Storm Water Pollution Prevention Plan

(SWPPP)

NPDES PERMIT MA0001091

Chelsea Terminal

March 2023

Prepared for:

Gulf Oil Limited Partnership
Chelsea, MA Terminal
281 Eastern Ave
Chelsea, MA 02150

Prepared by:

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Suite 400
Wellesley Hills, MA 02481

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Introduction

Stormwater discharges to Chelsea Creek from the Gulf Oil Limited Partnership's (Gulf) Chelsea, Massachusetts Bulk Petroleum Terminal are regulated under the Terminal's Individual National Pollutant Discharge Elimination System (NPDES) Permit #MA0001091 (Appendix A) issued pursuant to the Federal Clean Water Act (CWA), as amended, and the Commonwealth of Massachusetts Clean Water Act, as amended. This Stormwater Pollution Prevention Plan (SWPPP) has been developed for the facility in accordance with the applicable regulations.

The goal of developing and implementing this SWPPP (the Plan) is to create a program for: continually assessing the potential impact Significant Materials may have on precipitation at the Terminal or on stormwater run-on from areas adjacent to the Terminal; implementing and maintaining practices which eliminate or minimize the discharge of Significant Materials from the facility via stormwater runoff; reviewing the success of the implemented practices; and amending this SWPPP when appropriate.

Per 40 C.F.R. 122.26 (b)(12), *Significant materials* includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under Section 101(14) of CERCLA; any chemical the facility is required to report pursuant to Section 313 of Title III of SARA; fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with stormwater discharges. Materials or machinery that are not exposed to stormwater or that are not located at the facility are not considered "Significant Materials".

The Permittee ("Gulf" or "The Terminal") will certify **at least annually** that the Terminal is in compliance with the SWPPP requirements in accordance with Part I. C. 2. d. of the Terminal's NPDES Permit. The Terminal will, **at least annually**, certify that the previous year's inspections, corrective actions, control measures and training activities are conducted, and records are maintained, as described in this SWPPP. If the Terminal is not in compliance with any limitations and/or Best Management Practices (BMPs) described in this SWPPP, the annual certification will state the non-compliance and the remedies which are being undertaken. The annual certifications will be signed in accordance with the requirements identified in Part II.D.2 of the Terminal's NPDES Permit Standard Conditions which references the requirements of 40 C.F.R. 122.22. Gulf will document in this SWPPP any violation of numeric or non-numeric effluent limitations with the date and description of the corrective actions taken.

The CWA 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 non-compliance may result in the imposition of criminal penalties as provided for in Part 309 of the CWA (also see Part II.A.1.b of the Permit).

This plan was developed using the format outlined in the US Environmental Protection Agency (EPA) Publication 833-B-09-002, ***Developing Your Storm Water Pollution Prevention Plan, A Guide for Industrial Operators, March 2021.*** It incorporates and is consistent with the requirements of Part 311 of the CWA and the Terminal's Individual NPDES Permit #MA0001091. The Terminal's Permit references several sections of the current Multi-Sector General Permit (MSGP) and the requirements of those sections are incorporated in this Plan. This Plan also references the Terminal's Facility Response Plan (FRP) and Spill Prevention, Control and Countermeasure (SPCC) Plan. If any part of this Plan is found to be inconsistent with the Terminal's NPDES Permit, the current MSGP or the CWA due to an error by the author of this plan, the requirements of those documents will be followed and this Plan will be corrected.

The Terminal will keep a copy of the current SWPPP and any updates, BMPs implementation documentation and all SWPPP certifications (the initial certification, recertification and annual certifications) signed during the effective period of the Terminal's NPDES Permit. All documentation of SWPPP activities will be maintained in the Terminal Manager's Office for at least 5 years and provided to the EPA and/or the Massachusetts Department of Environmental Protection (MassDEP) upon request. Copies of the current Plan and all

certifications will be submitted to the EPA for posting on the EPA Region I's Chelsea River[1] Terminals public website. Except for data determined to be confidential under the Permit's Standard Conditions, all reports prepared in accordance with the Permit should be made available for public inspection at the offices of the MassDEP and/or EPA Region I.

[1] The Chelsea River is known locally as the Chelsea Creek.

Stormwater Pollution Prevention Plan Certification

Per Part II.D.2 of the Terminal's NPDES Permit #MA0001091, effective December 1, 2022, this Plan and certification is signed in accordance with the requirements identified in 40 C.F.R. 122.22, which states, in part:

(a) All permit applications shall be signed as follows:

For a corporation: By a responsible corporate officer. For the purpose of this subsection, a responsible corporate officer means: (i) a president, secretary, treasurer or vice-president of the corporation in charge of a principal business function or any other person who performs similar policy- or decision-making functions for the corporation or (ii) the manager of one or more manufacturing, production or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

(b) All reports required by permits and other information requested by the Director shall be signed by a person described in paragraph (a) above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

1) The authorization is made in writing by a person described in paragraph (a) above;
2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
3) The written authorization is submitted to the Director (*Director normally means a person authorized to sign the NPDES permits by the EPA or the State or an authorized representative. Conversely, it could mean the Regional Administrator or the State Director as the context requires*).

(c) Any Person signing a document under paragraph (a) or (b) of this section shall make the following certification:

I, as a responsible corporate officer, certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: 

Name: Christopher E. Gill

Title: Director, ESOH

Date: 3/31/2023

Record of Changes

Date	Page or Section Numbers Affected	Description of Changes	Authorized By
February 1, 2015	All	Complete rewrite and update of Plan in accordance with the Terminal's 2014 NPDES Permit.	Doug Harrison
August 27, 2016	Cover Page, Record of Changes, Sections 1.1, 1.2 and 2.1, Table 3-1, Figures 2 and 3, Appendix D	Corporate Address, SWPP Team (EHS Supervisor replaces Terminal Supervisor), Team Member Responsibilities, Description of Storage, Tank Table, LNG Refueling Unit Removed from Terminal, Pages from FRP	Andrew Adams
September 2019	Cover Page, ToC, RoC, Sections 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 4.1, 4.9.5, 4.9.8, 6.2 & 8.0, Figures 2 & 3, Appendix C	Plan Renewal, Cover Page, Table of Contents, Record of Changes, All Footers, Team Members, Facility Operations, Garage Drains, Tank Table, Facility Activities, Sampling Data, Stormwater Drainage, Loading Rack Firefighting Foam, "No Discharge" Reporting, Proposed New Work, Site Plan, Drainage Plan and Spill History	Andrew Adams
March 2023	Cover Page, ToC, Introduction, RoC, All Sections, All Figures	Cover Page, All Footers, Table of Contents, Record of Changes, All Sections changed to reflect the requirements of the Terminal's NPDES Permit effective 12/01/2022	Andrew Adams

1. Stormwater Pollution Prevention Team

1.1. Team Member Contact Information

Team Member by Title
Title: Gulf Chelsea Terminal Manager Address: 281 Eastern Ave, Chelsea, MA 02150 Telephone Number: Office (617) 884-5980
Title: Gulf Chelsea Terminal Supervisor Address: 281 Eastern Ave, Chelsea, MA 02150 Telephone Number: Office (617) 884-5980

1.2. Team Member Responsibilities

The following is a list of the responsibilities of the Terminal Manager required under this SWPPP:

- Implement the engineering and operational control measures described in this plan and the Terminal's NPDES Permit, including the monitoring requirements, special conditions, reporting requirements and state permit conditions identified in Part I of the Permit and the applicable sections of Part II, Standard Conditions of the Permit.
- Comply with the requirements of any other spill plan and response measures developed by or for the facility to control discharges of pollutants to the environment.
- Ensure the Terminal is inspected at least daily and stormwater accumulated within the secondary containment areas is evaluated prior to discharge to the stormwater drainage system.
- Ensure the required monthly, quarterly and annual discharge sampling is performed as required and the results are reported to the appropriate state and federal agencies in accordance with the Terminal's Individual NPDES Permit.
- Ensure secondary containment areas are maintained and repaired as necessary to ensure integrity.
- Ensure facility security is maintained in accordance with EPA regulations (40 C.F.R. 112.7(g)) and United States Coast Guard (USCG) regulations (33 C.F.R. 105) to minimize the potential for releases resulting from vandalism or terrorism.
- Ensure, at least once per quarter, inspection of all areas with industrial materials or activities exposed to stormwater and all structural controls used to comply with effluent limits in the NPDES Permit by qualified personnel with one or more members of the stormwater pollution prevention team. Each quarterly inspection will include a visual assessment of stormwater samples from the outfall collected in accordance with Parts 3.1 and 3.2 of the 2021 MSGP as required by Part I.C.1.b.(1) of the Terminal's NPDES Permit (see Section 5.2 of this Plan).
- Ensure equipment and/or vehicle maintenance is performed indoors or under cover where possible.
- Ensure equipment and vehicles are maintained in good working condition (e.g., free of leaks, drips, etc.).

- Provide annual training for employees working in areas where Significant Materials are or will be used or stored to minimize the possibility of pollutant discharge caused by human error.
- Ensure contractors perform their work in a manner that does not cause a discharge of a Significant Material or is contrary to any requirements of this Plan.
- Ensure that any corrective actions required by Part 5.1 of the MSGP are performed and the corrective action documentation is maintained as required by Part 5.3 of the MSGP.
- Ensure this Plan is amended and updated within 14 days for any changes at the Terminal that result in a significant effect on the potential for the discharge of pollutants to the waters of the United States or that affect the SWPPP.
- Maintain records of inspections, maintenance of process equipment and personnel training associated with this SWPPP. Records will be maintained for at least five (5) years.
- Maintain a list of significant spills (i.e., reportable quantities) and significant leaks of toxic or hazardous pollutants that occurred at the Terminal as of the effective date of the NPDES Permit to the present and maintain the list to include up-to-date information.
- Ensure a responsible corporate officer certifies, at least annually, that the Terminal is in compliance with the SWPPP requirements, and that the previous year's inspections and maintenance activities were conducted, results recorded, records maintained and that the Terminal is in compliance with its NPDES Permit.

In the absence of the Terminal Manager, the Terminal Supervisor is responsible for all the duties listed above.

Under the direction of the Terminal Manager or Terminal Supervisor, the Terminal Operators are responsible for performing the required Terminal inspections and for evaluating the stormwater that may have accumulated inside the Terminal's secondary containment system prior to its discharge to Chelsea Creek through the Terminal's drainage system. Terminal Operators are required to report to the Terminal Manager or Supervisor any condition they observe that has resulted or may result in a spill of a reportable quantity of a pollutant or a prohibited discharge to the waters of the United States (i.e., Chelsea Creek).

2. Site Description

2.1. Facility Description and Operations

The Terminal is located on an approximately 48.6-acre lot at 281 Eastern Ave[2] in Chelsea, Massachusetts (Latitude 42° 23' 34"; Longitude -71° 01' 05") on the northwest shore of Chelsea Creek. Chelsea Creek is tidally influenced by Boston's Inner Harbor. Chelsea Creek is classified as a Class SB (CSO) water body by the Commonwealth of Massachusetts and as such, is designated as a habitat for fish, other aquatic life and wildlife and for primary (e.g., wading and swimming) and secondary (e.g., fishing and boating) contact recreation. A Class SB water body may also be suitable for shellfish harvesting but there are no areas within the Chelsea Creek currently approved by the Massachusetts Division of Marine Fisheries for such use (see GBH4.pdf (massmarinefisheries.net)). The area of Chelsea Creek around the Gulf Terminal is one of ten (10) Designated Port Areas (DPAs) established by the Massachusetts Office of Coastal Zone Management to promote and protect water-dependent industrial uses. Surrounding land use is commercial, industrial and residential.

Equipment and features at the Terminal include the vessel dock, bulk product tanks and associated piping, truck loading rack, two pump-off stations, a truck diesel re-fueling station, an office building, employee locker room and maintenance area, 2 warehouses, the Tire Room storage building, the Cumberland Farms Garage and the Foam House and associated fire suppression system piping. The Terminal's marine dock is located on Chelsea Creek. The Terminal Tank Farm, Terminal Yard including the truck loading rack, the Terminal Office and other facilities are located between Chelsea Creek and Eastern Avenue.

Gulf's Chelsea Terminal receives distillates, gasoline, naphtha, denatured ethanol, butane, biofuel and used cooking oil via barge, tank vessel and/or tank truck. The Terminal distributes distillates and ethanol/gasoline blend to customers through the truck loading rack. The Terminal has the capability of loading distillate products onto vessels at the marine dock. Distillate products include, but are not limited to, No. 2 Diesel, Ultra Low Sulfur Diesel and Heating Oil. Neither gasoline nor ethanol can be loaded onto marine vessels at the Gulf dock. Gasoline products include regular and premium unleaded products.

Bulk petroleum products and denatured ethanol are primarily delivered to the Terminal via tank ships and/or tank barges. The Terminal's marine dock is located adjacent to the Terminal's tank farm and Terminal yard on the northwest shore of the Chelsea Creek. Product is transferred from vessels to the bulk aboveground storage tanks located in the tank farm via product piping. The Terminal's marine dock is capable of handling only one tank barge or one tank ship at a time for loading and unloading operations. The dock is equipped with four loading arms through which product is pumped through the six product lines running from the dock to the Terminal's bulk product storage tanks. Pumping rates from the vessels to the Terminal's storage tanks (product receipt) generally range between 3,000 barrels per hour and 12,000 barrels per hour but can reach 20,000 barrels per hour using all 4 loading arms. The pumping rate from the tank farm to vessels is between 2,000 barrels per hour and 2,500 barrels per hour.

Additives are delivered to and stored at the Terminal to be added to bulk petroleum products. Additives are typically received at the Terminal via tank truck but may also be delivered to the Terminal in 55-gallon drums to be pumped into the additive tanks manually. Additives and denatured ethanol are mixed and dispensed with the distillate or gasoline products, as applicable, at the Truck Loading Rack. Lubricity (Tank 125) can be added to the appropriate product as it is transferred from the vessel at the marine dock to the tanks in the

[2] City of Chelsea Tax Assessor records identify 4 parcels – 123 Eastern Ave (35 acres), 283 Eastern Ave (8.36 acres), 285 Eastern Ave (2.3 acres) and 287 Eastern Ave (2.94 acres). Mailing address is 281 Eastern Ave.

Tank Farm. Red dye is added to the appropriate distillate product at the truck loading rack as the product is dispensed. The heating oil tanks for the Locker Room, Cumberland Farms Garage and Foam House receive heating oil for consumptive use via tank truck.

Gasoline and distillate products are distributed to tank trucks via the Terminal truck loading rack. The truck loading rack consists of seven loading bays (Bays 1, 2, 4, 5, 6, 7 and 8). Trucks at the loading rack can load gasoline and/or distillates at bays 2, 4, 5 and 6. Bays 7 and 8 are distillate only. Distillate products are top loaded at Bay 1. Bay 2 can load top load distillates and bottom load gasoline products. Bays 4, 5, 6, 7 and 8 are bottom loading only.

The Terminal has two stations where petroleum products can be transferred from tank trucks to the bulk product storage tanks. One pump-off station is located southwest of the truck loading rack and another is in the Tank Farm by Tank 125. Gasoline can be pumped through the truck pump-off located southwest of the truck loading rack to Tanks 108 or 109. Both distillates and gasoline can be off-loaded from tank trucks to the bulk product tanks using the pump-off station by Tank 125. The pump-off station by Tank 125 is also used to pump-off denatured ethanol, butane, used cooking oil and biofuel from tank trucks to the bulk product tanks.

Naphtha is typically pumped from tank barges to Tank 105 and can be transferred from Tank 105 to Tanks 110, 112, 113 or 116 and mixed with the gasoline in those tanks. Biofuels can be received via barge at the marine dock or via tank truck and mixed with the distillate products in Tanks 101, 102 106, 111, 114 and 117. Used cooking oil (UCO) is delivered by tank truck and pumped into Tank 111. Butane is received via tank truck and mixed with gasoline products in Tanks 110, 112, 113 and 116.

See Section 3.2 – Facility Activities Assessment below for more information.

2.2. Site Locus and Site Drainage Plans

Figure 1 – Site Locus and Figure 2 – Site Drainage Plan are included as part of this Plan. These drawings include the following information as appropriate:

- The boundaries of the property and size of the property in acres;
- The location and extent of significant structures and impervious surfaces;
- Directions of stormwater flow (note: no flows with significant potential to cause erosion have been identified at the Terminal);
- Locations of all stormwater control and management measures;
- Locations of all receiving waters, including wetlands, in the immediate vicinity of the Terminal, indicating if any of the waters are listed as impaired and which are identified by the MassDEP or the EPA as Tier 2, Tier 2.5 or Tier 3 waters (Not applicable - see Section 4.10);
- Locations of all stormwater conveyances including ditches, pipes and swales;
- Locations of potential pollutant sources;
- Locations where significant spills and leaks of oil or toxic or hazardous substances that actually occurred at exposed areas, or that drained to a stormwater conveyance, in the three years prior to the date this Plan was prepared or amended (also see Appendix C);
- Locations of all stormwater monitoring points;
- Locations of stormwater inlets and discharge points, with a unique identification code for each outfall (e.g., Outfall No. 1, No. 2, etc.), indicating if one or more outfalls are “substantially identical” under Parts 3.2.4.5, 4.1.1 and 5.2.5.3, of the current MSGP (not applicable to the Gulf Chelsea Terminal) and an approximate outline of the areas draining to each outfall;

- Municipal separate storm sewer systems and where Terminal stormwater discharges to them (not applicable);
- Areas of Endangered Species Act-designated critical habitat for endangered or threatened species (not applicable); and
- Locations and descriptions of all non-stormwater discharges identified under Part 6.2.2.3.m of the current MSGP including locations of the following activities where such activities are exposed to precipitation:
  - fueling stations;
  - vehicle and equipment maintenance and/or cleaning areas;
  - loading/unloading areas;
  - locations used for the treatment, storage or disposal of wastes;
  - liquid storage tanks;
  - processing and storage areas;
  - immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material or by-products used or created by the facility;
  - transfer areas for substances in bulk;
  - machinery; and
  - locations and sources of run-on to the site from adjacent property that contains significant quantities of pollutants (not applicable).

Figure 1, Site Locus, illustrates the general location of the facility on a U.S. Geologic Survey topographic map.

Figure 2, Site Drainage Plan shows the Terminal's acreage, configuration, significant structures (buildings, tanks, secondary containments, pipelines, dock and other features), impervious surfaces, direction of stormwater flows at the Terminal, locations of stormwater control measures, location of the receiving waters (Chelsea Creek), location of stormwater drainage conveyances, locations of significant spills, location of the stormwater monitoring point (Outfall 003), stormwater inlets and discharge point (Outfall 003) and locations where Terminal activities such as fueling stations, loading/unloading areas, waste storage areas and storage tanks are exposed to precipitation.

Chelsea Creek is not identified as a Tier 2, Tier 2.5, or Tier 3 water. There are no "substantially identical" outfalls at the Terminal. The Terminal does not discharge stormwater to a municipal separate stormwater system. The entire Terminal drains through the Terminal's drainage system, which includes the retention ponds and the oil-water separator (OWS), to Outfall 003. There are no locations and sources of run-on to the Terminal from adjacent properties that contain significant quantities of pollutants. There are no designated critical habitat areas for endangered or threatened species.

3. Site Assessments and Planning

3.1. Summary of Significant Materials

Safety Data Sheets (SDSs) for Significant Materials stored or used on site are on file in the Terminal's Control Room. SDSs for bulk petroleum products stored at the Terminal are also available online at www.Gulfoil.com.

Table 3-1 provides a list of Significant Materials which are stored, used or handled onsite.

Table 3-1 Chelsea Terminal Storage

Tank	Product	Shell Capacity		Tank Type/Year	Failure /Cause3F[3]
		Barrels	Gallons		
101	Distillates	96,387	4,048,257	Vertical Steel/1950	(a)
102	Distillates	94,807	3,981,894	Vertical Steel/1950	(a)
103	Empty	16,569	695,877	Vertical Steel/1950	(a)
104	Empty	1,964	82,500	Vertical Steel/1950	(a)
105	Gasoline/Naphtha	79,591	3,342,828	IFR[4]/Vertical/1950Steel/1950	(a)
106	Distillates	53,942	2,265,583	Vertical Steel/1950	(a)
107	Gasoline/Denatured Ethanol	80,771	3,392,368	IFR/Vertical Steel/1950	(a)
108	Gasoline	53,966	2,266,578	IFR/Vertical Steel/1950	(a)
109	Gasoline	53,965	2,266,533	IFR/Vertical Steel/1950	(a)
110	Gasoline	53,779	2,258,725	IFR/Vertical Steel/1950	(a)
111	Distillates/Used Cooking Oil	53,764	2,258,106	Vertical Steel/1950	(a)
112	Gasoline	130,007	5,460,297	IFR/Vertical Steel/1950	(a)
113	Denatured	131,006	5,502,264	IFR/Vertical Steel/1950	(a)
114	Distillates	53,405	2,243,005	Vertical Steel/1950	(a)
116	Gasoline/Naphtha	96,040	4,033,702	IFR/Vertical Steel/1950	(a)
117	Distillates	153,659	6,453,698	Vertical Steel/1950	(a)
118	Gasoline	28,145	1,182,075	IFR/Vertical Steel/1950	(a)
119	Gasoline	28,219	1,185,209	IFR/Vertical Steel/1950	(a)
120	Diesel Additive, by Loading Rack	191	8,020	Horizontal Steel/1987 Single Wall	(a)

[3] (a) – no failure known
[4] IFR – Internal Floating Roof

Table 3-1 Chelsea Terminal Storage					
Tank	**Product**	**Shell Capacity**		**Tank Type/Year**	**Failure /Cause3F[3]**
		Barrels	**Gallons**		
121	Gasoline Additive, by Loading Rack	238	9,986	Horizontal Steel/1990 Single Wall	(a)
122	Shell Additive, by Loading Rack	239	10,026	Horizontal Steel/1994 Single Wall	(a)
123	Diesel, Tank Truck Refueling	119	5,000	Horizontal Steel/1985 Single Wall	(a)
124	Red Dye, by Loading Rack Additive Tanks	71	3,007	Horizontal Steel/2005 Double Wall	(a)
125	Lubricity, by Pipeline to Dock	71	3,007	Horizontal Steel/2007 Double Wall	(a)
DYE-2	Empty, Formerly Red Dye, by Loading Rack	6	250	Stainless Steel Tote/2019 Single Wall	(a)
N/A	Spill Recovery Tank (Tank 117 Dike)	235	9,852	Horizontal Steel/ Single Wall	(a)
LR-HO	No. 2 Fuel Oil, Locker Room	24	1,003	Horizontal Steel/1996 Double Wall	(a)
FH-1	No. 2 Fuel Oil, Foam House	7	275	Horizontal Steel/1980 Single Wall	(a)
FH-2	No. 2 Fuel Oil, Foam House	7	275	Horizontal Steel/1980 Single Wall	(a)
G-1	No. 2 Fuel Oil, Cumberland Farms	7	275	Horizontal Steel/1980 Single Wall	(a)
G-2	No. 2 Fuel Oil, Cumberland Farms	7	275	Horizontal Steel/1980 Single Wall	(a)
SL-1	Slop Tank – Mixture of Gasoline, Diesel and	7	275	Horizontal Steel/1980 Single Wall	(a)
N/A	Mobile Proofer Tank	24	1,000	Steel	N/A
N/A	Ethanol Proofer Tank	2	100	Steel	N/A
N/A	Safety-Vac Trailer Tank	6	250	Steel	N/A
N/A	Red Dye, 4 Drums, Warehouse	5	220	Steel	N/A
N/A	Zink Fluid, 4 Drums, Warehouse	5	220	HDPV	N/A
N/A	Waste Oil Tank, Cumberland Farms	7	275	Steel	N/A
N/A	Motor Oil, 4 Drums Cumberland Farms	5	220	Steel	N/A

Table 3-1 Chelsea Terminal Storage					
Tank	**Product**	**Shell Capacity**		**Tank Type/Year**	**Failure /Cause3F[3]**
		Barrels	**Gallons**		
Totals		**1,261,269**	**52,973,310**		

There are two electrical transformers located at the Terminal. The transformers are owned, operated and maintained by EverSource (formerly NSTAR). EverSource is responsible for the remediation of any spills associated with the transformers. One transformer is inside a locked cage adjacent to the Terminal's Main Entrance and the other is in a locked fenced-off area adjacent to the Contractor's Trailer behind the Warehouse. Each transformer contains approximately 150 gallons of transformer oil. Gulf does not have access to the locked areas.

The number of Red Dye and Glycol drums (whether containing dye or glycol or empty) will vary based on usage, resupply and disposal. The Terminal may also store drums (full or empty) of diesel additive in the Warehouse. Drums containing product are stored on spill pallets.

The Terminal also maintains two 1,900-gallon tanks of Alcohol Resistant Aqueous Film Forming Foam (AR-AFFF) in the Foam House for a total capacity of 3,800 gallons to be used for fire suppression in the Terminal's Tank Farm. There is a 900-gallon tank and a 300-gallon tote of AR-AFFF in the Maintenance Building/Locker Room to be used for fire suppression at the Terminal's Truck Loading Rack.

The City of Chelsea Fire Department maintains five (5) 55-gallon drums of AR-AFFF in the Cumberland Farms Garage at the Terminal. The number of drums will vary based on usage and resupply.

A variety of paint cans are stored in the Warehouses and Tire Room at the Terminal. The number of paint cans will vary based on usage and resupply.

3.2. Facility Activities Assessment

Gulf's Chelsea Terminal receives distillates, gasoline, naphtha, denatured ethanol, butane, biofuel and used cooking oil via barge, tank vessel and/or tank truck. The Terminal distributes distillates and ethanol/gasoline blend through the truck loading rack. The Terminal has the capability of loading distillate products onto vessels at the marine dock but this is not a typical operation.

The Terminal currently has a total of forty-eight (48) aboveground storage containers with capacities of 55 gallons or more. The total combined shell capacity of the storage containers is 1,261,269 barrels (52,973,310 gallons).

Two (2) tanks (103 and 104) are inactive but may be put back into service in the future. The Terminal has six (6) distillate tanks (101, 102, 106, 111, 114 and 117), six (6) gasoline tanks (108, 109, 110, 112, 118 and 119), two (2) tanks that can contain either gasoline or naphtha (105 and 116), two (2) tanks that can contain either gasoline or denatured ethanol (107 and 113), one (1) own use diesel tank (123), five (5) additive tanks (120, 121, 122, 124, 125) and one empty red dye tank (DYE-2). There is one tank used to store oil/water that may be recovered from the Chelsea Creek in the event of a discharge to the water. There are five (5) Heating Oil tanks (LR-HO, FH-1, FH-2, G-1 and G-2), one (1) Slop Tank, one (1) Loading Rack Proofer Tank, one (1) Ethanol Proofer Tank, one (1) tank on the Safety-Vac Trailer and one (1) Waste Oil Tank. There may be four (4) Red Dye drums and four (4) Glycol drums on hand at the Terminal at any one time and the Cumberland Farms Garage may have four (4) drums of Motor Oil on hand. The number of drums on hand at any one time will vary based on usage and replacement. Cumberland Farms is responsible for the Waste Oil Tank and the Motor Oil Drums stored in the Cumberland Farms Garage.

The Terminal has an area in the small Warehouse where hazardous and non-hazardous waste drums may be stored. Universal Waste is also stored in the small Warehouse. The number of drums and containers will vary.

See Section 2.1 (above) for more information for Facility Description and Operations. Areas where the activities discussed above are located are shown on Figure 2 – Site Drainage Plan.

3.3. Existing Sampling Data

Sampling data from December 31, 2014 to November 30, 2021 can be found on the EPA's website. More recent monitoring data is kept on file in the Terminal Office. A copy of Parts 1 and 2 of the Terminal's Individual NPDES Permit can be found in Appendix A of this Plan. A copy of this Plan is kept in the Terminal Office.

Part I of the Permit is also accessible on the EPA's website at:

2022 Gulf Oil Limited Partnership Final Permit, MA0001091 (epa.gov)

Sampling data can be found on the EPA's website at:

gulf-ma0001091-dmr-data.xlsx (epa.gov)

4. Description of Control Measures

4.1. Terminal Stormwater Drainage System

Stormwater discharges to Chelsea Creek through Outfall 003 are generated from runoff from paved areas which include the Terminal's Truck Loading Rack area, vehicle parking areas and the Tank Farm roadways; from the roofs of the Terminal Office Building, the Locker Room Building, the Cumberland Farms Garage and the warehouses; and from stormwater that is discharged from the secondary containment dikes in the Terminal's Tank Farm. The discharge from Outfall 003 is regulated by the Terminal's NPDES Permit #MA0001091.

The secondary containment dikes are graded to direct the flow of stormwater to trenches that direct the flow toward the dike discharge valves. The Tank Farm drainage system discharge valves are located at the east corner of the Tank 101/102 dike, on the road outside the southwest corner of Tank 117 dike, in the Tank 105 dike at the southeast corner and in the Tank 118 dike west of the Tank. The valve in the Tank 118 dike controls the discharge of all the stormwater from the dikes west and south of the Tank Farm and Dock Roads. The dike discharge valves are kept closed and locked when they are not opened to allow discharge of stormwater from the dike. The stormwater in the dikes is inspected by Terminal personnel to ensure there is no visible sheen or other obvious signs of pollutants prior to discharge. The locations of the valves are shown on Figure 2 – Drainage Plan.

The Terminal has two lift stations associated with the Terminal Yard and Tank Farm drainage systems, each equipped with two, individually powered, float activated 800 gallons per minute (gpm) pumps and a third lift station associated with the marine dock drainage system.

Lift Station #1 is located adjacent to the roadway between Tanks 117 and 102. This lift station pumps the drainage from the truck Loading Rack area (during normal rain events) and the Tank 101/102 dike area to Lift Station #2. Lift Station #2 is located adjacent to the upper retention basin (aka the Small Pond). Lift Station #2 handles all drainage from the roads in the Tank Farm, drainage from the Tank 117 dike and the Tank Farm drainage that flows through the Tank 118 discharge valve. Lift Station #2 pumps the collected drainage to the upper retention basin.

The truck loading rack area (including vehicle parking areas and runoff from the roofs of the buildings in the area) is graded to direct stormwater into trench drains or catch basins (refer to Figure 2). Stormwater that enters the trench drains or catch basins flows via gravity to two, in series, OWS baffle tanks and then to Lift Station #1. During normal rain events, the flow from the loading rack and parking areas flows into Lift Station #1 and is then pumped to Lift Station #2. During heavy rain events, the flow from the loading rack and parking areas flows into Lift Station #1 and the valve for the flow from the Tank 101/102 dike field is closed. The water in Lift Station #1 is then pumped to the Tank 117 dike field. The Tank 117 dike discharges by gravity to Lift Station #2 which pumps the water to the retention ponds as described below.

The stormwater in the upper retention basin flows by gravity to the lower retention basin (aka the Big Pond) and then by gravity from the lower retention basin to the OWS before being discharged by gravity to the Chelsea Creek at Outfall 003. The 8,000-gallon capacity OWS has a maximum design flow rate of 800 gpm. The lower retention basin discharge valve is kept closed and locked when it is not opened to allow discharge of stormwater from the basin to the OWS. The lower basin discharge valve is not opened until the stormwater in the basin has been inspected by Terminal personnel to ensure there is no visible sheen or other obvious signs of pollutants.

The Marine Dock Manifold spill pan drains to a lift station that pumps drainage from the Dock Manifold Area to the Tank 117 dike by means of a float activated 60-gpm pump.

In the event of a failure of any lift station pump, the Terminal has portable pumps and hoses that may be used to pump stormwater through the drainage system.

The inspection and discharge of collected stormwater is documented using a stormwater discharge tracking log contained in Appendix I in the Facility Response Plan or a similar form. Stormwater drainage flow direction and the drainage system components are shown on Figure 2 – Site Drainage Plan.

4.2. Numeric Effluent Limitations Based on Effluent Limits in the Terminal's NPDES Permit

Stormwater discharge effluent limits that are applicable to the Terminal are found in Part I.A.1 of the Terminal's NPDES Permit #MA0001091 (Appendix A) and summarized on Table 4-1. Discharge sampling for several parameters is conducted in accordance with the Terminal's NPDES Permit as described in Section 4.4.2.7.

4.3. Unauthorized Non-Stormwater Discharges

4.3.1. NPDES Permit Part I.B.1

Part I.B of the Terminal's NPDES Permit authorizes the Terminal to discharge in accordance with the terms and conditions of the Permit and from the outfall identified in Part I.A.1 of the Permit. Discharges of wastewater from any other point sources which are not authorized by the Terminal's NPDES Permit or other NPDES permits will be reported in accordance with Part D.1.e.(1) of the Standard Conditions of the Permit (twenty-four hour reporting).

4.3.2. NPDES Permit Part I.B.2

The Terminal is authorized to discharge only the effluent types listed in Part I.A.1 of its NPDES Permit with the exception of the following discharges allowable under Part 1.2.2.1 of the 2021 MSGP, provided these discharges meet all effluent limitations in the Permit:

- Discharges from emergency/unplanned fire-fighting activities;
- Fire hydrant flushings;
- Potable water, including uncontaminated water line flushings;
- Uncontaminated condensate from air conditioners, coolers/chillers, and other compressors and from the outside storage of refrigerated gases or liquids;
- Irrigation/landscape drainage, provided all pesticides, herbicides, and fertilizers have been applied in accordance with the approved labeling;
- Pavement wash waters, provided that detergents or hazardous cleaning products are not used (e.g., bleach, hydrofluoric acid, muriatic acid, sodium hydroxide, nonylphenols), and the wash waters do not come into contact with oil and grease deposits, sources of pollutants associated with industrial activities (see MSGP Part 6.2.3), or any other toxic or hazardous materials, unless residues are first cleaned up using dry clean-up methods (e.g., applying absorbent materials and sweeping, using hydrophobic mops/rags) and appropriate control measures have been implemented to minimize discharges of mobilized solids and other pollutants (e.g., filtration, detention, settlement);
- External building/structure washdown / power wash water that does not use detergents or hazardous cleaning products (e.g., those containing bleach, hydrofluoric acid, muriatic acid, sodium hydroxide, nonylphenols) and appropriate control measures have been implemented to minimize discharges of mobilized solids and other pollutants (e.g., filtration, detention, settlement);
- Uncontaminated groundwater or spring water;
- Foundation or footing drains where flows are not contaminated with process materials;

- Incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of the facility, but not intentional discharges from the cooling tower (e.g., “piped” cooling tower blowdown; drains); and
- Any authorized non-stormwater discharge listed above or any stormwater discharge listed in MSGP Part 1.2.1 mixed with a discharge authorized by a different NPDES permit and/or a discharge that does not require NPDES permit authorization.

In accordance with Part I.B.1 of the Permit, the only authorized discharges from Outfall 003 are those identified in Part I.A.1 of the Permit. The following discharges are expressly prohibited:

- Discharge of tank bottom water and/or bilge water alone or in combination with stormwater discharge or other wastewater;
- Discharge of any sludge and/or bottom deposits from any storage tank(s), basin(s), and/or diked area(s) to the receiving waters. Examples of storage tanks and/or basins include, but are not limited to: primary catch basins, OWSs, petroleum product storage tanks, baffled storage tanks collecting spills, and tank truck loading rack sumps;
- Discharge of liquid hazardous waste alone or in combination with stormwater or other wastewater;
- Discharges of runoff from any vehicle and equipment washing alone or in combination with stormwater or other wastewater, including from the leased property;
- Discharges of ballast water alone or in combination with stormwater or other wastewater;
- Runoff resulting from accidental spill or release, alone or in combination with stormwater or other wastewater;
- Discharges of emulsion chemicals, including surfactants (e.g., detergents and soaps) alone or in combination with stormwater or other wastewater;
- Discharges of contaminated groundwater, including, but not limited to wastewater generated during activities conducted under the Massachusetts Contingency Plan, alone or in combination with stormwater or other wastewater; and
- Discharges of aqueous film-forming foam and alcohol resistant foam either in concentrate form or as foam diluted with water during testing or maintenance of the fire suppression system at the Facility’s marine vessel dock.

Tank bottom water, sludge or bottom deposits from any storage tank or liquid hazardous waste will be removed by appropriately licensed contractors and disposed of at appropriately licensed disposal sites. The disposal records are maintained in the Terminal Manager’s office.

The Terminal does not have a groundwater remediation system. If such a system is installed, the system will be designed so as to collect the wastewater which will then be disposed of and not discharged to Chelsea Creek, unless the Terminal applies for and obtains a separate NPDES Permit for such a discharge to Chelsea Creek.

If there is a spill involving an additive and the spilled additive entered the Terminal’s drainage system, the lift station pumps would be shut down to prevent the spilled material from entering the retention ponds and the OWS. The drains would be cleaned. Any spilled additive that did not enter the drainage system would be cleaned up to prevent it from flowing into the drainage system.

The Terminal’s fire suppression systems are tested using municipal (potable) water which the Terminal is allowed to discharge. Fire suppression foam is not used in testing the fire suppression systems. If the fire suppression foam system is activated at the Terminal’s truck loading rack during testing, the lift station pumps would be shut down and the discharge valve from the Terminal’s retention ponds would be closed so that the run-off would be contained in the Terminal’s drainage system. In the event the foam system is activated for an actual fire suppression activity at a storage tank, the foam/water mixture would typically be

contained in the tank impacted by the fire. If any of the foam monitors around the Tank Farm are used in fighting a fire at the Terminal, the drainage system valves would be closed and the foam/water mixture would be contained in the affected dike. The foam/water mixture in the impacted tank and/or dike would be removed and disposed of and not allowed to be discharged to Chelsea Creek.

The Terminal is not equipped with a bypass system for the stormwater drainage. All stormwater is processed through the retention ponds and the OWS.

In the event of an accidental oil spill at the Terminal, the spill would typically be cleaned up before it could impact the Terminal's drainage system. If the spill did enter the drainage system, the impacted water would be processed through the retention ponds and the Terminal's OWS. If there is a visible sheen or other obvious pollutants in either of the retention ponds, the water would not be allowed to flow to the OWS and the spilled material would be removed from the retention pond. If the spill is in a Tank Farm dike area, it would be retained in the dike and cleaned up before the dike discharge valve is opened to release accumulated stormwater to the Terminal's drainage system.

4.4. Special Conditions (NPDES Permit Part I.C)

4.4.1. NPDES Permit Part I.C.1.a Best Management Practices

Best Management Practices (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures and practices to control plant site runoff, spillage or leaks, sludge or waste disposal or drainage from raw material storage.

The Terminal has designed, installed and implemented control measures to minimize pollutants discharged from stormwater associated with the Facility operations to Chelsea Creek. The Terminal has implemented control measures, both structural controls (e.g., OWS, containment areas, holding tanks) and non-structural (e.g., operational procedures and operator training) consistent with those described in Part 2.1.2 and of EPA's MSGP. The control measures ensure the following non-numeric effluent limitations are met.

4.4.1.1. Minimize Exposure of Stored Material (NPDES Permit Part I.C.1.a.(1))

All bulk products are stored in enclosed tanks or containers compatible with the substance stored within. The tanks and containers are located inside a secondary containment system such as the Tank Farm dike system, the Terminal Yard drainage system or inside a building. The facility oil storage tanks are not designed, installed and/or operated (permanently manifolded) in such a manner that the multiple tanks function as one storage unit. Secondary containment for each tank is provided by an earthen dike, the facility drainage system including the OWS and retention ponds or concrete containments. The secondary containment system walls and floors are sufficiently impervious to contain oil. All storage areas are inspected at least once per shift by Terminal personnel.

All piping systems within the facility are designed and operated to minimize the chance of product release. Pipe supports are steel to steel construction to allow for equal expansion and contraction of the piping and support column. Supports are mounted on concrete bases with footing below the frost line to ensure structural support. Typically, pipe supports are made of steel for elevated lines and concrete for lines at grade. Expansion loops are incorporated into long pipe routings to allow for expansion and contraction of pipe. Pipe supports are typically designed to minimize abrasion and corrosion via installation of steel sliders welded to the bottoms of pipe. Bumper blocks, concrete islands or concrete filled pipes (bollards) are placed strategically around above ground piping that is exposed to vehicular traffic.

4.4.1.2. Minimize Exposure During Transfer of Bulk Materials (NPDES Permit Part I.C.1.a.(1))

Bulk product is received at the facility via barge or tank ship with direct loading from the Terminal's marine dock through the Terminal's pipeline system to the appropriate storage tanks within the Tank Farm

secondary containment areas. Receipt operations from vessels to the Terminal's storage tanks are monitored by Terminal and vessel personnel. Terminal personnel inspect the pipeline route and gauge the tank(s) being filled every hour during the receipt operation. The bulk product storage tanks are equipped with high-level and high-high-level alarms to prevent overfilling during transfers. Triggering a high-level alarm activates an audio and visual alarm in the Dock House and in the Control Room in the Terminal Office Building and an audio alarm that can be heard throughout the Terminal. In the event the alarm is activated, transfer operations are immediately stopped. Transfer operations will not resume until the cause of the alarm is determined and addressed. The appropriate secondary containment dike discharge valves are kept closed and locked during receipt operations to contain the discharge of any product within the dike system should a spill occur.

Product is transferred from the Terminal's bulk storage tanks to tank trucks at the truck loading rack via the Terminal's piping system. The truck loading rack is equipped with a canopy to minimize exposure to precipitation. All piping is constructed of materials compatible with the substance handled within.

Drivers who bottom load must enter the amount of product they want to receive as part of the product transfer procedure before they can load. The flow of product will stop when the amount of product entered into the system is reached. Truck drivers are required to monitor and control truck loading and unloading. The tank truck driver inspects the drains and outlet connections to ensure proper closure of hatches, bottom valves and vapor openings both prior to and after loading operations to prevent potential discharges. If necessary, the valves are tightened, adjusted or replaced prior to continuing operations. The visual inspections are typically not documented. The vehicle is attended at all times by the driver during the transfer so that no leaks or discharges will go undetected should there be an equipment malfunction. After the transfer is complete, the vehicle will not be moved until all connections have been checked by the driver to be sure that they are undone and that there is no restraint on the truck that could possibly damage equipment and cause a leak.

The Terminal is equipped with *Scully's* Electronic Terminal Systems which provide Dynamic Self-Checking® overfill protection, as well as grounding verification for bottom loading tankers which load petroleum. These systems are capable of controlling fills and eliminating spills of tanker trucks with up to 8 compartments when equipped with two-wire sensors or 15 compartment tanks when equipped with five-wire sensors. All bottom loading trucks that load at the Terminal are equipped with either the two or five wire sensors. To prevent overloading, the driver must obtain a working Scully connection, needed for computer-controlled permission to load. Once permission is secured, the Scully system shuts down the loading process should product reach any of the compartment overfill sensors.

All bottom-loading tank trucks at the Terminal are equipped with a brake-interlock system. Drivers must raise a guard bar in order to access the tanker's loading connections. This activates the truck's braking system to prevent the vehicle from rolling during loading/unloading if the parking brake is not applied and from leaving before completely disconnecting from the fuel transfer lines. The guard bar cannot be lowered back into place until the loading connections have been disconnected. Signs warning drivers to completely disconnect from the fuel transfer lines are also posted in loading and unloading areas.

Drivers who top load must enter the amount of product they want to receive as part of the product transfer procedure before they can load. The flow of product will stop when the amount of product entered into the system is reached. Drivers who top load also visually witness the product rising in the truck from the open dome during transfer and can stop the flow at any time. The driver must manually hold open a spring-loaded handle on the loading arm to receive product. The product will stop flowing if the driver releases pressure on the handle. Drivers use wheel chocks to prevent top loading tank trucks from departing the loading area while loading/unloading.

Each truck loading bay is equipped with an emergency stop button that, when pushed, will shut down the transfer operations at all the loading bays. There is also an emergency stop button on the Terminal Office exterior wall and in the Terminal Office Control Room.

4.4.1.3. Housekeeping (NPDES Permit Part I.C.1.a.(2))

Good housekeeping BMPs are used to maintain a clean and orderly workplace to reduce the potential for accidental spills or releases of materials that could contaminate stormwater. Materials that are stored at the Terminal are stored in containers that are compatible with the products stored within.

The Terminal Yard, which includes the loading racks, truck re-fueling pump, slop tank and paved parking areas are kept clear of unnecessary equipment and debris. The Terminal is inspected daily by Terminal personnel to ensure that all areas are kept clean and orderly. Small spills (up to 10 gallons) anywhere at the Terminal are immediately cleaned up by Terminal personnel using any combination of absorbent pads, absorbent booms and/or granular absorbent material.

Housekeeping measures implemented at the Terminal are part of the control measures for waste, garbage and floatable debris. Any such debris that may be found at the Terminal is typically removed by Terminal personnel or caught in the drainage system covers before it can enter the drainage system. If waste, garbage or floatable debris is small enough to make its way into the drainage system, it would likely be contained within the baffle tanks, the retention ponds or the OWS before it could be discharged.

The trash dumpsters in the Terminal Yard are kept covered, bottom drains are plugged and the dumpsters are emptied regularly. If a dumpster is found to have any holes that may allow pollutants to enter the Terminal's drainage system, the vendor that provides the dumpster is contacted to replace it.

The Terminal Yard and other paved areas of the Terminal are swept twice a year in accordance with the Terminal's Individual NPDES Permit. The sweepings are typically done in the spring after the last snowfall and in the fall before the first freeze.

4.4.1.4. Maintenance (NPDES Permit Part I.C.1.a.(3))

The Terminal Manager is responsible for both the preventative and corrective maintenance of all on-site equipment and secondary containment systems. Tanks, pipes, valves, glands, drums or other equipment found to be leaking petroleum products or other hazardous substances will be promptly repaired, replaced or taken out of service following detection of the leak. All releases of petroleum product are cleaned up promptly by Terminal personnel or by contracted personnel in accordance with the Terminal's FRP.

All bulk petroleum and additive products are stored within storage tanks that are painted to inhibit corrosion. Maintenance and inspection of bulk product and additive tanks are performed in accordance with the American Petroleum Institute's Standard 653 or the Steel Tank Institute's SP001 Standard, as appropriate.

To help prevent leaks from forming in product piping installed prior to August 16, 2002 that crosses through a dike wall, the piping will be sleeved, wrapped or provided with cathodic protection or relocated above ground if it is unearthed.

All in-service above ground piping is painted to inhibit corrosion. Pipe supports are designed to minimize abrasion and corrosion and allow for expansion and contraction. Bumper blocks, concrete islands or concrete filled pipes (bollards) are placed strategically around all above ground piping that is exposed to vehicular traffic.

Any piping which exhibits signs of significant corrosion or structural fatigue is replaced with piping which meets or exceeds the industrial standards applicable to new pipe installations that are in place at the time of the replacement. Pipes removed from service are capped or blank flanged and marked as to origin or they are physically removed.

All equipment which exhibits signs of significant structural fatigue or deterioration will be promptly repaired, replaced or taken out of service until the situation is rectified. Any leaking substance will be contained and the source of the leak repaired as soon as practical after the leak is detected or the equipment will be taken out of service until the situation is rectified.

All storage areas or areas surrounding storage tanks/piping are maintained impermeable and in a manner which provides secondary containment and allows for unobstructed movement of personnel, fire protection or spill control equipment and/or decontamination equipment. All paved surfaces are maintained in good repair and free of cracks.

Secondary containment systems are maintained in good repair, free of accumulated debris and free of cracks through which hazardous substances could be discharged. Secondary containment systems are inspected by Terminal personnel on a monthly basis and prior to any planned stormwater discharge from these areas.

The Terminal's drainage system is inspected and cleaned periodically. Debris surfaces in catch basins are at least 6 inches below the lowest outlet pipe.

4.4.1.5. Spill Prevention and Response Procedures (NPDES Permit Part I.C.1.a.(4))

The Terminal complies with the Facility Response Plan and Spill Containment, Control and Countermeasure requirements of 40 CFR 112. Those requirements include the spill prevention and response procedures and practices that have been implemented at the Terminal, spill prediction, spill preparedness, spill detection, spill notification procedures and contact information, spill response equipment inventory and inspection, spill response actions and employee training requirements. Secondary containment systems are utilized to contain any spill that may occur at the Terminal and prevent a spill from entering Chelsea Creek. The Terminal's drainage system, which includes the retention basins and the OWS, is described in Section 4.1 above.

The Terminal maintains a supply of hydrophobic, petroleum adsorbing pads and boom and absorbent granular materials on site to be able to respond to minor spills. The Boston Harbor Oil Spill Cooperative (BHOSC) maintains pre-deployed containment boom at the Terminal and at other strategic locations along Chelsea Creek and Boston Harbor. The Terminal has contracted with the BHOSC and an Oil Spill Removal Organization (OSRO) to respond to spills at the Terminal. The BHOSC will provide manpower and equipment to deploy containment boom in Chelsea Creek and Boston Harbor if necessary. The OSRO will, if necessary, be able to provide the manpower and equipment required to respond to a spill ranging in size from less than one (1) gallon up to the Terminal's EPA defined worst case discharge of 6,453,698 gallons both on land and on water for the duration of time required to clean up the spill.

The Terminal has identified the location and contact information for sensitive resources that are within the planning distance for the Terminal and the methods to be used to protect them from the effects of a spill at the Terminal. For non-persistent oil discharged into tidal waters the planning distance is 5 miles from the facility down current during ebb tide and to the point of maximum tidal influence or 5 miles, whichever is less, during flood tide (40 C.F.R. 112 Appendix C 4.2). The EPA provides a list of sensitive resources in 40 C.F.R. 112, Appendix F Part 1.4.2, to be considered in the evaluation of potential risk factors. This list includes schools, medical facilities, residential areas, wetlands, drinking water intakes, wildlife areas, marine and estuarine reserves and recreational areas and is intended to direct planning efforts toward the protection of important environmental and community resources.

4.4.1.6. Erosion and Sediment Controls (NPDES Permit Part I.C.1.a.(5))

The Terminal's ground surface area is comprised of a combination of concrete or asphalt pavement, and hard packed soils with gravel or clay. The Terminal Yard area is paved with asphalt. The truck loading rack area surface is concrete. The Tank Farm dikes have a clay interior surface with some areas enhanced with bentonite to improve impermeability. The Tank Farm roadways by Tank 117 and the warehouses and the Foam House Road are paved with asphalt. The Gate 5 roadway and the roadways adjacent to the marine dock are hard packed soils with gravel. The external walls of the Tank Farm dikes are covered with either gravel or vegetation to prevent erosion. The Terminal Operators perform daily and monthly inspections that include checks to detect any erosion issues that may arise.

The Terminal's Tank Farm drainage system includes gravel covered ditches that can trap sediment before it can be discharged from the dike area. The Terminal's retention ponds and OWS provide another means to control sediment by allowing the solids to settle out of the stormwater prior to discharge through the

regulated Outfall 003. As required by the Terminal's NPDES Permit, the Terminal samples the Outfall 003 discharge for Total Suspended Solids (TSS) twice monthly and conducts visual monitoring of the discharge quarterly to ensure sediments are not being discharged to the receiving waters. The retention ponds and OWS are cleaned periodically to minimize the chance of sediment being discharged to Chelsea Creek.

Outfall 003 discharges to Chelsea Creek onto stones that minimize erosion and scour in the immediate vicinity of the discharge location.

4.4.1.7. Management of Stormwater (NPDES Permit Part I.C.1.a.(6))

All stormwater collected within the Terminal Tank Farm secondary containment dikes drains by gravity to the Terminal's drainage system. The dike walls prevent uncontrolled runoff of the stormwater to Chelsea Creek from the diked areas. The Terminal Yard is graded to direct stormwater to the Terminal's drainage system. An earthen berm at the east side of the Terminal Yard prevents untreated stormwater runoff from the Terminal Yard from entering Chelsea Creek. Roof drains on the buildings at the Terminal direct runoff to the Terminal's drainage system. Stormwater at the marine dock is collected in a drainage pit and directed to a lift station that pumps the drainage into the Tank 117 dike.

4.4.1.8. Salt Storage Piles (NPDES Permit Part I.C.1.a.(7))

The Terminal may purchase salt in bulk and store it in piles inside the Cumberland Farms Garage where it is not exposed to stormwater. Calcium chloride pellets used for de-icing the Terminal's Yard, roadways and walkways may be purchased in 50 pound bags and delivered on pallets. The calcium chloride is also stored inside the Cumberland Farms Garage and is not exposed to stormwater. The Terminal uses a spreader on the bed of a company pickup truck to distribute the salt and/or calcium chloride when necessary. The spreader is filled inside the Cumberland Farms Garage to prevent exposure to stormwater. Some of the bags of calcium chloride are emptied into plastic barrels equipped with covers for localized use on walkways and parking areas around the Terminal. These barrels are stored inside buildings or outdoors under canopies to prevent exposure to stormwater.

Residue from salt and calcium chloride that has been used for de-icing the Terminal Yard, roadways and walkways would enter the Terminal's drainage system. The Terminal's drainage system baffle tanks for the Terminal Yard would remove most of the residue from the discharge stream. The retention ponds would also assist in the removal of residue. Results of the TSS sampling described in Section 4.4.1.6 above would be an indicator of whether the discharge through Outfall 003 contains any residue.

4.4.1.9. Employee Training (NPDES Permit Part I.C.1.a.(8))

Terminal employees who work in areas where industrial activities or material handling activities are exposed to stormwater receive training upon hiring and annually thereafter. Those who are responsible for implementing activities necessary to comply with the Terminal's NPDES Permit receive training prior to undertaking those activities. These employees include all members of the Stormwater Pollution Prevention Team (the Terminal Manager and Supervisor) and all Terminal Operators.

The Terminal Manager, Supervisor and Operators receive training in the contents and requirements of this SWPPP, spill response procedures, good housekeeping, maintenance requirements, material management practices, the location of all controls required by the Terminal's NPDES Permit, the proper procedures to follow with respect to the Permit's pollution prevention procedures, when and how to conduct inspections, record applicable findings and take corrective actions and the Terminal's emergency procedures.

The employees receive annual training on the contents and requirements of the Terminal's FRP and SPCC Plan as well as OSHA 29 C.F.R. 1910.120 HazWoper training. The training may be conducted by Gulf's Environmental, Safety & Occupational Health (ESOH) Department personnel, the Terminal Manager or Supervisor, classroom training provided by an outside contractor and/or computer-based training. Training records are maintained by the Terminal Manager.

4.4.1.10. Non-Stormwater Discharge Evaluation (NPDES Permit Part I.C.1.a.(9))

The Terminal has evaluated its drainage system and found no cross connections between the stormwater drainage system and sanitary sewer lines. The Terminal has inspected the stormwater drainage system to ensure there is no groundwater infiltration that would create an illicit discharge and will do so again within one year of the effective date of the Permit (December 1, 2022) in accordance with Part 1.C.b.(8) of its NPDES Permit (see Section 4.4.2.8 of this Plan). The Terminal personnel conduct daily, weekly, monthly, quarterly and annual inspections to prevent non-stormwater discharges from occurring. Should a release be detected, Terminal personnel would be able to close the appropriate valves to prevent the release from being discharged to the Chelsea Creek.

4.4.1.11. Dust Generation and Vehicle Tracking of Industrial Materials (NPDES Permit Part I.C.1.a.(10))

The Terminal Yard area and Tank Farm roadways, where most vehicle activity occurs, are paved thereby minimizing dust generation. The Terminal's Tank Farm interior dike surfaces are clay and gravel which also minimizes dust generation. If a discharge occurred at the truck loading rack, any vehicle that may be impacted by the leak would be cleaned prior to allowing it to depart from the Terminal.

4.4.1.12. Illicit Discharges (NPDES Permit Part I.C.1.a.(11))

There are no cross connections between the Terminal's stormwater drainage system and sanitary sewers. If an illicit discharge is detected, the Terminal will locate, identify and eliminate the illicit discharge as expeditiously as possible.

4.4.1.13. Rodents, Birds and Other Animals (NPDES Permit Part I.C.1.a.(12))

The Terminal will use known, available and reasonable methods to prevent rodents, birds or other animals that may be found to be feeding/nesting/roosting at the Terminal. These methods will not include any that would be construed as a violation of any applicable federal, state or local statutes, ordinances or regulations, including the Migratory Bird Act.

4.4.1.14. Practices to Minimize Bacteria (NPDES Permit Part I.C.1.a.(13))

In addition to using known, available and reasonable methods to prevent rodents, birds and other animals from feeding/nesting/roosting at the Terminal, the Terminal will ensure that all food waste will be properly disposed of in sealed trash bags and that the covers on the waste dumpsters at the Terminal are closed and the drains are plugged to prevent rodents and other wildlife from accessing the dumpsters and possibly spreading waste that may promote the growth of bacteria.

4.4.2. NPDES Permit Part I.C.1.b Additional Best Management Practices

The Terminal will or has designed, installed and/or implemented the following BMPs.

4.4.2.1. MSGP Parts 3.1, 3.2, 5.1 & 5.3

The Terminal will comply with the inspection requirements in Parts 3.1 and 3.2 of the 2021 MSGP (see Section 5.0), the corrective action requirements in Part 5.1 of the 2021 MSGP and the corrective action documentation requirements in Part 5.3 of the 2021 MSGP (see Section 4.11). If any of the following conditions occur or are detected during an inspection, monitoring or by other means, the Terminal will review and revise this Plan, as appropriate, so that the Permit's effluent limits are met and pollutant discharges are minimized:

- An unauthorized release or discharge (e.g., spill, leak, or discharge of non- stormwater not authorized by this or another NPDES permit);
- A discharge violates a numeric effluent limit listed in Part I.A of the Permit (see Section 4.4.2.7 of this Plan);

- The stormwater control measures are not stringent enough to control stormwater discharges as necessary such that the receiving water will meet applicable water quality standards and/or the non-numeric limits in Part I.C of the Permit;
- A required control measure was never installed, was installed incorrectly, or is not being properly operated or maintained; and
- Whenever a visual assessment shows evidence of stormwater pollution (e.g., color, odor, floating solids, settled solids, suspended solids, foam).

4.4.2.2. MSGP Parts 2.1 & 2.1.1

The Terminal will comply with the control measure requirements in Part 2.1 and 2.1.1 of the 2021 MSGP in order to identify pollutant sources (stormwater runoff, petroleum products) and select, design, install and maintain the pollution control technology (secondary containment dikes, retention basins, OWS) necessary to meet the effluent limitations in the Permit that ensure dilution is not used as a form of treatment as described elsewhere in this Plan.

4.4.2.3. Discharge During Worst-Case Conditions

The Terminal will minimize, to the maximum extent practicable, discharging stormwater and hydrostatic test water during worst-case conditions (i.e., approximately one hour before and after slack tide and during periods of lowest receiving water flow) The Terminal will, to the maximum extent practicable, discharge stormwater and hydrostatic test water on an outgoing tide. In the event that a discharge outside of the parameters described here cannot be avoided, the Terminal will document the discharge and the reason for the discharge as a supplement to Appendix C to the SWPPP as shown below.

Date/Time of Discharge	Reason for Discharge

4.4.2.4. Discharge Flow Control

The flow through the stormwater treatment system's OWS discharge is a combination of gravity and pumped flow. Stormwater is pumped to the retention basin from the lift stations and flows from the retention basins to the OWS by gravity. There is a flow meter on the OWS discharge line. Storage is available in the containment areas so the lift station discharge can be controlled to ensure that the 800 gpm maximum design flow of the OWS is not exceeded.

4.4.2.5. Response Procedures for Ethanol and Materials Used for Spill Response & Fire Control

The Terminal has designed and implemented response procedures for ethanol and materials that are used for spill response and fire control (e.g., aqueous film-forming foam). This includes specific provisions for the treatment of ethanol and/or pollutants in materials that are used for spill and fire control, should release occur.

The Terminal receives and stores ethanol denatured with gasoline. The denatured ethanol is blended with gasoline at the truck loading rack dispensers as the product is loaded into the customer's trailer. Ethanol is totally miscible in water and would not be able to be recovered from water if a spill to water occurs. Water impacted by ethanol may be flammable. With the deoxygenating properties of ethanol, large fish kills have been reported in locations that are separated from the incident scene by great distances. The threat of deoxygenating from a large volume ethanol release may require the inclusion of oxygen-generation systems to minimize the impact on the local marine life. Responders should be aware of the mixing agents or additional chemicals that may be present in the water after the ethanol mixes with water. The majority of these agents (such as gasoline) will remain on the surface of the water allowing for the successful perimeter

use of booms for containment and targeted mitigation. Denatured ethanol may tend to penetrate porous surfaces, requiring more extensive cleanup activities if they impact a shore area.

Denatured ethanol may be stored in either Tank 107 or Tank 113 in the Terminal's Tank Farm. In the event of a spill in the Tank Farm, Terminal personnel will verify that the dike's stormwater drainage valve is closed to ensure the spilled product does not enter the Terminal's drainage system. Any ignition source should be eliminated. If the spill occurred while the dike drainage valve was open to allow stormwater to drain from the dike, the valve would be closed, Lift Station #2 pumps would be shut down and the OWS discharge valve would be closed to ensure the denatured ethanol would not be discharged to Chelsea Creek. Vapor-suppressing foam can be used to reduce vapors. The required repairs would be made, impacted soil would be removed and disposed of and drainage lines, retention ponds and the OWS would be drained and cleaned to remove traces of the ethanol that would have mixed with the stormwater in the drainage system and the residue disposed of by properly licensed contractors

As discussed above, the denatured ethanol is mixed with gasoline at the truck loading rack. The result is a mixture of approximately 90% gasoline and 10% ethanol. Therefore, all spills of gasoline that result from a failure of equipment or human error after the products have been mixed at the loading rack will involve an ethanol component. If a spill does occur at the truck loading rack, Lift Stations #1 and #2 pumps will be shut down. Any ignition source should be eliminated. Dry earth, sand or other non-combustible material can be used to construct a berm to prevent material that has not reached the loading rack drainage system from flowing into the drainage system and to absorb or cover the material. Vapor-suppressing foam may be required to reduce vapors. Clean, non-sparking tools will be used to collect absorbed material. The Terminal's drainage system will be cleaned, as necessary, and the residue along with any disposable equipment (protective clothing, gloves, boots, absorbent materials, drums, etc.) will be disposed of by properly licensed contractors at a properly licensed disposal site permitted to accept such waste materials.

The Terminal utilizes National Foam's Universal Gold 3% Alcohol-Resistant Aqueous Film-Forming Foam (AR-AFFF) in its fire suppression system. AR-AFFF is used in fighting fires that may involve hydrocarbons, polar solvents (water miscible) and many oxygenated fuel blends. The Terminal does not use its AR-AFFF for testing or fire suppression purposes. Should an accidental release of the AR-AFFF occur, the lift station pumps would be shut down and the discharge valves for the retention ponds and the OWS would be closed to prevent the foam from entering the water. Surfaces impacted by the accidental release and the Terminal's drainage system will be cleaned, as necessary. The residue along with any disposable equipment (protective clothing, gloves, boots, absorbent materials, drums, etc.) will be disposed of by properly licensed contractors at a properly licensed disposal site permitted to accept such waste materials.

Discharges from emergency/unplanned fire-fighting activities are permitted. Should such an event occur, the containment and cleanup methods used for accidental releases would be followed if it is safe to do so. Also see Section 4.3.2 of this Plan for more information on Tank Farm fires.

Disposable materials that are used for spill response include but are not limited to, protective clothing, gloves, boots, granular absorbents, hydrophobic spill pads, sausage booms and drums. All disposable response equipment used for any spill at the Terminal will be collected and disposed of by properly licensed contractors at a properly licensed disposal site permitted to accept such waste materials. All reusable spill response equipment may be decontaminated and stored for future use.

4.4.2.6. Impacts of Major Storm and Flood Events

Evaluation of the risk posed by precipitation, sea level rise, extreme weather events, coastal flooding, and inland flooding at the Terminal was conducted to inform measures aimed at minimizing stormwater pollution from major storm and flood events. The factual basis for this evaluation is outlined in more detail in Appendix H. The section below focuses on the two phenomena deemed most relevant to pollution prevention measures on site: increase in Federal Emergency Management Agency (FEMA) Base Flood Elevation (BFE) due to sea level rise and increase in precipitation intensity. The former exposes various containment structures on site to additional stresses and increases the area of the site subject to inundation, while the

latter increases the volume of water that must be conveyed and retained by the site's stormwater management system.

A review of hurricane return intervals and storm surge impacts is also included in Appendix H. The conclusion was that the possibility exists for the site to be impacted by a major hurricane, and thus acute wave action from storm surges, sometime in the next century.

The BFE provides an extreme event water elevation with a 100-year recurrence interval. Though the Flood Insurance Study for this area included some analysis of wave height on top of the BFE at various transects throughout Boston Harbor, the site is located sufficiently upstream that this was not considered a significant factor (see Appendix H for further discussion). Though the BFE benchmark is considered appropriate for assessment of risk for current conditions, it does not consider the projected sea level rise associated with climate change. To provide a forward-looking assessment of flood risk, estimates of sea level rise from the Northeast Climate Adaptation Science Center (NECASC), as published in the Massachusetts State Hazard Mitigation and Climate Adaptation Plan (Commonwealth of Massachusetts, 2018) were superimposed on the BFE. To represent a conservative evaluation, the warming scenario associated with the highest sea level rise was used and is presented in Figure 3 (the warming scenario associated with intermediate sea level rise is also presented in Figure 3 for reference). The current BFE applicable to the Terminal is 10 feet NAVD88 (FEMA, 2016). Per the NECASC "Extreme" scenario, an increase in sea level of 1.4 feet yields a BFE of 11.4 feet NAVD88 in 2030. An increase in sea level of 3.1 feet yields a BFE of 13.1 feet NAVD88 in 2050. An increase in sea level of 5.4 feet yields a BFE of 15.4 feet NAVD88 in 2070. An increase in sea level of 10.2 feet yields a BFE of 20.2 feet NAVD88 in 2100.

Given this information, the following control measures are recommended:

The material storage structures at the Terminal are petroleum and petroleum additive storage tanks. The additional exertion of force resulting from the impacts of storm and flood events consist of the exertion of force on the sidewalls of the tanks due to the differential hydrostatic pressure inside versus outside the tanks and the exertion of uplift (buoyant) force on the bottom of the tanks and the anchoring system. Potential future elevated water levels around the tanks are not expected to lead to a greater exertion of sidewall force since the elevated surrounding water would tend to decrease, not increase, the inside/outside fluid level differential. Uplift (buoyant) force on the tanks is based on the volume of water displaced by the tanks offset by the weight of the tanks and the fluid stored in them. Contingency plan procedures are in place to add ballast water to the tanks to prevent floatation under current extreme event assumptions. These procedures will be reviewed and revised to reflect the higher water levels surrounding the tanks associated with sea level rise projections.

Secondary containment dikes surround the petroleum bulk storage tanks and are therefore part of the materials storage system or the controls associated with this system. The primary risk to the containment dikes from major storm events is the rise in the water level surrounding the dikes. The current BFE of 10 feet NAVD88 roughly corresponds to the base of the containment dikes. The minimum observed dike elevation is 13.2 feet (excluding a roadway cut at an elevation of ±12 feet on the eastern dike which assumably can be sealed off). Based on the Extreme sea level rise scenario depicted above, flood elevations risk exceeding the berm height in the 2050s.

Though flood elevations under these conservative assumptions are not likely to exceed the berm height for many years, flood waters could be in contact with the exterior of the dikes sooner. The containment berms have been designed to contain fluids from the interior. Additional investigation and analysis are necessary to evaluate the impact of elevated water levels (and potentially acute wave action from storm surges) on the exterior of the containment dikes.

The ability of the containment dikes to contain leaks is in part dependent upon storm events, as volume occupied by stormwater is not available to contain tank leakage. The design criteria for secondary containment stipulates sufficient volume to contain the contents of the largest tank in the containment combined with the stormwater volume from a 24-hour storm with a 25-year recurrence interval. Looking forward, projections of increases in the precipitation depth of 24-hour storms increase the required volume.

An analysis of available secondary containment volume based on an estimated 25-year 24-hour precipitation depth of 8.2 inches by the 2070s (Commonwealth of Massachusetts, 2018) was conducted (see Appendix H). The analysis indicates that the existing containment areas have sufficient volume to meet the above criteria with the exception of the area surrounding Tank 117, which has 98% of the required volume. This is not considered to be a problem since excess capacity is available in other containments and the Terminal has the ability to pump between containment areas.

Higher intensity storms in general are not expected to negatively impact the ability of the site's stormwater management system to monitor and control discharges. Since discharges are controlled by valve and pump systems, the Terminal has the ability to retain excess volumes in the containment areas.

As noted above, prior to the extreme event, tanks will be filled with sufficient fluid to prevent flotation. Tanks that cannot be filled with sufficient fluid will be tied down.

Delivery of materials subject to exposure to stormwater within 48 hours of a storm will be delayed as appropriate to avoid this exposure. It should be noted all material storage at the Terminal is in tanks or indoors and therefore this measure will have limited applicability.

All material storage at the Terminal is in tanks or indoors. There is no portion of the site that is above the BFE by 2070 under the NECASC "Extreme" climate change scenario.

All formally designated material storage at the Terminal is in tanks or indoors. Any temporary or incidental storage potentially subject to exposure will be addressed prior to the storm event.

Mobile vehicles will be relocated to the northwest corner (the highest portion of the site). It should be noted that there is no portion of the Terminal site that is above the BFE by 2070 under the NECASC "Extreme" climate change scenario, so options are limited.

Scenario based emergency procedures in response to major storms will include the following:

- Secure all loose items (e.g., empty drums and totes, fire extinguishers, trash barrels, signs, covers, etc.).
- Check separators for oil and close covers.
- Transfer product or water into tanks with low levels to prevent floatation.
- Fill or strap down smaller additive tanks.
- Secure all tank vents.
- Close and secure trash dumpsters.
- Close all unnecessary tank valves.
- Secure loading arms at tank rack.
- Clean out all grates and culvert openings.
- Close all dike drainage valves.
- Monitor the OWS discharge flow rate and controlling Lift Station 2 to ensure that the maximum discharge rate of 800 gpm is not exceeded.
- Monitor the condition of containment dikes to ensure there is no breach.
- Monitor the water level in the containment areas and redistribute if necessary to ensure sufficient excess volume for spill containment.

4.4.2.7. Stormwater Monitoring and Quality Assurance/Quality Control (QA/QC) Practices

Part I.A.1 of the Permit requires sampling of the stormwater effluent and the receiving water (i.e., Chelsea Creek) at the following frequencies – see Table 4-1 for the specific analyses required:

- Stormwater Effluent
  - Semi-monthly (2x per month), if there are at least two discharge events
  - Monthly (includes field parameters and microbial samples)
  - Quarterly (calendar quarters)
- Annual toxicity testing in April of stormwater effluent and receiving water

Stormwater discharge samples are collected from Outfall 003, which is shown on Figure 2. The receiving water samples are collected from the Chelsea Creek at a point immediately outside of Outfall 003's zone of influence at a reasonably accessible location. The typical location is shown on Figure 2, but may vary based on site conditions at the time of sampling.

Table 4-1 gives details on the number of samples, type of samples, analytical methods, type and number of containers, type of preservation, type and number of field samples, and sample storage holding times. The analytical methods chosen are compliant with the sufficiently sensitive test methods approved under 40 C.F.R. Part 136.

Measurements of pH and total residual chlorine are done as field tests due to the extremely short hold times. The appropriate meters are rented and calibration records from the rental company are checked and kept in the site records. The field measurements are recorded on a field form that is kept at the Terminal.

The samples are sent to commercial contract laboratories for the various analyses and tests. Samples are typically picked up by the laboratory courier either the same day as sampling or the next morning. Due to the short holding time of some of the tests (particularly the microbial tests and acute toxicity test), the samples may be sent via express delivery (e.g., FedEx) for next morning delivery or may be hand delivered to the laboratory, depending on the time of sample collection and courier availability. Standard chain-of-custody procedures are used when the samples are submitted to the laboratory.

Where possible, the monthly, quarterly, and annual sampling events are combined so that required analyses are not duplicated. An attempt is made to collect samples during the first discharge event of the month/quarter.

Ideally, the Terminal is supposed to discharge during a "qualifying event" which means discharging under the following conditions:

- In daylight;
- On an outgoing tide (water is heading out to sea);
- At least 1 hour from both the low and high slack tide[5]; and
- Not during low Creek water level conditions.

[5] Slack tide is the point in time where the water appears not to be moving in or out (i.e., the tide is changing direction). Tide charts can be obtained from: https://tidesandcurrents.noaa.gov/noaatidepredictions.html?id=8443725&legacy=1

As stated in the Permit, EPA recognizes that storm conditions may require discharge outside of these "qualifying event" conditions, in order to avoid damaging the stormwater system or flooding the property. To the extent possible, these qualifying event conditions should be followed.

Ideally, the monthly/quarterly discharge samples should also be collected during a "qualifying event"; however, if the Terminal needs to discharge outside of those conditions, the monthly/quarterly samples can still be collected under the following conditions:

- In daylight (for safety reasons), and
- Not when the outfall is submerged (fully or partially).

Table 4-1 Monthly, Semi-Monthly, and Quarterly Events

Monthly, Semi-Monthly, and Quarterly Events (x11) (except for April - see below)									
Media	**Parameter**	**Required ML**	**Permit Effluent Limits**		**# samples**	**Method**	**Bottle Type**	**Preservative**	**Hold Time**
			Avg. Monthly	**Max Daily**					
Effluent	pH	-	6.5 to 8.5 S.U.		1	Field test			
	Total Residual Chlorine	30 µg/L	-	30 µg/L (13 µg/L)*	1	Field test			
	Total Suspended Solids [a]	-	30 mg/L	100 mg/L	1	SM 2540D	250 mL poly	none	7 days
	Turbidity [a]	-	report	report	1	SM 2130B			
	Oil & Grease	-	-	15 mg/L	1	EPA 1664	1L amber glass	H2SO4	28 days
	Chemical Oxygen Demand	-	-	report	1	SM 5220D	250mL poly	H2SO4	28 days
	Total Ammonia as N (May thru October)	-	-	1.8 mg/L	1	E350.1			
	Total Recoverable Copper	3 µg/L	-	5.8 µg/L	1	EPA 200.8	250ml poly	HNO3	6 months
	VOCs				1	EPA 624	40ml VOA vial x3	HCl	14 days
	Benzene	2 µg/L	-	5 µg/L					
	Methyl tert-butyl ether [b]	-	-	report					
	Group I PAHS + naphthalene				1	Method 625.1 (low level GC/MS)	1L amber glass x2	none	7 days
	naphthalene	5 µg/L	-	20 µg/L					
	benzo(a)pyrene	0.05 µg/L	0.05 µg/L (0.00013 µg/L)*	report					
	benzo(a)anthracene	0.05 µg/L	-	report					
	benzo(b)fluoranthene	0.05 µg/L	0.05 µg/L (0.0013 µg/L)*	report					
	benzo(k)fluoranthene	0.05 µg/L	0.05 µg/L (0.013 µg/L)*	report					
	chrysene	0.05 µg/L	-	report					
	dibenzo(a,h)anthracene	0.1 µg/L	-	report					
	indeno(1,2,3-cd)pyrene	0.1 µg/L	0.1 µg/L (0.0013 µg/L)*	report					
	Fecal coliform	-	-	report	1	SM 9221 (MPN)	120ml sterile poly	Na2S2O3	8 hours
	Enterococcus	-	-	report	1	EPA 1600	120ml sterile poly	Na2S2O3	8 hours

Notes:
[a] Total suspended solids and turbidity are to be sampled two times per month (semi-monthly) if at least two discharge events occur
[b] Methyl tert-butyl ether is to be analyzed for quarterly.
[c] Quarterly and annual samples will be collected at the same time as the monthly samples.
[d] Quarterly analysis should be done in the first month of the quarter if possible.

*The compliance level for parameters with numeric effluent limits less than the detection limit shall be non-detect at any sample ML above the numeric limit.

Annual - April (Monthly + Qrtly + Annual)									
Media	**Parameter**	**Required ML**	**Permit Effluent Limits**		**# samples**	**Method**	**Bottle Type**	**Preservative**	**Hold Time**
			Avg. Monthly	**Max Daily**					
Effluent	pH	-	6.5 to 8.5 S.U.		1	Field test			
	Total Residual Chlorine	30 µg/L	-	30 µg/L (13 µg/L)*	1	Field test			
	Oil & Grease	-	-	15 mg/L	1	EPA 1664	1L amber glass	H2SO4	28 days
	VOCs				1	EPA 624	40ml VOA vial x3	HCl	14 days
	Benzene	2 µg/L	-	5 µg/L					
	Toluene, ethylbenzene, xylenes	2 µg/L	-	report					
	Methyl tert-butyl ether	-	-	report					
	Group I PAHS + naphthalene				1	Method 625.1 (low level GC/MS)	1L amber glass x2	none	7 days
	naphthalene	5 µg/L	-	20 µg/L					
	benzo(a)pyrene	0.05 µg/L	0.05 µg/L (0.00013 µg/L)*	report					
	benzo(a)anthracene	0.05 µg/L	-	report					
	benzo(b)fluoranthene	0.05 µg/L	0.05 µg/L (0.0013 µg/L)*	report					
	benzo(k)fluoranthene	0.05 µg/L	0.05 µg/L (0.013 µg/L)*	report					
	chrysene	0.05 µg/L	-	report					
	dibenzo(a,h)anthracene	0.1 µg/L	-	report					
	indeno(1,2,3-cd)pyrene	0.1 µg/L	0.1 µg/L (0.0013 µg/L)*	report					
	Group II PAHS								
	acenaphthene	5 µg/L	-	report					
	acenaphthylene	5 µg/L	-	report					
	anthracene	5 µg/L	-	report					
	benzo(g,h,i)perylene	5 µg/L	-	report					
	fluoranthene	5 µg/L	-	report					
	fluorene	5 µg/L	-	report					
	phenanthrene	5 µg/L	-	report					
	pyrene	5 µg/L	-	report					
	Fecal coliform	-	-	report	1	Colilert-18	120ml sterile poly	Na2S2O3	8 hours
	Enterococcus	-	-	report	1	9230D Enterolert	120ml sterile poly	Na2S2O3	8 hours
	Chemical Oxygen Demand	-	-	report	1	SM 5220D	250mL poly	H2SO4	28 days
	Total Ammonia as N	-	-	1.8 mg/L	1	E350.1			

Annual - April (Monthly + Qrtly + Annual)									
Media	**Parameter**	**Required ML**	**Permit Effluent Limits**		**# samples**	**Method**	**Bottle Type**	**Preservative**	**Hold Time**
			Avg. Monthly	**Max Daily**					
Effluent	LC50	-	-	report	1	EPA-821-R-02-012	2.5 gal poly	none	36 hrs
	Salinity	-	-	report	1	SM 2520B	500mL poly	none	28 days
	Total Solids	-	-	report	1	SM 2540B			7 days
	Turbidity	-	report	report	1	SM 2130B			7 days
	Total Suspended Solids	-	30 mg/L	100 mg/L	1	SM 2540D			7 days
	Total Organic Carbon	0.5 mg/L	-	report	1	SM 5310B	8oz amber glass	H3PO4	28 days
	Metals (Total Recoverable)				1	EPA 200.8	250ml poly	HNO3	6 months
	Cadmium	0.5 µg/L	-	report					
	Copper	3 µg/L	-	5.8 µg/L					
	Lead	0.5 µg/L	-	report					
	Nickel	5 µg/L	-	report					
	Zinc	5 µg/L	-	report					
Creek	Benzene, toluene, ethylbenzene, xylenes	2 µg/L	n/a	n/a	1	EPA 624	40ml VOA vial x3	HCl	14 days
	PAHS (Group I & II)				1	Method 625.1 (low level GC/MS)	1L amber glass x2	none	7 days
	benzo(a)pyrene	0.05 µg/L	n/a	n/a					
	benzo(a)anthracene	0.05 µg/L	n/a	n/a					
	benzo(b)fluoranthene	0.05 µg/L	n/a	n/a					
	benzo(k)fluoranthene	0.05 µg/L	n/a	n/a					
	chrysene	0.05 µg/L	n/a	n/a					
	dibenzo(a,h)anthracene	0.1 µg/L	n/a	n/a					
	indeno(1,2,3-cd)pyrene	0.1 µg/L	n/a	n/a					
	naphthalene	5 µg/L	n/a	n/a					
	acenaphthene	5 µg/L	n/a	n/a					
	acenaphthylene	5 µg/L	n/a	n/a					
	anthracene	5 µg/L	n/a	n/a					
	benzo(g,h,i)perylene	5 µg/L	n/a	n/a					
	fluoranthene	5 µg/L	n/a	n/a					
	fluorene	5 µg/L	n/a	n/a					
	phenanthrene	5 µg/L	n/a	n/a					
	pyrene	5 µg/L	n/a	n/a					
	WET test								
	pH	-	n/a	n/a	1	Field test			
	Temperature	-	n/a	n/a	1	Field test			
	Total Residual Chlorine	30 µg/L	n/a	n/a	1	Field test			
	LC50 (dilution water)	-	n/a	n/a	1	EPA-821-R-02-012	5 gal poly	none	36 hrs
	Salinity	-	n/a	n/a	1	SM 2520B	500mL poly	none	28 days
	Total Solids	-	n/a	n/a	1	SM 2540B			7 days

Annual - April (Monthly + Qrtly + Annual)									
Media	**Parameter**	**Required ML**	**Permit Effluent Limits**		**# samples**	**Method**	**Bottle Type**	**Preservative**	**Hold Time**
			Avg. Monthly	**Max Daily**					
	Total Suspended Solids	-	n/a	n/a	1	SM 2540D			7 days
	Total Ammonia as N	-	n/a	n/a	1	E350.1	250ml poly	H2SO4	28 days
	Total Organic Carbon	0.5 mg/L	n/a	n/a	1	SM 5310B	8oz amber glass	H3PO4	28 days
	Metals (Total Recoverable)				1	EPA 200.8	250ml poly	HNO3	6 months
Creek	Cadmium	0.5 µg/L	-	report					
	Copper	3 µg/L	-	5.8 µg/L					
	Lead	0.5 µg/L	-	report					
	Nickel	5 µg/L	-	report					
	Zinc	5 µg/L	-	report					

Grab samples are taken from the outfall within 15 to 30 minutes of the initiation of discharge, but no later than within the first hour of initiation of discharge.

The annual toxicity test samples in April must be collected during a "qualifying event" as defined above. If a "qualifying event" does not occur in April then the annual samples should be collected during the next "qualifying event". The annual outfall and receiving water sampling must be done concurrently during the same sampling event. Part I Attachment A of the Terminal's NPDES Permit details the specific requirements for the Marine Acute Toxicity Test Procedures and Protocols for the annual toxicity testing.

Field and sample results are typically reviewed within one business day of receipt from the field sampling personnel or laboratory. The laboratory analytical report narrative is reviewed for issues and the results are compared to the Permit Effluent Limits (see Table 4-1). If a result is not within the Permit Effluent Limits, potential causes are evaluated and corrective actions developed in accordance with Section 4.11 of this Plan. Additional sampling for the parameter at issue may be conducted.

The results of the stormwater monitoring are reported on the Discharge Monitoring Reports (DMRs) that are due the 15th of the month following the end of the monitoring period. DMRs are prepared and submitted using EPA's NetDMR online system. NetDMR is accessible through EPA's Central Data Exchange at https://cdx.epa.gov/.

4.4.2.8. Integrity of Stormwater Components

The Terminal will implement a stormwater system BMP that ensures the integrity of stormwater system components through elimination of the infiltration of contaminated groundwater to the stormwater conveyance system. In the first year of the Permit term, the Terminal will complete an evaluation including the following activities:

- A one-time cross-connection evaluation between the stormwater conveyance system and the municipal separate storm sewer system (MS4);
- Measurement of the flow rate, and flow direction of known areas of groundwater contamination based on the hydraulic gradient observed from groundwater monitoring currently underway (may use groundwater monitoring work already in progress at the Terminal);
- Sampling of methyl tert-butyl ether (MtBE) at groundwater monitoring points at the Facility, including known areas of contamination (collected during dry weather absent of tidal influence) (may use groundwater monitoring work already in progress at the Terminal); and
- Sampling of MtBE at accumulation points within the stormwater system that are likely susceptible to groundwater infiltration, including points located in known areas of groundwater contamination (collected during dry weather absent of tidal influence);

In 2017, the Terminal completed a video inspection of the readily accessible portions of the stormwater system installed below grade. There have been no modifications to the subsurface portions of the system, therefore, it is not necessary to repeat the video inspection in 2023.

If MtBE is detected above the minimum level in any of the four quarterly samples required to be taken from Outfall 003 within a calendar year (see stormwater monitoring requirements in Section 4.4.2.7) then the Terminal will initiate another evaluation of the stormwater system integrity as described above during the following calendar year (potentially including another video inspection).

If infiltration of contaminated groundwater to the stormwater system is identified through the quarterly MtBE sampling of the outfall or the sampling described above, then the Terminal will evaluate and implement appropriate corrective actions (see Section 4.11).

The results of the evaluation of the integrity of stormwater system components as described in this section will be documented in the first annual SWPPP certification (see the Introduction Section), and included in Appendix E of this SWPPP. If additional evaluations are required in future years based on the quarterly

MtBE sampling of the outfall (as described above), then the results of the additional evaluations will be documented in SWPPP certification for any subsequent years.

4.4.3. Hydrostatic Test Water

The Permit allows discharge of water used for hydrostatic testing of tanks and pipeline through Outfall 003 to Chelsea Creek provided the hydrostatic test water is managed and monitored as described in the Terminal's NPDES Permit Part I.C.3. The Permit can be found in Appendix A of this Plan. The Terminal uses municipal water for hydrostatically testing its storage tanks and pipelines.

For tanks, one in-process sample of the tank water following maintenance or testing, but before draining, will be collected. For pipelines, one in-process sample of the pipeline water following depressurization, but before draining, will be collected. The sample will be analyzed and the results of the in-process sample will be reviewed prior to initiating discharge. If the analysis indicates that the tank water does not meet the effluent limitations in the Permit, the Terminal will not discharge the tank water to Chelsea Creek unless treatment will reduce the pollutant levels below the effluent levels established in the Permit.

Effluent samples will be collected at Outfall 003 during the first 10% of the discharge, at the approximate midpoint of the discharge and during the last 10% of the discharge. One grab sample of the effluent during the first 10% of discharge is sufficient for discharges from tanks with volumes no greater than 50,000 gallons.

If at any time analysis indicates that the hydrostatic test water does not meet the effluent limitations in this Permit, corrective action must be taken in accordance with Part I.C.1.b(1) of the Permit (see Section 4.11 of this Plan).

The in-process and effluent samples of hydrostatic test water shall be analyzed for the following parameters:

- Total Flow,
- Flow Rate,
- Total Suspended Solids (TSS),
- Oil and Grease (O&G),
- pH,
- Chemical Oxygen Demand (COD),
- Dissolved Oxygen (DO),
- Total Surfactants,
- VOCs (benzene, toluene, ethylbenzene and total xylenes),
- Group I and II PAHs listed in Table 4-1,
- Metals (total recoverable iron and the total recoverable metals listed in Table 4-1),
- Ethanol (if the tank or pipeline had been used to store and/or convey ethanol or petroleum products containing ethanol within the previous year), and
- Total Residual Chlorine, if potable water or a similar source of water which is likely to contain residual chlorine concentrations is used for hydrostatic testing.

The hydrostatic test waters released from the tanks and pipelines will be treated through the Terminal's stormwater treatment system before being discharged to Chelsea Creek. The flow rate of hydrostatic test water will be controlled to prevent it from exceeding the maximum design flow rate of the system (i.e., 800 gpm at OWS to Outfall 003).

The Terminal will submit a letter/report to the EPA and MassDEP summarizing the results of the hydrostatic test within 90 days of the completion of the test. The report shall contain:

- The date(s) during which the hydrostatic testing occurred;
- The volume of hydrostatic test water discharged;
- A copy of the laboratory data sheets for each analysis, providing the test method, the detection limits for each analyte, and a brief discussion of whether all appropriate QA/QC procedures were met and were within acceptable limits; and
- A brief discussion of the overall test results and how they relate to the Effluent Limitations in this Permit.

In accordance with Part I.D.2 of the Permit, this letter/report should be submitted as an attachment in NetDMR. A report submitted electronically as a NetDMR attachment will be considered timely if it is electronically submitted to EPA using NetDMR with the next DMR due following the particular report due date.

4.4.4. Bioassessment

Gulf will design and implement a bioassessment to characterize the extent to which, if any, pollutants discharged from the facility to Chelsea Creek affect the benthic morphology, substrate and/or biota, in accordance with Part 1.C.5 of the Permit (Appendix A). Gulf submitted a separate Work Plan to EPA to describe the activities required in the bioassessment. In general, data collection activities will be conducted quarterly for one year in the first/second year of the Permit term and quarterly for one year in the fifth year of the Permit term.

The bioassessment will consist of the following:

- Water column characterization;
- Substrate characterization;
- Benthic pollutant analysis; and
- Qualitative biological monitoring.

Gulf will submit reports to the EPA and MassDEP within 60 days after the first year's data collection and the fifth year's data collection in accordance with Part I.D.3 of the Permit.

4.4.5. Application of Herbicides

Gulf hires an outside contractor to provide vegetation control services at the Terminal. A range of mowing and other mechanical removal equipment is utilized to maintain a desirable vegetation height on banks. EPA-approved herbicides are also applied, in accordance with the manufacturer's instructions, to control undesirable and nuisance vegetation.

4.4.6. Proper Handling Procedures for Ethanol Storage

See Section 4.4.2.5.

4.4.7. Stormwater Discharge Best Management Practices

The following BMPs for discharging from the secondary containment dikes, discharging to Chelsea Creek and discharge and receiving waters sampling procedures have been implemented at the Terminal. The Terminal drainage system is illustrated in Figure 2.

4.4.7.1. Secondary Containment Discharge to the Drainage System

Accumulated stormwater is retained in the secondary containment dikes in the Terminal's Tank Farm until it is inspected for oil sheen or other visible pollutants. After Terminal personnel have ascertained that there is no sheen or other visible pollutant, the dike discharge valve(s) will be opened to allow the stormwater to drain to the Terminal's drainage piping system. The Loading Rack and Terminal Yard secondary containment drainage system flows to Lift Station #1. If there is a spill at the Loading Rack or in the Terminal Yard, the pumps at Lift Station #1 will be shut down, if they are not already, so that the spill would be contained and not be allowed to impact the stormwater in the retention ponds. All the Terminal's drainage piping from the dikes and the Terminal Yard flows or is pumped to Lift Station #2. From Lift Station #2, the drainage is pumped to the retention ponds.

4.4.7.2. Discharge to Chelsea Creek

After the stormwater has been pumped into the retention ponds through Lift Station #2, the retention ponds will be inspected prior to allowing discharge to the OWS. Terminal personnel will ensure there is no sheen or other visible pollutants before opening the lower retention pond discharge valve. The retention ponds discharge to the Terminal's OWS. The OWS discharges to Chelsea Creek. The OWS's discharge valve is usually open therefore the retention pond discharge valve would typically regulate the discharge of stormwater to Chelsea Creek through Outfall 003.

In accordance with the Terminal's NPDES Permit Part I.A.1, the grab samples for Outfall 003 will be collected at the discharge point to the Chelsea River during the first qualifying event that occurs for each required measurement frequency, after treatment through the treatment system, free from tidal influence. See the discussion of stormwater monitoring requirements in Section 4.4.2.7.

The Terminal will assess activities that may increase the potential to contribute pollutants to the stormwater discharge. Recent spills, flooding and/or Terminal construction or maintenance activities could introduce pollutants to the stormwater drainage system that would ordinarily not have been introduced. If such activities occur unexpectedly, the Terminal will assess the potential impact on the Chelsea Creek before allowing the discharge. If the activity is planned, its potential impact on Chelsea Creek will be assessed prior to the commencement of the activity.

In addition to the practices that have been implemented by the Terminal and are discussed elsewhere in the Plan, the Terminal has implemented other means to control pollutants before they are introduced to the stormwater drainage system. The Terminal sweeps all paved areas 2 times per year. The first sweeping will typically take place in late spring after the last reasonably expected snow event. The second will be performed in the fall prior to the first reasonably expected snow event.

4.5. Spill Control Best Management Practices

The Terminal has implemented a Facility Response Plan and Spill Prevention, Control and Countermeasure Plan in accordance with the requirements of 40 CFR 112.The plans detail the actions taken to prevent a spill and those taken in response to a spill of a reportable quantity at the Terminal. The plans identify the procedures for notifying the EPA, MassDEP, USCG and the City of Chelsea as required. A list of spills that have occurred at the Terminal as of the effective date of the current Permit to the present is found in Appendix C.

4.6. Stormwater System Integrity Best Management Practices

See Section 4.4.2.8.

4.7. MSGP Part 8 Sector-Specific Best Management Practices

The Terminal has incorporated some of the Sector-Specific Requirements for Industrial Activity for Standard Industrial Classification (SIC) code 5171 found in Part 8 – Subpart P – Sector P Land Transportation and Warehousing of the current Multi-Sector General Permit (MSGP – effective March 1, 2021) as BMPs.

4.7.1. Prohibited Discharges (MSGP Part 8.P.2.1)

Part 8.P.2.1 of the current MSGP prohibits the discharge of vehicle/equipment/surface wash water and water resulting from tank cleaning operations.

The Terminal performs, on average, 2 bulk product tank cleaning operations per year. The Terminal collects and disposes of any water used in tank cleaning operations.

Cumberland Farms is a tenant that rents the Garage (known at the Terminal as the Cumberland Farms Garage) and parking spaces for their trucks from Gulf. Other fuel delivery companies rent parking spaces from Gulf for their trucks as well. Cumberland Farms may, on occasion, contract with a third party to perform vehicle washing on their fleet of trucks maintained at the Terminal. Other companies that park their trucks or load product at the Terminal may be invited by Cumberland Farms to have their trucks washed as well. Cumberland Farms' contractor collects the water used in the truck cleaning operations and disposes of it off-site. The truck wash water is not allowed to enter the Terminal's drainage system.

4.7.2. Good Housekeeping Measures (MSGP Part 8.P.3.1)

- Vehicle and Equipment Storage Areas (MSGP Part 8.P.3.1.1) – Vehicles, whether belonging to the Terminal or to tenants, that are leaking oil or other pollutants are required to be removed from the Terminal property and repairs made before being allowed to return to the Terminal. Vehicles may be allowed to remain at the Terminal if the repairs are minor and can be made on-site without allowing the leaking material or any other pollutant to impact stormwater. Drip pans may be used as a temporary means of collecting any leaking material to prevent it from comingling with stormwater or being discharged. Any oil or other pollutant that has leaked to the ground or any other surface will be cleaned up as soon as practical by Terminal personnel, tenant's employees or contractors.
- Fueling Areas (MSGP Part 8.P.3.1.2) – The Terminal's truck loading rack bays are covered to help minimize exposure to precipitation. The loading rack area is inside the Terminal Yard secondary containment system. The truck re-fueling pump is inside a concrete secondary containment located within the Terminal Yard's secondary containment system. If a spill were to overflow the re-fueling pump's secondary containment, the spill would flow to the Terminal Yard's secondary containment system.
- Material Storage Areas (MSGP Part 8.P.3.1.3) – Paint, solvents, hydraulic fluids, waste oil, used oil/oil filters and product additives that are in containers are stored inside the Cumberland Farms Garage, Gulf Warehouses, sheds, etc. The Terminal's hazardous and universal waste collection areas are inside a warehouse adjacent to the dock road. All containers are labeled with their contents.
- Vehicle and Equipment Cleaning Areas (MSGP Part 8.P.3.1.4) – Two or three times a year Cumberland Farms sets up an area east of the Garage where a contractor washes the Cumberland Farms trucks and trailers. The contractor is required to use a curbed basin onto which the vehicles are driven to be washed. The contractor collects the wash water to prevent it from entering the Terminal's drainage system and being discharged through Outfall 003. On average, two bulk product storage tanks per year are cleaned at the Terminal. The storage tank wash water is collected and disposed of to prevent it from entering the Terminal's drainage system.
- Vehicle and Equipment Maintenance Areas (MSGP Part 8.P.3.1.5) - Cumberland Farms performs most vehicle maintenance on their truck fleet vehicles inside the Cumberland Farms Garage. Occasionally, the repair technician may perform minor maintenance in the truck parking area. When he/she performs a minor repair outdoors and the repair has the potential to result in a leak, the repair

technician will place a drip pan in the appropriate area under the vehicle to catch any potential leak. Any leaks that may occur during vehicle maintenance, whether indoors or outdoors are promptly cleaned up by the technician. Terminal employees rarely perform vehicle maintenance on Terminal vehicles. If vehicle maintenance were to be performed at the Terminal, the Terminal employees would take the same precautions as the Cumberland Farms technician.

- Locomotive Sanding Areas (MSGP Part 8.P.3.1.6) – Not Applicable.

4.7.3. Employee Training (MSGP Part 8.P.3.2)

Employees are trained at least once a year on the following activities as they apply to the employee's job: used oil and spent solvent management, fueling procedures, general housekeeping practices, proper painting procedures and battery management. The Terminal typically does not handle spent solvent. Painting operations are usually performed by outside contractors. Battery management training is conducted as part of the Terminal's universal waste training.

4.8. MSGP Part 8.P.4 SWPPP Best Management Practices

4.8.1. Drainage Area Site Map (MSGP Part 8.P.4.1)

Fueling stations, vehicle/equipment maintenance or cleaning areas, outdoor storage areas for vehicle/equipment with actual or potential fluid leaks, loading/unloading areas, areas where storage of wastes occur, liquid storage tanks, processing areas and storage areas are identified on the Terminal's Site Drainage Plan – Figure 2 in this Plan.

4.8.2. Potential Pollution Sources (MSGP Part 8.P.4.2)

Potential pollution sources are identified in Sections 2.1, 3.1 and 3.2 of this Plan. Onsite waste storage and fueling areas are further discussed in Section 4.4.2 above. MSGP Part 8.P.5 Inspection Best Management Practices

The areas and/or activities listed below are inspected by Terminal and/or Cumberland Farms personnel:

- Storage areas for vehicles/equipment awaiting maintenance;
- Fueling areas;
- Indoor and outdoor vehicle/equipment maintenance areas;
- Material storage areas;
- Vehicle/equipment cleaning areas; and
- Loading/unloading areas.

Fueling areas, material storage areas and loading/unloading areas are inspected daily by Terminal personnel as part of the Terminal's inspection program. Storage areas for vehicles awaiting maintenance and indoor and outdoor vehicle maintenance areas are inspected by Cumberland Farms personnel. Vehicle/equipment cleaning activities are inspected by Terminal and/or Cumberland Farms personnel while the cleaning is being performed.

4.9. Additional Controls to Address Impaired Waters

The Chelsea River is classified as Class SB (CSO). Class SB waters are described in the Massachusetts Surface Water Quality Standards at 314 CMR 4.05(4)(b) as follows: *"These waters are designated as a habitat for fish, other aquatic life and wildlife, including for their reproduction, migration, growth and other critical functions and for primary and secondary contact recreation. In certain waters, habitat for fish, other aquatic life and wildlife may include, but is not limited to, seagrass…These waters shall have consistently good aesthetic value."* The Chelsea River is one of ten (10) Designated Port Areas (DPAs) established by

the Massachusetts Office of Coastal Zone Management to promote and protect water-dependent industrial uses. The Chelsea River is part of the Mystic River Basin and the Boston Harbor Drainage Area.

EPA's antidegradation regulation, at 40 C.F.R. 131.12, provides a framework for maintaining and protecting water quality for: (1) existing uses (known as "Tier 1"); (2) high quality waters by establishing a process for authorizing the lowering of water quality where existing water quality exceeds levels needed to support propagation of fish, shellfish, and wildlife and recreation in and on the water (known as "Tier 2"); and (3) for Outstanding National Resource Waters (known as "Tier 3"). While EPA's antidegradation regulation only outlines three levels of antidegradation protection, some states and tribes include an additional level of antidegradation protection between Tier 2 and Tier 3 (sometimes known as "Tier 2.5"). Tier 2, Tier 2.5, and 3 waters are identified and listed in the Massachusetts Water Quality Standards 314 CMR 4.00. Surface water qualifiers that correspond with Tier classifications are defined at 314 CMR 4.06(1)(d)m and listed in tables and figures at the end of 314 CMR 4.06. Chelsea Creek is not identified as a Tier 2, 2.5 or 3 water.

According to the *Draft Massachusetts Integrated List of Waters for the Clean Water Act* (available here https://www.mass.gov/lists/integrated-lists-of-waters-related-reports), the Chelsea River segment where the Terminal is located (Segment MA71-06) is listed as a Category 5 "Waters Requiring a TMDL *[total maximum daily load]*" and is impaired for: ammonia (un-ionized), contaminants in fish and/or shellfish (sediment screening value exceedance), fecal coliform, odor, polychlorinated biphenyls (PCBs) in fish tissue, petroleum hydrocarbons, trash, and turbidity. This segment is also impaired for debris/floatables/trash, but this category is considered a non-pollutant. A TMDL has been issued for fecal coliform for Segment MA71-06 (*Final Pathogen TMDL for the Boston Harbor, Weymouth-Weir, and Mystic Watersheds*, October 2018; available here: https://mywaterway.epa.gov/plan-summary/MA_DEP/R1_MA_2019_01).

4.10. Corrective Actions

Per the Terminal's NPDES Permit (Part I.C.1.b.(1)), the Terminal will take corrective action(s) as required below.

1. If any of the following conditions occur the Terminal must review and revise the selection, design, installation and implementation of control measures (including BMPs) to ensure that the condition is eliminated and will not be repeated in the future:

    a. an unauthorized release or discharge or a release of a reportable quantity of pollutants as described in 40 C.F.R. §302;

    b. a discharge violates any permit condition, including a numeric effluent limit;

    c. a determination by the Terminal or EPA that the control measures (including BMPs) appear to be ineffective in achieving the general objectives of controlling pollutants in discharges or are not stringent enough for the discharge to meet applicable water quality standards;

    d. an inspection or evaluation of the Terminal by an EPA official or local or State entity, determines that modifications to the control measures are necessary to meet the non-numeric effluent limits in this Permit; or

    e. a finding by the Terminal during a quarterly inspection that control measures are not being properly operated and maintained.

2. If any of the following conditions occur, the Terminal must review the selection, design, installation and implementation of control measures (including BMPs) to determine if modifications are necessary to meet the effluent limits in this Permit:

    a. a change in design, construction, operation or maintenance, materials storage or activities at the Terminal that significantly changes the nature of pollutants discharged

in stormwater from the Terminal or significantly increases the quantity of pollutants discharged; or

b. new data identifies the integrity of the stormwater system and level of groundwater infiltration into the stormwater system.

3. If the Terminal determines that changes are necessary, any modifications to control measures (including BMPs) must be made before the next discharge if possible or as soon as practicable following that discharge.

4. For corrective actions, the Terminal will document conditions included in 1 and/or 2 above. **within 24 hours** of identifying such conditions. The Terminal will document any corrective action(s) to be taken or if no corrective action is needed, the basis for that determination, **within 14 days** of identifying such conditions. The Terminal will document the following information, at a minimum:

    a. Identification of the condition triggering the need for corrective action review;

    b. Description of the problem identified; and

    c. Date the problem was identified.

    d. Summary of corrective action taken or to be taken (or, where corrective action is determined not to be necessary, the basis for this determination);

    e. Notice of whether SWPPP modifications are required as a result of this discovery or corrective action;

    f. Date corrective action initiated; and

5. Date corrective action completed or expected to be completed.

6. The Terminal will amend and update this Plan **within 14 days** for any changes at the Terminal that result in a significant effect on the potential for the discharge of pollutants to the waters of the United States or that affect this Plan. Such changes may include but are not limited to those listed in 1 and/or 2 above. Any amended, modified or new versions of this Plan will be re-certified and signed by the appropriate person in accordance with the requirements identified in this Plan's Certification found on Page II of this Plan.

Documentation of the corrective actions taken by the Terminal can be found in Appendix G of this Plan.

5. Procedures for Inspections

The following daily, monthly, quarterly and annual inspections are required of the Terminal by the NPDES Permit and the relevant sections of the MSGP.

5.1. Daily and Monthly Terminal Inspections

Visual inspections of the site are conducted by the Terminal Operators and/or other Terminal personnel. The inspections are conducted a minimum of once per shift but no less than once per day. The objective of the inspections is to ensure that all equipment, systems and structures are in a satisfactory condition, including environmental controls. At a minimum, the five (5) principal components of the Terminal that should be considered during these inspections are: (1) product storage and handling equipment; (2) containment and diversionary structures; (3) stormwater collection system and drainage (i.e., OWS and catch basins); (4) loading rack hoses in good condition and not leaking, Scully system operating properly, loading rack surface in good condition and free of cracks and signs reminding drivers to disconnect hoses before driving away are posted; and (5) drums in Hazardous Waste storage areas are labeled, in good condition, securely covered and not leaking. Any corrective action required as a result of a daily or monthly site inspection will be performed consistent with Section 4.11 of this Plan.

The monthly inspections conducted by Terminal personnel involve a close examination of all oil storage tanks and containers, aboveground valves and pipelines, underground piping and secondary containment areas, looking for signs of wear, corrosion or other deterioration, leaks or malfunctions and the presence of debris, vegetation or other free liquids. Tanks are inspected for drip marks, discoloration of tanks, puddles containing spilled or leaked material, corrosion, cracks, localized dead vegetation, no leaks detected in double bottom tanks and condition of paint. Tank floating roof systems will be inspected for damage and leaks. Tank foundations will be checked for cracks, discoloration, puddles of spilled or leaked material, settling, damage caused by vegetation roots and gaps between tank and foundation. Tank piping will be checked for droplets of stored material, discoloration, corrosion, bowing of pipe between supports, piping in contact with the ground, localized dead vegetation, evidence of stored material seepage from valves or seals and condition of paint. Gulf conducts monthly sight, smell and sound inspections of all equipment in gasoline service in accordance with 40 C.F.R. 63.424 (a). Water draw-offs are secured. Equipment integral to or supporting the oil spill discharge prevention system (e.g., lighting, instrumentation and communications systems) will be observed as appropriate and any operational problems promptly addressed.

The daily and monthly inspections serve to meet inspection requirements of the EPA's SPCC regulations. The monthly inspections are also conducted to satisfy the requirements of API 653 or STI SP001, as appropriate, requiring monthly inspections of all ASTs constructed to the API 650 standard or tanks built to STI standards.

5.2. Quarterly (Routine) Inspections and Visual Assessments

All areas with industrial materials or activities exposed to stormwater and all structural control measures used to comply with effluent limits in the Terminal's NPDES Permit are inspected, at least once per quarter, by qualified personnel with one or more members of the stormwater pollution prevention team. Any corrective action required as a result of the quarterly site inspection must be performed consistent with Section 4.11 of this Plan.

As part of the quarterly inspections (aka "routine inspections"), the Terminal inspects all areas with industrial materials or activities exposed to stormwater and all structural control measures used to comply with effluent limits in the Terminal's NPDES Permit. The inspections are performed by qualified personnel with one or more members of the stormwater pollution prevention team. Inspections will begin during the first full calendar quarter after the effective date of the Terminal's NPDES Permit. EPA considers quarters as follows: January

to March; April to June; July to September; and October to December. Inspections should be separated by at least 60 days. A copy of the Routine Inspection form is in Appendix F. The areas to be inspected include:

- Terminal Entrance and Egress Areas
- Truck Loading Rack
- Yard Area:
  - Catch Basins/Trench Drains
  - Own-use Fuel Dispenser
  - Additive Tank Areas
  - Vapor Recovery Units
- Garage and Storage Buildings
- Tank Farm Roads
- All aboveground piping, valves, pumps, fittings and connection points
- Bulk Product Storage Tanks
- Containment areas around all storage tanks (accumulated stormwater, oil sheen, staining, soil/dike erosion, etc.)
- Waste Storage Areas
- Warehouses
- Foam House
- Dock Transfer Area
- Retention Ponds (oil sheen, floating debris, etc.)
- OWS
- Outfall 003

In addition to the monthly inspection items discussed in Section 5.1, specific items to evaluate during inspections are listed on the Terminal's Quarterly Visual Inspection Form provided in Appendix F and include:

- Industrial materials, residue or trash on the ground that could contaminate stormwater;
- Leaks or spills from industrial equipment, drums, barrels, tanks or similar containers;
- Offsite tracking of industrial materials or sediment where vehicles enter or exit the site;
- Tracking, blowing or whirling of raw, final or waste materials and the evidence of or the potential for, pollutants to contact stormwater; and
- Stormwater BMPs identified in the SWPPP must be inspected and evaluated to ensure that they are operating correctly. Inspect stormwater conveyances and outfalls for erosion, integrity and potential pollutants.

Each quarterly inspection must include a visual assessment of a stormwater sample, discharged through Outfall 003, that is collected within the first 15 minutes of discharge, stored in a clean, clear glass or plastic container and examined in a well-lit area for the following water quality characteristics:

- Color,
- Odor,
- Clarity,

- Floating solids,
- Settled solids,
- Suspended solids,
- Foam,
- Oil sheen, and
- Other obvious indicators of pollution.

5.3. Quarterly Inspection and Visual Assessment Documentation

The Terminal will document the findings of each quarterly inspection and visual assessment and maintain this documentation onsite with this Plan. At a minimum, the documentation of the quarterly inspections and visual assessments will include:

- The date of the inspection;
- The name(s) and title(s) of the personnel making the inspection;
- Findings from the examination of areas identified in Section 5.2;
- All observations relating to the implementation of the control measures including:
  - previously unidentified discharges from the site,
  - previously unidentified pollutants in existing discharges,
  - evidence of or the potential for, pollutants entering the drainage system;
  - evidence of pollutants discharging to receiving waters at all facility outfall(s) and the condition of and around the outfall, including flow dissipation measures to prevent scouring and
  - additional control measures needed to address any conditions requiring corrective action identified during the inspection.
- Any required revisions to the SWPPP resulting from the inspection;
- Any incidents of noncompliance observed or a certification stating the facility is in compliance with its NPDES Permit (if there is no noncompliance); and
- A statement signed and certified in accordance with Part II.D.2 of the Permit.

5.4. Annual Comprehensive Site Inspections

Comprehensive site inspections must be conducted by qualified personnel. Typically, the Terminal Manager, who is a member of the stormwater pollution prevention team, will perform the inspection. The Terminal Manager may be accompanied by another member of the pollution prevention team and/or a representative from the Gulf ESOH Department.

The comprehensive site inspections must cover all areas of the facility affected by the requirements in the Terminal's NPDES Permit, including the areas identified in this Plan as potential pollutant sources where industrial materials or activities are exposed to stormwater, any areas where control measures are used to comply with the effluent limits in Part I.A of the Terminal's Permit and areas where spills and leaks have occurred in the past 3 years. The inspections must also include a review of monitoring data collected during the year. Inspectors must consider the results of the past year's visual and analytical monitoring when planning and conducting inspections. Inspectors must examine the following:

- Industrial materials, residue or trash that may have or could come into contact with stormwater;

- Leaks or spills from industrial equipment, drums, tanks and other containers;
- Offsite tracking of industrial or waste materials or sediment where vehicles enter or exit the site;
- Tracking or blowing of raw, final or waste materials from areas of no exposure to exposed areas; and
- Control measures needing replacement, maintenance or repair.

Stormwater control measures required by the Terminal's Permit must be observed to ensure that they are functioning correctly.

The annual comprehensive site inspection may also be used as one of the routine inspections, as long as all components of both types of inspections are included. A copy of the Annual Reporting Form is located in Appendix F of this Plan.

Any corrective action required as a result of the comprehensive site inspection must be performed consistent with Section 4.11 of this Plan.

6. Discharges, Monitoring, Recordkeeping, Reporting Requirements and Permit Transfer

6.1. Discharges

Per the Terminal's NPDES Permit, Part I.A:

- The discharge shall not cause a violation of the Massachusetts water quality standards of the receiving water.
- The effluent shall not impart taste, odor, turbidity, toxicity, radioactivity or other properties which cause those waters to be unsuitable for the designated uses and characteristics ascribed to their use.
- The effluent shall not cause objectionable discoloration of the receiving waters.
- The effluent shall contain neither a visible oil sheen, foam, nor floating or settleable solids at any time.
- The effluent shall not contain materials in concentrations or in combinations which would impair the uses designated by the classification of the receiving water or which would cause or contribute to alterations that adversely affect the physical or chemical nature of the bottom.
- The effluent must not lower the quality of any classified body of water below such classification or lower the existing quality of any body of water if the existing quality is higher than the classification.
- The Terminal shall inspect, operate and maintain the stormwater treatment system at the Terminal to ensure that the Effluent Limitations and permit conditions are met. The Terminal shall ensure that all components of the Terminal's SWPPP, including those BMPs which specifically address the operation and maintenance of the OWS, pumps and other components of the stormwater collection and treatment system, are complied with.
- The Terminal shall not discharge any toxic pollutant or material including, but not limited to, chemicals (e.g., surfactants, disinfectant agents, detergents, emulsifiers, alcohol-resistant foam), chemical additives or bioremedial agents, including microbes, which was not reported in the permit application. Pollutants which are not limited by this Permit, but which have been specifically disclosed in the permit application, may be discharged up to the frequency and level disclosed in the application, provided that such discharge does not violate Part 307 or 311 of the CWA or applicable state water quality standards.

6.2. Monitoring Requirements

Because of the stormwater storage capacity in the tank containment areas, retention ponds and OWS, the timing of stormwater discharge events is often not linked to the timing of a precipitation event. Typically the Terminal plans a discharge event once the retention ponds are near full and the water has had time to settle (i.e., a couple days). This could be after one or more storm events. If a large storm event is predicted, the Terminal will typically discharge as much of the precipitation retained in the stormwater system as possible prior to the storm event. Section 4.4.2.7 details the stormwater monitoring requirements including frequency, sampling methods, parameters, analytical method, definition of a "qualifying event", and numerical effluent limitations.

6.3. Recordkeeping Requirements

In accordance with the Terminal's NPDES Permit, Standard Conditions, Part II.C.1.b: except for records for monitoring information required by this Permit related to the Terminal's sewage sludge use and disposal activities, which will be retained for a period of at least five years (or longer as required by 40 C.F.R. Part 503), the Terminal will retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for 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 3 years from the date of the sample, measurement, report or application**.** This retention period may be extended by request of the EPA Regional Administrator at any time.

Records of monitoring information will include:

- The date, exact place and time of sampling or measurements;
- The individual(s) who performed the sampling or measurements;
- The date(s) analyses were performed;
- The individual(s) who performed the analyses;
- The analytical techniques or methods used; and
- The results of such analyses.

6.4. Reporting Requirements

The Terminal will immediately report the appearance of any size sheen attributable to the stormwater discharge from the Terminal to U.S. Coast Guard Sector Boston in accordance with Part 311 of the Clean Water Act (CWA). The Terminal will also notify, at a minimum, the National Response Center, EPA Region I and the MassDEP. A copy of the Spill Notification Form is in Appendix D of this Plan.

6.4.1. Submittal of DMRs Using NetDMR

The Terminal will continue to submit its monthly monitoring data in DMRs to EPA and MassDEP no later than the 15th day of the month electronically using EPA's NetDMR online system. When the Terminal submits DMRs using NetDMR, it is not required to submit hard copies of DMRs to EPA or MassDEP. NetDMR is accessible through EPA's Central Data Exchange at https://cdx.epa.gov/.

The results of sampling for any parameter above its required frequency will also be reported on the DMRs, if it is conducted in accordance with EPA approved methods consistent with the provisions of 40 C.F.R. §122.41(1)(4)(ii).

If no discharge occurs during a month or quarter, the Terminal will report a No Data Indicator Code (e.g., "C" for "No Discharge") on the DMR.

6.4.2. Submittal of Reports

Unless otherwise specified in the Terminal's NPDES Permit, the Terminal will electronically submit all reports to EPA as NetDMR attachments rather than as hard copies. Because the due dates for reports described in this Permit may not coincide with the due date for submitting DMRs (which is no later than the 15th day of the month), a report shall be considered timely if it is electronically submitted to EPA as a NetDMR attachment with the next DMR due following the particular report due date specified in this Permit.

6.4.3. Submittal of Requests and Reports to EPA Water Division (WD)

The following requests, reports and information described in this Permit shall be submitted to the NPDES Applications Coordinator in EPA WD:

- Transfer of Permit notice;
- Request for changes in sampling location;
- BMP/SWPPP reports and certifications;
- Request to discharge new chemicals or additives;

- Request for change in Whole Effluent Toxicity (WET) testing requirements;
- Bioassessment reports; and
- Report on unacceptable dilution water/request for alternative dilution water.

These reports, information and requests shall be submitted to EPA WD electronically at R1NPDESReporting@epa.gov or by hard copy mail to the following address:

U.S. Environmental Protection Agency
Water Division
NPDES Applications Coordinator
5 Post Office Square - Suite 100 (06-03)
Boston, MA 02109-3912

6.4.4. Submittal of Reports in Hard Copy Form

Written notifications required under Part II, Standard Conditions shall be signed and dated originals, submitted in hard copy, with a cover letter describing the submission. Beginning December 21, 2025, such notifications must be done electronically using EPA's NPDES Electronic Reporting Tool ("NeT") or another approved EPA system, which will be accessible through EPA's Central Data Exchange at https://cdx.epa.gov/.

Hard copy documents shall be submitted to EPA Region I's Enforcement and Compliance Assurance Division at the following address:

U.S. Environmental Protection Agency
Enforcement and Compliance Assurance Division
Water Compliance Section
Post Office Square, Suite 100 (04-SMR)
Boston, MA 02109-3912

6.4.5. State Reporting

Duplicate signed copies of any WET test reports shall be submitted to the Massachusetts Department of Environmental Protection, Division of Watershed Management, at the following address:

Massachusetts Department of Environmental Protection
Bureau of Water Resources
Division of Watershed Management
8 New Bond Street
Worcester, Massachusetts 01606

6.4.6. Verbal Reports and Verbal Notifications

Any verbal reports or verbal notifications, if required by Parts I and/or II of the Permit, shall be made to both EPA and MassDEP. This includes verbal reports and notifications which require reporting within 24 hours (e.g., Part II.B.4.c. (2), Part II.B.5.c. (3) and Part II.D.1.e.).

Verbal reports and verbal notifications shall be made to EPA's Enforcement and Compliance Assurance Division at:

617-918-1510

Verbal reports and verbal notifications shall be made to MassDEP's Emergency Response at:

888-304-1133

6.4.7. Notification of Planned Changes

The Terminal will give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

- The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 C.F.R. § 122.29(b); or
- The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the Permit, nor to notification requirements at 40 C.F.R. § 122.42(a)(1).
- The alteration or addition results in a significant change in the Terminal's sludge use or disposal practices and such alteration, addition or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

6.4.8. Anticipated Non-Compliance

The Terminal will give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

6.4.9. Permit Transfer

The Permit is not transferable to any person except after 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 the Clean Water Act. *See* 40 C.F.R. § 122.61; in some cases, modification or revocation and reissuance is mandatory.

6.4.10. Twenty-Four Hour Reporting Requirements

The Terminal will report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Terminal becomes aware of the circumstances. A written report shall also be provided within 5 days of the time the Terminal becomes aware of the circumstances. The written report 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. For noncompliance events related to combined sewer overflows, sanitary sewer overflows or bypass events, these reports must include the data described above (with the exception of time of discovery) as well as the type of event (combined sewer overflows, sanitary sewer overflows or bypass events), type of sewer overflow structure (e.g., manhole, combined sewer overflow outfall), discharge volumes untreated by the treatment works treating domestic sewage, types of human health and environmental impacts of the sewer overflow event and whether the noncompliance was related to wet weather. As of December 21, 2020 all reports related to combined sewer overflows, sanitary sewer overflows or bypass events submitted in compliance with this section must be submitted electronically by the Terminal to the Director or initial recipient, as defined in 40 C.F.R. § 127.2(b), in compliance with this Section and 40 C.F.R. Part 3 (including, in all cases Subpart D to Part 3), § 122.22 and 40 C.F.R. 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date and independent of Part 127, the Terminal may be required to electronically submit reports related to combined sewer overflows, sanitary sewer overflows or bypass events under this section by a particular permit or if required to do so by state law. The Director may also require the Terminal to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows or bypass events under this section.

The following shall be included as information which must be reported within 24 hours:

- Any unanticipated bypass which exceeds any effluent limitation in the Permit. See 40 C.F.R. § 122.41(g);
- Any upset which exceeds any effluent limitation in the Permit; and
- Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in the Permit to be reported within 24 hours. See 40 C.F.R. § 122.44(g).

The Director may waive the written report on a case-by-case basis for reports under Part II. D.1.e. of the Permit if the oral report has been received within 24 hours.

6.4.11. Compliance Schedules

Reports of compliance or noncompliance with or any progress reports on, interim and final requirements contained in any compliance schedule of this Permit shall be submitted no later than 14 days following each schedule date.

6.4.12. Other Non-Compliance

The Terminal will report all instances of noncompliance not reported as described above, at the time monitoring reports are submitted. The reports shall contain the information listed in Section 6.4.10. For noncompliance events related to combined sewer overflows, sanitary sewer overflows or bypass events, these reports shall contain the information described in Section 6.4.10 and the applicable required data in Appendix A to 40 C.F.R. 127. As of December 21, 2020 all reports related to combined sewer overflows, sanitary sewer overflows or bypass events submitted in compliance with this section must be submitted electronically by the Terminal to the Director or initial recipient, as defined in 40 C.F.R. § 127.2(b), in compliance with this Section and 40 C.F.R. Part 3 (including, in all cases, Subpart D to Part 3), §122.22 and 40 C.F.R. 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date and independent of Part 127, the Terminal may be required to electronically submit reports related to combined sewer overflows, sanitary sewer overflows or bypass events under this section by a particular permit or if required to do so by state law. The Director may also require the Terminal to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows or bypass events under this Section.

6.4.13. Other Information

Where the Terminal 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, it shall promptly submit such facts or information.

6.4.14. Identification of the Initial Recipient for NPDES Electronic Data Reporting

The owner, operator or the duly authorized representative of an NPDES-regulated entity is required to electronically submit the required NPDES information (as specified in Appendix A to 40 C.F.R. 127) to the appropriate initial recipient, as determined by EPA and as defined in 40 C.F.R. § 127.2(b). EPA will identify and publish the list of initial recipients on its Web site and in the FEDERAL REGISTER, by state and by NPDES data group (see 40 C.F.R. § 127.2(c) of this Chapter). EPA will update and maintain this listing.

6.5. Signatory Requirement

All applications, reports or information submitted to the Director shall be signed and certified. See 40 C.F.R. §122.22.

The CWA 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 non-compliance 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.

6.6. Availability of Reports

Except for data determined to be confidential under Part II.A.6 of the Permit, all reports prepared in accordance with the terms of this Permit shall be available for public inspection at the offices of the State water pollution control agency (MassDEP) and EPA Region I. As required by the CWA, effluent data shall not be considered confidential. Knowingly making any false statements on any such report may result in the imposition of criminal penalties as provided for in Part 309 of the CWA.

7. Operations and Maintenance of Pollution Controls

In accordance with the Terminal's NPDES Permit, Standard Conditions, April 2018, Part II.B.1, the Terminal will, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are or will be installed or used by the Terminal to achieve compliance with the conditions of the Terminal's NPDES Permit and with the requirements of this Plan. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. 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.

Gulf will take all reasonable steps to minimize or prevent and discharge, sludge use or disposal in violation of the Permit which has a reasonable likelihood of adversely affecting human health or the environment.

Bypass is the intentional diversion of waste streams from any portion of the facility. Gulf may allow a bypass that does not cause effluent limitations of the Permit to be exceeded to occur only if it is for essential maintenance to assure efficient operation. Such bypasses are not subject to the notification and prohibition requirements of Part II B.4 of the Permit.

If Gulf is aware a bypass will be required, Gulf will notify the EPA at least ten days in advance if possible. If an unanticipated bypass occurs, Gulf will submit a notice to the EPA within 24 hours. The notifications must be submitted electronically. Bypasses are prohibited and enforcement action may be taken against Gulf unless:

- The bypass was unavoidable to prevent loss of life, personal injury or severe property damage;
- There were no feasible alternatives to the bypass as described in Part II.B.4.d.(1)(b); and
- Notice was provided.

Upset is an exceptional incident in which there is an unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of Gulf. 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. An upset is an affirmative defense to an action brought for noncompliance with technology-based permit effluent limitations if the requirements of Part II.B.5.c of the Permit are met. In any enforcement proceeding, Gulf will have the burden of proof to establish the occurrence of an upset.

8. Planned Work or Work in Progress

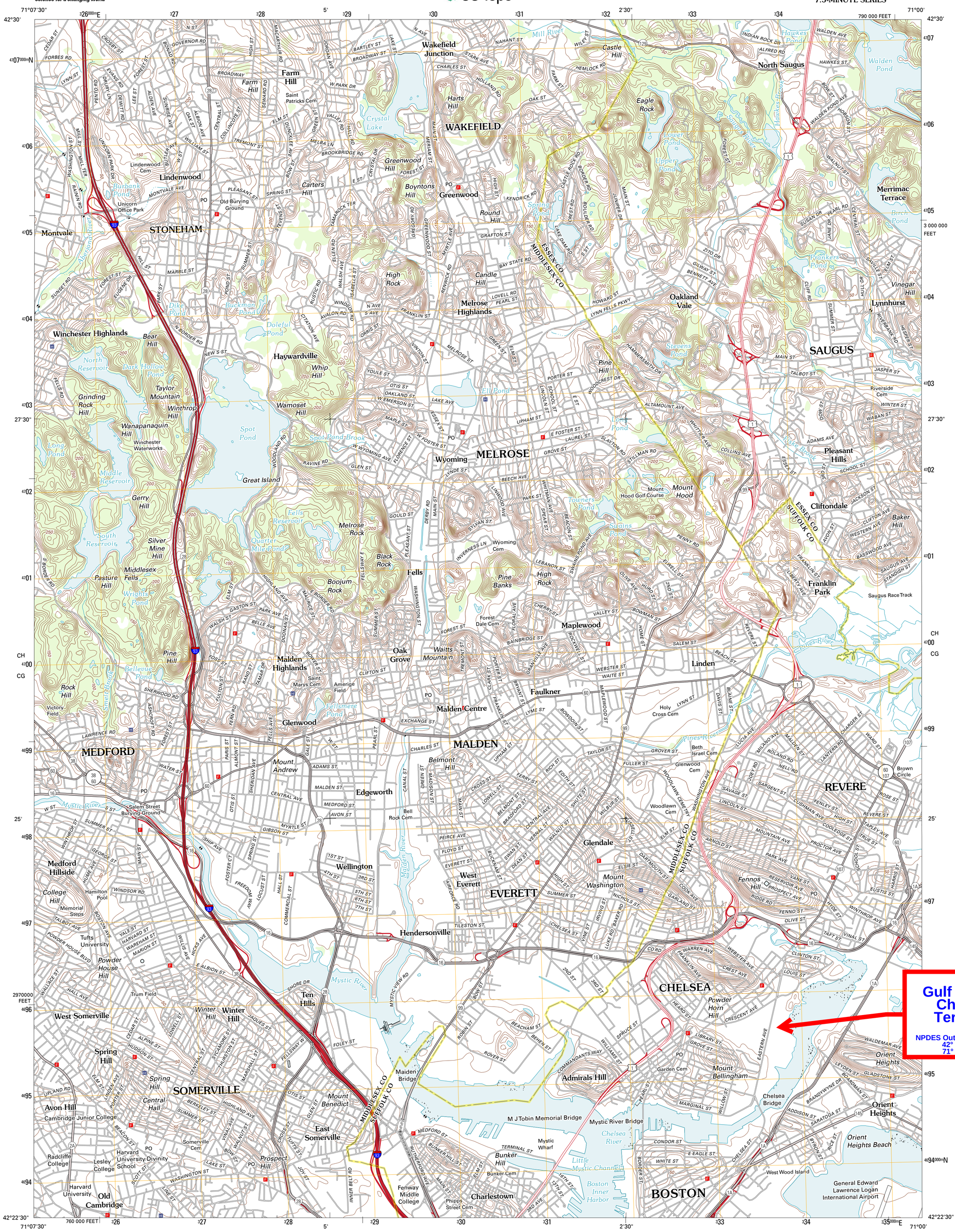
FIGURES

Figure 1 Site Locus

U.S. DEPARTMENT OF THE INTERIOR
U. S. GEOLOGICAL SURVEY

The National Map US Topo

BOSTON NORTH QUADRANGLE
MASSACHUSETTS
7.5-MINUTE SERIES



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and 1 000-meter grid: Universal Transverse Mercator, Zone 19T
10 000-foot ticks: Massachusetts Coordinate System of 1983 (mainland zone)

Imagery.....NAIP, August 2010
Roads.....©2006-2011 TomTom
Names.....GNIS, 2011
Hydrography.....National Hydrography Dataset, 2010
Contours.....National Elevation Dataset, 2008
Boundaries.....Census, IBWC, IBC, USGS, 1972 - 2010

UTM GRID AND 2012 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

MN 15° 4' 268 MILS | GN 1° 23' 25 MILS

U.S. National Grid
100,000-m Square ID: CH, CG
Grid Zone Designation: 19T

SCALE 1:24 000

1 0.5 0 KILOMETERS 1 2
1000 500 0 METERS 1000 2000
1 0.5 0 1 MILES
1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000 FEET

CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the National Geospatial Program US Topo Product Standard, 2011.
A metadata file associated with this product is draft version 0.6.2

MASSACHUSETTS

QUADRANGLE LOCATION

Wilmington	Reading	Salem
Lexington	Boston North	Lynn
Newton	Boston South	Hull

ADJOINING 7.5' QUADRANGLES

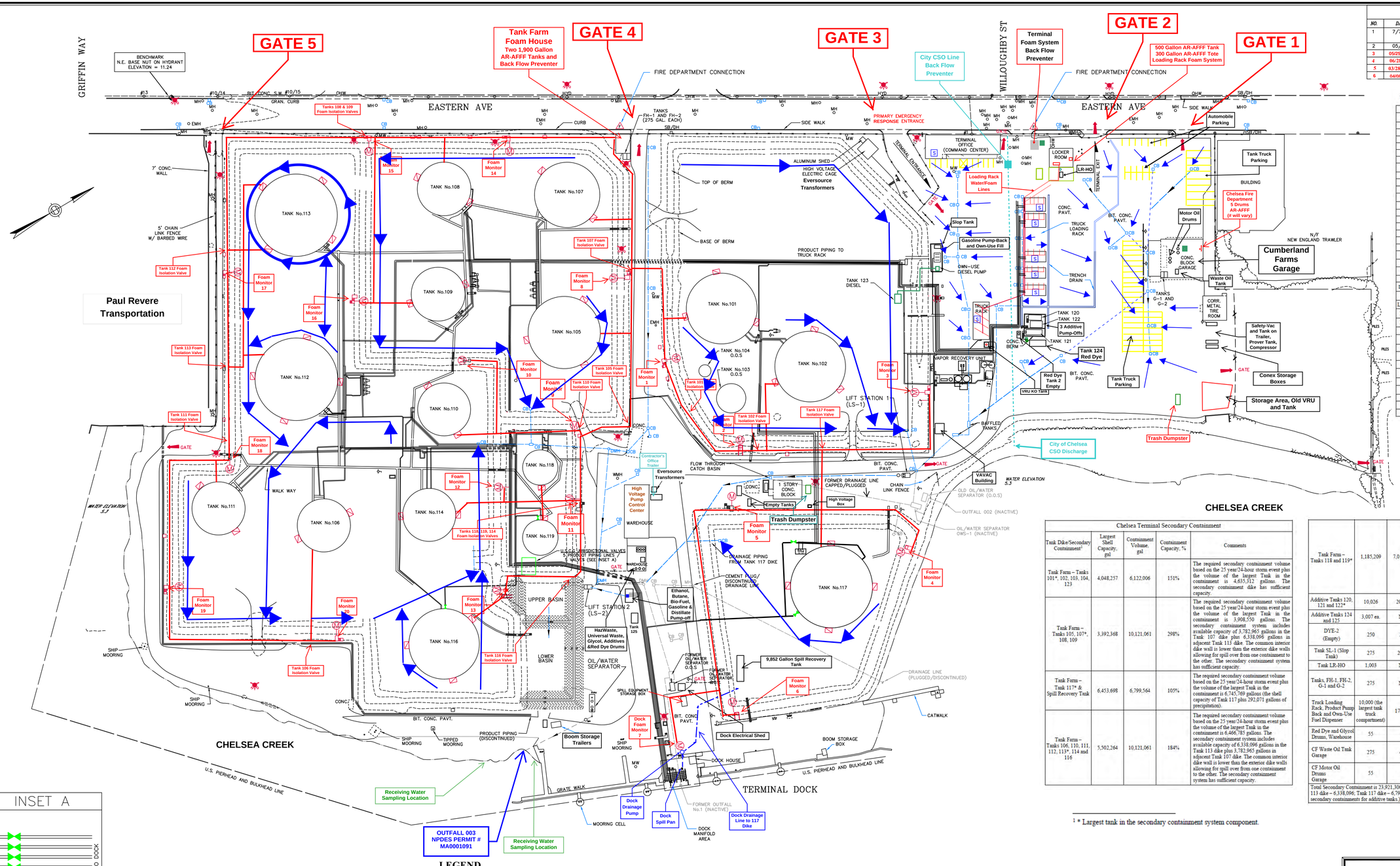
ROAD CLASSIFICATION

Interstate Route	State Route
US Route	Local Road
Ramp	4WD

Interstate Route · US Route · State Route

BOSTON NORTH, MA
2012

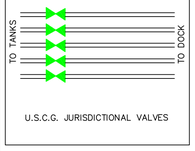
Figure 2 Site Drainage Plan



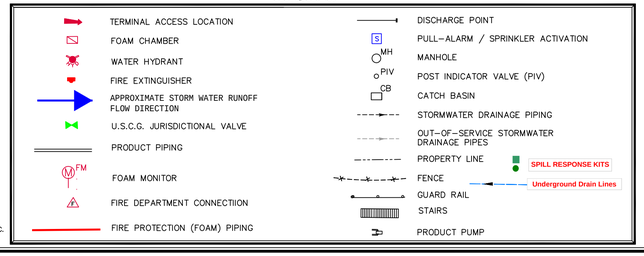
REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	7/7/00	MODIFIED STORMWATER COLLECTION/ TREATMENT/DISCHARGE (JOB # 100063)	P.S
2	05/08/06	UPDATED OUTPUT IDENTIFICATION	P.S
3	05/25/2014	Updated Foam, Drainage, Piping & Tanks	PJM
4	06/28/2016	Update Tank Table	PJM
5	03/28/2019	Update Tank Table, Piping, Foam Lines	PJM
6	04/08/2022	Update Tank Table	PJM

Tank	Product	Shell Capacity	
		Barrels	Gallons
101	Distillates	96,387	4,048,257
102	Distillates	94,807	3,981,894
103	Empty	16,569	695,877
104	Empty	1,964	82,500
105	Gasoline-Naphtha	79,591	3,342,828
106	Distillates	53,942	2,265,583
107	Gasoline/Denatured Ethanol	80,771	3,392,368
108	Gasoline	53,066	2,266,578
109	Gasoline	53,965	2,266,533
110	Gasoline	53,779	2,258,725
111	Distillates/Used Cooking Oil	53,764	2,258,106
112	Gasoline	130,007	5,460,297
113	Denatured Ethanol/Gasoline	131,006	5,502,264
114	Distillates	53,405	2,243,005
116	Gasoline-Naphtha	96,040	4,033,702
117	Distillates	153,659	6,453,698
118	Gasoline	28,145	1,182,075
119	Gasoline	28,219	1,185,209
120	Diesel Additive, by Loading Rack	191	8,020
121	Gasoline Additive, by Loading Rack	238	9,986
122	Shell Additive, by Loading Rack	239	10,026
123	Diesel, Tank Truck Refueling	119	5,000
124	Red Dye, by Loading Rack Additive Tanks	71	3,007
125	Lubricity, by Pipeline to Dock	71	3,007
DYE-2	Red Dye by Loading Rack Additive Tanks (Empty)	6	250
N/A	Spill Recovery Tank (Tank 117 Dike)	235	9,852
LR-HO	No. 2 Fuel Oil, Locker Room	24	1,003
FH-1	No. 2 Fuel Oil, Foam House	7	275
FH-2	No. 2 Fuel Oil, Foam House	7	275
G-1	No. 2 Fuel Oil, Cumberland Farms Garage	7	275
G-2	No. 2 Fuel Oil, Cumberland Farms Garage	7	275
SL-1	Slop Tank – Mixture of Gasoline and Distillates	7	275
N/A	Mobile Proofer Tank	24	1,000
N/A	Ethanol Proofer Tank	2	100
N/A	Safety-Vac Trailer Tank	6	250
N/A	Red Dye, 4 Drums, Warehouse	5	220
N/A	Zink Fluid, 4 Drums, Warehouse	5	220
N/A	Waste Oil Tank, Cumberland Farms Garage	7	275
N/A	Motor Oil, 4 Drums Cumberland Farms Garage	5	220
Totals		1,361,269	52,973,310

INSET A



LEGEND



NOTES

1. THIS PLAN IS BASED ON A PLAN ENTITLED "DETAIL PLAN OF LAND IN CHELSEA, MASS." PREPARED BY ANDOVER ENGINEERING, INC. DATED SEPTEMBER 11, 1996 FOR GULF OIL, L.P.
2. RECEIVING WATER SAMPLING LOCATIONS ARE APPROXIMATE AND DEPEND ON SITE CONDITIONS AT THE TIME OF SAMPLING.

DISCLAIMER:
THIS DRAWING IS FOR PERMITTING PURPOSES ONLY. THE LOCATIONS OF STRUCTURES, FEATURES AND EQUIPMENT PRESENTED ON THIS DRAWING SHOULD BE CONSIDERED APPROXIMATE. THE LOCATIONS OF TERMINAL EQUIPMENT (INCLUDE PRODUCT PIPING) HAS BEEN SHOWN SCHEMATICALLY BASED ON INFORMATION PROVIDED BY GULF OIL, L. P. AND THE ORIGINAL BASE MAP PREPARED BY ANDOVER ENGINEERING, INC. (SEE NOTE 1) AND IS NOT BASED ON A SURVEY OF THE PROPERTY.

Chelsea Terminal Secondary Containment

Tank Dike/Secondary Containment[1]	Largest Shell Capacity, gal	Containment Volume, gal	Containment Capacity, %	Comments
Tank Farm – Tanks 101*, 102, 103, 104, 123	4,048,257	6,122,006	151%	The required secondary containment volume based on the 25 year/24-hour storm event plus the volume of the largest Tank in the containment is 4,635,312 gallons. The secondary containment dike has sufficient capacity.
Tank Farm – Tanks 105, 107*, 108, 109	3,392,368	10,121,061	298%	The required secondary containment volume based on the 25 year/24-hour storm event plus the volume of the largest Tank in the containment is 3,908,550 gallons. The secondary containment system includes available capacity of 3,782,965 gallons in the Tank 107 dike plus 6,338,096 gallons in adjacent Tank 113 dike. The common interior dike wall is lower than the exterior dike walls allowing for spill over from one containment to the other. The secondary containment system has sufficient capacity.
Tank Farm – Tank 117* & Spill Recovery Tank	6,453,698	6,799,564	105%	The required secondary containment volume based on the 25 year/24-hour storm event plus the volume of the largest Tank in the containment is 6,745,769 gallons (the shell capacity of Tank 117 plus 292,071 gallons of precipitation).
Tank Farm – Tanks 106, 110, 111, 112, 113*, 114 and 116	5,502,264	10,121,061	184%	The required secondary containment volume based on the 25 year/24-hour storm event plus the volume of the largest Tank in the containment is 6,466,785 gallons. The secondary containment system includes available capacity of 6,338,096 gallons in the Tank 113 dike plus 3,782,965 gallons in adjacent Tank 107 dike. The common interior dike wall is lower than the exterior dike walls allowing for spill over from one containment to the other. The secondary containment system has sufficient capacity.
Tank Farm – Tanks 118 and 119*	1,185,209	7,017,991	592%	The required secondary containment volume based on the 25 year/24-hour storm event plus the volume of the largest Tank in the containment is 1,275,094 gallons. The secondary containment system includes available capacity of 679,895 gallons in the Tank 119 dike plus 6,338,096 gallons in adjacent Tank 113 dike. The common interior dike wall is lower than the exterior dike walls allowing for spill over from one containment to the other. The secondary containment system has sufficient capacity.
Additive Tanks 120, 121 and 122*	10,026	20,618	206%	Poured concrete containment. Sufficient capacity for 3,818 gallons of storm water.
Additive Tanks 124 and 125	3,007 ea.	N/A	N/A	Double Walled Tanks
DYE-2 (Empty)	250	374	150%	Tank is in a 50-cf containment located adjacent to the Additive Tanks within the Loading Rack containment system.
Tank SL-1 (Slop Tank)	275	2,214	>110%	Poured concrete containment. Sufficient capacity for 992 gallons of storm water.
Tank LR-HO	1,003	N/A	N/A	Double Walled Tank
Tanks, FH-1, FH-2, G-1 and G-2	275	N/A	N/A	Tanks are inside buildings (Foam House and CF Garage) with solid concrete flooring with curbing (FH) or sloped inward (G). No storm water impact.
Truck Loading Rack, Product Pump Back and Own-Use Fuel Dispenser	10,000 (the largest tank truck compartment)	175,000	>110%	Retention Basins – 167,000 gallons. OWS – 8,000 gallons. See discussion regarding storm water impact at the end of this table.
Red Dye and Glycol Drums, Warehouse	55	73	133%	Drums are stored indoors on 4-drum spill pallets. No storm water impact.
CF Waste Oil Tank Garage	275	422	153%	Steel Containment inside Garage. Cumberland Farms is responsible for this tank. No storm water impact.
CF Motor Oil Drums Garage	55	73	133%	Drums are stored on spill pallets and platforms. The drums are the responsibility of Cumberland Farms. No storm water impact.
Total Secondary Containment is 23,921,300 Gallons. (Tank 101 dike – 6,122,006; Tank 107 dike – 3,782,965; Tank 113 dike – 6,338,096; Tank 117 dike – 6,799,564; Tank 119 dike – 679,895: plus retention ponds, OWS capacity and secondary containments for additive tanks.)				

[1] * Largest tank in the secondary containment system component.

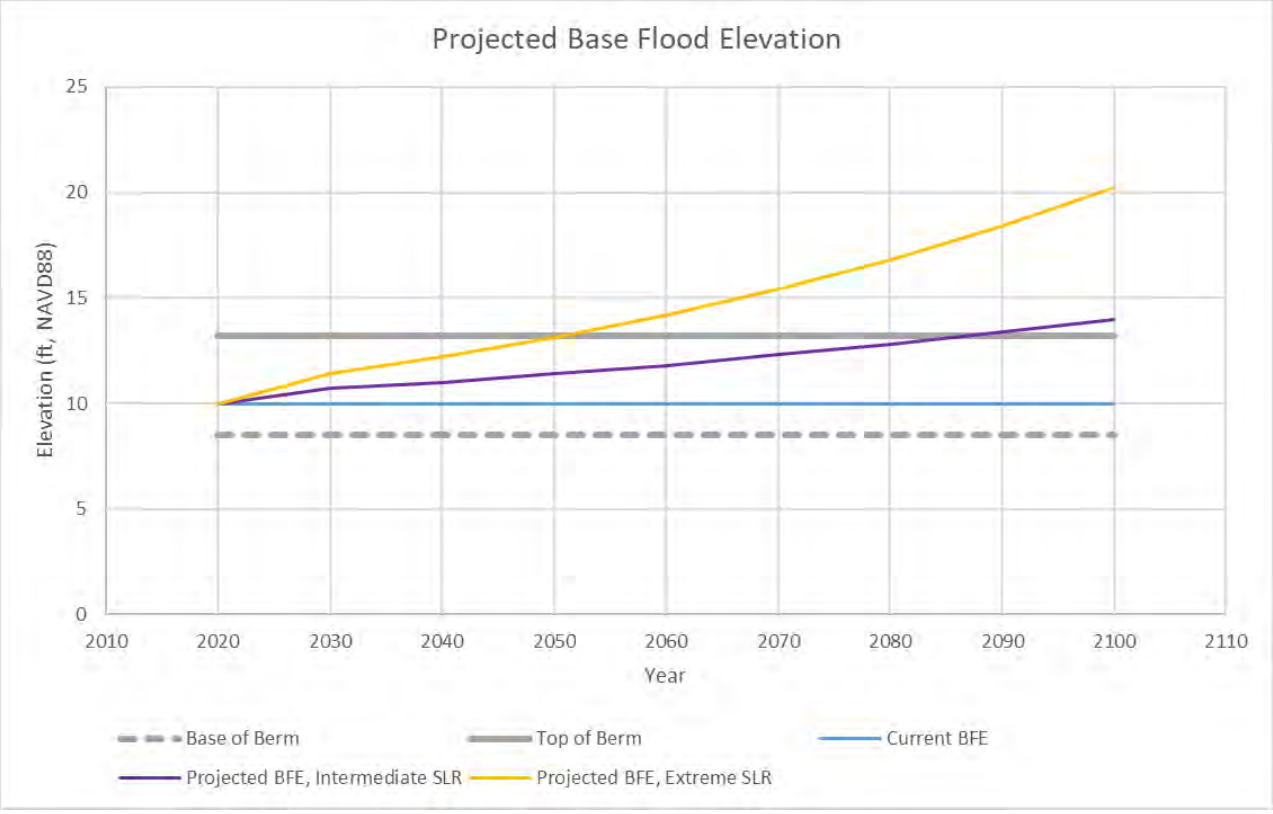
APPROXIMATE SCALE
80' 0 40' 80' 160'
(IN FEET)
1 inch = 80 ft.

FIGURE 2
Site Drainage Plan

GULF OIL L.P., CHELSEA, MASSACHUSETTS TERMINAL
281 EASTERN AVENUE
CHELSEA, MASSACHUSETTS

DRAWN BY:	APPROVED BY:	
DATE:	SCALE: 1"=80'	FILE No.:

Figure 3 Projected Base Flood Elevation



Data Sources: Massachusetts State Hazard Mitigation and Climate Adaptation Plan (2018), Suffolk County Flood Insurance Rate Map Panel 0019J (2016)

Appendix A - NPDES Permit #MA0001091, Parts I & II

Appendix A contains the Terminal's NPDES Permit Parts I and II. Part I of the Permit is also accessible through the EPA's website at:

2022 Gulf Oil Limited Partnership Final Permit, MA0001091 (epa.gov)

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Clean Water Act as amended, 33 U.S.C. §§1251 et seq. (the "CWA"), and the Massachusetts Clean Waters Act, as amended, (M.G.L. Chap. 21, §§26-53),

Gulf Oil Limited Partnership

is authorized to discharge from a facility located at

Gulf Oil Terminal
281 Eastern Avenue
Chelsea, MA 02150

to receiving water named

Chelsea River (MA71-06)
Mystic River Watershed

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

This permit shall become effective on December 1, 2022.

This permit expires at midnight on November 30, 2027.

This permit supersedes the permit issued on September 24, 2014.

This permit consists of this **cover page**, **Part I**, **Attachment A** (Marine Acute Toxicity Test Procedure and Protocol, July 2012), and **Part II** (NPDES Part II Standard Conditions, April 2018).

Signed this 30th day of September

KENNETH MORAFF Digitally signed by KENNETH MORAFF Date: 2022.09.30 11:02:39 -04'00'

Ken Moraff, Director
Water Division
Environmental Protection Agency
Region 1
Boston, MA

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date and lasting through the expiration date, the Permittee is authorized to discharge treated stormwater and hydrostatic test water through **Outfall Serial Number 003** to the Chelsea River. The discharge shall be limited and monitored as specified below; the receiving water shall be monitored as specified below.

Effluent Characteristic	**Effluent Limitation**		**Monitoring Requirements[1,2,3]**	
	Average Monthly	**Maximum Daily**	**Measurement Frequency[4]**	**Sample Type**
Flow Rate Oil/Water Separator[5]	---	800 GPM	When Discharging	Estimate
Total Effluent Flow[6]	---	Report MGal/Mo	When Discharging	Meter
Number of Events	---	Report #	When Discharging	Count
Total Suspended Solids (TSS)	30 mg/L	100 mg/L	2/Month	Grab
Turbidity	Report NTU	Report NTU	2/Month	Grab
pH[7]	6.5 - 8.5 S.U.		1/Month	Grab
Chemical Oxygen Demand	---	Report mg/L	1/Month	Grab
Oil and Grease	---	15 mg/L	1/Month	Grab
Fecal Coliform	---	Report MPN	1/Month	Grab
Enterococcus[8]	---	Report CFU	1/Month	Grab
Benzene[9]	---	5 µg/L	1/Month	Grab

Effluent Characteristic	Effluent Limitation		Monitoring Requirements[1,2,3]	
	Average Monthly	Maximum Daily	Measurement Frequency[4]	Sample Type
Ethylbenzene[9]	---	Report µg/L	1/Year[10]	Grab
Toluene[9]	---	Report µg/L	1/Year[10]	Grab
Total Xylenes[9]	---	Report µg/L	1/Year[10]	Grab
Benzo(a)pyrene[11]	0.00013 µg/L	Report µg/L	1/Month	Grab
Benzo(a)anthracene[11]	---	Report µg/L	1/Month	Grab
Benzo(b)fluoranthene[11]	0.0013 µg/L	Report µg/L	1/Month	Grab
Benzo(k)fluoranthene[11]	0.013 µg/L	Report µg/L	1/Month	Grab
Chrysene[11]	---	Report µg/L	1/Month	Grab
Dibenzo(a,h)anthracene[11]	---	Report µg/L	1/Month	Grab
Indeno(1,2,3-cd)pyrene[11]	0.0013 µg/L	Report µg/L	1/Month	Grab
Naphthalene[11]	---	20 µg/L	1/Month	Grab
Acenaphthene[11]	---	Report µg/L	1/Year[10]	Grab
Acenaphthylene[11]	---	Report µg/L	1/Year[10]	Grab
Anthracene[11]	---	Report µg/L	1/Year[10]	Grab
Benzo(g,h,i)perylene[11]	---	Report µg/L	1/Year[10]	Grab
Fluoranthene[11]	---	Report µg/L	1/Year[10]	Grab

Effluent Characteristic	Effluent Limitation		Monitoring Requirements[1,2,3]	
	Average Monthly	Maximum Daily	Measurement Frequency[4]	Sample Type
Fluorene[11]	---	Report µg/L	1/Year[10]	Grab
Phenanthrene[11]	---	Report µg/L	1/Year[10]	Grab
Pyrene[11]	---	Report µg/L	1/Year[10]	Grab
Total Residual Chlorine[12]	---	13 µg/L	1/Month	Grab
Methyl tert-butyl Ether	---	Report	1/Quarter	Grab
Perfluorohexanesulfonic acid (PFHxS)[13]	---	Report ng/L	1/Quarter	Grab
Perfluoroheptanoic acid (PFHpA)[13]	---	Report ng/L	1/Quarter	Grab
Perfluorononanoic acid (PFNA)[13]	---	Report ng/L	1/Quarter	Grab
Perfluorooctanesulfonic acid (PFOS)[13]	---	Report ng/L	1/Quarter	Grab
Perfluorooctanoic acid (PFOA)[13]	---	Report ng/L	1/Quarter	Grab
Perfluorodecanoic (PFDA)[13]	---	Report ng/L	1/Quarter	Grab
Copper	---	5.8 µg/L	1/Month	Grab
Total Ammonia (as N) (April 1 through October 31)	---	1.8 mg/L	1/Month	Grab
Whole Effluent Toxicity (WET) Testing[14,15]				
LC_{50}	---	Report %	1/Year	Grab
Total Residual Chlorine	---	Report mg/L	1/Year	Grab

Effluent Characteristic	Effluent Limitation		Monitoring Requirements[1,2,3]	
	Average Monthly	Maximum Daily	Measurement Frequency[4]	Sample Type
Salinity	---	Report g/kg	1/Year	Grab
pH	---	Report SU	1/Year	Grab
Total Solids	---	Report mg/L	1/Year	Grab
Total Suspended Solids	---	Report mg/L	1/Year	Grab
Ammonia Nitrogen	---	Report mg/L	1/Year	Grab
Total Organic Carbon	---	Report mg/L	1/Year	Grab
Total Cadmium	---	Report µg/L	1/Year	Grab
Total Copper	---	Report µg/L	1/Year	Grab
Total Lead	---	Report µg/L	1/Year	Grab
Total Nickel	---	Report µg/L	1/Year	Grab
Total Zinc	---	Report µg/L	1/Year	Grab

Ambient Characteristic[16]	Reporting Requirements		Monitoring Requirements[1,2,3]	
	Average Monthly	Maximum Daily	Measurement Frequency[4]	Sample Type[5]
Salinity	---	Report g/kg	1/Year	Grab
Ammonia Nitrogen	---	Report mg/L	1/Year	Grab

Total Cadmium	---	Report µg/L	1/Year	Grab
Total Copper	---	Report µg/L	1/Year	Grab
Total Nickel	---	Report µg/L	1/Year	Grab
Total Lead	---	Report µg/L	1/Year	Grab
Total Zinc	---	Report µg/L	1/Year	Grab
pH[17]	---	Report SU	1/Year	Grab
Temperature[17]	---	Report °C	1/Year	Grab
Benzene	---	Report µg/L	1/Year[18]	Grab
Ethylbenzene	---	Report µg/L	1/Year[18]	Grab
Toluene	---	Report µg/L	1/Year[18]	Grab
Total Xylenes	---	Report µg/L	1/Year[18]	Grab
Benzo(a)anthracene	---	Report µg/L	1/Year[18]	Grab
Benzo(a)pyrene	---	Report µg/L	1/Year[18]	Grab
Benzo(b)fluoranthene	---	Report µg/L	1/Year[18]	Grab
Benzo(k)fluoranthene	---	Report µg/L	1/Year[18]	Grab
Chrysene	---	Report µg/L	1/Year[18]	Grab
Dibenzo(a,h)anthracene	---	Report µg/L	1/Year[18]	Grab
Indeno(1,2,3-cd)pyrene	---	Report µg/L	1/Year[18]	Grab

Acenaphthene	---	Report µg/L	1/Year[18]	Grab
Acenaphthylene	---	Report µg/L	1/Year[18]	Grab
Anthracene	---	Report µg/L	1/Year[18]	Grab
Benzo(g,h,i)perylene	---	Report µg/L	1/Year[18]	Grab
Fluoranthene	---	Report µg/L	1/Year[18]	Grab
Fluorene	---	Report µg/L	1/Year[18]	Grab
Naphthalene	---	Report µg/L	1/Year[18]	Grab
Phenanthrene	---	Report µg/L	1/Year[18]	Grab
Pyrene	---	Report µg/L	1/Year[18]	Grab

Footnotes:

1. Grab samples for Outfall 003 shall be collected at a point after treatment through the Facility's oil/water separator (OWS) prior to comingling with any other wastestream and free from tidal influence. Samples shall be grab samples taken within 15 minutes of the initiation of a discharge during a qualifying event where practicable, but in no case later than within the first hour of discharge from the outfall. Changes in sampling location must be approved in writing by the Environmental Protection Agency Region 1 (EPA) and the State. The Permittee shall report the results to EPA and the State of any additional testing above that required herein, if testing is done in accordance with 40 Code of Federal Regulations (CFR) § 136.

2. In accordance with 40 CFR § 122.44(i)(1)(iv), the Permittee shall monitor according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR Part 136 or required under 40 CFR chapter I, subchapter N or O, for the analysis of pollutants or pollutant parameters (except WET). A method is "sufficiently sensitive" when: 1) the method minimum level (ML) is at or below the level of the effluent limitation established in the permit for the measured pollutant or pollutant parameter; or 2) the method has the lowest ML of the analytical methods approved under 40 CFR Part 136 or required under 40 CFR chapter I, subchapter N or O for the measured pollutant or pollutant parameter. The term "minimum level" refers to either the sample concentration equivalent to

the lowest calibration point in a method or a multiple of the method detection limit (MDL), whichever is higher. Minimum levels may be obtained in several ways: They may be published in a method; they may be based on the lowest acceptable calibration point used by a laboratory; or they may be calculated by multiplying the MDL in a method, or the MDL determined by a laboratory, by a factor.

3. When a parameter is not detected above the ML, the Permittee must report the data qualifier signifying less than the sample ML for that parameter (e.g., < 5 µg/L, if the sample ML for a parameter is 5 µg/L). For calculating and reporting the average monthly concentration when one or more values are not detected, assign a value of zero to all non-detects and report the average of all the results. The number of exceedances shall be enumerated for each parameter in the field provided on every Discharge Monitoring Report (DMR).

4. Measurement frequency of "when discharging" is defined as the sampling of any measurable discharge event, reported for each calendar month. Sampling frequency of 1/month is defined as the sampling of one discharge event in each calendar month. Sampling frequency of 1/year is defined as the sampling of one discharge event during one calendar year, unless otherwise specified. If no sample is collected during the measurement frequencies defined above, the Permittee must report an appropriate No Data Indicator Code.

5. For Flow Rate, the maximum daily value represents the maximum instantaneous flow rate measured by the Facility as passing through the OWS for each day that a discharge occurs during the reported period. The maximum instantaneous flow rate, which is to be reported in units of gallons per minute (GPM), shall be an estimate based on the summation of the pump curve value(s) for all pumps in operation which control the rate of flow through the OWS when discharge is occurring. The Permittee shall at no time exceed the design flow rate of the treatment system.

6. For Total Flow, the value reported represents the sum of the recorded discharge volume for each day that effluent is discharged during that month, measured at the OWS using a totalizer or similar device. Total Flow shall be reported in the units of millions of gallons per month (Mgal/Mo). The Permittee shall also report the total number of days during the reporting period discharges from the outfall occurred (i.e., a measurable volume of effluent passes through the totalizer or similar device), noted on the discharge monitoring report (DMR) form under "Event Total" parameter. The required meter shall be operational no later than 180 days following the effective date of the permit. Following the effective date of the permit and until the required meter becomes operational, but no more than 180 days following the effective date of the permit, the Permittee may report Total Flow as an estimate based on the estimated flow rate and the total hours of pump operation.

7. The pH shall be within the specified range at all times. The minimum and maximum pH sample measurement values for the month shall be reported in standard units (S.U.).

8. Results must be reported as colony forming units (CFU) per 100 mL. After a minimum of one year following the effective date of the permit and 12 samples, the sampling frequency for *Enterococcus* shall reduce to 1/year if all sample results are less than the applicable water quality criteria.

9. The ML for analysis for benzene, ethylbenzene, toluene and total xylenes shall be no greater than 2 µg/L.

10. The Permittee shall conduct annual monitoring of the effluent during the month of April for the following compounds: acenaphthene, acenaphthylene, anthracene, benzo(g,h,i)perylene, fluoranthene, fluorene, phenanthrene, pyrene, toluene, ethylbenzene, and total xylenes. Sampling shall be performed during the first Qualifying Event and concurrently with the April monthly monitoring event. A Qualifying Event shall be defined as a discharge that occurs during daylight hours on an outgoing tide at least one hour from both the low and high slack tide. To identify a Qualifying Event, the permittee may use tide charts to predict the two four-hour intervals of an outgoing tide each day that are one hour from both low and high slack tide. If a measurable discharge does not occur such that sampling cannot be completed during the first Qualifying Event of the required sampling frequency, the permittee is to sample the next Qualifying Event. If no discharge occurs during the month of April, the Permittee shall sample the next qualifying event.

11. Analysis for the Group I and II Polycyclic Aromatic Hydrocarbons (PAHs) shall use Method 625.1 (low level GC/MS). The expected ML for benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, and chrysene is 0.05 µg/L. The expected ML for dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene is 0.1 µg/L. The expected ML for acenaphthene, acenaphthylene, anthracene, benzo(g,h,i)perylene, fluoranthene, fluorene, naphthalene, phenanthrene, and pyrene is 5 µg/L. The compliance level for Group I PAHs with numeric effluent limits less than the detection limit shall be non-detect at any sample ML above the numeric limit.

12. For the purposes of this permit, TRC analysis must be completed using a test method in 40 CFR § 136 that achieves a minimum level of detection no greater than 30 µg/L. The compliance level for TRC is 30 µg/L. The Permittee may request that this limit and associated monitoring apply only to discharges that have been previously chlorinated or that contain residual chlorine following completion of a source identification study demonstrating the source of TRC and implementation of BMPs to control TRC in the effluent.

13. This reporting requirement takes effect during the first quarter following six months after receiving written notification of the availability of the multi-laboratory validation of analytical test Method 1633 for the analysis of PFAS in wastewater and biosolids. Results must be reported in nanograms per liter (ng/L). After three years of monitoring or a minimum of 12 samples, if all samples are non-detect for all six PFAS compounds using EPA's multi-lab validated method for wastewater, the Permittee may request to remove the requirement for PFAS monitoring.

14. The Permittee shall conduct acute toxicity tests (LC_{50}) 1/year in the month of April in accordance with test procedures and protocol specified in **Attachment A** of this permit. LC_{50} is defined in Part II.E. of this permit. The Permittee shall test the mysid shrimp (*Americamysis bahia*), and the inland silverside, *Menidia beryllina*. The complete report for each toxicity test shall be submitted as an attachment to the monthly DMR submittal immediately following the completion of the test. If no discharge occurs during the month of April, the Permittee shall sample the next qualifying event.

15. For Part I.A.1., Whole Effluent Toxicity Testing, the Permittee shall conduct the analyses specified in **Attachment A**, Part VI. CHEMICAL ANALYSIS for the effluent sample. If toxicity test(s) using the receiving water as diluent show the receiving water to be toxic or unreliable, the Permittee shall follow procedures outlined in **Attachment A**, Section IV., DILUTION WATER. Even where alternate dilution water has been used, the results of the receiving water control (0% effluent) analyses must be reported. Minimum levels and test methods are specified in **Attachment A**, Part VI. CHEMICAL ANALYSIS.

16. For Part I.A.1., Ambient Characteristic, the Permittee shall conduct the analyses specified in **Attachment A**, Part VI. CHEMICAL ANALYSIS for the receiving water sample collected as part of the WET testing requirements. Such samples shall be taken from the receiving water at a point immediately upstream of the permitted discharge's zone of influence at a reasonably accessible location, as specified in **Attachment A**. Minimum levels and test methods are specified in **Attachment A**, Part VI. CHEMICAL ANALYSIS.

17. A pH and temperature measurement shall be taken of each receiving water sample at the time of collection and the results reported on the appropriate DMR. These pH and temperature measurements are independent from any pH and temperature measurements required by the WET testing protocols.

18. The Permittee shall conduct annual monitoring of the receiving water during the month of April for the following compounds: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, acenaphthene, acenaphthylene, anthracene, benzo(g,h,i)perylene, fluoranthene, fluorene, naphthalene, phenanthrene, pyrene, benzene, toluene, ethylbenzene, and total xylenes. The ML for analysis shall be equivalent to the ML for effluent monitoring. The receiving water sample shall be collected from the Chelsea River at a point immediately outside of Outfall 003's

zone of influence at a reasonably accessible location. Sampling shall be performed during a Qualifying Event concurrently with the annual toxicity monitoring event and annual effluent monitoring described above.

Part I.A. continued.

2. The discharge shall not cause a violation of the water quality standards of the receiving water.

3. The discharge shall be free from pollutants in concentrations or combinations that, in the receiving water, settle to form objectionable deposits; float as debris, scum or other matter to form nuisances; produce objectionable odor, color, taste or turbidity; or produce undesirable or nuisance species of aquatic life.

4. The discharge shall be free from pollutants in concentrations or combinations that adversely affect the physical, chemical, or biological nature of the bottom.

5. The discharge shall not result in pollutants in concentrations or combinations in the receiving water that are toxic to humans, aquatic life or wildlife.

6. The discharge shall be free from floating, suspended and settleable solids in concentrations or combinations that would impair any use assigned to the receiving water.

7. The discharge shall be free from oil, grease and petrochemicals that produce a visible film on the surface of the water, impart an oily taste to the water or an oily or other undesirable taste to the edible portions of aquatic life, coat the banks or bottom of the water course, or are deleterious or become toxic to aquatic life.

8. All existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe (40 CFR § 122.42):

   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) 100 micrograms per liter (µg/L);
      (2) 200 µg/L for acrolein and acrylonitrile; 500 µg/L for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (mg/L) for antimony;
      (3) Five times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR § 122.21(g)(7); or
      (4) Any other notification level established by the Director in accordance with 40 CFR § 122.44(f) and State 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) 500 µg/L;
      (2) One mg/L for antimony;
      (3) 10 times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR § 122.21(g)(7); or

(4) Any other notification level established by the Director in accordance with 40 CFR § 122.44(f) and State regulations.

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

B. UNAUTHORIZED DISCHARGES

1. This permit authorizes discharges only from the outfall(s) listed in Part I.A.1, in accordance with the terms and conditions of this permit. Discharges of wastewater from any other point sources are not authorized by this permit and shall be reported in accordance with Part D.1.e.(1) of the Standard Conditions of this permit (24-hour reporting).

2. The following discharges are expressly prohibited:

a. Discharge of tank bottom water and/or bilge water alone or in combination with stormwater discharge or other wastewater;

b. Discharge of any sludge and/or bottom deposits from any storage tank(s), basin(s), and/or diked area(s) to the receiving waters. Examples of storage tanks and/or basins include, but are not limited to: primary catch basins, oil/water separators, petroleum product storage tanks, baffled storage tanks collecting spills, and tank truck loading rack sumps;

c. Discharge of liquid hazardous waste alone or in combination with stormwater or other wastewater;

d. Discharges of runoff from any vehicle and equipment washing alone or in combination with stormwater or other wastewater, including from the leased property;

e. Discharges of ballast water alone or in combination with stormwater or other wastewater;

f. Runoff resulting from accidental spill or release, alone or in combination with stormwater or other wastewater;

g. Discharges of emulsion chemicals, including surfactants (e.g., detergents and soaps) alone or in combination with stormwater or other wastewater;

h. Discharges of contaminated groundwater, including, but not limited to wastewater generated during activities conducted under the Massachusetts Contingency Plan, alone or in combination with stormwater or other wastewater;

i. Discharges of aqueous film-forming foam and alcohol resistant foam either in concentrate form or as foam diluted with water during testing or maintenance of the fires suppression system at the Facility’s marine vessel dock

C. SPECIAL CONDITIONS

1. Best Management Practices (BMPs)

a. The Permittee shall design, install, and implement control measures to minimize pollutants discharged from stormwater associated with the Facility operations to the receiving water. At a minimum, the Permittee must implement control measures, both structural controls (e.g., OWS, containment areas, holding tanks) and non-structural (e.g., operational procedures and operator training) consistent with those described in Part 2.1.2 and of EPA's Multi-Sector General Permit (MSGP).[1] The control measures must ensure the following non-numeric effluent limitations are met:

(1) Minimize exposure of processing and material storage areas to stormwater discharges;
(2) Design good housekeeping measures to maintain areas that are potential sources of pollutants;
(3) Implement preventative maintenance programs to avoid leaks, spills, and other releases of pollutants to stormwater that is discharged to receiving waters;
(4) Implement spill prevention and response procedures to ensure effective response to spills and leaks if or when they occur, including, but not limited to, those required by Section 311 of the CWA, 33 U.S.C. § 1321. The Permittee shall report immediately the appearance of any size sheen attributable to the discharge from the Facility to the appropriate agency of the United States Government in accordance with Section 311 of the CWA;
(5) Design of erosion and sediment controls to stabilize exposed areas and contain runoff using structural and/or non-structural control measures to minimize onsite erosion and sedimentation, and the resulting discharge of pollutants;
(6) Utilize runoff management practices to divert, infiltrate, reuse, contain, or otherwise reduce stormwater runoff;
(7) Develop proper handling procedures for salt or materials containing chlorides that are used for snow and ice control;
(8) Conduct employee training to ensure personnel understand the requirements of this permit;
(9) Evaluate for the presence of non-stormwater discharges and require the elimination of any non-stormwater discharges not explicitly authorized in this permit or covered by another NPDES permit; and
(10) Minimize dust generation and vehicle tracking of industrial materials.
(11) Demonstrate that no illicit discharges exist, including, but not limited to, sanitary sewer cross connections. If any illicit discharge is detected, the Permittee shall locate, identify, and eliminate the illicit discharge as expeditiously as possible;
(12) Use known, available, and reasonable methods to prevent rodents, birds, and other animals from feeding/nesting/roosting at the Facility. Known, available, and

[1] The current MSGP was effective March 21, 2021 and is available at https://www.epa.gov/npdes/stormwater-discharges-industrial-activities-epas-2021-msgp.

reasonable methods do not include methods that would be construed as a violations of any applicable federal, state, or local statutes, ordinances, or regulations, including the Migratory Bird Act;

(13) Implement practices to minimize bacteria from known sources (e.g., dumpsters, food waste, or animal waste).

b. In addition, the Permittee must design, install, and/or implement the following BMPs:

(1) The Permittee shall comply with the inspection requirements in Parts 3.1 and 3.2 of the 2021 MSGP, the corrective action requirements in Part 5.1 of the 2021 MSGP, and the corrective action documentation requirements in Part 5.3 of the 2021 MSGP. If any of the following conditions occur or are detected during an inspection, monitoring or by other means, the Permittee shall review and revise, as appropriate, the SWPPP so that the permit's effluent limits are met and pollutant discharges are minimized:
   i. An unauthorized release or discharge (e.g., spill, leak, or discharge of non-stormwater not authorized by this or another NPDES permit;
   ii. A discharge violates a numeric effluent limit listed in Part I.A of this permit;
   iii. The stormwater control measures are not stringent enough to control stormwater discharges as necessary such that the receiving water will meet applicable water quality standards and/or the non-numeric limits in Part I.C of this permit;
   iv. A required control measure was never installed, was installed incorrectly, or is not being properly operated or maintained; and
   v. Whenever a visual assessment shows evidence of stormwater pollution (e.g., color, odor, floating solids, settled solids, suspended solids, foam).

(2) The Permittee shall comply with the control measure requirements in Part 2.1 and 2.1.1 of the 2021 MSGP in order to identify pollutant sources and select, design, install and maintain the pollution control technology necessary to meet the effluent limitations in the permit that ensure dilution is not used as a form of treatment.

(3) The Permittee shall minimize, to the maximum extent practicable, discharging stormwater and hydrostatic test water during worst-case conditions (i.e., approximately one hour before and after slack tide and during periods of lowest receiving water flow) The Permittee shall, to the maximum extent practicable, discharge stormwater and hydrostatic test water on an outgoing tide. In the event that a discharge outside of the parameters described above cannot be avoided, the Permittee shall document the reason for the discharge in an attachment to the SWPPP.

(4) The Permittee shall document the measures and methods used to control flow through the stormwater treatment system to ensure that the design flow of the treatment system is not exceeded.

(5) The Permittee shall design and implement response procedures for ethanol, materials that are used for spill and fire control (e.g. aqueous film-forming foam). This must include specific provisions for the treatment of ethanol and/or pollutants in materials that are used for spill and fire control, should release occur.

(6) The Permittee shall implement structural improvements, enhanced/resilient pollution prevention measures, and/or other mitigation measures to minimize[2] discharges that result from impacts of major storm and flood events.[3] The Permittee must document in the SWPPP its evaluation of the major storm and flood risks at the Facility, and all control measures considered to address discharges resulting from these risks. For all control measures considered, the Permittee must document in the SWPPP the factual basis (i.e., the maps, data sets and calculations for the analysis), for either implementing or not implementing the measure. The factual basis and analysis must be presented in sufficient detail to allow EPA, the public, or an independent qualified person to evaluate the reasonableness of the decision. For control measures already in place, including requirements from state, local or federal agencies, a description of the controls and how they meet the requirement(s) of this permit must be documented in the SWPPP. The Permittee must consider, at a minimum, the following control measures to minimize discharges:[4,5]

i. Reinforce materials storage structures to withstand flooding and additional exertion of force;
ii. Prevent floating of semi-stationary structures by elevating above the relative base flood elevation[6] or securing with non-corrosive device;
iii. When a delivery of materials is expected, and a storm is anticipated within 48 hours, delay delivery until after the storm or store materials as appropriate (refer to emergency procedures);

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[2] For the purposes of this provision, the term "minimize" means to reduce and/or eliminate to the extent achievable using stormwater control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practice.

[3] "Major storm and flood events" refers to instances resulting from major storms such as hurricanes, extreme/heavy precipitation events, and pluvial, fluvial, and flash flood events such as high-water events, storm surge, and high-tide flooding. "Extreme/heavy precipitation" refers to instances during which the amount of rain or snow experienced in a location substantially exceeds what is normal. What constitutes a period of heavy precipitation varies according to location and season. "Extreme/heavy precipitation" does not necessarily mean the total amount of precipitation at a location has increased—just that precipitation is occurring in more intense or more frequent events.

[4] To determine the risks at the Facility of discharges from major storm and flood events, you must conduct the evaluation using, at a minimum, the worst-case data relating to changes in precipitation, sea level rise, extreme weather events, coastal flooding, and inland flooding, and relevant to the facility's discharges from: 1) the data generated by the 13 federal agencies that conduct or use research on global change that contributed to the latest National Climate Assessment produced by the U.S. Global Change Research Program (USGCRP); 2) climate data generated by the Commonwealth of Massachusetts; and 3) resiliency planning completed by the municipality in which a given facility is located (i.e., City of Boston, Revere, and Chelsea) and incorporate the results of the evaluation in a manner that demonstrates that the control measures taken are precautionary and sufficiently protective. Evaluation must be completed by a qualified person on a rolling annual basis considering: 1) historical observations from all years the Permittee has operated the facility prior to this permit's term; 2) all observations of events that occurred in the calendar year; and 3) the 25 to 100 years forward-looking from the review year to assess impacts that are likely to occur.

[5] EPA Region 1 currently maintains a resource of additional data sources for evaluation and incorporation pursuant to this BMP at https://www.epa.gov/npdes-permits/dewatering-and-remediation-general-permit-drgp.

[6] Relative base flood elevation is the computed elevation to which floodwater is anticipated to rise during the reference flood. BFEs shown on the Federal Emergency Management Agency's Flood Maps, for example, are the elevation of surface water resulting from a flood that has a 1% chance of equaling or exceeding that level in any given year. This is the regulatory standard also referred to as the "100-year flood." The base flood is the national standard used by the National Flood Insurance Program (NFIP), accessed at https://msc.fema.gov/portal/search.

iv. Temporarily store materials and waste above the relative base flood elevation;
v. Temporarily reduce or eliminate outdoor storage;
vi. Temporarily relocate any mobile vehicles and equipment to upland areas;
vii. Develop scenario-based emergency procedures for major storms that are complementary to regular stormwater pollution prevention planning and identify emergency contacts for staff and contractors; and
viii. Conduct staff training for implementing your emergency procedures at regular intervals.

(7) The Permittee shall document quality assurance/quality control (QA/QC) practices including, at a minimum:
i. A summary of the monitoring requirements specified in the permit;
ii. A map and/or treatment system diagram indicating the location of each sampling location with a geographic identifier (i.e., latitude and longitude coordinates);
iii. Specifications for the number of samples, type of samples, type and number of containers, type of preservation, type and number of quality assurance samples, if applicable, type and number of field samples, if applicable, and sample storage, holding times, and shipping methods, including chain-of-custody procedures;
iv. Specifications for EPA-approved test methods and sufficiently sensitive minimum levels for each required parameter;
v. A schedule for review of sample results; and
vi. A description of data validation and data reporting processes.

(8) The Permittee shall implement a stormwater system BMP that ensures the integrity of stormwater system components through elimination of the infiltration of contaminated groundwater to the stormwater conveyance system where such infiltration contributes pollutants but are not otherwise explicitly authorized (i.e., by another NPDES permit). Within one year of the effective date of the permit, the Permittee must complete:
i. One-time cross-connection evaluation, to ensure that the stormwater conveyance system does not contribute pollutants to or convey pollutants from a municipal separate storm sewer system (MS4) to the receiving water;
ii. A schedule for routine visual or video inspection of the readily accessible portions of the stormwater system installed below grade;
iii. Measurement of the flow rate, and flow direction of known areas of groundwater contamination;
iv. Sampling of MtBE at groundwater monitoring points representative of groundwater conditions at the Facility, including known areas of contamination, collected during dry weather absent of tidal influence;
v. Sampling of MtBE at accumulation points within the stormwater system that are likely susceptible to groundwater infiltration, including points located in known areas of contamination, collected during dry weather absent of tidal influence in addition to routine MtBE monitoring at Outfall 003 as required in Part I.A.1; and
vi. A procedure for implementation and confirmation of corrective actions in accordance with Part I.C.1.b.(1), above, to eliminate infiltration of groundwater to the stormwater conveyance system where such infiltration is identified through the quarterly MtBE sampling as required in Part I.A.1 and/or described above. If MtBE is detected above the minimum level in any of the four quarterly samples

taken within a calendar year, the Permittee shall repeat the sampling requirements identified in (ii) through (v) during the following calendar year. Confirmation of monitoring the stormwater system integrity shall be documented in the first annual SWPPP certification and, when required based on MtBE detection, in the SWPPP certification for any subsequent years.

2. Stormwater Pollution Prevention Plan

The Permittee shall develop and implement a Stormwater Pollution Prevention Plan (SWPPP) that documents the selection, design and installation of control measures, including BMPs designed to meet the effluent limitations required in this permit to minimize the discharge of pollutants from the Facility's operations to the receiving water. The SWPPP shall be a written document and consistent with the terms of this Permit.

a. The SWPPP shall be developed and signed consistent with the signatory requirements in Part II.D.2 of this Permit within 90 days after the effective date of this Permit.

b. The SWPPP shall be consistent with the general provisions for SWPPPs included in Part 6 of EPA's MSGP. The SWPPP shall be prepared in accordance with good engineering practices and manufacturer's specifications and must take future conditions into consideration. The SWPPP must identify potential sources of pollution that may reasonably be expected to affect the quality of the stormwater discharges, and document the implementation of non-numeric technology based effluent limitations in Part I.C.1 that will be used to reduce the pollutants and assure compliance with this Permit, including any remedies taken when non-compliance occurs. Specifically, the SWPPP shall contain the elements listed in Parts 6.2.1 through 6.2.5 of the 2021 MSGP and briefly described below:

(1) Stormwater pollution prevention team;
(2) Site description;
(3) Drainage area site map;
(4) Summary of potential pollutant sources;
(5) Description of all stormwater control measures; and
(6) Schedules and procedures pertaining to implementation of stormwater control measures, inspections and assessments, and monitoring.

c. The Permittee shall amend and update the SWPPP within fourteen (14) days of any changes at the Facility affecting the SWPPP. Changes that may affect the SWPPP include, but are not limited to: 1) 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 United States; 2) a release of a reportable quantity of pollutants as described in 40 CFR § 302; 3) a determination by the Permittee or EPA that the SWPPP appears to be ineffective in achieving the general objective of controlling pollutants in stormwater discharges associated with industrial activity; and 4) any revisions or improvements made to the Facility's stormwater management program based on new information and experiences with wet weather events, including major storm events and

extreme flooding conditions. Any amended or updated versions of the SWPPP shall be re-certified by the Permittee. Such re-certifications also shall be signed in accordance with the requirements identified in Part II.D.2 of this Permit.

d. The Permittee shall certify at least annually that the previous year's inspections, corrective actions, control measures, and training activities were conducted, results were recorded, and records were maintained, as described in the SWPPP. Certifications must be submitted by January 15th of the following calendar year. If the Facility is not in compliance with any limitations and/or BMPs described in the SWPPP, the annual certification shall state the non-compliance and the remedies which are being undertaken. Such annual certifications also shall be signed in accordance with the requirements identified in Part II.D.2 of this Permit. The Permittee shall submit a copy of the current SWPPP and all SWPPP certifications (i.e., the initial certification, recertifications, and annual certifications) signed during the effective period of this Permit to EPA for posting on EPA Region 1's Chelsea River Terminals public website. All documentation of SWPPP activities shall be kept at the Facility for at least five years and provided to EPA upon request.

3. Hydrostatic Test Water

Hydrostatic test water shall be monitored as described below and treated through the stormwater treatment system prior to being discharged through Outfall 003 to the Chelsea River, and is subject to the Effluent Limitations in Part I.A.1., above.

a. The flow of hydrostatic test water into the stormwater treatment system shall be controlled to prevent it from exceeding the maximum design flow rate of the system (i.e., 800 gpm at OWS to Outfall 003).

b. The Permittee shall take a minimum of five representative samples of the hydrostatic test water:

(1) For tanks, one in-process sample of the tank water following maintenance or testing, but before draining. The operator shall analyze and review the results of the in-process sample prior to initiating discharge. If the analysis indicates that the tank water does not meet the effluent limitations in this permit, the operator shall not discharge the tank water to the river unless treatment will reduce the pollutant levels below the effluent levels established in this permit;
(2) For pipelines, one in-process sample of the pipeline water following depressurization, but before draining. The operator shall analyze and review the results of the in-process sample prior to initiating discharge. If the analysis indicates that the pipeline water does not meet the effluent limitations in this permit, the operator shall not discharge the pipeline water unless treatment will reduce the pollutant levels below the effluent levels established in this permit; and
(3) Three grab samples of the effluent (at the discharge point for the treatment system), one sample during the first 10% of discharge, one sample at the approximate midpoint of discharge, and one sample during the last 10% of discharge after

treatment. One grab sample of the effluent during the first 10% of discharge is sufficient for discharges from tanks with volumes no greater than 50,000 gallons. If at any time analysis indicates that the hydrostatic test water does not meet the effluent limitations in this permit, corrective action must be taken in accordance with Part I.C.1.b(1), above.

c. The in-process and effluent samples of hydrostatic test water shall be analyzed for the following parameters:

(1) Total Flow;
(2) Flow Rate;
(3) Total Suspended Solids (TSS);
(4) Oil & Grease (O&G);
(5) pH;
(6) Chemical Oxygen Demand (COD);
(7) Dissolved Oxygen (DO);
(8) Total Surfactants;
(9) VOCs (benzene, toluene, ethylbenzene, and total xylenes);
(10) PAHs (Group I and II PAHs listed in Part I.A.1., benzo(a)anthracene through pyrene);
(11) Metals (total recoverable iron, and total recoverable metals listed in Part I.A.1., Whole Effluent Toxicity, cadmium through zinc);
(12) Ethanol, if tank or line has been used to store and/or convey ethanol and/or petroleum products containing ethanol within the previous year; and
(13) Total Residual Chlorine, if potable water or a similar source of water which is likely to contain residual chlorine concentrations is used for hydrostatic testing.

d. The Permittee shall submit a letter/report to EPA and the MassDEP, summarizing the results of the hydrostatic test **within 90 days of completion of the test**. This report shall contain:

(1) The date(s) during which the hydrostatic testing occurred;
(2) The volume of hydrostatic test water discharged;
(3) A copy of the laboratory data sheets for each analysis, providing the test method, the detection limits for each analyte, and a brief discussion of whether all appropriate QA/QC procedures were met and were within acceptable limits; and
(4) A brief discussion of the overall test results and how they relate to the Effluent Limitations in this permit.

e. EPA reserves the right to re-open this permit, in accordance with 40 CFR § 122.62(a)(2), to examine hydrostatic test water discharges in the event that sampling results indicate that the water quality standards for the assigned classification of the Chelsea River might not be attained.

4. Discharges of Chemicals and Additives

The discharge of any chemical or additive, including chemical substitution, which was not reported in the application submitted to EPA or provided through a subsequent written notification submitted to EPA is prohibited. Upon the effective date of this permit, chemicals and/or additives which have been disclosed to EPA may be discharged up to the frequency and level disclosed, provided that such discharge does not violate §§ 307 or 311 of the CWA or applicable State water quality standards. Discharges of a new chemical or additive are authorized under this permit 30 days following written notification to EPA unless otherwise notified by EPA. To request authorization to discharge a new chemical or additive, the Permittee must submit a written notification to EPA in accordance with Part I.D.3 of this permit. The written notification must include the following information, at a minimum:

a. The following information for each chemical and/or additive that will be discharged:

   (1) Product name, chemical formula, general description, and manufacturer of the chemical/additive;
   (2) Purpose or use of the chemical/additive;
   (3) Safety Data Sheet (SDS), Chemical Abstracts Service (CAS) Registry number, and EPA registration number, if applicable, for each chemical/additive;
   (4) The frequency (e.g., daily), magnitude (i.e., maximum application concentration), duration (e.g., hours), and method of application for the chemical/additive;
   (5) The maximum discharge concentration; and
   (6) The vendor's reported aquatic toxicity, if available (i.e., NOAEL and/or LC_{50} in percent for aquatic organism(s)).

b. Written rationale which demonstrates that the discharge of such chemicals and/or additives as proposed will not: 1) add any pollutants in concentrations which exceed any permit effluent limitation; and 2) add any pollutants that would justify the application of permit conditions different from, or in addition to those currently in this permit.

c. Discharges of glutaraldehyde, ethylene glycol, butoxyethanol, alkylacrelate nitrito styrene polymer, coco alkylamine, 1,2,3 and 4-trimethylbenzene, 1,3,5-trimethylbenzene and methyl isobutyl ketone are prohibited.

5. Bioassessment

The Permittee shall design and implement a bioassessment to characterize the extent to which, if any, pollutants discharged from the Facility to the receiving water affect the benthic morphology, substrate, and/or biota. Unless otherwise specified below, data collection activities shall be conducted: 1) quarterly for one year starting 90 days following the effective date of the permit; and 2) quarterly for one year in the fifth year of the permit term. Within 60 days of the effective date of the permit, the Permittee shall submit a plan for conducting the bioassessment to EPA and MassDEP. EPA and MassDEP will provide any comments on the plan within 30 days of receipt of the plan, and comments will be reasonably considered by the Permittee for inclusion into the plan. The bioassessment must comply with applicable local, state and federal regulations, and shall consist of the following elements, at a minimum:

a. Water Column Characterization

(1) One water quality monitoring station shall be established within the vicinity of Outfall 003. The station must be positioned to collect water quality data representative of incoming and outgoing tides.
(2) For each monitoring period, relative water quality data must be collected at the water quality monitoring station during the months of January, April, July and October at approximately:
   i. one foot below the surface;
   ii. mid-depth; and
   iii. one foot above the bottom.
(3) At each collection depth, the following data shall be collected:
   i. depth from the surface (feet);
   ii. water temperature (degrees Fahrenheit);
   iii. pH (Standard Units);
   iv. dissolved oxygen (milligrams per liter);
   v. salinity (parts per thousand);
   vi. turbidity (nephelometric turbidity units);
   vii. nutrients; and
   viii. current velocity (feet per second).
(4) During each quarterly data collection period, all water quality data at all station depths shall be collected over a 48-hour period during the apex of the spring tide and the neap tide.
   i. Continuous recording data sondes shall be used to collect water quality data for all parameters (except where noted otherwise in Part I.C.6) at all depths. The recording frequency shall be at least one reading for all parameters, every 15 minutes over the course of the 48-hour sampling period.
   ii. Current velocity data may be collected manually at the water monitoring station, at the three depths, every three hours (when deemed safe to do so), over the course of the 48-hour sampling period.
(5) The following supporting environmental data, recorded concurrent with continuous water quality data collection, shall be obtained from a near-by official weather station and a near-by official tide gauge:
   i. local air temperature (degrees Fahrenheit), collected at least once per hour, over the 48-hour sampling period;
   ii. local total precipitation (inches) for each 24-hour period, beginning 48 hours before water quality data is collected through the end of the 48-hour sampling period (four days in total);
   iii. the river level in relation to mean low water level when data is collected over the 48-hour sampling period; and
   iv. the tidal stage (flood current, ebb current) when data is collected over the 48-hour sampling period.

b. Substrate Characterization

(1) For each year that data collection is required, substrate characterization shall be conducted once. The Permittee shall collect samples of the substrate as follows:
   i. Along a transect upstream of the outfall from the bank to the approximate edge of the navigation channel and a transect downstream of the outfall from the bank to the approximate edge of the navigation channel. Transects shall be positioned perpendicular to river current.
   ii. At each location, three substrate samples must be collected at evenly spaced intervals between the bank and the edge of the main navigational channel.
   iii. The location, depth, and analysis of each substrate sample shall be recorded. The depth information must be calibrated to the mean low water level.
   iv. The analysis of each substrate sample must include, at a minimum, grain size composition (percent of silt, sand, and clay); total organic carbon (TOC); and benthic infauna.
   v. Secchi disk readings shall be recorded at each location.

c. Benthic Pollutant Analysis

(1) Concurrent with substrate data collection and in the same locations, the Permittee shall collect additional substrate samples to determine contamination present within the benthic habitat. The parameters required for analysis shall include:
   i. Table I.A.1 pollutants;
   ii. Total volatile solids, acid volatile sulfides, sediment oxidation reduction potential; and
   iii. Sediment toxicity test (i.e., 10-day static test).
(2) Analysis shall be performed using the test method for each constituent in accordance with EPA-600-R-97-072.[7]

d. Qualitative Biological Monitoring

(1) The permittee shall conduct a qualitative biological assessment to determine the organisms present in the vicinity of the water quality monitoring station.
(2) The collection effort shall take place, at a minimum, in April, July and October, as specified above, and on a sequential basis during year three.
(3) The biological survey shall be designed to collect:
   i. fish (early life stages, juvenile, and adult);
   ii. benthic macroinvertebrates;
   iii. aquatic macrophytes;
   iv. phytoplankton;
   v. zooplankton;
   vi. epibenthos; and
   vii. paleoenvironmental remains (e.g., diatoms, dinoflagellates, and foraminifera)

7 Methods for the Determination of Chemical Substances in Marine and Estuarine Environmental Matrices - 2nd Edition: EPA-600-R-97-072. Office of Research and Development, U.S. EPA, Washington, D.C. 1997, as specified in 314 CMR 4.03(6)(f).

(4) The organisms shall be identified to species. For larger bodied organisms that are collected, an evaluation of overall condition shall be recorded (e.g., spawning condition, lesions, or deformities).

e. Summary Report

(1) The Permittee shall prepare and submit a report to EPA and MassDEP within 60 days of the first permit year's (four quarters) data collection and the fifth permit year's (four quarters) data collection in accordance with Part I.D.3 of this Permit.
(3) The summary report shall consist of the following, at a minimum:
i. A description of the sampling locations, including a figure depicting the geographic locations, a figure depicting the vertical distribution relative to mean low tide, and a copy of the laboratory data sheets for each analysis.
ii. A brief discussion of the overall bioassessment results and how they relate to the effluent limitations in this permit.
iii. A description of the results of water column characterization, and a table summarizing the sample results.
iv. A description of the substrate characterization results, and a table summarizing the sample results.
v. A description of the benthic pollutant analysis, and a table summarizing the sample results.
vi. A description of the biological assessment results, and a table summarizing the total number of each species of organisms found for each monitoring period, the date they were collected, the depth (if available), and location where they were collected.
vii. A brief discussion of whether any of the requirements of the QA/QC BMP were not met. If any QA/QC requirements impact the usability of data, the Permittee must repeat collection of the unacceptable data.

D. REPORTING REQUIREMENTS

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

1. Submittal of DMRs Using NetDMR

The Permittee shall continue to submit its monthly monitoring data in DMRs to EPA and the State 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 EPA or the State. NetDMR is accessible through EPA's Central Data Exchange at https://cdx.epa.gov/.

2. Submittal of Reports as NetDMR Attachments

Unless otherwise specified in this permit, the Permittee shall electronically submit all reports to EPA as NetDMR attachments rather than as hard copies. *See* Part I.D.5. for more information

on State reporting. Because the due dates for reports described in this permit may not coincide with the due date for submitting DMRs (which is no later than the 15th day of the month), a report submitted electronically as a NetDMR attachment shall be considered timely if it is electronically submitted to EPA using NetDMR with the next DMR due following the particular report due date specified in this permit.

3. Submittal of Requests and Reports to EPA Water Division (WD)

a. The following requests, reports, and information described in this permit shall be submitted to the NPDES Applications Coordinator in EPA WD:

(1) Transfer of Permit notice;
(2) Request for changes in sampling location;
(3) BMP/SWPPP reports and certifications;
(4) Request to discharge new chemicals or additives;
(5) Request for change in WET/PFAS testing requirements;
(6) Bioassessment reports; and
(7) Report on unacceptable dilution water/request for alternative dilution water.

b. These reports, information, and requests shall be submitted to EPA WD electronically at R1NPDESReporting@epa.gov or by hard copy mail to the following address:

U.S. Environmental Protection Agency
Water Division
NPDES Applications Coordinator
5 Post Office Square - Suite 100 (06-03)
Boston, MA 02109-3912

4. Submittal of Reports in Hard Copy Form

a. The following notifications and reports shall be signed and dated originals, submitted in hard copy, with a cover letter describing the submission:

(1) Written notifications required under Part II, Standard Conditions. Beginning December 21, 2025, such notifications must be done electronically using EPA's NPDES Electronic Reporting Tool ("NeT"), or another approved EPA system, which will be accessible through EPA's Central Data Exchange at https://cdx.epa.gov/.

b. This information shall be submitted to EPA Region 1's Enforcement and Compliance Assurance Division at the following address:

U.S. Environmental Protection Agency
Enforcement and Compliance Assurance Division
Water Compliance Section
5 Post Office Square, Suite 100 (04-SMR)
Boston, MA 02109-3912

5. State Reporting

Duplicate signed copies of all WET test reports shall be submitted to the Massachusetts Department of Environmental Protection, Division of Watershed Management, at the following address:

Massachusetts Department of Environmental Protection
Bureau of Water Resources
Division of Watershed Management
8 New Bond Street
Worcester, Massachusetts 01606

6. Verbal Reports and Verbal Notifications

a. Any verbal reports or verbal notifications, if required, in Parts I and/or II of this permit, shall be made to both EPA and to the State. This includes verbal reports and notifications which require reporting within 24 hours (e.g., Part II.B.4.c. (2), Part II.B.5.c. (3), and Part II.D.1.e.).

b. Verbal reports and verbal notifications shall be made to EPA's Enforcement and Compliance Assurance Division at:

617-918-1510

c. Verbal reports and verbal notifications shall be made to MassDEP's Emergency Response at:

888-304-1133

E. REOPENER CLAUSE

1. This permit may be modified or revoked and reissued in accordance with 40 C.F.R. §122.62. The reason for modification or revocation may include, but is not limited to:

a. Material and substantial alterations or additions to the Terminal or activity have occurred.

b. New information is received which was not available at the time of permit issuance and that would have justified the application of different permit conditions at the time of issuance.

c. An applicable effluent standard or limitation is issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the CWA, which:
   (1) Contains different conditions or is otherwise more stringent than any effluent limitation in this permit; or
   (2) Controls any pollutant not limited by this permit.

2. If the permit is modified or reissued, it shall be revised to reflect all currently applicable requirements of the CWA.

F. STATE PERMIT CONDITIONS

EPA has received the state water quality certification issued by the State under § 401(a) of the CWA and 40 CFR § 124.53. EPA incorporates by reference the following state water quality certification requirements into this final permit.

1. Pursuant to 314 CMR 3.11 (2)(a)(6), and in accordance with MassDEP's obligation under 314 CMR 4.05(5)(e) to maintain surface waters free from pollutants in concentrations or combinations that are toxic to humans, aquatic life, or wildlife, within 6 months of the effective date of the 2021 Federal NPDES permit, the permittee shall submit to MassDEP an evaluation of whether the facility uses any products containing any per- and polyfluoroalkyl substances (PFAS) and whether use of those products can be reduced or eliminated. The analysis shall be submitted electronically to massdep.npdes@mass.gov.

2. Pursuant to 314 CMR 3.11 (2)(a)(6), and in accordance with MassDEP's obligation under 314 CMR 4.05(5)(e) to maintain surface waters free from pollutants in concentrations or combinations that are toxic to humans, aquatic life, or wildlife, within 6 months after the permittee has been notified by EPA of a multi-lab validated method for wastewater, or two years from the effective date of the 2021 Federal NPDES permit, whichever is earlier, the permittee shall conduct monitoring of the effluent for PFAS compounds as detailed in the table below. If the permittee has not been notified by EPA of a multi-lab validated method for wastewater by two years from the effective date of the 2021 Federal NPDES permit, the permittee shall conduct monitoring of the effluent for PFAS compounds as detailed in the table below using a method specified by MassDEP. If EPA's multi-lab validated method is not available by 20 months after the effective date of the 2021 Federal NPDES permit, the permittee shall contact MassDEP (massdep.npdes@mass.gov) for guidance on an appropriate analytical method.

Effluent (Outfall 001)

Parameter	Units	Measurement Frequency	Sample Type
Perfluorohexanesulfonic acid (PFHxS)	ng/L	Quarterly[8]	Grab
Perfluoroheptanoic acid (PFHpA)	ng/L	Quarterly	Grab
Perfluorononanoic acid (PFNA)	ng/L	Quarterly	Grab
Perfluorooctanesulfonic acid (PFOS)	ng/L	Quarterly	Grab
Perfluorooctanoic acid (PFOA)	ng/L	Quarterly	Grab
Perfluorodecanoic acid (PFDA)	ng/L	Quarterly	Grab

[8] Quarters are defined as January to March, April to June, July to September, and October to December. Samples shall be taken during the same month each quarter and shall be taken 3 months apart (e.g., an example sampling schedule could be February, May, August, and November).

3. Pursuant to 314 CMR 3.11 (2)(a)(6), and in accordance with MassDEP's obligation under 314 CMR 4.05(5)(e) to maintain surface waters free from pollutants in concentrations or combinations that are toxic to humans, aquatic life, or wildlife, after completing one year of monitoring, if 4 consecutive samples are reported as non-detect for all 6 PFAS compounds, then the permittee may submit a request to MassDEP to discontinue PFAS monitoring. Any such request shall be made in writing and sent to massdep.npdes@mass.gov. The permittee shall continue such monitoring pending written approval from MassDEP to discontinue it.

NPDES PART II STANDARD CONDITIONS
(April 26, 2018)[1]

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[1] Updated July 17, 2018 to fix typographical errors.

A. GENERAL REQUIREMENTS

1. Duty to Comply

The Permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act (CWA or Act) and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

a. The Permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.

b. Penalties for Violations of Permit Conditions: The Director will adjust the civil and administrative penalties listed below in accordance with the Civil Monetary Penalty Inflation Adjustment Rule (83 Fed. Reg. 1190-1194 (January 10, 2018) and the 2015 amendments to the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461 note. See Pub. L.114-74, Section 701 (Nov. 2, 2015)). These requirements help ensure that EPA penalties keep pace with inflation. Under the above-cited 2015 amendments to inflationary adjustment law, EPA must review its statutory civil penalties each year and adjust them as necessary.

(1) Criminal Penalties

(a) *Negligent Violations.* The CWA provides that any person who negligently violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to criminal penalties of not less than $2,500 nor more than $25,000 per day of violation, or imprisonment of not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation or by imprisonment of not more than 2 years, or both.

(b) *Knowing Violations.* The CWA provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a fine of not less than $5,000 nor more than $50,000 per day of violation, or by imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than 6 years, or both.

(c) *Knowing Endangerment.* The CWA provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 303, 306, 307, 308, 318, or 405 of the Act and who knows at that time that he or she is placing another person in imminent danger of death or serious bodily injury shall upon conviction be subject to a fine of not more than $250,000 or by imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing

endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in Section 309(c)(3)(B)(iii) of the Act, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions.

(d) *False Statement.* 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, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both. The Act further 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 non-compliance 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.

(2) *Civil Penalties*. The CWA provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a civil penalty not to exceed the maximum amounts authorized by Section 309(d) of the Act, the 2015 amendments to the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461 note, and 40 C.F.R. Part 19. *See* Pub. L.114-74, Section 701 (Nov. 2, 2015); 83 Fed. Reg. 1190 (January 10, 2018).

(3) *Administrative Penalties*. The CWA provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to an administrative penalty as follows:

(a) *Class I Penalty.* Not to exceed the maximum amounts authorized by Section 309(g)(2)(A) of the Act, the 2015 amendments to the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461 note, and 40 C.F.R. Part 19. *See* Pub. L.114-74, Section 701 (Nov. 2, 2015); 83 Fed. Reg. 1190 (January 10, 2018).

(b) *Class II Penalty.* Not to exceed the maximum amounts authorized by Section 309(g)(2)(B) of the Act the 2015 amendments to the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461 note, and 40 C.F.R. Part 19. *See* Pub. L.114-74, Section 701 (Nov. 2, 2015); 83 Fed. Reg. 1190 (January 10, 2018).

2. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. 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.

3. 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.

4. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the Permittee from responsibilities, liabilities or penalties to which the Permittee is or may be subject under Section 311 of the CWA, or Section 106 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA).

5. Property Rights

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

6. Confidentiality of Information

a. In accordance with 40 C.F.R. Part 2, any information submitted to EPA 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, EPA may make the information available to the public without further notice. If a claim is asserted, the information will be treated in accordance with the procedures in 40 C.F.R. Part 2 (Public Information).

b. Claims of confidentiality for the following information will be denied:

(1) The name and address of any permit applicant or Permittee;
(2) Permit applications, permits, and effluent data.

c. Information required by NPDES application forms provided by the Director under 40 C.F.R. § 122.21 may not be claimed confidential. This includes information submitted on the forms themselves and any attachments used to supply information required by the forms.

7. 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.)

8. State Authorities

Nothing in Parts 122, 123, or 124 precludes more stringent State regulation of any activity

covered by the regulations in 40 C.F.R. Parts 122, 123, and 124, whether or not under an approved State program.

9. Other Laws

The issuance of a permit does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations.

B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. 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. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a Permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

2. 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.

3. Duty to Mitigate

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

4. Bypass

a. Definitions

(1) *Bypass* means the intentional diversion of waste streams from any portion of a treatment facility.

(2) *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. *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 (c) and (d) of this Section.

c. Notice

(1) *Anticipated bypass*. If the Permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass. As of December 21, 2020 all notices submitted in compliance with this Section must be submitted electronically by the Permittee to the Director or initial recipient, as defined in 40 C.F.R. § 127.2(b), in compliance with this Section and 40 C.F.R. Part 3 (including, in all cases, Subpart D to Part 3), § 122.22, and 40 C.F.R. Part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of Part 127, Permittees may be required to report electronically if specified by a particular permit or if required to do so by state law.

(2) *Unanticipated bypass*. The Permittee shall submit notice of an unanticipated bypass as required in paragraph D.1.e. of this part (24-hour notice). As of December 21, 2020 all notices submitted in compliance with this Section must be submitted electronically by the Permittee to the Director or initial recipient, as defined in 40 C.F.R. § 127.2(b), in compliance with this Section and 40 C.F.R. Part 3 (including, in all cases, Subpart D to Part 3), § 122.22, and 40 C.F.R. Part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of Part 127, Permittees may be required to report electronically if specified by a particular permit or required to do so by law.

d. *Prohibition of bypass.*

(1) 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;

(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 back-up 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 preventative maintenance; and

(c) The Permittee submitted notices as required under paragraph 4.c of this Section.

(2) 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 4.d of this Section.

5. Upset

a. *Definition*. *Upset* means an exceptional incident in which there is an 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.

b. *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 B.5.c. 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.

c. *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:

(1) An upset occurred and that the Permittee can identify the cause(s) of the upset;
(2) The permitted facility was at the time being properly operated; and
(3) The Permittee submitted notice of the upset as required in paragraph D.1.e.2.b. (24-hour notice).
(4) The Permittee complied with any remedial measures required under B.3. above.

d. *Burden of proof.* In any enforcement proceeding the Permittee seeking to establish the occurrence of an upset has the burden of proof.

C. MONITORING REQUIREMENTS

1. Monitoring and Records

a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

b. Except for records of monitoring information required by this permit related to the Permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least 5 years (or longer as required by 40 C.F.R. § 503), the Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for 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 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.

c. Records of monitoring information shall include:

(1) The date, exact place, and time of sampling or measurements;
(2) The individual(s) who performed the sampling or measurements;
(3) The date(s) analyses were performed;
(4) The individual(s) who performed the analyses;
(5) The analytical techniques or methods used; and
(6) The results of such analyses.

d. Monitoring must be conducted according to test procedures approved under 40 C.F.R. § 136 unless another method is required under 40 C.F.R. Subchapters N or O.

e. The Clean Water Act 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, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both.

2. Inspection and Entry

The Permittee shall allow the Director, or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon presentation of credentials and other documents as may be required by law, to:

a. 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;

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

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

d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

D. REPORTING REQUIREMENTS

1. Reporting Requirements

a. *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. Notice is required only when:

(1) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 C.F.R. § 122.29(b); or

(2) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements at 40 C.F.R. § 122.42(a)(1).

(3) The alteration or addition results in a significant change in the Permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

b. *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 permit requirements.

c. *Transfers*. This permit is not transferable to any person except after 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 the Clean Water Act. *See* 40 C.F.R. § 122.61; in some cases, modification or revocation and reissuance is mandatory.

d. *Monitoring reports*. Monitoring results shall be reported at the intervals specified elsewhere in this permit.

(1) Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Director for reporting results of monitoring of sludge use or disposal practices. As of December 21, 2016 all reports and forms submitted in compliance with this Section must be submitted electronically by the Permittee to the Director or initial recipient, as defined in 40 C.F.R. § 127.2(b), in compliance with this Section and 40 C.F.R. Part 3 (including, in all cases, Subpart D to Part 3), § 122.22, and 40 C.F.R. Part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of Part 127, Permittees may be required to report electronically if specified by a particular permit or if required to do so by State law.

(2) If the Permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 C.F.R. § 136, or another method required for an industry-specific waste stream under 40 C.F.R. Subchapters N or O, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Director.

(3) Calculations for all limitations which require averaging or measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.

e. *Twenty-four hour reporting.*

(1) The Permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Permittee becomes aware of the circumstances. A written report shall also be provided within 5 days of the time the Permittee becomes aware of the circumstances. The written report 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. For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports must include the data described above (with the exception of time of discovery) as well as the type of event (combined sewer overflows, sanitary sewer overflows, or bypass events), type of sewer overflow structure (e.g., manhole, combined sewer overflow outfall), discharge volumes untreated by the treatment works treating domestic sewage, types of human health and environmental impacts of the sewer overflow event, and whether the noncompliance was related to wet weather. As of December 21, 2020 all

reports related to combined sewer overflows, sanitary sewer overflows, or bypass events submitted in compliance with this section must be submitted electronically by the Permittee to the Director or initial recipient, as defined in 40 C.F.R. § 127.2(b), in compliance with this Section and 40 C.F.R. Part 3 (including, in all cases Subpart D to Part 3), § 122.22, and 40 C.F.R. Part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of Part 127, Permittees may be required to electronically submit reports related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section by a particular permit or if required to do so by state law. The Director may also require Permittees to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section.

(2) The following shall be included as information which must be reported within 24 hours under this paragraph.

(a) Any unanticipated bypass which exceeds any effluent limitation in the permit. *See* 40 C.F.R. § 122.41(g).
(b) Any upset which exceeds any effluent limitation in the permit.
(c) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in the permit to be reported within 24 hours. *See* 40 C.F.R. § 122.44(g).

(3) The Director may waive the written report on a case-by-case basis for reports under paragraph D.1.e. of this Section if the oral report has been received within 24 hours.

f. *Compliance Schedules.* Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

g. *Other noncompliance.* The Permittee shall report all instances of noncompliance not reported under paragraphs D.1.d., D.1.e., and D.1.f. of this Section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph D.1.e. of this Section. For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports shall contain the information described in paragraph D.1.e. and the applicable required data in Appendix A to 40 C.F.R. Part 127. As of December 21, 2020 all reports related to combined sewer overflows, sanitary sewer overflows, or bypass events submitted in compliance with this section must be submitted electronically by the Permittee to the Director or initial recipient, as defined in 40 C.F.R. § 127.2(b), in compliance with this Section and 40 C.F.R. Part 3 (including, in all cases, Subpart D to Part 3), §122.22, and 40 C.F.R. Part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of Part 127, Permittees may be required to electronically submit reports related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section by a particular permit or if required to do so by state law. The Director may also require Permittees to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this Section.

h. *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, it shall promptly submit such facts or information.

i. *Identification of the initial recipient for NPDES electronic reporting data*. The owner, operator, or the duly authorized representative of an NPDES-regulated entity is required to electronically submit the required NPDES information (as specified in Appendix A to 40 C.F.R. Part 127) to the appropriate initial recipient, as determined by EPA, and as defined in 40 C.F.R. § 127.2(b). EPA will identify and publish the list of initial recipients on its Web site and in the FEDERAL REGISTER, by state and by NPDES data group (see 40 C.F.R. § 127.2(c) of this Chapter). EPA will update and maintain this listing.

2. Signatory Requirement

a. All applications, reports, or information submitted to the Director shall be signed and certified. *See* 40 C.F.R. §122.22.

b. The CWA 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 non-compliance 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.

3. Availability of Reports.

Except for data determined to be confidential under paragraph A.6. above, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the State water pollution control agency and the Director. As required by the CWA, effluent data shall not be considered confidential. Knowingly making any false statements on any such report may result in the imposition of criminal penalties as provided for in Section 309 of the CWA.

E. DEFINITIONS AND ABBREVIATIONS

1. General Definitions

For more definitions related to sludge use and disposal requirements, see EPA Region 1's NPDES Permit Sludge Compliance Guidance document (4 November 1999, modified to add regulatory definitions, April 2018).

Administrator means the Administrator of the United States Environmental Protection Agency, or an authorized representative.

Applicable standards and limitations means all, State, interstate, and federal standards and limitations to which a "discharge," a "sewage sludge use or disposal practice," or a related activity is subject under the CWA, including "effluent limitations," water quality standards, standards of performance, toxic effluent standards or prohibitions, "best management practices," pretreatment standards, and "standards for sewage sludge use or disposal" under Sections 301, 302, 303, 304, 306, 307, 308, 403 and 405 of the CWA.

Application means the EPA standard national forms for applying for a permit, including any additions, revisions, or modifications to the forms; or forms approved by EPA for use in

"approved States," including any approved modifications or revisions.

Approved program or *approved State* means a State or interstate program which has been approved or authorized by EPA under Part 123.

Average monthly discharge limitation means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month.

Average weekly discharge limitation means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week.

Best Management Practices ("BMPs") means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of "waters of the United States." BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Bypass see B.4.a.1 above.

C-NOEC or *"Chronic (Long-term Exposure Test) – No Observed Effect Concentration" means* the highest tested concentration of an effluent or a toxicant at which no adverse effects are observed on the aquatic test organisms at a specified time of observation.

Class I sludge management facility is any publicly owned treatment works (POTW), as defined in 40 C.F.R. § 501.2, required to have an approved pretreatment program under 40 C.F.R. § 403.8 (a) (including any POTW located in a State that has elected to assume local program responsibilities pursuant to 40 C.F.R. § 403.10 (e)) and any treatment works treating domestic sewage, as defined in 40 C.F.R. § 122.2, classified as a Class I sludge management facility by the EPA Regional Administrator, or, in the case of approved State programs, the Regional Administrator in conjunction with the State Director, because of the potential for its sewage sludge use or disposal practice to affect public health and the environment adversely.

Contiguous zone means the entire zone established by the United States under Article 24 of the Convention on the Territorial Sea and the Contiguous Zone.

Continuous discharge means a "discharge" which occurs without interruption throughout the operating hours of the facility, except for infrequent shutdowns for maintenance, process changes, or similar activities.

CWA means the Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Public Law 92-500, as amended by Public Law 95-217, Public Law 95-576, Public Law 96-483and Public Law 97-117, 33 U.S.C. 1251 *et seq*.

CWA and regulations means the Clean Water Act (CWA) and applicable regulations promulgated thereunder. In the case of an approved State program, it includes State program requirements.

Daily Discharge means the "discharge of a pollutant" measured during a calendar day or any

other 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurements, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

Direct Discharge means the "discharge of a pollutant."

Director means the Regional Administrator or an authorized representative. In the case of a permit also issued under Massachusetts' authority, it also refers to the Director of the Division of Watershed Management, Department of Environmental Protection, Commonwealth of Massachusetts.

Discharge

(a) When used without qualification, *discharge* means the "discharge of a pollutant."

(b) As used in the definitions for "interference" and "pass through," *discharge* means the introduction of pollutants into a POTW from any non-domestic source regulated under Section 307(b), (c) or (d) of the Act.

Discharge Monitoring Report ("DMR") means the EPA uniform national form, including any subsequent additions, revisions, or modifications for the reporting of self-monitoring results by Permittees. DMRs must be used by "approved States" as well as by EPA. EPA will supply DMRs to any approved State upon request. The EPA national forms may be modified to substitute the State Agency name, address, logo, and other similar information, as appropriate, in place of EPA's.

Discharge of a pollutant means:

(a) Any addition of any "pollutant" or combination of pollutants to "waters of the United States" from any "point source," or

(b) Any addition of any pollutant or combination of pollutants to the waters of the "contiguous zone" or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation.

This definition includes additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. This term does not include an addition of pollutants by any "indirect discharger."

Effluent limitation means any restriction imposed by the Director on quantities, discharge rates, and concentrations of "pollutants" which are "discharged" from "point sources" into "waters of the United States," the waters of the "contiguous zone," or the ocean.

Effluent limitation guidelines means a regulation published by the Administrator under section 304(b) of CWA to adopt or revise "effluent limitations."

Environmental Protection Agency ("EPA") means the United States Environmental Protection

Agency.

Grab Sample means an individual sample collected in a period of less than 15 minutes.

Hazardous substance means any substance designated under 40 C.F.R. Part 116 pursuant to Section 311 of CWA.

Incineration is the combustion of organic matter and inorganic matter in sewage sludge by high temperatures in an enclosed device.

Indirect discharger means a nondomestic discharger introducing "pollutants" to a "publicly owned treatment works."

Interference means a discharge (see definition above) which, alone or in conjunction with a discharge or discharges from other sources, both:

(a) Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and

(b) Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resources Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to Subtitle D of the SDWA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

Landfill means an area of land or an excavation in which wastes are placed for permanent disposal, and that is not a land application unit, surface impoundment, injection well, or waste pile.

Land application is the spraying or spreading of sewage sludge onto the land surface; the injection of sewage sludge below the land surface; or the incorporation of sewage sludge into the soil so that the sewage sludge can either condition the soil or fertilize crops or vegetation grown in the soil.

Land application unit means an area where wastes are applied onto or incorporated into the soil surface (excluding manure spreading operations) for agricultural purposes or for treatment and disposal.

LC_{50} means the concentration of a sample that causes mortality of 50% of the test population at a specific time of observation. The LC_{50} = 100% is defined as a sample of undiluted effluent.

Maximum daily discharge limitation means the highest allowable "daily discharge."

Municipal solid waste landfill (MSWLF) unit means a discrete area of land or an excavation that receives household waste, and that is not a land application unit, surface impoundment, injection well, or waste pile, as those terms are defined under 40 C.F.R. § 257.2. A MSWLF unit also may receive other types of RCRA Subtitle D wastes, such as commercial solid waste, nonhazardous sludge, very small quantity generator waste and industrial solid waste. Such a landfill may be

publicly or privately owned. A MSWLF unit may be a new MSWLF unit, an existing MSWLF unit or a lateral expansion. A construction and demolition landfill that receives residential lead-based paint waste and does not receive any other household waste is not a MSWLF unit.

Municipality

(a) When used without qualification *municipality* means a city, town, borough, county, parish, district, association, or other public body created by or under State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under Section 208 of CWA.

(b) As related to sludge use and disposal, *municipality* means a city, town, borough, county, parish, district, association, or other public body (including an intermunicipal Agency of two or more of the foregoing entities) created by or under State law; an Indian tribe or an authorized Indian tribal organization having jurisdiction over sewage sludge management; or a designated and approved management Agency under Section 208 of the CWA, as amended. The definition includes a special district created under State law, such as a water district, sewer district, sanitary district, utility district, drainage district, or similar entity, or an integrated waste management facility as defined in Section 201 (e) of the CWA, as amended, that has as one of its principal responsibilities the treatment, transport, use or disposal of sewage sludge.

National Pollutant Discharge Elimination System means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 402, 318, and 405 of the CWA. The term includes an "approved program."

New Discharger means any building, structure, facility, or installation:

(a) From which there is or may be a "discharge of pollutants;"

(b) That did not commence the "discharge of pollutants" at a particular "site" prior to August 13, 1979;

(c) Which is not a "new source;" and

(d) Which has never received a finally effective NPDES permit for discharges at that "site."

This definition includes an "indirect discharger" which commences discharging into "waters of the United States" after August 13, 1979. It also includes any existing mobile point source (other than an offshore or coastal oil and gas exploratory drilling rig or a coastal oil and gas exploratory drilling rig or a coastal oil and gas exploratory drilling rig or a coastal oil and gas developmental drilling rig) such as a seafood processing rig, seafood processing vessel, or aggregate plant, that begins discharging at a "site" for which it does not have a permit; and any offshore or coastal mobile oil and gas exploratory drilling rig or coastal mobile oil and gas developmental drilling rig that commences the discharge of pollutants after August 13, 1979, at a "site" under EPA's permitting jurisdiction for which it is not covered by an individual or general permit and which is located in an area determined by the Director in the issuance of a final permit to be in an area of biological concern. In determining whether an area is an area of biological concern, the Director shall consider the factors specified in 40 C.F.R. §§ 125.122 (a) (1) through (10).

An offshore or coastal mobile exploratory drilling rig or coastal mobile developmental drilling rig will be considered a "new discharger" only for the duration of its discharge in an area of biological concern.

New source means any building, structure, facility, or installation from which there is or may be a "discharge of pollutants," the construction of which commenced:

(a) After promulgation of standards of performance under Section 306 of CWA which are applicable to such source, or

(b) After proposal of standards of performance in accordance with Section 306 of CWA which are applicable to such source, but only if the standards are promulgated in accordance with Section 306 within 120 days of their proposal.

NPDES means "National Pollutant Discharge Elimination System."

Owner or operator means the owner or operator of any "facility or activity" subject to regulation under the NPDES programs.

Pass through means a Discharge (see definition above) which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).

Pathogenic organisms are disease-causing organisms. These include, but are not limited to, certain bacteria, protozoa, viruses, and viable helminth ova.

Permit means an authorization, license, or equivalent control document issued by EPA or an "approved State" to implement the requirements of Parts 122, 123, and 124. "Permit" includes an NPDES "general permit" (40 C.F.R § 122.28). "Permit" does not include any permit which has not yet been the subject of final agency action, such as a "draft permit" or "proposed permit."

Person means an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof.

Person who prepares sewage sludge is either the person who generates sewage sludge during the treatment of domestic sewage in a treatment works or the person who derives a material from sewage sludge.

pH means the logarithm of the reciprocal of the hydrogen ion concentration measured at 25° Centigrade or measured at another temperature and then converted to an equivalent value at 25° Centigrade.

Point Source means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff (see 40 C.F.R. § 122.3).

Pollutant means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials

(except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 *et seq*.)), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water. It does not mean:

(a) Sewage from vessels; or

(b) Water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil and gas production and disposed of in a well, if the well is used either to facilitate production or for disposal purposes is approved by the authority of the State in which the well is located, and if the State determines that the injection or disposal will not result in the degradation of ground or surface water resources.

Primary industry category means any industry category listed in the NRDC settlement agreement (*Natural Resources Defense Council et al. v. Train*, 8 E.R.C. 2120 (D.D.C. 1976), *modified* 12 E.R.C. 1833 (D.D.C. 1979)); also listed in Appendix A of 40 C.F.R. Part 122.

Privately owned treatment works means any device or system which is (a) used to treat wastes from any facility whose operator is not the operator of the treatment works and (b) not a "POTW."

Process wastewater means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

Publicly owned treatment works (POTW) means a treatment works as defined by Section 212 of the Act, which is owned by a State or municipality (as defined by Section 504(4) of the Act). This definition includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW Treatment Plant. The term also means the municipality as defined in Section 502(4) of the Act, which has jurisdiction over the indirect discharges to and the discharges from such a treatment works.

Regional Administrator means the Regional Administrator, EPA, Region I, Boston, Massachusetts.

Secondary industry category means any industry which is not a "primary industry category."

Septage means the liquid and solid material pumped from a septic tank, cesspool, or similar domestic sewage treatment system, or a holding tank when the system is cleaned or maintained.

Sewage Sludge means any solid, semi-solid, or liquid residue removed during the treatment of municipal waste water or domestic sewage. Sewage sludge includes, but is not limited to, solids removed during primary, secondary, or advanced waste water treatment, scum, septage, portable toilet pumpings, type III marine sanitation device pumpings (33 C.F.R. Part 159), and sewage sludge products. Sewage sludge does not include grit or screenings, or ash generated during the incineration of sewage sludge.

Sewage sludge incinerator is an enclosed device in which only sewage sludge and auxiliary fuel are fired.

Sewage sludge unit is land on which only sewage sludge is placed for final disposal. This does

not include land on which sewage sludge is either stored or treated. Land does not include waters of the United States, as defined in 40 C.F.R. § 122.2.

Sewage sludge use or disposal practice means the collection, storage, treatment, transportation, processing, monitoring, use, or disposal of sewage sludge.

Significant materials includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substance designated under Section 101(14) of CERCLA; any chemical the facility is required to report pursuant to Section 313 of title III of SARA; fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with storm water discharges.

Significant spills includes, but is not limited to, releases of oil or hazardous substances in excess of reportable quantities under Section 311 of the CWA (see 40 C.F.R. §§ 110.10 and 117.21) or Section 102 of CERCLA (*see* 40 C.F.R. § 302.4).

Sludge-only facility means any "treatment works treating domestic sewage" whose methods of sewage sludge use or disposal are subject to regulations promulgated pursuant to section 405(d) of the CWA, and is required to obtain a permit under 40 C.F.R. § 122.1(b)(2).

State means any of the 50 States, the District of Columbia, Guam, the Commonwealth of Puerto Rico, the Virgin Islands, American Samoa, the Commonwealth of the Northern Mariana Islands, the Trust Territory of the Pacific Islands, or an Indian Tribe as defined in the regulations which meets the requirements of 40 C.F.R. § 123.31.

Store or storage of sewage sludge is the placement of sewage sludge on land on which the sewage sludge remains for two years or less. This does not include the placement of sewage sludge on land for treatment.

Storm water means storm water runoff, snow melt runoff, and surface runoff and drainage.

Storm water discharge associated with industrial activity means the discharge from any conveyance that is used for collecting and conveying storm water and that is directly related to manufacturing, processing, or raw materials storage areas at an industrial plant.

Surface disposal site is an area of land that contains one or more active sewage sludge units.

Toxic pollutant means any pollutant listed as toxic under Section 307(a)(1) or, in the case of "sludge use or disposal practices," any pollutant identified in regulations implementing Section 405(d) of the CWA.

Treatment works treating domestic sewage means a POTW or any other sewage sludge or waste water treatment devices or systems, regardless of ownership (including federal facilities), used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated for the disposal of sewage sludge. This definition does not include septic tanks or similar devices.

For purposes of this definition, "domestic sewage" includes waste and waste water from humans or household operations that are discharged to or otherwise enter a treatment works. In States where there is no approved State sludge management program under Section 405(f) of the CWA, the Director may designate any person subject to the standards for sewage sludge use and

disposal in 40 C.F.R. Part 503 as a "treatment works treating domestic sewage," where he or she finds that there is a potential for adverse effects on public health and the environment from poor sludge quality or poor sludge handling, use or disposal practices, or where he or she finds that such designation is necessary to ensure that such person is in compliance with 40 C.F.R. Part 503.

Upset see B.5.a. above.

Vector attraction is the characteristic of sewage sludge that attracts rodents, flies, mosquitoes, or other organisms capable of transporting infectious agents.

Waste pile or *pile* means any non-containerized accumulation of solid, non-flowing waste that is used for treatment or storage.

Waters of the United States or waters of the U.S. means:

(a) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

(b) All interstate waters, including interstate "wetlands;"

(c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands", sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:

    (1) Which are or could be used by interstate or foreign travelers for recreational or other purpose;

    (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or

    (3) Which are used or could be used for industrial purposes by industries in interstate commerce;

(d) All impoundments of waters otherwise defined as waters of the United States under this definition;

(e) Tributaries of waters identified in paragraphs (a) through (d) of this definition;

(f) The territorial sea; and

(g) "Wetlands" adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 C.F.R. § 423.11(m) which also meet the criteria of this definition) are not waters of the United States. This exclusion applies only to manmade bodies of water which neither were originally created in waters of the United States (such as disposal area in wetlands) nor resulted from the impoundment of waters of the United States. Waters of the United States do not include prior converted cropland.

Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA.

Wetlands means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Whole Effluent Toxicity (WET) means the aggregate toxic effect of an effluent measured directly by a toxicity test.

*Zone of Initial Dilution (*ZID) means the region of initial mixing surrounding or adjacent to the end of the outfall pipe or diffuser ports, provided that the ZID may not be larger than allowed by mixing zone restrictions in applicable water quality standards.

2. Commonly Used Abbreviations

BOD	Five-day biochemical oxygen demand unless otherwise specified
CBOD	Carbonaceous BOD
CFS	Cubic feet per second
COD	Chemical oxygen demand
Chlorine	
Cl_2	Total residual chlorine
TRC	Total residual chlorine which is a combination of free available chlorine (FAC, see below) and combined chlorine (chloramines, etc.)
TRO	Total residual chlorine in marine waters where halogen compounds are present
FAC	Free available chlorine (aqueous molecular chlorine, hypochlorous acid, and hypochlorite ion)
Coliform	
Coliform, Fecal	Total fecal coliform bacteria
Coliform, Total	Total coliform bacteria
Cont.	Continuous recording of the parameter being monitored, i.e. flow, temperature, pH, etc.
Cu. M/day or M^3/day	Cubic meters per day
DO	Dissolved oxygen

kg/day	Kilograms per day
lbs/day	Pounds per day
mg/L	Milligram(s) per liter
mL/L	Milliliters per liter
MGD	Million gallons per day
Nitrogen	
Total N	Total nitrogen
NH3-N	Ammonia nitrogen as nitrogen
NO3-N	Nitrate as nitrogen
NO2-N	Nitrite as nitrogen
NO3-NO2	Combined nitrate and nitrite nitrogen as nitrogen
TKN	Total Kjeldahl nitrogen as nitrogen
Oil & Grease	Freon extractable material
PCB	Polychlorinated biphenyl
Surfactant	Surface-active agent
Temp. °C	Temperature in degrees Centigrade
Temp. °F	Temperature in degrees Fahrenheit
TOC	Total organic carbon
Total P	Total phosphorus
TSS or NFR	Total suspended solids or total nonfilterable residue
Turb. or Turbidity	Turbidity measured by the Nephelometric Method (NTU)
µg/L	Microgram(s) per liter
WET	"Whole effluent toxicity"
ZID	Zone of Initial Dilution

Appendix B - SWPPP Annual Certifications

Appendix C – Spill History

The Terminal's is required to list significant spills (i.e., reportable quantities) that occurred at the Terminal within the three years prior to the date this Plan was prepared or amended (October 2022).

Date of Spill	**Product Spilled**	**Amount Spilled**	**Amount in Navigable Waters**	**Capacity of Tank or Impoundment**
2/4/2022	Gasoline Additive	950 gallons	0	10,026 (Tank)
Specific Location/Source of Spill and Cause		**How was Spill Detected**	**Clean-up Actions Taken**	
Loading Rack Additive Tank Area, Tank 122 valve leak, Containment drainage valve previously broken off during snow plowing, gasoline additive flowed out of containment to Terminal's drainage system. NRC #1328056 MassDEP RTN #3-0037124		Gulf Employee in the course of normal work activities	Gulf Employees & Moran Enviro. Absorbents used. Concrete Containment, Rack Trench Drains and Separators were cleaned, Appx 16,579 gallons of water/additive mix removed via vac truck + absorbents	
Steps Taken to Reduce Possibility of Recurrence		**Enforcement Actions**		
Tank valve and containment drainage valve repaired.		MassDEP issued a Consent Order (Enforcement # 00013124) for failure to properly notify the DEP of a release to the environment and for conducting immediate response actions without the approval of the DEP.		
Effectiveness & Size of Containment		**Effectiveness of Monitoring Equipment**		
Secondary containment (20,618 gallons) was breached. Spill contained in Terminal's drainage system.		N/A		

Appendix D – Spill Notification Form

SPILL RESPONSE NOTIFICATION FORM

It is NOT necessary to compile all information requested in the notification form before making the notifications.

Reporter's Last Name _ _____ First_ _____ M.I._ _____

Phone Numbers (Work) _**617-884-5980** ext. ___

Company/Owner **Gulf Oil Chelsea Terminal/Gulf Oil L.P.**

Organization Type **Private** Facility ID # _____

Position _ _____

Home Address ____N/A_____

City __ _____ State _ _____ Zip __

Were Materials Released _ _ (Y/N)? Confidential (Proprietary Product) __ __ (Y/N)?

Meeting Federal Obligations to Report __ _____(Y/N)? Date Called _ _____

Calling for Responsible Party __ _____(Y/N)? Time Called ___ _____

Incident Address/Location **_281 Eastern Avenue, Chelsea, MA 02150_____**

INCIDENT DESCRIPTION

Source and/or Cause of Incident

_ _____

_____

Date _ _____ Time of Incident _ _____ AM/PM

Nearest City **Chelsea** State **MA** County **Suffolk** Zip **02150**_

Distance From City **N/A** Units **Miles** Direction from City **N/A**

Section **N/A**_____ Township **N/A**_____ Range **N/A**_

Container Type _ _____ Tank Capacity (gallons)_ _____

Facility Capacity (gallons) __**52,973,310**_____

Facility Latitude **42 Degrees North 23 Minutes 34 Seconds**

Facility Longitude **71 Degrees West 01 Minutes 05 Seconds**

MATERIAL

Product Released	Quantity Released	Unit of Measure	Quantity on Land	Quantity in Water	CHRIS Code
_____	_____	____	_____	____	___

RESPONSE ACTION

Actions Taken to Correct, Control or Mitigate Incident

_____

_____

_____

IMPACT

Number of Injuries: _ _____ Number of Deaths _ _____

Were there Evacuations: _ ____ (Y/N) Number Evacuated _ _____

Was there any Damage: __ ___ (Y/N) Damage in Dollars (approximate) _ _____

Medium Affected __ _____

Description _ _____

More information about Medium __ _____

ADDITIONAL INFORMATION

Any information about the incident not recorded elsewhere in the report?

_ _____

_____

CALLER NOTIFICATIONS*

Call Chelsea Fire Department (911) immediately for all reportable spills then call the spill response contractors if the spill requires their response.

Time Called	Individual/Agency/ Organization Called	Telephone Number	Contact Name	Comments (i.e. Incident Number Given, Different Contact Name, etc.)
	911 Local FD, PD, Amb	**911**		
	Terminal Manager (QI)	**207-432-2583 (c)**	**Andrew Adams**	If not available call: AQI- 413-992-8626
	Boston Line (Boom)	**617-951-9957**		
	Moran Environmental	**888-233-5338**		
	Gulf NE Regional Manager	**207-799-5561 (o) 207-704-0192 (h) 857-636-2659 (c)**	**Terry Sullivan**	If not available call: Steve Carten 717-443-0129 (c)
	National Response Center	**800-424-8802**		
	MADEP Spill Hotline	**888-304-1133**		
	USCG Sector Boston	**617-223-5757**		
	US EPA Region I/FOSC	**888-372-7341**		24 Hour Voice Mailbox
		617-918-1111		Outside New England
	Gulf Environmental	**508-782-0127**	**Chris Gill**	
Call the agencies or entities below only if necessary or at the direction of the Terminal Manager				
	MA Department of Fire Services (Fire Marshal)	978-567-3100		
	MA State Police Troop "H" Headquarters, South Boston	617-740-7710		
	Mystic Region Emergency Response Commission (LEPC)	781-979-4111		
	MA Emergency Management Agency (MEMA - SERC)	508-820-2000		
	MA Water Resources Authority	617-305-5940 (sewer) 617-305-5950 (water)		
	NOAA–Weather (Taunton, MA)	508-822-0634		
	WBZ News Radio 1030 AM	617-787-7000		
	WBZ Television, Channel 4	617-783-4444		
	Mass General Hospital	617-726-2000		

Date:__ _____ **This Form Completed By:**___ _____

*** <u>Additional notifications may be required.</u>** Use the Spill Response Call Log below to record additional notifications and calls related to the incident.

Spill Response Call Log

NRC Spill #: _____

Date/ Time Incoming/Outgoing	Gulf Employee/ Response Section	Contact	Representing	Phone Number	Subject

Appendix E – Stormwater System Integrity Testing Records

Appendix F – Routine Inspection Checklist, Quarterly Visual Assessment Form and Annual Reporting Form

Stormwater Industrial Routine Facility Inspection Report

General Information			
Facility Name	Gulf Oil L.P. Chelsea Terminal		
NPDES Tracking No.	MA-0001091		
Date of Inspection		**Start/End Time**	
Inspector's Name(s)			
Inspector's Title(s)	Terminal Manager		
Inspector's Contact Information			
Inspector's Qualifications			

Weather Information

Weather at time of this inspection?
❑ Clear ❑Cloudy ❑ Rain ❑ Sleet ❑ Fog ❑ Snow ❑ High Winds
❑ Other: Temperature:

Have any previously unidentified discharges of pollutants occurred since the last inspection? ❑Yes ❑No
If yes, describe:

Are there any discharges occurring at the time of inspection? ❑Yes ❑No
If yes, describe:

Control Measures

- *Number the structural stormwater control measures identified in your SWPPP on your site map and list them below (add as many control measures as are implemented on-site). Carry a copy of the numbered site map with you during your inspections. This list will ensure that you are inspecting all required control measures at your facility.*
- *Describe corrective actions initiated, date completed, and note the person that completed the work in the Corrective Action Log.*

	Structural Control Measure	**Control Measure is Operating Effectively?**	**If No, In Need of Maintenance, Repair, or Replacement?**	**Corrective Action Needed and Notes** (identify needed maintenance and repairs, or any failed control measures that need replacement)
1		❑Yes ❑No	❑ Maintenance ❑ Repair ❑ Replacement	
2		❑Yes ❑No	❑ Maintenance ❑ Repair ❑ Replacement	
3		❑Yes ❑No	❑ Maintenance ❑ Repair ❑ Replacement	
4		❑Yes ❑No	❑ Maintenance ❑ Repair ❑ Replacement	
5		❑Yes ❑No	❑ Maintenance ❑ Repair ❑ Replacement	
6		❑Yes ❑No	❑ Maintenance ❑ Repair ❑ Replacement	
7		❑Yes ❑No	❑ Maintenance ❑ Repair ❑ Replacement	
8		❑Yes ❑No	❑ Maintenance ❑ Repair ❑ Replacement	

	Structural Control Measure	Control Measure is Operating Effectively?	If No, In Need of Maintenance, Repair, or Replacement?	Corrective Action Needed and Notes (identify needed maintenance and repairs, or any failed control measures that need replacement)
9		❑Yes ❑No	❑ Maintenance ❑ Repair ❑ Replacement	
10		❑Yes ❑No	❑ Maintenance ❑ Repair ❑ Replacement	

Areas of Industrial Materials or Activities exposed to stormwater

Below are some general areas that should be assessed during routine inspections. Customize this list as needed for the specific types of industrial materials or activities at your facility.

	Area/Activity	Inspected?	Controls Adequate (appropriate, effective, and operating)?	Corrective Action Needed and Notes
1	**Material loading/unloading and storage areas**	❑Yes ❑No ❑ N/A	❑Yes ❑No	
2	**Equipment operations and maintenance areas**	❑Yes ❑No ❑ N/A	❑Yes ❑No	
3	**Fueling areas**	❑Yes ❑No ❑ N/A	❑Yes ❑No	
4	**Outdoor vehicle and equipment washing areas**	❑Yes ❑No ❑ N/A	❑Yes ❑No	
5	**Waste handling and disposal areas**	❑Yes ❑No ❑ N/A	❑Yes ❑No	
6	**Erodible areas/construction**	❑Yes ❑No ❑ N/A	❑Yes ❑No	
7	**Non-stormwater/ illicit connections**	❑Yes ❑No ❑ N/A	❑Yes ❑No	
8	**Salt storage piles or pile containing salt**	❑Yes ❑No ❑ N/A	❑Yes ❑No	
9	**Dust generation and vehicle tracking**	❑Yes ❑No ❑ N/A	❑Yes ❑No	
10	**(Other)**	❑Yes ❑No ❑ N/A	❑Yes ❑No	
11	**(Other)**	❑Yes ❑No ❑ N/A	❑Yes ❑No	
12	**(Other)**	❑Yes ❑No ❑ N/A	❑Yes ❑No	

Non-Compliance

Describe any incidents of non-compliance observed and not described above:

Additional Control Measures

Describe any additional control measures needed to comply with the permit requirements:

Notes

Use this space for any additional notes or observations from the inspection:

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Print name and title: _____

Signature: _____ **Date:** _____

MSGP Quarterly Visual Assessment Form

(Complete a separate form for each outfall you assess)

Name of Facility: L.P. Gulf Oil L.P. Chelsea Terminal NPDES Tracking No. MA-0001091

Outfall Name: 003 "Substantially Identical Outfall"? Yes ☐ No ☒

Person(s)/Title(s) collecting sample:

Person(s)/Title(s) examining sample:

Date & Time Discharge Began: _____/_____/_____

Date & Time Sample Collected: _____/_____/_____

Date & Time Sample Examined: _____/_____/_____

Substitute Sample? ☐ No ☐ Yes (identify quarter/year when sample was originally scheduled to be collected):_____

Nature of Discharge: ☐ Rainfall ☐ Snowmelt

If rainfall: Rainfall Amount: inches

Previous Storm Ended > 72 hours Before Start of This Storm? ☐ Yes ☐ No* (explain):

Parameter

Color ☐ None ☐ Other (describe):_____

Odor ☐ None ☐ Musty ☐ Sewage ☐ Sulfur ☐ Sour ☐ Petroleum/Gas ☐ Solvents ☐ Other (describe):_____

Clarity ☐ Clear ☐ Slightly Cloudy ☐ Cloudy ☐ Opaque ☐ Other

Floating Solids ☐ No ☐ Yes (describe):_____

Settled Solids** ☐ No ☐ Yes (describe):_____

Suspended Solids ☐ No ☐ Yes (describe):_____

Foam (gently shake sample) ☐ No ☐ Yes (describe):_____

Oil Sheen ☐ None ☐ Flecks ☐ Globs ☐ Sheen ☐ Slick ☐ Other (describe):_____

Other Obvious Indicators of Storm Water Pollution ☐ No ☐ Yes (describe):_____

* The 72-hour interval can be waived when the previous storm did not yield a measurable discharge or if you are able to document (attach applicable documentation) that less than a 72-hour interval is representative of local storm events during the sampling period.

** Observe for settled solids after allowing the sample to sit for approximately one-half hour.

Detail any concerns, additional comments, descriptions of pictures taken, and any corrective actions taken below (attach additional sheets as necessary).

Certification by Facility Responsible Official (Refer to MSGP Subpart 11 Appendix B for Signatory Requirements)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. Name: B. Title:

C. Signature: D. Date Signed:

NPDES Permit Tracking No.:
MA0001091

EPA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

Annual Reporting Form

A. GENERAL INFORMATION

1. Facility Name: Gulf Oil L.P. Chelsea Terminal

2. NPDES Permit Tracking No.: MA0001091

3. Facility Physical Address:

a. Street: 281 Eastern Ave

b. City: Chelsea c. State: MA d. Zip Code: 02150 -

4. Lead Inspectors Name: Title: Terminal Manager

Additional Inspectors Name(s):

5. Contact Person: Title:

Phone: 617 - 884 - 5980 Ext. E-mail:

6. Inspection Date: / /

B. GENERAL INSPECTION FINDINGS

1. As part of this comprehensive site inspection, did you inspect all potential pollutant sources, including areas where industrial activity may be exposed to stormwater?
☐ YES ☐ NO

If NO, describe why not:

NOTE: *Complete Section C of this form for each industrial activity area inspected and included in your SWPPP or as newly identified in B.2 or B.3 below where pollutants may be exposed to stormwater.*

2. Did this inspection identify any stormwater or non-stormwater outfalls not previously identified in your SWPPP? ☐ YES ☐ NO

If YES, for each location, describe the sources of those stormwater and non-stormwater discharges and any associated control measures in place:

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3. Did this inspection identify any sources of stormwater or non-stormwater discharges not previously identified in your SWPPP? ☐ YES ☐ NO

If YES, describe these sources of stormwater or non-stormwater pollutants expected to be present in these discharges, and any control measures in place:

4. Did you review stormwater monitoring data as part of this inspection to identify potential pollutant hot spots? ☐ YES ☐ NO ☐ NA, no monitoring performed

If YES, summarize the findings of that review and describe any additional inspection activities resulting from this review:

5. Describe any evidence of pollutants entering the drainage system or discharging to surface waters, and the condition of and around outfalls, including flow dissipation measures to prevent scouring:

6. Have you taken or do you plan to take any corrective actions, as specified in Part 3 of the permit, since your last annual report submission (or since you received authorization to discharge under this permit if this is your first annual report), including any corrective actions identified as a result of this annual comprehensive site inspection?

☐ YES ☐ NO

If YES, how many conditions requiring review for correction action as specified in Parts 3.1 and 3.2 were addressed by these corrective actions? ☐☐

NOTE: *Complete the attached Corrective Action Form (Section D) for each condition identified, including any conditions identified as a result of this comprehensive stormwater inspection.*

NPDES Permit Tracking No.:
MA0001091

C. INDUSTRIAL ACTIVITY AREA SPECIFIC FINDINGS

Complete one block for each industrial activity area where pollutants may be exposed to stormwater. Copy this page for additional industrial activity areas.

In reviewing each area, you should consider:

- Industrial materials, residue, or trash that may have or could come into contact with stormwater;
- Leaks or spills from industrial equipment, drums, tanks, and other containers;
- Offsite tracking of industrial or waste materials from areas of no exposure to exposed areas; and
- Tracking or blowing of raw, final, or waste materials from areas of no exposure to exposed areas.

INDUSTRIAL ACTIVITY AREA _____:

1. Brief Description:

2. Are any control measures in need of maintenance or repair? ☐ YES ☐ NO

3. Have any control measures failed and require replacement? ☐ YES ☐ NO

4. Are any additional/revised control measures necessary in this area? ☐ YES ☐ NO

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form)

INDUSTRIAL ACTIVITY AREA _____:

1. Brief Description:

2. Are any control measures in need of maintenance or repair? ☐ YES ☐ NO

3. Have any control measures failed and require replacement? ☐ YES ☐ NO

4. Are any additional/revised c necessary in this area? ☐ YES ☐ NO

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form)

INDUSTRIAL ACTIVITY AREA _____:

Brief Description:

2. Are any control measures in need of maintenance or repair? ☐ YES ☐ NO

3. Have any control measures failed and require replacement? ☐ YES ☐ NO

4. Are any additional/revised BMPs necessary in this area? ☐ YES ☐ NO

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form)

NPDES Permit Tracking No.:
MA0001091

***NOTE:** Copy this page and attach additional pages as necessary*

INDUSTRIAL ACTIVITY AREA ______:

1. Brief Description:

2. Are any control measures in need of maintenance or repair? ☐ YES ☐ NO

3. Have any control measures failed and require replacement? ☐ YES ☐ NO

4. Are any additional/revised BMPs necessary in this area? ☐ YES ☐ NO

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form)

INDUSTRIAL ACTIVITY AREA ______:

1. Brief Description:

2. Are any control measures in need of maintenance or repair? ☐ YES ☐ NO

3. Have any control measures failed and require replacement? ☐ YES ☐ NO

4. Are any additional/revised BMPs necessary in this area? ☐ YES ☐ NO

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form)

INDUSTRIAL ACTIVITY AREA ______:

1. Brief Description:

2. Are any control measures in need of maintenance or repair? ☐ YES ☐ NO

3. Have any control measures failed and require replacement? ☐ YES ☐ NO

4. Are any additional/revised BMPs necessary in this area? ☐ YES ☐ NO

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form)

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D. CORRECTIVE ACTIONS

Complete this page for each specific condition requiring a corrective action or a review determining that no corrective action is needed. Copy this page for additional corrective actions or reviews.

Include both corrective actions that have been initiated or completed since the last annual report, and future corrective actions needed to address problems identified in this comprehensive stormwater inspection. Include an update on any outstanding corrective actions that had not been completed at the time of your previous annual report.

1. Corrective Action # ☐☐ of ☐☐ for this reporting period.

2. Is this corrective action:

- ☐ An update on a corrective action from a previous annual report; or
- ☐ A new corrective action?

3. Identify the condition(s) triggering the need for this review:

- ☐ Unauthorized release or discharge
- ☐ Numeric effluent limitation exceedance
- ☐ Control measures inadequate to meet applicable water quality standards
- ☐ Control measures inadequate to meet non-numeric effluent limitations
- ☐ Control measures not properly operated or maintained
- ☐ Change in facility operations necessitated change in control measures
- ☐ Average benchmark value exceedance
- ☐ Other (describe): _____

4. Briefly describe the nature of the problem identified:

5. Date problem identified: ☐☐/☐☐/☐☐☐☐

6. How problem was identified:

- ☐ Comprehensive site inspection
- ☐ Quarterly visual assessment
- ☐ Routine facility inspection
- ☐ Benchmark monitoring
- ☐ Notification by EPA or State or local authorities
- ☐ Other (describe): _____

7. Description of corrective action(s) taken or to be taken to eliminate or further investigate the problem (e.g., describe modifications or repairs to control measures, analyses to be conducted, etc.) or if no modifications are needed, basis for that determination:

8. Did/will this corrective action require modification of your SWPPP? ☐ YES ☐ NO

9. Date corrective action initiated: ☐☐/☐☐/☐☐☐☐

10. Date correction action completed: ☐☐/☐☐/☐☐☐☐ or expected to be completed: ☐☐/☐☐/☐☐☐☐

11. If corrective action not yet completed, provide the status of corrective action at the time of the comprehensive site inspection and describe any remaining steps (including timeframes associated with each step) necessary to complete corrective action:

NPDES Permit Tracking No.:
MA0001091

E. ANNUAL REPORT CERTIFICATION

1. Compliance Certification

Do you certify that your annual inspection has met the requirements of Part 4.2 of the permit, and that, based upon the results of this inspection, to the best of your knowledge, you are in compliance with the permit? ☐ YES ☐ NO

If NO, summarize why you are not in compliance with the permit:

2. Annual Report Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Authorized Representative Printed Name: _____ Title: _____

Signature: _____ Date Signed: _____

Appendix G – Corrective Action Records

CORRECTIVE ACTION AND AIM DOCUMENTATION

Description of Condition:

For Spills and Leaks:
Description of Incident:
Material:
Date/Time:
Amount:
Location:
Reason for Spill:
Discharge to Waters of U.S.:

Date:
Immediate Actions:

Actions Taken within 14 Days:

14 Day Infeasibility:

45 Day Extension:

Description of Condition:

For Spills and Leaks:
Description of Incident:
Material:
Date/Time:
Amount:
Location:
Reason for Spill:
Discharge to Waters of U.S.:

Date:
Immediate Actions:

Actions Taken within 14 Days:

14 Day Infeasibility:

45 Day Extension:

Appendix H – Basis for Extreme Events Analysis

I. Overview

To support efforts to minimize discharges resulting from impacts of major storm and flood events per Permit Section PART I.C.1.b.6, an evaluation was conducted to locate data regarding changes in precipitation, sea level rise (SLR), extreme weather events, coastal flooding, and inland flooding that would inform a conservative analysis of the impact of these factors on future discharges. Data was sourced from: 1) the data generated by the 13 federal agencies that conduct or use research on global change that contributed to the latest National Climate Assessment produced by the U.S. Global Change Research Program (USGCRP); 2) climate data generated by the Commonwealth of Massachusetts; and 3) resiliency planning completed by the municipalities in/near which the facility is located (i.e., City of Boston, Revere, and Chelsea). The specific sources used are summarized below.

All elevations throughout this document are referenced to NAVD88.

II. Sea Level Rise

Data Sources

Present sea level and tidal datums were taken from the National Oceanic and Atmospheric Administration (NOAA) water level monitoring station 8443970, located at the mouth of Fort Point Channel. Sea level rise projections were compiled from the highest-SLR scenarios presented in a) The *Global and Regional Sea Level Rise Scenarios for the United States* report published by NOAA in 2022, b) The *State Hazard Mitigation and Climate Adaptation Plan* (SHMCAP) published by the Commonwealth in 2018, c) *The Pilot Project Report: Climate Change and Extreme Weather Vulnerability Assessments and Adaptation Options for the Central Artery* jointly published by the Massachusetts Department of Transportation (MassDOT) and the Federal Highway Association (FHWA) in June 2015, and d) *The Climate Ready Boston: Climate Change and Sea Level Rise Projections for Boston* report published in 2016 by the Boston Research Advisory Group (BRAG). The NOAA projections apply to the Northeastern United States generally, while the FHWA, NECASC, and BRAG studies apply to the Boston Harbor area specifically. The NOAA study uses the year 2000 as a baseline, BRAG a 19-year average centered on the year 2000, NECASC the years 1971-2000, and FHWA the year 2013.

No novel studies were found conducted by the cities of Chelsea or Revere.

Existing Site Conditions

Current mean sea level at the NOAA tidal gauge is -0.30 ft. The average elevation of the docking area and the corridors between berms ranges from ±7.5 ft to ±9 ft. The minimum observed dike elevation is 13.2 ft (excluding a roadway cut at an elevation of ±12 ft on the eastern dike which assumably can be sealed off). Mean high-high water level at the site is 4.77 ft.

Future Site Conditions

Sea level rise projections are tabulated below.

Table H1. Projected Sea Level Rise (ft, NAVD88)

	Sea Level Rise (ft)							
Source	NOAA		FHWA		NECASC		BRAG	
Scenario	Intermediate	High	Intermediate-High	Highest	Intermediate	Extreme	RCP 8.5, p=0.5	RCP 8.5, p=0.001
2030					0.7	1.4	0.5	1.2
2040					1.0	2.2		
2050	1.41	1.77			1.4	3.1	1.1	2.4
2060					1.8	4.2		
2070				3.94	2.3	5.4	2.2	4.8
2080					2.8	6.8		
2090					3.4	8.4		
2100	4.27	6.89	3.94	6.56	4.0	10.2	4.9	10.5
2150	7.55	12.14						

The NECASC Extreme scenario was chosen as the primary basis for future analysis. The study was tailored to Boston Harbor, and while the BRAG RCP 8.5/p=0.001 scenario presents slightly greater sea level rise by 2100, the FHWA study presents sea level rise as somewhat faster (e.g. 0.7 ft greater by 2050), and thus was deemed more conservative.

III. Extreme Flood Events

Data Sources

The Federal Emergency Management Agency (FEMA) Flood Map Service Center provides public access to Flood Insurance Rate Maps (FIRMs) and Flood Insurance Studies (FISs), which provide base flood elevations (BFEs) and 100-year wave heights. The site is depicted in Suffolk County FIRM Panel 0019J and included in the Suffolk County FIS.

100-year maximum wave crest elevations (that is, elevation of wave crests on top of the 100-year maximum stillwater elevation) are provided along numerous transects throughout the Suffolk County study area Figure H1. Transect 20, located downstream of the site, past the confluence of Chelsea Creek with the Mystic River, was chosen as the most representative.

Figure H1: Suffolk County FIS Transects
Source: Flood Insurance Study No. 25025CV000B for Suffolk County, Massachusetts (2016)

Future BFEs were determined by adding the sea level rise estimate described above to the current BFE for a given time frame.

Existing Site Conditions

The Flood Insurance Rate Map (FIRM) that contains the site lists the base flood elevation (BFE) as 10 ft, and depicts the secondary containment areas and retention basins as protected from inundation, but not the truck fueling area, pier, or the corridors between diked areas. According to the FIS, the 100-year stillwater elevation at Transect 20 is 9.4 ft, and 100-year wave crest elevation is given as 10.9 ft. Given that the net wave height at Transect 20 is only 1.5 feet, and further attenuation is expected as waves travel the roughly 2 miles up Chelsea Creek to the site, wave crest elevation was not deemed significant in this analysis compared to BFE.

BFE with Sea Level Rise

Under the given sea level rise conditions, the BFE will be 11.4 ft by the 2030s, 15.4 ft by the 2070s, and 20.2 ft by 2100 based on the NECASC Extreme scenario.

Historical Extreme Weather Events

Using the 1987 NHC Risk Analysis Program and data through 2010, NOAA has published a map of estimated return intervals for hurricanes (winds over 74mph) and major hurricanes (Category 3 or greater) within 50 nautical miles (58 miles) of the US Atlantic and Gulf Coasts (Figures H2 and H3). NOAA also administers a Historical Hurricane Track database which allows users to view the paths and severities of tropical storms within a given area over a given timeframe.

According to NOAA's Historical Hurricane Track Database, 26 tropical cyclones have passed within 50 nautical miles (58 miles) of the site between 1922 and 2022 Figure H4 These 26 storms range from Extratropical Cyclones (least severe) to Category 3 Hurricanes (most severe). Four of the 26 storms reached a hurricane classification, and the other 22 were categorized as Tropical Storms or Extratropical Cyclones. Only one major hurricane has been observed within 50 nm of the site over the past 100 years. At Boston Harbor, NOAA predicts a return period of 30 years (a 1 in 30, or 3.33% chance each year) for a hurricane of any magnitude to pass within 50 nm of the area. For major hurricanes, NOAA predicts a return period of 120 years (a 1 in 120, or 0.08% chance in any given year) of passing within the same area. In simpler terms, hurricanes of any magnitude can be expected to pass within 50 nm of Boston Harbor 3 to 4 times every century, and major hurricanes can be expected less than once per century.

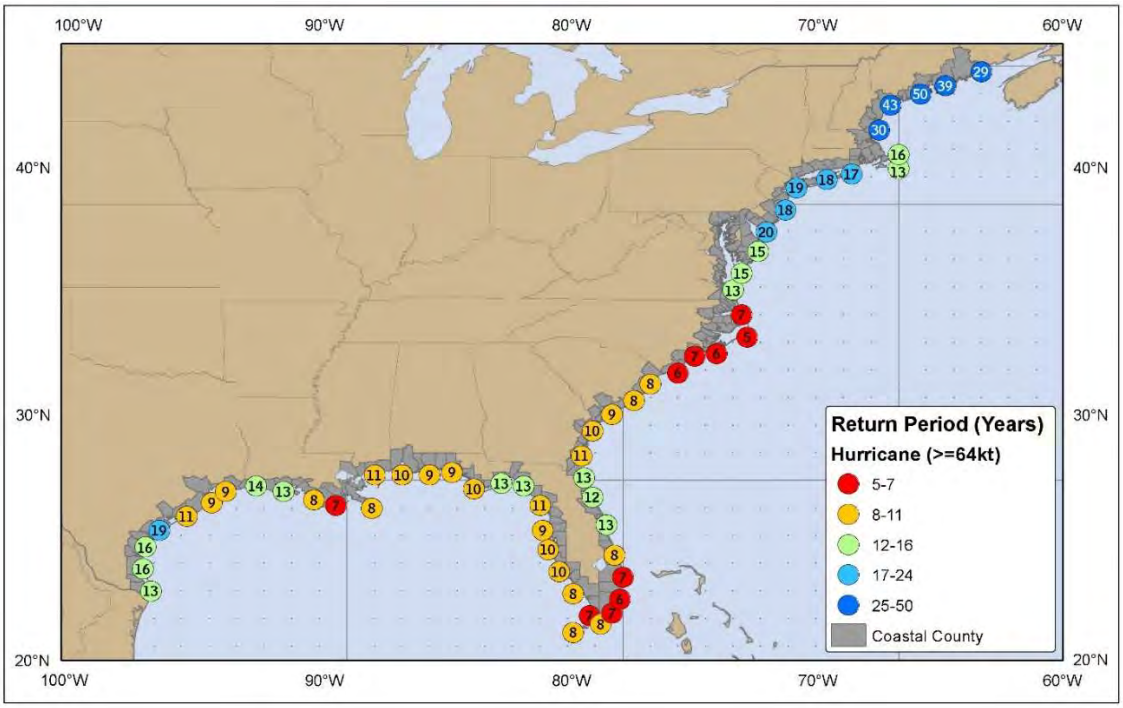

Figure H2: Hurricane Return Periods within 50 nm of Coast
Source: NOAA Tropical Cyclone Climatology (n.d.)

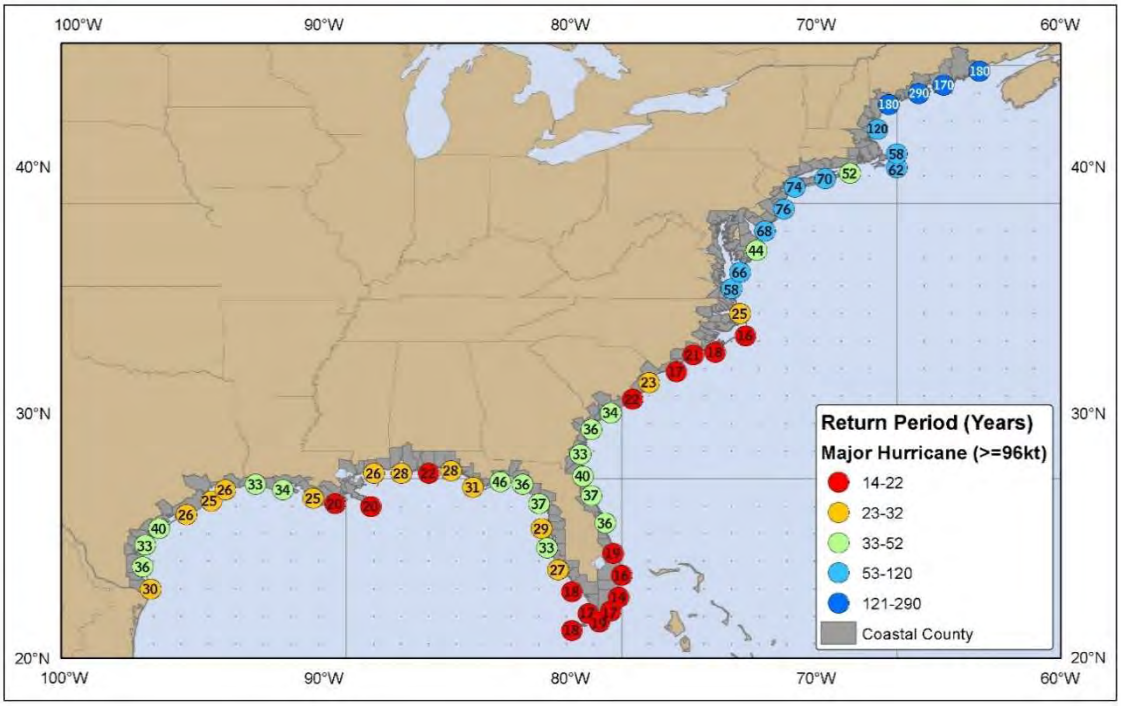

Figure H3: Major Hurricane Return Periods within 50 nm of Coast

Source: NOAA Tropical Cyclone Climatology (n.d.)

Figure H4: Hurricane/Storm Tracks within 50 nm of Site (1922-2022)

Source: NOAA Historical Hurricane Tracks (2023)

Predicted Storm Surge Inundation

To model storm surge inundation, the flood depths provided by NOAA's Sea, Lake, and Overland Surges from Hurricanes (SLOSH) model were viewed via the Massachusetts Sea Level Rise and Coastal Flooding Viewer. The model uses a "representative sample of hypothetical storms to estimate the near worst–case scenario of flooding for each hurricane category." Worth noting is that the model was cited by the FHWA study as being of relatively coarse resolution, often overestimating storm surge elevations, and not being sufficient for evaluating storm surge attenuation by specific structures.

As shown in Figure H5, under a Category 1 condition the berms appear to be above the storm surge elevation, indicating that the secondary containment areas may be protected from inundation. Under the Category 2 and above conditions, however, the entire site appears to be inundated.

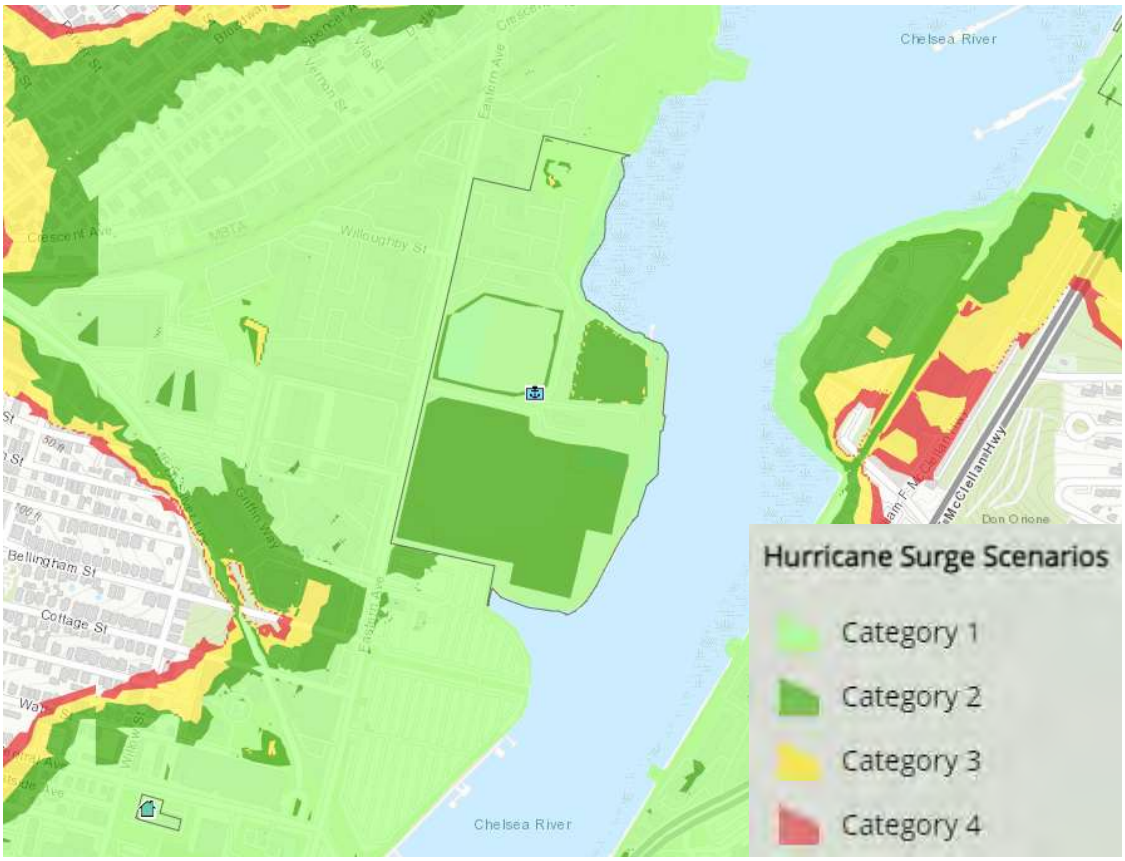

Figure H5: SLOSH Model Results
Source: *Massachusetts Sea Level Rise and Coastal Flooding Viewer (n.d)*

Though difficult to quantify, the SHMCAP, FHWA, and BRAG reports agree that the frequency and intensity of tropical storm events are increasing and will likely continue to do so. Within the 100-year time horizon laid out by the permit, the possibility exists of a major hurricane impacting the site and seaward-facing berms being exposed to acute wave action from storm surges.

IV. Precipitation

Data Sources

Per 67 CFR § 112.8(c)(2), diked areas were designed to contain the full volume of the largest tank within plus precipitation from the 25-year 24-hour storm. These values are shown on the *Chelsea Terminal Secondary Containment* table on Figure 2.

The BRAG report cites a study by the City of Cambridge projecting increases in the 25-year 24-hour storm precipitation depth through the 2070s.

Existing Site Conditions

See the *Chelsea Terminal Secondary Containment* table on Figure 2.

Future Site Conditions

Secondary containment calculations were redone based on the Cambridge study's 2070 25-year 24-hour storm precipitation depth estimate of 8.2". Largest shell capacity, area footprint, and containment volume were given. Precipitation depth was multiplied by containment area footprint with appropriate unit conversions to yield precipitation volume. Containment volume divided by the sum of largest shell volume and precipitation volume yielded containment area capacity. A capacity over 100% indicates that the secondary containment volume exceeds the required volume. As shown in Table H2, all diked area capacities are expected to continue to be sufficient, with the exception of the area around Tank 117, which is now under the design capacity by 2%.

Table H2: Secondary Containment Capacities based on 8.2" Precipitation Depth

Tank Dike/Secondary Containment	Largest Shell Capacity (gal)	Area Footprint (sf)	Precipitation Volume (gal)	Containment Volume (gal)	Capacity (%)
Tank Farm-Tanks 101, 102, 103, 104, 123	4048257	188360	962838	6122006	122
Tank Farm-Tanks 105, 107, 108, 109	3392368	165639	846695	10121061	239
Tank Farm-Tank 117 & Spill Recovery Tank	6453698	93712	479027	6799564	98
Tank Farm-Tanks 106, 110, 111, 112, 113, 114, 116	5502264	309472	1581925	10121061	143
Tank Farm-Tanks 118 & 119	1185209	28840	147421	7017991	527

V. Summary of Findings

Findings which form the factual basis of the prevention and mitigation measures outlined in the permit are summarized below:

Table H3: Summary of Findings

	By 2030s	By 2070s	By 2100
Sea Level Rise (ft)	1.4	5.4	10.5
MHHW (ft NAVD88)	6.2	10.2	15.3
BFE (ft NAVD88)	11.4	15.4	20.2
100-year Wave Crest Elevation	12.3	16.3	21.1
25yr-24hr Precipitation Depth (in)	7.3	8.2	-

VI. References

BRAG. 2016. *Climate Ready Boston: Climate Change and Sea Level Rise Projections for Boston*. City of Boston.

Commonwealth of Massachusetts. 2018. *Massachusetts State Hazard Mitigation and Climate Adaptation Plan.* Boston, MA: Commonwealth of Massachusetts.

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