RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
235 Promenade Street, Providence, Rhode Island 02908

April 8, 2024

CERTIFIED MAIL

Mr. Peter McNerney, Chair
New Shoreham Sewer Commission
P.O. Drawer 774
Block Island, RI 02807

RE: New Shoreham Water Pollution Control Facility (WPCF) and Block Island Water Company Final Permit
RIPDES No. RI0100196

Dear Mr. McNerney:

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

Also enclosed is a copy of the Department's response to the comments received on the draft permit during the public comment period and information relative to hearing requests and stays of RIPDES Permits.

We appreciate your cooperation throughout the development of this permit. Should you have any questions concerning this permit, feel free to contact Aaron Mello of the State Permits Staff at (401) 537-4255 or aaron.mello@dem.ri.gov.

Sincerely,

Heidi Travers

Heidi Travers, P.E.
Environmental Engineer IV

HT:am

Enclosures

Ecc: David Turin, EPA Region 1
Maryanne Crawford, Town of New Shoreham
Dylan Chase, New Shoreham WPCF
John Breunig, Block Island Water Company
James Geremia, James J. Geremia & Associates, Inc.
Matt Puglia, P.E., DEM/OWR
Crystal Charbonneau, DEM/OWR

RESPONSE TO COMMENTS

From February 9, 2024 to March 21, 2024 the Rhode Island Department of Environmental Management (DEM) solicited public comment on the New Shoreham Sewer Commission's and New Shoreham Water Commission's draft Rhode Island Pollutant Discharge Elimination System (RIPDES) permit for the facilities located at 20 Spring Street and 436 Sand's Pond Road (respectively), Block Island, RI. The following is a synopsis of the significant comments submitted and the DEM's response to those comments:

1. COMMENTS FROM MR. MICHAEL JARBEAU OF SAVE THE BAY SUBMITTED TO DEM VIA EMAIL DATED MARCH 14, 2024:

Comment 1: Save the Bay supports the proposed permit.

Response 1: The DEM notes Save the Bay's comment on this permit reissuance.

HEARING REQUESTS

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

Mary Dalton, Clerk
Department of Environmental Management
Office of Administrative Adjudication
235 Promenade Street
3rd Floor, Rm 350
Providence, RI 02908

Any request for a formal hearing must conform to the requirements of §1.50 of the Regulations for the Rhode Island Pollutant Discharge Elimination System (RI Code of Regulations; 250-RICR-150-10-1.50).

STAYS OF RIPDES PERMITS

Should the Department receive and grant a request for a formal hearing, the contested conditions of the permit will not automatically be stayed. However, the permittee, in accordance with §1.51 of the Regulations for the Rhode Island Pollutant Discharge Elimination System (RI Code of Regulations; 250-RICR-150-10-1.51), may request a temporary stay for the duration of adjudicatory hearing proceedings. Requests for stays of permit conditions should be submitted to the Office of Water Resources at the following address:

Joseph B. Haberek, P.E.
Administrator for Surface Water Protection
Office of Water Resources
235 Promenade Street
Providence, Rhode Island 02908

All uncontested conditions of the permit will be effective and enforceable in accordance with the provisions of §1.50 of the Regulations for the Rhode Island Pollutant Discharge Elimination System (RI Code of Regulations; 250-RICR-150-10-1.50).

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,

New Shoreham Sewer Commission & New Shoreham Water Commission
P.O. Drawer 774
Block Island, RI 02807

is authorized to discharge from facilities located at

New Shoreham Water Pollution Control Facility
20 Spring Street
Block Island, RI 02807
&
Block Island Water Company
436 Sand's Pond Road
Block Island, RI 02807

to receiving waters named

Rhode Island Sound (Waterbody ID: RI0010046E-02A (Block Island Waters))

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

This permit shall become effective on July 1, 2024.

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

This permit supersedes the permit issued on May 20, 2016.

This permit consists of thirty-six (36) pages in Part I and Part II including effluent limitations, monitoring requirements, General Conditions, etc.

Signed this **8th** day of **April** , **2024**.

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

PART I

A. **EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

1. During the period beginning on the effective date and lasting through permit expiration, the permittee is authorized to discharge from outfall serial number 100A (New Shoreham WPCF Effluent Discharge). Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations					Monitoring Requirement	
	Quantity – lbs./day		Concentration – Specify Units				
	Average Monthly	Maximum Daily	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
Flow[1]	0.45 MGD	-- MGD				Continuous	Recorder
BOD_5 [2]	---	---	20 mg/l	30 mg/l	33 mg/l	3/Week	24-Hr. Comp.
BOD_5 - % Removal[2]			≥85%			1/Month	Calculated
TSS[2]	---	---	20 mg/l	30 mg/l	33 mg/l	3/Week	24-Hr. Comp.
TSS - % Removal[2]			≥85%			1/Month	Calculated
Settleable Solids[1]				--- ml/l	--- ml/l	1/Day	Grab
Oil and Grease					--- mg/l	1/Month	3 Grabs[3]
Copper, Total			73.5 ug/l		81.0 ug/l	1/Month	24-Hr. Comp.

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

[1]Sampling for Flow and Settleable Solids shall be performed Sunday-Saturday.

[2]Sampling for BOD_5 and TSS shall be performed Tuesday, Thursday and either Saturday or Sunday**.** All BOD_5 and TSS samples shall be taken on the influent and effluent with appropriate allowances for hydraulic detention (flow-through) time.

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

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: Outfall 100A (New Shoreham WPCF Effluent Discharge after dechlorination and prior to combining with the Concentrate Waste Stream from the Block Island Water Company's Reverse Osmosis (RO) Water Treatment System).

PART I

A. **EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

2. During the period beginning on the effective date and lasting through permit expiration, the permittee is authorized to discharge from outfall serial number 100A (New Shoreham WPCF Effluent Discharge). Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations					Monitoring Requirement	
	Quantity – lbs./day		Concentration – Specify Units				
	Average Monthly	Maximum Daily	Average Monthly *(Minimum)	Average Weekly *(Average)	Maximum Daily *(Maximum)	Measurement Frequency	Sample Type
Enterococci			35 cfu/100 ml[1]		276 cfu/100 ml[1]	3/Week	Grab
Fecal Coliform			--- MPN/100 ml[1]		--- MPN/100 ml[1]	1/Week	Grab
Total Residual Chlorine (TRC)[3]			185 µg/l[2]		228 µg/l[2]	3/Day	Grab
pH[3]			(6.5 SU)		(8.5 SU)	2/Day	Grab

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

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

[1]Two (2) of the three (3) Enterococci samples are to be taken on Tuesday and Thursday at the same time as one of the TRC samples. The Fecal Coliform samples shall be taken at the same time as the Enterococci samples. The Geometric Mean shall be used to obtain the "average monthly" values. The facility shall immediately report to DEM, verbally, any fecal coliform sample result that exceeds 400 MPN/100 ml.

[2]The use of a continuous TRC recorder after chlorination and prior to dechlorination is required to provide a record that proper disinfection was achieved at all times. Compliance with these limitations shall be determined by taking a minimum of three (3) grab samples, equally spaced over a day with a minimum of three (3) hours between grabs, Monday – Friday (except holidays), and on Saturdays, Sundays, and Holidays by taking at least (2) grab samples each day with a minimum of two (2) hours between grabs. The maximum daily and average monthly values are to be computed from the averaged grab sample results for each day. The following methods may be used to analyze the grab samples: (1) DPD Spectrophotometric, EPA No. 330.5 or Standard Methods (18th Edition) No. 4500-Cl G; (2) DPD Titrimetric, EPA No. 330.4 or Standard Methods (18th Edition) No. 4500-Cl F; (3) Amperometric Titration, EPA No. 330.1 or Standard Methods (18th Edition) No. 4500-Cl D or ASTM No. D1253-86(92); (4) Iodometric Direct Titration, EPA No. 330.3 or Standard Methods (18th Edition) No. 4500-Cl B; (5) Iodometric Back Titration (either end-point), EPA No. 330.2 or Standard Methods (18th Edition) No. 4500-Cl C.

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

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: Outfall 100A (New Shoreham WPCF Effluent Discharge after dechlorination and prior to combining with the Concentrate Waste Stream from the Block Island Water Company's Reverse Osmosis (RO) Water Treatment System).

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A. **EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

3. During the period beginning on the effective date and lasting through permit expiration, the permittee is authorized to discharge from outfall serial number 100A (New Shoreham WPCF Effluent Discharge). Such discharges shall be monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations					Monitoring Requirement	
	Quantity – lbs./day		Concentration – Specify Units				
	Average Monthly	Maximum Daily	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
Ammonia, Total (as N) (May-Oct)			8.3 mg/l		84.0 mg/l	1/Week	24-Hr. Comp.
TKN (as N)			--- mg/l		--- mg/l	1/Month	24-Hr. Comp.
Nitrate, Total (as N)			--- mg/l		--- mg/l	1/Month	24-Hr. Comp.
Nitrite, Total (as N)			--- mg/l		--- mg/l	1/Month	24-Hr. Comp.
Nitrogen, Total (TKN + Nitrate + Nitrite, as N)	-- lb/day		-- mg/l		--- mg/l	1/Month	Calculated
***Mysidopsis bahia*[1] LC_{50}[2]**					≥100%	1/Quarter	24-Hr. Comp.
Arbacia punctulata C-NOEC[3]					---	1/Quarter	24-Hr. Comp.

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

[1]Testing may be conducted using *Americamysis bahia.*

[2]LC_{50} is defined as the concentration of wastewater that causes mortality to 50% of the test organisms. Therefore, a 100% limit means that a sample of 100% effluent (no dilution) shall cause no more than a 50% mortality rate.

[3]C-NOEC is defined as the highest concentration of toxicant or effluent at which no adverse effects are observed.

Samples taken in compliance with the monitoring requirements specified above shall be taken Monday through Friday at the following location: Outfall 100A (New Shoreham WPCF Effluent Discharge after dechlorination and prior to combining with the Concentrate Waste Stream from the Block Island Water Company's Reverse Osmosis (RO) Water Treatment System).

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A. **EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

4. During the period beginning on the effective date and lasting through permit expiration, the permittee is authorized to discharge from outfall serial number 100A (New Shoreham WPCF Effluent Discharge). Such discharges shall be monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations					Monitoring Requirement	
	Quantity – lbs./day		Concentration – Specify Units				
	Average Monthly	Maximum Daily	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
Cyanide, Free [1]			--- µg/l		--- µg/l	1/Quarter	Composite[2]
Aluminum, Total[1]			--- µg/l		--- µg/l	1/Quarter	24-Hr. Comp.
Cadmium, Total[1]			--- µg/l		--- µg/l	1/Quarter	24-Hr. Comp.
Chromium, Hexavalent[1]			--- µg/l		--- µg/l	1/Quarter	24-Hr. Comp.
Lead, Total[1]			--- µg/l		--- µg/l	1/Quarter	24-Hr. Comp.
Nickel, Total[1]			--- µg/l		--- µg/l	1/Quarter	24-Hr. Comp.
Zinc, Total[1]			--- µg/l		--- µg/l	1/Quarter	24-Hr. Comp.
Phenols, Total[1]			--- µg/l		--- µg/l	1/Quarter	Grab
Organic Carbon, Total[1]			--- mg/l		--- mg/l	1/Quarter	24-Hr. Comp.

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

[1] Monitoring data may be obtained in conjunction with bioassay testing required in Part I.B of the permit.

[2] Composite shall be obtained by taking three grab samples per day, spaced over one (1) day with a minimum of three (3) hours between grabs, and preserved immediately upon collection. All three (3) samples shall be composited, then analyzed for Free Cyanide.

Samples taken in compliance with the monitoring requirements specified above shall be taken Monday through Friday at the following location: Outfall 100A (New Shoreham WPCF Effluent Discharge after dechlorination and prior to combining with the Concentrate Waste Stream from the Block Island Water Company's Reverse Osmosis (RO) Water Treatment System).

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A. **EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

5. During the period beginning on the effective date and lasting through permit expiration, the permittee is authorized to discharge from outfall serial number 100A (New Shoreham WPCF Effluent Discharge). Such discharges shall be monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations					Monitoring Requirement	
	Quantity – lbs./day		Concentration – Specify Units				
	Average Monthly	Maximum Daily	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
PFAS Analytes[1]					--- ng/L	1/Quarter	Grab [2]

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

[1]Influent and effluent sampling shall be conducted for the PFAS parameters listed in Attachment A. PFAS shall be analyzed using Clean Water Act wastewater draft analytical method 1633 until a 40 CFR Part 136 approved test method for wastewater is approved. The permittee must report the analytical results in NetDMR for all PFAS analytes required to be tested as part of the method as shown in Attachment A.

[2]Influent samples taken in compliance with the monitoring requirements specified above shall be taken at the facility headworks at the same sampling location where influent BOD_5 and influent TSS are sampled. Effluent samples shall be taken at the New Shoreham WPCF effluent discharge after dechlorination and prior to combining with the Concentrate Waste Stream from the Block Island Water Company's Reverse Osmosis (RO) Water Treatment System.

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A. **EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

6. During the period beginning on the effective date and lasting through permit expiration, the permittee is authorized to discharge from outfall serial number 200A (Concentrate Waste Stream from the Block Island Water Company's Reverse Osmosis (RO) Water Treatment System). Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations					Monitoring Requirement	
	Quantity – lbs./day		Concentration – Specify Units				
	Average Monthly	Maximum Daily	Average Monthly *(Minimum)	Average Weekly *(Average)	Maximum Daily *(Maximum)	Measurement Frequency	Sample Type
Flow	0.05 MGD	-- MGD				Continuous	Recorder
BOD_5	---	---	--- mg/l		--- mg/l	3/Week	Composite[1]
TSS	---	---	30 mg/l		50 mg/l	3/Week	Composite[1]
Turbidity			--- NTU		--- NTU	3/Week	Composite[1]
pH[2]			(6.5 S.U.)		(8.5 S.U.)	2/Day	Grab
Copper, Total			73.5 ug/l		81.0 ug/l	1/Month	Composite[1]

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

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

[1] Composite sampling must consist of a minimum of four (4) grabs, spaced equally over an operating shift, when there is a discharge from all processes associated with the RO membrane systems. Samples for BOD_5 and TSS shall be on the same days that Outfall 100A (the New Shoreham WPCF Effluent Discharge) is sampled.

[2] Sampling for pH shall be performed Sunday-Saturday.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: Outfall 200A (Concentrate Waste Stream from the Block Island Water Company's Reverse Osmosis (RO) Water Treatment System prior to combining with the New Shoreham WPCF effluent discharge).

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7. During the period beginning on the effective date and lasting through permit expiration, the permittee is authorized to discharge from outfall serial number 200A (Concentrate Waste Stream from the Block Island Water Company's Reverse Osmosis (RO) Water Treatment System). Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations					Monitoring Requirement	
	Quantity – lbs./day		Concentration – Specify Units				
	Average Monthly	Maximum Daily	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
Ammonia, Total (as N) (May-Oct)			8.3 mg/l		84.0 mg/l	1/Week	Composite[1]
TKN (as N)					--- mg/l	1/Month	Composite[1]
Nitrate, Total (as N)					--- mg/l	1/Month	Composite[1]
Nitrite, Total (as N)					--- mg/l	1/Month	Composite[1]
Nitrogen, Total (TKN + Nitrate + Nitrite, as N)					--- mg/l	1/Month	Calculated
Total Residual Chlorine (TRC)			185 ug/l		228 ug/l	3/Day	Grab[2]

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

[1] Composite sampling must consist of a minimum of four (4) grabs, spaced equally over an operating shift, when there is a discharge from all processes associated with the RO membrane systems.

[2] Compliance with these limitations shall be determined by taking a minimum of three (3) grab samples, equally spaced over an operating shift, Monday – Friday (except holidays). 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-Cl G; (2) DPD Titrimetric, EPA No. 330.4 or Standard Methods (18th Edition) No. 4500-Cl F; (3) Amperometric Titration, EPA No. 330.1 or Standard Methods (18th Edition) No. 4500-Cl D or ASTM No. D1253-86(92); (4) Iodometric Direct Titration, EPA No. 330.3 or Standard Methods (18th Edition) No. 4500-Cl B; (5) Iodometric Back Titration (either end-point), EPA No. 330.2 or Standard Methods (18th Edition) No. 4500-Cl C.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: Outfall 200A (Concentrate Waste Stream from the Block Island Water Company's Reverse Osmosis (RO) Water Treatment System prior to combining with the New Shoreham WPCF effluent discharge).

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A. **EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

8. During the period beginning on the effective date and lasting through permit expiration, the permittee is authorized to discharge from outfall serial number 001A (Combined Discharge of the New Shoreham WPCF Effluent and the Concentrate Waste Stream from the Block Island Water Company's RO Water Treatment System). Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations					Monitoring Requirement	
	Quantity – lbs./day		Concentration – Specify Units				
	Average Monthly	Maximum Daily	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
Flow	0.50 MGD	-- MGD				1/Day	Calculated[1]
BOD_5	75	125				3/Week	Calculated[1]
TSS	75	125				3/Week	Calculated[1]

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

[1] Values shall be calculated by summing the individual measurements from outfalls 100A and 200A for each sampling day. The Maximum Daily value shall be the highest calculated value during a given month and the Average Monthly value shall be the average of all values calculated during a given month.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: Outfall 001A (Combined Discharge of the New Shoreham WPCF Effluent and the Concentrate Waste Stream from the Block Island Water Company's RO Water Treatment System).

9. Per 40 CFR 122.42(b), prior to acceptance, the permittee shall notify DEM of the following:

   a. Any new introduction of pollutants into the permittee's treatment facility from an indirect discharger which would be subject to section 301 or 306 of CWA if it were directly discharging those pollutants; and

   b. Any substantial change in the volume or character of pollutants being introduced into the permittee's treatment facility by a source that was discharging pollutants into the facility at the time of permit issuance.

   c. Notice shall include information on:
      i. the quality and quantity of effluent introduced into the permittee's treatment facility, and
      ii. any anticipated impact of the change on the quantity and quality of effluent to be discharged from the permittee's treatment facility.

10. PERMIT CONDITIONS:

   a. The pH of the effluent must be in the range of 6.5 - 8.5 standard units, but not more than 0.2 units outside of the normally occurring range.

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

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

   d. The turbidity of the receiving water shall not exceed 10 NTU over background.

   e. Outfall 100A shall maintain a minimum of 85 percent removal of both total suspended solids and 5-day biochemical oxygen demand. The percent removal shall be based on monthly average values.

   f. When the effluent discharges from Outfall 100A for a period of 90 consecutive days exceeds 80 percent of the designed flow, the permittee shall submit to the permitting authorities a projection of loadings up to the time when the design capacity of the treatment facility will be reached, and a program for maintaining satisfactory treatment levels consistent with approved water quality management plans.

   g. The permittee shall analyze its effluent from Outfall 100A and Outfall 200A annually for the EPA Priority Pollutants as listed in 40 CFR 122, Appendix D, Tables II and III. The results of these analyses shall be submitted to the Department of Environmental Management by October 15th of each year. All sampling and analysis shall be done in accordance with EPA Regulations, including 40 CFR, Part 136; grab and composite samples shall be taken as appropriate.

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

11. BLOCK ISLAND WATER COMPANY CONCENTRATE DISCHARGE REQUIREMENTS:

   a. Solids, sludges, or biosolids removed in the course of treatment or control of

wastewaters, shall be properly disposed of in compliance with applicable state laws, regulations, and permit requirements, and in a manner such as to prevent any pollutant from such materials from entering the waters of the state.

b. The permittee shall not discharge wastewater that results from the semiannual cleaning of the Reverse Osmosis (RO) membranes to Rhode Island Sound via the combined final discharge point. The wastewater generated from the cleaning cycle and during the first two hours of operation after the cleaning cycle shall be diverted to the head works of the wastewater treatment facility via the existing collection system.

c. The permittee shall comply with all of the terms and conditions of the approved comprehensive Residuals Management Plan. The components of the Residuals Management Plan must include the following:

i. Characterization of the form, quantity, and quality of the residuals;
ii. Determination of the appropriate regulatory requirements;
iii. Identification of feasible disposal options;
iv. Selection of appropriate residuals processing/treatment technologies and development of a residuals management strategy that meets the regulatory goals established for the water treatment facility;
v. Development of best management practices which at a minimum include the following: a) an evaluation of the water treatment residuals storage capacity within each residuals treatment unit and identification of criteria which will serve as a trigger to determine when treatment units (i.e. lagoons, equalization basins, etc.) need to be pulled offline in order to avoid short circuiting and potential permit violations; b) development of procedures and periodic evaluation techniques necessary to gauge the remaining storage capacity of residuals treatment units; c) an evaluation of the need for coordination between WTP operators and personnel responsible for the operation of WTP residuals treatment units; d) development of maintenance procedures to deactivate and prepare treatment units for sludge removal. These maintenance procedures must identify the appropriate steps necessary to temporarily lower the water level in the treatment unit, remove settled sludges, and restore the flow through the treatment unit in such a way that degradation of the receiving waters and permit violations will be prevented;
vi. A requirement that all critical activities associated with the operations and maintenance of the water treatment plant residuals treatment units be documented and copies of such documentation be kept on site at all times throughout the effective life of the permit;
vii. A requirement to review the Residuals Management Plan (at a minimum) on a yearly basis and that it must be updated as necessary. A copy of the Residuals Management Plan and records of the annual reviews must be available on site at all times throughout the effective life of this permit.

The DEM may notify the permittee at any time that the Residuals Management Plan is deficient or does not meet one or more of the minimum requirements of the permit. After such notification from the DEM, the permittee shall make changes to the Residuals Management Plan and shall submit to the DEM a written certification that the requested changes have been made. Unless otherwise provided by the DEM, the permittee shall have thirty (30) days after such notification to make the necessary changes. The permittee shall immediately amend the Residuals Management Plan if it proves to be ineffective in achieving the general objectives of controlling pollutants in discharges

associated with the water treatment facility. Changes must be noted and then submitted to the DEM within thirty (30) days of amending the Residuals Management Plan. Amendments to the Residuals Management Plan may be reviewed by the DEM in the same manner as specified above.

d. This permit authorizes the use of Pretreat Plus Y2K and/or Vitec 3000 water treatment chemicals as antiscalants. The permittee must use Pretreat Plus Y2K and/or Vitec 3000 at a concentration that is less than 3.0 mg/l in order to eliminate the potential for discharging this additive at a potentially toxic concentration pursuant to the MSDS. The permittee must notify the DEM and request approval prior to using any other antiscalant products, or significantly adjusting the concentration in the feed of the Block Island Water Company's RO Treatment System.

B. BIOMONITORING REQUIREMENTS AND INTERPRETATION OF RESULTS

1. General

Beginning on the effective date of the permit, the permittee shall perform four (4) chronic and four (4) acute toxicity tests per year on dechlorinated effluent samples collected from discharge Outfall 100A. The permittee shall conduct the tests during dry weather periods (no rain within forty-eight (48) hours prior to or during sampling unless approved by DEM) according to the following test frequency and protocols. Chronic toxicity data shall be collected from the Arbacia punctulata tests. Acute toxicity data shall be collected from the Mysidopsis bahia tests. Chronic and acute data shall be reported as outlined in Part I.B.10. DEM may require additional screening, range finding, definitive acute or chronic bioassays as deemed necessary based on the results of the initial bioassays required herein. Indications of toxicity could result in requiring a Toxicity Reduction Evaluation (TRE) to investigate the causes and to identify corrective actions necessary to eliminate or reduce toxicity to an acceptable level.

2. Test Frequency

On four sampling events, (one (1) each calendar quarter) the permittee will conduct forty-eight (48) hour acute definitive toxicity tests on the two (2) species listed below, for a total of four (4) chronic toxicity tests on the first species and four (4) acute toxicity tests on the second species per year. This requirement entails performing two-species testing as follows:

Species	Test Type	Frequency
Mysids (*Mysidopsis bahia*)	Definitive 48-Hour Acute Static (LC_{50})	Quarterly
Arbacia punctulata	Sea Urchin 1 hour fertilization test (chronic)	Quarterly

3. Testing Methods

Toxicity tests shall be conducted in accordance with protocols listed in 40 CFR Part 136, incorporating any deviations from protocol listed herein, or additional methods if approved by the Director of DEM.

4. Sample Collection

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

A: Chemical Analysis
B: Acute and Chronic Toxicity Testing

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

5. Salinity Adjustment

Prior to the initiation of testing, the effluent must be adjusted to make the salinity of the effluent equal to that of the marine dilution water. The test solution must be prepared by adding non-toxic dried ocean salts to a sufficient quantity of 100% effluent to raise the salinity to the desired level. After the addition of the dried salts, stir gently for thirty (30) to sixty (60) minutes, preferably with a magnetic stirrer, to ensure that the salts are in solution. It is important to check the final salinity with a refractometer or salinometer. Salinity adjustments following this procedure and in accordance with EPA protocol will ensure that the concentrations (% effluent) of each dilution are real and allow for an accurate evaluation with the $LC_{50} \geq$ 100% effluent permit limit and chronic monitoring requirements.

6. Dilution Water

Dilution water used for marine acute toxicity analyses should be of sufficient quality to meet minimum acceptability of test results (See Part I.B.7. and I.B.8.). For both species, natural seawater shall be used as the dilution water. This water shall be collected from Narragansett Bay off the dock at the URI's Graduate School of Oceanography on South Ferry Road, Narragansett. It is noted that the University claims no responsibility for the personal safety on this dock. The permittee shall observe the rules posted at the dock. If this natural seawater diluent is found to be, or suspected to be toxic or unreliable, an alternate source of natural seawater or, deionized water mixed with hypersaline brine or artificial sea salts of known quality with a salinity and pH similar to that of the receiving water may be substituted AFTER RECEIVING WRITTEN APPROVAL FROM DEM.

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

Test conditions are required to be compliant with 40 CFR 136 using the following effluent concentrations:

Five (5) dilutions plus a control: 100%, 50%, 25%, 12.5%, 6.25%, and 0% effluent.

8. Effluent Toxicity Test Conditions for Arbacia punctulata Fertilization Test

Test conditions are required to be compliant with 40 CFR 136 using the following effluent concentrations:

Five (5) dilutions plus a control: 100%, 50%, 25%, 12.5%, 6.25%, and 0% effluent.

9. Chemical Analysis

The following chemical analysis shall be performed for each two-species sampling event. A sample analyzed as part of the required third-quarter priority pollutant scan may be used to satisfy this sampling requirement.

Parameter	Effluent	Saline Diluent	Detection Limit
pH	√	√	--
Specific Conductance	√	√	--
Total Solids and Suspended Solids	√	√	--
Total Ammonia	√		0.1 mg/L
Total Organic Carbon	√		0.5 mg/L
Free Cyanide[1]	√		0.01 mg/L
Total Phenols	√		0.05 mg/L
Salinity	√	√	PPT (0/00)
Total Cadmium[2]	√	√	0.1 µg/L
Hexavalent Chromium[3]	√	√	20.0 µg/L
Total Copper[2]	√	√	1.0 µg/L
Total Lead[2]	√	√	1.0 µg/L
Total Zinc[2]	√	√	5.0 µg/L
Total Nickel[2]	√	√	1.0 µg/L
Total Aluminum	√	√	5.0 µg/L

[1] Free cyanide analysis is in addition to the total cyanide analysis that is required as part of the priority pollutant scan.
[2]Priority pollutant.
[3] Hexavalent chromium analysis is in addition to the total chromium analysis that is required as part of the priority pollutant scan.

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

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

10. Toxicity Test Report Elements

A report of results will include the following:

- Description of sample collection procedures and site description.

- Names of individuals collecting and transporting samples, times, and dates of sample collection and analysis.

- General description of tests: age of test organisms, origin, dates and results of

standard toxicant tests (quality assurance); light and temperature regime; dilution water description; other information on test conditions if different than procedures recommended.

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

Toxicity test data shall include the following:

Chronic

- The endpoints of toxicity tests using the sea urchin are based on the reduction in percent of eggs fertilized. Chronic test data shall undergo hypothesis testing to determine if the distribution of results is normal using the Shapiro-Wilks test. The variance must also be tested for homogeneity using Bartlett's Test. Then the endpoint estimates, NOEC and LOEC must be determined using Dunnett's Procedure, Bonferroni's T-Test, Steel's Many-One Rank Test, or Wilcoxan Rank Sum Test. The choice of test depends on the number of replicates and whether the variance is homogeneous or not. See EPA/600/4-87/028 for details. (All printouts and graphical displays must be submitted along with the name of the program, the date, and the author(s). When data is analyzed by hand, the worksheets should be submitted.)
- C-NOEC: Chronic No Observed Effect Concentration
- LOEC: Lowest Observed Effect Concentration
- MATC: Maximum Allowable Toxicant Concentration

Acute

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

11. Special Condition

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

12. Species Sensitivity Screening Report

For four (4) quarters of the permit beginning the third year of the permit (July 1, 2026), the permittee shall conduct a chronic species sensitivity screening for the discharge. Species sensitivity screening for chronic toxicity shall include, at a minimum, chronic toxicity testing for four consecutive calendar quarters using 40 CFR Part 136 approved methods for mysid (*Mysidopsis Bahia*), sea urchin (*Arbacia punctulata*), and fish (*Menidia beryllina*). Samples shall be obtained from the dechlorinated effluent collected from Outfall 100A during dry weather periods (no rain within forty-eight (48) hours prior to or during sampling unless approved by DEM).

If only a single species in the species sensitivity screening testing exceeds 1 chronic Toxic Unit (TUc) (as 100/NOEC), then that species shall be established as the most sensitive species. If there are more than one species that exceed 1 TUc (as 100/NOEC), then the species with the highest TUc (as 100/NOEC) shall be established as the most sensitive species. DEM shall have final discretion to determine which species is the most sensitive considering the test results from the species sensitivity screening.

Test No.	Quarter Screening is to be Performed
1	July 1, 2026 – September 30, 2026
2	October 1, 2026 – December 31, 2026
3	January 1, 2027 – March 31, 2027
4	April 1, 2027 – June 30, 2027

The final Species Sensitivity Screening Report shall include all of the elements required under Part I.B.10 for each quarterly test and shall be submitted to DEM by September 30, 2027.

13. Reporting of Bioassay Testing

Bioassay Testing shall be reported as follows:

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

Reports shall be maintained by the permittee and shall be made available upon request by DEM.

C. **INDUSTRIAL USERS**

1. Within ninety (90) days of the effective date of the permit, the permittee shall submit an Industrial User Evaluation with the name of any Industrial User (IU):
   - Subject to Categorical Pretreatment Standards under 40 CFR § 403.6 and 40 CFR chapter I, subchapter N (Parts 405-415, 417-430, 432, 447, 449-451, 454, 455, 457-461, 463-469, and 471 as amended) who discharge to the facility.
   - Other users that discharge an average of 25,000 gallons per day or more of process wastewater into the facility (excluding sanitary, noncontact cooling and boiler blowdown wastewater); contributes a process wastewater which makes up five (5) percent or more of the average dry weather hydraulic or organic capacity of the facility; or has a reasonable potential to adversely affect the wastewater treatment facility's operation, or for violating any pretreatment standard or requirement (in accordance with 40 CFR § 403.8(f)(6)).

   New dischargers shall be submitted 30 days prior to discharge.

2. Monitoring and Reporting for Emerging Contaminants

   Following the effective date of the permit, the permittee shall commence annual sampling of the below-listed types of industrial discharges into the POTW. PFAS sampling requirements do not apply to any below-listed industries that only discharge sanitary waste. PFAS shall be analyzed using Clean Water Act wastewater draft analytical method 1633 until a 40 CFR Part 136 approved test method for wastewater is made available to the public.
   - Platers/Metal Finishers
   - Paper and Packaging Manufacturers
   - Tanneries and Leather/Fabric/Carpet Treaters
   - Manufacturers of Parts with Polytetrafluorethylene (PTFE) or Teflon type coatings (i.e. bearings)
   - Landfill Leachate
   - Centralized Waste Treaters
   - Contaminated Sites
   - Fire Fighting Training Facilities
   - Airports
   - Any Other Known or Expected Sources of PFAS

   Sampling shall be for the PFAS analytes as shown in Attachment A.

   The industrial discharges sampled, and the sampling results (including the full lab report) shall be summarized and submitted as an electronic attachment to the March discharge monitoring report due April 15th of the calendar year following the testing. In the case that there are no relevant dischargers, the annual submittal must include a description of the process used to determine that there were no relevant dischargers. If the first year's PFAS sampling is not completed by the above April 15th due date, the annual submittal shall include a listing of the relevant dischargers along with the anticipated sampling date within one year of the permit's effective date.

D. **OPERATION AND MAINTENANCE OF THE SEWER SYSTEM**

Operation and maintenance of the sewer system shall be in compliance with the General

Requirements of Part II and the following terms and conditions:

1. Maintenance Staff

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

2. Infiltration/Inflow

The permittee shall minimize infiltration/inflow to the sewer system. A summary report of all actions taken to minimize infiltration/inflow during the previous two (2) years shall be submitted to DEM, Office of Water Resources, by the 15th day of January of every other odd numbered year. The first report is due January 15, 2025.

3. Resiliency Planning

Within one (1) year of the effective date of this permit, the City shall submit a Resiliency Plan and schedule of short-term and long-term actions that will be taken to maintain, operate, and protect key collection and treatment system assets. The plan shall be consistent with the most current version of DEM's Guidance for the Consideration of Climate Change Impacts in the Planning and Design of Municipal Wastewater Collection and Treatment Infrastructure and include consideration of the findings of the 2017 DEM report Implications of Climate Change for Rhode Island Wastewater Collection and Treatment Infrastructure. The Resiliency Plan shall include, but not be limited to: (i) an assessment of current and projected impacts from natural hazards on critical components within the Town's collection and treatment systems, as well as on the systems themselves; (ii) a plan to adapt and protect vulnerable components and systems; (iii) an analysis that provides justification for selected adaptation methods, including relevant cost-benefit analyses. The overall analysis must consider component and system design life and sea-level rise projections. For the purposes of this Resiliency Plan, critical components are considered those necessary to ensure the forward flow and treatment of wastewater in accordance with the limits set forth in this permit. The Resiliency Plan shall also consider impacts—such as debris carried in high winds—on the Town's treatment facility and wastewater collection system from neighboring facilities during high hazard events. This Plan shall be subject to DEM review and approval. If DEM determines that modifications need to be made to the Plan, DEM shall notify the permittee in writing which elements of the Plan need to be modified and the reason for the needed modification. This notification shall include a schedule for making required changes. After such notification from the DEM, the permittee shall make changes to the Plan and submit the revisions to the DEM for their approval.

4. Outfall Inspection

a. The outfall pipe and associated effluent diffuser shall be maintained to ensure proper operation. Proper operation means that the outfall pipe be intact, operating as designed, and have unobstructed flow. The plumes from each discharge port shall be balanced relative to each other. Maintenance may include dredging in the vicinity of the diffuser, removal of solids and debris in the diffuser header pipe, and repair/replacement.

b. To determine if maintenance will be required, the permittee shall inspect and videotape the operation of the outfall pipe/diffuser either remotely or using a qualified

diver or marine contractor. Within one (1) year of the effective date of this permit, the permittee shall inspect and videotape the operation of the outfall pipe/diffuser and submit to the DEM a video of the diffuser/outfall pipe inspection along with copies of reports summarizing the results of the inspection. Where it is determined that maintenance will be necessary, the permittee shall provide the proposed schedule for the maintenance along with the results of the inspection.

c. Any necessary maintenance dredging must be performed only after receiving all necessary permits from DEM, Coastal Resources Management Council, U.S. Coast Guard, U.S. Army Corps of Engineers, and other appropriate agencies.

E. SLUDGE

The permittee shall conform and adhere to all conditions, practices and regulations as contained in the State of Rhode Island Rules and Regulations for Sewage Sludge Management (250-ICR-150-10-3). The permittee shall comply with DEM Order of Approval No. 1062 for the disposal of sludge.

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

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

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

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

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

1. "could not be analyzed" data shall be excluded, and shall not be considered as failure to comply with the permit sampling requirements;
2. results reported as less than the MDL shall be included as 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 ug/l (ppb)**
1V	acrolein	10.0
2V	acrylonitrile	5.0
3V	benzene	1.0
5V	bromoform	1.0
6V	carbon tetrachloride	1.0
7V	chlorobenzene	1.0
8V	chlorodibromomethane	1.0
9V	chloroethane	1.0
10V	2-chloroethylvinyl ether	5.0
11V	chloroform	1.0
12V	dichlorobromomethane	1.0
14V	1,1-dichloroethane	1.0
15V	1,2-dichloroethane	1.0
16V	1,1-dichloroethylene	1.0
17V	1,2-dichloropropane	1.0
18V	1,3-dichloropropylene	1.0
19V	ethylbenzene	1.0
20V	methyl bromide	1.0
21V	methyl chloride	1.0
22V	methylene chloride	1.0
23V	1,1,2,2-tetrachloroethane	1.0
24V	tetrachloroethylene	1.0
25V	toluene	1.0
26V	1,2-trans-dichloroethylene	1.0
27V	1,1,1-trichloroethane	1.0
28V	1,1,2-trichloroethane	1.0
29V	trichloroethylene	1.0
31V	vinyl chloride	1.0
Acid Compounds-EPA Method 625		**MDL ug/l (ppb)**
1A	2-chlorophenol	1.0
2A	2,4-dichlorophenol	1.0
3A	2,4-dimethylphenol	1.0
4A	4,6-dinitro-o-cresol	1.0
5A	2,4-dinitrophenol	2.0
6A	2-nitrophenol	1.0
7A	4-nitrophenol	1.0
8A	p-chloro-m-cresol	2.0
9A	pentachlorophenol	1.0
10A	phenol	1.0
11A	2,4,6-trichlorophenol	1.0
Pesticides-EPA Method 608		**MDL ug/l (ppb)**
1P	aldrin	0.059
2P	alpha-BHC	0.058
3P	beta-BHC	0.043
4P	gamma-BHC	0.048
5P	delta-BHC	0.034
6P	chlordane	0.211
7P	4,4 ' -DDT	0.251
8P	4,4 ' -DDE	0.049
9P	4,4 ' -DDD	0.139
10P	dieldrin	0.082
11P	alpha-endosulfan	0.031
12P	beta-endosulfan	0.036
13P	endosulfan sulfate	0.109
14P	endrin	0.050
15P	endrin aldehyde	0.062
16P	heptachlor	0.029
17P	heptachlor epoxide	0.040

	Pesticides-EPA method 608	**MDL ug/l (ppb)**
18P	PCB-1242	0.289
19P	PCB-1254	0.298
20P	PCB-1221	0.723
21P	PCB-1232	0.387
22P	PCB-1248	0.283
23P	PCB-1260	0.222
24P	PCB-1016	0.494
25P	toxaphene	1.670
Base/Neutral-EPA Method 625		**MDL ug/l (ppb)**
1B	acenaphthene*	1.0
2B	acenaphthylene*	1.0
3B	anthracene*	1.0
4B	benzidine	4.0
5B	benzo(a)anthracene*	2.0
6B	benzo(a)pyrene*	2.0
7B	3,4-benzofluoranthene*	1.0
8B	benzo(ghi)perylene*	2.0
9B	benzo(k)fluoranthene*	2.0
10B	bis(2-chloroethoxy)methane	2.0
11B	bis(2-chloroethyl)ether	1.0
12B	bis(2-chloroisopropyl)ether	1.0
13B	bis(2-ethylhexyl)phthalate	1.0
14B	4-bromophenyl phenyl ether	1.0
15B	butylbenzyl phthalate	1.0
16B	2-chloronaphthalene	1.0
17B	4-chlorophenyl phenyl ether	1.0
18B	chrysene*	1.0
19B	dibenzo (a,h)anthracene*	2.0
20B	1,2-dichlorobenzene	1.0
21B	1,3-dichlorobenzene	1.0
22B	1,4-dichlorobenzene	1.0
23B	3,3 ' -dichlorobenzidine	2.0
24B	diethyl phthalate	1.0
25B	dimethyl phthalate	1.0
26B	di-n-butyl phthalate	1.0
27B	2,4-dinitrotoluene	2.0
28B	2,6-dinitrotoluene	2.0
29B	di-n-octyl phthalate	1.0
30B	1,2-diphenylhydrazine (as azobenzene)	1.0
31B	fluoranthene*	1.0
32B	fluorene*	1.0
33B	hexachlorobenzene	1.0
34B	hexachlorobutadiene	1.0
35B	hexachlorocyclopentadiene	2.0
36B	hexachloroethane	1.0
37B	indeno(1,2,3-cd)pyrene*	2.0
38B	isophorone	1.0
39B	naphthalene*	1.0
40B	nitrobenzene	1.0
41B	N-nitrosodimethylamine	1.0
42B	N-nitrosodi-n-propylamine	1.0
43B	N-nitrosodiphenylamine	1.0
44B	phenanthrene*	1.0
45B	pyrene*	1.0
46B	1,2,4-trichlorobenzene	1.0

* Polynuclear Aromatic Hydrocarbons

OTHER TOXIC POLLUTANTS

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

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

NOTE:

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

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

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

G. MONITORING AND REPORTING

The monitoring program in the permit specifies sampling and analysis, which will provide continuous information on compliance and the reliability and effectiveness of the installed pollution abatement equipment. The approved analytical procedures found in 40 CFR Part 136 are required unless other procedures are explicitly required in the permit. The Permittee is obligated to monitor and report sampling results to the DEM within the time specified within the permit.

Unless otherwise specified in this permit, the permittee shall submit reports, requests, and information and provide notices in the manner described in this section.

1. Submittal of DMRs Using NetDMR

   The permittee shall continue to submit its monthly monitoring data in discharge monitoring reports (DMRs) to DEM no later than the 15th day of the month electronically using NetDMR. When the permittee submits DMRs using NetDMR, it is not required to submit hard copies of DMRs to DEM.

2. 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
   - Monthly Operating Reports

   All other reports should be submitted to DEM hard copy via regular US mail (see Part I.G.5 below).

3. Submittal of Unauthorized Discharges Using NeT-SewerOverflow

   The permittee shall submit, as needed to comply with Part II of this permit, written notice of unauthorized discharges, including Sanitary Sewer Overflow (SSO) reporting, bypasses, dry weather CSO reporting, extreme event, and anticipated bypasses using NeT-SewerOverflow. The permittee is not required to submit hard copies of these reports to DEM.

4. Submittal of Requests and Reports to DEM

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

   A. Transfer of Permit notice
   B. Request for changes in sampling location
   C. Request for reduction in testing frequency
   D. Request for reduction in WET testing requirement
   E. Report on unacceptable dilution water / request for alternative dilution water for WET testing
   F. Request for change in antiscalant products or significantly adjusting the concentration in the feed of the Block Island Water Company's RO Treatment System.

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

5. 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 (as needed) other than those required to be submitted using NeT-SewerOverflow as described in Part I.G.3 above
B. Priority Pollutant Scan results for Outfalls 100A/200A (October 15th annually)
C. Species Sensitivity Report (September 30, 2027)
D. Infiltration/Inflow Reports (January 15th every other odd ending year)
E. Resiliency Plan (within 1 year of the permit effective date; June 30, 2025)
F. Outfall Inspection Report (within 1 year of the permit effective date; June 30, 2025)
G. Industrial Users Evaluation (within 90 days of permit effective date (September 30, 2024)
H. PFAS Industrial Users Sampling Results (April 15th each year)

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

6. 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.(l)(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.

PART II

TABLE OF CONTENTS

GENERAL REQUIREMENTS

(a) Duty to Comply

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

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

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

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

(b) Duty to Reapply

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

(c) Need to Halt or Reduce Not a Defense

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

(d) Duty to Mitigate

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

(e) Proper Operation and Maintenance

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

(f) Permit Actions

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

(g) Property Rights

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

(h) Duty to Provide Information

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

(i) Inspection and Entry

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

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

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

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

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

(j) Monitoring and Records

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

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

(3) Records of monitoring information shall include:

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

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

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

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

(v) The analytical techniques or methods used; and

(vi) The results of such analyses.

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

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

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

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

(k) Signatory Requirement

All applications, reports, or information submitted to the Director shall be signed and certified in accordance with 250-RICR-150-10-1.12 of the Rhode Island Pollutant Discharge Elimination System (RIPDES) Regulations. Rhode Island General Laws, Chapter 46-12 provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall,

upon conviction, be punished by a fine of not more than $5,000 per violation, or by imprisonment for not more than 30 days per violation, or by both.

(l) Reporting Requirements

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

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

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

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

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

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

The following information must be reported immediately:

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

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

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

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

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

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

(m) Bypass

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

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

(2) Notice.

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

(ii) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in 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 pubic without further notice.

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

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

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

(iii) NPDES effluent data.

(x) Best Management Practices

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

(y) Right of Appeal

Within thirty (30) days of receipt of notice of a final permit decision, the permittee or any interested person may submit a request to the Director for an adjudicatory hearing to reconsider or contest that decision. The request for a hearing must conform to the requirements of 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. ^oC	temperature in degrees Centigrade
Temp. ^oF	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

Attachment A
PFAS Analyte List

Target Analyte Name	Abbreviation	CAS Number
Perfluoroalkyl carboxylic acids		
Perfluorobutanoic acid	PFBA	375-22-4
Perfluoropentanoic acid	PFPeA	2706-90-3
Perfluorohexanoic acid	PFHxA	307-24-4
Perfluoroheptanoic acid	PFHpA	375-85-9
Perfluorooctanoic acid	PFOA	335-67-1
Perfluorononanoic acid	PFNA	375-95-1
Perfluorodecanoic acid	PFDA	335-76-2
Perfluoroundecanoic acid	PFUnA	2058-94-8
Perfluorododecanoic acid	PFDoA	307-55-1
Perfluorotridecanoic acid	PFTrDA	72629-94-8
Perfluorotetradecanoic acid	PFTeDA	376-06-7
Perfluoroalkyl sulfonic acids		
Acid Form		
Perfluorobutanesulfonic acid	PFBS	375-73-5
Perfluoropentansulfonic acid	PFPeS	2706-91-4
Perfluorohexanesulfonic acid	PFHxS	355-46-4
Perfluoroheptanesulfonic acid	PFHpS	375-92-8
Perfluorooctanesulfonic acid	PFOS	1763-23-1
Perfluorononanesulfonic acid	PFNS	68259-12-1
Perfluorodecanesulfonic acid	PFDS	335-77-3
Perfluorododecanesulfonic acid	PFDoS	79780-39-5
Fluorotelomer sulfonic acids		
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	4:2FTS	757124-72-4
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	6:2FTS	27619-97-2
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid	8:2FTS	39108-34-4
Perfluorooctane sulfonamides		
Perfluorooctanesulfonamide	PFOSA	754-91-6
N-methyl perfluorooctanesulfonamide	NMeFOSA	31506-32-8
N-ethyl perfluorooctanesulfonamide	NEtFOSA	4151-50-2
Perfluorooctane sulfonamidoacetic acids		
N-methyl perfluorooctanesulfonamidoacetic acid	NMeFOSAA	2355-31-9
N-ethyl perfluorooctanesulfonamidoacetic acid	NEtFOSAA	2991-50-6
Perfluorooctane sulfonamide ethanols		
N-methyl perfluorooctanesulfonamidoethanol	NMeFOSE	24448-09-7
N-ethyl perfluorooctanesulfonamidoethanol	NEtFOSE	1691-99-2
Per- and Polyfluoroether carboxylic acids		
Hexafluoropropylene oxide dimer acid	HFPO-DA	13252-13-6
4,8-Dioxa-3H-perfluorononanoic acid	ADONA	919005-14-4
Perfluoro-3-methoxypropanoic acid	PFMPA	377-73-1
Perfluoro-4-methoxybutanoic acid	PFMBA	863090-89-5

Target Analyte Name	Abbreviation	CAS Number
Nonafluoro-3,6-dioxaheptanoic acid	NFDHA	151772-58-6
Ether sulfonic acids		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	9Cl-PF3ONS	756426-58-1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	11Cl-PF3OUdS	763051-92-9
Perfluoro(2-ethoxyethane)sulfonic acid	PFEESA	113507-82-7
Fluorotelomer carboxylic acids		
3-Perfluoropropyl propanoic acid	3:3FTCA	356-02-5
2H,2H,3H,3H-Perfluorooctanoic acid	5:3FTCA	914637-49-3
3-Perfluoroheptyl propanoic acid	7:3FTCA	812-70-4

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

FACT SHEET

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

RIPDES PERMIT NO. RI0100196

NAME AND ADDRESS OF APPLICANT:

New Shoreham Sewer Commission & New Shoreham Water Commission
P.O. Drawer 774
Block Island, RI 02807

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

New Shoreham Water Pollution Control Facility
20 Spring Street
Block Island, RI 02807
&
Block Island Water Company
436 Sand's Pond Road
Block Island, RI 02807

RECEIVING WATER: Rhode Island Sound
WBID: RI0010046E-02A (Block Island Waters)
CLASSIFICATION: SB1

FACT SHEET TABLE OF CONTENTS

I. PROPOSED ACTION, TYPE OF FACILITY, AND DISCHARGE LOCATION

The above-named applicant has applied to the Rhode Island Department of Environmental Management (DEM) for reissuance of a Rhode Island Pollutant Discharge Elimination System (RIPDES) Permit to discharge into the designated receiving water. The New Shoreham Water Pollution Control Facility (WPCF) is engaged in the treatment of domestic sewage. The Block Island Water Company is engaged in the operation of a Reverse Osmosis (RO) process located on Sands Pond Road to treat well water for domestic consumption. The discharges are from the New Shoreham WPCF effluent (Outfall 100A), the Block Island Water Company RO Water Treatment System concentrate waste stream (Outfall 200A), and the combined waste streams of the above two discharges (Outfall 001A) that discharges into Rhode Island Sound. The latitude / longitude coordinates of the outfall are 41.167861, -71.550667 which is approximately 220 feet from shore, and is located in water approximately 4.2 feet deep at mean low water. The sampling location is after dechlorination. Schematics of the facilities are shown in Figures 1 through Figure 3.

II. DESCRIPTION OF DISCHARGE

A quantitative description of the discharge in terms of significant effluent parameters based on the facility's Discharge Monitoring Report (DMR) data from July 2016 through April 2023 is shown in Attachment A-1. A review of the historic discharge data demonstrate that the New Shoreham WPCF and Block Island Water Company can comply with all limitations given.

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 New Shoreham Sewer Commission owns and operates a wastewater treatment facility located on Spring Street in New Shoreham, Rhode Island. The discharge to Rhode Island Sound consists of secondary treated sanitary sewage contributed by the municipality of New Shoreham. The New Shoreham WPCF does not have an industrial pretreatment program. The New Shoreham facility is an extended aeration facility, and treatment consists of the following: coarse screening/bar racks, grit removal, fine screening/mechanical filter screen, aeration, secondary settling, chlorination and dechlorination.

New Shoreham's most recent RIPDES permit, authorizing discharges from the above-mentioned facility, was issued on May 20, 2016. This permit became effective on July 1, 2016 and expired on June 30, 2021. The facility submitted an application for permit reissuance to the DEM on September 30, 2020, which was amended on March 9, 2021. On March 11, 2021, 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 July 1, 2016, 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 July 1, 2016, permit.

The Town of New Shoreham/Block Island Water Company owns and operates a Reverse Osmosis (RO) process located on Sands Pond Road to treat well water for domestic consumption. This discharge ranges from 5,000 gpd to 37,000 gpd (depending on the season). During winter months (November 1st – April 30th) Block Island Water Company diverts the concentrate waste stream to the New Shoreham WPCF's collection system. During the high flow summer months (May 1st –

October 31st) the Block Island Water Company discharges the concentrate waste stream to Outfall 001A. The concentrate waste stream blends with the WPCF effluent before ultimately discharging into the Atlantic Ocean (Rhode Island Sound).

It was decided that the location where the two waste streams blend would be the appropriate compliance monitoring point for the combined discharge from the New Shoreham WPCF Effluent and Concentrate Waste Stream from the Block Island Water Company's RO Water Treatment System. However, since there are not any safely accessible locations to sample the combined streams, the DEM has developed concentration-based permit limits using the dilution achieved by the combined flow and assigned these limits to each of the individual waste streams. This method will ensure that the combined flow does not exceed the concentration-based limits. In addition, for mass-based limits, the DEM is requiring that the Town monitor each of the internal streams for mass loads on the same days and then sum these loads to obtain the total mass load of the combined flows for the given day. This calculated mass load will be reported as the load for Outfall 001A (the Combined Discharge of the New Shoreham WPCF Effluent and the Concentrate Waste Stream from the Block Island Water Company's RO Water Treatment System). The current sampling location for the effluent of the WPCF can be maintained and the monitoring/sampling results will be reported as Outfall 100A (New Shoreham WPCF Effluent). The concentrate waste stream from the Block Island Water Company can be discharged by one of two means: either RO back pressure can be used to discharge the waste stream, or the effluent tanks at the Water Company can be used to store the concentrate waste stream and then the effluent pumps would discharge the tanks contents. Both means result in a discharge of the concentrate waste stream to the PVC force main. This location of sampling will be representative of Outfall 200A (Concentrate Waste Stream from the Block Island Water Company's RO Water Treatment System).

Provided in Figures 1, 2, and 3 are an overall process schematic that displays the average and maximum daily flows for the above waste streams, a process flow diagram for the WPCF, and a process and instrumentation diagram of the Block Island Water Company's RO Water Treatment System, respectively.

Receiving Water Description

The waterbody segment that receives the discharge from the New Shoreham WPCF is described as Block Island waters in the vicinity of Pebbly Beach, within a 500-foot radius of the New Shoreham marine sewer outfall. The identification number for this water body segment is RI0010046E-02A. This segment is located in Block Island waters subbasin and is classified as a class SB1 water body according to the Rhode Island Water Quality Regulations. SB1 waters are designated for primary and secondary contact recreational activities and fish and wildlife habitat. They shall be suitable for aquacultural uses, navigation, and industrial cooling. These waters shall have good aesthetic value. Primary contact recreational activities may be impacted due to pathogens from approved wastewater discharges. However, all Class SB criteria must be met. This segment is not listed as impaired on DEM's March 2022 Integrated Report. Impaired waters include those where TMDLs are required (i.e., Category 5 Waters or 303d List of Impaired Waters) and those where TMDLs are not required (i.e., Category 4 Waters).

Permit Limit Development

The requirements set forth in this permit are from the Rhode Island Water Quality Regulations (RICR 250-RICR-150-05-1) and the State's Regulations for the Rhode Island Pollutant Discharge Elimination System, both filed pursuant to RIGL Chapter 46-12, as amended. DEM's primary authority over the permit comes from EPA's delegation of the program in September 1984 under the Federal Clean Water Act (CWA).

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.

WPCF Conventional Pollutant Permit Limitations (Outfall 100A)

Flow Limits

The basis for the facility's average monthly flow limit of 0.45 MGD is the facility's "Facilities Plan" dated January 30, 2008.

BOD_5, TSS, and pH

The biochemical oxygen demand (BOD_5) and total suspended solids TSS limitations as well as the pH limitations contained in this permit are based upon the secondary treatment requirements of Section 301 (b)(1)(B) of the CWA as defined in 40 CFR 133.102 (a) - (c). The "Maximum Daily" BOD_5 and TSS limits and the enterococci limits are based on Rhode Island requirements for Publicly Owned Treatment Works (POTW's) under Section 401 (a)(1) of the CWA and in 40 CFR 124.53 and 124.56. The "Percent Removal" requirements for BOD_5 and TSS are assigned in accordance with 40 CFR 133.102(a) and (b) respectively.

As a result of the previous design flow increase at the WPCF from 0.3 MGD to 0.45 MGD, the DEM has modified the allowable discharge limits for BOD_5 and TSS at Outfall 100A so the mass load remains constant. The constant mass loading is applied at Outfall 001A (Combined Discharge of New Shoreham WPCF Effluent and Concentrate Waste Stream from the Block Island Water Company's RO Water Treatment System) as this is the final discharge point into the receiving water. A ratio of old design flow to the new design flow was used to adjust the Outfall 100A (New Shoreham WPCF Effluent) concentration limits of BOD_5 and TSS, while monitor only of the mass loading was required. Monitoring was also required for the BOD_5 and TSS loads for Outfall 200A.

The effluent limitations for pH have been established in accordance with the Rhode Island Water Quality Regulations (250-RICR-150-05, Section 1.10.E(1) (Class Specific Criteria – Saltwaters). The table specifies for Class SB1 saltwaters that the pH must be in the range of 6.5-8.5 s.u. but not more than 0.2 units outside of the normally occurring range. These limitations have been applied to Outfalls 100A (New Shoreham WPCF Effluent).

Settleable Solids

Settleable Solids monitoring has been included as a process-control parameter that can aid in the assessment of the operation of the plant but does not need to have an effluent limit.

Oil and Grease

Oil and Grease monitoring requirements have been maintained in this permit in order to serve as a process control parameter. Monitoring data will serve as a monitor of potential excessive levels of Oil and Grease in the collection system that may cause backups and blockages.

Bacteria

The RI Water Quality Regulations (250-RICR-150-05-1) include enterococci criteria for primary contact recreation / swimming of a geometric mean of 35 colonies/100 mL and a single sample

maximum of 104 colonies/100mL (§ 1.10(E)(1)). The "single sample maximum" value is only used by the Rhode Island Department of Health to evaluate swimming advisories at public beaches and is not applied to the receiving water in the area of the New Shoreham WPCF outfall. EPA's November 12, 2008, memorandum regarding "Initial Zones of Dilution for Bacteria in Rivers and Streams Designated for Primary Contact Recreation" specifies that it is not appropriate to use dilution for bacteria criteria in receiving waters that are designated for primary contact recreation. Therefore, because the receiving water is designated for primary contact recreation, the DEM has assigned a monthly geometric mean enterococci limit of 35 colonies/100mL. The daily maximum enterococci limit has been set at the 90% upper confidence level value for "lightly used full body contact recreation" of 276 colonies/100ml[1].

The DEM has maintained fecal coliform monitoring to ensure that the discharge from the WPCF will not have an impact in any areas designated for shellfish harvesting outside of the immediate vicinity of the outfall.

WPCF 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 New Shoreham WPCF's July 1, 2016, permit also contained WQBELs. The Town's first permit to contain WQBELs was issued on September 29, 1992.

Mixing Zones and Dilution Factors

In order to evaluate the need for water quality-based limits, it is necessary to determine the mixing that occurs in the immediate vicinity of the discharge (initial dilution). The Regulations for the Rhode Island Pollutant Discharge Elimination System (250-RICR-150-10-1.18(B)(1)) requires the use of the design flow when establishing limits for POTWs. The New Shoreham WPCF effluent is conveyed through a 10" pipe and discharged through a diffuser that is approximately 220 feet offshore. The diffuser consists of four ports, 2.5" in diameter, spaced 1.5' apart. CORMIX2 is designed to simulate the dilution characteristics of submerged multiport diffuser discharges. The limits for this permit reissuance were determined from the EPA computer model CORMIX2 assuming the design flow of 0.5 MGD, a mean low water depth of the outfall of approximately 4.2 feet, a conservative estimate of ambient current velocity (0.1 meters per second), and the most conservative density profile to determine the dilutions within the designated mixing zones. For modeling the most conservative values of Wind Speed (2 m/s) and Manning's 'n' (0.025) were used. The DEM has decided that it would utilize the CORMIX model with the existing outfall configuration, taking into consideration the increased design flow of the WPCF and the addition of the Block Island Water Company RO Treatment System concentrate waste stream. Based on the results of the CORMIX2 Session Reports (March 2008) a chronic dilution factor of 24.6 and an acute dilution factor of 17.5 were established, with respective mixing zone radii of 28.1 meters (approximately 92.3 feet) and 2.81 meters (approximately 9.23 feet). The above-referenced CORMIX2 Session

[1]United States Environmental Protection Agency. Ambient Water Quality Criteria for Bacteria – 1986. Publication 440-5-84002. https://www.epa.gov/sites/default/files/2019-03/documents/ambient-wqc-bacteria-1986.pdf. Accessed April 2023.

Reports and other accompanying information can be found in the July 2008 Development Document for the New Shoreham Water Pollution Control Facility (WPCF) and Block Island Water Company (BIWC) (Permit Development Document; RIPDES Permit No. RI0100196) and is available upon request.

The Regulations for the Rhode Island Pollutant Discharge Elimination System at 250-RICR-150-10-1.18(N)(1) require in-stream concentrations of discharged pollutants to be determined by specific formulas, or other methods which may be found to be acceptable.

Using the above-mentioned 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 the available background concentration data[2].
   Limit $_1$ *= (DF) * (Criteria) * (90%) – (Background) * (DF – 1)*
   Where: DF = acute or chronic dilution factor, as appropriate

Since specific background data was not available for this discharge, the DEM used the equation in part (a) above to calculate water quality-based limits. Attachment A-2 includes the calculations of allowable limits based on Aquatic Life and Human Health Criteria. A summary of Priority Pollutant Scan Data for the years 2016 to 2022 can be found in Attachment A-3. A Comparison of Allowable Limits with Discharge Monitoring Report data and Priority Pollutant Scan Data can be found in Attachment A-4.

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

a) Pollutants that, based on 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.

b) Total residual chlorine. The limits for total residual chlorine (TRC) were established in accordance with the DEM Effluent Disinfection Policy. The "Monthly Average" and "Daily Maximum" were based on a 100% allocation, a zero-background data concentration, and the appropriate dilution factor(s). The 100% allocation factor for TRC was used due to the nonconservative nature of chlorine and the improbability of the receiving water having a detectable background TRC concentration.

c) 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 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 122.4(d)(1)(iii), it is only necessary to establish water-quality-based permit limits for those pollutants in the discharge which have the reasonable potential to cause or contribute to the exceedance of instream 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 for all parameters in Attachment A-2 were calculated using 80% allocation for pollutants without background data, 90% allocation for pollutants with background data, and 100% allocation of total residual chlorine (TRC) due to the fact that chlorine is not expected to be

found in ambient water and it is a non-conservative pollutant. In the case of ammonia, since removal is strongly dependent on temperature (nitrification rate decreases as temperature decreases) and ammonia does not bioaccumulate or accumulate in sediment, seasonal dilution factors and historical pH and temperature background data are generally used to determine the appropriate potential ammonia limitations. In this permit, as described below, ammonia limits were subject to an anti-degradation and anti-backsliding evaluation, which determined the limits.

When evaluating reasonable potential, the allowable discharge concentrations (i.e. potential permit limits) were compared to Discharge Monitoring Report (DMR) data, Priority Pollutant Scan data, and data provided in the facility's permit application. Specifically, the mean of the monthly average DMR data, the average of the Priority Pollutant Scan data reported as greater than the detection limit, and the and the average concentration reported on the permit application, were compared to the "monthly average" allowable discharge concentrations, calculated using the chronic water quality criteria. Similarly, the mean of the daily maximum DMR data, the maximum of the Priority Pollutant data, and the maximum reported in the permit application were compared to the "daily maximum" allowable discharge concentrations, calculated using the acute water quality criteria. When doing this, DEM used DMR data collected during the previous six (6) years. 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 no "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-based effluent limitations have been deemed necessary for Total Residual Chlorine (TRC), Total Copper and Ammonia. As explained previously, due to the lack of a safe sampling location for the combined discharge (Outfall 001A), the concentration-based water quality limits for Total Residual Chlorine, Total Copper and Total Ammonia (as N) have been assigned to each of the internal outfalls (Outfalls 100A and 200A). This will ensure that the combined discharge meets these concentrations.

Although these pollutants did not have "reasonable potential", quarterly monitoring for Total Aluminum, Total Cadmium, Hexavalent Chromium, Total Lead, Total Nickel, and Total Zinc have been maintained in the permit as part of the quarterly toxicity testing requirements. Review of DMR data for Cyanide shows reasonable potential to exceed the calculated water quality-based limits. Upon further review, the elevated concentrations of Cyanide were due to laboratory detection limits not in compliance with the permit required detection limits for Cyanide, not actual detections of in the WPCF effluent. Due to this fact, quarterly monitoring for Cyanide has been maintained in the permit with the clarification that the monitoring and reporting will be for Free Cyanide.

Priority Pollutants

The required priority pollutants scans are to be performed annually for the EPA Priority Pollutants as listed in 40 CFR 122, Appendix D, Tables II and III. The priority pollutant scans are typically performed during the third calendar quarter bioassay sampling event.

WET Testing

The biomonitoring requirements are set forth in 40 CFR 131.11 and in Section 1.10(B)(1) of the State's Water Quality Regulations (250-RICR-150-05), containing narrative conditions that state, at a minimum, all waters shall be free of pollutants in concentrations or combinations or from anthropogenic activities subject to these regulations that: adversely affect the composition of fish and wildlife; adversely affect the physical, chemical, or biological integrity of the habitat; interfere with the propagation of fish and wildlife; adversely alter the life cycle functions, uses, processes,

and activities of fish and wildlife; or adversely affect human health. In order to determine compliance with many of these conditions, WET testing is required. If toxicity is demonstrated, then toxicity identification and reduction will be required.

DEM's toxicity permitting policy is based on past toxicity data and the level of available dilution. Evaluation of the data collected for biotoxicity revealed that the final effluent samples consistently demonstrated non-toxic values for the Mysid (shrimp) tests and the Arbacia (sea urchin) tests. DEM's toxicity permitting policy requires that acute toxicity be evaluated for effluents with dilutions between 20:1 – 100:1. Based upon past toxicity results and available dilution, the draft permit continues to require an $LC_{50} \geq 100\%$ effluent limit for quarterly acute tests conducted on Mysids at Outfall 100A. New Shoreham's bioassay limit of ≥100% effluent for an LC_{50} value is based on is based upon 40 CFR 131.11. At this point in time a chronic toxicity effluent limit has not been established, although chronic toxicity testing for Arbacia (Sea Urchin) is required for monitoring and performance purposes at Outfall 100A. This is due in part to the consistently non-toxic levels of acute Mysid tests and the need to monitor low levels of chronic pollution toxicity, as has been observed with the C-NOEC values for Arbacia within the last two years. WET testing requirements can be found in Part I.B. of the permit. Part I.B.12 has been added to the permit to be consistent with DEM's WET Policy. Part I.B.12 contains a requirement for a Species Sensitivity Screening Report to be submitted to DEM that will ensure the WET limits in the permit are evaluated using the most sensitive applicable marine species.

Nutrients

The effluent monitoring requirements have been specified in accordance with the RIPDES regulations as well as 40 CFR 122.41 (j), 122.44 (i), and 122.48 to yield data representative of the discharge. At this time, nutrient criteria have not been established for the receiving water. Seasonal (May through October) testing requirements for TKN, Nitrate, and Nitrite have been extended to year-round testing at a frequency of once per month. This nutrient monitoring has been applied at Outfalls 100A and 200A.

Block Island Water Company Concentrate Discharge Limitations

The Block Island Water Company owns and operates a Reverse Osmosis (RO) process located on Sands Pond Road to treat well water for domestic consumption. RO produces nearly pure water by maintaining a pressure gradient across the membrane greater than the osmotic pressure of the feed water. 75% of feed water passes through the membrane and is collected in the permeate tank as product. The remaining water (25%) is discharged along with the rejected salts and other pollutants in a concentrate waste stream.

The Water Company has three (3) RO Water Treatment Systems that have been designed to produce potable water. The raw water is generated from Well Nos. 1, 2, 3, 5, and 6 with a Total Dissolved Solids (TDS) of approximately 300 mg/L as the ion. Each RO system consists of three (3) stages. The first two stages contain two pressure vessels each and the third stage contains one pressure vessel. The first two systems are designed to produce 93,600 gpd permeate and the third is designed to produce 32,000 gpd permeate.

The RO Systems contain the following components: an 8" diameter 316 SS tubular particle screen filter, six (6) 40" five-micron cartridge micron filters, chemical feed systems that deliver antiscalant/sequestrant to the inlet side of the membranes and for post-pH adjustment and chlorine dosing (disinfection) for the potable water side of the membranes, a RO high pressure booster pump, the RO membrane modules, and a freshwater flush/acid water flush/membrane cleaning system.

Flush Procedure

In order to provide a regular means of iron control to prevent membrane fouling, the RO system contains a permeate water flush system. Upon each system shutdown sequence, each RO

system is flushed with approximately 165 gallons of permeate. The flush sequence is automatically operated and assists in keeping the systems free of iron and other minerals. No chemicals/water treatment additives are used during these sequences. The total volume of water used during the flush sequences is proposed to be discharged via Outfall 200A (the concentrate waste stream outfall from the Block Island Water Company's RO Water Treatment System) through a force main to the manhole on the existing WPCF ten-inch outfall sewer.

Membrane Recovery - Chemical Cleaning

The RO membranes at the Block Island Water Company will be cleaned using a high pH solution of permeate water and ROCleanP111, and a low pH solution of permeate water and ROCleanP703 (both manufactured by Avista Technologies, Inc.). Cleaning is accomplished by heating approximately 160 gallons of water containing either ROCleanP111 or ROCleanP703, and then each unit is washed with this solution. At the end of the cleaning cycle, the respective solution is discharged to waste (i.e. discharged to the sewer system). During the first two hours of operation following the cleaning cycle the permeate water produced is also diverted to waste. During the cleaning cycle(s) and two-hour post-production period the wastewater generated will be diverted to the head works of the WPCF. This will be accomplished by closing the valve to the PVC force main (Outfall 200A) and diverting flow into the existing sanitary collection system. Therefore, the permit does not authorize the discharge of chemical cleaning wastewater.

Flow

The discharge from the concentrate waste stream ranges from 5,000 gpd to 37,000 gpd (depending on the season). However, during the 2008 calculation of water quality-based limits and CORMIX modeling the DEM used a maximum flow of 50,000 gpd for the concentrate waste stream to evaluate the limits at the final point of discharge for the combined discharge point (Outfall 001) to Rhode Island Sound. In addition, the dosing rates and concentrations of the antiscalant/sequestering agents discussed below were evaluated in the concentrate waste stream at the maximum flow of 50,000 gpd to assess if there were any potential toxicity effects in the discharge from using those chemicals. Therefore, the permitted design flow for Outfall 200A was considered to be 50,000 gpd (0.05 MGD).

Total Suspended Solids and BOD

The proposed limits for TSS at Outfall 200A have been designated as 30 mg/l monthly average and 50 mg/l daily maximum based on Best Professional Judgment (BPJ) for the treatment capabilities of wastewater treatment systems currently used for the treatment of potable water treatment waste streams throughout the country. The DEM has determined that the use of the Best Available Treatment technologies are not cost prohibitive and that by using the Best Available Treatment technologies the 30 mg/l and 50 mg/l TSS limitations can be achieved. These limits are consistent with the Environmental Protection Agency Final NPDES General Permits for Water Treatment Facility Discharges in the States of Massachusetts (MAG640000) And New Hampshire (NHG640000). Concentration based limits have been applied for Outfall 200A (Concentrate Waste Stream from the Block Island Water Company's RO Water Treatment System). Mass based limits for Outfall 200A have not been assigned, but reporting of loadings is required. Monitoring of BOD concentration and load have also been included for Outfall 200A. This monitoring will be used to determine compliance with the load limits at Outfall 001A.

Turbidity

Turbidity monitoring requirements have been included in this permit in order to establish a database of NTU data that can be used to determine compliance with water quality criteria. These monitoring requirements have been applied to Outfall 200A (Concentrate Waste Stream from the Block Island Water Company's RO Water Treatment System). The permit also includes a narrative condition that the receiving water's turbidity not be increased more than 10 NTU over background.

pH

The effluent limitations for pH have been established in accordance with the Rhode Island Water Quality Regulations (250-RICR-150-05, Section 1.10.E(1) (Class Specific Criteria – Saltwaters). The table specifies for Class SB1 saltwaters that the pH must be in the range of 6.5-8.5 s.u. but not more than 0.2 units outside of the normally occurring range. These limitations have been applied to Outfall 200A (Concentrate Waste Stream from the Block Island Water Company's RO Water Treatment System).

Water Quality Based Limits

As previously indicated, water quality-based limits for Total Copper, Total Ammonia, and Total Residual Chlorine have been assigned to Outfalls 100A and 200A. Limits have been assigned to these outfalls since there is not a suitable sample location for Outfall 001A.

Residuals Management Requirements

Water treatment plant residuals form when solids in the raw water react with chemicals such as coagulants added in the treatment process and from the addition of other process control chemicals. Some potable water treatment processes generate residuals that are relatively easy to process and dispose. For example, leaves, limbs, logs, plastic bottles, and other large floating debris separated from water during the initial screening process can be disposed of at conventional solid waste landfills. However, most other treatment processes produce more complex residual waste streams that may require advanced processing and disposal methods to protect human health and the environment.

Water Treatment Chemicals

pH limits have been assigned in the permit to regulate the concentrations of antiscalant/sequestrant present in Outfall 200A. This permit also authorizes the use of Pretreat Plus Y2K and/or Vitec 3000 water treatment chemicals as antiscalants. The permittee must use Pretreat Plus Y2K and/or Vitec 3000 at a concentration that is less than 3.0 mg/l in order to eliminate the potential for discharging this additive at a potentially toxic concentration pursuant to the MSDS. The permittee must notify the DEM and request approval prior to using any other antiscalant products, or significantly adjusting the concentration in the feed of the Block Island Water Company's RO Treatment System. The concentration of the above antiscalants listed in the permit application as being applied in the feed chemical systems is in the range of 2.5 to 3.0 mg/l. Toxicity information provided by the manufacturer of Pretreat Plus-Y2K indicates the chemical ingredients contained within the formulation are generally non-toxic. The 96-hour LC_{50} for the *Sheepshead Minnow* species was listed as being >12,700 mg/l. In addition, an aquatic toxicity report provided by the manufacturer of Vitec 3000 displays a 48-hour LC_{50} for the *Pimephales promelas* species as being 7,939 mg/l. Considering both dilution within the treatment process, from the commingling of the concentrate waste stream and the WPCF effluent, and from the final outfall diffuser into Rhode Island Sound and the potential for a reduction in the concentration of the additive in the treatment process prior to discharge, the DEM is confident that the concentrations of Pretreat Plus Y2K and/or Vitec 3000 discharged from the Block Island Water Company will not have an adverse impact on the receiving water.

Emerging Contaminants

Per-and polyfluoroalkyl substances (PFAS) are a group of synthetic chemicals that have been in use since the 1940s. They are found in a wide array of consumer and industrial products. PFAS manufacturing and processing facilities, facilities using PFAS in production of other products, airports, and military installations can be contributors of PFAS releases into the air, soil, and water. Due to their widespread use and persistence in the environment, most people in the United States have been exposed to PFAS. Exposure to some PFAS above certain levels may increase risk of

adverse health effects.[2] DEM is collecting information to evaluate the potential impacts that discharges of PFAS from wastewater treatment plants may have on downstream uses, which can include drinking water, recreational and aquatic life uses depending on the receiving water.

The Environmental Protection Agency (EPA) established a Drinking Water Health Advisory in 2016 for Perfluorooctanoic Acid (PFOA), Perfluorooctanesulfonic Acid (PFOS), or a combination of these chemicals at 70 parts per trillion (ppt) or 70 nanogram per liter (ng/l). This Drinking Water Health Advisory was established to protect against adverse health effects that studies have indicated can be caused by exposure to these chemicals. In 2017, the Rhode Island Department of Health (DOH) began the process of sampling public wells for these pollutants due to increasing public health concerns about their possible presence in drinking water. Also in 2017, DEM adopted the EPA health advisory as a groundwater quality standard.

In 2022, Rhode Island passed a law concerning PFAS in drinking water, groundwater and surface waters. The Rhode Island law establishes monitoring requirements for public water supplies as well as drinking water treatment requirements if the sum of the concentrations of the following six species of PFAS exceed 20 ppt.

Perfluorohexanesulfonic acid (PFHxS)
Perfluoroheptanoic acid (PFHpA)
Perfluorononanoic acid (PFNA)
Perfluorooctanesulfonic acid (PFOS)
Perfluorooctanoic acid (PFOA)
Perfluorodecanoic acid (PFDA)

The 2022 Rhode Island law is consistent with the Massachusetts Department of Environmental Protection (Mass DEP) public drinking water standard regarding allowable concentrations and PFAS species. In addition to drinking water requirements, the 2022 Rhode Island law also compels DEM to adopt a groundwater quality standard and a surface water action level by December 31, 2023.

Although the Rhode Island Water Quality Regulations (250-RICR-150-05-1) do not include numeric criteria for PFAS, the RI Water Quality Regulations § 1.10(E)(1)(saltwater) under Chemical Constituents have narrative requirements that prohibits the discharge of pollutants in concentration or combinations that could be harmful to humans or fish and wildlife for the most sensitive and governing water class use.

Since PFAS chemicals are persistent in the environment and may lead to adverse human health and environmental effects, the Permit requires that the facility conduct quarterly influent and effluent sampling for PFAS chemicals and annual sampling of certain industrial users using draft EPA Method 1633 until a 40 CFR Part 136 approved method is made available to the public.

The purpose of this monitoring and reporting requirement is to better understand potential discharges of PFAS from this facility and to inform future permitting decisions, including the potential development of water quality-based effluent limits on the facility-specific basis. DEM is authorized to require this monitoring and reporting by CWA § 308(a), which states:

> "SEC. 308. (a) Whenever required to carry out the objective of this Act, including but not limited to (1) developing or assisting in the development of any effluent limitation, or other limitation, prohibition, or effluent standard, pretreatment standard, or standard of performance under this Act; (2) determining whether any person is in violation of any such

[2] EPA, *EPA's Per- and Polyfluoroalkyl Substances (PFAS) Action Plan,* EPA 823R18004, February 2019. http://www.epa.gov/sites/production/files/201902/documents/pfas_action_plan_021319_508compliant_1.pdf

effluent limitation, or other limitation, prohibition or effluent standard, pretreatment standard, or standard of performance; (3) any requirement established under this section; or (4) carrying out sections 305, 311, 402, 404 (relating to State permit programs), 405, and 504 of this Act –

a. The Administrator shall require the owner or operator of any point source to (i) establish and maintain such records, (ii) make such reports, (iii) install, use, and maintain such monitoring equipment or methods (including where appropriate, biological monitoring methods), (iv) sample such effluents (in accordance with such methods, at such locations, at such intervals, and in such manner as the Administrator shall prescribe), and (v) provide such other information as he may reasonably require…"

Since an EPA method for sampling and analyzing PFAS in wastewater is not currently available, the permit requires that PFAS be analyzed using draft EPA method 1633 until a 40 CFR Part 136 approved test method for wastewater is made available to the public. This approach is consistent with 40 CFR § 122.44(i)(1)(iv)(b) which states that in the case of pollutants or pollutant parameters for which there are no approved methods under 40 CFR Part 136 or methods are not otherwise required under 40 CFR chapter I, subchapter N or O, monitoring shall be conducted according to a test procedure specified in the permit for such pollutants or pollutant parameters.

The reporting requirement for the listed PFAS parameters takes effect following the effective date of the permit. The PFAS Analytes that are required to be reported are listed in Attachment A of the permit. Sampling requirements include quarterly influent and effluent sampling as well as annual sampling of any relevant industrial users.

Antibacksliding and Antidegradation

Since the analysis outlined above in WPCF Toxic Pollutant Limits / Mixing Zones and Dilution Factors may allow a relaxation of the Total Ammonia monthly average limit from 8.3 mg/l to 17.8 mg/l, 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:

a) 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.

b) 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 DEM 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 Water Quality Regulations (250-RICR-150-05, Section 1.20) establishes four tiers of water quality protection:

> **Tier 1**. In all surface waters, existing uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.
>
> **Tier 2**. In waters where the existing water quality 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 SRPWs[3], 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 ONRWs[4], 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 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

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

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

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 concentration[5]
C_d = discharge data[6]
DF = dilution factor

If the waterbody is a high-quality water for the pollutant in question ($C_p < C_{criteria}$), then the discharge requires an evaluation under Tier 2 protection. If the waterbody is not determined to be high quality for that parameter, then antibacksliding will allow an increased permit limit only if it can be assured that water quality standards would be attained. Therefore, the permit limit would be calculated to comply with Tier 1 protection, using the procedures noted previously (i.e., $Limit_1$).

Assuming the receiving water has been designated as a high-quality waterbody for the parameter under investigation, the next step is to determine whether the new or increased discharge is permissible and if so whether an important benefits demonstration is required. As explained above, for existing discharges DEM shall follow the general rule of allocating no more than 20% of the remaining assimilative capacity without the need to complete this demonstration (assuming the receiving water is not an SRPW or ONRW). On a case-by-case basis, the DEM may limit the allocation or determine that any incremental loss or impact to the receiving water is significant enough to require a detailed important benefits demonstration.

Water Quality Based Limits – Considering Antibacksliding and Antidegradation

DEM has previously performed an antidegradation analysis for Ammonia. This analysis is included in the July 2008 Development Document for the New Shoreham Water Pollution Control Facility (WPCF) and Block Island Water Company (BIWC) and is available upon request.

[5] Data collected at a location that is unimpacted by significant point source discharges.
[6] 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.

Below are the four (4) steps DEM used to establish permit limitations for Total Ammonia to be consistent with Tier 2 protection of antidegradation.

1) Determine the remaining assimilative capacity of the receiving water C_{rac}. The remaining assimilative capacity (or buffer) is equivalent to the difference between the criteria and the calculated present instream water quality concentrations:

$$C_{rac} = C_{criteria} - C_P$$

Where:

$C_{criteria}$ = applicable standard for the most sensitive use; and
C_p = the calculated present water quality concentration.

2) Establish the percentage of the remaining assimilative capacity that will be allocated to the permittee.

DEM allocated 0% of the remaining assimilative capacity for Total Ammonia. The decision to allocate 0% of the remaining assimilative capacity was based on the fact that the historical discharge concentration was below the previous permit limit. Therefore, there was no apparent reason to allocate any additional assimilative capacity of the receiving water.

3) Calculate an increased permit limit that would meet the Antidegradation Implementation Policy.

The next step is to calculate a permit limit based on the available concentration. Basically, the available concentration is a percentage of the remaining assimilative capacity of the receiving water, which can be allocated to the permittee, plus the present water quality. This concentration is then used to calculate a permit limit. The limit is calculated by subtracting background data (if available or appropriate) from the criteria and using the appropriate dilution factors and allocation factors in a mass balanced relationship. In the calculation of the Total Ammonia limit, a chronic dilution factor of 24.6 was used. This was the dilution factor produced taking into account the increased design flow of the WPCF (0.45 MGD) and the addition of 0.05 MGD of flow from the Block Island Water Company's RO Water Treatment System concentrate waste stream.

The limit is determined by:

$$Limit_2 = \left(C_p + \% * C_{rac}\right) * DF - \left(DF - 1\right) * C_b$$

4) Finally, compare $Limit_1$ to $Limit_2$.

The final limit is the minimum of $Limit_1$ and $Limit_2$.

In this permit, all monthly average limitations (including Ammonia; see above discussion) are either the same as or more stringent than the limits in the July 2016 permit. Therefore, the limits contained in this permit are consistent with the Department's anti-degradation policy.

Industrial Users

While the New Shoreham Sewer Commission does not have an industrial pretreatment program, the permit requires that the permittee submit the names of any industrial users that are subject to Categorical Pretreatment and other significant users that meet the criteria detailed in the permit. This information shall be submitted to DEM within ninety (90) days of the permit effective date. After the initial inventory is submitted to DEM, any new dischargers that meet the criteria shall be

submitted to DEM thirty (30) days prior to discharge. Additional details are located in Part I.C.1 of the permit.

Operations and Maintenance

Resiliency Planning Requirements

The permit requires that, within one year of the effective date of this permit, the Town shall submit a Resiliency Plan and schedule of short- and long-term actions that will be taken to maintain, operate, and protect key collection and treatment system assets. The plan shall be consistent with the most current version of DEM's *Guidance for the Consideration of Climate Change Impacts in the Planning and Design of Municipal Wastewater Collection and Treatment Infrastructure* and include consideration of the findings of the 2017 DEM report Implications of Climate Change for Rhode Island Wastewater Collection and Treatment Infrastructure. The Resiliency Plan shall include, but not be limited to: (i) an assessment of current and projected impacts from natural hazards on critical components within the Town's collection and treatment systems, as well as on the system themselves; (ii) a plan to adapt and protect vulnerable components and systems; (iii) an analysis the provides justification for selected adaptation methods, including relevant cost-benefit analyses. The overall analysis must consider component and system design life and sea-level rise projections. For the purpose of this Resiliency Plan, critical components are considered those necessary to ensure the forward flow and treatment of wastewater in accordance with the limits set forth in this permit. The Resiliency Plan shall also consider impacts – such as debris carried in high winds – on the Town's treatment facility and wastewater collection system from neighboring facilities during high hazard events.

Outfall Inspection Requirement

The permit requires that the outfall pipe and associated effluent diffuser shall be maintained to ensure proper operation. Within one (1) year of the effective date of the permit, the permittee shall inspect and videotape the operation of the outfall pipe/diffuser and submit to the DEM a video of the diffuser/outfall pipe inspection along with copies of reports summarizing the results of the diffuser/outfall pipe inspection. If maintenance is needed, the permittee shall submit a schedule to complete the required maintenance.

Sludge Requirements

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

Other Conditions

It has been determined that the New Shoreham discharge outfall is seaward of the territorial sea baseline, and therefore is subject to Section 403(c) of the CWA. Section 403(c) of the CWA provides that no NPDES permit for discharges to the "territorial sea, the waters of the contiguous zone, or the oceans" shall be issued except in compliance with the ocean discharge guidelines. The Ocean Discharge criteria regulations (45 FR 65942, October 3, 1980, codified at 40 CFR Part 125, Subpart M) establish ocean discharge guidelines to determine whether or not the discharge will cause "unreasonable degradation" of the marine environment. An Ocean Discharge Criteria Evaluation (ODCE) was conducted in 1992 for the New Shoreham discharge. In summary, the ODCE states that the New Shoreham discharge will not result in unreasonable degradation to the marine environment. The ODCE for New Shoreham is available upon request.

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

Permit Limit Summary

Table 1: Permit Limits - Outfall 001A (Combined Discharge of New Shoreham WPCF Effluent and Concentrate Waste Stream from the Block Island Water Company's RO Water Treatment System)

Effluent Characteristic	Monthly Average Permit Limit	Weekly Average Permit Limit	Daily Max Permit Limit	Sampling Frequency
Flow[1]	0.50 MGD		--- MGD	1/Day
BOD_5 Load[1]	75 lbs/day		125 lbs/day	3/Week
TSS Load[1]	75 lbs/day		125 lbs/day	3/Week

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

[1]Values shall be calculated by summing the individual measurements from outfalls 100A and 200A for each sampling day. The Maximum Daily value shall be the highest calculated value during a given month and the Average Monthly value shall be the average of all values calculated during a given month.

Table 2: Permit Limits - Outfall 100A (New Shoreham WPCF Effluent; final discharge after dechlorination)

Effluent Characteristic	Monthly Average Permit Limit	Weekly Average Permit Limit	Daily Max Permit Limit	Sampling Frequency
Flow	0.45 MGD		--- MGD	Continuous
BOD_5 Load[1]	--- lbs/day		--- lbs/day	3/Week
BOD_5 Concentration[1]	20 mg/L	30 mg/L	33 mg/L	3/Week
BOD_5 - % Removal[1]	≥85%			1/Month
TSS Load[1]	--- lbs/day		--- lbs/day	3/Week
TSS Concentration[1]	20 mg/L	30 mg/L	33 mg/L	3/Week
TSS - % Removal[1]	≥85%			1/Month
Settleable Solids		--- ml/L	--- ml/L	Daily
Fecal Coliform	--- MPN/100 ml		--- MPN/100 ml	1/Week
Enterococci	35 cfu/100 ml		276 cfu/100 ml	3/Week
Total Residual Chlorine (TRC)	185 µg/L		228 µg/L	3/Day
pH	(6.5 SU)		(8.5 SU)	2/Day
Oil and Grease			--- mg/L	1/Month
Ammonia, Total (as N)	8.3 mg/L		84.0 mg/L	1/Week
TKN (as N)			--- mg/L	1/Month
Nitrate, Total (as N)			--- mg/L	1/Month
Nitrite, Total (as N)			--- mg/L	1/Month
Nitrogen, Total			--- mg/L	1/Month
Total Copper[2]	73.5 µg/L		81.0 µg/L	1/Month
Free Cyanide[2]	--- µg/L		--- µg/L	1/Quarter
Total Cadmium[2]	--- µg/L		--- µg/L	1/Quarter
Hexavalent Chromium[2]	--- µg/L		--- µg/L	1/Quarter
Total Lead[2]	--- µg/L		--- µg/L	1/Quarter
Total Zinc[2]	--- µg/L		--- µg/L	1/Quarter
Total Nickel[2]	--- µg/L		--- µg/L	1/Quarter
Total Aluminum[2]	--- µg/L		--- µg/L	1/Quarter
Phenols, Total[2]	--- µg/L		--- µg/L	1/Quarter
Organic Carbon, Total[2]	--- µg/L		--- µg/L	1/Quarter
Mysidopsis bahia - LC_{50}[3]			≥100%	1/Quarter
Arbacia punctulata – C-NOEC[4]			---	1/Quarter

Effluent Characteristic	Monthly Average Permit Limit	Weekly Average Permit Limit	Daily Max Permit Limit	Sampling Frequency
PFAS Analytes[1,5]			--- ng/L	1/Quarter

() Values in parentheses represent the minimum and maximum values.
--- Signifies a parameter which must be monitored, and data must be reported; no limit has been established at this time.
[1]Samples shall be taken on the influent and effluent with appropriate allowances for hydraulic detention (flow-through) time.
[2]Monitoring data may be obtained in conjunction with the bioassay testing required in Part I.B of the permit.
[3]LC_{50} is defined as the concentration of wastewater that causes mortality to 50% of the test organisms. Therefore, a 100% limit means that a samples of 100% effluent (no dilution) shall cause no more than a 50% mortality rate.
[4]C-NOEC is defined as the highest concentration of toxicant or effluent at which no adverse effects are observed.
[5]Influent and effluent sampling shall be conducted for the PFAS parameters listed in Attachment A. PFAS shall be analyzed using Clean Water Act wastewater draft analytical method 1633 until a 40 CFR Part 136 approved test method for wastewater is approved. The permittee must report the analytical results in NetDMR for all PFAS analytes required to be tested as part of the method as shown in Attachment A.

Table 3: Permit Limits - Outfall 200A (Concentrate Waste Stream from the Block Island Water Company's RO Water Treatment System)

Effluent Characteristic	Monthly Average Permit Limit	Weekly Average Permit Limit	Daily Max Permit Limit	Sampling Frequency
Flow	0.05 MGD		--- MGD	Continuous
BOD_5 Load[1]	--- lbs/day		--- lbs/day	3/Week
BOD_5 Concentration[1]	--- mg/L		--- mg/L	3/Week
TSS Load[1]	--- lbs/day		--- lbs/day	3/Week
TSS Concentration[1]	30 mg/L		50 mg/L	3/Week
Turbidity[1]	--- NTU		--- NTU	3/Week
Total Residual Chlorine (TRC)	185 µg/L		228 µg/L	3/Day
pH	(6.5 SU)		(8.5 SU)	2/Day
Total Copper[1]	73.5 µg/L		81.0 µg/L	1/Month
Ammonia, Total (as N)	8.3 mg/L		84.0 mg/L	1/Week
TKN (as N)			--- mg/L	1/Month
Nitrate, Total (as N)			--- mg/L	1/Month
Nitrite, Total (as N)			--- mg/L	1/Month
Nitrogen, Total			--- mg/L	1/Month

() Values in parentheses represent the minimum and maximum values.
--- Signifies a parameter which must be monitored, and data must be reported; no limit has been established at this time.
[1]Composite sampling must consist of a minimum of four (4) grabs, spaced equally over an operating shift, when there is a discharge from all processes associated with the RO membrane systems. Samples for BOD_5 and TSS shall be on the same days that Outfall 100A (the New Shoreham WPCF Effluent Discharge) is sampled.

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:

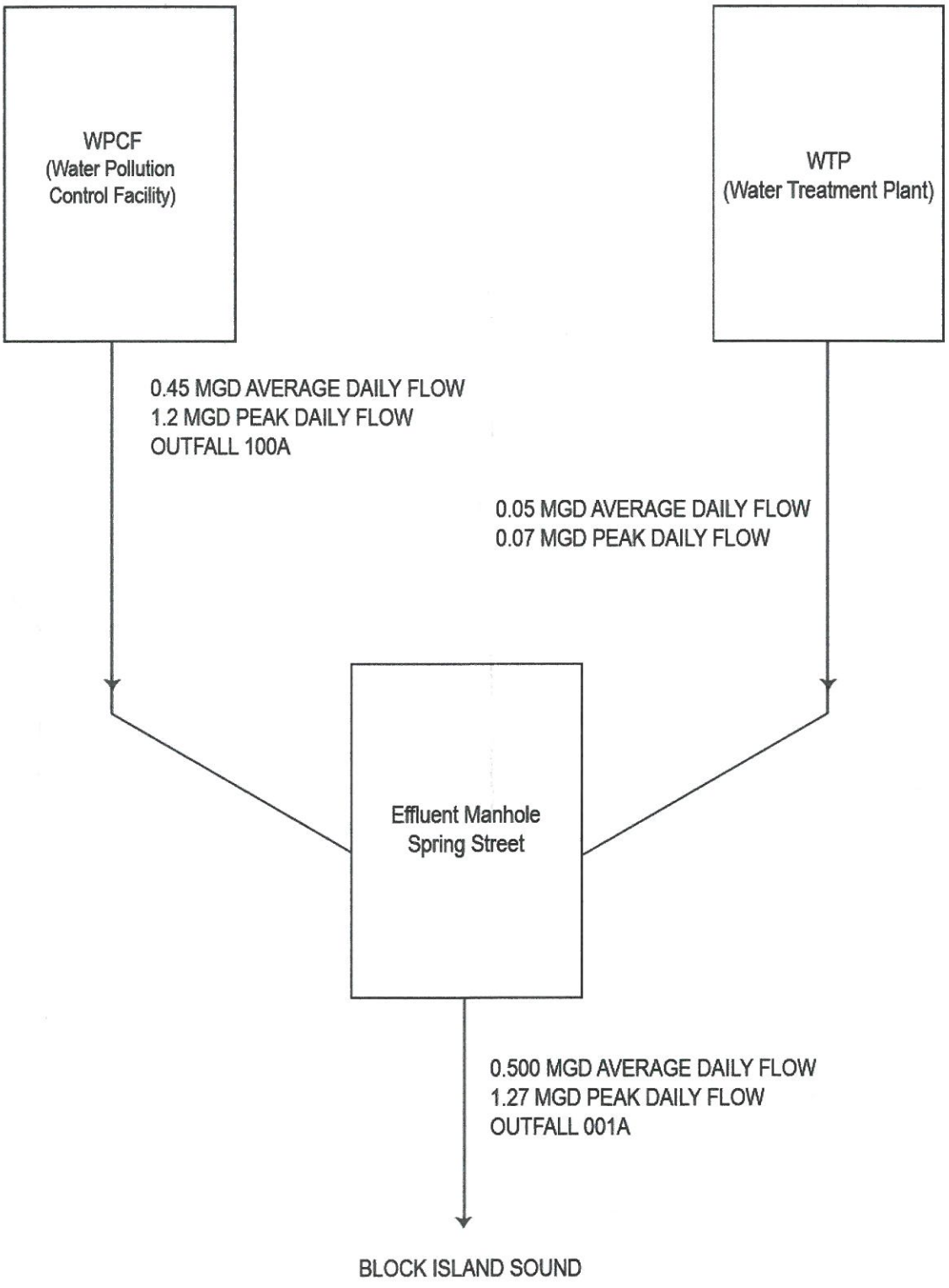
Aaron Mello
Environmental Engineer II
Department of Environmental Management/ Office of Water Resources
235 Promenade Street
Providence, Rhode Island 02908
Telephone: (401) 537-4255
Email: aaron.mello@dem.ri.gov

06 Feb 2024
Date

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

FIGURE #1

Overall Process Flow Schematic for the New Shoreham WPCF Effluent and the Block Island Water Company Concentrate Discharge



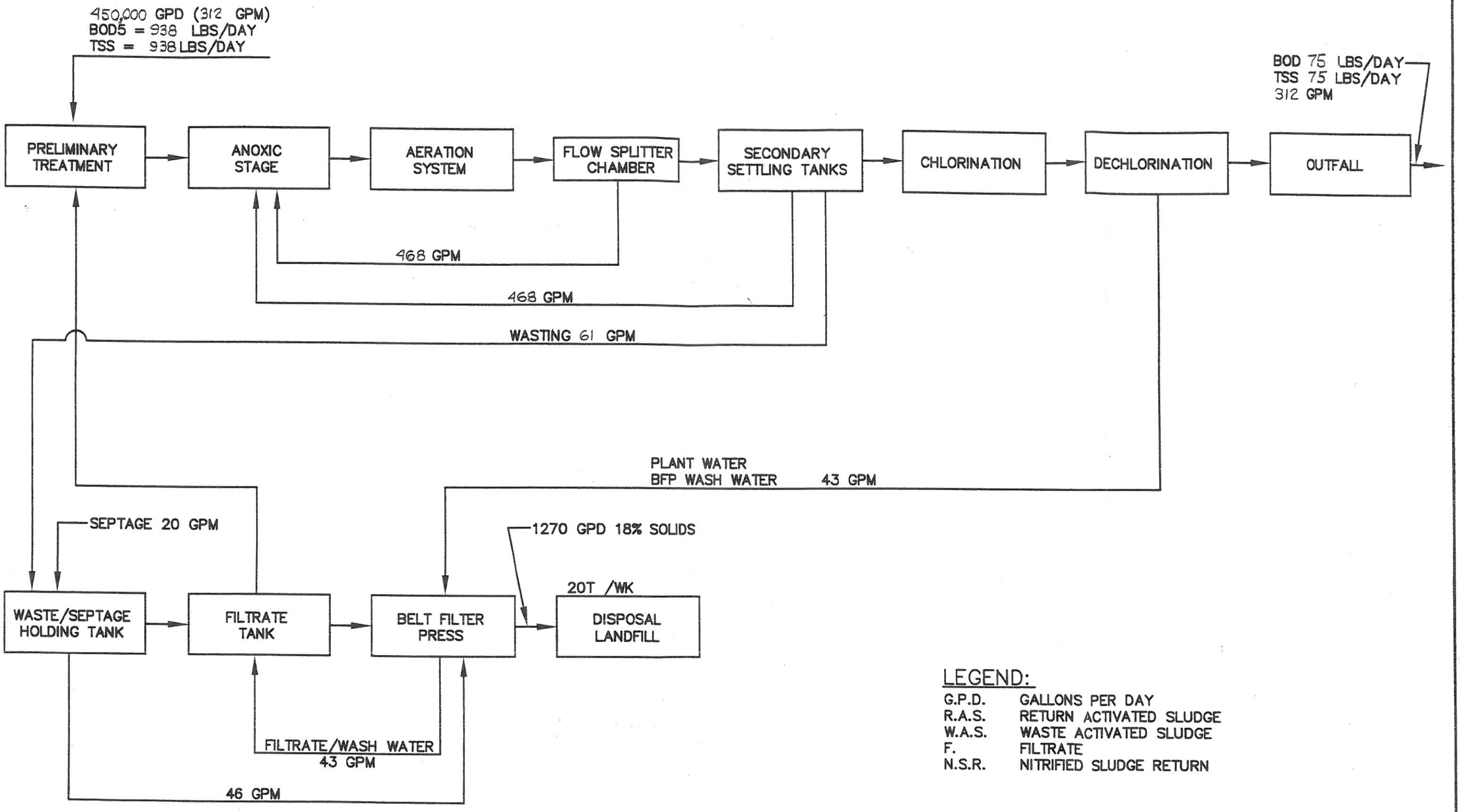
JAMES J. GEREMIA & ASSOCIATES, INC.
CONSULTING ENVIRONMENTAL ENGINEERS & SCIENTISTS
272 W. Exchange Street Suite 201 Providence,RI 02903-1028
Phone: 401-454-7000 Fax: 401-454-7415

Wastewater Effluent Flow Schematic

Scale: N.T.S. | Date: 2008

FIGURE #2

Process Flow Diagram for the New Shoreham WPCF



LEGEND:

G.P.D.	GALLONS PER DAY
R.A.S.	RETURN ACTIVATED SLUDGE
W.A.S.	WASTE ACTIVATED SLUDGE
F.	FILTRATE
N.S.R.	NITRIFIED SLUDGE RETURN

JAMES J. GEREMIA & ASSOCIATES, INC.
272 W. Exchange Street Suite 201 Providence,RI 02903-1025
Phone: 401-454-7000 Fax: 401-454-7415

PROCESS FLOW DIAGRAM
NEW SHOREHAM FACILITY PLAN

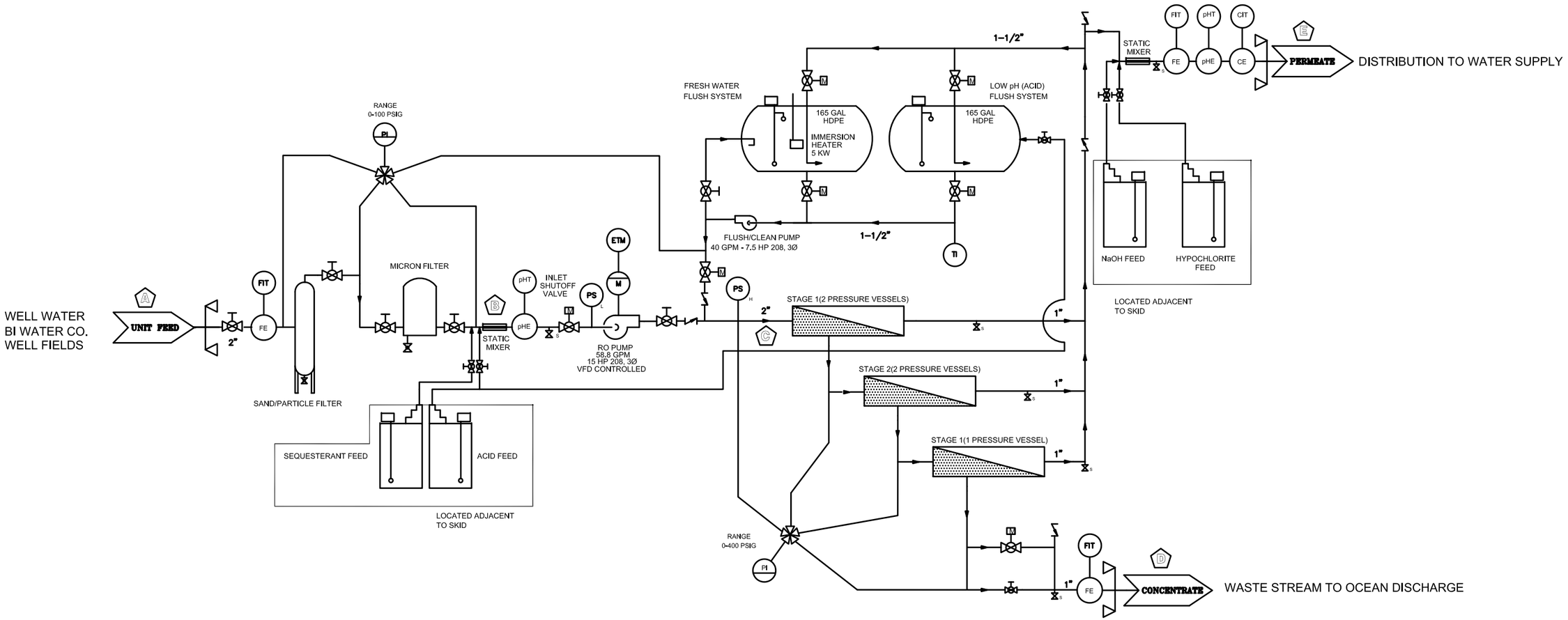
DATE: 07-1-13

FIG. NO. 1

FIGURE #3

Block Island Water Company Process & Instrumentation Diagram for the Reverse Osmosis Water Treatment System

IIIB



PROCESS CONDITIONS

DESCRIPTION	Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ
FLOW (GPM)	65	65	65	22.8	42.2
PRESSURE (PSIG)	40	34	194	174	10
PIPE SIZE & TYPE	2" PVC	2" PVC	2" 316SS	1" 316PVC	1.5" PVC

FIGURE 1

NO.:	BY:	DATE:	REMARKS:

DESIGNED BY: JJG
DRAWN BY: CJB
CHECKED BY: JJG
SCALE: AS NOTED
NO SCALE
CONTRACT:

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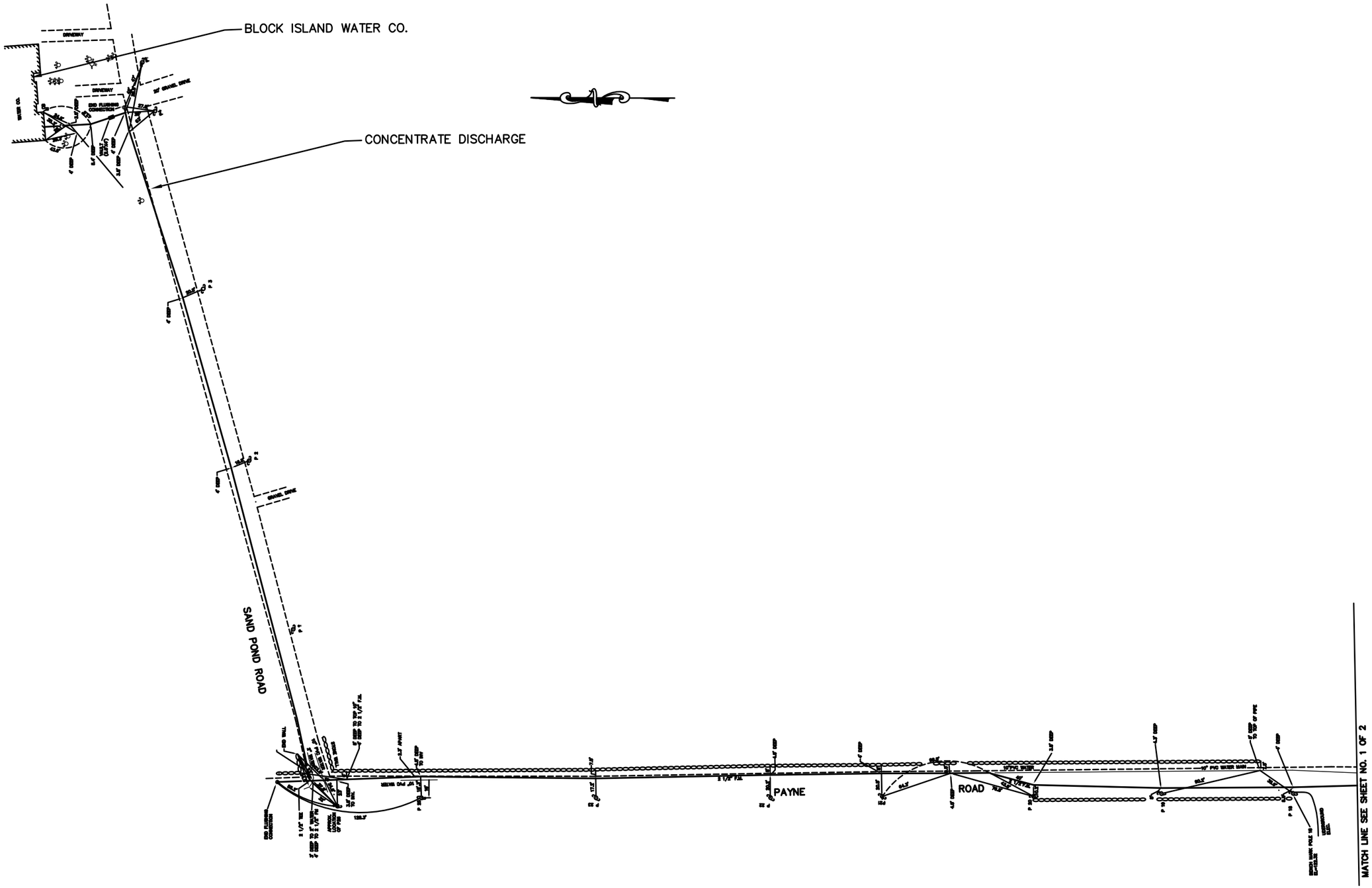
TOWN OF NEW SHOREHAM
RHODE ISLAND

BLOCK ISLAND WATER COMPANY
PROCESS & INSTRUMENTATION DIAGRAM

FIGURE
1



NO.:	BY:	DATE:	REMARKS:

DESIGNED BY: JJG
DRAWN BY: CJB
CHECKED BY: JJG
SCALE: AS NOTED
NO SCALE
CONTRACT: _____

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TOWN OF NEW SHOREHAM
RHODE ISLAND

BLOCK ISLAND WATER COMPANY
LOW PRESSURE SEWER LINE
FOR CONCENTRATE

FIGURE
2

ATTACHMENT A-1

DESCRIPTION OF DISCHARGE: New Shoreham WPCF Effluent – Outfall 100A

AVERAGE EFFLUENT CHARACTERISTICS AT POINT OF DISCHARGE:

Parameter	Average[1]	Weekly Average[2]	Daily Maximum[3]
Flow, MGD	0.110		0.152[4]
BOD_5, mg/L	2.67	3.38	4.45
BOD_5, lbs/day	2.97		6.08
BOD_5, % removal	97.40		
TSS, mg/L	4.07	5.41	7.28
TSS, lbs/day	4.53		9.73
TSS, % removal	97.56		98.3062
Fecal Coliform, MPN/100 ml	1.49[5]		4.27
Enterococci, CFU/100 ml	1.26[5]		6.73
pH, S.U.	7.20		7.62
Chlorine, Total Residual, µg/L	6.67		25.30
Oil & Grease, mg/L			4.76
Ammonia, Total (as N), mg/L	0.338		0.638
Nitrogen, Nitrite (Total as N), mg/L			0.191
Nitrogen, Nitrate (Total as N), mg/L			14.34
Nitrogen, Total Kjeldhal (Total as N), mg/L			2.82
Nitrogen, Total, mg/L			16.56
Settleable Solids, mL/L		0.128	0.229
Aluminum, Total, µg/L	33.36		33.36
Cadmium, Total, µg/L	2.99		2.99
Chromium, Total, µg/L	4.63		4.63
Copper, Total, µg/L	12.62		13.53
Cyanide, Free Available, µg/L	10.38		10.38
Cyanide, Total, µg/L	20		20
Lead, Total, µg/L	6.32		6.32
Nickel, Total, µg/L	19.35		19.35
Zinc, Total, µg/L	42.89		42.89

[1]Data represents the mean of the monthly average data from July 2016 – April 2023.
[2]Data represents the mean of the weekly average date from July 2016 – April 2023.
[3]Data represents the mean of the daily maximum data from July 2016 – April 2023.
[4]Maximum monthly value of maximum flow from July 2016 – April 2023.
[5]Mean of the monthly geometric means from July 2016 – April 2023.

ATTACHMENT A-1

DESCRIPTION OF DISCHARGE: Block Island Water Company Concentrate Discharge – Outfall 200A

AVERAGE EFFLUENT CHARACTERISTICS AT POINT OF DISCHARGE:

Parameter	Average[1]	Weekly Average[2]	Daily Maximum[3]
Flow, MGD	0.0274		0.0402[4]
BOD_5, mg/L	5.34		7.57
BOD_5, lbs/day	1.28		2.33
TSS, mg/L	16.74		30.28
TSS, lbs/day	3.90		7.34
Turbidity, NTU	42.85		71.95
pH, S.U.	6.82		7.12
Copper, Total, μg/L	10.36		10.36
Chlorine, Total Residual, μg/L	BDL		BDL
Ammonia, Total (as N), mg/L	0.487		0.753
Nitrogen, Nitrite (Total as N), mg/L			0.0796
Nitrogen, Nitrate (Total as N), mg/L			0.0718
Nitrogen, Total Kjeldhal (Total as N), mg/L			0.802
Nitrogen, Total, mg/L			0.935

[1]Data represents the mean of the monthly average data from July 2016 – April 2023.
[2]Data represents the mean of the weekly average date from July 2016 – April 2023.
[3]Data represents the mean of the daily maximum data from July 2016 – April 2023.
[4]Maximum monthly value of maximum flow from July 2016 – April 2023.
BDL=Below Detection Limit

ATTACHMENT A-1

DESCRIPTION OF DISCHARGE: Combined Discharge of the New Shoreham WPCF Effluent and the Concentrate Waste Stream from the Block Island Water Company's RO Water Treatment System – Outfall 001A

AVERAGE EFFLUENT CHARACTERISTICS AT POINT OF DISCHARGE:

Parameter	Average[1]	Weekly Average[2]	Daily Maximum[3]
Flow, MGD	0.119		0.164[4]
BOD_5, lbs/day	3.55		7.14
TSS, lbs/day	5.96		12.23

[1]Data represents the mean of the monthly average data from July 2016 – April 2023.
[2]Data represents the mean of the weekly average date from July 2016 – April 2023.
[3]Data represents the mean of the daily maximum data from July 2016 – April 2023.
[4]Maximum monthly value of maximum flow from July 2016 – April 2023.
BDL=Below Detection Limit

ATTACHMENT A-1

DESCRIPTION OF DISCHARGE: New Shoreham Water Pollution Control Facility (WPCF) – Outfall 100A

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

Year	Quarter 1	Quarter 2	Quarter 3	Quarter 4
2016			>100	>100
2017	>100	>100	>100	>100
2018	>100	>100	>100	>100
2019	>100	>100	>100	>100
2020	>100	>100	>100	>100
2021	>100	>100	>100	>100
2022	>100	>100	>100	>100
2023	>100			

Biotoxicity Data C-NOEC Values (in percent effluent) Arbacia punctulata

Year	Quarter 1	Quarter 2	Quarter 3	Quarter 4
2016			=100	=100
2017	=100	=50	=100	=100
2018	=50	=100	=100	=100
2019	=100	=100	=100	=100
2020	=100	=100	=100	=100
2021	=100	=100	=100	=100
2022	=100	=100	=100	=50
2023	=100			

ATTACHMENT A-2

Calculation of Allowable Acute and Chronic Discharge Limitations Based on Saltwater Aquatic Life Criteria and Human Health 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: **New Shoreham WPCF**

RIPDES PERMIT #: **RI0100196**

	DISSOLVED BACKGROUND DATA (ug/L)	ACUTE METAL TRANSLATOR	CHRONIC METAL TRANSLATOR
ALUMINUM	NA	NA	NA
ARSENIC	NA	1	1
CADMIUM	NA	0.994	0.994
CHROMIUM III	NA	NA	NA
CHROMIUM VI	NA	0.993	0.993
COPPER	NA	0.83	0.83
LEAD	NA	0.951	0.951
MERCURY	NA	0.85	NA
NICKEL	NA	0.99	0.99
SELENIUM	NA	0.998	0.998
SILVER	NA	0.85	0.85
ZINC	NA	0.946	0.946

USE NA WHEN NO DATA IS AVAILABLE

NOTE 1: NO DISSOLVED BACKGROUND DATA WAS AVAILABLE

NOTE 2: METAL TRANSLATORS FROM RI WATER QUALITY REGS.

DILUTION FACTORS		
	ACUTE =	17.5 x
	CHRONIC =	24.6 x
	HUMAN HEALTH =	24.6 x

NOTE: TEST WWTF'S DILUTION FACTORS OBTAINED FROM A CORMIX2 DILUTION EVALUATION

TOTAL AMMONIA CRITERIA (ug/L)		
WINTER	ACUTE =	21000
	CHRONIC =	3100
SUMMER	ACUTE =	7300
	CHRONIC =	1100

NOTE 1: LIMITS ARE FROM TABLE 3 IN THE RI WATER QUALITY REGS. USING:
SALINITY = 30 g/Kg; pH = 8.0 s.u.

WINTER (NOV-APRIL) TEMP=5.0 C;
SUMMER (MAY-OCT) TEMP=20.0 C.

CALCULATION OF WATER QUALITY BASED SALTWATER DISCHARGE LIMITS

FACILITY NAME: New Shoreham WPCF RIPDES PERMIT #: RI0100196

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	12595.2
ARSENIC (limits are total recoverable)	7440382	NA	69	966	36	1.4	27.552
ASBESTOS	1332214			No Criteria			No Criteria
BERYLLIUM	7440417			No Criteria			No Criteria
CADMIUM (limits are total recoverable)	7440439	NA	40	563.3802817	8.8		174.2293763
CHROMIUM III (limits are total recoverable)	16065831	NA		No Criteria			No Criteria
CHROMIUM VI (limits are total recoverable)	18540299	NA	1100	15508.55992	50		990.9365559
COPPER (limits are total recoverable)	7440508	NA	4.8	80.96385542	3.1		73.50361446
CYANIDE	57125		1	14.00	1	140	19.68
LEAD (limits are total recoverable)	7439921	NA	210	3091.48265	8.1		167.6214511
MERCURY (limits are total recoverable)	7439976	NA	1.8	29.64705882	0.94	0.15	2.952
NICKEL (limits are total recoverable)	7440020	NA	74	1046.464646	8.2	4600	163.0060606
SELENIUM (limits are total recoverable)	7782492	NA	290	4068.136273	71	4200	1400.08016
SILVER (limits are total recoverable)	7440224	NA	1.9	31.29411765			No Criteria
THALLIUM	7440280			No Criteria		0.47	9.2496
ZINC (limits are total recoverable)	7440666	NA	90	1331.92389	81	26000	1685.073996
VOLATILE ORGANIC COMPOUNDS							
ACROLEIN	107028			No Criteria		290	5707.2
ACRYLONITRILE	107131			No Criteria		2.5	49.2
BENZENE	71432			No Criteria		510	10036.8
BROMOFORM	75252			No Criteria		1400	27552
CARBON TETRACHLORIDE	56235			No Criteria		16	314.88
CHLOROBENZENE	108907			No Criteria		1600	31488
CHLORODIBROMOMETHANE	124481			No Criteria		130	2558.4
CHLOROFORM	67663			No Criteria		4700	92496
DICHLOROBROMOMETHANE	75274			No Criteria		170	3345.6
1,2DICHLOROETHANE	107062			No Criteria		370	7281.6
1,1DICHLOROETHYLENE	75354			No Criteria		7100	139728
1,2DICHLOROPROPANE	78875			No Criteria		150	2952
1,3DICHLOROPROPYLENE	542756			No Criteria		21	413.28
ETHYLBENZENE	100414			No Criteria		2100	41328
BROMOMETHANE (methyl bromide)	74839			No Criteria		1500	29520
CHLOROMETHANE (methyl chloride)	74873			No Criteria			No Criteria
METHYLENE CHLORIDE	75092			No Criteria		5900	116112

CALCULATION OF WATER QUALITY BASED SALTWATER DISCHARGE LIMITS

FACILITY NAME: New Shoreham WPCF RIPDES PERMIT #: RI0100196

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	787.2
TETRACHLOROETHYLENE	127184			No Criteria		33	649.44
TOLUENE	108883			No Criteria		15000	295200
1,2TRANSDICHLOROETHYLENE	156605			No Criteria		10000	196800
1,1,1TRICHLOROETHANE	71556			No Criteria			No Criteria
1,1,2TRICHLOROETHANE	79005			No Criteria		160	3148.8
TRICHLOROETHYLENE	79016			No Criteria		300	5904
VINYL CHLORIDE	75014			No Criteria		2.4	47.232
2CHLOROPHENOL	95578			No Criteria		150	2952
2,4DICHLOROPHENOL	120832			No Criteria		290	5707.2
2,4DIMETHYLPHENOL	105679			No Criteria		850	16728
4,6DINITRO2METHYL PHENOL	534521			No Criteria		280	5510.4
2,4DINITROPHENOL	51285			No Criteria		5300	104304
4NITROPHENOL	88755			No Criteria			No Criteria
PENTACHLOROPHENOL	87865		13	182	7.9	30	155.472
PHENOL	108952			No Criteria		1700000	33456000
2,4,6TRICHLOROPHENOL	88062			No Criteria		24	472.32
ACENAPHTHENE	83329			No Criteria		990	19483.2
ANTHRACENE	120127			No Criteria		40000	787200
BENZIDINE	92875			No Criteria		0.002	0.03936
POLYCYCLIC AROMATIC HYDROCARBONS				No Criteria		0.18	3.5424
BIS(2CHLOROETHYL)ETHER	111444			No Criteria		5.3	104.304
BIS(2CHLOROISOPROPYL)ETHER	108601			No Criteria		65000	1279200
BIS(2ETHYLHEXYL)PHTHALATE	117817			No Criteria		22	432.96
BUTYL BENZYL PHTHALATE	85687			No Criteria		1900	37392
2CHLORONAPHTHALENE	91587			No Criteria		1600	31488
1,2DICHLOROBENZENE	95501			No Criteria		1300	25584
1,3DICHLOROBENZENE	541731			No Criteria		960	18892.8
1,4DICHLOROBENZENE	106467			No Criteria		190	3739.2
3,3DICHLOROBENZIDENE	91941			No Criteria		0.28	5.5104
DIETHYL PHTHALATE	84662			No Criteria		44000	865920
DIMETHYL PHTHALATE	131113			No Criteria		1100000	21648000
DInBUTYL PHTHALATE	84742			No Criteria		4500	88560
2,4DINITROTOLUENE	121142			No Criteria		34	669.12

CALCULATION OF WATER QUALITY BASED SALTWATER DISCHARGE LIMITS

FACILITY NAME: New Shoreham WPCF RIPDES PERMIT #: RI0100196

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	39.36
FLUORANTHENE	206440			No Criteria		140	2755.2
FLUORENE	86737			No Criteria		5300	104304
HEXACHLOROBENZENE	118741			No Criteria		0.0029	0.057072
HEXACHLOROBUTADIENE	87683			No Criteria		180	3542.4
HEXACHLOROCYCLOPENTADIENE	77474			No Criteria		1100	21648
HEXACHLOROETHANE	67721			No Criteria		33	649.44
ISOPHORONE	78591			No Criteria		9600	188928
NAPHTHALENE	91203			No Criteria			No Criteria
NITROBENZENE	98953			No Criteria		690	13579.2
NNITROSODIMETHYLAMINE	62759			No Criteria		30	590.4
NNITROSODINPROPYLAMINE	621647			No Criteria		5.1	100.368
NNITROSODIPHENYLAMINE	86306			No Criteria		60	1180.8
PYRENE	129000			No Criteria		4000	78720
1,2,4trichlorobenzene	120821			No Criteria		70	1377.6
ALDRIN	309002		1.3	18.2		0.0005	0.00984
Alpha BHC	319846			No Criteria		0.049	0.96432
Beta BHC	319857			No Criteria		0.17	3.3456
Gamma BHC (Lindane)	58899		0.16	2.24		1.8	35.424
CHLORDANE	57749		0.09	1.26	0.004	0.0081	0.07872
4,4DDT	50293		0.13	1.82	0.001	0.0022	0.01968
4,4DDE	72559			No Criteria		0.0022	0.043296
4,4DDD	72548			No Criteria		0.0031	0.061008
DIELDRIN	60571		0.71	9.94	0.0019	0.00054	0.0106272
ENDOSULFAN (alpha)	959988		0.034	0.476	0.0087	89	0.171216
ENDOSULFAN (beta)	33213659		0.034	0.476	0.0087	89	0.171216
ENDOSULFAN (sulfate)	1031078			No Criteria		89	1751.52
ENDRIN	72208		0.037	0.518	0.0023	0.06	0.045264
ENDRIN ALDEHYDE	7421934			No Criteria		0.3	5.904
HEPTACHLOR	76448		0.053	0.742	0.0036	0.00079	0.0155472
HEPTACHLOR EPOXIDE	1024573		0.053	0.742	0.0036	0.00039	0.0076752
POLYCHLORINATED BIPHENYLS3	1336363			No Criteria	0.03	0.00064	0.0125952
2,3,7,8TCDD (Dioxin)	1746016			No Criteria		0.000000051	1.00368E-06
TOXAPHENE	8001352		0.21	2.94	0.0002	0.0028	0.003936
TRIBUTYLTIN			0.42	5.88	0.0074		0.145632

CALCULATION OF WATER QUALITY BASED SALTWATER DISCHARGE LIMITS

FACILITY NAME: New Shoreham WPCF RIPDES PERMIT #: RI0100196

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)
ALUMINUM (limits are total recoverable)	7429905	NA		No Criteria			No Criteria
AMMONIA as N (winter/summer)	7664417		17262 | 6000.6	241668 84008.4	2548 | 904.2		50148.6 | 17794.7
4BROMOPHENYL PHENYL ETHER				No Criteria			No Criteria
CHLORIDE	16887006			No Criteria			No Criteria
CHLORINE	7782505		13	227.5	7.5		184.5
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: New Shoreham WPCF RIPDES PERMIT #: RI0100196

CHEMICAL NAME	CAS#	DAILY MAX LIMIT (ug/L)	MONTHLY AVE LIMIT (ug/L)
PRIORITY POLLUTANTS:			
TOXIC METALS AND CYANIDE			
ANTIMONY	7440360	No Criteria	12595.20
ARSENIC, TOTAL	7440382	966.00	27.55
ASBESTOS	1332214	No Criteria	No Criteria
BERYLLIUM	7440417	No Criteria	No Criteria
CADMIUM, TOTAL	7440439	563.38	174.23
CHROMIUM III, TOTAL	16065831	No Criteria	No Criteria
CHROMIUM VI, TOTAL	18540299	15508.56	990.94
COPPER, TOTAL	7440508	80.96	73.50
CYANIDE	57125	14.00	14.00
LEAD, TOTAL	7439921	3091.48	167.62
MERCURY, TOTAL	7439976	29.65	2.95
NICKEL, TOTAL	7440020	1046.46	163.01
SELENIUM, TOTAL	7782492	4068.14	1400.08
SILVER, TOTAL	7440224	31.29	No Criteria
THALLIUM	7440280	No Criteria	9.25
ZINC, TOTAL	7440666	1331.92	1331.92
VOLATILE ORGANIC COMPOUNDS			
ACROLEIN	107028	No Criteria	5707.20
ACRYLONITRILE	107131	No Criteria	49.20
BENZENE	71432	No Criteria	10036.80
BROMOFORM	75252	No Criteria	27552.00
CARBON TETRACHLORIDE	56235	No Criteria	314.88
CHLOROBENZENE	108907	No Criteria	31488.00
CHLORODIBROMOMETHANE	124481	No Criteria	2558.40
CHLOROFORM	67663	No Criteria	92496.00
DICHLOROBROMOMETHANE	75274	No Criteria	3345.60
1,2DICHLOROETHANE	107062	No Criteria	7281.60
1,1DICHLOROETHYLENE	75354	No Criteria	139728.00
1,2DICHLOROPROPANE	78875	No Criteria	2952.00
1,3DICHLOROPROPYLENE	542756	No Criteria	413.28
ETHYLBENZENE	100414	No Criteria	41328.00
BROMOMETHANE (methyl bromide)	74839	No Criteria	29520.00
CHLOROMETHANE (methyl chloride)	74873	No Criteria	No Criteria
METHYLENE CHLORIDE	75092	No Criteria	116112.00
1,1,2,2TETRACHLOROETHANE	79345	No Criteria	787.20
TETRACHLOROETHYLENE	127184	No Criteria	649.44
TOLUENE	108883	No Criteria	295200.00
1,2TRANSDICHLOROETHYLENE	156605	No Criteria	196800.00
1,1,1TRICHLOROETHANE	71556	No Criteria	No Criteria
1,1,2TRICHLOROETHANE	79005	No Criteria	3148.80
TRICHLOROETHYLENE	79016	No Criteria	5904.00
VINYL CHLORIDE	75014	No Criteria	47.23
ACID ORGANIC COMPOUNDS			
2CHLOROPHENOL	95578	No Criteria	2952.00
2,4DICHLOROPHENOL	120832	No Criteria	5707.20
2,4DIMETHYLPHENOL	105679	No Criteria	16728.00
4,6DINITRO2METHYL PHENOL	534521	No Criteria	5510.40
2,4DINITROPHENOL	51285	No Criteria	104304.00
4NITROPHENOL	88755	No Criteria	No Criteria
PENTACHLOROPHENOL	87865	182.00	155.47
PHENOL	108952	No Criteria	33456000.00
2,4,6TRICHLOROPHENOL	88062	No Criteria	472.32
BASE NEUTRAL COMPUNDS			
ACENAPHTHENE	83329	No Criteria	19483.20
ANTHRACENE	120127	No Criteria	787200.00
BENZIDINE	92875	No Criteria	0.04
PAHs		No Criteria	3.54
BIS(2CHLOROETHYL)ETHER	111444	No Criteria	104.30
BIS(2CHLOROISOPROPYL)ETHER	108601	No Criteria	1279200.00
BIS(2ETHYLHEXYL)PHTHALATE	117817	No Criteria	432.96
BUTYL BENZYL PHTHALATE	85687	No Criteria	37392.00
2CHLORONAPHTHALENE	91587	No Criteria	31488.00
1,2DICHLOROBENZENE	95501	No Criteria	25584.00
1,3DICHLOROBENZENE	541731	No Criteria	18892.80
1,4DICHLOROBENZENE	106467	No Criteria	3739.20
3,3DICHLOROBENZIDENE	91941	No Criteria	5.51
DIETHYL PHTHALATE	84662	No Criteria	865920.00
DIMETHYL PHTHALATE	131113	No Criteria	21648000.00
DI-n-BUTYL PHTHALATE	84742	No Criteria	88560.00
2,4DINITROTOLUENE	121142	No Criteria	669.12
1,2DIPHENYLHYDRAZINE	122667	No Criteria	39.36
FLUORANTHENE	206440	No Criteria	2755.20

CALCULATION OF WATER QUALITY BASED SALTWATER DISCHARGE LIMITS

FACILITY NAME: New Shoreham WPCF RIPDES PERMIT #: RI0100196

CHEMICAL NAME	CAS#	DAILY MAX LIMIT (ug/L)	MONTHLY AVE LIMIT (ug/L)
FLUORENE	86737	No Criteria	104304.00
HEXACHLOROBENZENE	118741	No Criteria	0.06
HEXACHLOROBUTADIENE	87683	No Criteria	3542.40
HEXACHLOROCYCLOPENTADIENE	77474	No Criteria	21648.00
HEXACHLOROETHANE	67721	No Criteria	649.44
ISOPHORONE	78591	No Criteria	188928.00
NAPHTHALENE	91203	No Criteria	No Criteria
NITROBENZENE	98953	No Criteria	13579.20
N-NITROSODIMETHYLAMINE	62759	No Criteria	590.40
N-NITROSODI-N-PROPYLAMINE	621647	No Criteria	100.37
N-NITROSODIPHENYLAMINE	86306	No Criteria	1180.80
PYRENE	129000	No Criteria	78720.00
1,2,4trichlorobenzene	120821	No Criteria	1377.60
PESTICIDES/PCBs			
ALDRIN	309002	18.20	0.01
Alpha BHC	319846	No Criteria	0.96
Beta BHC	319857	No Criteria	3.35
Gamma BHC (Lindane)	58899	2.24	2.24
CHLORDANE	57749	1.26	0.08
4,4DDT	50293	1.82	0.02
4,4DDE	72559	No Criteria	0.04
4,4DDD	72548	No Criteria	0.06
DIELDRIN	60571	9.94	0.01
ENDOSULFAN (alpha)	959988	0.48	0.17
ENDOSULFAN (beta)	33213659	0.48	0.17
ENDOSULFAN (sulfate)	1031078	No Criteria	1751.52
ENDRIN	72208	0.52	0.05
ENDRIN ALDEHYDE	7421934	No Criteria	5.90
HEPTACHLOR	76448	0.74	0.02
HEPTACHLOR EPOXIDE	1024573	0.74	0.01
POLYCHLORINATED BIPHENYLS3	1336363	No Criteria	0.01
2,3,7,8TCDD (Dioxin)	1746016	No Criteria	0.00
TOXAPHENE	8001352	2.94	0.00
TRIBUTYLTIN		5.88	0.15

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	241668.00	50148.58
AMMONIA (as N), SUMMER (MAY-OC	7664417	84008.40	17794.66
4BROMOPHENYL PHENYL ETHER		No Criteria	No Criteria
CHLORIDE	16887006	No Criteria	No Criteria
CHLORINE	7782505	227.50	184.50
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

ATTACHMENT A-3

Summary of Priority Pollutant Scan Data 2016 through 2022

FACILITY:	**New Shoreham Water Pollution Control Facility**
RIPDES PERMIT #:	**RI0100196**
OUTFALL:	**100A**

PARAMETER	CONCENTRATION, PPB	SAMPLE DATE	LAB RL, PPB	TEST METHOD	AVERAGE	MAX. VALUE
ACETONE	22.8	9/21/2022	5	524.2	22.8	22.8
CHLOROMETHANE	2.7	9/21/2022	0.5	524.2	2.7	2.7
COPPER, TOTAL	24	8/23/2016	20	200.7	26.11	33
COPPER, TOTAL	31	8/23/2017	20	200.7		
COPPER, TOTAL	33	8/29/2018	2	200.7		
COPPER, TOTAL	28	8/27/2019	20	200.7		
COPPER, TOTAL	29	8/25/2020	20	200.7		
COPPER, TOTAL	22	9/8/2021	20	200.7		
COPPER, TOTAL	15.8	9/21/2022	10	6010C		
METHOXYCHLOR	0.06	8/25/2020	0.05	608.3	0.06	0.06
TOTAL PHENOLS	260	9/8/2021	50	420.1	260	260
ZINC, TOTAL	84	8/23/2016	50	200.7	60.49	84
ZINC, TOTAL	59	8/23/2017	50	200.7		
ZINC, TOTAL	52	8/29/2018	5	200.7		
ZINC, TOTAL	73	8/27/2019	50	200.7		
ZINC, TOTAL	53	8/25/2020	50	200.7		
ZINC, TOTAL	60	9/8/2021	50	200.7		
ZINC, TOTAL	42.4	9/21/2022	25	6010C		

All sampling data taken from Annual Priority Pollutant Scan results for the Water Pollution Control Facility treated effluent.

FACILITY:	**Block Island Water Company**
RIPDES PERMIT #:	**RI0100196**
OUTFALL:	**200A**

PARAMETER	CONCENTRATION, PPB	SAMPLE DATE	LAB RL, PPB	TEST METHOD	AVERAGE	MAX. VALUE
ARSENIC, TOTAL	7.4	8/22/2016	5	3113B	6.6	7.4
ARSENIC, TOTAL	5.8	8/22/2017	5	3113B		
LEAD, TOTAL	29	8/26/2019	25	200.7	29	29
TOTAL PHENOLS	20	8/28/2018	10	420.1	20	20
ZINC, TOTAL	60	8/26/2019	50	200.7	49.5	60
ZINC, TOTAL	39	8/24/2020	20	200.7		

All sampling data taken from Annual Priority Pollutant Scan results for the Block Island Water Company's permitted discharge at Outfall 200A.

ATTACHMENT A-4

Comparison of Allowable Limits with Discharge Monitoring Report Data and Priority Pollutant Scan Data

Facility Name: *New Shoreham WPCF*
RIPDES Permit #: *RI0100196*
Outfall #: *100A*

NOTE: METALS LIMITS ARE TOTAL METALS

Parameter	CAS #	Concentration Limits (ug/L) Based on WQ Criteria		Antideg. Limits (ug/L)	Priority Pollutant Scan Data (ug/L) 2016 - 2022		Ave. DMR Data (ug/L) 7/2016 - 4/2023		Potential Permit Limits (ug/L)		Reasonable Potential (Yes/No)
		Daily Max	Monthly Ave	Monthly Ave	Max	Ave	Daily Max	Monthly Ave	Daily Max	Monthly Ave	
PRIORITY POLLUTANTS											
TOXIC METALS AND CYANIDE											
ANTIMONY	7440360	No Criteria	12595.20	---	---	---	---	---	---	12595.2	
ARSENIC (limits are total recoverable)	7440382	966.00	27.55	---	---	---	---	---	966	27.55	
ASBESTOS	1332214	No Criteria	No Criteria	---	---	---	---	---	---	---	
BERYLLIUM	7440417	No Criteria	No Criteria	---	---	---	---	---	---	---	
CADMIUM (limits are total recoverable)	7440439	563.38	174.23	---	---	---	2.99	2.99	563.38	174.23	No
CHROMIUM III (limits are total recoverable)	16065831	No Criteria	No Criteria	---	---	---	---	---	---	---	
CHROMIUM VI (limits are total recoverable)	18540299	15508.56	990.94	---	---	---	---	---	15508.56	990.94	
COPPER (limits are total recoverable)	7440508	80.96	73.50	---	33	26.11	13.53	12.62	80.96	73.5	Yes
CYANIDE	57125	14.00	14.00	---	---	---	10.4	10.4	14	14	Yes
LEAD (limits are total recoverable)	7439921	3091.48	167.62	---	---	---	6.32	6.32	3091.48	167.62	No
MERCURY (limits are total recoverable)	7439976	29.65	2.95	---	---	---	---	---	29.65	2.95	
NICKEL (limits are total recoverable)	7440020	1046.46	163.01	---	---	---	19.4	19.4	1046.46	163.01	No
SELENIUM (limits are total recoverable)	7782492	4068.14	1400.08	---	---	---	---	---	4068.14	1400.08	
SILVER (limits are total recoverable)	7440224	31.29	No Criteria	---	---	---	---	---	31.29	31.29	
THALLIUM	7440280	No Criteria	9.25	---	---	---	---	---	---	9.25	
ZINC (limits are total recoverable)	7440666	1331.92	1331.92	---	84	60.49	42.9	42.9	1331.92	1331.92	No
VOLATILE ORGANIC COMPOUNDS											
ACROLEIN	107028	No Criteria	5707.20	---	---	---	---	---	---	5707.2	
ACRYLONITRILE	107131	No Criteria	49.20	---	---	---	---	---	---	49.2	
BENZENE	71432	No Criteria	10036.80	---	---	---	---	---	---	10036.8	
BROMOFORM	75252	No Criteria	27552.00	---	---	---	---	---	---	27552	
CARBON TETRACHLORIDE	56235	No Criteria	314.88	---	---	---	---	---	---	314.88	
CHLOROBENZENE	108907	No Criteria	31488.00	---	---	---	---	---	---	31488	
CHLORODIBROMOMETHANE	124481	No Criteria	2558.40	---	---	---	---	---	---	2558.4	
CHLOROFORM	67663	No Criteria	92496.00	---	---	---	---	---	---	92496	
DICHLOROBROMOMETHANE	75274	No Criteria	3345.60	---	---	---	---	---	---	3345.6	
1,2DICHLOROETHANE	107062	No Criteria	7281.60	---	---	---	---	---	---	7281.6	
1,1DICHLOROETHYLENE	75354	No Criteria	139728.00	---	---	---	---	---	---	139728	
1,2DICHLOROPROPANE	78875	No Criteria	2952.00	---	---	---	---	---	---	2952	
1,3DICHLOROPROPYLENE	542756	No Criteria	413.28	---	---	---	---	---	---	413.28	
ETHYLBENZENE	100414	No Criteria	41328.00	---	---	---	---	---	---	41328	
BROMOMETHANE (methyl bromide)	74839	No Criteria	29520.00	---	---	---	---	---	---	29520	
CHLOROMETHANE (methyl chloride)	74873	No Criteria	No Criteria	---	2.7	2.7	---	---	---	---	N/A
METHYLENE CHLORIDE	75092	No Criteria	116112.00	---	---	---	---	---	---	116112	
1,1,2,2TETRACHLOROETHANE	79345	No Criteria	787.20	---	---	---	---	---	---	787.2	

Facility Name: ***New Shoreham WPCF***

RIPDES Permit #: ***RI0100196***

Outfall #: ***100A***

NOTE: METALS LIMITS ARE TOTAL METALS

Parameter	CAS #	Concentration Limits (ug/L) Based on WQ Criteria		Antideg. Limits (ug/L)	Priority Pollutant Scan Data (ug/L) 2016 - 2022		Ave. DMR Data (ug/L) 7/2016 - 4/2023		Potential Permit Limits (ug/L)		Reasonable Potential (Yes/No)
		Daily Max	Monthly Ave	Monthly Ave	Max	Ave	Daily Max	Monthly Ave	Daily Max	Monthly Ave	
TETRACHLOROETHYLENE	127184	No Criteria	649.44	---	---	---	---	---	---	649.44	
TOLUENE	108883	No Criteria	295200.00	---	---	---	---	---	---	295200	
1,2TRANSDICHLOROETHYLENE	156605	No Criteria	196800.00	---	---	---	---	---	---	196800	
1,1,1TRICHLOROETHANE	71556	No Criteria	No Criteria	---	---	---	---	---	---	---	
1,1,2TRICHLOROETHANE	79005	No Criteria	3148.80	---	---	---	---	---	---	3148.8	
TRICHLOROETHYLENE	79016	No Criteria	5904.00	---	---	---	---	---	---	5904	
VINYL CHLORIDE	75014	No Criteria	47.23	---	---	---	---	---	---	47.23	
2CHLOROPHENOL	95578	No Criteria	2952.00	---	---	---	---	---	---	2952	
2,4DICHLOROPHENOL	120832	No Criteria	5707.20	---	---	---	---	---	---	5707.2	
2,4DIMETHYLPHENOL	105679	No Criteria	16728.00	---	---	---	---	---	---	16728	
4,6DINITRO2METHYL PHENOL	534521	No Criteria	5510.40	---	---	---	---	---	---	5510.4	
2,4DINITROPHENOL	51285	No Criteria	104304.00	---	---	---	---	---	---	104304	
4NITROPHENOL	88755	No Criteria	No Criteria	---	---	---	---	---	---	---	
PENTACHLOROPHENOL	87865	182.00	155.47	---	---	---	---	---	182	155.47	
PHENOL	108952	No Criteria	33456000.00	---	---	---	---	---	---	33456000	
2,4,6TRICHLOROPHENOL	88062	No Criteria	472.32	---	---	---	---	---	---	472.32	
ACENAPHTHENE	83329	No Criteria	19483.20	---	---	---	---	---	---	19483.2	
ANTHRACENE	120127	No Criteria	787200.00	---	---	---	---	---	---	787200	
BENZIDINE	92875	No Criteria	0.04	---	---	---	---	---	---	0.04	
POLYCYCLIC AROMATIC HYDROCARBONS		No Criteria	3.54	---	---	---	---	---	---	3.54	
BIS(2CHLOROETHYL)ETHER	111444	No Criteria	104.30	---	---	---	---	---	---	104.3	
BIS(2CHLOROISOPROPYL)ETHER	108601	No Criteria	1279200.00	---	---	---	---	---	---	1279200	
BIS(2ETHYLHEXYL)PHTHALATE	117817	No Criteria	432.96	---	---	---	---	---	---	432.96	
BUTYL BENZYL PHTHALATE	85687	No Criteria	37392.00	---	---	---	---	---	---	37392	
2CHLORONAPHTHALENE	91587	No Criteria	31488.00	---	---	---	---	---	---	31488	
1,2DICHLOROBENZENE	95501	No Criteria	25584.00	---	---	---	---	---	---	25584	
1,3DICHLOROBENZENE	541731	No Criteria	18892.80	---	---	---	---	---	---	18892.8	
1,4DICHLOROBENZENE	106467	No Criteria	3739.20	---	---	---	---	---	---	3739.2	
3,3DICHLOROBENZIDENE	91941	No Criteria	5.51	---	---	---	---	---	---	5.51	
DIETHYL PHTHALATE	84662	No Criteria	865920.00	---	---	---	---	---	---	865920	
DIMETHYL PHTHALATE	131113	No Criteria	21648000.00	---	---	---	---	---	---	21648000	
DInBUTYL PHTHALATE	84742	No Criteria	88560.00	---	---	---	---	---	---	88560	
2,4DINITROTOLUENE	121142	No Criteria	669.12	---	---	---	---	---	---	669.12	
1,2DIPHENYLHYDRAZINE	122667	No Criteria	39.36	---	---	---	---	---	---	39.36	
FLUORANTHENE	206440	No Criteria	2755.20	---	---	---	---	---	---	2755.2	

Facility Name: ***New Shoreham WPCF***

RIPDES Permit #: ***RI0100196***

Outfall #: ***100A***

NOTE: METALS LIMITS ARE TOTAL METALS

Parameter	CAS #	Concentration Limits (ug/L) Based on WQ Criteria		Antideg. Limits (ug/L)	Priority Pollutant Scan Data (ug/L) 2016 - 2022		Ave. DMR Data (ug/L) 7/2016 - 4/2023		Potential Permit Limits (ug/L)		Reasonable Potential
		Daily Max	Monthly Ave	Monthly Ave	Max	Ave	Daily Max	Monthly Ave	Daily Max	Monthly Ave	(Yes/No)
FLUORENE	86737	No Criteria	104304.00	---	---	---	---	---	---	104304	
HEXACHLOROBENZENE	118741	No Criteria	0.06	---	---	---	---	---	---	0.06	
HEXACHLOROBUTADIENE	87683	No Criteria	3542.40	---	---	---	---	---	---	3542.4	
HEXACHLOROCYCLOPENTADIENE	77474	No Criteria	21648.00	---	---	---	---	---	---	21648	
HEXACHLOROETHANE	67721	No Criteria	649.44	---	---	---	---	---	---	649.44	
ISOPHORONE	78591	No Criteria	188928.00	---	---	---	---	---	---	188928	
NAPHTHALENE	91203	No Criteria	No Criteria	---	---	---	---	---	---	---	
NITROBENZENE	98953	No Criteria	13579.20	---	---	---	---	---	---	13579.2	
NNITROSODIMETHYLAMINE	62759	No Criteria	590.40	---	---	---	---	---	---	590.4	
NNITROSODINPROPYLAMINE	621647	No Criteria	100.37	---	---	---	---	---	---	100.37	
NNITROSODIPHENYLAMINE	86306	No Criteria	1180.80	---	---	---	---	---	---	1180.8	
PYRENE	129000	No Criteria	78720.00	---	---	---	---	---	---	78720	
1,2,4trichlorobenzene	120821	No Criteria	1377.60	---	---	---	---	---	---	1377.6	
ALDRIN	309002	18.20	0.01	---	---	---	---	---	18.2	0.01	
Alpha BHC	319846	No Criteria	0.96	---	---	---	---	---	---	0.96	
Beta BHC	319857	No Criteria	3.35	---	---	---	---	---	---	3.35	
Gamma BHC (Lindane)	58899	2.24	2.24	---	---	---	---	---	2.24	2.24	
CHLORDANE	57749	1.26	0.08	---	---	---	---	---	1.26	0.08	
4,4DDT	50293	1.82	0.02	---	---	---	---	---	1.82	0.02	
4,4DDE	72559	No Criteria	0.04	---	---	---	---	---	---	0.04	
4,4DDD	72548	No Criteria	0.06	---	---	---	---	---	---	0.06	
DIELDRIN	60571	9.94	0.01	---	---	---	---	---	9.94	0.01	
ENDOSULFAN (alpha)	959988	0.48	0.17	---	---	---	---	---	0.48	0.17	
ENDOSULFAN (beta)	33213659	0.48	0.17	---	---	---	---	---	0.48	0.17	
ENDOSULFAN (sulfate)	1031078	No Criteria	1751.52	---	---	---	---	---	---	1751.52	
ENDRIN	72208	0.52	0.05	---	---	---	---	---	0.52	0.05	
ENDRIN ALDEHYDE	7421934	No Criteria	5.90	---	---	---	---	---	---	5.9	
HEPTACHLOR	76448	0.74	0.02	---	---	---	---	---	0.74	0.02	
HEPTACHLOR EPOXIDE	1024573	0.74	0.01	---	---	---	---	---	0.74	0.01	
POLYCHLORINATED BIPHENYLS3	1336363	No Criteria	0.01	---	---	---	---	---	---	0.01	
2,3,7,8TCDD (Dioxin)	1746016	No Criteria	0.0000010	---	---	---	---	---	---	0.000001	
TOXAPHENE	8001352	2.94	0.00	---	---	---	---	---	2.94	0.004	
TRIBUTYLTIN		5.88	0.15	---	---	---	---	---	5.88	0.15	
ALUMINUM (limits are total recoverable)	7429905	No Criteria	No Criteria	---	---	---	33.4	33.4	---	---	N/A

Facility Name: ***New Shoreham WPCF***

RIPDES Permit #: ***RI0100196***

Outfall #: ***100A***

NOTE: METALS LIMITS ARE TOTAL METALS

Parameter	CAS #	Concentration Limits (ug/L) Based on WQ Criteria		Antideg. Limits (ug/L)	Priority Pollutant Scan Data (ug/L) 2016 - 2022		Ave. DMR Data (ug/L) 7/2016 - 4/2023		Potential Permit Limits (ug/L)		Reasonable Potential
		Daily Max	Monthly Ave	Monthly Ave	Max	Ave	Daily Max	Monthly Ave	Daily Max	Monthly Ave	(Yes/No)
AMMONIA (winter)	7664417	241668.00	50148.58	8300	---	---	---	---	241668	8300	
AMMONIA (summer)		84008.40	17794.66	8300	---	---	638	338	84008.4	8300	Yes
4BROMOPHENYL PHENYL ETHER	16887006	No Criteria	No Criteria	---	---	---	---	---	---	---	
CHLORIDE	7782505	No Criteria	No Criteria	---	---	---	---	---	---	---	
CHLORINE		227.50	184.50	---	---	---	25.3	6.67	227.5	184.5	No-WQ
4CHLORO2METHYLPHENOL		No Criteria	No Criteria	---	---	---	---	---	---	---	
1CHLORONAPHTHALENE	106489	No Criteria	No Criteria	---	---	---	---	---	---	---	
4CHLOROPHENOL		No Criteria	No Criteria	---	---	---	---	---	---	---	
2,4DICHLORO6METHYLPHENOL		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	---	---	---	---	---	---	---	
CHROMIUM (total recoverable)		No Criteria	No Criteria	---	---	---	4.63	4.63	---	---	N/A
ACETONE		No Criteria	No Criteria	---	22.8	22.8	---	---	---	---	N/A
METHOXYCHLOR		No Criteria	No Criteria	---	0.06	0.06	---	---	---	---	N/A
TOTAL PHENOLS		No Criteria	No Criteria	---	260	260	---	---	---	---	N/A

Facility Name: ***New Shoreham WPCF***

RIPDES Permit #: ***RI0100196***

Outfall #: ***200A***

NOTE: METALS LIMITS ARE TOTAL METALS

Parameter	CAS #	Concentration Limits (ug/L) Based on WQ Criteria		Antideg. Limits (ug/L)	Priority Pollutant Scan Data (ug/L) 2016 - 2022		Ave. DMR Data (ug/L) 7/2016 - 4/2023		Potential Permit Limits (ug/L)		Reasonable Potential
		Daily Max	Monthly Ave	Monthly Ave	Max	Ave	Daily Max	Monthly Ave	Daily Max	Monthly Ave	(Yes/No)
PRIORITY POLLUTANTS											
TOXIC METALS AND CYANIDE											
ANTIMONY	7440360	No Criteria	12595.20	---	---	---	---	---	---	12595.2	
ARSENIC (limits are total recoverable)	7440382	966.00	27.55	---	7.4	6.6	---	---	966	27.55	No
ASBESTOS	1332214	No Criteria	0.00	---	---	---	---	---	---	0	
BERYLLIUM	7440417	No Criteria	0.00	---	---	---	---	---	---	0	
CADMIUM (limits are total recoverable)	7440439	563.38	174.23	---	---	---	---	---	563.38	174.23	
CHROMIUM III (limits are total recoverable)	16065831	No Criteria	0.00	---	---	---	---	---	---	0	
CHROMIUM VI (limits are total recoverable)	18540299	15508.56	990.94	---	---	---	---	---	15508.56	990.94	
COPPER (limits are total recoverable)	7440508	80.96	73.50	---	---	---	10.36	10.36	80.96	73.5	No-WQ
CYANIDE	57125	14.00	14.00	---	---	---	---	---	14	14	
LEAD (limits are total recoverable)	7439921	3091.48	167.62	---	29	29	---	---	3091.48	167.62	No
MERCURY (limits are total recoverable)	7439976	29.65	2.95	---	---	---	---	---	29.65	2.95	
NICKEL (limits are total recoverable)	7440020	1046.46	163.01	---	---	---	---	---	1046.46	163.01	
SELENIUM (limits are total recoverable)	7782492	4068.14	1400.08	---	---	---	---	---	4068.14	1400.08	
SILVER (limits are total recoverable)	7440224	31.29	No Criteria	---	---	---	---	---	31.29	31.29	
THALLIUM	7440280	No Criteria	9.25	---	---	---	---	---	---	9.25	
ZINC (limits are total recoverable)	7440666	1331.92	1331.92	---	60	49.5	---	---	1331.92	1331.92	No
VOLATILE ORGANIC COMPOUNDS											
ACROLEIN	107028	No Criteria	5707.20	---	---	---	---	---	---	5707.2	
ACRYLONITRILE	107131	No Criteria	49.20	---	---	---	---	---	---	49.2	
BENZENE	71432	No Criteria	10036.80	---	---	---	---	---	---	10036.8	
BROMOFORM	75252	No Criteria	27552.00	---	---	---	---	---	---	27552	
CARBON TETRACHLORIDE	56235	No Criteria	314.88	---	---	---	---	---	---	314.88	
CHLOROBENZENE	108907	No Criteria	31488.00	---	---	---	---	---	---	31488	
CHLORODIBROMOMETHANE	124481	No Criteria	2558.40	---	---	---	---	---	---	2558.4	
CHLOROFORM	67663	No Criteria	92496.00	---	---	---	---	---	---	92496	
DICHLOROBROMOMETHANE	75274	No Criteria	3345.60	---	---	---	---	---	---	3345.6	
1,2DICHLOROETHANE	107062	No Criteria	7281.60	---	---	---	---	---	---	7281.6	
1,1DICHLOROETHYLENE	75354	No Criteria	139728.00	---	---	---	---	---	---	139728	
1,2DICHLOROPROPANE	78875	No Criteria	2952.00	---	---	---	---	---	---	2952	
1,3DICHLOROPROPYLENE	542756	No Criteria	413.28	---	---	---	---	---	---	413.28	
ETHYLBENZENE	100414	No Criteria	41328.00	---	---	---	---	---	---	41328	
BROMOMETHANE (methyl bromide)	74839	No Criteria	29520.00	---	---	---	---	---	---	29520	
CHLOROMETHANE (methyl chloride)	74873	No Criteria	No Criteria	---	---	---	---	---	---	---	
METHYLENE CHLORIDE	75092	No Criteria	116112.00	---	---	---	---	---	---	116112	

Facility Name: ***New Shoreham WPCF***

RIPDES Permit #: ***RI0100196***

Outfall #: ***200A***

NOTE: METALS LIMITS ARE TOTAL METALS

Parameter	CAS #	Concentration Limits (ug/L) Based on WQ Criteria		Antideg. Limits (ug/L)	Priority Pollutant Scan Data (ug/L) 2016 - 2022		Ave. DMR Data (ug/L) 7/2016 - 4/2023		Potential Permit Limits (ug/L)		Reasonable Potential (Yes/No)
		Daily Max	Monthly Ave	Monthly Ave	Max	Ave	Daily Max	Monthly Ave	Daily Max	Monthly Ave	
1,1,2,2TETRACHLOROETHANE	79345	No Criteria	787.20	---	---	---	---	---	---	787.2	
TETRACHLOROETHYLENE	127184	No Criteria	649.44	---	---	---	---	---	---	649.44	
TOLUENE	108883	No Criteria	295200.00	---	---	---	---	---	---	295200	
1,2TRANSDICHLOROETHYLENE	156605	No Criteria	196800.00	---	---	---	---	---	---	196800	
1,1,1TRICHLOROETHANE	71556	No Criteria	No Criteria	---	---	---	---	---	---	---	
1,1,2TRICHLOROETHANE	79005	No Criteria	3148.80	---	---	---	---	---	---	3148.8	
TRICHLOROETHYLENE	79016	No Criteria	5904.00	---	---	---	---	---	---	5904	
VINYL CHLORIDE	75014	No Criteria	47.23	---	---	---	---	---	---	47.23	
2CHLOROPHENOL	95578	No Criteria	2952.00	---	---	---	---	---	---	2952	
2,4DICHLOROPHENOL	120832	No Criteria	5707.20	---	---	---	---	---	---	5707.2	
2,4DIMETHYLPHENOL	105679	No Criteria	16728.00	---	---	---	---	---	---	16728	
4,6DINITRO2METHYL PHENOL	534521	No Criteria	5510.40	---	---	---	---	---	---	5510.4	
2,4DINITROPHENOL	51285	No Criteria	104304.00	---	---	---	---	---	---	104304	
4NITROPHENOL	88755	No Criteria	No Criteria	---	---	---	---	---	---	---	
PENTACHLOROPHENOL	87865	182.00	155.47	---	---	---	---	---		155.47	
PHENOL	108952	No Criteria	33456000.00	---	---	---	---	---	---	33456000	
2,4,6TRICHLOROPHENOL	88062	No Criteria	472.32	---	---	---	---	---	---	472.32	
ACENAPHTHENE	83329	No Criteria	19483.20	---	---	---	---	---	---	19483.2	
ANTHRACENE	120127	No Criteria	787200.00	---	---	---	---	---	---	787200	
BENZIDINE	92875	No Criteria	0.04	---	---	---	---	---	---	0.04	
POLYCYCLIC AROMATIC HYDROCARBONS		No Criteria	3.54	---	---	---	---	---	---	3.54	
BIS(2CHLOROETHYL)ETHER	111444	No Criteria	104.30	---	---	---	---	---	---	104.3	
BIS(2CHLOROISOPROPYL)ETHER	108601	No Criteria	1279200.00	---	---	---	---	---	---	1279200	
BIS(2ETHYLHEXYL)PHTHALATE	117817	No Criteria	432.96	---	---	---	---	---	---	432.96	
BUTYL BENZYL PHTHALATE	85687	No Criteria	37392.00	---	---	---	---	---	---	37392	
2CHLORONAPHTHALENE	91587	No Criteria	31488.00	---	---	---	---	---	---	31488	
1,2DICHLOROBENZENE	95501	No Criteria	25584.00	---	---	---	---	---	---	25584	
1,3DICHLOROBENZENE	541731	No Criteria	18892.80	---	---	---	---	---	---	18892.8	
1,4DICHLOROBENZENE	106467	No Criteria	3739.20	---	---	---	---	---	---	3739.2	
3,3DICHLOROBENZIDENE	91941	No Criteria	5.51	---	---	---	---	---	---	5.51	
DIETHYL PHTHALATE	84662	No Criteria	865920.00	---	---	---	---	---	---	865920	
DIMETHYL PHTHALATE	131113	No Criteria	21648000.00	---	---	---	---	---	---	21648000	
DInBUTYL PHTHALATE	84742	No Criteria	88560.00	---	---	---	---	---	---	88560	
2,4DINITROTOLUENE	121142	No Criteria	669.12	---	---	---	---	---	---	669.12	

Facility Name: ***New Shoreham WPCF***

RIPDES Permit #: ***RI0100196***

Outfall #: ***200A***

NOTE: METALS LIMITS ARE TOTAL METALS

Parameter	CAS #	Concentration Limits (ug/L) Based on WQ Criteria		Antideg. Limits (ug/L)	Priority Pollutant Scan Data (ug/L) 2016 - 2022		Ave. DMR Data (ug/L) 7/2016 - 4/2023		Potential Permit Limits (ug/L)		Reasonable Potential (Yes/No)
		Daily Max	Monthly Ave	Monthly Ave	Max	Ave	Daily Max	Monthly Ave	Daily Max	Monthly Ave	
1,2DIPHENYLHYDRAZINE	122667	No Criteria	39.36	---	---	---	---	---	---	39.36	
FLUORANTHENE	206440	No Criteria	2755.20	---	---	---	---	---	---	2755.2	
FLUORENE	86737	No Criteria	104304.00	---	---	---	---	---	---	104304	
HEXACHLOROBENZENE	118741	No Criteria	0.06	---	---	---	---	---	---	0.06	
HEXACHLOROBUTADIENE	87683	No Criteria	3542.40	---	---	---	---	---	---	3542.4	
HEXACHLOROCYCLOPENTADIENE	77474	No Criteria	21648.00	---	---	---	---	---	---	21648	
HEXACHLOROETHANE	67721	No Criteria	649.44	---	---	---	---	---	---	649.44	
ISOPHORONE	78591	No Criteria	188928.00	---	---	---	---	---	---	188928	
NAPHTHALENE	91203	No Criteria	No Criteria	---	---	---	---	---	---	---	
NITROBENZENE	98953	No Criteria	13579.20	---	---	---	---	---	---	13579.2	
NNITROSODIMETHYLAMINE	62759	No Criteria	590.40	---	---	---	---	---	---	590.4	
NNITROSODINPROPYLAMINE	621647	No Criteria	100.37	---	---	---	---	---	---	100.37	
NNITROSODIPHENYLAMINE	86306	No Criteria	1180.80	---	---	---	---	---	---	1180.8	
PYRENE	129000	No Criteria	78720.00	---	---	---	---	---	---	78720	
1,2,4trichlorobenzene	120821	No Criteria	1377.60	---	---	---	---	---	---	1377.6	
ALDRIN	309002	18.20	0.01	---	---	---	---	---	18.2	0.01	
Alpha BHC	319846	No Criteria	0.96	---	---	---	---	---	---	0.96	
Beta BHC	319857	No Criteria	3.35	---	---	---	---	---	---	3.35	
Gamma BHC (Lindane)	58899	2.24	2.24	---	---	---	---	---	2.24	2.24	
CHLORDANE	57749	1.26	0.08	---	---	---	---	---	1.26	0.08	
4,4DDT	50293	1.82	0.02	---	---	---	---	---	1.82	0.02	
4,4DDE	72559	No Criteria	0.04	---	---	---	---	---	---	0.04	
4,4DDD	72548	No Criteria	0.06	---	---	---	---	---	---	0.06	
DIELDRIN	60571	9.94	0.01	---	---	---	---	---	9.94	0.01	
ENDOSULFAN (alpha)	959988	0.48	0.17	---	---	---	---	---	0.48	0.17	
ENDOSULFAN (beta)	33213659	0.48	0.17	---	---	---	---	---	0.48	0.17	
ENDOSULFAN (sulfate)	1031078	No Criteria	1751.52	---	---	---	---	---	---	1751.52	
ENDRIN	72208	0.52	0.05	---	---	---	---	---	0.52	0.05	
ENDRIN ALDEHYDE	7421934	No Criteria	5.90	---	---	---	---	---	---	5.9	
HEPTACHLOR	76448	0.74	0.02	---	---	---	---	---	0.74	0.02	
HEPTACHLOR EPOXIDE	1024573	0.74	0.01	---	---	---	---	---	0.74	0.01	
POLYCHLORINATED BIPHENYLS3	1336363	No Criteria	0.01	---	---	---	---	---	---	0.01	
2,3,7,8TCDD (Dioxin)	1746016	No Criteria	0.0000010	---	---	---	---	---	---	0.000001	
TOXAPHENE	8001352	2.94	0.00	---	---	---	---	---	2.94	0.004	
TRIBUTYLTIN		5.88	0.15	---	---	---	---	---	5.88	0.15	

Facility Name: ***New Shoreham WPCF***

RIPDES Permit #: ***RI0100196***

Outfall #: ***200A***

NOTE: METALS LIMITS ARE TOTAL METALS

Parameter	CAS #	Concentration Limits (ug/L) Based on WQ Criteria		Antideg. Limits (ug/L)	Priority Pollutant Scan Data (ug/L) 2016 - 2022		Ave. DMR Data (ug/L) 7/2016 - 4/2023		Potential Permit Limits (ug/L)		Reasonable Potential
		Daily Max	Monthly Ave	Monthly Ave	Max	Ave	Daily Max	Monthly Ave	Daily Max	Monthly Ave	(Yes/No)
ALUMINUM (limits are total recoverable)	7429905	No Criteria	No Criteria	---	---	---	---	---	---	---	
AMMONIA (winter)	7664417	241668.00	50148.58	8300	---	---	---	---	241668	8300	
AMMONIA (summer)		84008.40	17794.66	8300	---	---	7529	4868	84008.4	8300	Yes
4BROMOPHENYL PHENYL ETHER	16887006	No Criteria	No Criteria	---	---	---	---	---	---	---	
CHLORIDE	7782505	No Criteria	No Criteria	---	---	---	---	---	---	---	
CHLORINE		227.50	184.50	---	---	---	0	0	227.5	184.5	No-WQ
4CHLORO2METHYLPHENOL		No Criteria	No Criteria	---	---	---	---	---	---	---	
1CHLORONAPHTHALENE	106489	No Criteria	No Criteria	---	---	---	---	---	---	---	
4CHLOROPHENOL		No Criteria	No Criteria	---	---	---	---	---	---	---	
2,4DICHLORO6METHYLPHENOL		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	---	---	---	---	---	---	---	
TOTAL PHENOLS		No Criteria	No Criteria	---	20	20	---	---	---	---	N/A