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

November 23, 2020

CERTIFIED MAIL

Ms. Amy Weinberger, Terminal Superintendent
ExxonMobil Oil Corporation – East Providence Terminal
1001 Wampanoag Trail
East Providence, RI 02915

RE: ExxonMobil Pipeline Company; Final Permit No. RI0001333

Dear Ms. Weinberger:

Enclosed is the final Rhode Island Pollutant Discharge Elimination System (RIPDES) Permit issued for the ExxonMobil Pipeline Company's (ExxonMobil) East Providence Terminal site located at 1001 Wampanoag Trail, East Providence, RI. 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 permit.

Also enclosed is information relative to hearing requests and stays of RIPDES Permits along with the Rhode Island Department of Environmental Management's (DEMs) response to comments received during the public comment period.

The DEM appreciates ExxonMobil's cooperation throughout the development of this permit. Should ExxonMobil have any questions concerning this permit, feel free to contact Aaron Mello of the State Permits Staff at (401) 222-4700, extension 7405.

Sincerely,

Joseph B. Haberek

Joseph B. Haberek, P.E.
Environmental Engineer IV
Office of Water Resources

JBH:am

Enclosures

cc: David Turin, EPA Region 1 (Electronic Copy)
Jeffrey Willis, CRMC (Electronic Copy)
Emma Clements, ExxonMobil Pipeline Company (Electronic Copy)
Thomas Henderson, Roux Associates, Inc. (Electronic Copy)
Bryan Crowley, Roux Associates, Inc. (Electronic Copy)
Crystal Charbonneau, DEM/OWR (Electronic Copy)
Traci Pena, DEM/OWR (Electronic Copy)

RESPONSE TO COMMENTS

From October 2, 2020 to November 6, 2020 the Rhode Island Department of Environmental Management (DEM) solicited public comment on ExxonMobil Pipeline Company's (ExxonMobil's) draft Rhode Island Pollutant Discharge Elimination System (RIPDES) permit for the facility located at 1001 Wampanoag Trail, East Providence, RI. The following is a synopsis of the significant comments submitted and the DEM's response to those comments:

1. COMMENTS FROM MR. EDWARD LAWLER SUBMITTED TO DEM VIA EMAIL DATED OCTOBER 7, 2020:

COMMENT: *Mr. Lawler requested that Method 8270 be used instead of Method 8260 for analyzing Ethanol for Outfalls 200A and 400A in the draft permit.* As part of the above request, Mr. Lawler stated the following information:

- Method 8260 does not provide reliable data for Ethanol due to its water solubility.
- A more reliable analysis approach is to treat Ethanol like a semi-volatile organic compound in a manner similar to how the analysis of 1,4-dioxane is performed.
- Method 8270 can be extended for the analysis of this type of water-soluble compound.
- This analysis approach has been developed and is used under the EPA-CLP laboratory program for Superfund related actions.
- Due to its relatively low health impact, monitoring for Ethanol is not particularly important, and monitoring for MTBE and BTEX compounds are used to indicate the presence of Ethanol.

RESPONSE: Based on review of Mr. Lawler's comments above, DEM has removed Footnote 4 from Part I.A.4 and Footnote 1 from Part I.A.8 of the draft permit requiring analysis of Ethanol by EPA Method 8260. According to 40 CFR Part 136, which lists the required analytical methods for RIPDES permits, Ethanol may be analyzed by Methods 1666, 1671, D3695, or 624.1. The list of approved methods for Ethanol is contained in Table IF of Part 136.3 (List of Approved Methods for Pharmaceutical Pollutants in Part 439). DEM has contacted local environmental testing laboratories to inquire if they can test for Ethanol using 40 CFR Part 136 approved methods and was informed that Ethanol could be analyzed using Method 624.1, which complies with 40 CFR 136 approved methods. Based on this example, there are laboratory services available that will perform the analysis for Ethanol using 40 CFR 136 methods on non-potable water samples. In addition, the R.I. Department of Health does not offer certification of laboratories to test for Ethanol. Therefore, ExxonMobil can use any laboratory that analyzes for Ethanol using the methods listed in 40 CFR Part 136 in accordance with Part I.C of its final permit.

HEARING REQUESTS

If you wish to contest any of the provisions of this permit, you must 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:

Angelo S. Liberti, P.E.
Chief of 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,

ExxonMobil Pipeline Company
22777 Springwoods Village Parkway
Room No. E.3.5A.618
Spring, Texas 77389

is authorized to discharge from a facility located at

ExxonMobil Oil Corporation - East Providence Terminal
1001 Wampanoag Trail
East Providence, Rhode Island 02915

to receiving waters named

Providence River

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

This Permit shall become effective on January 1, 2021.

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

This permit supersedes the permit issued on September 30, 2008.

This permit consists of 28 pages in Part I including effluent limitations, monitoring requirements, etc. and 10 pages in Part II including General Conditions.

Signed this 23rd day of November, 2020.

Joseph B. Haberek

Angelo S. Liberti, 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 001A. (Overflow Weir from Second Lagoon).
   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	--- MGD	--- MGD				Continuous	Recorder
TSS			21 mg/l		33 mg/l	2/Month[1,3]	Grab
Oil and Grease			--- mg/l		15 mg/l	2/Month[1,3]	Grab
Benzene			--- µg/l		--- µg/l	1/Month[2,3]	Grab
Toluene			--- µg/l		--- µg/l	1/Month[2,3]	Grab
Ethyl-benzene			--- µg/l		--- µg/l	1/Month[2,3]	Grab
Total Xylenes			--- µg/l		--- µg/l	1/Month[2,3]	Grab

[1]The two (2) grab samples shall be taken as follows: one when the separator at Main Tank Farm is being pumped with proper allowances for hydraulic detention time (time for flow to travel from separator to overflow weir) and one (1) during dry weather or when the pumps at the Main Tank Farm are not in operation. If the separator at the Main Tank Farm cannot be pumped under normal operating conditions, the two (2) samples for TSS, and Oil and Grease for the current month shall be taken during dry weather (when the pumps at the Main Tank Farm are not in operation).

[2]The one grab sample shall be taken when the Main Tank Farm Separator is being pumped, giving proper allowances for hydraulic detention time (time for flow to travel from separator to overflow weir). If pumping cannot occur under normal operating conditions, BTEX sampling shall be suspended for that month.

[3] The permittee must keep a log of times when the pumps at the Main Tank Farm are in operation, and maintain the log data on-site for 5 years.

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

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: Outfall 001A - overflow weir from second lagoon.

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. (Effluent from PCS Groundwater 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	--- gpm	600 gpm				Continuous[1]	Recorder
Benzene			5.0 µg/l		5.0 µg/l	1/Month	Grab
Toluene			10.0 µg/l		10.0 µg/l	1/Month	Grab
Ethylbenzene			10.0 µg/l		10.0 µg/l	1/Month	Grab
Total Xylenes			30.0 µg/l		30.0 µg/l	1/Month	Grab
Total BTEX[2]			--- µg/l		--- µg/l	1/Month	Grab
MTBE			--- µg/l		70.0 µg/l	1/Month	Grab
Naphthalene			10.0 µg/l		10.0 µg/l	1/Month	Grab
Total Iron			--- µg/l		--- µg/l	1/Month	Grab

[1]Monitor flow and submit a flow log with the monitoring results. The flow log shall include the rate and duration of flow including the time(s) of day when flow commences and ceases. In addition, the flow log shall specify the volume and flow rates associated with flows, if any, generated from Tank 58.

[2]Sum of benzene, toluene, ethylbenzene and total xylenes.

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

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: Outfall 100A - effluent from Perimeter Containment System (PCS) groundwater treatment system.

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

3. During the period beginning on the effective date and lasting through permit expiration, the permittee is authorized to discharge from outfall serial number 100A. (Effluent from PCS Groundwater 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
Acenaphthene			10.0 µg/l		10.0 µg/l	Quarterly	Grab
Acenaphthylene			10.0 µg/l		10.0 µg/l	Quarterly	Grab
Anthracene			10.0 µg/l		10.0 µg/l	Quarterly	Grab
Benzo (a) Anthracene			1.44 µg/l		1.44 µg/l	Quarterly	Grab
Benzo (a) Pyrene			1.44 µg/l		1.44 µg/l	Quarterly	Grab
Benzo (b) Fluoranthene			1.44 µg/l		1.44 µg/l	Quarterly	Grab
Benzo (ghi) Perylene			41.0 µg/l		41.0 µg/l	Quarterly	Grab
Benzo (k) Fluoranthene			1.44 µg/l		1.44 µg/l	Quarterly	Grab
Chrysene			1.44 µg/l		1.44 µg/l	Quarterly	Grab
Dibenzo (a,h) Anthracene			1.44 µg/l		1.44 µg/l	Quarterly	Grab
Fluoranthene			10.0 µg/l		10.0 µg/l	Quarterly	Grab
Fluorene			10.0 µg/l		10.0 µg/l	Quarterly	Grab
Indeno (1, 2, 3 - cd) Pyrene			1.44 µg/l		1.44 µg/l	Quarterly	Grab
Phenanthrene			10.0 µg/l		10.0 µg/l	Quarterly	Grab
Pyrene			10.0 µg/l		10.0 µg/l	Quarterly	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: Outfall 100A - effluent from PCS groundwater treatment system.

PART I

A. **EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

4. During the period beginning on the effective date and lasting through permit expiration, the permittee is authorized to discharge from outfall serial number 200A. (Effluent from Tank 52/58 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	--- gpm	20 gpm				Continuous[1]	Recorder
Flow (Volume)		--- MG				Continuous	Recorder
Benzene			5.0 µg/l		5.0 µg/l	3/Discharge[2]	Grab
Toluene			10.0 µg/l		10.0 µg/l	3/Discharge[2]	Grab
Ethylbenzene			10.0 µg/l		10.0 µg/l	3/Discharge[2]	Grab
Total Xylenes			30.0 µg/l		30.0 µg/l	3/Discharge[2]	Grab
Total BTEX[3]			--- µg/l		--- µg/l	3/Discharge[2]	Grab
Ethanol			--- µg/l		--- µg/l	3/Discharge[2]	Grab
Total Iron			--- µg/l		--- µg/l	3/Discharge[2]	Grab

[1]Monitor flow and submit a flow log with the monitoring results. The flow log shall include the rate and duration of flow including the time(s) of day when flow commences and ceases. The average monthly flow should be based on the days of the month that there is a discharge from the treatment system.

[2]The three (3) grab samples shall be equally spaced over the course of drainage of Tank 52/58 and should be representative of the contents of the entire tank.

[3]Sum of benzene, toluene, ethylbenzene and total xylenes.

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

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: Outfall 200A - effluent from Tank 52/58 treatment system.

PART I

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 200A. (Effluent from Tank 52/58 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
Acenaphthene			10.0 µg/l		10.0 µg/l	3/Discharge[1]	Grab
Acenaphthylene			10.0 µg/l		10.0 µg/l	3/Discharge[1]	Grab
Anthracene			10.0 µg/l		10.0 µg/l	3/Discharge[1]	Grab
Benzo (a) Anthracene			1.44 µg/l		1.44 µg/l	3/Discharge[1]	Grab
Benzo (a) Pyrene			1.44 µg/l		1.44 µg/l	3/Discharge[1]	Grab
Benzo (b) Fluoranthene			1.44 µg/l		1.44 µg/l	3/Discharge[1]	Grab
Benzo (ghi) Perylene			41.0 µg/l		41.0 µg/l	3/Discharge[1]	Grab
Benzo (k) Fluoranthene			1.44 µg/l		1.44 µg/l	3/Discharge[1]	Grab
Chrysene			1.44 µg/l		1.44 µg/l	3/Discharge[1]	Grab
Dibenzo (a,h) Anthracene			1.44 µg/l		1.44 µg/l	3/Discharge[1]	Grab
Fluoranthene			10.0 µg/l		10.0 µg/l	3/Discharge[1]	Grab
Fluorene			10.0 µg/l		10.0 µg/l	3/Discharge[1]	Grab
Indeno (1, 2, 3 - cd) Pyrene			1.44 µg/l		1.44 µg/l	3/Discharge[1]	Grab
Naphthalene			10.0 µg/l		10.0 µg/l	3/Discharge[1]	Grab
Phenanthrene			10.0 µg/l		10.0 µg/l	3/Discharge[1]	Grab
Pyrene			10.0 µg/l		10.0 µg/l	3/Discharge[1]	Grab

[1]The three (3) grab samples shall be equally spaced over the course of drainage of Tank 52/58 and should be representative of the contents of the entire tank.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: Outfall 200A - effluent from Tank 52/58 treatment system.

PART I

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 300A. (Effluent from the Vanity Fair Cliffs Area Recovery/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	--- gpm	10.0 gpm				Continuous[1]	Recorder
Benzene			5.0 µg/l		5.0 µg/l	1/Month	Grab
Toluene			10.0 µg/l		10.0 µg/l	1/Month	Grab
Ethylbenzene			10.0 µg/l		10.0 µg/l	1/Month	Grab
Total Xylenes			30.0 µg/l		30.0 µg/l	1/Month	Grab
Total BTEX[2]			--- µg/l		--- µg/l	1/Month	Grab
MTBE			--- µg/l		70.0 µg/l	1/Month	Grab
Naphthalene			10.0 µg/l		10.0 µg/l	1/Month	Grab
Total Iron			--- µg/l		--- µg/l	1/Month	Grab

[1]Monitor flow and submit a flow log with the monitoring results. The flow log shall include the rate and duration of flow including the time(s) of day when flow commences and ceases.

[2]Sum of benzene, toluene, ethylbenzene and total xylenes.

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

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: Outfall 300A - effluent from the Vanity Fair Cliffs Area Recovery/Treatment System.

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

7. During the period beginning on the effective date and lasting through permit expiration, the permittee is authorized to discharge from outfall serial number 300A. (Effluent from the Vanity Fair Cliffs Area Recovery/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
Acenaphthene			10.0 µg/l		10.0 µg/l	Quarterly	Grab
Acenaphthylene			10.0 µg/l		10.0 µg/l	Quarterly	Grab
Anthracene			10.0 µg/l		10.0 µg/l	Quarterly	Grab
Benzo (a) Anthracene			1.44 µg/l		1.44 µg/l	Quarterly	Grab
Benzo (a) Pyrene			1.44 µg/l		1.44 µg/l	Quarterly	Grab
Benzo (b) Fluoranthene			1.44 µg/l		1.44 µg/l	Quarterly	Grab
Benzo (ghi) Perylene			41.0 µg/l		41.0 µg/l	Quarterly	Grab
Benzo (k) Fluoranthene			1.44 µg/l		1.44 µg/l	Quarterly	Grab
Chrysene			1.44 µg/l		1.44 µg/l	Quarterly	Grab
Dibenzo (a,h) Anthracene			1.44 µg/l		1.44 µg/l	Quarterly	Grab
Fluoranthene			10.0 µg/l		10.0 µg/l	Quarterly	Grab
Fluorene			10.0 µg/l		10.0 µg/l	Quarterly	Grab
Indeno (1, 2, 3 - cd) Pyrene			1.44 µg/l		1.44 µg/l	Quarterly	Grab
Phenanthrene			10.0 µg/l		10.0 µg/l	Quarterly	Grab
Pyrene			10.0 µg/l		10.0 µg/l	Quarterly	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: Outfall 300A - effluent from the Vanity Fair Cliffs Area Recovery/Treatment System.

PART I

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 400A. (Effluent from the Main Oil Water Separator).
   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	--gpm	--gpm				1/Month	Estimate
TSS			---µg/l		--- µg/l	1/Month	Grab
Oil and Grease			--- µg/l		--- µg/l	1/Month	Grab
Benzene			--- µg/l		--- µg/l	1/Month	Grab
Toluene			--- µg/l		--- µg/l	1/Month	Grab
Ethyl-benzene			--- µg/l		--- µg/l	1/Month	Grab
Total Xylenes			--- µg/l		--- µg/l	1/Month	Grab
Ethanol			--- µg/l		--- µg/l	1/Month	Grab

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

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: Outfall 400A – effluent from the Main Oil Water Separator.

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

9. During the period beginning on the effective date and lasting through permit expiration, the permittee is authorized to discharge from outfall serial number 500A. (Effluent from the Vanity Fair Cliffs Area Oil Water Separator).
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	---gpm	---gpm				1/Month	Estimate
TSS			--- µg/l		--- µg/l	1/Month	Grab
Oil and Grease			--- µg/l		--- µg/l	1/Month	Grab
Benzene			--- µg/l		--- µg/l	1/Month	Grab
Toluene			--- µg/l		--- µg/l	1/Month	Grab
Ethyl-benzene			--- µg/l		--- µg/l	1/Month	Grab
Total Xylenes			--- µg/l		--- µg/l	1/Month	Grab

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

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: Outfall 500A – effluent from the Vanity Fair Cliffs Area Oil Water Separator.

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

10. During the period beginning on the date that the Engineered Natural System (ENS) Treatment System's discharge ceases flow to the unnamed tributary to the Providence River and is replaced as internal Outfall 600A that will discharge to the Providence River through Outfall 001A and lasting through permit expiration, the permittee is authorized to discharge from outfall serial number 600A. (Effluent Control Structure from the Engineered Natural System (ENS) Treatment System, or the contingency treatment system effluent, when the contingency treatment system is operating). 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	--- gpm	70 gpm				Continuous[1]	Recorder
Benzene			5.0 µg/l		5.0 µg/l	1/Month	Grab
Toluene			10.0 µg/l		10.0 µg/l	1/Month	Grab
Ethylbenzene			10.0 µg/l		10.0 µg/l	1/Month	Grab
Total Xylenes			30.0 µg/l		30.0 µg/l	1/Month	Grab
Total BTEX[2]			--- µg/l		--- µg/l	1/Month	Grab
MTBE			--- µg/l		70.0 µg/l	1/Month	Grab
Naphthalene			10.0 µg/l		10.0 µg/l	1/Month	Grab
Total Iron			--- µg/l		--- µg/l	1/Month	Grab
Total Lead			68.1 µg/l		1,600 µg/l	1/Month	Grab

[1]Monitor flow and submit a flow log with the monitoring results. The flow log shall include the volume, rate and duration of flow generated from the ENS.

[2]Sum of benzene, toluene, ethylbenzene and total xylenes.

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

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: Outfall 600A – Effluent Control Structure from the Engineered Natural System (ENS) treatment system, or the contingency treatment system effluent, when the contingency treatment system is operating.

11.

a. The pH of the effluent shall not be less than 6.0 nor greater than 9.0 standard units at any time, unless these values are exceeded due to natural causes or as a result of the approved treatment processes.

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.

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

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

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

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

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

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

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

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

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

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

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

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

13. The permittee shall analyze the effluent from Outfall 001A and 600A 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 January 15th for the previous calendar year. All sampling and analysis shall be done in accordance with EPA Regulations, including 40 CFR 136 or other methods approved in this permit, grab and composite samples shall be taken as appropriate.

14. This permit serves as the State's water quality certification for the discharges described herein.

15. The permittee shall operate and maintain the Perimeter Containment System (PCS) in accordance with Order of Approval No. SROA 95-024 issued by RIDEM. Mechanical failure or breakthrough of the PCS system (exceedance of any permit limits) shall be immediately reported to the Office of Water Resources and the Office of Waste Management.

16. The permittee shall operate and maintain the Silver Springs Golf Course – Vanity Fair Area Engineered Natural System (ENS), consisting of a constructed treatment wetland, permeable reactive barrier, and contingency treatment system in accordance with the Order of Approval No. SR-10-0831E issued by RIDEM on September 16, 2015. Mechanical failure or breakthrough of the ENS (exceedance of any permit limits) shall be immediately reported to the Office of Water Resources and the Office of Waste Management.

17. The addition of chemicals (i.e., disinfecting agents, detergents, emulsifiers, etc.) to the collection and treatment system is prohibited without prior approval by the Department. This prohibition will prevent the carryover of hydrocarbons and/or particulate matter to the Providence River. This prohibition does not apply to the addition of Percol 726 or 727, sodium hypochlorite, and aluminum chlorohydrate (per acceptance in the March 5, 1996 letter from the Department) to the PCS groundwater treatment system.

18. The permittee shall not discharge any sludge and/or bottom deposits from any storage tank, basin and/or diked area to the receiving water. Examples of storage tanks and/or basins include, but are not limited to: primary catch basins, stilling basins, the oil/water separator, observation basins with baffles, petroleum product storage tanks, baffled storage tanks collecting spills, and tank truck loading rack sumps.

19. This permit does not authorize discharges to the separate storm sewer system or to waters of the State from floor drains and trench drains located inside of buildings. These discharges may, however, be discharged to either the Tank 52/58 treatment system or the PCS groundwater treatment system, provided the discharge does not cause a permit violation.

20. There shall be no direct discharge to the Southern Operations and/or Vanity Fair oil/water separators, or to the lagoons of untreated tank bottom draw off water (water which separates from product during storage and settles to the tank bottom); untreated marine transportation water (water which separates and/or accumulates during marine transportation); tank truck wash water, storm water and wash water from spill tank at truck loading rack; vehicle or equipment washing activities; and ship barge/bilge water. These discharges may, however, be discharged to either the Tank 52/58 treatment system or the PCS groundwater treatment system, provided the discharge does not cause a permit violation.

21. This permit does not authorize the discharge of sanitary waste water to waters of the State.

22. This permit authorizes the discharge of groundwater from the recovery wells, as described in the Remedial Action Work Plan for the Groundwater Treatment Component of the Perimeter Containment System, dated January 13, 1995, to the PCS groundwater treatment system. In addition, this permit authorizes the discharge of well development/purge water from the monitoring wells, as described in the September 18, 1995 letter from Mobil to RIDEM, to the PCS groundwater treatment system. Also, this permit authorizes the discharge of water generated from a vapor/liquid separator associated with soil vapor extraction/air sparging in the vicinity of former tank No. 66 (North Operations) to the PCS groundwater treatment system, as described in the March 3, 1998 letter from RIDEM to ExxonMobil Oil Corporation. Authorization to discharge additional sources of contaminated groundwater to the PCS system shall only be granted upon receipt of satisfactory qualitative data that demonstrates the additional sources of

groundwater are substantially the same as that of the PCS influent. Contaminated groundwater generated from recovery or monitoring wells during site investigation and remediation shall not be discharged to or placed in either oil/water separator. Infiltration/inflow of contaminated groundwater into the storm water collection system or into either oil/water separator shall be addressed by the permittee pursuant to Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases ("Remediation Regulations") under the direction of the Office of Waste Management, in association with the Office of Water Resources. Nothing in this paragraph shall be construed to relieve permittee's obligation to investigate and/or remediate contaminated groundwater in compliance with the Remediation Regulations or the regulations of the Office of Water Resources.

23. This permit authorizes the discharge of treated shallow groundwater, surface water and stormwater in the Silver Springs Golf Course of the Vanity Fair Area, as described in the Remedial Action Work Plan for Installation of an Engineered Natural System (ENS), Silver Springs Golf Course – Vanity Fair Area, dated July 7, 2014, from an Engineered Natural System consisting of a permeable reactive barrier, subsurface flow constructed treatment wetland, and contingency treatment system. Nothing in this paragraph shall be construed to relieve the permittee's obligation to investigate and/or remediate contaminated groundwater in the compliance with the Remediation Regulations or the Regulations of the Office of Water Resources.

24. Unless identified by the permittee or the DEM as significant sources of pollutants to waters of the United States, the following non-storm water discharges are authorized under this permit to enter the storm water drainage system: discharges from firefighting activities; fire hydrant flushings; routine external building washdown / power wash water that does not use detergents or hazardous cleaning products (such as those containing bleach, hydrofluoric acid, muriatic acid, sodium hydroxide, nonylphenols); lawn watering; uncontaminated groundwater; springs; air conditioning condensate; potable waterline flushings; irrigation drainage; foundation or footing drains where flows are not contaminated with process materials, such as solvents, or contaminated by contact with soils, where spills or leaks of toxic or hazardous materials have occurred; water sprayed for dust control or at a truck load wet-down station; incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of the facility, but NOT intentional discharges from the cooling towner (e.g., "piped" cooling tower blowdown or drains); uncontaminated utility vault dewatering; dechlorinated water line testing water; hydrostatic test water that does not contain any treatment chemicals and is not contaminated with process chemicals; discharges from washing of vehicles provided: chemicals, soaps, detergents, hazardous cleaning products (such as those containing bleach, hydrofluoric acid, muriatic acid, sodium hydroxide, nonylphenols), steam, or heated water are not used; cleaning is restricted to the outside of the vehicle (e.g., no engines, transmissions, undercarriages, or truck beds); or washing is not used to remove accumulated industrial materials, paint residues, heavy metals or any other potentially hazardous materials from surfaces; and discharges from washing of marine vessels provided chemicals, soaps, detergents, hazardous cleaning products (such as those containing bleach, hydrofluoric acid, muriatic acid, sodium hydroxide, nonylphenols), steam, or heated water are not used an the washing is not used to remove topside or bottom paint; marine growth, or other potentially hazardous materials from vessels. If any of these discharges may reasonably be expected to be present and to be mixed with storm water discharges, they must be specifically identified and addressed in the facility's Storm Water Pollution Prevention Plan (SWPPP) required in Part I.B.

25. The discharge of tank bottom draw off water or other wastewaters (including contaminated groundwater) generated off-site is strictly prohibited. This exclusion does not apply to the discharge of groundwater contaminated by sources which have originated and/or emanated from terminal property.

26. The permittee shall notify the Office of Water Resources at least twenty-four (24) hours prior to the commencement of any proposed hydrostatic-test water discharges.

Prior to testing tank(s), the interior of the tank(s) being tested shall be cleaned and certified to be free of petroleum product. There shall be no discharge of tank cleaning residual/debris to either of the oil/water separators or lagoons. At a minimum, four (4) representative samples shall be taken of the hydrostatic-test water: one (1) grab sample of the influent (water added to the tank) and three (3) serial-grab samples of the effluent (test water discharged from the tank), which after treatment though the oil water separator and two lagoons is discharged to the receiving waters. The influent grab sample shall be taken approximately midway through the fill segment of the hydrostatic-test procedure. The three (3) effluent serial-grab samples shall be taken over the duration of the entire discharge segment of the hydrostatic-test procedure. The first serial-grab sample shall be taken during the initial phase of the discharge; the second serial grab sample is to be taken midway through the discharge; and the final sample shall be taken at the end of the discharge. All effluent samples should be taken directly from the effluent of the tank prior to discharge into the oil/water separator and/or mixing with any other authorized waste streams. These samples should provide adequate characterization of the influent and effluent hydrostatic-test water and shall be analyzed for the following parameters:

a. Total Suspended Solids (TSS)
b. Oil & Grease
c. Total Iron
d. Chemical Oxygen Demand (COD)
e. Dissolved Oxygen (DO)
f. pH

Hydrostatic testing of piping is limited to piping that has been in hydrocarbon service before. At a minimum one (1) representative sample of the discharge from pipe testing shall be taken from the final collection tank(s) holding the hydrostatic test water. The sample will be made up of equal parts of grab samples taken from each tank. The grab samples will be taken from the top, middle and bottom of water column in each tank and then composited. All samples should be taken and analytical results received prior to discharge into the oil/water separator. These samples shall be analyzed for the following parameters:

a. Total Suspended Solids (TSS)
b. Oil & Grease (O/G)

All hydrostatic test waters released from the tank(s) and/or pipe(s) must satisfy all the effluent limitations and conditions of this permit after treatment through the oil/water separator and lagoons. The surface of the oil/water separator should be routinely observed during hydrostatic test water discharges to determine if there is any detectable increase in the separated oil layer to prevent inadvertent hydrocarbon release to the receiving water(s). A logbook shall be kept to document the start and end of each hydrostatic test, the total flow discharged and all monitoring data.

Should any visual inspection or suspicious odor indicate the presence of petroleum while inspecting the oil/water separator as required above or if laboratory results from the samples of the discharge become available that indicate an exceedance of the permit effluent limits, the transfer shall be halted immediately followed by notification to the RI DEM of the suspended discharge. After the discharge of the hydrostatic test water has been completed, the permittee shall submit a letter/report to the RI DEM within thirty (30) days, summarizing the results of the transfer. This report shall contain: the date(s) of hydrostatic test water transfer; the volume of hydrostatic test water transferred; and the analytically determined values of the discharge parameters.

27. Silver Springs Golf Course - Vanity Fair Area Engineered Natural System:

a. The permittee shall properly operate and maintain the Silver Springs Golf Course – Vanity Fair Area Engineered Natural System (ENS). Mechanical failure or breakthrough of the treatment system (exceedance of any permit limits) shall be immediately reported to the Office of Water Resources.

b. The permittee shall treat shallow groundwater, surface water, and stormwater in the Silver Springs Golf Course area of the Vanity Fair Area with a treatment system that consists of a permeable reactive barrier, a subsurface flow constructed treatment wetland, and a contingency treatment system as needed (as described in Part IV. of the attached Fact Sheet) and is designed to meet the effluent limitations listed in Part I.A.10. The system shall not be modified without written approval from the Office of Water Resources.

c. The flow through the ENS shall be measured via a flowmeter and totalizer. A logbook shall be kept to document the total flow discharged through the system.

d. The treatment system shall be inspected in accordance with the Final O&M Manual dated January 20, 2017 and revised January 20, 2020, to assure the system is operating efficiently. ExxonMobil may revise the O&M Manual in the future to optimize system performance and/or respond to a change in conditions. As a result of these inspections, appropriate actions shall be taken immediately to resolve any problems discovered during the inspection. Records documenting the inspections and any actions taken shall be retained and made available to the Office of Water Resources upon request.

e. Discharge shall cease and DEM shall be notified if any of the limits listed in Part I.A.10 are exceeded. The discharge may recommence once steps have been taken to ensure the limits will not be exceeded again and after DEM approval.

28. Tank 52/58 Treatment System:

a. The permittee shall properly operate and maintain the Tank 52/58 Treatment System. Mechanical failure or breakthrough of the treatment system (exceedance of any permit limits) shall be immediately reported to the Office of Water Resources.

b. The permittee shall treat all tank bottom draw-off water, vessel ballast water, tank truck wash water, and storm water and wash water from the spill tank at the truck loading rack with a treatment system that consists of storage tanks, a Natural Media Filter (NMF) treatment cell, and an air stripper with off-gas treatment (as described in Part IV. of the attached Fact Sheet) and is designed to meet the effluent limitations listed in Part I.A.4-5. The system shall not be modified without written approval from the Office of Water Resources.

c. The flow through the Tank 52/58 Treatment System shall be measured via a flowmeter and totalizer. A logbook shall be kept to document the start and end of each discharge and the total flow discharged through the system

d. The treatment system shall be inspected at a minimum of once per day when operating to assure the system is operating efficiently. As a result of these inspections, appropriate actions shall be taken immediately to resolve any problems discovered during the inspection. Records documenting the inspections and any actions taken shall be retained and made available to the Office of Water Resources upon request.

e. Discharge shall cease and DEM shall be notified if any of the limits listed in Part I.A.4-5. are exceeded. The discharge may recommence once steps have been taken to ensure the limits will not be exceeded again and after DEM approval.

f. This permit authorizes the use of the chemical additives Redux 210/345 and Redux 100 in the Tank 52/58 treatment system, manufactured by Azure Water Services, for the purposes of keeping iron dissolved in the process water stream to prevent fouling of the NMF system and as an anti-foaming agent to prevent fouling of the

air stripper component of the NMF system, respectively, at concentrations in the discharge not to exceed 2,000 mg/L and 183 mg/L, respectively.

g. The permittee shall obtain Department approval before increasing the amount of any of the treatment chemicals listed in Part I.A.28.f or prior to using any other additive(s) in conjunction with or in place of the treatment chemicals listed in Part I.A.28.f of this permit. Prior to using any other chemical additives, the permittee shall submit for DEM approval a complete list of all chemical additives, including Safety Data Sheets (SDS). The permittee shall not begin to use any other additional chemical additives other than those specified in Part I.A.28.f of this permit without prior written approval from the Office of Water Resources.

29. Main Tank Farm Oil/Water Separator

a. Until closure of the Main Tank Farm Oil/Water Separator, all surface runoff from the product storage area at the main tank farm and office/parking areas, and hydrostatic test water shall be treated by the Main Tank Farm Oil/Water Separator prior to reaching Aeration Lagoon #1 in the Vanity Fair Area. Upon startup of the Highland Tank Model HTC 25,000-gallon capacity aboveground oil/water separator as described in Part IV of the Fact Sheet, final treatment shall consist of that Highland Tank Model HTC 25,000-gallon capacity aboveground oil/water separator.

b. The release of runoff from any diked area, holding basin, or any area noted above shall be controlled so that this discharge alone or in combination with all other wastewater's does not exceed the optimum design flow rates for the oil/water separator or cause violations of the effluent limitations specified in this permit. The design flow rate for the Main Tank Farm Oil/Water Separator servicing internal outfall 400A is: 2,500 GPM.

c. Storm water accumulated in holding basins or tank dike areas shall be inspected to verify that it is free of product or sheen prior to draining to any other storm water handling system at the terminal. Tank dike areas shall be drained as necessary to provide adequate secondary containment in the event of a release from a tank. If a sheen is detected the area will be covered with oil adsorbent blankets to collect petroleum product. After the sheen has been absorbed and the absorbent blankets have been removed, the draining process will begin. If the amount of petroleum product is such that professional clean-up action is required than all the liquid from that containment area shall be removed and disposed of properly off site.

d. The wastewater collection and treatment system shall be operated and maintained in order to provide optimal treatment of the wastewaters prior to discharge to the receiving water.

e. The SWPPP in Part I.B shall specifically address the adequacy of containment of leaks and spills in storage areas (from drums, additive tanks, petroleum product tanks, etc.) and truck loading area(s). Adequate containment must exist at these locations so as to prevent untreated discharges from reaching any surface waters.

f. A schedule for routinely inspecting and cleaning the Main Tank Farm Oil/Water Separator for both sludge layer and oil layer shall be specified in the SWPPP, as needed. This schedule will be developed based on the results of initial startup of the system. The permittee shall use the same inspection frequency for the secondary containment areas as is specified for the oil/water separator with cleaning being performed as necessary. In addition, the SWPPP shall identify procedures for insuring compliance with the permit during such cleaning or maintenance periods.

g. The permittee shall assure the proper management of solid and hazardous waste in accordance with regulations promulgated under the Solid Waste Disposal Act, as amended, by the Resource Conservation and Recovery Act (RCRA) of 1978 (40 U.S.C. 6901 et seq.), or amendments thereto.

30. Vanity Fair Oil/Water Separator

a. Monitoring and Recordkeeping

Listed below are monitoring and recordkeeping requirements for the Vanity Fair Separator:

(1) The separator shall be visually checked at least five (5) days a week to determine its water level and to observe the condition of the free-floating petroleum hydrocarbons.

(2) Sludge build-up in the separator shall be monitored by taking measurements on a monthly basis at the inlet compartment. Downstream compartments will be checked as sludge builds up in the upstream compartments. The results of the measurements will be recorded.

b. Skimming Operation

Skimming petroleum residue shall be done on an as required basis. Floating petroleum residue will be skimmed frequently enough so it will be contained in the first compartment. All petroleum hydrocarbons skimmed from the separator will be disposed of in accordance with all applicable laws and regulations.

c. Sludge Removal

The Terminal Supervisor will evaluate the amount of the sludge build-up and determine the need for cleaning and removal once a month. Under no conditions shall sludge be allowed to build up in compartments two (2) and three (3) that would result in exceeding the RIPDES limits of the system.

31. Lagoons and Outfall

a. Monitoring and Recordkeeping

(1) The two (2) lagoons shall be visually checked at least once per month to determine if any floating hydrocarbons have reached the lagoons, or if any other unusual conditions exist. Special attention shall be paid to the outfall, weir and measurement equipment. The operator will note the date, time, and other relevant facts. Any indication of floating hydrocarbons on either lagoon will be reported to the Terminal Supervisor.

(2) While the pump at the Main Tank Farm Separator is running, the operator shall periodically visually inspect the water passing through the weir and outfall.

(3) Calibration of the weir flow measurement shall be made once each calendar year and in no event longer than thirteen (13) months after the prior calibration. Documentation shall be kept at the Terminal Office.

B. STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

1. A Storm Water Pollution Prevention Plan (SWPPP) shall be maintained and implemented by the permittee. The SWPPP shall be prepared in accordance with good engineering practices and identify potential sources of pollutants, which may reasonably be expected

to affect the quality of storm water discharges from the facility. In addition, the Plan shall describe and ensure the implementation of Best Management Practices (BMPs) which are to be used to reduce or eliminate the pollutants in storm water discharges at the facility and to assure compliance with the terms and conditions of this permit.

2. The Plan shall be signed by the permittee in accordance with §1.12 of the RIPDES Regulations (See 250-RICR-150-10-1.12) and retained on-site for at least five (5) years. The Plan shall be made available upon request to the DEM.

3. If the Plan is reviewed by the DEM, he or she may notify the permittee at any time that the Plan does not meet one or more of the minimum requirements of this part. After such notification from the DEM, the permittee shall make changes to the 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.

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

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

   a. Description of Potential Pollutant Sources. The Plan must provide a description of potential sources which may be reasonably expected to add significant amounts of pollutants to storm water discharges or that may result in unauthorized spills or releases to the environment. It must identify all activities and significant materials, which may potentially be significant pollutant sources.

      Each plan shall include:

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

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

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

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

measures to reduce pollutants in storm water runoff; and description of any treatment the storm water receives;

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

(6) A list of any pollutants limited in effluent guidelines to which a facility is subject under 40 CFR Subchapter N, any pollutants listed on a RIPDES permit to discharge process water, and any information required under §1.11.D of the RIPDES Regulations (See 250-RICR-150-10-1.11D) or 40 CFR 122.21(g)(iii)-(v);

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

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

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

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

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

(3) *Preventative Maintenance.* A preventative maintenance program must involve inspection and maintenance of storm water management devices (i.e., oil/water separators, catch basins) as well as inspecting and testing terminal equipment and systems to uncover conditions that could cause breakdown or failures resulting in discharges of pollutants to surface waters. Parts I.A. 29, 30 and 31 satisfactorily address this requirement for the oil/water separators and treatment lagoons.

(4) *Good Housekeeping.* Good housekeeping requires the maintenance of a clean, orderly facility. If applicable, the following areas must be specifically addressed:

i. Vehicle and Equipment Storage Areas: The storage of vehicles and equipment with actual or potential fluid leaks must be confined to designated areas (delineated on the site map). The SWPPP must describe measures that prevent or minimize contamination of the storm water runoff from these areas. The facility shall consider the use of drip pans under vehicles and equipment, indoor storage of the vehicles and equipment, installation of berming and diking of this area, use of absorbents, roofing or covering storage areas, cleaning pavement surface to remove oil and grease, or other equivalent methods.

ii. Truck Loading Racks: The SWPPP must describe measures that prevent or minimize contamination of the storm water runoff from fuel loading areas. The facility shall consider berming the loading rack area(s), using spill and overflow protection and cleanup equipment, minimizing run-on/runoff of storm water to the loading rack area(s) by way of storm water drains, using dry cleanup methods, collecting the storm water runoff and providing treatment or recycling, or other equivalent measures.

iii. Material Storage Areas: Storage units of all materials (e.g., used oil, used oil filters, spent solvents, paint wastes, radiator fluids, transmission fluids, hydraulic fluids) must be maintained in good condition, so as to prevent contamination of storm water, and plainly labeled (e.g., "used oil", "spent solvents", etc.). The SWPPP must describe measures that prevent or minimize contamination of the storm water runoff from such storage areas. The facility shall consider indoor storage of the materials, installation of berming and diking of the area, minimizing run-on/runoff of storm water to the areas, using dry cleanup methods, collecting the storm water runoff and providing treatment, or other equivalent methods.

iv. Vehicle and Equipment Cleaning Areas: The SWPPP must describe measures that prevent the discharge of vehicle and equipment wash waters, including tank cleaning operations. The facility shall consider performing all cleaning operations indoors, covering the cleaning operation, ensuring that all wash waters drain to the intended collection system, collecting the storm water runoff from the cleaning area and providing treatment or recycling, or other equivalent measures. These discharges are not authorized by this permit.

v. Vehicle and Equipment Maintenance Areas: The SWPPP must describe measures that prevent or minimize contamination of the storm water runoff from all areas used for vehicle and equipment maintenance. The facility shall consider performing all maintenance activities indoors, using drip pans, maintaining an organized inventory of materials used in the shop, draining all parts of fluids prior to disposal, prohibiting wet cleanup practices where the practices would result in the discharge of pollutants to storm water drainage systems, using dry cleanup methods, collecting the storm water runoff from the maintenance area and providing treatment or recycling, minimizing run-on/runoff of storm water areas or other equivalent measures.

(5) *Spill Prevention and Response Procedure.* For each area identified in Part I.B.5.a.(5), the potential for spills to enter the storm water drainage system must be eliminated wherever feasible. Where appropriate, specific

material handling procedures, storage requirements, and procedures for cleaning up spills must be identified in the Plan and made available to the appropriate personnel. The necessary equipment to implement a clean-up must also be made available to personnel. The permittee shall immediately notify the Office of releases in excess of reportable quantities to Waters of the State.

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

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

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

(9) Disposal Procedures. The disposal procedures for tank bottom waters, tank bottom sludge, oil/water separator sediments, oil/water separator oils, oil absorbent cleaning material(s) and any wash down waters containing detergents, dispersants, emulsifiers, etc. must be documented in the SWPPP.

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

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

c. Site Inspection. An annual site inspection must be conducted by appropriate personnel to verify that the description of potential pollutant sources required under Part B.5.a. is accurate, that the drainage plan has been updated or otherwise modified to reflect current conditions, and controls to reduce pollutants in storm water discharges identified in the Plan are being implemented and are adequate. The following areas shall be included in all inspections: storage areas for vehicles and equipment awaiting maintenance, truck loading rack area(s), vehicle and equipment maintenance areas (both indoors and outdoors), material storage areas, vehicle and equipment cleaning areas, and loading and unloading areas. A tracking or follow up procedure must be used to ensure that the appropriate action has been taken in response to the inspection. A copy of the annual site inspection report and records documenting significant observations made during the site inspection must be retained as part of the SWPPP for a minimum of five (5) years.

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

C. 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 testing required by this permit, is performed in conformance with methods listed in 40 CFR 136. In accordance with 40 CFR 136, EPA approved analysis techniques, quality assurance procedures and quality control procedures shall be followed for all reports required to be submitted under the Rhode Island Pollutant Discharge Elimination System (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).

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

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

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

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

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

LIST OF TOXIC POLLUTANTS

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

Volatiles		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		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		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		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		MDL ug/l (ppb)
1B	acenaphthene*	1.0
2B	acenaphthylene*	1.0
3B	anthracene*	1.0
4B	benzidine	4.0
5B	benzo(a)anthracene*	0.02
6B	benzo(a)pyrene*	0.03
7B	3,4-benzofluoranthene*	0.018
8B	benzo(ghi)perylene*	2.0
9B	benzo(k)fluoranthene*	0.02
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*	0.15
19B	dibenzo (a,h)anthracene*	0.04
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*	0.043
38B	isophorone	1.0
39B	naphthalene*	1.0
40B	nitrobenzene	1.0
41B	N-nitrosodimethylamine	1.0
42B	N-nitrosodi-n-propylamine	1.0
43B	N-nitrosodiphenylamine	1.0
44B	phenanthrene*	1.0
45B	pyrene*	1.0
46B	1,2,4-trichlorobenzene	1.0

OTHER TOXIC POLLUTANTS

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

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

NOTE:

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

D. MONITORING AND REPORTING

1. Monitoring

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

2. Submittal of DMRs Using NetDMR

a. 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.

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

- DMR Cover Letters
- Below Detection Limit summary tables
- Priority Pollutant Scan results for Outfalls 001A and 600A per Part I.A.13 of the permit

All other reports must be submitted to DEM hard copy via mail.

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

c. 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 when submitted to DEM.

- Transfer of Permit notice
- Request for changes in sampling location
- Request for reduction in testing frequency
- Request to add chemicals to the collection and treatment system per Part I.A.17 of the permit
- Notice of proposed hydrostatic test water discharges and test water results per Part I.A.26 of the permit
- Request to modify the Silver Spring Golf Course Area – Vanity Fair Area ENS per Part I.A.27.b of the permit
- Request to modify the Tank 52/58 Treatment System per Part I.A.28.b of the permit
- Request to increase the amount of chemicals or add additional chemicals to the Tank 52/58 Treatment System per Part I.A.28.g of the permit
- Written notifications required under Part II
- Notice of unauthorized discharges
- Amendments to the SWPPP per Parts I.B.3 and I.B.4 of the permit

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

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.

RI0001333

NAME AND ADDRESS OF APPLICANT:

ExxonMobil Pipeline Company
22777 Springwoods Village Parkway
Room No. E.3.5A.618
Spring, Texas 77389

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

ExxonMobil Oil Corporation- East Providence Terminal
1001 Wampanoag Trail
East Providence, Rhode Island 02915

RECEIVING WATER:

Providence River (Waterbody ID# RI0007020E-01B)

CLASSIFICATION:

SB1{a}

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

The above-named applicant has applied to the Rhode Island Department of Environmental Management for reissuance of a RIPDES Permit to discharge into the designated receiving waters. The facility is engaged in the storage and distribution of refined petroleum products. The discharge is to the Providence River for Outfall 001A.

II. Permit Limitations and Conditions

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

III. Description of Discharge

The discharge from Outfall 001A consists of storm water, hydrostatic test water, groundwater infiltration/inflow, treated effluent from the PCS groundwater treatment system, treated effluent from Tank 52/58 treatment system, treated effluent from the Vanity Fair Cliffs Area Recovery treatment system, treated effluent from the Silver Springs Golf Course – Vanity Fair Area Engineered Natural System (ENS), and any allowable non-storm water discharges. Allowable non-storm water discharges are limited to discharges from firefighting activities; fire hydrant flushings; routine external building washdown / power wash water that does not use detergents or hazardous cleaning products (such as those containing bleach, hydrofluoric acid, muriatic acid, sodium

hydroxide, nonylphenols); lawn watering; uncontaminated groundwater; springs; air conditioning condensate; potable waterline flushings; irrigation drainage; foundation or footing drains where flows are not contaminated with process materials, such as solvents, or contaminated by contact with soils, where spills or leaks of toxic or hazardous materials have occurred; water sprayed for dust control or at a truck load wet-down station; incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of the facility, but NOT intentional discharges from the cooling towner (e.g., "piped" cooling tower blowdown or drains); uncontaminated utility vault dewatering; dechlorinated water line testing water; hydrostatic test water that does not contain any treatment chemicals and is not contaminated with process chemicals; discharges from washing of vehicles provided: chemicals, soaps, detergents, hazardous cleaning products (such as those containing bleach, hydrofluoric acid, muriatic acid, sodium hydroxide, nonylphenols), steam, or heated water are not used; cleaning is restricted to the outside of the vehicle (e.g., no engines, transmissions, undercarriages, or truck beds); or washing is not used to remove accumulated industrial materials, paint residues, heavy metals or any other potentially hazardous materials from surfaces; and discharges from washing of marine vessels provided chemicals, soaps, detergents, hazardous cleaning products (such as those containing bleach, hydrofluoric acid, muriatic acid, sodium hydroxide, nonylphenols), steam, or heated water are not used an the washing is not used to remove topside or bottom paint; marine growth, or other potentially hazardous materials from vessels. These allowable non-storm water discharges are consistent with those allowed under DEM's 2019 Multi-Sector General Permit, and any that will be present in the discharge must be identified in the facility's SWPPP. All storm water and groundwater infiltration/inflow are treated by one (1) of two (2) oil/water separators (Vanity Fair Separator or Main Tank Farm Separator) and two (2) settling lagoons in series prior to discharge from Outfall 001. The effluent from the PCS groundwater treatment system, the Tank 58 treatment system, treated effluent from the Vanity Fair Cliffs Area Recovery treatment system, and treated effluent from the Silver Springs Golf Course – Vanity Fair Area Engineered Natural System (ENS) is discharged downstream of the Main Tank Farm Oil/Water Separator and subsequently treated by the two (2) settling lagoons prior to discharge from Outfall 001.

Outfall 001 discharges to the Providence River in the segment defined as water body ID number RI0007020E-01B. This segment is described as the Providence River from its confluence with the Moshassuck and Woonasquatucket Rivers in Providence south and south of a line from India Point to Bold Point (across the mouth of the Seekonk River), to a line extending from a point on shore due east of Naushon Avenue in Warwick to the western terminus of Beach Road in East Providence, including Watchemoket Cove in the cities of East Providence, Providence, Cranston and Warwick. This segment is classified as a Class SB1{a} water body according to the RI Water Quality Regulations. Class 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. The Providence River in this segment has been assigned a partial use designation of {a}, where these waters will likely be impacted by combined sewer overflows in accordance with approved CSO Facilities Plans. Therefore, primary contact recreational activities; shell fishing uses; and fish and wildlife habitat will likely be restricted. Currently, this segment was listed as a Category 5/303(d) Listed Water during the 2016 assessment cycle for not supporting fish and wildlife habitat due to Total Nitrogen and Dissolved Oxygen impairments with a target date of 2022 for a TMDL dependent on upgrades to nearby wastewater treatment facilities. In addition, this segment was listed as not supporting primary and secondary contact recreation due to Fecal Coliform impairments with a target date of 2022 for a TMDL. It was noted for the latter that compliance with an existing Consent Agreement for CSO abatement expected to negate the need for a TMDL analysis by the DEM.

A quantitative description of the discharges from the treatment lagoons in terms of significant effluent parameters based on Discharge Monitoring Report Data for the past five (5) years is shown in Attachments A-1, A-2, A-3, A-4, A-5, and A-6. Attachment A-7 includes a site location map; Attachment A-8 a site drainage plan; Attachment A-9 a flow diagram and water balance for all discharges from the site as described above for Outfall 001; and Attachment A-10 a flow diagram

and water balance for the discharge from the Silver Springs Golf Course Area – Vanity Fair Area ENS.

IV. Permit Basis and Explanation of Effluent Limitation Derivation

Description of the Facility and Discharge(s)

ExxonMobil Pipeline Company owns and operates the ExxonMobil Oil Corporation-East Providence Terminal located at 1001 Wampanoag Trail, East Providence, Rhode Island. Refined petroleum products (three (3) grades of gasoline, diesel and ethanol) are transported to the facility by marine tankers or barges and off-loaded to storage tanks. Deliveries are then made to the truck rack. The facility has the capability to load vessels from the dock, but this is uncommon.

The East Providence Terminal is also the site of an active remediation project due to the presence of a contaminated plume of non-aqueous phase product. Remedial activity consists of the operation of a series of extraction wells located around the perimeter of the Terminal property, termed the Perimeter Containment System (PCS). RIDEM issued Order of Approval SROA 95-024 for the PCS system. The goal of the PCS is to artificially alter the flow patterns of groundwater by pumping at high rates in order to prevent further off-site migration of pollutants. The contaminated groundwater is then pumped to an on-site groundwater treatment system and discharged to the Providence River via the existing storm water drainage system. The treatment system consists of the following: metals treatment, air-stripping, and granular activated carbon absorption.

The permit authorizes the discharge from one (1) outfall to surface waters: Outfall 001A, , and six (6) internal outfalls: Outfall 100A, Outfall 200A, Outfall 300A, Outfall 400A, Outfall 500A, and Outfall 600A, as described below

Outfall 001A: The discharge from Outfall 001A consists of storm water, hydrostatic test water, groundwater infiltration/inflow, treated effluent from the PCS groundwater treatment system, treated effluent from Tank 52/58 treatment system, treated effluent from the Vanity Fair Cliffs Area Recovery treatment system, and any identified allowable non-storm water discharges. Storm water and groundwater infiltration/inflow is treated by one (1) of two (2) oil/water separators (Vanity Fair Separator or Main Tank Farm Separator) and two (2) settling lagoons in series. Infiltration/Inflow of contaminated groundwater into the storm water collection and treatment system shall be addressed by the permittee pursuant to Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases. The effluent from the PCS groundwater treatment system, the Tank 52/58 treatment system, and treated effluent from the Vanity Fair Cliffs Area Recovery treatment system is discharged downstream of the Main Tank Farm Oil/Water Separator and subsequently treated by the two (2) settling lagoons.

Outfall 100A: The discharge from Outfall 100A consists entirely of treated effluent from the PCS groundwater treatment system. Outfall 100A is an internal waste stream associated with Outfall 001A and is defined as the effluent of the PCS groundwater treatment system (see Attachment A-11 for a detailed flow schematic of the system). In a June 25, 2018 request for permit modification and notice of planned physical alterations or additions to the permitted facility (submitted by Roux Associates, Inc. (Roux) on behalf of ExxonMobil Oil Corporation (Exxon), it was noted that the two existing air stripper towers would be replaced with two shallow tray air strippers. The proposed modification reflects a technology upgrade to match industry standards and does not affect pollutant mass loadings or flow rate of the PCS treatment system effluent. During a July 29, 2019 compliance inspection of the East Providence Terminal it was noted that the shallow tray air strippers were installed and operational, while the air stripper towers had been decommissioned.

Outfall 200A: The discharge from Outfall 200A consists of treated effluent from the Tank 52/58 treatment system (see Attachment A-12 for a detailed flow diagram of the system). Outfall 200A is also an internal waste stream associated with Outfall 001A and is defined as the effluent of the Tank 52/58 treatment system. The Tank 52/58 system has been designed to treat wastewater

pumped from Tank 52 or Tank 58, which are used to store the following wastewaters generated on-site: tank bottom water, vessel ballast water, tank truck wash water, and storm water and wash water from the spill tank at the truck loading rack. In a revised RIPDES renewal application submitted on June 30, 2014 ExxonMobil included updated information to reflect a biological treatment component to the Tank 52 or 58 wastewaters. The existing authorized treatment system consisting of oil/water separation, organoclay sorption, and granular activated carbon was designed to remove BTEX and MTBE, but not ethanol. As noted in the revised application, a March 25, 2014 letter from ExxonMobil to the DEM described how the Tank 58 contents (approximately 1,609,000 gallons of "contact water" generated from the terminal truck loading rack, storage tank water bottoms, and incidental precipitation) were treated with the existing Tank 58 treatment system and transferred to Tank 52 so that Tank 58 could be taken out of service for an API 653 inspection, but preliminary sampling indicated elevated levels of ethanol. To address the ethanol levels ExxonMobil had Arcadis U.S., Inc. perform bench testing (Arcadis report is available for review upon request) of a biological treatment process seeded with POTW digester sludge, and was able to reduce ethanol concentrations to below detection (<0.1 mg/L) in approximately 48 hours. It was estimated that the treatment of 1.6 million gallons of wastewater within a closed loop biological treatment process would take 2 - 3 months to reach an ethanol concentration of less than 2 mg/L. As a result of the above study, ExxonMobil proposed to install a system to recirculate the Tank 52 contact water through a series of aeration tanks and weirs and utilize digester sludge from the East Providence Municipal Waste Water Treatment Plant to treat the ethanol and any residual BTEX in the contact water prior to discharge. The treatment material would consist of a nutrient (Diammonium Phosphate) and biological inoculum (sludge). Following testing of the above system, it was determined that the above treatment method would be able to comply with the effluent limits in Part I.A.4-5. In a June 25, 2018 request for permit modification and notice of planned physical alterations or additions to the permitted facility (submitted by Roux Associates, Inc. (Roux) on behalf of ExxonMobil Oil Corporation (Exxon), it was proposed for Outfall 200A the installation of a Natural Media Filter (NMF) system to treat the contact water. The NMF was initially designed to operate at a flow rate of 6 gpm, with flow into the system being adjusted based on system performance. The NMF design includes a three-phase treatment approach comprised of storage tanks a Natural Media Filter treatment cell, and an air stripper with off-gas treatment. The first phase of the treatment system will be up to three frac tanks to provide temporary detention of contact water, the second phase of the system will be the compost based NMF designed for removal of iron and ethanol, and the third phase will be an air stripper and off-gas treatment to reduce the concentration of VOCs. Following the June 25th modification request, Roux submitted information regarding potential chemical addition in the Tank 52/58 NMF system. Roux proposed using either Redux 210 or 345 at a rate of 180 ppm / 4.9 gallons per day // 44 pounds per day, in order to keep iron dissolved in the process water stream to prevent precipitation and fouling of the NMF system. Roux also proposed the use of Redux 100 at a rate of 20 ppm / 0.65 gallons per day / 5 pounds per day, in order to prevent excess foaming that has the potential to cause fouling of the air stripper component of the system. These dosing rates were for a daily maximum discharge flow rate of 20 gpm of the NMF system. The daily maximum discharge flow rate of the treatment system was determined to have to be greater than 6 gpm included in the June 25th modification request due to the inability of limiting the frac tank discharge to 6 gpm. The maximum daily flow rate has been limited to 20 gpm in accordance with the above information. Part I.A.28.f of the permit limits the types of treatment chemicals used to ensure that their use will not result in aquatic life toxicity, based on a comparison of treatment chemical concentrations against the toxic levels listed it he applicable Safety Data Sheets (SDS). The permit includes the following conditions for the Tank 52/58 system: proper operation and maintenance; the permittee shall treat all wastewaters above with the system as described, which can be modified with written approval of the DEM; flow measurement and recordkeeping requirements; inspection of the system at a minimum of once per discharge; notification and shut down of the system if the permit limits are exceeded; approval of the use of the above treatment chemicals Redux 210/345 and Redux 100 at 2,000 ppm and 183 ppm, respectively; and the permittee must obtain written approval form the DEM for before increasing the amount of any of the treatment chemicals listed in Part I.A.28.f or prior to using any other additive(s) in conjunction with or in place of the treatment chemicals listed above. Although this system has not had a discharge in several years, the permit includes

appropriate limits so that ExxonMobil Oil Corporation can reactivate at any time the Tank 52/58 system should it become necessitated.

Outfall 300A: The discharge from Outfall 300A consists of treated effluent from Vanity Fair Cliffs Area Recovery System (see Attachment A-13 for a detailed flow schematic of the system). Outfall 300A is an internal waste stream associated with Outfall 001A and is defined as the effluent of the Vanity Fair Cliffs Area Recovery System. The Vanity Fair Cliffs Area Recovery System was designed to minimize pollutant loadings to the Vanity Fair Area Oil/Water separator, minimize groundwater infiltration to the existing storm sewer system, and prevent free product seeping from the Vanity Fair Area Cliffs from contacting storm water (Remedial Action Work Plan for the Vanity Fair Cliffs Area Recovery System, April 16, 1998). The 'Feasibility Study for Flow to the Vanity Fair Area Oil/Water Separator' (Roux Associates, 1997) identified free product and impacted groundwater seepage areas at the base of the Vanity Fair Area Cliffs and the adjacent area to the south.

Outfall 400A: Outfall 400A consists of storm water from the product storage area at the main tank farm, office/ parking areas and hydrostatic test water. These waters are treated by the main oil/water separator. Outfall 400A is an internal waste stream associated with Outfall 001A and is defined as the effluent from the main oil/water separator. In a June 25, 2018 request for permit modification and notice of planned physical alterations or additions to the permitted facility (submitted by Roux Associates, Inc. (Roux) on behalf of ExxonMobil Oil Corporation (Exxon), it was noted that one of the proposed modifications was the replacement of the Main Tank Farm Oil/Water Separator in the South Operations Area of the facility. The proposed modification reflects a technology upgrade. Flow rate from will increase from 1,450 gpm from the existing separator to 2,500 gpm with the installation of the proposed oil water separator. In a December 1, 2017 notice submitted to the DEM by Roux on behalf of ExxonMobil, the draft design for the Main Tank Farm Separator retrofit was presented to DEM for review and approval. The aboveground separator is of modern design and is sized to comply with the requirements in the *R.I. Stormwater Design and Installation Standards Manual (RISDSIM; latest amendment), Appendix C: Guidance for Retrofitting Existing Development for Stormwater Management.* The following are the key design aspects as noted in the December 1st submission:

- Improved pollutant removal efficiency and designed to treat storm water from the above areas up to a 25-year storm event.
- The RISDISM and U.S. Department of Agriculture Technical Release 55 were used to perform a runoff analysis to size the retrofitted separator.
- The replacement separator will utilize the existing 60-inch diameter storm sewer to convey storm after from the North Operations to a wet well equipped with redundant 2,500 gpm positive displacement pumps. The pumps will direct the storm water to be treated by the separator and then will be discharged back into the downstream portion of the existing 60-inch storm sewer line. From the 60-inch storm sewer following the separator, the treated storm water will enter a lift station and will be pumped to Aeration Lagoon #1 in the Vanity Fair Area of the site. However, upon start-up of the new OWS it may be determined that a lift station will not be necessary to convey treated storm water to Aeration Lagoon #1 if sufficient head pressure exists for a gravity feed.
- The aboveground separator is a Highland Tank Model HTC 25,000-gallon capacity separator with easy access hatches. The design flow rate is 2,500 gpm with a 10-minute retention time. The separator will have baffle plates to reduce the velocity of sediment and a Corella Plate Coalescer for enhanced oil and grease removal.
- The separator will include gauging ports, alarm sensors, and contain foam insulation and immersion heaters for winterization.

The DEM approved the design of the proposed oil/water separator in a letter dated March 7, 2018.

Outfall 500A: Outfall 500A consists of storm water from the Vanity Fair Oil/Water Separator. Outfall 500A is an internal waste stream associated with Outfall 001A and is defined as the effluent from the Vanity Fair Oil/Water Separator.

Outfall 600A: The discharge from Outfall 600A consists of treated effluent from the Silver Springs Golf Course – Vanity Fair Area Engineered Natural System (ENS) and any identified allowable non-storm water discharges. Outfall 600A is an internal waste stream associated with Outfall 001A and is defined as the effluent of the ENS treatment system. Shallow groundwater, surface water, and stormwater in the Silver Springs Golf Course area of the Vanity Fair Area is treated by an ENS that consists of a permeable reactive barrier (PRB), subsurface flow constructed treatment wetland (CTW), and/or contingency treatment system (as-needed) prior to discharge from Outfall 600 into the final treatment lagoons that ultimately discharge to the Providence River. The contingency treatment system will operate only if discharge limitations are not met by the PRB and CTW. In a June 25, 2018 request for permit modification and notice of planned physical alterations or additions to the permitted facility (submitted by Roux Associates, Inc. (Roux) on behalf of ExxonMobil Oil Corporation (Exxon), it was noted that the addition of Outfall 002 was proposed in a previous request for permit modification dated September 22, 2015. The September 22nd permit modification submission noted that details of the proposed ENS are included in a Remedial Action Work Plan (RAWP) dated July 7, 2014 and a response to DEM comments letter dated March 13, 2015. The DEM Office of Waste Management issued Order of Approval No. SR-10-0831E on September 16, 2015 for the above RAWP, for installation and operation of the ENS at the Silver Springs Golf Course Area of the facility. The Order of Approval required that a final Operations and Maintenance Plan be submitted to the DEM for review and approval and be adhered to during the life of the ENS. A Final O&M Manual dated January 20, 2017 and revised January 10, 2020 has been submitted to DEM to assure the system is operating efficiently. These documents can be made available upon request to DEM. The ENS components include a permeable reactive barrier (PRB) to remove dissolved iron from shallow groundwater, a subsurface flow constructed treatment wetland to remove petroleum related contaminants of concern in shallow groundwater and surface water, and installation of a contingency treatment system for removal of petroleum related contaminants of concern from shallow groundwater and surface water during construction of the PRB and wetland and subsequent startup. The constructed treatment wetland was designed based on the performance testing data collected from a pilot system installed in the southern end of the Silver Springs Golf Course in 1996. In addition, the June 25, 2018 submission noted that Roux has been evaluating options to reduce the amount of non-impacted surface water and runoff that is directed to the ENS, and in this effort installed a storm water runoff collection trench on the eastern edge of the Silver Springs Golf Course in December 2017. Future proposed modifications to drainage in the Silver Springs Golf Course will be made in writing to the DEM. Also, the June 25th submittal included analytical data for the ENS, contingency treatment system, and surrounding area. During a July 29, 2019 compliance inspection of the East Providence Terminal it was noted that the ENS and contingency treatment system were operational.

General Requirements

The requirements set forth in this permit are from the State's Water Quality Regulations and the State's Regulations for the Rhode Island Pollutant Discharge Elimination System, both filed pursuant to RIGL Chapter 46-12, as amended. 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).

Explanation of Effluent Limitation Derivation

Development of Rhode Island Pollutant Discharge Elimination System (RIPDES) permit limitations is a multi-step process consisting of the following steps: calculating allowable water quality-based discharge levels based on in-stream criteria, background data and available dilution; identifying any technology-based limits that apply to the facility; assigning appropriate Best Professional Judgment (BPJ) limits; setting the most stringent of these limits (water quality-based, technology-based, and BPJ-based) as the final allowable discharge levels; comparing existing permit limits to the new allowable discharge levels; and evaluating the ability of the facility to meet the final permit effluent limits.

The in-stream dilution factor was determined based on the results of computer modeling of the outfall 001 into the Providence River, using the CORMIX model. CORMIX is a hydrodynamic simulation model that predicts dilution based on the following: effluent buoyancy, ambient density stratification, discharge velocity, and ambient receiving water velocity. It, however, yielded a dilution factor of 11.5:1 which exceeded the maximum allowable dilution factor for groundwater remediation projects (per RIDEM policy) of 10:1. Therefore, a dilution factor of 10:1 was used to establish the permit limits, assuring a significant margin of safety.

The draft RIDES permit for ExxonMobil Oil Corporation, authorizing the discharge of treated storm water, hydrostatic test water, groundwater infiltration/inflow, treated effluent from the PCS groundwater treatment system, treated effluent from Tank 52/58 treatment system, treated effluent from the Silver Springs Golf Course – Vanity Fair Area Engineered Natural System, and treated effluent from the Vanity Fair Cliffs Area Recovery treatment system, and any allowable non-storm water discharges, includes numeric effluent limitations and requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP) for additional protection of the environment. The effluent parameters in the draft permit are discussed in more detail below following the effluent limitation derivation for the seven (7) outfalls being regulated by this permit:

Technology-based Limits

Technology based treatment requirements represent the minimum level of control that must be imposed under Section 402 and 301(b) of the CWA (see 40 CFR 125 Subpart A) to meet Best Practicable Control Technology Currently Available (BPT), Best Conventional Control Technology (BCT) for conventional pollutants, and Best Available Technology Economically Achievable (BAT) for toxic pollutants. EPA has not promulgated National Effluent Guidelines for storm water discharges from bulk storage petroleum facilities. In the absence of technology-based guidelines, DEM is authorized to use Best Professional Judgment (BPJ) to establish effluent limitations, in accordance with Section 402(a)(1) of the CWA.

Under Section 301 (b)(1)(C) of the CWA, discharges are subject to effluent limitations based on water quality standards. The Rhode Island Water Quality Standards include a narrative statement that prohibits the discharge of any pollutant or combination of pollutants in quantities that would be toxic or injurious to aquatic life. In addition, the State has adopted numerical criteria for specific pollutants.

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

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

BPJ-based Limits

Outfall 001A: Effluent limitations for Outfall 001A have been established for total suspended solids (TSS) and oil and grease. The effluent limitations for TSS are 33 mg/l and 21 mg/l for maximum daily and average monthly, respectively. TSS has been limited to account for the potential for petroleum hydrocarbons to adsorb or absorb to particulates and be transported with the suspended material. These limits are based on storm water runoff guidelines for petroleum refining facilities (50 Federal Register 28516, July 12, 1985). Although bulk petroleum storage terminals are not refineries, the guidelines do serve as guidance to available technology for the petroleum refining and handling industry. Based on Best Professional Judgment (BPJ), the permit establishes effluent limitations for TSS in accordance with these guidelines. The Draft Permit limit for oil and grease for Outfall 001A remains unchanged at 15 mg/l, for the maximum daily value. The effluent limitation for oil and grease is a technology-based limit based on American Petroleum Institute (API) oil/water separator guidelines. The ExxonMobil Oil Corporation has demonstrated its ability to meet the oil and grease permit condition in the current permit as shown in the summary of the discharge

monitoring data submitted during the time period of December 2008 to October 2019. Performance data from terminals similar to this facility and from this facility indicate that these effluent limits can be achieved through the proper operation of a correctly sized oil/water separator, appropriate source controls, routine inspections, preventative maintenance, good housekeeping programs, and effective best management practices (BMPs).

Ethanol is a fuel additive blended with gasoline as the gasoline oxygenate. Ethanol has replaced MTBE as an additive in Rhode Island. Monitoring for Ethanol has been removed from the requirements for Outfall 001 as historic effluent monitoring at Outfall 001 has demonstrated that the Ethanol concentrations in ExxonMobil's discharge is below the required MDL of 2.0 mg/L. Also, monitoring for MTBE has been removed from the requirements for Outfall 001 as historic effluent monitoring at Outfall 001 has demonstrated that the MTBE concentrations in ExxonMobil's discharge is well below the permit limit of 70 ug/L used for the facility's internal outfalls. Outfall 001A must be monitored for the following: benzene, toluene, ethylbenzene, and total xylenes. These pollutants were chosen because they are indicators used to characterize contamination from petroleum hydrocarbons and gasoline.

Following the 2008 permit reissuance, ExxonMobil appealed the Ethanol and MTBE sampling requirements for outfall 001A and the DEM and ExxonMobil entered into a Consent Agreement, RIA-401, to resolve these contested permit limits. ExxonMobil had indicated that there was limited potential for the discharge from outfall 001A to contain Ethanol and MTBE. In order to allow ExxonMobil to be able to stop testing for these pollutants if it was demonstrated that outfall 001A did not contain these pollutants, the permit was modified on March 18, 2011 to require ExxonMobil to perform monthly testing on samples collected from discharge Outfall 001A for Ethanol and MTBE and, if the results of twelve (12) consecutive months of monitoring showed effluent concentrations below the applicable minimum detection limits from the permit, then ExxonMobil would no longer be required to continue sampling for Ethanol and MTBE at outfall 001A. As indicated above, Ethanol and MTBE monitoring have been removed from the Outfall 001 monitoring requirements.

Outfalls 100A, 200A and 300A: Effluent limitations for Outfalls 100A, 200A and 300A were established for benzene, toluene, ethylbenzene, total xylenes, total BTEX, total iron, and sixteen polynuclear aromatic hydrocarbons (PAHs) to monitor the effectiveness of the PCS groundwater treatment system, the Tank 52/58 treatment system and the Vanity Fair Cliffs Area Recovery System and as they are indicators used to characterize contamination from the petroleum hydrocarbons stored at the site. For Outfalls 100A and 300A, the permit requires monthly analysis for benzene, toluene, ethylbenzene, total xylenes, total iron and naphthalene, and quarterly analysis of PAHs (minus naphthalene). For Outfall 200A, the permit requires three (3) grab samples shall be equally spaced over the course of drainage of Tank 52/58 and should be representative of the contents of the entire tank for benzene, toluene, ethylbenzene, total xylenes, and PAHs.

The limits for benzene, toluene, ethylbenzene, total xylenes, acenaphthene, acenaphthylene, anthracene, benzo (ghi) perylene, fluoranthene, fluorene, naphthalene, phenanthrene, and pyrene are the same as the previous permit in accordance with antibacksliding provisions. The limits for the seven (7) Polycyclic Aromatic Hydrocarbons (PAHs), which include benzo (a) anthracene, benzo (a) pyrene, benzo (b) fluoranthene, benzo (k) fluoranthene, chrysene, dibenzo (a,h) anthracene, and indeno (1,2,3 – cd) pyrene, were calculated based on the human health non-class A criteria from the Rhode Island Water Quality Regulations using an allocation factor of 80% and a dilution factor of 10 in accordance with the following equation: Limit = (dilution factor)(80%)(water quality criteria). The allocation of 80% is consistent with the DEM policy for assigning water quality-based limits when background data is not available for a given pollutant. There are no water quality criteria or technology-based limits for iron.

A potential contaminant of concern found in gasoline is methyl tertiary -butyl ether (MTBE). MTBE is a synthetic compound used as a blending component in gasoline. Since 1979 it has been used at low levels in gasoline to enhance octane levels and in some gasoline since 1992 to fulfill the oxygenate requirements established by the 1990 Clean Air Act Amendments. Due to its small

molecular size and solubility in water, MTBE moves rapidly into the ground water, faster than do other constituents of gasoline. Since the terminal no longer stores or dispenses MTBE on site, DEM anticipates that storm water alone will not contain MTBE. However, historic groundwater samples from monitoring wells on the property indicate elevated levels of MTBE in the groundwater. Since the PCS (outfall 100A) and Vanity Fair Cliffs area (outfall 300A) systems operate as groundwater treatment systems, removing residual contamination from the site, these discharges may contain MTBE. Monitoring reports from gasoline remediation sites demonstrate that using best available technology (e.g. air stripping and/ or carbon absorption) a MTBE limit of 70ug/l can be consistently met by a properly designed and maintained treatment system. Therefore, the DEM has established a technology-based effluent limit for MTBE of 70 ug/l for Outfalls 100A and 300A in the Draft Permit. In addition, since the Tank 52/58 area (Outfall 200A) has the potential to receive ethanol, ethanol monitoring has been included for this outfall.

Outfalls 400A and 500A: Outfalls 400A and 500A must be monitored for the following: TSS, oil and grease, benzene, toluene, ethylbenzene, (ethanol 400A) and total xylenes. These pollutants were chosen because they are indicators used to characterize contamination from petroleum hydrocarbons, which may be present in the storm water from these areas. Ethanol monitoring for Outfall 400A has been included in the permit since ethanol is stored in the main tank farm area and therefore, storm water that is discharged through Outfall 400A may contain ethanol.

Outfall 600A: Effluent limitations for Outfall 600A were established for TSS, benzene, toluene, ethylbenzene, total xylenes, total BTEX, MTBE, naphthalene, iron, and lead to monitor the Silver Springs Golf Course Area - Vanity Fair Cliffs Area Engineered Natural System (ENS) and/or contingency treatment system (as-needed) and as they are pollutants of concern as identified through on-site monitoring of shallow groundwater and stormwater and surface water runoff from the golf course area. The permit requires monthly analysis for TSS, benzene, toluene, ethylbenzene, total xylenes, MTBE, total iron, total lead, and naphthalene.

The effluent discharge limitations for Outfall 600A (except those for TSS) for benzene, toluene, ethylbenzene, total xylenes, and naphthalene are the same as those for Outfalls 100A, 200A, and 300A in accordance with antibacksliding provisions. There are no water quality criteria or technology-based limits for iron for a saltwater receiving waterbody and are monitor only requirements. Based on the Vanity Fair Silver Spring Golf Course Area analytical data that was submitted with the June 25, 2018 request for RIPDES permit modification, it was determined that there is reasonable potential for total lead (as sampled at the constructed treatment wetland effluent control structure) to exceed the proposed effluent limits taken from the RIPDES RGP. Therefore, numeric effluent limits were assigned for that parameter for Outfall 600. The effluent discharge limitations for Total Lead are based on those for Discharge Category C for Petroleum Sites Containing Other Pollutants discharging to Class SB receiving waters as shown in Part II.D.9 of the 2019 RIPDES Remediation General Permit (RGP) with a dilution factor of 10 to be consistent with the limits for Outfalls 100A, 200A, and 300A. A technology-based effluent limit for MTBE of 70 ug/l is being applied for Outfall 600A to be consistent with the limits assigned for Outfalls 100A, 200A, and 300A.

Water Quality-based Limits

The narrative effluent limitations for pH are based on water quality criteria established in the State's Water Quality Regulations for Saltwater Receiving Waters. In accordance with 40 CFR Part 122.4(d)(1)(iii), it is only necessary to establish limits for those pollutants in the discharge which have the reasonable potential to cause or contribute to the exceedance of the in-stream criteria. Because ExxonMobil was concerned that it would not be able to comply with the pH limits of 6.5 SU and 8.5 SU on a continuous basis, ExxonMobil requested a stay of the final permit limits of the 2008 permit and the DEM and ExxonMobil entered into a Consent Agreement, RIA-401, to resolve these contested permit limits.

The DEM and the ExxonMobil jointly agreed that ExxonMobil could conduct a pH study. The DEM reviewed and approved ExxonMobil's proposed Scope of Work for conducting the pH Study. The

results of the pH study indicated that, if the effluent is discharged with a pH of 6.0-9.0 SU, the in stream pH at the edge of the mixing zone would not exceed the applicable water quality criteria for pH of 6.5–8.5 SU. Based on the findings of the pH Evaluation Report the DEM modified the pH limitations in a March 18, 2011 permit modification to a range of 6.0–9.0 SU. The narrative effluent limitations for pH have been retained in this draft permit while the numeric effluent limitations contained in Part I.A.1. for Outfall 001 have been removed to be consistent with the monitoring strategy for similar RIPDES industrial storm water permits.

Hydrostatic Test Water: To ensure safe working conditions during maintenance work periods; storage vessels (welding, new tank floors, e.g.) and/or pipe networks are rigorously cleaned (e.g. "poly brushed", "squeegee pigged") and certified as being "gas free". The vessels and/or pipe networks are then hydrostatically tested after the maintenance work is completed. Thus, hydrostatic test water discharge should contain only minimal amounts of foreign matter and/or trace amounts of hydrocarbons. As a precaution, however, the hydrostatic test water shall go through the oil/water separator (effluent) in a controlled manner to prevent exceedance of the maximum design flow rate of the separator thereby reducing any potential carryover of oil into the receiving waters.

The permittee shall notify the Office of Water Resources at least twenty-four (24) hours prior to the commencement of any proposed hydrostatic-test water discharges. Prior to testing, the interior of the tank(s) and/or piping being tested shall be cleaned and certified to be free of petroleum product. There shall be no discharge of tank and/or pipe cleaning residual/debris to either of the oil/water separators or holding ponds.

The hydrostatic test water released from the tank(s), after treatment through the oil/water separator and lagoons, must satisfy all the effluent limitations and conditions of the permit. The surface of the oil/water separator should be routinely observed to determine if there is any detectable increase in the separated oil layer to prevent inadvertent hydrocarbon release to the receiving water(s). A logbook shall be kept to document the start and end of each hydrostatic test, the total flow discharged and all monitoring data.

In addition to hydrostatic testing of tanks, ExxonMobil occasionally tests piping using hydrostatic methods. Integrity testing of piping that is in service is typically pressure tested using petroleum product, or by using non-destructive testing methods, such as x-ray photography. New piping fabrications, consisting of piping that has not been in hydrocarbon service, will typically be hydrostatically tested using water. Hydrostatic test water is stored near the fabricating area in portable tanks before and after testing. Modification of existing piping consists of piping that has been in hydrocarbon service before, and the finished fabrications are not hydrostatically tested using water. If existing piping is hydrostatically tested with water, the water is managed as petroleum contact water and is not discharged.

The volume of water used to hydrostatically test new piping is a relatively small contribution to the overall facility flow, and would typically be 10,000 to 20,000 gallons per event, but could be as large as 150,000 gallons. The hydrostatic test water is stored in portable tanks before and after use in the piping fabrication, and may be reused on multiple fabrications during a project. The risk of contaminating the hydrostatic test water with pollutants is low because the pipe being tested has not been in petroleum service. On March 18, 2011 the permit was modified to simplify the sampling and testing requirements for piping hydrostatic testing water to reflect the limited potential for pollutants in the water in comparison to discharges of hydrostatic test water from petroleum storage tanks.

Should any RIPDES permit discharge parameter be exceeded, the hydrostatic test water transfer shall be halted immediately followed by notification to the DEM of the exceedence.

SWPPP: Pursuant to Section 304(e) of the CWA and 40 CFR§125.103(b), best management practices (BMPs) may be expressly incorporated into a permit on a case-by-case basis where necessary to carry out Section 402(a)(1) of the CWA. The facility stores and handles pollutants

listed as toxic under Section 307(a)(1) of the CWA or pollutants listed as hazardous under Section 311 of the CWA and has ancillary operations which could result in significant amounts of these pollutants reaching the Providence River. These operations include one or more of the following items from which there is or could be site runoff: materials storage, materials processing and handling, blending operations, intra-facility transfers, and loading/unloading of product. To control these activities/operations, which could contribute pollutants to waters of the United States via storm water discharges, at this facility; the permit requires this facility to maintain a Storm Water Pollution Prevention Plan (SWPPP) containing BMPs appropriate for this specific facility. The BMPs should include processes, procedures, schedule of activities, prohibitions on practices, and other management practices that prevent or reduce the discharge of pollutants in storm water runoff. The SWPPP shall be retained on-site for the duration of the authorization under this permit. This information must be made available to RIDEM upon request. The permit also outlines specific procedures to be followed for the proper operation and maintenance of the two (2) oil/water separators at the Main Tank Farm and Vanity Fair areas of the East Providence Terminal.

Prohibited Discharges

Non-storm Water Discharges: This permit authorizes certain non-storm water discharges consistent with DEM's 2019 Multi-Sector General Permit. Allowable non-storm water discharges are limited to discharges from firefighting activities; fire hydrant flushings; routine external building washdown / power wash water that does not use detergents or hazardous cleaning products (such as those containing bleach, hydrofluoric acid, muriatic acid, sodium hydroxide, nonylphenols); lawn watering; uncontaminated groundwater; springs; air conditioning condensate; potable waterline flushings; irrigation drainage; foundation or footing drains where flows are not contaminated with process materials, such as solvents, or contaminated by contact with soils, where spills or leaks of toxic or hazardous materials have occurred; water sprayed for dust control or at a truck load wet-down station; incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of the facility, but NOT intentional discharges from the cooling towner (e.g., "piped" cooling tower blowdown or drains); uncontaminated utility vault dewatering; dechlorinated water line testing water; hydrostatic test water that does not contain any treatment chemicals and is not contaminated with process chemicals; discharges from washing of vehicles provided: chemicals, soaps, detergents, hazardous cleaning products (such as those containing bleach, hydrofluoric acid, muriatic acid, sodium hydroxide, nonylphenols), steam, or heated water are not used; cleaning is restricted to the outside of the vehicle (e.g., no engines, transmissions, undercarriages, or truck beds); or washing is not used to remove accumulated industrial materials, paint residues, heavy metals or any other potentially hazardous materials from surfaces; and discharges from washing of marine vessels provided chemicals, soaps, detergents, hazardous cleaning products (such as those containing bleach, hydrofluoric acid, muriatic acid, sodium hydroxide, nonylphenols), steam, or heated water are not used an the washing is not used to remove topside or bottom paint; marine growth, or other potentially hazardous materials from vessels. To prevent hydrocarbon and/or particulate entrainment (carry-over) from the treatment system, the permittee shall not add chemicals, soaps, detergents, solvents, emulsifiers, etc. to any fresh water wash down collection and treatment system without prior approval by the DEM.

All other non-storm water discharges including fire protection foam, either in concentrate form or as foam diluted with water, are excluded from coverage under this permit. The DEM believes there is a significant potential for these types of discharges to be contaminated. Thus, the permittee is required to obtain a separate RIPDES permit for these non-storm water discharges or seek the necessary approval(s) from the appropriate local pretreatment authority to discharge to the sanitary sewer system.

Tank Bottom Water: The bottom of many petroleum product storage tanks may contain a layer of water that has separated from the stored petroleum product due to the density difference between the product and water. As this water coalesces and then settles to the bottom of the tank, it partitions (dissolves) PAHs from the petroleum product. Through this process, the water selectively extracts some of these hazardous substances and may become toxic. To avoid product contamination, terminal operators drain this water layer to prevent transfer with the product.

Whereas storm water contacts only those hydrocarbons spilled on the ground and then only for short periods of time; tank bottom water remains in intimate proximity with petroleum derivatives for prolonged periods of time, allowing the pollutants the necessary contact time to dissolve into the aqueous phase. Storm water also is discharged from the terminal in a timely fashion to maintain maximum storage capacity within the diked areas at all times. This procedure also minimizes the contact time between petroleum product and storm water.

The DEM considers tank bottom water a "process wastewater", since it can partition soluble toxic materials from petroleum product with time. To protect the Providence River from pollutants dissolved in tank bottom water, the DEM is prohibiting the permittee from discharging any tank bottom water alone or in combination with storm water or other wastewater directly from the facility. Currently, the facility stores tank bottom water in either Tanks 52 or 58 for treatment and discharge via Outfall 200A, or for off-site disposal by a licensed hazardous waste contractor.

Contaminated Groundwater: Infiltration/Inflow of contaminated groundwater into the storm water collection and treatment system is not authorized by this permit and must be addressed by the permittee pursuant to the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases.

Antibacksliding

EPA's antibacksliding provision at 40 CFR §122.44(l) prohibit the relaxation of permit limits, standards, and conditions unless the circumstances on which previous permit was based have materially and substantially changed since the time the permit was issued.

The circumstances at the facility have not substantially changed since the issuance of the last RIPDES permit, and therefore the limits in the draft permit are no less stringent than what are in the previous permit. Therefore, since all of the permit limits are at least as stringent as those from the previous permit, this permit satisfies the antibacksliding provisions at 40 CFR §122.44(l).

Similarly, the RI DEM has determined that all permit limitations are consistent with the Rhode Island Antidegradation policy.

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. Any person, prior to such date, may submit a request in writing for a public hearing to consider the draft permit to the Rhode Island Department of Environmental Management. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public hearing may be held after at least thirty (30) days public notice whenever the Director finds that response to this notice indicates significant public interest. In reaching a final decision on the draft permit the Director will respond to all significant comments and make these responses available to the public at DEM's Providence Office.

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

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
RIPDES Program
Office of Water Resources
Department of Environmental Management
235 Promenade Street
Providence, Rhode Island 02908
Telephone: (401) 222-6820 Ext.7405
Email: aaron.mello@dem.ri.gov

9/24/2020
Date

Joseph B. Haberek, P.E.
Environmental Engineer IV
RIPDES Permitting Section
Office of Water Resources
Department of Environmental Management

ATTACHMENT A-1

DISCHARGE: 001A – Effluent from Treatment Lagoons

AVERAGE EFFLUENT CHARACTERISTICS AT POINT OF DISCHARGE:

PARAMETER	AVERAGE[1]	MAXIMUM[2]
FLOW (MGD)	0.907 MGD	0.907 MGD
TSS	4.23 mg/l	5.69 mg/l
Oil and Grease	1.96 mg/l	2.09 mg/l
pH	7.10 S.U. (Minimum)	7.34 S.U. (Maximum)
Benzene	0.392 µg/l	0.392 µg/l
Toluene	1.52 µg/l	1.52 µg/l
Ethylbenzene	0.55 µg/l	0.55 µg/l
Total Xylenes	1.47 µg/l	1.48 µg/l
Ethanol	793 µg/l	793 µg/l
MTBE	1.89 µg/l	1.89 µg/l

[1]Data represents the mean of the monthly average data from December 2008 through October 2019.
[2]Data represents the mean of the daily maximum data from December 2008 through October 2019.

ATTACHMENT A-2

DISCHARGE: 100A– Effluent from PCS Groundwater Treatment System

AVERAGE EFFLUENT CHARACTERISTICS AT POINT OF DISCHARGE:

PARAMETER	**AVERAGE[1]**	**MAXIMUM[2]**
FLOW	83.4 GPM	142 GPM
Benzene	0.459 ug/l	0.527 ug/l
Toluene	0.447 ug/l	0.469 ug/l
Ethylbenzene	0.411 ug/l	0.433 ug/l
Total Xylenes	0.602 µg/l	0.723 µg/l
Total BTEX	1.89 µg/l	2.14 µg/l
MTBE	6.96 µg/l	8.36 µg/l
Total Iron	645 µg/l	1226 µg/l
Acenaphthene	0.119 µg/l	0.133 µg/l
Acenaphthylene	0.242 µg/l	0.285 µg/l
Anthracene	0.105 µg/l	0.114 µg/l
Benzo (a) Anthracene	0.0283 µg/l	0.0301 µg/l
Benzo (a) Pyrene	0.024 µg/l	0.030 µg/l
Benzo (b) Fluoranthene	0.0241 µg/l	0.0296 µg/l
Benzo (ghi) Perylene	0.0454 µg/l	0.049 µg/l
Benzo (k) Fluoranthene	0.0253 µg/l	0.0313 µg/l
Chrysene	0.039 µg/l	0.0417 µg/l
Dibenzo (a,h) Anthracene	0.0445 µg/l	0.0474 µg/l
Fluoranthene	0.0469 µg/l	0.0493 µg/l
Fluorene	0.0752 µg/l	0.0882 µg/l
Indeno (1, 2, 3 – cd) Pyrene	0.045 µg/l	0.0481 µg/l
Naphthalene	0.110 µg/l	0.127 µg/l
Phenanthrene	0.0761 µg/l	0.0873 µg/l
Pyrene	0.0465 µg/l	0.0497 µg/l

[1]Data represents the mean of the monthly average data from December 2008 through October 2019.
[2]Data represents the mean of the daily maximum data from December 2008 through October 2019.

ATTACHMENT A-3

DISCHARGE: 200A – Effluent from Tank 52/58 Treatment System

AVERAGE EFFLUENT CHARACTERISTICS AT POINT OF DISCHARGE:

PARAMETER	**AVERAGE[1]**	**MAXIMUM[2]**
FLOW	0.0 GPM	0.0 GPM
Benzene	0.0 ug/l	0.0 ug/l
Toluene	0.0 ug/l	0.0 ug/l
Ethylbenzene	0.0 ug/l	0.0 ug/l
Total Xylenes	0.0 µg/l	0.0 µg/l
Total BTEX	0.0 µg/l	0.0 µg/l
MTBE	0.0 µg/l	0.0 µg/l
Total Iron	0.0 µg/l	0.0 µg/l
Acenaphthene	0.0 µg/l	0.0 µg/l
Acenaphtylene	0.0 µg/l	0.0 µg/l
Anthracene	0.0 µg/l	0.0 µg/l
Benzo (a) Anthracene	0.0 µg/l	0.0 µg/l
Benzo (a) Pyrene	0.0 µg/l	0.0 µg/l
Benzo (b) Fluoranthene	0.0 µg/l	0.0 µg/l
Benzo (ghi) Perylene	0.0 µg/l	0.0 µg/l
Benzo (k) Fluoranthene	0.0 µg/l	0.0 µg/l
Chrysene	0.0 µg/l	0.0 µg/l
Dibenzo (a,h) Anthracene	0.0 µg/l	0.0 µg/l
Fluoranthene	0.0 µg/l	0.0 µg/l
Fluorene	0.0 µg/l	0.0 µg/l
Indeno (1, 2, 3 – cd) Pyrene	0.0 µg/l	0.0 µg/l
Naphthalene	0.0 µg/l	0.0 µg/l
Phenanthrene	0.0 µg/l	0.0 µg/l
Pyrene	0.0 µg/l	0.0 µg/l

[1]Data represents the mean of the monthly average data from December 2008 through October 2019.
[2]Data represents the mean of the daily maximum data from December 2008 through October 2019.

ATTACHMENT A-4

DISCHARGE: 300A – Effluent from Vanity Fair Cliffs Area Recovery/Treatment System

AVERAGE EFFLUENT CHARACTERISTICS AT POINT OF DISCHARGE:

PARAMETER	**AVERAGE[1]**	**MAXIMUM[2]**
FLOW	0.586 GPM	1.779 GPM
Benzene	0.379 µg/l	0.383 µg/l
Toluene	0.380 µg/l	0.382 µg/l
Ethylbenzene	0.381 µg/l	0.385 µg/l
Total Xylenes	0.466 µg/l	0.479 µg/l
Total BTEX	1.61 µg/l	1.64 µg/l
MTBE	0.378 µg/l	0.382 µg/l
Total Iron	887 µg/l	1343 µg/l
Acenaphthene	0.104 µg/l	0.114 µg/l
Acenaphtylene	0.250 µg/l	0.309 µg/l
Anthracene	0.103 µg/l	0.112 µg/l
Benzo (a) Anthracene	0.0317 µg/l	0.0377 µg/l
Benzo (a) Pyrene	0.0246 µg/l	0.0279 µg/l
Benzo (b) Fluoranthene	0.033 µg/l	0.0376 µg/l
Benzo (ghi) Perylene	0.0454 µg/l	0.0496 µg/l
Benzo (k) Fluoranthene	0.026 µg/l	0.0292 µg/l
Chrysene	0.0539 µg/l	0.0651 µg/l
Dibenzo (a,h) Anthracene	0.0451 µg/l	0.0485 µg/l
Fluoranthene	0.0619 µg/l	0.0776 µg/l
Fluorene	0.0878 µg/l	0.107 µg/l
Indeno (1, 2, 3 – cd) Pyrene	0.0454 µg/l	0.0491 µg/l
Naphthalene	0.116 µg/l	0.132 µg/l
Phenanthrene	0.0892 µg/l	0.106 µg/l
Pyrene	0.0967 µg/l	0.144 µg/l

[1]Data represents the mean of the monthly average data from December 2008 through October 2019.
[2]Data represents the mean of the daily maximum data from December 2008 through October 2019.

ATTACHMENT A-5

DISCHARGE: 400A – Effluent from the Main Oil Water Separator

AVERAGE EFFLUENT CHARACTERISTICS AT POINT OF DISCHARGE:

PARAMETER	**AVERAGE[1]**	**MAXIMUM[2]**
FLOW (MGD)	1300 GPM	1450 GPM
TSS	9897 µg/l	9912 µg/l
Oil and Grease	1501 µg/l	1501 µg/l
Ethanol	759 µg/l	759 µg/l
Benzene	0.465 µg/l	0.467 µg/l
Toluene	2.16 µg/l	2.16 µg/l
Ethylbenzene	0.806 µg/l	0.807 µg/l
Total Xylenes	4.31 µg/l	4.33 µg/l

[1]Data represents the mean of the monthly average data from December 2008 through October 2019.
[2]Data represents the mean of the daily maximum data from December 2008 through October 2019.

ATTACHMENT A-6

DISCHARGE: 500A – Effluent from the Vanity Fair Cliffs Area Oil Water Separator

AVERAGE EFFLUENT CHARACTERISTICS AT POINT OF DISCHARGE:

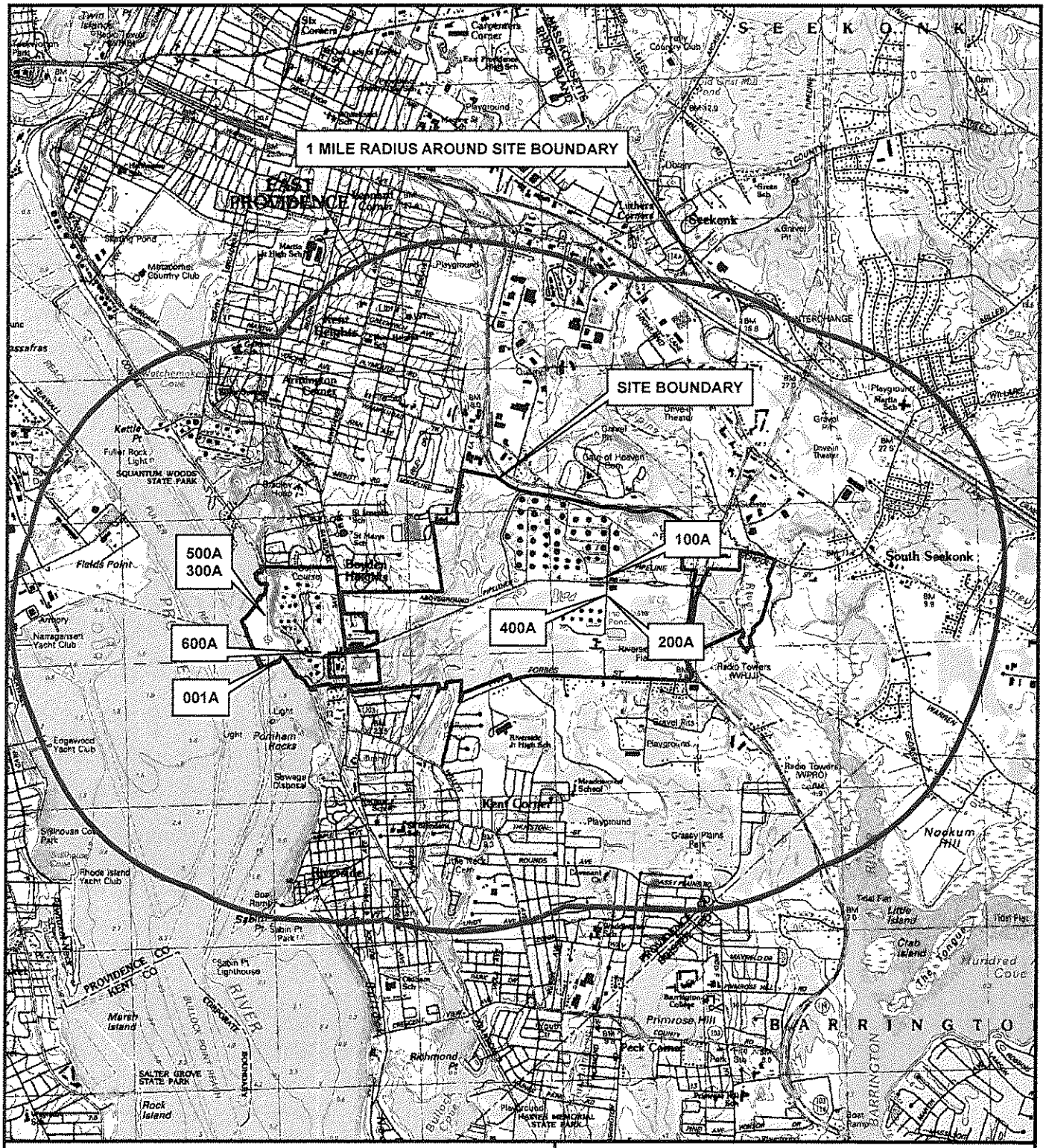
PARAMETER	**AVERAGE[1]**	**MAXIMUM[2]**
FLOW (MGD)	7.32 GPM	7.32 GPM
TSS	52514 µg/l	52527 µg/l
Oil and Grease	1917 µg/l	1917 µg/l
Benzene	0.371 µg/l	0.371 µg/l
Toluene	0.500 µg/l	0.500 µg/l
Ethylbenzene	0.523 µg/l	0.523 µg/l
Total Xylenes	1.92 µg/l	1.92 µg/l

[1]Data represents the mean of the monthly average data from December 2008 through October 2019.
[2]Data represents the mean of the daily maximum data from December 2008 through October 2019.

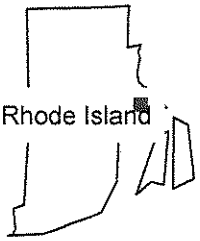
ATTACHMENT A-7

ExxonMobil Oil Corporation – 1001 Wampanoag Trail, East Providence, RI

SITE LOCATION MAP



QUADRANGLE LOCATION



001A OUTFALL LOCATION

N

1,000 0 1,000'

Title:

SITE LOCATION MAP AND FACILITY DISCHARGE LOCATIONS

RIPDES MODIFICATION APPLICATION

Prepared for:

EXXONMOBIL OIL CORPORATION
1001 WAMPANOAG TRAIL, EAST PROVIDENCE, RI
TERMINAL - LOCATION NO 38015

ROUX

Compiled by: SB	Date: 08/28/20	FIGURE
Prepared by: SB	Scale: AS SHOWN	1
Project Mgr: BC	Project: 0172.0035M048	
File: MC35110001V3.mxd		

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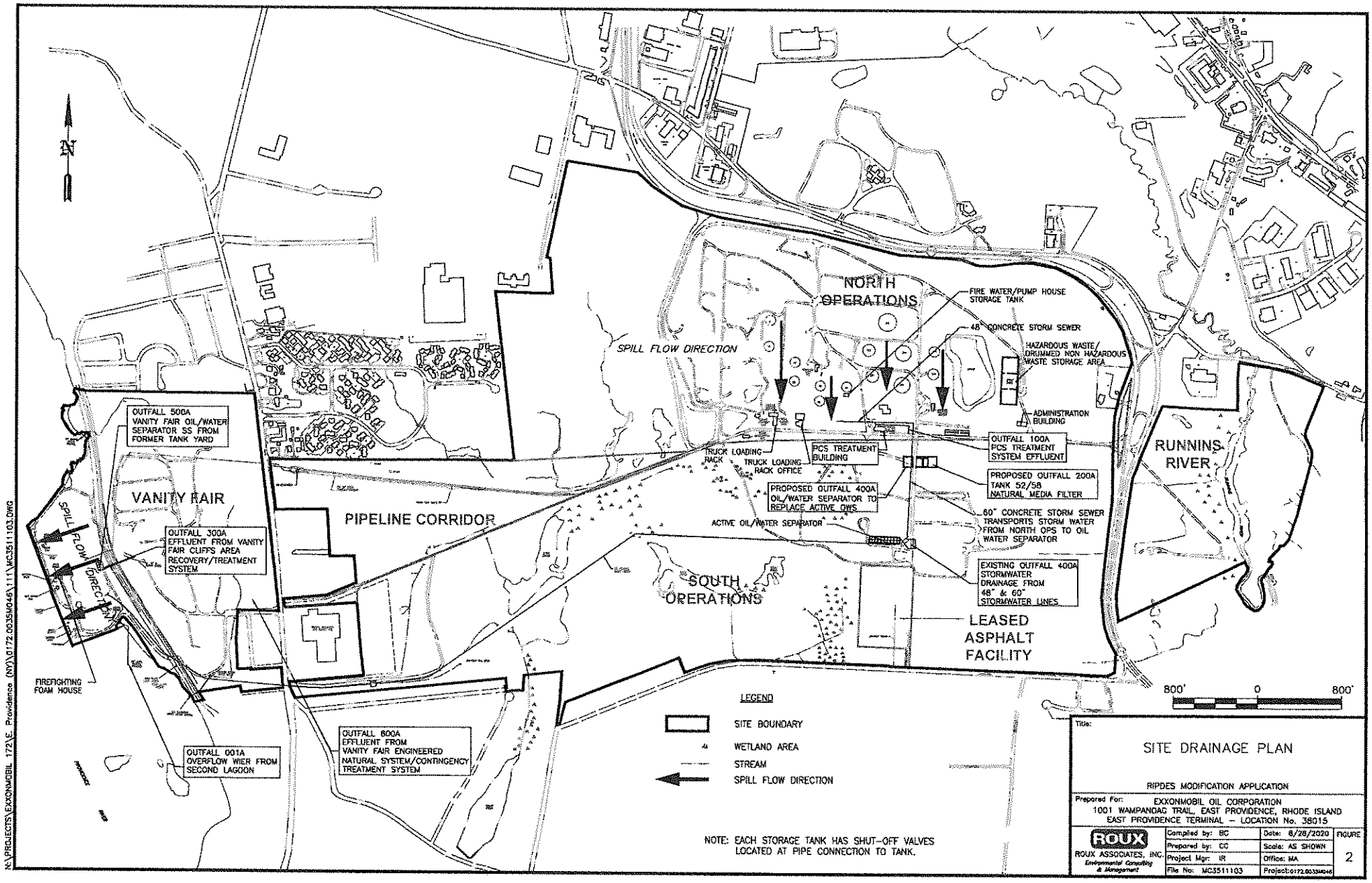
ATTACHMENT A-8

ExxonMobil Oil Corporation – 1001 Wampanoag Trail, East Providence, RI

SITE DRAINAGE PLAN



NOTE: EACH STORAGE TANK HAS SHUT-OFF VALVES LOCATED AT PIPE CONNECTION TO TANK.

Title:

SITE DRAINAGE PLAN

RIPDES MODIFICATION APPLICATION

Prepared For: EXXONMOBIL OIL CORPORATION
1001 WAMPANOAG TRAIL, EAST PROVIDENCE, RHODE ISLAND
EAST PROVIDENCE TERMINAL – LOCATION No. 38015

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: BC	Date: 8/28/2020	FIGURE
Prepared by: CC	Scale: AS SHOWN	2
Project Mgr: IR	Office: MA	
File No: MC3511103	Project: 0172.0035M046	

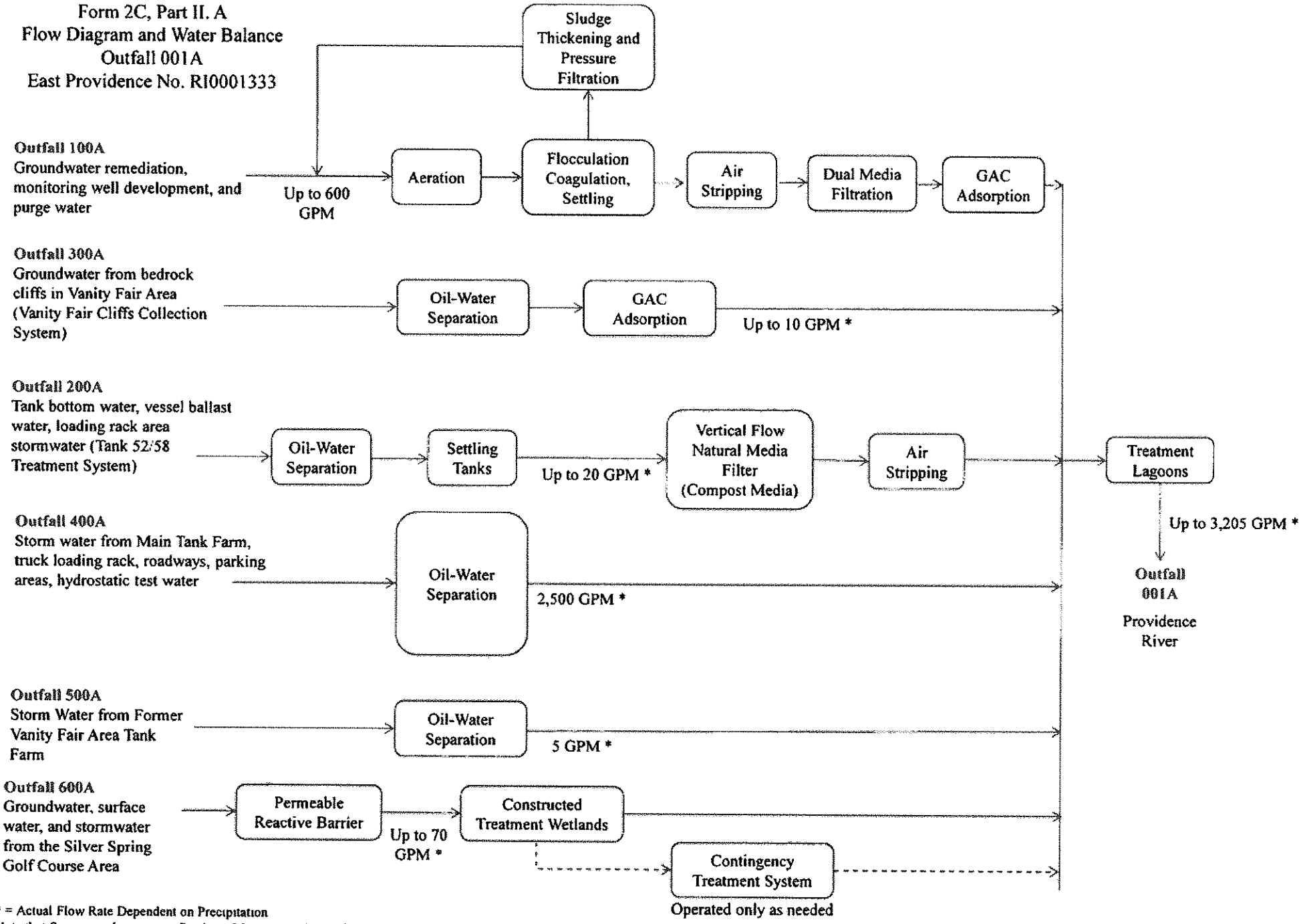
N:\PROJECTS\EXXONMOBIL 172\E. Providence (NY)\0172.0035M046\111\MC3511103.DWG

ATTACHMENT A-9

ExxonMobil Oil Corporation – 1001 Wampanoag Trail, East Providence, RI

SITE FLOW DIAGRAM – Outfall 001A

Attachment 2:
Form 2C, Part II. A
Flow Diagram and Water Balance
Outfall 001A
East Providence No. RI0001333



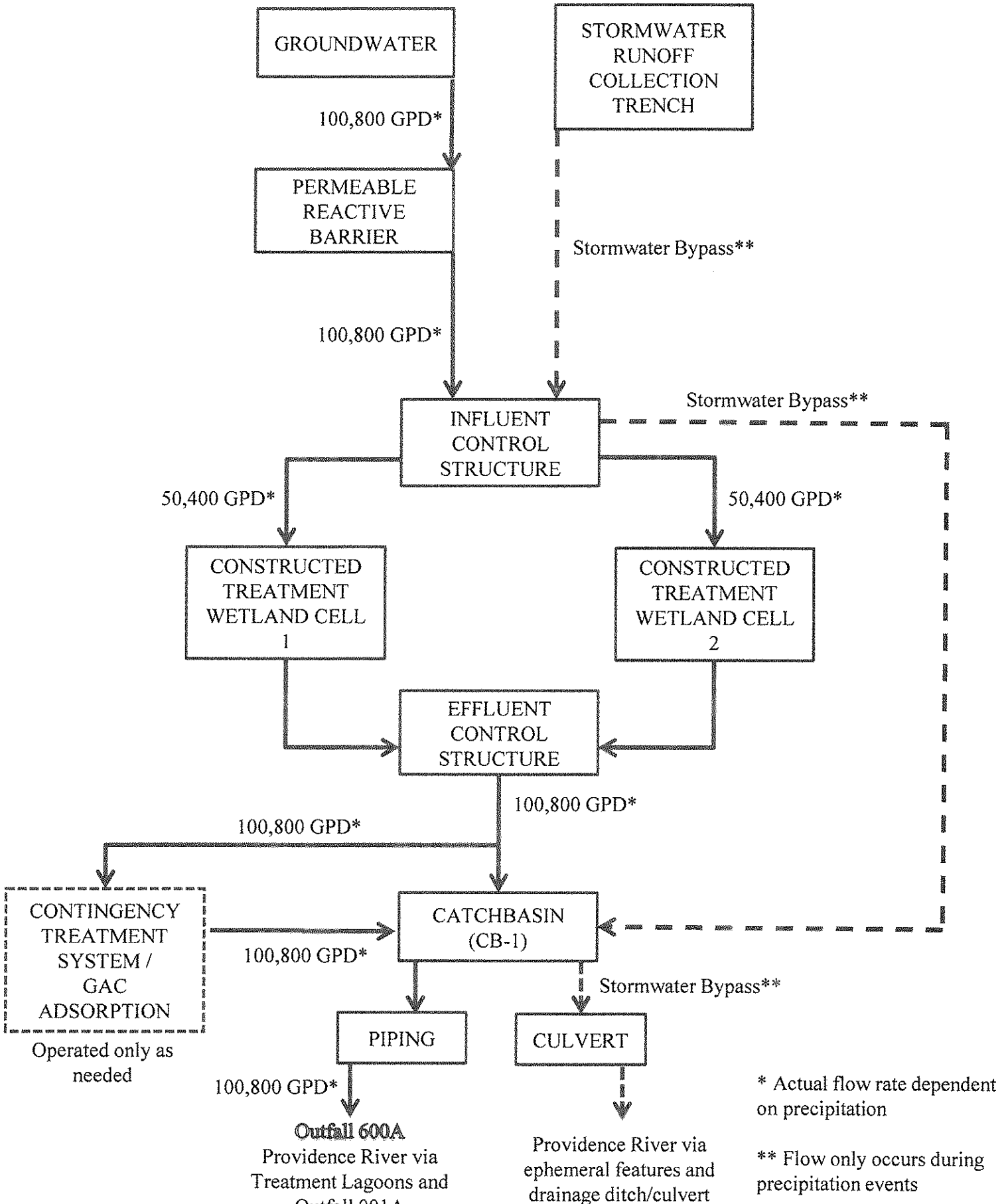
* = Actual Flow Rate Dependent on Precipitation
Note that flow rates shown are reflective of the proposed modifications to the Site water balance

ATTACHMENT A-10

ExxonMobil Oil Corporation – 1001 Wampanoag Trail, East Providence, RI

SITE FLOW DIAGRAM – Outfall 600A

Attachment 3
Form 2C, Part II. A
Flow Diagram and Water Balance Outfall 600A
East Providence No. RI0001333



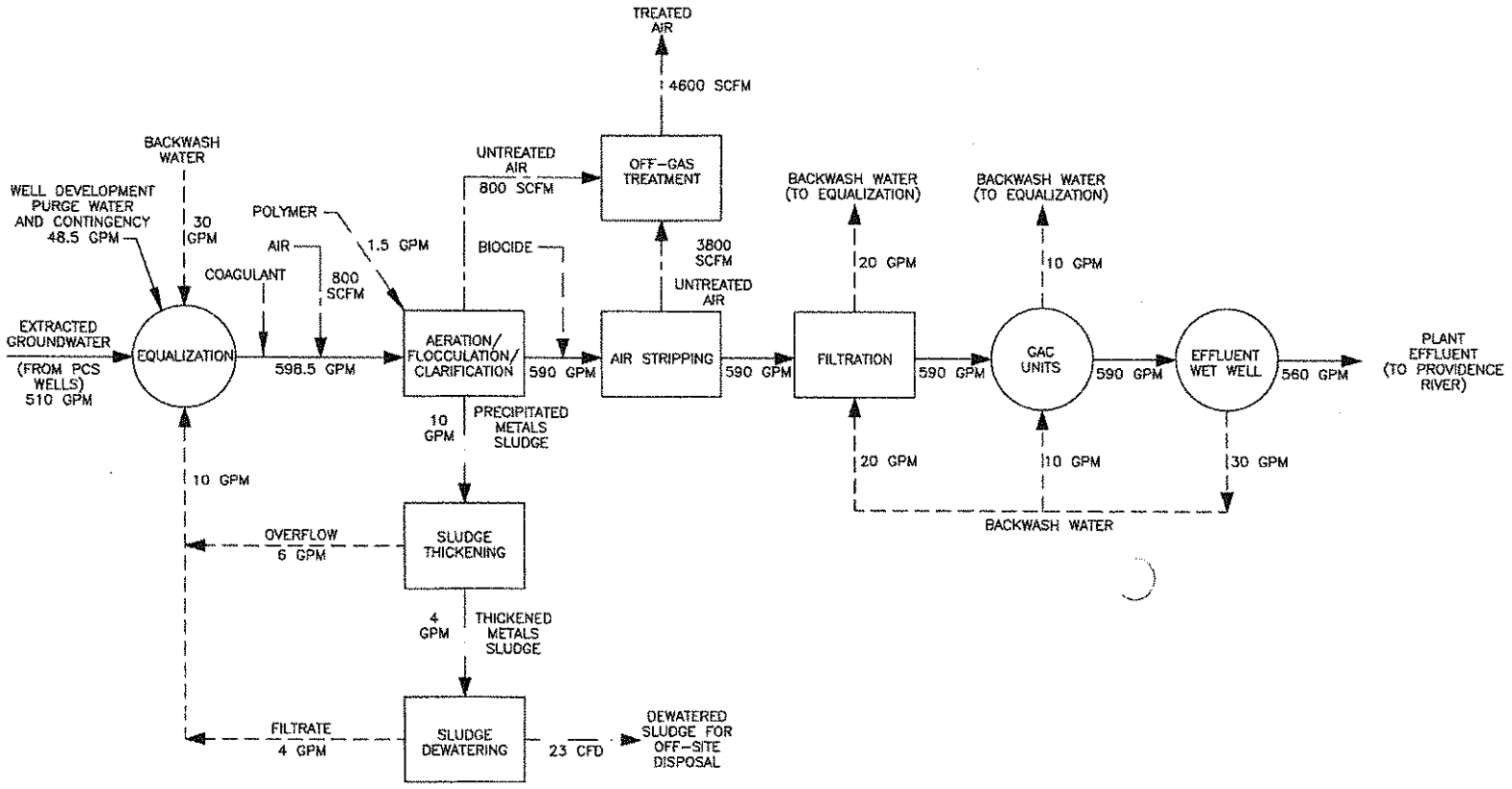
ROUX ASSOCIATES, INC.

MC0172.0035Y038.251/PROCESS FLOW DIAGRAM

ATTACHMENT A-11

ExxonMobil Oil Corporation – 1001 Wampanoag Trail, East Providence, RI

PCS TREATMENT SYSTEM FLOW SCHEMATIC



LEGEND

———	MAIN PROCESS FLOW	PCS	PERIMETER CONTAINMENT SYSTEM
— · — · —	SLUDGE FLOW	GAC	GRANULAR ACTIVATED CARBON
– – – – –	RECYCLE FLOW	GPM	GALLONS PER MINUTE
— — — —	CHEMICAL FLOW	SCFM	STANDARD CUBIC FEET PER MINUTE
— – — – —	AIR FLOW	CFD	CUBIC FEET PER DAY

Title:

PCS PROCESS FLOW SCHEMATIC
AIR STRIPPER MODIFICATION

RIPDES MODIFICATION APPLICATION

Prepared For: EXXONMOBIL OIL CORPORATION
1001 WAMPANOAG TRAIL, EAST PROVIDENCE, RI
EAST PROVIDENCE TERMINAL – LOCATION NO. 38015

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: BC	Date: 03/13/18
Prepared by: KV	Scale: NTS
Project Mgr: BC	Project: 0172.003SM048
File: MC3613601.DWG	

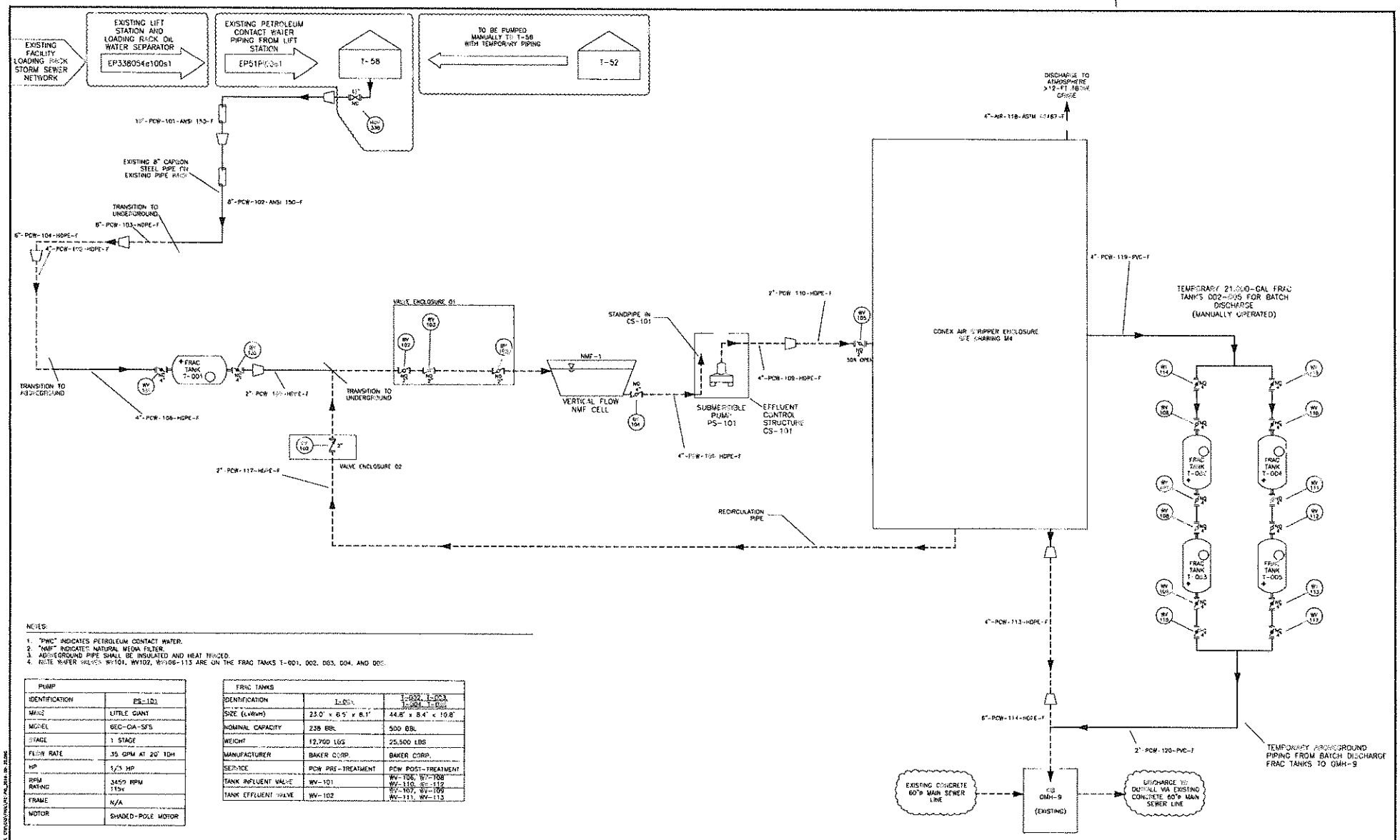
FIGURE 3

T:\PROJECTS\EXXONMOBIL 172\EAST PROVIDENCE\RIPDES FACILITY PERMIT\RIPDES MODIFICATION 2018\MC3613601.DWG

ATTACHMENT A-12

ExxonMobil Oil Corporation – 1001 Wampanoag Trail, East Providence, RI

TANK 52/58 TREATMENT SYSTEM FLOW DIAGRAM



NOTES:

1. "PWC" INDICATES PETROLEUM CONTACT WATER.
2. "NMF" INDICATES NATURAL MEDIA FILTER.
3. ABOVEGROUND PIPE SHALL BE INSULATED AND HEAT TRACED.
4. ROTE WATER VALVES WV101, WV102, WV106-113 ARE ON THE FRAC TANKS T-001, 002, 003, 004, AND 005.

PUMP	
IDENTIFICATION	PS-101
MAKE	LITTLE GIANT
MODEL	6EC-CIA-SFS
STAGE	1 STAGE
FLOW RATE	35 GPM AT 20' TDH
HP	1/3 HP
RPM RATING	3450 RPM 115v
FRAME	N/A
MOTOR	SHADED-POLE MOTOR

FRAC TANKS		
IDENTIFICATION	T-001	T-002, T-003, T-004, T-005
SIZE (LxWxH)	23.0' x 8.5' x 8.1'	44.8' x 8.4' x 10.8'
NOMINAL CAPACITY	238 BBL	500 BBL
WEIGHT	12,700 LBS	25,500 LBS
MANUFACTURER	BAKER CORP.	BAKER CORP.
SERVICE	PCW PRE-TREATMENT	PCW POST-TREATMENT
TANK INFLUENT VALVE	WV-101	WV-106, WV-108, WV-110, WV-112
TANK EFFLUENT VALVE	WV-102	WV-107, WV-109, WV-111, WV-113

NO.	DATE	REVISION DESCRIPTION	INIT.
1	3OJUL19	AS-BUILTS AND PWD DRAWING OF AIR STRIPPER ENCLOSURE ADDED AS M4	LV
2	31JAN18	AS-BUILTS, INSTALLED WV-117 TO PIPING ON 30JUL19	LV
3	20SEP16	UPDATE VALVE IDENTIFICATION	LV

PROJ. ENGINEER:	K.V.
DESIGNED BY:	K.V.
DRAWING SCALE:	AS SHOWN
DRAWING DATE:	31AUG16
OFFICE:	MA
PROJECT NO.:	0172021M008
DRAWING FILE:	P02_2019-09-10.DWG
DRAWN BY:	K.V.
CHECKED BY:	
PLOT SCALE:	NTS
PRINT TYPE:	BW
PAPER SIZE:	ARCH D

ROUX ASSOCIATES, INC.
12 Gill Street, Suite 4700
Woburn, Massachusetts 01801 (781) 569-4000

PROJECT NAME: CONTACT WATER - NATURAL MEDIA FILTER

PROJECT FOR: EXXONMOBIL OIL CORPORATION
1001 WAMPANOAG TRAIL, EAST PROVIDENCE, RI

TITLE: PIPING AND INSTRUMENTATION DIAGRAM: PAGE 1 OF 3

DRAWING NO.: M1

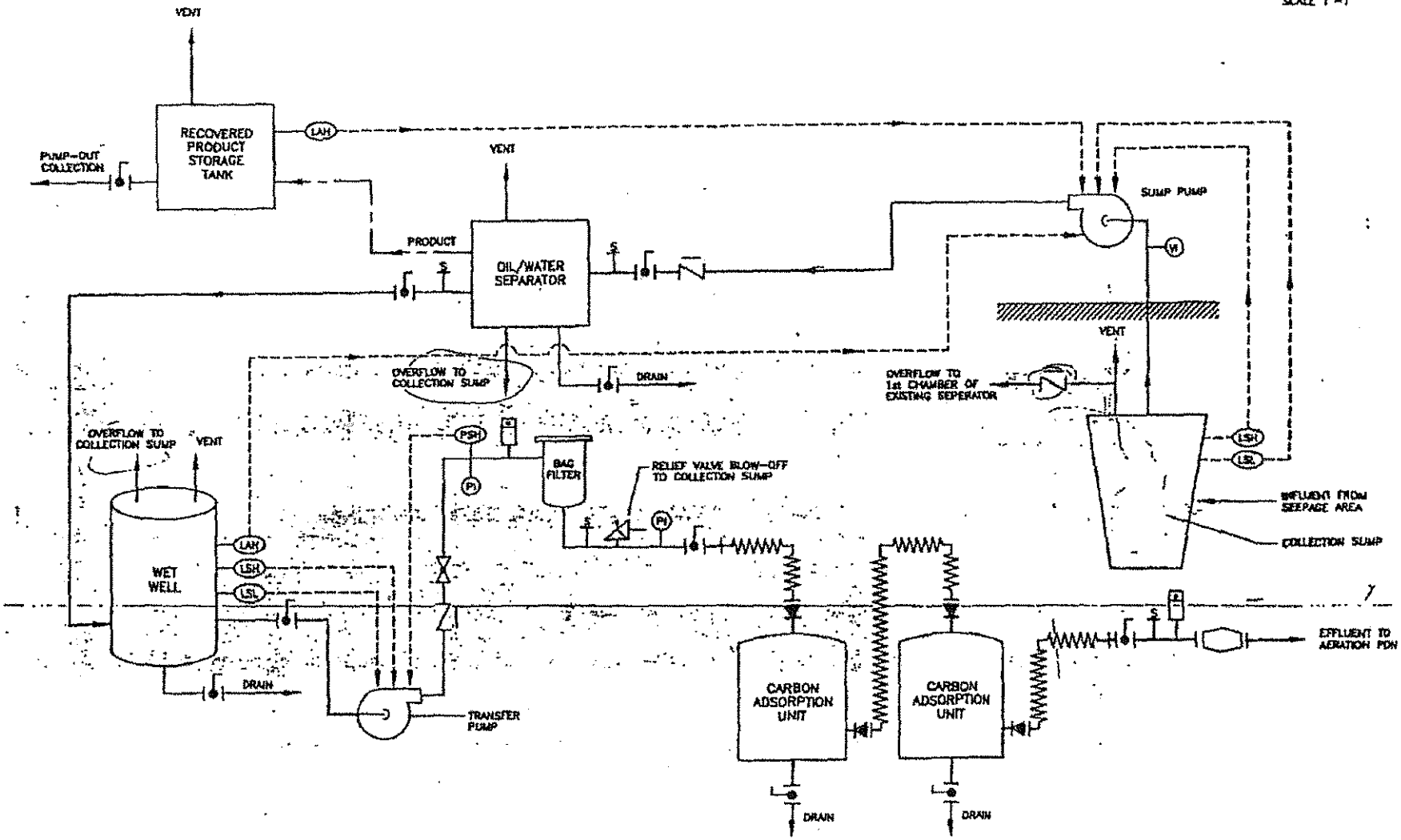
DRAWING 9 OF 15

ATTACHMENT A-13

ExxonMobil Oil Corporation – 1001 Wampanoag Trail, East Providence, RI

VANITY FAIR CLIFFS AREA RECOVERY SYSTEM FLOW DIAGRAM

CLIFF RECOVERY TRENCH
CONNECTION PLAN
SCALE 1"=1'



PROCESS AND INSTRUMENTATION DIAGRAM

PART II
TABLE OF CONTENTS

GENERAL REQUIREMENTS

DEFINITIONS

GENERAL REQUIREMENTS

(a) Duty to Comply

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

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

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

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

(b) Duty to Reapply

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

(c) Need to Halt or Reduce Not a Defense

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

(d) Duty to Mitigate

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

(e) Proper Operation and Maintenance

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

(f) Permit Actions

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

(g) Property Rights

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

(h) Duty to Provide Information

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

(i) Inspection and Entry

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

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

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

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

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

(j) Monitoring and Records

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

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

(3) Records of monitoring information shall include:

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

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

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

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

(v) The analytical techniques or methods used; and

(vi) The results of such analyses.

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

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

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

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

(k) Signatory Requirement

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