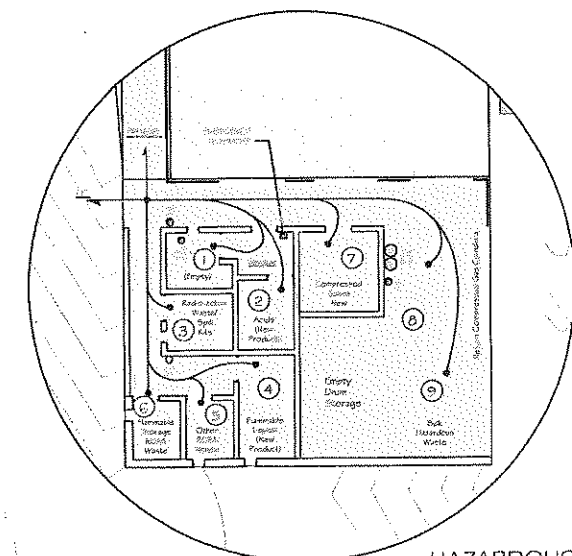
US EPA AED RIPDES Permit Attachment A-1 Site Location Map

Rev	By	Date	Description

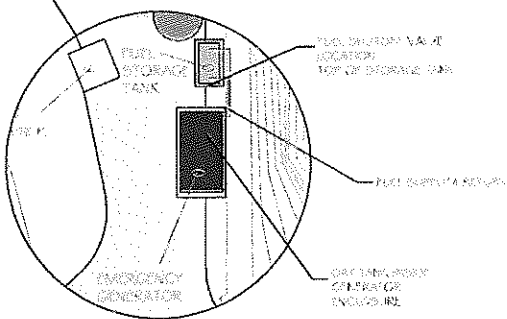


SYMBOL LEGEND

- BUILDING FOOTPRINT
- AIR POLLUTION CONTROL
- ENVIRONMENTAL MONITORING LOCATION
- EMERGENCY RESPONSE LOCATION
- UTILITY STRUCTURE



HAZARDOUS
MATERIALS
BLDG 6



U.S. ENVIRONMENTAL PROTECTION AGENCY
ATLANTA REGIONAL OFFICE
3900 KENNEDY DRIVE
ATLANTA, GA 30346



DCT INC.

SPCC PLAN LOCATIONS

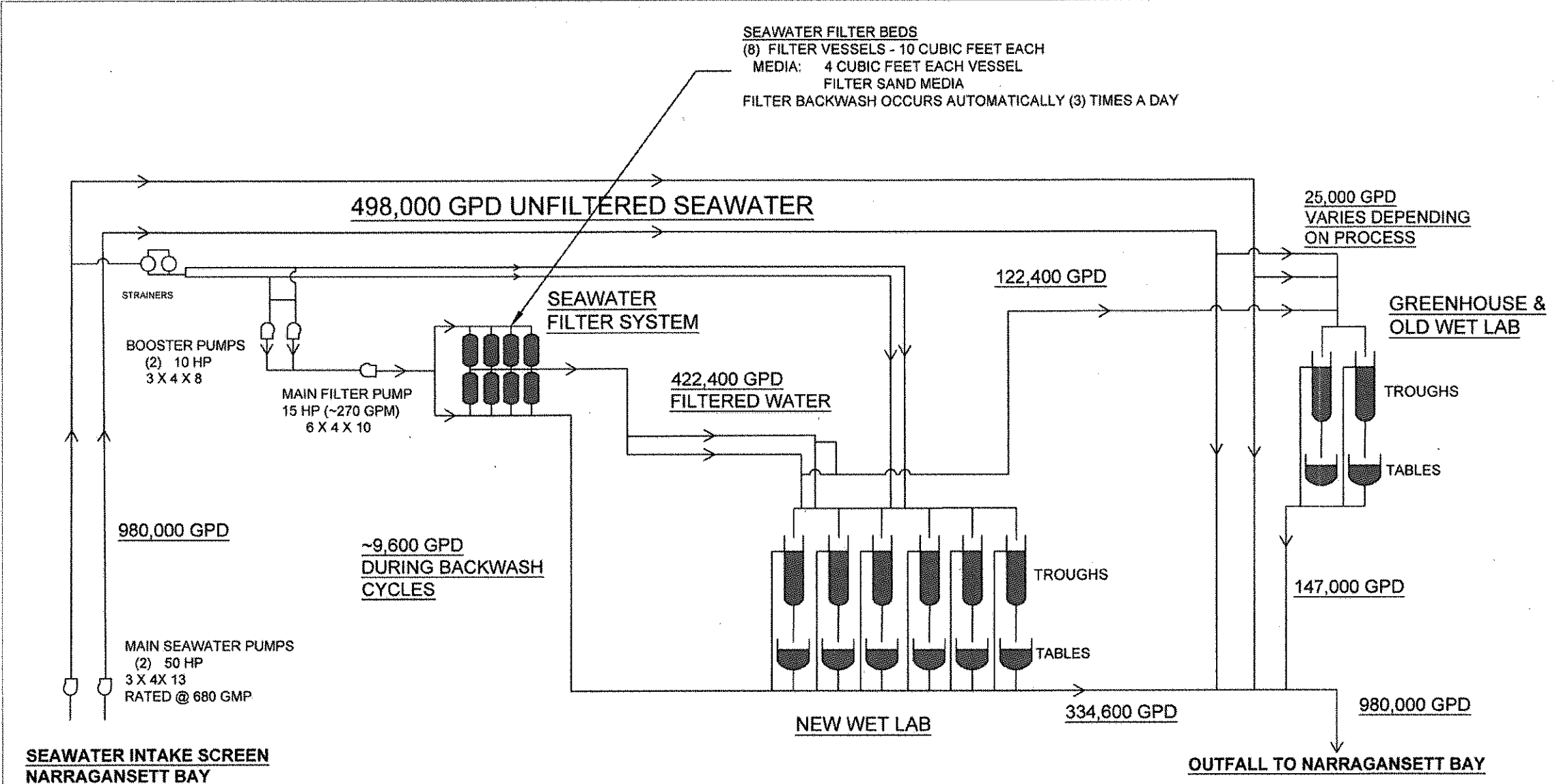
REV	DESCRIPTION	DATE	BY	CHKD
1	2011.19589.001	2011		

USER: REVDATE: FNAME: B: C: D: E: F: G: H:

Attachment A-2

US E.P.A. – Atlantic Coastal Environmental Sciences Division LINE FLOW DIAGRAM

US EPA AED RIPDES Permit Attachment A-2 Line Flow Diagram



SEAWATER INTAKE SCREEN
NARRAGANSETT BAY

NOTES:

1. MAIN SEAWATER PUMPS ARE RUN ALTERNATELY AND SWITCHED MANUALLY ON A MONTHLY BASIS
2. SEAWATER FILTER BOOSTER PUMPS ARE RUN ALTERNATELY AND SWITCHED AUTOMATICALLY ON A DAILY BASIS

FILTER BED CHLORINATION NOTES:

FILTER BED CHLORINATION TAKES PLACE ONCE PER MONTH

TOTAL QUANTITY OF NO MORE THAN (2) GALLONS OF 12% SODIUM HYPOCHLORITE SOLUTION IS CIRCULATED THROUGH THE FILTER SYSTEM TREATED AND DISCHARGED USING THE BACKWASH CYCLE

WATER SAMPLES ARE TAKEN DURING THE BACKWASH CYCLE AT THE OUTFALL

	Urban Services Group Inc. Atlanta, Georgia			
	US EPA ATLANTIC ECOLOGY DIVISION MAIN SEAWATER - ONE LINE DIAGRAM MAIN BUILDING			
	SIZE C	DESIGNER A.Kopacsi	DWG NO. MSW1LD.2018	REV A
	SCALE NONE	DATE 23 FEB 2018	SHEET 1 OF 1	

Attachment A-3 – Historical Effluent Data

DESCRIPTION OF DISCHARGES: 001A – Effluent from the facility that includes filtered seawater used in the wet labs, bypassed unfiltered seawater, and intermittent discharges of filter backwash and filter chlorination rinsate.

AVERAGE EFFLUENT CHARACTERISTICS AT POINT OF DISCHARGE:

PARAMETER	AVERAGE ¹	MAXIMUM ²
Flow	0.98 MGD	
BOD ₅		3.7895 mg/L
Total Suspended Solids (TSS)		44.13 mg/L
Fecal Coliform		96.07 MPN/100mL
Dissolved Oxygen (DO)		9.1987 mg/L
Total Residual Chlorine (TRC)	0.104 mg/L	0.1936 mg/L

¹Data represents the mean of the monthly average data from October 2013 through December 2023.

²Data represents the mean of the daily maximum data from October 2013 through December 2023.

Attachment A-4

**US E.P.A. – Atlantic Coastal Environmental Sciences Division
CALCULATION OF ALLOWABLE ACUTE AND CHRONIC DISCHARGE LIMITATIONS
BASED ON SALTWATER AQUATIC LIFE CRITERIA**

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

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

FACILITY NAME: USEPA Lab - Atlantic Ecology Division

RIPDES PERMIT #: RI0000949

	DISSOLVED BACKGROUND DATA (ug/L)	ACUTE METAL TRANSLATOR	CHRONIC METAL TRANSLATOR
ALUMINUM	NA	NA	NA
ARSENIC	1.13	1	1
CADMIUM	0.0368	0.994	0.994
CHROMIUM III	NA	NA	NA
CHROMIUM VI	0.234	0.993	0.993
COPPER	0.601	0.83	0.83
LEAD	0.08	0.951	0.951
MERCURY	0.000669	0.85	NA
NICKEL	0.87	0.99	0.99
SELENIUM	0.0406	0.998	0.998
SILVER	0.0147	0.85	0.85
ZINC	1.394	0.946	0.946

USE NA WHEN NO DATA IS AVAILABLE

NOTE 1: BACKGROUND DATA BASED ON AVERAGE
CONCENTRATIONS IN ATTACHMENT B.

NOTE 2: METAL TRANSLATORS FROM RI WATER
QUALITY REGS.

DILUTION FACTORS	
ACUTE =	33.4 x
CHRONIC =	57.9 x
HUMAN HEALTH =	57.9 x

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

TOTAL AMMONIA CRITERIA (ug/L)	
WINTER ACUTE =	6000
CHRONIC =	900
SUMMER ACUTE =	4600
CHRONIC =	690

NOTE 1: LIMITS ARE FROM TABLE 3 IN
THE RI WATER QUALITY REGS.
USING:
SALINITY = 30 g/Kg
WINTER (NOV-APRIL) pH=8.4 s.u.;
SUMMER (MAY-OCT) pH=8.2 s.u.
WINTER (NOV-APRIL) TEMP=10.0 C;
SUMMER (MAY-OCT) TEMP=20.0 C.

CALCULATION OF WATER QUALITY BASED SALTWATER DISCHARGE LIMITS

FACILITY NAME: USEPA Lab - Atlantic Ecology RIPDES PERMIT #: RI0000949

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

CHEMICAL NAME	CAS #	BACKGROUND CONCENTRATION (ug/L)	SALTWATER CRITERIA ACUTE (ug/L)	DAILY MAX LIMIT (ug/L)	SALTWATER CRITERIA CHRONIC (ug/L)	HUMAN HEALTH NON-CLASS A CRITERIA (ug/L)	MONTHLY AVE LIMIT (ug/L)
PRIORITY POLLUTANTS:							
TOXIC METALS AND CYANIDE							
ANTIMONY	7440360			No Criteria		640	29644.8
ARSENIC (limits are total recoverable)	7440382	1.13	69	2037.528	36	1.4	8.657
ASBESTOS	1332214			No Criteria			No Criteria
BERYLLIUM	7440417			No Criteria			No Criteria
CADMIUM (limits are total recoverable)	7440439	0.0368	40	1208.458431	8.8		459.2294567
CHROMIUM III (limits are total recoverable)	16065831	NA		No Criteria			No Criteria
CHROMIUM VI (limits are total recoverable)	18540299	0.234	1100	33291.45861	50		2610.45861
COPPER (limits are total recoverable)	7440508	0.601	4.8	150.380241	3.1		153.4266265
CYANIDE	57125		1	26.72	1	140	46.32
LEAD (limits are total recoverable)	7439921	0.08	210	6635.129338	8.1		439.0525762
MERCURY (limits are total recoverable)	7439976	0.000669	1.8	63.63096988	0.94	0.15	7.7784339
NICKEL (limits are total recoverable)	7440020	0.87	74	2218.436364	8.2	4600	381.6151515
SELENIUM (limits are total recoverable)	7782492	0.0406	290	8733.551663	71	4200	3704.909679
SILVER (limits are total recoverable)	7440224	0.0147	1.9	66.63261176			No Criteria
THALLIUM	7440280			No Criteria		0.47	21.7704
ZINC (limits are total recoverable)	7440666	1.394	90	2812.087104	81	26000	4378.003594
VOLATILE ORGANIC COMPOUNDS							
ACROLEIN	107028			No Criteria		290	13432.8
ACRYLONITRILE	107131			No Criteria		2.5	115.8
BENZENE	71432			No Criteria		510	23623.2
BROMOFORM	75252			No Criteria		1400	64848
CARBON TETRACHLORIDE	56235			No Criteria		16	741.12
CHLOROBENZENE	108907			No Criteria		1600	74112
CHLORODIBROMOMETHANE	124481			No Criteria		130	6021.6
CHLOROFORM	67663			No Criteria		4700	217704
DICHLOROBROMOMETHANE	75274			No Criteria		170	7874.4
1,2DICHLOROETHANE	107062			No Criteria		370	17138.4
1,1DICHLOROETHYLENE	75354			No Criteria		7100	328872
1,2DICHLOROPROPANE	78875			No Criteria		150	6948
1,3DICHLOROPROPYLENE	542756			No Criteria		21	972.72
ETHYLBENZENE	100414			No Criteria		2100	97272
BROMOMETHANE (methyl bromide)	74839			No Criteria		1500	69480
CHLOROMETHANE (methyl chloride)	74873			No Criteria			No Criteria
METHYLENE CHLORIDE	75092			No Criteria		5900	273288

CALCULATION OF WATER QUALITY BASED SALTWATER DISCHARGE LIMITS

FACILITY NAME: USEPA Lab - Atlantic Ecology ~~RIPDES~~ PERMIT #: RI0000949

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

CHEMICAL NAME	CAS #	BACKGROUND CONCENTRATION (ug/L)	SALTWATER CRITERIA ACUTE (ug/L)	DAILY MAX LIMIT (ug/L)	SALTWATER CRITERIA CHRONIC (ug/L)	HUMAN HEALTH NON-CLASS A CRITERIA (ug/L)	MONTHLY AVE LIMIT (ug/L)
1,1,2,2TETRACHLOROETHANE	79345			No Criteria		40	1852.8
TETRACHLOROETHYLENE	127184			No Criteria		33	1528.56
TOLUENE	108883			No Criteria		15000	694800
1,2TRANSDICHLOROETHYLENE	156605			No Criteria		10000	463200
1,1,1TRICHLOROETHANE	71556			No Criteria			No Criteria
1,1,2TRICHLOROETHANE	79005			No Criteria		160	7411.2
TRICHLOROETHYLENE	79016			No Criteria		300	13896
VINYL CHLORIDE	75014			No Criteria		2.4	111.168
ACID ORGANIC COMPOUNDS							
2CHLOROPHENOL	95578			No Criteria		150	6948
2,4DICHLOROPHENOL	120832			No Criteria		290	13432.8
2,4DIMETHYLPHENOL	105679			No Criteria		850	39372
4,6DINITRO2METHYL PHENOL	534521			No Criteria		280	12969.6
2,4DINITROPHENOL	51285			No Criteria		5300	245496
4NITROPHENOL	88755			No Criteria			No Criteria
PENTACHLOROPHENOL	87865		13	347.36	7.9	30	365.928
PHENOL	108952			No Criteria		1700000	78744000
2,4,6TRICHLOROPHENOL	88062			No Criteria		24	1111.68
BASE NEUTRAL COMPUNDS							
ACENAPHTHENE	83329			No Criteria		990	45856.8
ANTHRACENE	120127			No Criteria		40000	1852800
BENZIDINE	92875			No Criteria		0.002	0.09264
POLYCYCLIC AROMATIC HYDROCARBONS				No Criteria		0.18	8.3376
BIS(2CHLOROETHYL)ETHER	111444			No Criteria		5.3	245.496
BIS(2CHLOROISOPROPYL)ETHER	108601			No Criteria		65000	3010800
BIS(2ETHYLHEXYL)PHTHALATE	117817			No Criteria		22	1019.04
BUTYL BENZYL PHTHALATE	85687			No Criteria		1900	88008
2CHLORONAPHTHALENE	91587			No Criteria		1600	74112
1,2DICHLOROBENZENE	95501			No Criteria		1300	60216
1,3DICHLOROBENZENE	541731			No Criteria		960	44467.2
1,4DICHLOROBENZENE	106467			No Criteria		190	8800.8
3,3DICHLOROBENZIDENE	91941			No Criteria		0.28	12.9696
DIETHYL PHTHALATE	84662			No Criteria		44000	2038080
DIMETHYL PHTHALATE	131113			No Criteria		1100000	50952000
DInBUTYL PHTHALATE	84742			No Criteria		4500	208440
2,4DINITROTOLUENE	121142			No Criteria		34	1574.88

CALCULATION OF WATER QUALITY BASED SALTWATER DISCHARGE LIMITS

FACILITY NAME: USEPA Lab - Atlantic Ecology ~~RIPDES~~ PERMIT #: RI0000949

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

CHEMICAL NAME	CAS #	BACKGROUND CONCENTRATION (ug/L)	SALTWATER CRITERIA ACUTE (ug/L)	DAILY MAX LIMIT (ug/L)	SALTWATER CRITERIA CHRONIC (ug/L)	HUMAN HEALTH NON-CLASS A CRITERIA (ug/L)	MONTHLY AVE LIMIT (ug/L)
1,2DIPHENYLHYDRAZINE	122667			No Criteria		2	92.64
FLUORANTHENE	206440			No Criteria		140	6484.8
FLUORENE	86737			No Criteria		5300	245496
HEXACHLOROBENZENE	118741			No Criteria		0.0029	0.134328
HEXACHLOROBUTADIENE	87683			No Criteria		180	8337.6
HEXACHLOROCYCLOPENTADIENE	77474			No Criteria		1100	50952
HEXACHLOROETHANE	67721			No Criteria		33	1528.56
ISOPHORONE	78591			No Criteria		9600	444672
NAPHTHALENE	91203			No Criteria			No Criteria
NITROBENZENE	98953			No Criteria		690	31960.8
NNITROSODIMETHYLAMINE	62759			No Criteria		30	1389.6
NNITROSODINPROPYLAMINE	621647			No Criteria		5.1	236.232
NNITROSODIPHENYLAMINE	86306			No Criteria		60	2779.2
PYRENE	129000			No Criteria		4000	185280
1,2,4trichlorobenzene	120821			No Criteria		70	3242.4
PESTICIDES/PCBs							
ALDRIN	309002		1.3	34.736		0.0005	0.02316
Alpha BHC	319846			No Criteria		0.049	2.26968
Beta BHC	319857			No Criteria		0.17	7.8744
Gamma BHC (Lindane)	58899		0.16	4.2752		1.8	83.376
CHLORDANE	57749		0.09	2.4048	0.004	0.0081	0.18528
4,4DDT	50293		0.13	3.4736	0.001	0.0022	0.04632
4,4DDE	72559			No Criteria		0.0022	0.101904
4,4DDD	72548			No Criteria		0.0031	0.143592
DIELDRIN	60571		0.71	18.9712	0.0019	0.00054	0.0250128
ENDOSULFAN (alpha)	959988		0.034	0.90848	0.0087	89	0.402984
ENDOSULFAN (beta)	33213659		0.034	0.90848	0.0087	89	0.402984
ENDOSULFAN (sulfate)	1031078			No Criteria		89	4122.48
ENDRIN	72208		0.037	0.98864	0.0023	0.06	0.106536
ENDRIN ALDEHYDE	7421934			No Criteria		0.3	13.896
HEPTACHLOR	76448		0.053	1.41616	0.0036	0.00079	0.0365928
HEPTACHLOR EPOXIDE	1024573		0.053	1.41616	0.0036	0.00039	0.0180648
POLYCHLORINATED BIPHENYLS3	1336363			No Criteria	0.03	0.00064	0.0296448
2,3,7,8TCDD (Dioxin)	1746016			No Criteria		0.000000051	2.36232E-06
TOXAPHENE	8001352		0.21	5.6112	0.0002	0.0028	0.009264
TRIBUTYLtin			0.42	11.2224	0.0074		0.342768

CALCULATION OF WATER QUALITY BASED SALTWATER DISCHARGE LIMITS

FACILITY NAME: USEPA Lab - Atlantic Ecology ~~RIPDES~~ PERMIT #: RI0000949

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

CHEMICAL NAME	CAS #	BACKGROUND CONCENTRATION (ug/L)	SALTWATER CRITERIA ACUTE (ug/L)	DAILY MAX LIMIT (ug/L)	SALTWATER CRITERIA CHRONIC (ug/L)	HUMAN HEALTH NON-CLASS A CRITERIA (ug/L)	MONTHLY AVE LIMIT (ug/L)
NON PRIORITY POLLUTANTS: OTHER SUBSTANCES							
ALUMINUM (limits are total recoverable)	7429905	NA		No Criteria			No Criteria
AMMONIA as N (winter/summer)	7664417		4932 3781.2	131783 101034	739.8 567.2		34267.5 26271.8
4BROMOPHENYL PHENYL ETHER				No Criteria			No Criteria
CHLORIDE	16887006			No Criteria			No Criteria
CHLORINE	7782505		13	434.2	7.5		434.25
4CHLORO2METHYLPHENOL				No Criteria			No Criteria
1CHLORONAPHTHALENE				No Criteria			No Criteria
4CHLOROPHENOL	106489			No Criteria			No Criteria
2,4DICHLORO6METHYLPHENOL				No Criteria			No Criteria
1,1DICHLOROPROPANE				No Criteria			No Criteria
1,3DICHLOROPROPANE	142289			No Criteria			No Criteria
2,3DINITROTOLUENE				No Criteria			No Criteria
2,4DINITRO6METHYL PHENOL				No Criteria			No Criteria
IRON	7439896			No Criteria			No Criteria
pentachlorobenzene	608935			No Criteria			No Criteria
PENTACHLOROETHANE				No Criteria			No Criteria
1,2,3,5tetrachlorobenzene				No Criteria			No Criteria
1,1,1,2TETRACHLOROETHANE	630206			No Criteria			No Criteria
2,3,4,6TETRACHLOROPHENOL	58902			No Criteria			No Criteria
2,3,5,6TETRACHLOROPHENOL				No Criteria			No Criteria
2,4,5TRICHLOROPHENOL	95954			No Criteria			No Criteria
2,4,6TRINITROPHENOL	88062			No Criteria			No Criteria
XYLENE	1330207			No Criteria			No Criteria

CALCULATION OF WATER QUALITY BASED SALTWATER DISCHARGE LIMITS

FACILITY NAME: USEPA Lab - Atlantic Ecology DivisionRIPDES PERMIT #: RI0000949

CHEMICAL NAME	CAS#	DAILY MAX LIMIT (ug/L)	MONTHLY AVE LIMIT (ug/L)
PRIORITY POLLUTANTS:			
TOXIC METALS AND CYANIDE			
ANTIMONY	7440360	No Criteria	29644.80
ARSENIC, TOTAL	7440382	2037.53	8.66
ASBESTOS	1332214	No Criteria	No Criteria
BERYLLIUM	7440417	No Criteria	No Criteria
CADMIUM, TOTAL	7440439	1208.46	459.23
CHROMIUM III, TOTAL	16065831	No Criteria	No Criteria
CHROMIUM VI, TOTAL	18540299	33291.46	2610.46
COPPER, TOTAL	7440508	150.38	150.38
CYANIDE	57125	26.72	26.72
LEAD, TOTAL	7439921	6635.13	439.05
MERCURY, TOTAL	7439976	63.63	7.78
NICKEL, TOTAL	7440020	2218.44	381.62
SELENIUM, TOTAL	7782492	8733.55	3704.91
SILVER, TOTAL	7440224	66.63	No Criteria
THALLIUM	7440280	No Criteria	21.77
ZINC, TOTAL	7440666	2812.09	2812.09
VOLATILE ORGANIC COMPOUNDS			
ACROLEIN	107028	No Criteria	13432.80
ACRYLONITRILE	107131	No Criteria	115.80
BENZENE	71432	No Criteria	23623.20
BROMOFORM	75252	No Criteria	64848.00
CARBON TETRACHLORIDE	56235	No Criteria	741.12
CHLOROBENZENE	108907	No Criteria	74112.00
CHLORODIBROMOMETHANE	124481	No Criteria	6021.60
CHLOROFORM	67663	No Criteria	217704.00
DICHLOROBROMOMETHANE	75274	No Criteria	7874.40
1,2DICHLOROETHANE	107062	No Criteria	17138.40
1,1DICHLOROETHYLENE	75354	No Criteria	328872.00
1,2DICHLOROPROPANE	78875	No Criteria	6948.00
1,3DICHLOROPROPYLENE	542756	No Criteria	972.72
ETHYLBENZENE	100414	No Criteria	97272.00
BROMOMETHANE (methyl bromide)	74839	No Criteria	69480.00
CHLOROMETHANE (methyl chloride)	74873	No Criteria	No Criteria
METHYLENE CHLORIDE	75092	No Criteria	273288.00
1,1,2,2TETRACHLOROETHANE	79345	No Criteria	1852.80

CHEMICAL NAME	CAS#	DAILY MAX LIMIT (ug/L)	MONTHLY AVE LIMIT (ug/L)
TETRACHLOROETHYLENE	127184	No Criteria	1528.56
TOLUENE	108883	No Criteria	694800.00
1,2TRANS-DICHLOROETHYLENE	156605	No Criteria	463200.00
1,1,1TRICHLOROETHANE	71556	No Criteria	No Criteria
1,1,2TRICHLOROETHANE	79005	No Criteria	7411.20
TRICHLOROETHYLENE	79016	No Criteria	13896.00
VINYL CHLORIDE	75014	No Criteria	111.17
ACID ORGANIC COMPOUNDS			
2CHLOROPHENOL	95578	No Criteria	6948.00
2,4DICHLOROPHENOL	120832	No Criteria	13432.80
2,4DIMETHYLPHENOL	105679	No Criteria	39372.00
4,6DINITRO-2-METHYL PHENOL	534521	No Criteria	12969.60
2,4DINITROPHENOL	51285	No Criteria	245496.00
4-NITROPHENOL	88755	No Criteria	No Criteria
PENTACHLOROPHENOL	87865	347.36	347.36
PHENOL	108952	No Criteria	78744000.00
2,4,6-TRICHLOROPHENOL	88062	No Criteria	1111.68
BASE NEUTRAL COMPOUNDS			
ACENAPHTHENE	83329	No Criteria	45856.80
ANTHRACENE	120127	No Criteria	1852800.00
BENZIDINE	92875	No Criteria	0.09
PAHs		No Criteria	8.34
BIS(2CHLOROETHYL)ETHER	111444	No Criteria	245.50
BIS(2CHLOROISOPROPYL)ETHER	108601	No Criteria	3010800.00
BIS(2ETHYLHEXYL)PHTHALATE	117817	No Criteria	1019.04
BUTYL BENZYL PHTHALATE	85687	No Criteria	88008.00
2CHLORONAPHTHALENE	91587	No Criteria	74112.00
1,2DICHLOROBENZENE	95501	No Criteria	60216.00
1,3DICHLOROBENZENE	541731	No Criteria	44467.20
1,4DICHLOROBENZENE	106467	No Criteria	8800.80
3,3DICHLOROBENZIDENE	91941	No Criteria	12.97
DIETHYL PHTHALATE	84662	No Criteria	2038080.00
DIMETHYL PHTHALATE	131113	No Criteria	50952000.00
DI-n-BUTYL PHTHALATE	84742	No Criteria	208440.00
2,4DINITROTOLUENE	121142	No Criteria	1574.88
1,2DIPHENYLHYDRAZINE	122667	No Criteria	92.64
FLUORANTHENE	206440	No Criteria	6484.80

CALCULATION OF WATER QUALITY BASED SALTWATER DISCHARGE LIMITS

FACILITY NAME: USEPA Lab - Atlantic Ecology DivisionRIPDES PERMIT #: RI0000949

CHEMICAL NAME	CAS#	DAILY MAX LIMIT (ug/L)	MONTHLY AVE LIMIT (ug/L)
FLUORENE	86737	No Criteria	245496.00
HEXACHLOROBENZENE	118741	No Criteria	0.13
HEXACHLOROBUTADIENE	87683	No Criteria	8337.60
HEXACHLOROCYCLOPENTADIENE	77474	No Criteria	50952.00
HEXACHLOROETHANE	67721	No Criteria	1528.56
ISOPHORONE	78591	No Criteria	444672.00
NAPHTHALENE	91203	No Criteria	No Criteria
NITROBENZENE	98953	No Criteria	31960.80
N-NITROSODIMETHYLAMINE	62759	No Criteria	1389.60
N-NITROSODI-N-PROPYLAMINE	621647	No Criteria	236.23
N-NITROSODIPHENYLAMINE	86306	No Criteria	2779.20
PYRENE	129000	No Criteria	185280.00
1,2,4trichlorobenzene	120821	No Criteria	3242.40
PESTICIDES/PCBs			
ALDRIN	309002	34.74	0.02
Alpha BHC	319846	No Criteria	2.27
Beta BHC	319857	No Criteria	7.87
Gamma BHC (Lindane)	58899	4.28	4.28
CHLORDANE	57749	2.40	0.19
4,4DDT	50293	3.47	0.05
4,4DDE	72559	No Criteria	0.10
4,4DDD	72548	No Criteria	0.14
DIELDRIN	60571	18.97	0.03
ENDOSULFAN (alpha)	959988	0.91	0.40
ENDOSULFAN (beta)	33213659	0.91	0.40
ENDOSULFAN (sulfate)	1031078	No Criteria	4122.48
ENDRIN	72208	0.99	0.11
ENDRIN ALDEHYDE	7421934	No Criteria	13.90
HEPTACHLOR	76448	1.42	0.04
HEPTACHLOR EPOXIDE	1024573	1.42	0.02
POLYCHLORINATED BIPHENYLS3	1336363	No Criteria	0.03
2,3,7,8TCDD (Dioxin)	1746016	No Criteria	0.00
TOXAPHENE	8001352	5.61	0.01
TRIBUTYLTIN		11.22	0.34

CHEMICAL NAME	CAS#	DAILY MAX LIMIT (ug/L)	MONTHLY AVE LIMIT (ug/L)
NON PRIORITY POLLUTANTS:			
OTHER SUBSTANCES			
ALUMINUM, TOTAL	7429905	No Criteria	No Criteria
AMMONIA (as N), WINTER (NOV-APR)	7664417	131783.04	34267.54
AMMONIA (as N), SUMMER (MAY-OC)	7664417	101033.66	26271.78
4BROMOPHENYL PHENYL ETHER		No Criteria	No Criteria
CHLORIDE	16887006	No Criteria	No Criteria
CHLORINE	7782505	434.20	434.20
4CHLORO2METHYLPHENOL		No Criteria	No Criteria
1CHLORONAPHTHALENE		No Criteria	No Criteria
4CHLOROPHENOL	106489	No Criteria	No Criteria
2,4DICHLORO6METHYLPHENOL		No Criteria	No Criteria
1,1DICHLOROPROPANE		No Criteria	No Criteria
1,3DICHLOROPROPANE	142289	No Criteria	No Criteria
2,3DINITROTOLUENE		No Criteria	No Criteria
2,4DINITRO6METHYL PHENOL		No Criteria	No Criteria
IRON	7439896	No Criteria	No Criteria
pentachlorobenzene	608935	No Criteria	No Criteria
PENTACHLOROETHANE		No Criteria	No Criteria
1,2,3,5tetrachlorobenzene		No Criteria	No Criteria
1,1,1,2TETRACHLOROETHANE	630206	No Criteria	No Criteria
2,3,4,6TETRACHLOROPHENOL	58902	No Criteria	No Criteria
2,3,5,6TETRACHLOROPHENOL		No Criteria	No Criteria
2,4,5TRICHLOROPHENOL	95954	No Criteria	No Criteria
2,4,6TRINITROPHENOL	88062	No Criteria	No Criteria
XYLENE	1330207	No Criteria	No Criteria

Facility Name: USEPA Lab - Atlantic Ecology Division

RIPDES Permit #: RI0000949

Outfall #: 001A

NOTE: METALS LIMITS ARE TOTAL METALS

Parameter	CAS #	Concentration Limits (ug/L)		Antideg. Limits (ug/L) Monthly Ave	18 permit ap Data (ug/L)		DMR Data (ug/L)		Potential		Reasonable Pot
		Based on WQ Criteria			NA		10/13-12/23		Permit Limits (ug/L)		
		Daily Max	Monthly Ave		Daily Max	Mo. Ave	Daily Max	Mo. Ave	Daily Max	Monthly Ave	
PRIORITY POLLUTANTS											
TOXIC METALS AND CYANIDE											
ANTIMONY	7440360	No Criteria	29644.80	---	---	---	---	---	---	29644.8	
ARSENIC (limits are total recoverable)	7440382	2037.53	8.66	---	---	---	---	---	2037.528	8.657	
ASBESTOS	1332214	No Criteria	No Criteria	---	---	---	---	---	---	---	
BERYLLIUM	7440417	No Criteria	No Criteria	---	---	---	---	---	---	---	
CADMIUM (limits are total recoverable)	7440439	1208.46	459.23	---	---	---	---	---	1208.458431	459.2294567	
CHROMIUM III (limits are total recoverable)	16065831	No Criteria	No Criteria	---	---	---	---	---	---	---	
CHROMIUM VI (limits are total recoverable)	18540299	33291.46	2610.46	---	---	---	---	---	33291.45861	2610.45861	
COPPER (limits are total recoverable)	7440508	150.38	150.38	---	---	---	---	---	150.380241	150.380241	
CYANIDE	57125	26.72	26.72	---	---	---	---	---	26.72	26.72	
LEAD (limits are total recoverable)	7439921	6635.13	439.05	---	---	---	---	---	6635.129338	439.0525762	
MERCURY (limits are total recoverable)	7439976	63.63	7.78	---	---	---	---	---	63.63096988	7.7784339	
NICKEL (limits are total recoverable)	7440020	2218.44	381.62	---	---	---	---	---	2218.436364	381.6151515	
SELENIUM (limits are total recoverable)	7782492	8733.55	3704.91	---	---	---	---	---	8733.551663	3704.909679	
SILVER (limits are total recoverable)	7440224	66.63	No Criteria	---	---	---	---	---	66.63261176	66.63261176	
THALLIUM	7440280	No Criteria	21.77	---	---	---	---	---	---	21.7704	
ZINC (limits are total recoverable)	7440666	2812.09	2812.09	---	---	---	---	---	2812.087104	2812.087104	
VOLATILE ORGANIC COMPOUNDS											
ACROLEIN	107028	No Criteria	13432.80	---	---	---	---	---	---	13432.8	
ACRYLONITRILE	107131	No Criteria	115.80	---	---	---	---	---	---	115.8	
BENZENE	71432	No Criteria	23623.20	---	---	---	---	---	---	23623.2	
BROMOFORM	75252	No Criteria	64848.00	---	---	---	---	---	---	64848	
CARBON TETRACHLORIDE	56235	No Criteria	741.12	---	---	---	---	---	---	741.12	
CHLOROBENZENE	108907	No Criteria	74112.00	---	---	---	---	---	---	74112	
CHLORODIBROMOMETHANE	124481	No Criteria	6021.60	---	---	---	---	---	---	6021.6	
CHLOROFORM	67663	No Criteria	217704.00	---	---	---	---	---	---	217704	
DICHLOROBROMOMETHANE	75274	No Criteria	7874.40	---	---	---	---	---	---	7874.4	
1,2DICHLOROETHANE	107062	No Criteria	17138.40	---	---	---	---	---	---	17138.4	
1,1DICHLOROETHYLENE	75354	No Criteria	328872.00	---	---	---	---	---	---	328872	
1,2DICHLOROPROPANE	78875	No Criteria	6948.00	---	---	---	---	---	---	6948	

1,3DICHLOROPROPYLENE	542756	No Criteria	972.72	---	---	---	---	---	972.72
ETHYLBENZENE	100414	No Criteria	97272.00	---	---	---	---	---	97272
BROMOMETHANE (methyl bromide)	74839	No Criteria	69480.00	---	---	---	---	---	69480
CHLOROMETHANE (methyl chloride)	74873	No Criteria	No Criteria	---	---	---	---	---	---
METHYLENE CHLORIDE	75092	No Criteria	273288.00	---	---	---	---	---	273288
1,1,2,2TETRACHLOROETHANE	79345	No Criteria	1852.80	---	---	---	---	---	1852.8
TETRACHLOROETHYLENE	127184	No Criteria	1528.56	---	---	---	---	---	1528.56
TOLUENE	108883	No Criteria	694800.00	---	---	---	---	---	694800
1,2TRANS-DICHLOROETHYLENE	156605	No Criteria	463200.00	---	---	---	---	---	463200
1,1,1TRICHLOROETHANE	71556	No Criteria	No Criteria	---	---	---	---	---	---
1,1,2TRICHLOROETHANE	79005	No Criteria	7411.20	---	---	---	---	---	7411.2
TRICHLOROETHYLENE	79016	No Criteria	13896.00	---	---	---	---	---	13896
VINYL CHLORIDE	75014	No Criteria	111.17	---	---	---	---	---	111.168
ACID ORGANIC COMPOUNDS									
2CHLOROPHENOL	95578	No Criteria	6948.00	---	---	---	---	---	6948
2,4DICHLOROPHENOL	120832	No Criteria	13432.80	---	---	---	---	---	13432.8
2,4DIMETHYLPHENOL	105679	No Criteria	39372.00	---	---	---	---	---	39372
4,6DINITRO-2-METHYL PHENOL	534521	No Criteria	12969.60	---	---	---	---	---	12969.6
2,4DINITROPHENOL	51285	No Criteria	245496.00	---	---	---	---	---	245496
4NITROPHENOL	88755	No Criteria	No Criteria	---	---	---	---	---	---
PENTACHLOROPHENOL	87865	347.36	347.36	---	---	---	---	347.36	347.36
PHENOL	108952	No Criteria	78744000.00	---	---	---	---	---	78744000
2,4,6TRICHLOROPHENOL	88062	No Criteria	1111.68	---	---	---	---	---	1111.68
BASE NEUTRAL COMPOUNDS									
ACENAPHTHENE	83329	No Criteria	45856.80	---	---	---	---	---	45856.8
ANTHRACENE	120127	No Criteria	1852800.00	---	---	---	---	---	1852800
BENZIDINE	92875	No Criteria	0.09	---	---	---	---	---	0.09264
POLYCYCLIC AROMATIC HYDROCARBONS		No Criteria	8.34	---	---	---	---	---	8.3376
BIS(2CHLOROETHYL)ETHER	111444	No Criteria	245.50	---	---	---	---	---	245.496
BIS(2CHLOROISOPROPYL)ETHER	108601	No Criteria	3010800.00	---	---	---	---	---	3010800
BIS(2ETHYLHEXYL)PHTHALATE	117817	No Criteria	1019.04	---	---	---	---	---	1019.04
BUTYL BENZYL PHTHALATE	85687	No Criteria	88008.00	---	---	---	---	---	88008
2CHLORONAPHTHALENE	91587	No Criteria	74112.00	---	---	---	---	---	74112
1,2DICHLOROBENZENE	95501	No Criteria	60216.00	---	---	---	---	---	60216
1,3DICHLOROBENZENE	541731	No Criteria	44467.20	---	---	---	---	---	44467.2
1,4DICHLOROBENZENE	106467	No Criteria	8800.80	---	---	---	---	---	8800.8
3,3DICHLOROBENZIDENE	91941	No Criteria	12.97	---	---	---	---	---	12.9696
DIETHYL PHTHALATE	84662	No Criteria	50952000.00	---	---	---	---	---	50952000
DIMETHYL PHTHALATE	131113	No Criteria	208440.00	---	---	---	---	---	208440
Di-n-BUTYL PHTHALATE	84742	No Criteria	1574.88	---	---	---	---	---	1574.88

2,4DINITROTOLUENE	121142	No Criteria	92.64	---	---	---	---	---	92.64
1,2DIPHENYLHYDRAZINE	122667	No Criteria	6484.80	---	---	---	---	---	6484.8
FLUORANTHENE	206440	No Criteria	0.00	---	---	---	---	---	0
FLUORENE	86737	No Criteria	245496.00	---	---	---	---	---	245496
HEXACHLORO BENZENE	118741	No Criteria	0.13	---	---	---	---	---	0.134328
HEXACHLORO BUTADIENE	87683	No Criteria	8337.60	---	---	---	---	---	8337.6
HEXACHLORO CYCLOPENTADIENE	77474	No Criteria	50952.00	---	---	---	---	---	50952
HEXACHLORO ETHANE	67721	No Criteria	1528.56	---	---	---	---	---	1528.56
ISOPHORONE	78591	No Criteria	444672.00	---	---	---	---	---	444672
NAPHTHALENE	91203	No Criteria	No Criteria	---	---	---	---	---	---
NITROBENZENE	98953	No Criteria	31960.80	---	---	---	---	---	31960.8
NNITROSODIMETHYLAMINE	62759	No Criteria	1389.60	---	---	---	---	---	1389.6
NNITROSODINPROPYLAMINE	621647	No Criteria	236.23	---	---	---	---	---	236.232
NNITROSODIPHENYLAMINE	86306	No Criteria	2779.20	---	---	---	---	---	2779.2
PYRENE	129000	No Criteria	185280.00	---	---	---	---	---	185280
1,2,4trichlorobenzene	120821	No Criteria	3242.40	---	---	---	---	---	3242.4
PESTICIDES/PCBs									
ALDRIN	309002	34.74	0.02	---	---	---	---	34.736	0.02316
Alpha BHC	319846	No Criteria	2.27	---	---	---	---	---	2.26968
Beta BHC	319857	No Criteria	7.87	---	---	---	---	---	7.8744
Gamma BHC (Lindane)	58899	4.28	4.28	---	---	---	---	4.2752	4.2752
CHLORDANE	57749	2.40	0.19	---	---	---	---	2.4048	0.18528
4,4DDT	50293	3.47	0.05	---	---	---	---	3.4736	0.04632
4,4DDE	72559	No Criteria	0.10	---	---	---	---	---	0.101904
4,4DDD	72548	No Criteria	0.14	---	---	---	---	---	0.143592
DIELDRIN	60571	18.97	0.03	---	---	---	---	18.9712	0.0250128
ENDOSULFAN (alpha)	959988	0.91	0.40	---	---	---	---	0.90848	0.402984
ENDOSULFAN (beta)	33213659	0.91	0.40	---	---	---	---	0.90848	0.402984
ENDOSULFAN (sulfate)	1031078	No Criteria	4122.48	---	---	---	---	---	4122.48
ENDRIN	72208	0.99	0.11	---	---	---	---	0.98864	0.106536
ENDRIN ALDEHYDE	7421934	No Criteria	13.90	---	---	---	---	---	13.896
HEPTACHLOR	76448	1.42	0.04	---	---	---	---	1.41616	0.0365928
HEPTACHLOR EPOXIDE	1024573	1.42	0.02	---	---	---	---	1.41616	0.0180648
POLYCHLORINATED BIPHENYLS3	1336363	No Criteria	0.03	---	---	---	---	---	0.0296448
2,3,7,8TCDD (Dioxin)	1746016	No Criteria	0.00	---	---	---	---	---	2.36232E-06
TOXAPHENE	8001352	5.61	0.01	---	---	---	---	5.6112	0.009264
TRIBUTYL TIN		11.22	0.34	---	---	---	---	11.2224	0.342768
NON PRIORITY POLLUTANTS:									
OTHER SUBSTANCES									
ALUMINUM (limits are total recoverable)	7429905	No Criteria	No Criteria	---	---	---	---	---	---

AMMONIA (winter)	7664417	131783.04	34267.54	---	---	---	---	---	131783.04	34267.536	
AMMONIA (summer)		101033.66	26271.78	---	---	---	---	---	101033.664	26271.7776	
4BROMOPHENYL PHENYL ETHER	16887006	No Criteria	No Criteria	---	---	---	---	---	---	---	
CHLORIDE	7782505	No Criteria	No Criteria	---	---	---	---	---	---	---	
CHLORINE		434.20	434.20	---	300	20	195	104	434.2	434.2	Y
4CHLORO2METHYLPHENOL		No Criteria	No Criteria	---	---	---	---	---	---	---	
1CHLORONAPHTHALENE	106489	No Criteria	No Criteria	---	---	---	---	---	---	---	
4CHLOROPHENOL		No Criteria	No Criteria	---	---	---	---	---	---	---	
2,4DICHORO6METHYLPHENOL		No Criteria	No Criteria	---	---	---	---	---	---	---	
1,1DICHLOROPROPANE	142289	No Criteria	No Criteria	---	---	---	---	---	---	---	
1,3DICHLOROPROPANE		No Criteria	No Criteria	---	---	---	---	---	---	---	
2,3DINITROTOLUENE		No Criteria	No Criteria	---	---	---	---	---	---	---	
2,4DINITRO6METHYL PHENOL	7439896	No Criteria	No Criteria	---	---	---	---	---	---	---	
IRON	608935	No Criteria	No Criteria	---	---	---	---	---	---	---	
pentachlorobenzene		No Criteria	No Criteria	---	---	---	---	---	---	---	
PENTACHLOROETHANE		No Criteria	No Criteria	---	---	---	---	---	---	---	
1,2,3,5tetrachlorobenzene	630206	No Criteria	No Criteria	---	---	---	---	---	---	---	
1,1,1,2TETRACHLOROETHANE	58902	No Criteria	No Criteria	---	---	---	---	---	---	---	
2,3,4,6TETRACHLOROPHENOL		No Criteria	No Criteria	---	---	---	---	---	---	---	
2,3,5,6TETRACHLOROPHENOL	95954	No Criteria	No Criteria	---	---	---	---	---	---	---	
2,4,5TRICHLOROPHENOL	88062	No Criteria	No Criteria	---	---	---	---	---	---	---	
2,4,6TRINITROPHENOL	1330207	No Criteria	No Criteria	---	---	---	---	---	---	---	
XYLENE		No Criteria	No Criteria	---	---	---	---	---	---	---	