

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF CONNECTICUT

CONSERVATION LAW FOUNDATION,
INC.,

Plaintiff,

v.

GULF OIL LIMITED PARTNERSHIP,

Defendant.

June 26, 2023

AMENDED COMPLAINT AND JURY
DEMAND

Plaintiff Conservation Law Foundation, Inc. (“CLF”), by and through its counsel, hereby alleges:

INTRODUCTORY STATEMENT

1. This is a civil suit brought under the citizen suit enforcement provisions of the Federal Water Pollution Control Act, 33 U.S.C. §§ 1251, et seq. (“Clean Water Act”), and the Solid Waste Disposal Act, 42 U.S.C. §§ 6901, et seq. (“Resource Conservation and Recovery Act” or “RCRA”). Plaintiff CLF seeks declaratory and injunctive relief, civil penalties, and other relief the Court deems proper to remedy Defendant Gulf Oil Limited Partnership’s (hereinafter “Defendant” or “Gulf”) violations of federal law, which include: (1) Gulf’s past and ongoing failures to comply with Connecticut Industrial Stormwater Permit No. GSI001571 (the “Permit”), and the Clean Water Act; (2) the Gulf facility’s location in a floodplain with improperly managed susceptibility to washout of solid waste that poses a hazard to human life, wildlife, and land and water resources; (3) Gulf’s past and present contribution to handling, storage, treatment, transportation, or disposal of solid and hazardous wastes that may present an imminent and substantial endangerment to health or the environment in violation of RCRA; and (4) Gulf’s failure to operate and maintain its facility to minimize the possibility of a fire, explosion, or any unplanned release of hazardous

waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.

2. These violations of federal law have occurred, are occurring, and—in the absence of a remedial order from this Court—will continue to occur at Gulf’s New Haven Terminal, a bulk storage and fuel terminal located at 500 Waterfront Street, New Haven, Connecticut (hereinafter “Terminal”).

JURISDICTION AND VENUE

3. CLF brings this civil suit under the citizen suit enforcement provisions of Section 505 of the Clean Water Act, 33 U.S.C. § 1365, and Section 7002 of the Resource Conservation and Recovery Act, 42 U.S.C. § 6972. This Court has subject matter jurisdiction over the parties and this action pursuant to those statutes and 28 U.S.C. § 1331 (providing district courts with original jurisdiction over an action arising under the Constitution and laws of the United States).

4. Venue is proper in the U.S. District Court for the District of Connecticut pursuant to Section 505(c)(1) of the Clean Water Act, 33 U.S.C. § 1365(c)(1), and Section 7002(a) of RCRA, 42 U.S.C. § 6972(a), because the source of the violations is located within this judicial district.

5. On July 28, 2020, CLF notified Gulf of its intention to file suit for violations of both (i) the Clean Water Act, in compliance with the statutory notice requirements set forth in 33 U.S.C. § 1365(b)(1), and the corresponding regulations at 40 C.F.R. Part 135, and (ii) RCRA, in compliance with the statutory notice requirements set forth in 42 U.S.C. § 6972(b)(2)(A), and the corresponding regulations at 40 C.F.R. Part 254. CLF’s Notice Letter (Jul. 28, 2020) (hereinafter, “CLF’s Notice Letter”). A true and accurate copy of CLF’s Notice Letter is appended hereto as Exhibit A.

6. More than ninety days have elapsed since CLF’s Notice Letter was served on Gulf, during which time neither the Environmental Protection Agency (“EPA”) nor the Connecticut Department

of Energy and Environmental Protection (“CT DEEP”) has commenced and/or diligently prosecuted a court action to redress the Clean Water Act and RCRA violations alleged in this complaint. *See* 33 U.S.C. § 1365(b)(1)(B); 42 U.S.C. § 6972(b)(1)(B).

7. Further, neither EPA nor CT DEEP has taken administrative action to redress the Clean Water Act or RCRA violations alleged in this complaint.

PARTIES

I. Plaintiff

8. Plaintiff CLF is a 501(c)(3) nonprofit, member-supported organization dedicated to the conservation and protection of New England’s public health, environment, and natural resources. It is incorporated under the laws of Massachusetts with its principal place of business at 62 Summer Street, Boston, MA 02110. CLF operates in Connecticut through local actions and out of its Rhode Island office at 235 Promenade Street, Suite 560, Providence, RI 02908. CLF has over 5,000 members, including over 190 members in Connecticut. CLF has long worked to protect the health of New England’s waterways, including addressing the significant water quality impacts of industrial and stormwater pollution.

9. CLF members live near, recreate on, and regularly visit the area and waters near Gulf’s Terminal, including, but not limited to, the New Haven Harbor, the Quinnipiac River, and the Mill River. CLF members use and enjoy these waters for recreational and aesthetic purposes, including, but not limited to, boating, swimming, fishing, observing wildlife, and sightseeing; they intend to continue to engage in these activities in the future.

10. CLF and its members are harmed and threatened by Gulf’s acts and omissions at the Terminal and its violations of environmental laws and regulations.

11. CLF and its members are also concerned about, and have an interest in, eliminating the risk from the discharge and/or release of pollutants from the Terminal into the New Haven Harbor, the Quinnipiac River, and the Mill River, as well as into nearby communities and ecosystems.

12. CLF and its members are affected by, and concerned with, pollutant discharges and/or releases resulting from Gulf's failure to satisfy its obligations under the Clean Water Act and RCRA. For instance, members are concerned about Gulf's contribution to exceedances of water quality standards, which currently affects members' ability to use and enjoy the water, including fishing, boating, and recreating in the Quinnipiac and Mill Rivers, as well as New Haven Harbor, and reasonably fear that it will only get worse with the impacts of climate change.

13. CLF and its members have also smelled strong petroleum odors around the Terminal, and have seen oil sheen in the surrounding waters, further negatively impacting their use and enjoyment of the waters.

14. Further, in addition to pollutant discharges and/or releases due to precipitation, the Terminal has not been designed or modified to address pollutant discharges and/or releases due to flooding; specifically, the Terminal is likely to discharge and/or release pollutants into surrounding surface waters, groundwater, the community, and the air because it has not been designed to withstand flooding associated with storm events and storm surge, tides, sea level rise, and increasing sea surface temperatures.

15. The substantial risk of pollutant discharges and/or releases at the Terminal is due to factors including, but not limited to, inadequate infrastructure design and Gulf's failure to sufficiently prepare for precipitation and/or flooding, which is exacerbated by storms and storm surge, sea level rise, and increasing sea surface temperatures, as discussed in Section IV.A, *infra*.

16. CLF and its members are placed directly in harm's way by Gulf's pollutant discharges, releases, and/or risk of releases and have no assurance that they will be protected from pollutants released and/or discharged from the Terminal. Gulf is not in compliance with the Permit, the Clean Water Act, or RCRA for, at a minimum, the reasons set forth herein, including, but not limited to, Gulf's (i) failure to eliminate non-stormwater discharges; (ii) activity inconsistent with Connecticut's Coastal Management Act, which is causing adverse impacts to coastal resources; (iii) unlawful certification of its Stormwater Pollution Prevention Plan ("SWPPP"); (iv) failure to identify sources of pollution reasonably expected to affect the quality of stormwater discharges; (v) failure to describe and implement practices to reduce pollutants and assure permit compliance; (vi) failure to implement measures to manage runoff; (vii) failure to minimize the potential for leaks and spills; (viii) failure to submit required facts or information to CT DEEP; (ix) failure to amend or update the SWPPP; (x) failure to identify discharges to impaired waters in the SWPPP; (xi) failure to conduct monitoring for discharges to impaired waters; (xii) failure to identify outfalls in the SWPPP; (xiii) failure to monitor discharges from all outfalls; (xiv) illegal infiltration of stormwater; (xv) failure to maintain an impervious containment area; (xvi) open dumping of waste in violation of RCRA; (xvii) creation of an imminent and substantial endangerment to health or the environment in violation of RCRA; (xviii) failure to comply with state and federal RCRA regulations applicable to generators of hazardous wastes; and (xix) causing or contributing exceedances of water quality standards under the Clean Water Act.

II. Defendant

17. Defendant Gulf Oil Limited Partnership is headquartered in Wellesley Hills, Massachusetts. Gulf is primarily a refined petroleum products terminaling, storage, and logistics business, as well as a distributor of motor fuels.

18. Gulf Oil Limited Partnership was formed in 1993 as a joint venture between Cumberland Farms, Inc. and Catamount Petroleum Limited Partnership.

19. In 2015, full ownership of Gulf Oil Limited Partnership was acquired by subsidiaries of ArcLight Capital Partners.

20. Upon information and belief, Gulf owns approximately 14 million barrels of oil storage capacity.

21. Gulf owns and operates the bulk petroleum storage terminal located at 500 Waterfront Street, New Haven, Connecticut 06512.

OVERVIEW

22. Climate change and its associated impacts are affecting New Haven *now*. According to the Connecticut Institute for Resilience and Climate Adaptation (“CIRCA”), the city currently “experiences frequent flooding due to heavy rainfall and increasingly severe hurricanes and winter storms.” CIRCA, *City of New Haven Commercial Industrial Toolbox Final Report* 4 (Jul. 31, 2017), *available at* <https://circa.uconn.edu/wp-content/uploads/sites/1618/2016/03/CIT-CIRCA-Final-Report-With-JPEG-Appendices-attached.pdf> (last visited Jun. 2, 2021). Between 1991 and 2015, the average surface temperature in Long Island Sound increased by almost 2 degrees. *See generally* CT DEEP, *2015 Long Island Sound Hypoxia Season Review* (2015), *available at* https://portal.ct.gov/DEEP/Water/LIS-Monitoring/-/media/DEEP/water/lis_water_quality/monitoring/2015/2015SeasonReviewfinalpdf.pdf (last visited Jun. 2, 2021). This increase is alarming because increases in sea surface temperature led to a higher frequency and magnitude of storm events, as evidenced by the 10% increase per decade in precipitation in the Northeast. Jerry M. U.S. Global Climate Change Research Program, *Climate Change Impacts in the United States: The Third National Climate Assessment* 373 (J.M. Melillo et al., eds. 2014), *available at* <https://nca2014.globalchange.gov/report/regions/northeast> (last visited Jun. 2, 2021). The effects of the

increasingly intense and frequent storms are additionally exacerbated by the increase in sea level of approximately one foot in the Northeast since 1900, about eight inches more than the global average. *Id.* at 373.

23. These climate impacts currently affecting New Haven and the resulting damage to the coastal city are only projected to get worse. “According to estimates by the Federal Emergency Management Administration (FEMA), a ‘100 year flood’ in Connecticut’s four shoreline counties could cause property losses of more than \$13 billion. To further exacerbate this threat, climate scientists estimate that by 2050 this ‘100 year flood’ will revisit the Connecticut coast, on average, not once every 100 years, but once every twelve-and-a-half to twenty-five years.” William R. Rath et al., UCONN SCHOOL OF LAW: MUNICIPAL RESILIENCE PLANNING ASSISTANCE PROJECT LAW & POLICY WHITE PAPER SERIES, *Floodplain Building Elevation Standards: Current Requirements & Enhancement Options for Connecticut Shoreline Municipalities* 2, (May 1, 2018) (citations omitted), available at <https://circa.uconn.edu/wp-content/uploads/sites/1618/2018/03/Floodplain-Building-Elevation-Standards.pdf> (last visited Jun. 2, 2021).

24. “Sea-level rise will likely increase the odds of flooding by a thousand-fold . . . in a half-century. By 2100, today’s ‘once-in-a-lifetime’ (e.g., 50-year return period) coastal flood level may be exceeded every day during the highest tide,” according to one recent report. Taherkhani, M., Vitousek, S., Barnard, P.L. et al., *Sea-level rise exponentially increases coastal flood frequency*, SCI. REP. 10:6466, 11 (Apr. 16, 2020), available at <https://doi.org/10.1038/s41598-020-62188-4> (last visited Jun. 2, 2021). The report also states that with increased flood frequency, “a corresponding acceleration of a number of related coastal hazards, such as beach and cliff erosion” can be expected. *Id.*

25. While many of the projections discuss harms in 2050 and 2100, it is clear that the acceleration of the negative impacts of climate change is happening now and will only get more pronounced as each year goes by.

26. Gulf has not designed, maintained, modified, and/or operated its Terminal to account for the numerous effects of climate change. This failure puts CLF, its members, and the New Haven community at great risk.

27. As laid out more fully below, the Terminal is immediately adjacent to the New Haven Harbor, it houses multiple, multi-million-gallon petroleum storage tanks at or below sea level, and has suffered several spills over the years, the detrimental impacts of which are still present in the Terminal's soil and groundwater today.

28. The Terminal is also close to the Mill and Quinnipiac Rivers, which are gems of the local economy and community and used frequently for recreational activities and aquaculture—including, notably, oyster farming along the Quinnipiac.

29. Operation of the Terminal is subject to many environmental laws, including the Clean Water Act and RCRA. These laws are in place to protect not just the waterbodies, surrounding land, and local wildlife, but also New Haven residents and their way of life. Gulf's abject failure to comply with the letter and spirit of the law puts all of these people and places at risk.

STATUTORY AND REGULATORY BACKGROUND

I. Clean Water Act

30. Congress enacted the Clean Water Act to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” 33 U.S.C. § 1251(a). To accomplish that objective, Congress set as a “national goal that the discharge of pollutants into the navigable waters be eliminated . . .” *Id.*

31. Accordingly, Section 301(a) of the Clean Water Act, 33 U.S.C. § 1311(a), prohibits the discharge of any pollutant into waters of the United States from a point source, unless the discharge complies with various enumerated sections of the Clean Water Act.

32. Among other things, Section 301(a) prohibits discharges not authorized by, or in violation of, the terms of a valid National Pollutant Discharge Elimination System (“NPDES”) permit issued pursuant to Section 402(p) of the Clean Water Act, 33 U.S.C. § 1342(p).

33. Section 502(14) of the Clean Water Act defines “point source” to include “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, or vessel or other floating craft, from which pollutants are or may be discharged.” 33 U.S.C. § 1362(14).

34. Under the regulations implementing the Clean Water Act, the definition of “discharge of a pollutant” includes “additions of pollutants into waters of the United States from: surface runoff which is collected or channelled by man.” 40 C.F.R. § 122.2.

35. Dischargers of pollutants, including industrial wastewater, process wastewater, and stormwater associated with industrial activity, must obtain and comply with the requirements of NPDES permits issued under Section 402 of the Clean Water Act, 33 U.S.C. § 1342.

36. NPDES permits contain pollutant sampling and monitoring requirements and limits on the amount or concentration of allowable pollutants, in addition to requirements regarding control measures, best management practices, and recordkeeping and reporting.

37. The discharge of any pollutant in violation of a NPDES permit, the failure to conduct required monitoring for pollutant discharges, and the failure to comply with other requirements of a NPDES permit are all violations of the Clean Water Act, 33 U.S.C. §§ 1311(a), 1342.

38. In Connecticut, the Commissioner of CT DEEP has been delegated authority to implement the NPDES permit program. Conn. Gen. Stat. § 22a-430; Conn. Regs. §§ 22a-430-3; 22a-430-4.

39. Section 505(a)(1) of the Clean Water Act, 33 U.S.C. § 1365(a)(1), provides for citizen enforcement actions against “any person . . . who is alleged to be in violation of . . . an effluent standard or limitation . . . or . . . an order issued by the [EPA] Administrator or a State with respect to such a standard or limitation.”

40. Such enforcement action under Section 505(a) of the Clean Water Act includes an action seeking remedies for unauthorized discharges in violation of Section 301 of the Clean Water Act, 33 U.S.C. § 1311, as well as for failing to comply with one or more permit conditions in violation of Sections 402 and 505(f) of the Act, 33 U.S.C. §§ 1342, 1365(f). Each separate violation of the Clean Water Act subjects the violator to a penalty of up to \$55,800 per day per violation. *See* 33 U.S.C. §§ 1319(d), 1365(a); 40 C.F.R. §§ 19.1–19.4.

II. Resource Conservation and Recovery Act

41. The Resource Conservation and Recovery Act (“RCRA”) “is a comprehensive environmental statute that governs the treatment, storage, and disposal of solid and hazardous waste.” *Meghrig v. KFC W.*, 516 U.S. 479, 483 (1996).

42. RCRA’s citizen suit provision, 42 U.S.C. § 6972(a)(1), provides in relevant part:

[A]ny person may commence a civil action on his own behalf- (1)(A) against any person . . . who is alleged to be in violation of any permit, standard, regulation, condition, requirement, prohibition, or order which has become effective pursuant to this chapter; or (B) against any person . . . including any past or present generator, past or present transporter, or past or present owner or operator of a treatment, storage, or disposal facility, who has contributed or who is contributing to the past or present handling, storage, treatment, transportation, or disposal of any solid or hazardous waste which may present an imminent and substantial endangerment to health or the environment . . .

43. “RCRA’s primary purpose . . . is to reduce the generation of hazardous waste and to ensure the proper treatment, storage, and disposal of that waste which is nonetheless generated, ‘so as to

minimize the present and future threat to human health and the environment.” *Meghrig v. KFC W.*, 516 U.S. 479, 483 (1996) (quoting 42 U.S.C. § 6902(b)).

44. RCRA’s citizen suit provision “allows citizen suits when there is a reasonable prospect that a serious, near-term threat to human health or the environment exists.” *Me. People’s All. & Nat. Res. Def. Council v. Mallinckrodt, Inc.*, 471 F.3d 277, 279 (1st Cir. 2006).

45. One of RCRA’s primary objectives is to “prohibit[] future open dumping on the land and requir[e] the conversion of existing open dumps to facilities which do not pose a danger to the environment or to health” 42 U.S.C. § 6902(a)(3).

46. Congressional findings enumerated at Section 1002(b)(4) of RCRA, 42 U.S.C. § 6901(b)(4) found that “open dumping is particularly harmful to health, contaminates drinking water from underground and surface supplies, and pollutes the air and the land”

47. Section 4005(a) of RCRA, 42 U.S.C. § 6945(a), prohibits “any solid waste management practice or disposal of solid waste . . . which constitutes the open dumping of solid waste.”

48. Section 1004(14) of RCRA, 42 U.S.C. § 6903(14), defines “open dump” as “any facility or site where *solid waste* is disposed of which is not a sanitary landfill which meets the criteria promulgated under [§ 6944] of this title and which is not a facility for disposal of hazardous waste.” (emphasis added).

49. Section 1004(27) of RCRA defines “solid waste” as:

any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges which are point sources subject to permits under section 1342 of title 33

42 U.S.C. §6903(27).

50. EPA implementing regulations further define solid waste as “any discarded material that is not excluded” under the regulations. 40 C.F.R. § 261.2(a)(1).

51. EPA implementing regulations define “discarded material” as “any material which is . . . [a]bandoned, . . . [r]ecycled, . . . or [c]onsidered inherently waste-like . . .” 40 C.F.R. § 261.2(a)(2).

52. EPA implementing regulations consider material “abandoned” when “[d]isposed of . . . [b]urned or incinerated . . . or [a]ccumulated, stored, or treated (but not recycled) before or in lieu of being abandoned by being disposed of, burned, or incinerated. . . .” 40 C.F.R. 261.2(b).

53. Section 1004(3) of RCRA, 42 U.S.C. § 6903(3), defines “disposal” as “the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste or hazardous waste into or on any land or water so that such solid waste or hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including ground waters.”

54. The plain meaning definition for “discharge” is “to send out a substance, esp[ecially] waste matter.” *See Cambridge Dictionary*, “Discharge”, available at <https://dictionary.cambridge.org/us/dictionary/english/discharge> (last visited Jun. 2, 2021).

55. Section 7002(a)(1) of RCRA, 42 U.S.C. § 6972(a)(1)(A), provides a citizen suit right of action “against any person . . . who is alleged to be in violation of any permit, standard, regulation, condition, requirement prohibition, or order which has become effective pursuant to [RCRA]”

56. Each separate RCRA violation enforceable under 42 U.S.C. § 6972(a)(1)(A) subjects the violator to a civil penalty of up to \$76,764 per violation, per day. *See* 42 U.S.C. § 6928(g); 40 C.F.R. §§ 19.1-19.4.

57. In Connecticut, the Commissioner of CT DEEP has been delegated authority to implement regulation of solid and hazardous wastes under RCRA. *See* Conn. Gen. Stat. §§ 22a-114–134z; §§ 22a-201–256ee; Conn. Regs. §§ 22a-449(c)-1–119; §§ 22a-209-1–17.

58. Section 7002(a)(2) of RCRA, 42 U.S.C. § 6972(a)(1)(B), states: “any person may commence a civil action on his own behalf . . . against any person . . . and including any past or present generator, past or present transporter, or past or present owner or operator of a treatment, storage, or disposal facility, who has contributed or who is contributing to the past or present handling, storage, treatment, transportation, or disposal of any solid or hazardous waste which may present an imminent and substantial endangerment to health or the environment”

59. This Court may “award costs of litigation (including reasonable attorney and expert witness fees) to the prevailing or substantially prevailing party, whenever [this] Court determines such an award is appropriate.” 42 U.S.C. § 6972(e).

FACTUAL BACKGROUND

I. Gulf’s New Haven Terminal

60. Gulf, acting through its officers, managers, subsidiary companies, and instrumentalities, owns and operates the Terminal.

61. Gulf Oil Limited Partnership owns the Terminal.

62. Gulf acquired the Terminal in 1993 from Cumberland Farms, Inc (“CFI”).

63. CFI acquired the Terminal from Chevron in 1986 and owned the Terminal until 1993 when Gulf acquired it.

64. The Terminal is a bulk storage and fuel terminal that has operated since at least 1926. *See* RCRA Inspection Report at 2; CT DEEP, *RCRA Inspection Report* (June 2015).

A. Facility Description

65. Upon information and belief, the Terminal is comprised of approximately 13 acres of land. SWPPP at 3.

66. The oil products at the Terminal are stored in a series of Aboveground Storage Tanks (“ASTs”). The Terminal has sixteen bulk storage tanks storing gasoline, fuel grade ethanol, No. 2 fuel oil, and diesel.

67. The SWPPP redacts information on the tank locations, storage capacity, and types of products stored in most ASTs.

68. Products stored in the tanks are distributed to two truck loading racks. SWPPP at 4.

69. As described in the Terminal’s 2017 SWPPP, petroleum products arrive at the Terminal dock by tanker ship. *See* 2017 SWPPP at 4, attached as Exhibit B hereto.

70. The products at the Terminal

are typically received by marine vessel at the terminal’s vessel dock (restricted to one vessel at the dock) or by pipeline. Upon receipt, products are transferred via product piping to bulk aboveground storage tanks (ASTs) located in the terminal’s tank farm. Final distribution of product is principally conducted at the terminal’s truck loading racks. Gulf also has the capability to distribute products to interstate and intrastate locations via petroleum product pipelines.

SWPPP at 4.

71. As of May 2019, the Terminal had a total bulk oil storage capacity of approximately 2-million-gallons. *See* Gulf Oil L.P., *Application for Development Permit and Coastal Site Plan Review for New Bulk Storage and Additive Tanks* (May 2019) (“AST Application”), Application Narrative, 1–2, excerpts of which are attached as Exhibit C hereto.

72. In May 2019, Gulf submitted its “Application for Development Permit and Coastal Site Plan Review for New Bulk Storage and Additive Tanks” seeking to remove five gasoline/distillate ASTs (capacity of approximately 2-million-gallons) and construct a new gasoline/distillate AST,

which will have the capacity of holding approximately 7-million-gallons. Ex. C, *AST Application*, Narrative ¶ 1.

73. Gulf also proposed the installation of an 8,000-gallon gasoline additive AST, the modification of the existing facility product piping and the installation of a new vapor recovery unit. *Id.*

74. The New Haven City Plan Commission approved the Site Plan and Gulf obtained a building permit for the 7-million-gallon AST on February 20, 2020. Building Permit No. B-20-00347.

75. In order to accommodate the increased storage capacity for the new AST, Gulf filed a Site Plan Review with the New Haven City Plan Commission to approve several modifications to the Terminal: i) increasing the berm heights around the ASTs to improve secondary containment and allegedly protect against flooding, ii) grading the containment area floor to improve stormwater runoff, iii) installing a liner and bentonite clay to ensure impermeability of the containment area, and iv) replacing and upgrading existing drainage infrastructure for stormwater runoff. *Application for Development Permit and Coastal Site Plan Review* (Jan. 2020) (“Berm Application”), Attachment B, 2, excerpts of which are attached as Exhibit D hereto.

76. While the City Plan Commission has approved the Berm Application, Gulf has not yet applied for, nor has it received, a building permit to perform modifications to the berms as of the filing of this Amended Complaint.

77. On May 7, 2020, CLF sent a letter via email to Mr. Steve Carten, Vice President of Operations for Gulf.

78. In its May 7 Letter, CLF raised concerns it had based on the application materials Gulf submitted to the City Plan Commission, including:

- i. How does Gulf Oil's Coastal Site Plan Review address the state-mandated sea-level rise scenario of an additional 20 inches by 2050?
- ii. How does Gulf Oil's Coastal Site Plan Review address the required standard for shoreline flood erosion and control structures?
- iii. How does Gulf's proposed "one foot above FEMA base flood elevation" [13 feet] design elevation compare with the methodology and standard of care applied in the ongoing US Army Corps of Engineers Coastal Storm Risk Management Project in New Haven which tentatively recommends a floodwall system with a top elevation of +15 feet NAVD88?
- iv. What analysis has Gulf Oil done to ensure that the facility satisfies the Connecticut Building Code applicable to facilities adjacent to a coastal high hazard zone?
- v. How does Gulf plan to ensure that it maintains dry access to the facility during a 100-year flood event?
- vi. What is the basis for filing a separate site plan and coastal site plan review application for the above-discussed modifications rather than combining it with Gulf's site plan and coastal site plan review application for its proposed new 7- million-gallon above-ground storage tank?
- vii. How does Gulf intend to anchor the new above-ground storage tank as required by the New Haven Flood Damage Prevention Ordinance?
- viii. What cumulative impacts of the proposed modifications and the installation of the 7- million-gallon above-ground storage tank are capable of negatively affecting the current conditions in New Haven Harbor and the future development for plans for Long Wharf favored by the New Haven City Plan and Engineering Department?

79. CLF received no response from Gulf regarding its May 7 Letter.

80. As determined by an analysis performed by a CLF consultant, “both yards of the Terminal would be subject to wave overtopping and subsequent flooding during a 50-, 100-, and 500-year storm.” Ex. G, ¶57 (citing Ex. F. at 6).

81. The same analysis concluded that “[t]he overtopping assessment findings suggest that current berm elevations in both yards would not be sufficient to withstand even a 50-year flood event in conjunction with 1m global sea level rise and the yards are at severe risk of flooding from a 100-year storm event even without consideration of sea level rise. In a 100-year storm, the 60-minute peak surge would completely submerge Yard 1 within 8 minutes, and Yard 2 would be completely submerged in less than 27 minutes.” (internal citations omitted) Ex. G, ¶58 (citing Ex. F at Tables 5-6).

82. “The proposed work to elevate the secondary containment berms which currently range in crest elevation from 10.7 feet NAVD88 to 13.6 feet NAVD88 to a new consistent elevation of 13 feet NAVD88 fall well short of providing reliable performance during storms. The Terminal, even once proposed berm improvements are made, faces a high likelihood of being damaged by storms in the near term and during the service life of the facility.” Ex. G, ¶60 (citing Ex. F at 6).

83. Piping within the Terminal – including aboveground, buried, and vessel receipt piping – connects the ASTs, the truck loading rack, and the vessel dock. SWPPP at 8.

84. The Terminal operates 24 hours per day, 7 days per week.

85. Defendant is, and has been, responsible for the operation and maintenance of the Terminal, including compliance with the Permit.

B. Drainage

86. Stormwater from the Terminal’s tank farm is either directed to a catch basin in a low elevation area or infiltrates into the ground. SWPPP at 53.

87. For purposes of stormwater management, the Terminal is divided into two “Drainage Areas,” identified as 001 and 002. SWPPP at 53.

88. Drainage Area 001 is made up of containment areas constructed to accumulate rainfall runoff from the tank farm, as well as the truck loading racks. SWPPP at 53–54.

89. The SWPPP describes Drainage Area 001 as follows:

The combined Tank farm draining (from both the eastern and western containment areas) flows by gravity from catch basin CB-2 into a partially buried concrete holding tank/lift station (LS-2). The combined Stormwater collected at LS-2 is then pumped (via subsurface piping) to the east where it discharges to catch basin CB-14. Stormwater from the tank farm combines with stormwater runoff from the truck rack and other yard drains, before discharging to the stormwater treatment system (see Terminal Site Plan [which is redacted]). The master on/off switch for the pump in LS-2 is located in the terminal office. According to Gulf, stormwater collected in LS-2 is visually inspected prior to drainage.

Id. at 54.

90. The Stormwater Management Plan submitted as a part of Gulf’s Berm Application noted two additional outfalls to New Haven Harbor that were not included in the SWPPP:

Gulf currently maintains two existing outfalls to New Haven Harbor located in the northwest and southwest portions of the containment area. Each outfall consists of a single gravity pipe from an existing catch basin that discharges onto the riprap slope to the south and west of the tank farm.

Berm App., Attachment C: Stormwater Management Plan, 3–4.

91. Stormwater from the truck loading rack similarly flows through the interceptor and oil/water separator before discharging to the New Haven Municipal Separate Storm Sewer System (“MS4”):

The interceptor and catch basins provide secondary containment in the event that a spill occurs at the truck racks. . . . To prevent a discharge of oil from OWS-1 to the City of New Haven storm sewer, the separator is equipped with a sensor designed to detect a certain amount of product in the discharge water. The sensor automatically disables the pump from the interceptor tank when oil is detected. If oil is not detected, stormwater discharges the City of New Haven storm sewer system on Waterfront Street.

SWPPP at 54.

92. Drainage Area 002 supports the vessel dock. SWPPP at 55. Stormwater collected in this area via drip trays is inspected for sheen and then discharged to New Haven Harbor. SWPPP at 55. If the stormwater contains a sheen, the water is not released into the Harbor. *Id.* at 55.

93. Importantly, the purpose of the Containment Areas around the ASTs is not to keep water out and act as flood protection. Instead, the Containment Areas are intended to contain oil in the event one of the storage tanks ruptures. As described in the SWPPP:

The terminal's yard and tank farm areas have been designed such that potential spills occurring within the terminal yard and tank farm are contained within secondary containment. Potential spills would flow towards low elevation areas within secondary containment.

Id. at 21.

94. According to the Berm Application for Development Permit and Site Plan Review submitted in February 2020,

[t]he elevation along the top of the existing secondary containment structure ranges from a minimum elevation of 10.7 to a maximum elevation of 13.64. As such, the containment structure volume is limited by the minimum elevation of 10.7. In order to provide additional containment for the permitted tanks and protect the tank farm from a 100-year storm event, Gulf is proposing to modify the structure by raising the overall elevation to 13.0 feet (NAVD 88).

Ex. D at 2. While Gulf's application assumes that raising the berm heights to 13.0 feet will adequately provide protection in a storm, this assumption is incorrect. *See Declaration of Dr. Wendi Goldsmith, Exhibit G, ¶¶ 74-95.*

95. The SWPPP describes the tank farm containment areas as follows:

The dike separating the two sections of the tank farm is lower than any portion of the perimeter berm, allowing both sections to work in combination. The land surface within these diked impoundment areas is relatively flat with drains at low points that discharge storm water by gravity to Lift Station 2 (a concrete holding tank). Water is pumped from this tank to a catch basin (CB-14) that ultimately drains to the interceptor (Int-1) where it is pumped to the oil/water (O/W) separator prior to discharge off-site.

SWPPP at 22.

96. The secondary containment area accounts for spills up to 110% of the largest storage tank's capacity—which includes 10% freeboard—which is calculated using “the largest tank plus the precipitation from a 25-year, 24-hour storm, and 10% of the total volume of all tanks in the area.”

SWPPP, App. C, at 1.

97. Nevertheless, the impermeability of the secondary containment area floors has not been certified:

The terminal manager has indicated that stormwater routinely collects in the tank farm following normal precipitation events prior to evaporating or infiltrating into the ground or discharging to a catch basin. *However, specific calculations/ investigations confirming that the permeability of the secondary containment system is sufficiently impervious to prevent migration of petroleum products to a navigable water body were not available.*

SWPPP at 22 (emphasis added); *see also id.* at App. D.

98. In its Berm Application, Gulf proposed

to install a 60 mil geomembrane liner and bentonite clay in select areas to provide a more consistent impermeable barrier than is provided by the current controls. Following the improvements to the containment structure (i.e., earthwork on berms, containment area floor, and concrete wall), Gulf will install the liner over the entire containment area. The liner will be underlain by a 2-inch layer of processed aggregate (imported material) and a geotextile fabric for protection from abrasion and/or puncture. It will be anchored at the top of the embankment by burying the edge of the liner in an excavated trench. The liner will be installed in sections along the containment area floor and around existing structures. The liner will be installed by overlapping adjacent liner sections and field-welded to create a fully sealed barrier. The liner will be mechanically attached to the exposed tank chimes, existing structures, and walls and field welded to create a seal around the existing structures. In select areas, as necessary, a layer of bentonite clay will be used where impractical to install the liner (i.e. beneath product pipelines).

Ex. D at 5.

99. To date, upon information and belief, Gulf has neither applied for nor received a building permit to begin construction on the containment berms or floor.

C. Hazardous Materials Handled and Stored

100. At the Terminal, Gulf is regulated under RCRA as a generator of hazardous waste, Handler ID No. CTD002901510.

101. At the time of the filing of this Complaint, the Terminal is categorized as a Small Quantity Generator under RCRA and Connecticut's implementing regulations.

102. Based on the information currently available to CLF, the toxic and hazardous wastes and pollutants listed below, many of which are highly carcinogenic, are present at the Terminal: petroleum hydrocarbons and other constituents including but not limited to toxic chemicals, such as 1,2,4-Trimethylbenzene, Benzene, Benzo(G,H,I)perylene, Cyclohexane, Ethylbenzene, Lead, Methyl Tert-Butyl Ether, N-Hexane, Naphthalene, Polycyclic Aromatic Compounds, Tert-Butyl Alcohol, Toluene, and Xylene.

103. The soil and groundwater within the Terminal are also contaminated by petroleum-related constituents, according to an environmental site assessment submitted by Defendant to CT DEEP in March 2018. *Phase III Environmental Site Assessment*, 8-17 (March 2018).

104. Remediation activities to address this contamination have been going on since the 1990s. *Remedial Action Plan*, 21 (March 1, 2019).

105. Gulf's remediation filings indicate that the soil and groundwater at the Terminal contain toxic pollutants in excess of Connecticut remediation standards, including extractable total petroleum hydrocarbons ("ETPH"), semi-volatile organic compounds ("SVOCs"), volatile organic compounds ("VOCs"), lead, benzene, benzo (a) pyrene, benzo (g, h, i) perylene, chrysene, 2-Methylnaphthalene, 1-Methylnaphthalene, ethylbenzene, isopropylbenzene, n-propylbenzene, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, and m,p-Xylene. *See Remedial Action Plan*, 9–11 (March 1, 2019); *Phase III: Environmental Site Assessment*, App. C, Tables 3–4 (March 2018).

D. Observations of the Terminal

106. Dr. Wendi Goldsmith was retained to investigate the site surrounding the Terminal and produce a preliminary analysis to accompany this Amended Complaint, a copy of which is attached hereto as Exhibit G.

107. Dr. Goldsmith visited the Terminal on October 20, 2022 and October 25, 2022. Her observations are described in Paragraphs 33-47. *See* Exhibit G.

108. She noted oil sheen in at least three locations and noted it may have come from one of Gulf's outfall pipes, "from the dock, hydrologically connected groundwater, or via leaching from the containment boom waiting for deployment around the next tanker ship to dock." *Id.* at ¶ 39. "[G]iven the highly pervious ground surface of the containment area," she also noted the sheen could be coming from contaminated groundwater. *Id.* at ¶ 40.

109. Petroleum odors were also very intense. *Id.* at ¶¶ 36, 39-40.

110. She concluded:

Based on my experiences with the waters near the Gulf Terminal, as well as various satellite images I have seen showing the Terminal and waters over time, I believe that the oil sheen I saw and the petroleum odor I smelled during my visit on 25 October 2022 to be present most days. Additionally, I believe it to be heavier and more concentrated at times than what I viewed by boat on 25 October, based on my observations upriver from the Terminal and via viewing distinctly heavy sheen plumes on satellite images.

Ex. G. at ¶ 34.

111. There were areas lacking maintenance, as well. *Id.* at ¶ 42 ("the shoreline condition falls far short of best industry practice because initial design and construction appear flawed and maintenance is clearly lacking.").

112. Regarding the containment berms, Dr. Goldsmith noted "the steep slopes of the containment berm have been surfaced with a layer of medium gravel, a structurally unsubstantial material offering little value against coastal erosion forces." *Id.* at ¶ 39.

113. “Based on my visual observation and assessment of conditions on site, the berms are inconsistent with suitable design criteria for a berm designed or maintained to endure common causes of coastal storm damage, such as wave forces, impacts from floating debris as large as unmoored ships, overtopping of berms which causes erosion of the crest and backside of berms/levees, etc. Hence, they visibly lack suitable features and well-maintained conditions adequate to be relied upon as flood protection measures, or even to withstand coastal storm forces while providing reliable secondary containment.” *Id.* at ¶ 75.

114. In addition, she observed, “[T]he Terminal does not demonstrate physical attributes indicating preparedness for severe weather driven risks, but rather indicates a lack of preparedness leading to present, substantial risks of weather-related spills and releases. This lack of preparedness creates compounding risks as climate change factors worsen over time.” *Id.* at ¶ 15; *see also* ¶ 22 (“The physical conditions and documentation associated with the Terminal do not indicate that the Terminal is in compliance with best industry practices . . . , thus creating a substantial risk of releases and discharges of pollutants and contaminants as well as spills of stored products.”).

115. Dr. Goldsmith also conducted water sampling in two locations. “One sample was collected from water flowing from the conveyance pipe’s outfall below the Q Bridge approach.” *Id.* at ¶ 49. “The second sample was collected from water standing in the deep sump catch basin directly outside the Terminal’s exit gate.” *Id.* at ¶ 50.

116. “The test results for the two samples fall below the Permit’s benchmark level of <5mg/l total oil and grease, and are relatively consistent, though not identical. However, because the timing of sample collection had allowed the “first flush” to escape, the levels appear high enough to suggest that had samples been collected at the prescribed timing, the levels may well have exceeded benchmark levels.” *Id.* at ¶ 51.

117. She concluded, “[W]hile the test results are not over benchmark levels, they do indicate a relatively high presence of total oil and grease, given the prior day’s storm event previously flushed out accumulated pollutant loads. . . . The presence of oil sheen and odor recently detected near Outfall 1-002 heighten my professional concern over this specific gap in testing results.” *Id.*

II. The Surrounding Environment: the Quinnipiac River, the Mill River, New Haven Harbor

118. New Haven Harbor and the Quinnipiac River split the City of New Haven in half, with the land of the City stretching down both sides of the River and Harbor. *See below image.*



Image of New Haven, including the Quinnipiac and Mill Rivers, GoogleEarth (Jan. 7, 2021)

A. Quinnipiac River

119. The Quinnipiac River forms its headwaters 38 miles upstream and drains into the New Haven Harbor and Long Island Sound. THE QUINNIPIAC RIVER FUND, *The Quinnipiac River: River History*, <http://www.thequinnipiacriver.com/about/river-history> (last visited Jun. 2, 2021).

120. Since early in New Haven’s history, the Quinnipiac has been recognized and appreciated as a valuable and treasured resource for the surrounding community. *Id.*

121. Oyster beds populated the Quinnipiac near the Fair Haven neighborhood and the Port, providing both a food source and a commodity—the shells were often used for fertilizer, road lining, and decoration. *Id.*

122. However, as New Haven and the surrounding towns industrialized and grew in the 1800s, the River became polluted from discharges from factories and city sewer systems. *Id.*

123. By the early 1900s, the River was so polluted that the oyster industry was almost gone and the fish had mostly disappeared near the Harbor. *Id.*

124. It was not until the passage of the Connecticut Clean Water Act of 1967 and the federal Clean Water Act in 1972 that the Quinnipiac began its long road to recovery. The 1970s and 80s saw the removal of many water-polluting businesses and the creation of parks, both state and municipal, along the River. *Id.*

125. Today, fish such as bluefish have returned, and oysters once again line the banks of the Quinnipiac, providing both a filtering, healing effect for the River itself, as well as an economic benefit to the community of New Haven.

126. “The lower Mill River and Quinnipiac River areas are the center of the City’s aquaculture industry. New Haven harbor is home to high quality and quantity oyster beds and is a central contributor to Connecticut’s premier status in the industry. The \$62 million Connecticut oyster industry represents 94% of all production in the Northeast. Dockside facilities are located on the rivers.” City of New Haven, *City of New Haven Natural Hazard Mitigation Plan Update II*, 4-1 (April 2017), *available at* <https://www.newhavenct.gov/civicax/filebank/blobdload.aspx?blobid=26456> (last visited Jun. 2, 2021).

127. The Quinnipiac River and its surrounding areas are also used frequently for recreation, including boating and fishing. In addition, Quinnipiac River Park, situated across the River from the Terminal on the water, contains a scenic walking path from which to view the River, as well as the various ducks, ospreys, egrets, and kingfishers which call the Quinnipiac River home.

128. The Quinnipiac River is tidally influenced and boasts six miles of tidal marshes along its banks. *Quinnipiac River Watershed Based Plan*, Appx A 37 (Dec. 2013) . (last visited Jun. 2, 2021). “Despite the encroachment of industrial and commercial development on the Quinnipiac tidal marsh over the years, the remaining portion of the marsh provides a unique ecological and recreational resource in a highly developed area. The Quinnipiac tidal marsh supports both estuarine and coastal zone species and offers a variety of opportunities for outdoor recreation.” *Id.* It is designated as an “Important Bird Area” by the Audubon Society. *Quinnipiac River Tidal Marsh*, National Audubon Society <https://www.audubon.org/important-bird-areas/quinnipiac-river-tidal-marsh> (last visited Jun. 2, 2021).

129. Quinnipiac Meadows, a specific portion of the tidal marsh area, is “an environmentally sensitive area” that “has become a focal point both for ecological restoration and economic development.” *City of New Haven Natural Hazard Mitigation Plan Update II*, 3-7– 8 (April 2017), available at <https://www.newhavenct.gov/civicax/filebank/blobdload.aspx?blobid=26456> (last visited Jun. 2, 2021).

130. The future of the Quinnipiac River, including all of its uses and their attendant benefits, is jeopardized by Gulf’s failure to prepare the Terminal for the effects of climate change.

B. Mill River

131. The Mill River begins its journey in Cheshire, Connecticut, winding its way through several towns before emptying in New Haven Harbor. Fuss & O’Neill, *Mill River Watershed*

Based Plan, 5 (Sept. 2018), available at https://portal.ct.gov/-/media/DEEP/water/watershed_management/wm_plans/millnhwbppdf.pdf?la=en (last visited Jun. 2, 2021).

132. It “runs directly through the center of [New Haven], connecting magnificent natural resources, from East Rock to the New Haven Harbor, and further afield from Sleeping Giant to the Long Island Sound” MILL RIVER TRAIL & CITY OF NEW HAVEN, *Mill River Trail Framework Plan*, 15 (2017), available at https://issuu.com/millrivertrail/docs/mrt_frameworkplan (last visited Jun. 2, 2021).

133. While portions of the Mill River are “[r]iddled with highways, train tracks, and privatized, abandoned and polluted properties, the lower section of the river nonetheless draws residents to its banks for recreation, exploration, rest, and reprieve.” *Id.*

134. Because of its central location, beauty and potential for connecting people and places, the City of New Haven and local community groups have taken great steps to both clean up the River and to create new and improved recreational spaces along its banks. *See* Breen, Thomas, *Mill River Trail’s Phase One Approved*, NEW HAVEN INDEPENDENT (Apr. 19, 2018), available at https://www.newhavenindependent.org/index.php/archives/entry/mill_river_trail/ (last visited Jun. 2, 2021). (“[A] dedicated group of volunteers has collaborated closely with the City Plan Department, the Engineering Department, and the Urban Resources Initiative (URI) over the past few years to beautify the existing riverfront property, and to develop a vision and a plan for converting an overgrown and uneven riverfront trail into a lush, durable, and continuous connector of two adjacent but disparate neighborhoods.”).

135. Gulf’s failure to prepare its Terminal for the impacts of climate change leave the Mill River and the community benefits it provides at risk, putting the burden and cost of a climate-disaster at the Terminal on the New Haven community.

C. New Haven Harbor and the Port of New Haven

136. The Port of New Haven is located in the northeastern part of the Harbor near the outlet of the Quinnipiac River.

137. According to the Port of New Haven’s website, the Port is “the highest volume commercial shipping port on the Long Island Sound and is considered the busiest port between Boston and New York City. . . . The 366-acre port district is primarily comprised of a cluster of privately owned facilities that handle petroleum products, general bulk, cargo, scrap metal, metallic products, cement, sand, stone, salt, break bulk and project cargo.” City of New Haven, *Port of New Haven*, https://www.newhavenct.gov/gov/depts/port_authority/port.htm (last visited Jun. 2, 2021).

138. In addition to providing a platform for various industries, the New Haven Harbor Watershed, which includes the Mill and Quinnipiac Rivers, has been designated an Urban Wildlife Refuge Partnership. “The project has been taking place in the city between the U.S. Fish and Wildlife Service, Audubon Connecticut, along with other partners, and aims to use these lands to create a network of wildlife-friendly habitat oases and improvements throughout the city.” U.S. FISH & WILDLIFE SERVICE, *New Haven Harbor Watershed Urban Wildlife Refuge Partnership*, available at https://www.fws.gov/uploadedFiles/Region_5/NWRS/North_Zone/Stewart_B_McKinney/NewHavenFactSheet.pdf (last visited Jun. 2, 2021); *see also* AUDUBON CONNECTICUT, *Urban Oases in the New Haven Harbor Watershed*, <https://ct.audubon.org/conservation/urban-oases-new-haven-harbor-watershed> (last visited Jun. 2, 2021); *Urban Oasis on the Trail*, MILL RIVER TRAIL (Aug. 5, 2017), available at <http://dev-millrivertrail.pantheonsite.io/urban-oasis-on-the-trail/> (last visited Jun. 2, 2021).

139. The Port is at substantial risk of flooding from severe weather events. As the City’s Natural Hazard Mitigation Plan Update II states:

This area is partly within the 100-year floodplain with a base elevation equal to the coastal inundation. Topography and drainage problems cause flooding, and residents have reported frequent inconveniences due to street flooding.

City of New Haven Natural Hazard Mitigation Plan Update II, 3-29 (April 2017), available at <https://www.newhavenct.gov/civicax/filebank/blobdload.aspx?blobid=26456> (last visited Jun. 2, 2021).

140. Gulf's failure to plan and prepare the Terminal for the impacts of climate change endangers the Harbor and all its economic and community resources.

D. Impaired Waters

141. According to at least twelve years of State of Connecticut Integrated Water Quality Reports published by the Connecticut Department of Energy and Environmental Compliance pursuant to Section 305(b) and 303(d) of the Clean Water Act, the waters surrounding the Terminal, including New Haven Harbor and the mouths of the Quinnipiac, Mill, and West Rivers, are impaired. CT Dept. of Env'tl. Prot., *Water Quality 305(b) Reports to Congress*, available at <https://portal.ct.gov/DEEP/Water/Water-Quality/Water-Quality-305b-Report-to-Congress/Archive-Previous-IWQR-Cycles> (last visited Nov. 2, 2022).

142. These waters are impaired for oil and grease, fecal coliform, dissolved oxygen saturation, dissolved oxygen, and enterococcus. *Id.* According to the Reports, many of these impairments come from stormwater, industrial point source discharges, municipal discharges, landfills, illicit discharge, remediation sites, groundwater contamination, combined sewer overflow. *Id.*

143. "These impairments have been evaluated at length in the scientific literature and, depending on the pollutant, activity, and effects of recent rainfall or other pollutant mobilizing events, pose recognized health risks to humans exposed to them via swimming and/or eating finfish or shellfish. Similarly, multiple species of flora and fauna are known to be affected at various life stages by pollutant exposure." Ex. G, ¶ 111.

144. Dr. Goldsmith also stated, “Bulk petroleum storage terminals contribute many of these contaminants to the surrounding waters, and based upon . . . deficiencies in stormwater management [at the Terminal], I have reason to believe the Gulf Terminal is likely contributing to these impairments.” *Id.* at ¶ 110.

III. Gulf’s Clean Water Act Permit

145. Gulf operates the Terminal pursuant to the General Permit for Discharge of Stormwater Associated with Industrial Activity issued by CT DEEP (“General Permit”). A version of the General Permit was first effective on October 1, 2011. The General Permit has been extended four times: on October 1, 2016, October 1, 2018, October 1, 2019, and October 1, 2021. It is set to expire on September 30, 2024. *See* CT DEEP, *Notice of Reissuance without Modifications* (June 22, 2021), *available at* https://portal.ct.gov/-/media/DEEP/water_regulating_and_discharges/stormwater/industrial/20210614-GSI_ReissuanceNotice-websiteSIGNED.pdf (last visited Nov. 2, 2022). A copy of the 2019 Permit is attached hereto as Exhibit E. The 2021 Permit can be found online at https://portal.ct.gov/-/media/DEEP/water_regulating_and_discharges/stormwater/industrial/20210316-Industrial-General-Permit-As-Is-Renewal---CleanSIGNED.pdf.¹

146. The Registration Number for the Terminal’s permit is GSI001571.

147. As the name implies, the General Permit is not specific to the Terminal.

148. Instead, the General Permit applies to stormwater discharges from “industrial activity” at any facility that registers for coverage under the General Permit. *See* Permit § 3(a)–(b). More specifically, the permit applies to “[t]he discharge of stormwater associated with industrial activity . . . to surface water or to a storm sewer system . . .” *See id.*

¹ When citing to the Permits, CLF cites to the Section numbers, as they are the same in both documents.

149. The Permit defines “*Stormwater discharge associated with industrial activity*” as “the discharge from any conveyance which is used for collecting and conveying stormwater and which is directly related to manufacturing, processing or material storage areas at an industrial activity.”

Permit § 2.

150. The Permit defines “industrial activity” in pertinent part as:

any activity listed below with primary Standard Industrial Classification (SIC) codes as identified by “Standard Industrial Classification Manual, Executive Office of the President, Office of Management and Budget 1987” or a primary activity described in narrative form below . . . (11) Facilities classified as Standard Industrial Classification 5171 (Petroleum Bulk Stations and Terminals);

Permit § 2.

151. The Permit defines “*Stormwater*” as “waters consisting of rainfall runoff, including snow or ice melt during a rain event but not including mine dewatering waters.” Permit § 2.

152. Because the Permit only authorizes discharges of “stormwater,” discharges of pollutants from non-stormwater, such as storm surge flooding of river and ocean water, is prohibited by the Permit. In fact, as explained further *infra*, the Permit states that Gulf “must eliminate non-stormwater discharges.” Permit § 5(b)(11).

153. Under the section entitled “Conditions of This General Permit,” the Permit states:

a permittee shall assure that authorized activities are conducted in accordance with the following conditions:

(3) There shall be no distinctly visible floating scum, oil or other matter contained in the stormwater discharge. Excluded from this are naturally occurring substances such as leaves and twigs provided no person has placed such substances in or near the discharge.

(4) The stormwater discharge shall not result in pollution due to acute or chronic toxicity to aquatic and marine life, impair the biological integrity of aquatic or marine ecosystems, or result in an unacceptable risk to human health.

(5) The stormwater discharge shall not cause or contribute to an exceedance of the applicable Water Quality Standards in the receiving water.

Permit § 5(a).

A. Water Quality Standards

154. The Permit requires that the Terminal must comply with the following condition: “The stormwater discharge shall not cause or contribute to an exceedance of the applicable water quality standards in the receiving waters.” Permit § 5(a)(5).

155. New Haven Harbor, including the waters receiving discharges from the Terminal and more generally proximate to the Terminal, are classified as Classification SB pursuant to the Connecticut Surface Water Quality Standards (“WQS”) adopted by the State and approved by the U.S. Environmental Protection Agency under section 303 of the Clean Water Act. *See State of CT Dept. Of Env'tl. Prot., Water Quality Standards* (2011), available at https://portal.ct.gov/-/media/DEEP/water/water_quality_standards/WQS-Final-Adopted-February-25-2011.pdf.

156. For Classification SB waters, Connecticut has adopted “Designated Uses” to be “These waters are designated for: habitat for marine fish, other aquatic life and wildlife; commercial shellfish harvesting; recreation; industrial water supply; and navigation.” *Id.* at 16. As detailed therein, Connecticut has found New Haven Harbor’s designated uses to be impaired. *Id.*

157. The WQS also specify water quality criteria that must be met in SB waters:

For “Sludge deposits-solid refuse-floating solids-oils and grease-scum” the SB criteria mandate “None except for small amounts that may result from the discharge from a grease waste treatment facility providing appropriate treatment and none exceeding levels necessary to protect and maintain all designated uses.”

For “Color” of waters the SB criteria mandate “None resulting in obvious discoloration of the surface water outside of any designated zone of influence.”

For “Taste and odor” the SB criteria mandate that the water must be “As naturally occurs. None that would impair any uses specifically assigned to this Class.”

Id.

B. Connecticut Coastal Management Act (“CMA”)

158. The General Permit states:

This general permit authorizes the activity listed in the “Eligible Activities” section (Section 3(a)) of this general permit provided: (2) Coastal Management Act

Such activity must be consistent with all applicable goals and policies in section 22a-92 of the Connecticut General Statutes, and must not cause adverse impacts to coastal resources as defined in section 22a-93(15) of the Connecticut General Statutes.

Permit § 3(b).

159. The Coastal Management Act applies to “all property lying within the coastal boundary.”

Conn. Gen. Stat. § 22a-94(g).

160. New Haven has adopted an official coastal boundary map depicting the applicable coastal boundary pursuant to Conn. Gen. Stat. § 22a-94. *See* CT DEEP, *Coastal Boundary Map for New Haven, Connecticut* (Jan. 2013), *available at* http://cteco.uconn.edu/maps/town/Coastal_Boundary/cstlbnd_NEW_HAVEN.pdf last visited Jun. 2, 2021). It “shows the extent of lands and coastal waters as defined by Connecticut General Statute within Connecticut’s coastal area.”

161. The Terminal is located within the delineated coastal boundary in New Haven.

162. The provisions referenced in the Permit, which first became effective in 2012, state in pertinent part:

(a) The following general goals and policies are established by this chapter: . . .

(5) To consider in the planning process the potential impact of a rise in sea level, coastal flooding and erosion patterns on coastal development so as to minimize damage to and destruction of life and property and minimize the necessity of public expenditure and shoreline armoring to protect future new development from such hazards;

Conn. Gen. Stat. § 22a-92.

163. A “rise in sea level” means “the most recent sea level change scenario updated pursuant to subsection (b) of section 25-68o.” Conn. Gen. Stat. § 22a-93(19) (as amended Jun. 2018); Conn.

Gen. Stat. Ann. § 25-68o (“[T]he Marine Sciences Division of The University of Connecticut shall publish a sea level change scenario” and “the Commissioner of Energy and Environmental Protection shall publish the sea level change scenario for the state on the Internet web site of the Department of Energy and Environmental Protection along with a notice that any previous updates are superseded.”).

164. Connecticut has adopted a sea level change scenario of 20 inches by 2050. CT DEEP, Statement of Commissioner Robert J. Klee, (Dec. 26, 2018), *available at* https://portal.ct.gov/-/media/DEEP/coastal-resources/coastal_management/coastal_hazards/SeaLevelChangeDEEPStatement12262018pdf.pdf?la=en (last visited Jun. 2, 2021) (“The Connecticut Institute for Resilience and Climate Adaptation (CIRCA) at the University of Connecticut has updated the sea level change scenarios as required in Public Act 18-82. . . . I hereby adopt CIRCA’s recommended sea level change scenario . . . [,] specifically: The sea level rise scenario shall be 0.5 m (1 foot 8 inches) higher than the national tidal datum in Long Island Sound by 2050.”).

165. The CMA goals and policies continue:

(b) In addition to the policies stated in subsection (a) of this section, the following policies are established for federal, state and municipal agencies in carrying out their responsibilities under this chapter:

(1) Policies concerning development, facilities and uses within the coastal boundary are: . . .

(C) to minimize the risk of oil and chemical spills at port facilities; . . .

(E) to disallow the siting within the coastal boundary of new tank farms and other new fuel and chemical storage facilities which can reasonably be located inland and to require any new storage tanks which must be located within the coastal boundary to abut existing storage tanks or to be located in urban industrial areas and to be adequately protected against floods and spills.

Conn. Gen. Stat. § 22a-92.

C. Control Measures

166. The Permit requires Gulf to implement “Control Measures” to guard against the risks of pollutant discharges in its stormwater.

167. Under the section entitled “Control Measures,” the Permit states:

Control Measures are required Best Management Practices (BMP) that the permittee must implement to minimize the discharge of pollutants from the permitted facility. The term “minimize” means reduce and/or eliminate to the extent achievable using control measures that are technologically available and economically practicable and achievable in light of best industry practice.

Permit § 5(b).

168. Section 2 of the Permit, the “Definitions” section, reiterates this definition of the term “Minimize”:

“Minimize”, for purposes of implementing control measures in Section 5(b) of this general permit, means reduce and/or eliminate to the extent achievable using control measures that are technologically available and economically practicable and achievable in light of best industry practice.

169. The Permit identifies 13 categories of “Control Measures.”

170. One of the control measures is entitled “Minimize Exposure,” which starts with the requirement that “[t]he permittee must minimize exposure to stormwater of materials identified in the ‘Inventory of Exposed Materials’ section (Section 5(c)(2)(D)(ii)) of this general permit.”

Permit § 5(b)(5).

171. The “Management of Runoff” control measure states:

The permittee shall investigate the need for stormwater management or treatment practices that shall be used to divert, infiltrate, reuse, or treat stormwater runoff in a manner that minimizes pollutants in stormwater discharges from the site. Any evaluation, construction or modification of the design of a stormwater drainage system requires certification by a professional engineer licensed to practice in the State of Connecticut. The permittee shall implement and maintain stormwater management or treatment measures determined to be reasonable and appropriate to minimize the discharge of pollutants from the site.

In implementing infiltration practices, care must be taken to avoid ground water contamination in accordance with Appendix C. Any stormwater infiltration measures implemented by the permittee and located within an aquifer protection area as mapped under section 22a-354b of the Connecticut General Statutes shall be conducted pursuant to sections 8(c) and 9(b) of the Aquifer Protection Regulations (section 22a-354i(1)-(10) of the Regulations of Connecticut State Agencies). The permittee must assure that stormwater run-off generated from the regulated activity is managed in a manner so as to prevent pollution of groundwater, and shall comply with all the requirements of this permit.

The permittee shall consider the potential of various sources at the facility to contribute pollutants to stormwater discharges associated with industrial activity when determining reasonable and appropriate measures. Where feasible, the permittee shall divert uncontaminated run-on to avoid areas that may contribute pollutants. Other appropriate stormwater management or treatment measures may include but are not limited to: vegetative swales or buffer strips, reuse of collected stormwater (such as for process water, cooling water or as an irrigation source), treatment technologies (e.g. swirl concentrators, sand filters, etc.), snow management activities, bioretention cells, green roofs, pervious pavement and wet detention/retention basins. The permittee shall ensure that such measures are properly designed, implemented and maintained in accordance with the Stormwater Quality Manual.

Permit § 5(b)(7) (emphasis added).

172. The “Preventive Maintenance” control measure states:

The permittee must implement a preventive maintenance program, which shall include but not be limited to: the inspection and maintenance of stormwater management devices (e.g. cleaning stormwater treatment devices, catch basins); the visual inspection and/or testing of on-site equipment and systems to identify conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters; and the appropriate maintenance of such equipment and systems. These areas shall be included in the Routine Inspections conducted under Section 5(d)(2) of this general permit. If the permittee maintains an existing preventive maintenance program that addresses the requirements of this control measure, they may use that program to meet this requirement. The existence of such a program and the location of its maintenance records shall be referenced in the Plan.

Permit § 5(b)(8).

173. Another of the “Control Measures” is entitled “Spill Prevention and Response Procedures,” which states in pertinent part:

The permittee must minimize the potential for leaks and spills. This shall include clearly identifying areas where potential spills can occur and their accompanying drainage points. The permittee must plainly label containers (e.g., “Used Oil,” “Spent Solvents,” “Fertilizers and Pesticides,” etc.) that could be susceptible to spillage or leakage in areas that could contribute pollutants to stormwater runoff. The permittee shall identify procedures for containing, reporting and cleaning up spills. These procedures must be provided to the appropriate personnel through Employee Training (subsection 10, below) along with the necessary equipment to implement a cleanup.

Permit § 5(b)(9) (emphasis added).

174. The “Non-Stormwater Discharges” control measure, referenced *infra*, states:

The Permittee must eliminate non-stormwater discharges except as provided in “Non-Stormwater Discharge Certification” (Section 5(c)(2)(F)) or as authorized by an individual permit issued pursuant to section 22a-430 or a general permit issued pursuant to 22a-430b of the Connecticut General Statutes, including the provisions of this general permit.

Permit § 5(b)(11).

D. Stormwater Pollution Prevention Plan

175. The Permit requires the permittee to develop a Stormwater Pollution Prevention Plan, or SWPPP. Permit § 5(c)(1)(A).

176. The Permit sets forth the elements that are required to be included in the SWPPP including, among other things: (i) a facility description, (ii) identification of “potential pollutant sources,” (iii) a description of the “control measures” implemented by the Terminal, and (iv) an engineer’s certification. *See* Permit § 5(c)(2).

177. In a section entitled “Potential Pollutant Sources,” the Permit provides that “[t]he [SWPPP] shall map and describe the potential sources of pollutants that may reasonably be expected to affect stormwater quality at the site or that may result in the discharge of pollutants during dry weather from the site.” Permit § 5(c)(2)(D). This section of the SWPPP must include, at a minimum, (i) a site map, (ii) an “inventory of exposed materials,” (iii) a “summary of potential pollutant sources,”

and (iv) a list of all spills and leaks of greater than five gallons occurring within the last three years of the certification. Permit § 5(c)(2)(D).

178. The Permit describes the required “Inventory of Exposed Materials” as:

A tabular inventory of non-gaseous materials at the site, including a description of potential pollutant

s associated with those materials that may be exposed to stormwater between the time of three years prior to the date of certification of the Plan and the present for the following areas:

- 1) loading and unloading operations;
- 2) roof areas;
- 3) outdoor storage activities;
- 4) outdoor manufacturing or processing activities;
- 5) dust or particulate generating processes; and
- 6) on-site waste disposal practices.

Permit § 5(c)(2)(D)(ii).

179. The Permit describes the “Summary of Potential Pollutant Sources” as:

A narrative summary of each area of the site specified in “Inventory of Exposed Materials” (Section 5(c)(2)(D)(ii), above) of this general permit and each associated potential source of pollution. Such summary shall include:

- 1) method and location of on-site storage or disposal;
- 2) materials management practices employed *to minimize contact of materials with stormwater runoff* between the time of three years prior to the effective date of this permit and the present;
- 3) the location and a description of *existing structural and non-structural control measures to reduce pollutants in stormwater runoff*; and
- 4) a description of any treatment the stormwater receives.

Permit § 5(c)(2)(D)(iii) (emphasis added).

180. The Permit describes the required documentation of “Control Measures” as follows:

The permittee must document the location and type of control measures installed and implemented at the site in accordance with “Control Measures” (Section 5(b)). *The permittee shall discuss the appropriateness and priorities of control measures in the Plan and how they address identified potential sources of pollutants at the site.* The Plan shall include a schedule for implementing such controls measures if not already implemented.

Permit § 5(c)(2)(E) (emphasis added).

181. The Permit requires that the SWPPP include a “Non-Stormwater Discharge Certification” that is “signed by a professional engineer licensed to practice in the State of Connecticut or a Certified Hazardous Materials Manager”, to include the following:

I certify that in my professional judgment, the stormwater discharge from the site consists only of stormwater, or of stormwater combined with wastewater authorized by an effective permit issued under section 22a-430 or section 22a-430b of the Connecticut General Statutes, including the provisions of this general permit, or of stormwater combined with any of the following discharges provided they do not contribute to a violation of water quality standards:

- landscape irrigation or lawn watering;
- uncontaminated groundwater discharges such as pumped groundwater, foundation drains, water from crawl space pumps and footing drains;
- discharges of uncontaminated air conditioner or refrigeration condensate;
- water sprayed for dust control or at a truck load wet-down station;
- naturally occurring discharges such as rising groundwaters, uncontaminated groundwater infiltration (as defined at 40 CFR 35.2005(20)), springs, and flows from riparian habitats and wetlands.

This certification is based on testing and/or evaluation of the stormwater discharge from the site. *I further certify that all potential sources of non-stormwater at the site, a description of the results of any test and/or evaluation for the presence of non-stormwater discharges, the evaluation criteria or testing method used, the date of any testing and/or evaluation, and the on-site drainage points that were directly observed during the test have been described in detail in the Stormwater Pollution Prevention Plan prepared for the site.* I further certify that no interior building floor drains exist unless such floor drain connection has been approved and permitted by the commissioner or otherwise authorized by a local authority for discharge as domestic sewage to sanitary sewer. I am aware that there may be significant penalties for false statements in this certification, including the possibility of fine and imprisonment for knowingly making false statements.

Permit § 5(c)(2)(F) (emphasis added).

182. The Permit requires that the SWPPP be amended within 120 days of certain events, including: “(A) [when] there is a change at the site which has an effect on the potential to cause pollution of the surface waters of the state . . . [and] (F) [when] necessary to address any significant sources or potential sources of pollution identified as a result of any inspection or visual monitoring.” Permit § 5(c)(5).

183. A Facilities Response Plan (FRP) is a plan required to be developed for “a significant and substantial harm facility” if it meets the over water transfer criterion, has a total oil storage capacity of one million gallons or more, and meets one or more of the other substantial harm factors.” Env’tl. Prot. Agency, *Criteria for Significant and Substantial Harm Facility Designation*, <https://www.epa.gov/oil-spills-prevention-and-preparedness-regulations/criteria-significant-and-substantial-harm> (last updated Jul. 14, 2022).

184. “[A]dditional significant and substantial harm factors are set out in 40 C.F.R. 112.20(f)(3). The additional significant and substantial harm factors include:

Frequency of past spills;
Proximity to navigable waters;
Age of oil storage tanks; and
Other facility-specific and region-specific information, including local impacts on public health.”

Id.

185. Consistent with the factual allegations in the Amended Complaint, the Terminal has been determined to be a significant and substantial harm facility and requires an FRP.

186. However, an FRP is required to address “response” to discharges and releases that occur from a facility, including those that occur due to weather and climate related hazards. In comparison, a SWPPP is prepared to comply with and implement the mandatory, enforceable

provisions of the Permit to effectuate the prevention of discharges of pollutants before spills or releases occur.

187. The FRP requirement and status is not incorporated or otherwise referenced in the Permit and does not serve the regulatory purpose of the SWPPP required by the Permit. The FRP and associated regulations do not include the annual review and update requirements of the SWPPP requirement. Unless adopted into the SWPPP by a Permit or through compliance activities by a permittee, the FRP is not enforceable pursuant to the Clean Water Act. The FRP is not prepared to comply with nor implement the regulatory standards set forth in the Permit.

IV. Pollutant Discharges and/or Releases from the Terminal

A. Factors Causing and/or Contributing to the Substantial Risk of Pollutant Discharges and/or Releases from the Terminal

188. Human emissions of greenhouse gases are causing changes to Earth's climate, referred to as "climate change."

189. Climate change has further exacerbated and continues to exacerbate precipitation events and flooding, in part because warmer air holds more moisture, higher sea surface temperatures cause stronger storms and higher storm surges and melting sea ice raises sea levels.

190. While the Federal Emergency Management Administration ("FEMA") estimates that a 100-year flood in Connecticut would cause over \$13 billion in property damage, "climate scientists estimate that by 2050 this '100 year flood' will revisit the Connecticut coast, on average, not once every 100 years, but once every twelve-and-a-half to twenty-five years." William R. Rath et al., *Floodplain Building Elevation Standards: Current Requirements & Enhancement Options for Connecticut Shoreline Municipalities*, UCONN SCHOOL OF LAW: MUNICIPAL RESILIENCE PLANNING ASSISTANCE PROJECT LAW & POLICY WHITE PAPER SERIES 2, (May 1, 2018) (citations

removed), *available at* <https://circa.uconn.edu/wp-content/uploads/sites/1618/2018/03/Floodplain-Building-Elevation-Standards.pdf> (last visited Jun. 2, 2021).

191. The reality of what currently constitutes a 100-year storm—both its severity and probability of occurring—has likely already changed given that FEMA bases its calculations of flood rates solely on historical data and does not take into account increased sea level rise, the increasingly frequent and more intense storms caused by climate change, and the development and addition of impervious surfaces in a given location.

192. In *Massachusetts v. Environmental Protection Agency*, the Supreme Court recognized “the enormity of the potential consequences associated with manmade climate change” and “[t]he risk of catastrophic harm.” 549 U.S. 497, 525–26 (2007). “The harms associated with climate change are serious and well recognized.” *Id.* at 521.

193. Companies in the fossil fuel industry, like Gulf, have long been aware of the present impacts and risks of climate change.

194. In 1972, the American Petroleum Institute (“API”) released a status report on all group-sponsored environmental research projects. Gulf is among the thirty-nine “company affiliations of committee members” listed in the status report. API, *Environmental Research, A Status Report*, at IV-1 (Jan. 1972), <http://files.eric.ed.gov/fulltext/ED066339.pdf> (last visited Jun. 2, 2021). The report contains a summary of a 1968 report on *Sources, Abundance, and Fate of Gaseous Atmospheric Pollutants* prepared for API. *Id.* at III-9. The API status report refers to the research initiative’s discussion of CO₂ as a “brief review of current thinking.” *Id.*

195. The *Sources, Abundance, and Fate of Gaseous Atmospheric Pollutants* report, by Stanford Research Institute (“SRI”), discusses the implications of a CO₂ generated “greenhouse effect” and consequential temperature increase, asserting that “[i]f the earth’s temperature increases

significantly, a number of events might be expected to occur, including the melting of the Antarctic ice cap, a rise in sea levels, warming of the oceans, and an increase in photosynthesis.” Robinson et al., *Sources, Abundance, and Fate of Gaseous Atmospheric Pollutants*, SRI, at 108 (1968), excerpt at <https://www.smokeandfumes.org/documents/document16> (last visited Jun. 2, 2021). In the report, SRI further states that “[a]lthough there are other possible sources for the additional CO₂ now being observed in the atmosphere, none seems to fit the presently observed situation as well as the fossil fuel emanation theory.” *Id.* at 109.

196. As early as the 1970s, experts at ExxonMobil recognized the link between carbon dioxide and climate change: “[T]here is general scientific agreement that the most likely manner in which mankind is influencing the global climate is through carbon dioxide release from the burning of fossil fuels.” Neela Banerjee, et al., *Exxon’s Own Research Confirmed Fossil Fuels’ Role in Global Warming Decades Ago*, INSIDE CLIMATE NEWS (Sept. 16, 2015), available at <https://insideclimatenews.org/news/15092015/Exxons-own-research-confirmed-fossil-fuels-role-in-global-warming> (last visited Jun. 2, 2021).

197. ExxonMobil has stated that the “company [] engineers its facilities and operations robustly with extreme weather considerations in mind. Fortification to existing facilities and operations are addressed, where warranted due to climate or weather events, as part of ExxonMobil’s Operations Integrity Management System.” ExxonMobil, *Energy and Carbon – Managing the Risks* 14 (2014), available at <http://www.lawandenvironment.com/wp-content/uploads/sites/5/2014/04/Report-Energy-and-Carbon-Managing-the-Risks1.pdf> (last visited Jun. 2, 2021).

198. In 1991, Royal Dutch Shell published a twenty-eight minute educational film entitled “Climate of Concern,” which warned about the risks of climate change. See Damian Carrington & Jelmer Mommers, *Shell’s 1991 warning: climate changing ‘at faster rate than at any time since*

end of ice age, THE GUARDIAN (Feb. 28, 2017), available at <https://www.theguardian.com/environment/2017/feb/28/shell-film-warning-climate-change-rate-faster-than-end-ice-age> (last visited Jun. 2, 2021). Shell claimed the warning about climate change was “endorsed by a uniquely broad consensus of scientists in their report to the United Nations at the end of 1990.” *Id.* The film says that “global warming is not yet certain, but many think that to wait for final proof *would be irresponsible*. Action now is seen as the only safe insurance.” *Id.* (emphasis added).

199. Royal Dutch Shell states in its 2016 Sustainability Report:

[t]he effects of climate change mean that governments, businesses and local communities are adapting their infrastructure to the changing environment. At Shell, we are taking steps at our facilities around the world to ensure that they are resilient to climate change. This reduces the vulnerability of our facilities and infrastructure to potential extreme variability in weather conditions.

We take different approaches to adaptation for existing facilities and new projects. We progressively adjust our design standards for new projects while, for existing assets, we identify those that are most vulnerable to climate change and take appropriate action.

Royal Dutch Shell plc, Sustainability Rep., at 19 (2016), <https://reports.shell.com/sustainability-report/2016/servicepages/download-centre.html> (last visited Jun. 2, 2021). The report further states that “Shell has a rigorous approach to understanding, managing and mitigating climate risks in our facilities.” *Id.*

200. Gulf also participated in an ongoing project with other major oil companies “to collect ocean data from newly installed Shell oil platforms for the development and calibration of environmental forecasting theories.” CENTER FOR INTERNATIONAL ENVIRONMENTAL LAW, *Smoke and Fumes: The Legal and Evidentiary Basis for Holding Big Oil Accountable for the Climate Crisis*, 10 (Nov. 2017), available at <https://www.ciel.org/wp-content/uploads/2019/01/Smoke-Fumes.pdf> (last visited Jun. 2, 2021).

201. The Intergovernmental Panel on Climate Change (“IPCC”) “was established by the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO) in 1988 to provide the world with a clear scientific view on the current state of knowledge in climate

change and its potential environmental and socio-economic impacts.” IPCC, *IPCC 30th Anniversary*, available at <https://www.ipcc.ch/reports/ipcc-30th-anniversary/#:~:text=The%20IPCC%20was%20established%20by,environmental%20and%20socio%2Deconomic%20impacts> (last visited Jun. 2, 2021).

202. As summarized in the Third National Climate Assessment, climate change is currently impacting human and environmental health and welfare:

- “Global climate is changing and this is apparent across the U.S. in a wide range of observations. The global warming of the past 50 years is primarily due to human activities, predominantly the burning of fossil fuels.” *Id.* at 15.
- “Some extreme weather and climate events have increased in recent decades, and new and stronger evidence confirms that some of these increases are related to human activities.” *Id.* at 15.
- “Human-induced climate change is projected to continue, and it will accelerate significantly if global emissions of heat-trapping gases continue to increase.” *Id.* at 15.
- “Impacts related to climate change are already evident in many sectors and are expected to become increasingly disruptive across the nation throughout this century and beyond.” *Id.* at 15.
- “Climate change threatens human health and well-being in many ways, including through more extreme weather events and wildfire, decreased air quality, and diseases transmitted by insects, food, and water.” *Id.* at 16.
- “*Infrastructure is being damaged by sea level rise, heavy downpours, and extreme heat; damages are projected to increase with continued climate change.*” *Id.* at 15 (emphasis added).

J. M. Melillo *et al.*, eds., *Third Nat’l Climate Assessment*, U.S. Global Change Research Program at 15 (2014), available at http://s3.amazonaws.com/nca2014/low/NCA3_Climate_Change_Impacts_in_the_United%20States_LowRes.pdf (last visited Jun. 2, 2021).

203. These changes, which exacerbate the risk of pollutant discharges and/or releases from precipitation and/or flooding, have already occurred, are continuing to occur, and are certain to worsen over time.

204. “Infrastructure will be increasingly compromised by climate-related hazards, including sea level rise, coastal flooding, and intense precipitation events.” *Third Nat’l Climate Assessment*, Ch. 16: Northeast, at 379.

205. “It is indisputable that climate change poses substantial risks to public and private infrastructure and other complex facilities generally and in Connecticut specifically, with facilities such as the Terminal posing ongoing certainly impending and substantial risks of pollutant releases through weather and climate driven spills and releases.” Ex. G, ¶ 10.

206. “These weather-driven spills and releases have been regularly demonstrated at facilities like the Gulf Terminal on an increasingly regular basis associated with climate-driven severe precipitation and storms.” *Id.*

1. Flooding

207. The Terminal is at severe risk of flooding from (a) storm surge, (b) sea level rise, and (c) increasing ocean temperatures.

a. Storms and Storm Surge Contribute to Flooding

208. Climate change is causing increases in the frequency of storms.

209. Climate change is causing increases in the intensity of storms.

210. The risk that Connecticut experiences an intense storm is increasing.

211. The risk that Connecticut experiences an intense storm is expected to continue to increase for at least the next 50 years.

212. Increasingly frequent and/or intense storm events and storm surges will cause and contribute to pollutant discharges and/or releases from the Terminal due to factors including, but not limited to, inadequate infrastructure design and infrastructure failure.

213. “People living in coastal flood zones are vulnerable to direct loss of life and injury associated with tropical storms and nor’easters. Flood damage to personal property, businesses, and public infrastructure can also result.” *Third Nat’l Climate Assessment*, Ch. 16: Northeast at 378.

214. “[I]t is *virtually certain* [i.e., there is a 99–100% probability] that intense tropical cyclone activity has increased in the North Atlantic since 1970.” See IPCC, *Climate Change 2014 Synthesis Rep. Fifth Assessment Rep.*, at 2 n.1, 53 (2015) (emphasis added), available at https://www.ipcc.ch/site/assets/uploads/2018/05/SYR_AR5_FINAL_full_wcover.pdf (last visited Jun. 2, 2021).

215. Coinciding with the increase in hurricanes has been “a substantial increase in most measures of Atlantic hurricane activity since the early 1980s, the period during which high-quality satellite data are available. These include measures of intensity, frequency, and duration as well as the number of strongest (Category 4 and 5) storms.” *Third Nat’l Climate Assessment* at 41.

216. Along the U.S. East Coast, “there has been a trend of increasing significant wave heights since at least the mid-1970s, with the trends being statistically significant at the 95% confidence level.” Paul Komar & Jonathan Allan, *Increasing Hurricane-Generated Wave Heights along the U.S. East Coast and Their Climate Controls*, 24 JOURNAL OF COASTAL RESEARCH 242, 487 (Mar. 2008).

217. Those increasing trends in wave height along the East Coast have been linked to the increasing numbers of hurricanes. IPCC, *Managing the Risks of Extreme Events & Disasters to*

Advance Climate Change Adaptation: Special Rep. of the IPCC, 181 (2012), available at https://www.ipcc.ch/site/assets/uploads/2018/03/SREX_Full_Report-1.pdf (last visited Jun. 2, 2021).

218. A relevant journal article published “by researchers at the National Oceanic and Atmospheric Administration and the University of Wisconsin at Madison, analyzed satellite data over the last 40 years and found that planetary warming during that period increased the likelihood of a tropical cyclone becoming a major hurricane — Category 3 strength or higher — by approximately 8% per decade.” Chris D’Angelo, *Climate Change Is Fueling Stronger Hurricanes, Federal Study Finds*, HUFFPOST.COM (May 19, 2020), https://www.huffpost.com/entry/hurricanes-climate-change-noaa-study_n_5ec3e9ecc5b68a8b77d88276. The article noted:

Over the past 40 y (and longer), anthropogenic warming has increased sea surface temperature (SST) in [tropical cyclone]-prone regions (22 \downarrow –24), and, in combination with changes in atmospheric conditions, this has increased [tropical cyclone] potential intensity in these regions Based on physical understanding and robust support from numerical simulations, an increase in environmental potential intensity is expected to manifest as a shift in the [tropical cyclone] intensity distribution toward greater intensity and an increase in mean intensity.

The greatest changes are found in the North Atlantic, where the probability of major hurricane exceedance increases by 49% per decade, significant at greater than the 99% confidence level

Kossin, James P., Knapp, Kenneth R., *et al.*, *Global increase in major tropical cyclone exceedance probability over the past four decades*, PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES, 2–3 (Apr. 10, 2020).

219. More intense storms in and around coastal areas result in greater storm surge.

220. Greater storm surge results in greater flooding in coastal areas.

221. Storm surge is increasing in New England.

222. Storm surge is increasing in Connecticut.

223. The severity of coastal flooding is increasing in New England.

224. The severity of coastal flooding is increasing in Connecticut.

225. The frequency of coastal flooding is increasing in New England.
226. The frequency of coastal flooding is increasing in Connecticut.
227. The storm surge threat associated with nor'easters in New England is steadily increasing due to sea level rise. See Jeff Masters, *Climate Change Impact on Nor'easters: An Increased Storm Surge Threat*, Weather Underground (Feb. 11, 2013), available at <https://www.wunderground.com/blog/JeffMasters/climate-change-impact-on-noreasters-an-increased-storm-surge-threat.html> (last visited Jun. 2, 2021). Moreover, "[w]intertime top 5% heavy precipitation events (both rain and snow) have increased over the Northeast U.S. in recent decades, so Nor'easters have been more of a threat to cause flooding problems and heavy snow events." Jeff Masters, *The Future of Intense Winter Storms*, Weather Underground (Mar. 3, 2010) (citation omitted), available at <https://www.wunderground.com/blog/JeffMasters/climate-change-impact-on-noreasters-an-increased-storm-surge-threat.html> (last visited Jun. 2, 2021).
228. The CT Governor's Steering Committee on Climate Change stated in a report that:
- Ports and Harbors are most susceptible to sea level rise and storm surges because of their location along the coast of Long Island Sound. More frequent storms could also affect maintenance dredging as sediments are both delivered to the Sound and relocated within the Sound during storms, especially extreme events. Consequently, needs for dredging will increase and any inability to keep ports and harbors functional could affect national security as well as commercial uses for freight transport and fishing, including aquaculture, and recreational boating uses. Breakwater structures, usually large stones, may deteriorate as wave heights and average depths increase. Loss of these breakwaters could have a devastating impact on some harbors. Land-side coastal infrastructure, including roads used for transporting goods, could be adversely impacted as they become impassable as a result of flooding. Secondary effects on the energy sector may occur if fuels such as home heating and power plant oil cannot be transported to ports and up rivers to storage terminals or power plants. Ports and harbors are also essential to the success of the fishing industry, primarily lobsters and shellfish.

Adaptation Subcommittee to the Governor's Steering Committee on Climate Change, *The Impacts of Climate Change on Connecticut Agriculture, Infrastructure, Natural Resources and Public*

Health 103 (April 2010) available at <https://portal.ct.gov/-/media/DEEP/climatechange/ImpactsofClimateChangepdf.pdf> (last visited Jun. 2, 2021).

229. “New Haven’s southern facing coastline and the geomorphology of Long Island Sound cause it to be particularly vulnerable to all hurricanes forecasted to track to New England. This is due to the ability of Long Island Sound to amplify hurricane surges.” See *City of New Haven Natural Hazard Mitigation Plan Update II*, 5-1 (April 2017).

230. “As a coastal town, New Haven experiences frequent flooding due to heavy rainfall and increasingly severe hurricanes and winter storms. Weather-related flooding is compounded by a high rate of sea level rise of 2.5mm per year (the global mean trend is 0.5mm per year).” CIRCA, *City of New Haven Commercial Industrial Toolbox Final Report*, 4 (Jul. 31, 2017), available at <https://circa.uconn.edu/wp-content/uploads/sites/1618/2016/03/CIgffgT-CIRCA-Final-Report-With-JPEG-Appendices-attached.pdf> (last visited Jun. 2, 2021).

231. According to the 2019 *Connecticut Natural Hazards Mitigation Plan*, “a Category 1 hurricane can be expected to make landfall in/near Connecticut once every ten to fifteen years. A Category 2 hurricane could be expected to make landfall in/near Connecticut once every twenty-three to thirty years, and a Category 3 hurricane has a calculated return period of forty-six to seventy-four years. With the last hurricane (Hurricane Bob, Category 2,) to impact Connecticut occurring in 1991, *[Connecticut]* can expect the occurrence of another hurricane to impact the state within the foreseeable future.” Dep’t. of Emergency Services and Public Prot., CT Dep’t of Energy and Env’tl. Prot., *Connecticut Natural Hazards Mitigation Plan Update*, 334 (2019) (emphasis added), available at https://portal.ct.gov/-/media/DEMHS/_docs/Plans-and-Publications/EHSP0023--NaturalHazardMitPlan.pdf.

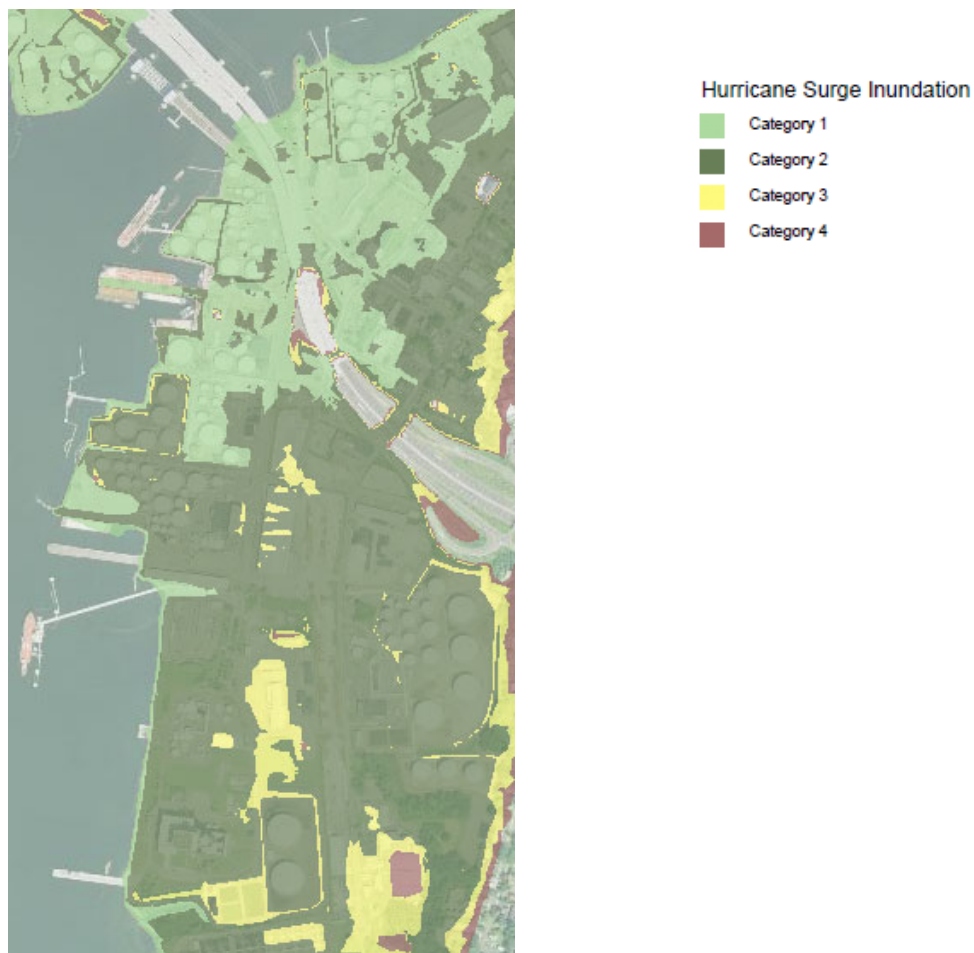
232. “Given the past history of major storms and a reasonable estimate of likely future scenarios, *it would be prudent for Connecticut to expect that there will be forthcoming hurricanes which make landfall in or near Connecticut and they will be of a greater intensity and longer duration than in the past. This may mean a potential increase in all categories of hurricanes normally experienced in New England.* Based on historical data for hurricane tracks within 50 miles of Connecticut, it is reasonable to assume that the state has a medium-low probability of future events (less than 1 event per year). It should be noted that this probability is based on the historical hurricane tracks since 1900 and is medium-low on an annual basis *but high based on recent events and perception.*” *Id.* at 335 (emphasis added).

CT DEEP maintains an online mapping tool, entitled the “Connecticut Coastal Hazards Viewer,” which grants the public access to environmental data and projections.

233. One of the datasets included in the Connecticut Coastal Hazards Viewer is the SLOSH model (Sea, Lake, and Overland Surges from Hurricanes), developed by the National Oceanic and Atmospheric Administration (“NOAA”), which produces hurricane surge values for worst case hurricane surge inundation areas.

234. The Army Corps of Engineers’ New England District utilized the data to examine areas of inundation for Category 1, 2, 3, and 4 hurricanes, producing a GIS overview layer on the map.

235. The SLOSH model depicts the present-day risk to the Terminal of inundation from storm surge associated with a Category 1 through Category 4 hurricane.



236. As indicated in the above SLOSH model, much of the Port of New Haven, including the Terminal, would be inundated by a Category 1 hurricane, while the remainder of the Port would be inundated by storm surge from a Category 2 hurricane.

237. The risk of flooding at the Terminal is not theoretical. The Terminal has been inundated by storm surge in the past.

238. According to the Coastal Hazards Viewer, all of the oil terminals in the Port of New Haven, including the Terminal, were inundated when Superstorm Sandy hit New Haven on October 29, 2012.



239. The storm surge in New Haven during Sandy was measured to be 9.14 feet above normal tide levels. *See City of New Haven Natural Hazard Mitigation Plan Update II* (April 2017). For purposes of comparison to the SLOSH Model referenced in Paragraph 233, *supra*, the storm surge from Superstorm Sandy corresponded to inundation from a Category 2 hurricane even though Sandy was a tropical storm by the time it made its way to Connecticut. *See* CNN Editorial Research, *Hurricane Sandy Fast Facts* (Sept. 30, 2020), *available at* <https://www.cnn.com/2013/07/13/world/americas/hurricane-sandy-fast-facts/index.html> (last visited Jun. 2, 2021).

240. Despite swamping the Terminal, the storm surge from Sandy was *less than initially anticipated* owing to a change in the storm's trajectory. Esteban L. Hernandez, *Connecticut officials talk resiliency to mark Superstorm Sandy anniversary*, NEW HAVEN REGISTER, (Oct. 31, 2017), *available at* <https://www.nhregister.com/news/article/Connecticut-officials-talk-resiliency-to-mark-12321276.php> (last visited Jun. 2, 2021).

241. "Though Sandy is often described as an anomaly, for many it was a call to action. The disaster showed how vulnerable wider areas of the United States are to extreme weather events, particularly in a time when scientists warn that climate change is threatening sea-level rise and hotter temperatures." Sarah Gibbens, *Hurricane Sandy, explained*, NATIONAL GEOGRAPHIC (Feb.

11, 2019), *available at* <https://www.nationalgeographic.com/environment/article/hurricane-sandy> (last visited Jun. 2, 2021).

242. Gulf similarly should have been called to action based on the fact that Sandy was a near-miss.

243. Post-Sandy, the City of New Haven commissioned a study of the resiliency of the I-95 corridor through New Haven. The study's authors noted that "[u]nder different storm tracking scenario, Superstorm Sandy could have caused more damage if the flooding inundation was superposed with high tides." Emmanouil Anagnostou & Wei Zhang, *Resiliency Analysis of Storm Surge for Interstate 95 Right-of-Way at Long Wharf/ New Haven, CT* 24 (Mar. 23, 2017), *available at* <https://trid.trb.org/view/1473186> (last visited Jun. 2, 2021). In particular, the study concluded that a similar storm in the future could increase the water level by almost three feet:

Table 6.2 TWL flooding scenarios estimated for the different scenarios of Table 6.1

	Maximum total water level	Time (UTC)	Description
1	3.73	10/30/2012: 00	Actual Superstorm Sandy conditions
2	4.911	10/30/2012 0:00	Surge + simulated wave + inland flooding+ sea level rise + future sandy low tides
3	6.495	10/30/2012 0:00	Surge + simulated wave + inland flooding+ sea level rise + future sandy high tides

Id. at 26.

244. According to J. Marshall Shepherd, an atmospheric scientist at the University of Georgia and former president of the American Meteorological Society, "One of the most devastating aspects of [Sandy] was surge[.] . . . As sea level continues to rise, whenever we get a storm like this – or even a garden-variety storm -- we are going to see more damage." Lauren Morello, *Hurricane Sandy, Scientists see extent of storm's damage linked to climate change*, E&E NEWS

(Oct. 31, 2012), *available at* <https://subscriber.politicopro.com/article/eenews/1059971867>, (last visited Jun. 2, 2021).

245. Storm surge can cause ASTs to buckle or float off their foundations, resulting in catastrophic oil spills. *See* Dave Flehing, *How Hurricanes that Hit the Texas Coast Can Float Giant Tanks*, National Public Radio (Oct. 7, 2013), *available at* <https://stateimpact.npr.org/texas/2013/10/07/how-hurricanes-that-hit-the-texas-coast-can-float-giant-tanks/> (last visited Jun. 2, 2020). During Hurricane Katrina, five or six major spills were caused by ASTs lifted by storm surge. *Id.*

246. Yet, Gulf's SWPPP does not include any measures that Gulf is taking to protect the ASTs, including such commonsense measures as filling the tanks with liquid before storms or anchoring the ASTs to their bases, let alone consideration of other strategies.

b. Sea Level Rise Contributes to Flooding

247. Climate change causes sea levels to rise.

248. Sea levels are rising in Connecticut.

249. Sea level rise is contributing to increases in the frequency of flood events in New England.

250. Sea level rise is contributing to increases in the intensity of flood events in New England.

251. Sea level rise is contributing to increases in the frequency of flood events in Connecticut.

252. Sea level rise is contributing to increases in the intensity of flood events in Connecticut.

253. Sea levels are expected to continue to rise in Connecticut for at least the next 50 years.

254. Sea level rise that has already happened, and that will certainly happen in the near future, interacts with the impacts of tides, heavy precipitation, and storm surge to cause and contribute to pollutant discharges and/or releases from the Terminal due to factors including, but not limited to, inadequate infrastructure design and infrastructure failure.

255. “Coastal flooding [in the Northeast] has increased due to a rise in sea level of approximately 1 foot since 1900. This rate of sea level rise exceeds the global average of approximately 8 inches . . .” *Third Nat’l Climate Assessment*, Ch. 16: Northeast at 373.

256. Sea level trends along the Northeast Atlantic “have been higher than the global rate over the last several decades, capped by a recent multiyear jump in sea level beginning in 2009.” NOAA, *Global & Regional Sea Level Rise Scenarios for the U.S.*, at 9 (Jan. 2017), available at https://tidesandcurrents.noaa.gov/publications/techrpt83_Global_and_Regional_SLR_Scenarios_for_the_US_final.pdf (last visited Jun. 2, 2021). This trend is projected to continue. *See id.* at vii (“Along regions of the Northeast Atlantic (Virginia coast and northward) and the western Gulf of Mexico coasts, RSL [relative sea level] rise is projected to be greater than the global average for almost all future GMSL [global mean sea level] rise scenarios.”).

257. Researchers have detected a “‘hotspot’ of accelerated sea level rise along the 1,000 km of coast from Cape Hatteras to above Boston and suggest it may be related to circulation changes in the North Atlantic Ocean.” NOAA, *Global Sea Level Rise Scenarios for the U.S. Nat’l Climate Assessment*, at 10 (Dec. 2012), available at https://cpo.noaa.gov/sites/cpo/Reports/2012/NOAA_SLR_r3.pdf (last visited Jun. 2, 2021). “Dynamical [sea level rise] resulting from ocean circulation patterns could be additive to the global mean [sea level rise] trend, creating even higher sea levels and potential coastal impacts in Boston, New York, and Washington, DC when compared to the Southeastern US.” *Id.* at 18-19.

258. “Sea level rise of two feet, without any changes in storms, would more than triple the frequency of dangerous coastal flooding throughout most of the Northeast.” *Third Nat’l Climate Assessment*, Ch. 16: Northeast at 374.

259. Another study found that “the odds of exceeding critical water-level thresholds increases exponentially with sea-level rise, meaning that fixed amounts of sea-level rise of only ~1–10 cm in areas with a narrow range of present-day extreme water levels can double the odds of flooding. Combining these growth rates with established sea-level rise projections, *we find that the odds of extreme flooding double approximately every 5 years into the future.*” M. Taherkhani *et al.*, *Sea-level rise exponentially increases coastal flood frequency*, 10 SCI REP 6466, 1 (Apr. 16, 2020) (emphasis added), available at <https://doi.org/10.1038/s41598-020-62188-4> (last visited Jun. 2, 2021).

260. Certain future changes are “committed” by “virtue of past or current forcings.” IPCC, *Climate Change 2013: The Physical Science Basis, Contribution of Working Grp. I to the Fifth Assessment Rep. of the IPCC*, at 128 (2013), http://www.climatechange2013.org/images/report/WG1AR5_ALL_FINAL.pdf (last visited Jun. 2, 2021). Continued sea level rise is “committed” as a result of past change in atmospheric composition, due to historical greenhouse gas and aerosol emissions, as well as the inertia and timescales of climate systems. IPCC, *Climate Change 2007: The Physical Science Basis, Working Grp. I Contribution to the Fourth Assessment Rep. of the IPCC*, at 68, 77 (2007), https://www.ipcc.ch/site/assets/uploads/2018/05/ar4_wg1_full_report-1.pdf (last visited Jun. 2, 2021).

261. “[I]t is *virtually certain* that global mean sea level rise will continue beyond 2100, with sea level rise due to thermal expansion to continue for many centuries.” IPCC, *Climate Change 2013: The Physical Science Basis, Contribution of Working Grp. I to the Fifth Assessment Rep. of the IPCC*, at 28 (2013), https://www.ipcc.ch/site/assets/uploads/2018/03/WG1AR5_SummaryVolume_FINAL.pdf (last visited Jun. 2, 2021). The IPCC defines “virtually certain” as a “99-100% probability.” *Id.* at 4.

262. Researchers have found that the greenhouse gases emitted by the year 2000 have already committed global mean sea level rise to approximately 1.7 meters (range of 1.2 to 2.2 meters). *See* Peter Clark, *Consequences of Twenty-First-Century Policy for Multi-Millennial Climate and Sea-Level Change*, NATURE CLIMATE CHANGE, at 6 (Feb. 8, 2016), https://hwpi.harvard.edu/files/climatechange/files/clark_etal_2016.pdf (last visited Jun. 2, 2021). “The sobering result encapsulated in this figure is that even if emissions were capped or reduced to some lower rate, we would still be committed to GMSL rise that is substantially larger than that experienced over much of recorded human civilization.” *Id.*

263. “In addition to Connecticut’s documented and increasing long term trend of sea level rise, it can also present impending risks of a sudden, though short-lived, effect which periodically occurs due to ephemeral shifts in ocean currents which affect how water flows, causing it to “pile up” along coastlines, creating higher water surface elevations.” Ex. G, ¶19

264. According to a summary of Connecticut’s climate published by NOAA’s National Centers for Environmental Information (“NCEI”), “[t]emperatures in Connecticut have increased about 3°F since the beginning of the 20th century (Figure 1).” NOAA NCEI, *State Climate Summaries: Connecticut*, available at <https://statesummaries.ncics.org/chapter/ct/> (last visited Jun. 2, 2021).

265. The NCEI Connecticut summary further explains:

Since 1880, global sea level has risen by about eight inches. Sea level has risen at the rate of 10–11 inches per century along the Connecticut coast, faster than the global rate. Sea level rise has caused an increase in tidal floods associated with nuisance-level impacts. Nuisance floods are events in which water levels exceed the local threshold (set by NOAA’s National Weather Service) for minor impacts. These events can damage infrastructure, cause road closures, and overwhelm storm drains. As sea level has risen along the Connecticut coastline, the number of tidal flood days (all days exceeding the nuisance level threshold) has also gradually increased. The most recent decade (2005–2014) had the greatest number (18) of any 10-yr period (Figure 6). Global sea level is projected to rise another 1 to 4 feet by 2100 as a result of both past and future emissions from human activities (Figure 7), and even greater increases can be expected along the northeast U.S. coast

following historical trends. Rising sea levels will have important coastal and floodplain impacts on local communities concentrated in these hazard prone areas.

Id.

266. According to an analysis done by Climate Central:

Even small amounts of sea level rise make rare floods more common by adding to tides and storm surge. Climate Central has estimated risk by combining local sea level rise projections with historic flood statistics from the NOAA water level station at Bridgeport, CT, 16 miles from the center of New Haven. For reference, our extreme values analysis indicates that the “100-year” flood height, is 5.8 feet above local Mean Higher High Water (high tide line). The highest observed flood at this location, in records from 1970 to 2015, reached 5.72 feet MHHW in 2012. Taken all together, these values suggest that floods above 6 feet likely pose significant concerns.

Based on the National Climate Assessment intermediate high sea level rise scenario, we project 4.1 feet of rise locally by 2100, from a 1992 baseline. *Our analysis translates this to 18 percent multi-year risk of at least one flood exceeding 6 feet from 2016 to 2030, a 49 percent risk by from 2016 to midcentury, and a 100 percent risk by 2100. Under the Assessment’s highest scenario, these chances increase to 20, 63, and 100 percent, respectively, and we compute a 99 percent risk of at least one flood exceeding 9 feet by the end of the century.*

CLIMATE CENTRAL, *Sea level rise and coastal flood exposure: Summary for New Haven, CT.*, at 1 (Jul. 21, 2016) (emphasis added), available at http://ssrf.climatecentral.org.s3-website-us-east-1.amazonaws.com/Buffer2/states/CT/downloads/pdf_reports/CTTown/CT_New_Haven-report.pdf (last visited Jun. 2, 2021).

267. “The increase in the risk of a flood exceeding 6 feet is based on anticipated sea level rise scenarios, but it still relies on assessment of past evaluation of storm risk (1970 – 2015), meaning that the historic-data-based percentages of 18 percent and 20 percent understate the actuality which reasonably accounts for future trends.” Ex. G, ¶ 14.

268. “The observed trends for Connecticut are consistent with, but larger in magnitude than those computed for the Northeast.” CIRCA, *Connecticut Physical Climate Science Assessment Report (PCSAR): Observed trends and projections of temperature and precipitation*, at 14 (Aug.

2019), *available at* <https://circa.uconn.edu/wp-content/uploads/sites/1618/2019/08/CTPCSAR-Aug2019.pdf> (last visited Jun. 2, 2021).

269. A 2019 analysis by CIRCA concluded that communities in Connecticut should plan that “sea level will be 0.5 m (1ft 8 inches) higher than the [1992 level] in Long Island Sound by 2050.” James O’Donnell, *Sea Level Rise in Connecticut* 1, 4 (Feb. 2019), *available at* <https://circa.uconn.edu/wp-content/uploads/sites/1618/2019/02/SeaLevelRiseConnecticut-Final-Report.pdf> (last visited Jun. 2, 2021).

270. This planning recommendation was adopted by the CT DEEP on December 26, 2018. CT DEEP, *Notice*, (Dec. 26, 2018) *available at* https://portal.ct.gov/-/media/DEEP/coastal-resources/coastal_management/coastal_hazards/SeaLevelChangeDEEPStatement12262018pdf.pdf?la=en (last visited Jun. 2, 2021).

271. A twenty-inch rise in sea level from 2018 to 2050 amounts to an average increase of 0.625 inches per year.

272. Thus, a reasonable design professional conducting a review and update of conditions should apply a planning assumption that sea level has risen 2.5 inches over the past four years since the planning standard was adopted by CTDEEP.

273. The CT Governor’s Steering Committee on Climate Change stated in a report that:

Port and Harbor sensitivity to climate change is variable: facilities with features such as existing bulkheads with substantial freeboard, floating docks or the ability to move landward may be little affected by a one foot change in sea level rise, while others may be seriously impacted, especially if there is little room for land-side infrastructure to retreat. Adaptive capacity is medium depending on local conditions. While larger ports may be maintained to be more resilient to the effects of sea level rise and storm surge than local marinas, re-engineering of Connecticut’s largest ports at New London, New Haven and Bridgeport as well as for the Submarine Base and other military installations may be necessary as climate change impacts continue to increase. *While bulkheads can be raised, and strengthened to withstand tomorrow’s 100-year storm, if upland space or affordability are constraints, some facilities may need to modify their capacity and make other*

adjustments in services. Elevation and intensity of land-side facilities are critical factors. For example, tank farms have low adaptive capacity, while bulk or container cargo lay down areas are more adaptable. While there may be local differences in the degree of impact, in general most of the coastal effects of climate change are likely to be Sound-wide.

Adaptation Subcommittee to the Governor's Steering Committee on Climate Change, *The Impacts of Climate Change on Connecticut Agriculture, Infrastructure, Natural Resources and Public Health*, 104 (Apr. 2010) (emphasis added).

274. Despite having understood climate change and its effects for decades, Gulf has not taken action to address the threat of sea level rise at the Terminal.

c. Increasing Sea Surface Temperatures Contribute to Flooding

275. Climate change is increasing sea surface temperatures in areas of the United States.

276. Increases in sea surface temperatures cause more intense storms.

277. Increases in sea surface temperatures cause more frequent storms.

278. Sea surface temperatures in New England are rising.

279. Sea surface temperatures in New England are expected to continue to rise for at least the next 50 years.

280. Increases in sea surface temperature and the resulting increase in frequency and magnitude of storm events cause and contribute to pollutant discharges and/or releases from the Terminal due to factors including, but not limited to, inadequate infrastructure design and infrastructure failure.

281. "The primary climatic forces affecting the coasts are changes in temperature, sea and water levels, precipitation, storminess, ocean acidity, and ocean circulation." *Third Nat'l Climate Assessment* at 582. "Sea surface temperatures are rising and are expected to rise faster over the next few decades, with significant regional variation, and with the possibility for more intense hurricanes as oceans warm." *Id.*

282. The rate of increase of sea surface temperatures in the northeast is greater than the global average. “From 1982 to 2006, sea surface temperature in the coastal waters of the Northeast warmed by close to twice the global rate of warming over this period.” *Id.* at 566.

283. Increases in sea surface temperature have been connected to increased risk of frequency and magnitude of storm events. The observed increases in activity in North Atlantic hurricanes “are linked, in part, to higher sea surface temperatures in the region that Atlantic hurricanes form in and move through.” *Id.* at 41.

284. According to a report by CT DEEP, average surface temperatures in Long Island Sound have been rising, with a change of almost 2 degrees between 1991 and 2015. CT DEEP, *2015 Long Island Sound Hypoxia Season Review*, 27 (2015), available at https://norwalkriver.org/wp-content/uploads/2014/05/2015-Season-Review_final.pdf (last visited Jun. 2, 2021).

285. Gulf has not taken action to address the threats associated with increasing sea surface temperatures at the Terminal.

2. Precipitation

286. Climate change can cause average annual precipitation in an area to increase.

287. The average annual precipitation has increased over the past 30 years, is increasing on an on-going basis, and will continue to increase into the future in Connecticut.

288. Average annual precipitation in Connecticut is virtually certain to continue to increase for at least the next 50 years.

289. Severe or intense precipitation events have caused, contributed to, and will continue to cause and contribute to pollutant discharges and/or releases from the Terminal due to factors including, but not limited to, inadequate infrastructure design and infrastructure failure.

290. . “Between 1895 and 2011, temperatures in the Northeast increased by almost 2°F (0.16°F per decade), and precipitation increased by approximately five inches, or more than 10% (0.4 inches per decade).” *Third Nat’l Climate Assessment*, Ch. 16: Northeast at 373

291. According to the NCEI report on Connecticut:

Annual average precipitation is projected to increase, with increases most likely occurring in spring (Figure 5) and winter. Increases in total precipitation and in the number of extreme precipitation events (e.g., storms) may also result in increased coastal and inland flooding risks. Coastal communities, characterized by many rivers, are particularly vulnerable to increases in total precipitation and the number of extreme precipitation events.

NOAA NCEI, *State Climate Summaries: Connecticut*, available at <https://state.summaries.ncics.org/chapter/ct/> (last visited Jun. 2, 2021).

292. CIRCA has concluded that “the annual total precipitation in CT is projected to increase by 4-5 inches (approximately 8.5%) by the midcentury (2040-2069) and by 4.5-5.5 inches (approximately 10%) by the late century (2070-2099).” CIRCA, *Connecticut Physical Climate Science Assessment Report (PCSAR): Observed trends and projections of temperature and precipitation*, 35 (Aug. 2019), available at <https://circa.uconn.edu/wp-content/uploads/sites/1618/2019/11/CTPCSAR-Aug2019.pdf> (last visited Jun. 2, 2021).

293. “Several extreme precipitation indices are projected to increase, including the number of days with more than 1 inch of precipitation [], number of heavy precipitation days [], fraction of total precipitation accounted for by heavy precipitation [], and the maximum 1-day and 5-day precipitation [], all indicating a substantial increase of flood risk by mid-century.” *Id.*

294.

295. However, Gulf has not taken action to address severe precipitation events at the Terminal.

B. Lessons from the Not-So-Distant Past

296. The unfortunate reality is that the present and substantial ongoing risk of pollutant releases and/or discharges from the Terminal is made worse by the factors described in Section IV.A, *supra*.

297. This reality has been demonstrated in the context of increased severe weather events all over the country, including Hurricane Katrina, Superstorm Sandy, and Hurricane Harvey. For example, in late October 2012, Motiva Enterprises LLC's Terminal in Sewaren, New Jersey suffered an approximately 378,000-gallon oil release into the Arthur Kill as a result of a containment failure. As reported in the New Jersey news media outlet NJ.com:

[A]t the Sewaren terminal of Motiva Enterprises, a subsidiary of Shell, the tidal surge damaged bulk fuel tanks, releasing approximately 378,000 gallons of low-sulfur diesel, officials said. Nearly three quarters of that amount escaped the containment area, rushing into the Arthur Kill and its tributaries. That's like 30 tanker trucks pouring their contents into the water.

It represents the largest fuel or oil spill in New Jersey in perhaps a decade or more, officials said.

'That's a major spill,' said Larry Ragonese, a spokesman for the state Department of Environmental Protection. 'On a normal basis, we would have had quite a bit of uproar and media attention.'

That, of course, did not happen as the region reeled amid death, destruction and darkness. Quickly and quietly, though, Shell and the other two oil companies that experienced leaks — at the Phillips 66 refinery in Linden and at the Kinder Morgan terminal in Carteret — moved in to plug breached tanks and contain what had already been released.

Within 24 hours, hundreds of workers had responded with oil skimmers, vacuum trucks, water barges, work boats and thousands of feet of containment boom, according to local, state and federal officials who have provided oversight for the work.

Ryan Hutchins, *Oil Spills, Other Hurricane Sandy Damage Present N.J. with Potential Pollution Headaches*, NJ.com (Nov. 14, 2012), http://www.nj.com/news/index.ssf/2012/11/hurricane_sandy_oil_spills.html (last visited Jun. 2, 2020).

298. Harvard's Daniel P. Schrag, Sturgis Hooper Professor of Geology in the Faculty of Arts and Sciences, stated in a news report regarding Superstorm Sandy that:

By midcentury, this will be the new normal. . . . How do you deal with extreme heat in the summer? It's going to be a challenge, but humans are adaptable. It's not going to be easy, just like a 13-foot storm surge will be the new norm on the Eastern seaboard.

Edward Mason, *Hello again, climate change: Sandy prompts renewed interest and concern, and Schrag says it should*, HARVARD GAZETTE (Nov. 6, 2012), available at <http://news.harvard.edu/gazette/story/2012/11/hello-again-climate-change/> (last visited Jun. 2, 2021).

299. In August 2005, Shell Oil's Mars Platform in the Gulf of Mexico suffered damages during Hurricane Katrina, not coming back online until May 2006. The storm forced Shell to begin "preparing for hurricanes in the Gulf of Mexico." Shell, *The Shell Sustainability Rep. 2006: Meeting the Energy Challenge*, at 23 (2006), available at <https://ungc-production.s3.us-west-2.amazonaws.com/attachments/1914/original/COP.pdf?1262614296> (last visited Jun. 2, 2021).

300. More recently, Hurricane Harvey's intense rains and flooding struck the Texas energy sector, damaging facilities and causing releases and discharges of pollutants, including toxic chemicals. Preliminary data from the National Weather Service shows that between August 24 and September 1, 2017, as much as 64.58 inches of rain fell in parts of Texas, including areas in and around Houston and Beaumont.

301. Hurricane Harvey was a 500-year storm (in the traditional historic context) that devastated the Houston area, a slow-moving onslaught of rain that caught the city unawares and wreaked havoc on Houston homes and industrial facilities alike.

302. Yet Harvey was not the first such storm to pass through Houston in 500 years. In fact, Harvey was the third such storm in three years to bombard the area, and it was Houston's very reliance on the 1-in-500-year projected frequency that led the city to inadequately prepare, leading

to unnecessary and disastrous consequences. Dara Lind, *The “500-year” flood: why Houston was so underprepared for Hurricane Harvey*, VOX (Aug. 28, 2017), available at <https://www.vox.com/science-and-health/2017/8/28/16211392/100-500-year-flood-meaning> (last visited Jun. 2, 2021); see also Blake, Eric S. & Zelinsky & David, A., Nat’l Hurricane Ctr., *Tropical Cyclone Report: Hurricane Harvey*, 9 (2018), available at https://www.nhc.noaa.gov/data/tcr/AL092017_Harvey.pdf (stating that total damages from Harvey have been difficult to calculate in part because a majority of the residential flood loss claims came from outside the 500-year flood plain) (last visited Jun. 2, 2021).

303. According to pollution reports submitted to state and federal regulators, “more than two dozen storage tanks holding crude oil, gasoline and other contaminants ruptured or otherwise failed when Harvey slammed into the Texas coast, spilling at least 145,000 gallons [] of fuel and spewing toxic pollutants into the air.” Matthew Brown & Larry Fenn, *Tank Failures in Harvey Reveal Vulnerabilities in Storm*, Associated Press (Sept. 9, 2017), available at <https://apnews.com/0485b3c424be4ce3bb555cf16a88f3bd> (last visited Jun. 2, 2021).

304. On August 28, 2017, Shell reported to the Texas Commission on Environmental Quality (“TCEQ”) that at its Deer Park facility, “at approximately 8:00 am, it was discovered that the external floating roof Tank G346 had material on top of the roof and in the dike area. Process indicators determined that the roof started sinking at 3:00 AM due to Hurricane Harvey dumping heavy and large amounts of rainfall in a short period of time.” Included among emissions reported during the event were approximately 2,968.8 pounds of benzene, 1,272.4 pounds of ethylbenzene, 11,451.1 pounds of toluene, and 7,634.1 pounds of xylene. See TCEQ, *Air Emission Event Reporting Database: Shell Oil Deer Park*, (Aug. 28, 2017), available at <https://www.tceq.texas.gov/airquality/emission-events> (last visited Jun. 2, 2021).

305. On August 28, 2017, Shell reported from its Deer Park facility that “[c]rude oil was discovered on the roof of tank A330. Heavy rains from Hurricane Harvey resulted in significant roof stress, which then allowed crude to get onto the roof.” Included among emissions reported during the event were approximately 19 pounds of benzene and 122.2 pounds of toluene. *See* TCEQ, *Air Emission Event Reporting Database: Shell Oil Deer Park* (Aug. 28, 2017), available at <https://www.tceq.texas.gov/airquality/emission-events> (last visited Jun. 2, 2021).

306. At Kinder Morgan’s Pasadena Terminal, “a [6.3-million-gallon] fuel storage tank spilled an unspecified amount of gasoline . . . after tilting over due to large volumes of rain from Harvey.” *Texas Regulators Report Gas Spill Due to Harvey*, Associated Press (Aug. 28, 2017), available at <https://www.houstonpublicmedia.org/articles/news/2017/08/28/233577/texas-regulators-report-gas-spill-due-to-harvey/> (last visited Jun. 2, 2021).

307. At an Arkema Inc. facility in Crosby, Texas, flooding overwhelmed primary power and two sources of emergency backup power causing explosions and black smoke that forced evacuations of areas within 1.5 miles of the plant. Arkema, *Explosions & Smoke Reported at Arkema Inc. Crosby Plant* (Aug. 31, 2017), available at <http://www.arkema-america.com/en/media/news-overview/news/Explosions-and-Smoke-Reported-at-Arkema-Inc.-Crosby-Plant/> (last visited Jun. 2, 2021).

308. According to the TCEQ’s assessment of Superfund sites, as of September 2, 2017, “13 sites have been flooded and/or are experiencing possible damage due to the storm.” TCEQ, *Status of Superfund sites in areas affected by Harvey* (Sep. 2, 2017), <https://archive.epa.gov/epa/newsreleases/status-superfund-sites-areas-affected-harvey.html> (last visited Jun. 2, 2021).

309. In August 2020, with a public health emergency raging across the country, Hurricane Laura led to a fire at a chlorine production facility in Westlake, Louisiana, releasing “an unknown

quantity of chlorine gas into the air and possibly nearby water bodies, including Lake Charles, according to the Louisiana Fire Marshal's office." Tristan Baurick, *Fire fight at Hurricane Laura-damaged chemical plant near Lake Charles continues into 2nd day*, nola.com (Aug. 28, 2020), https://www.nola.com/news/environment/article_6cca4e36-e969-11ea-b1ba-53ec47f5a71b.html (last visited Jun. 2, 2021).

310. Media reports noted that:

Battling the fire was complicated by several factors. The first was getting to the scene. Downed power lines, broken tree limbs and other debris created a maze for fire trucks and other emergency vehicles. . . . Then there was the matter of containing the facility's chemicals. According to [the state Department of Environmental Quality], fire crews had to wait while all outfalls on the property were closed to prevent firehose water from mixing with chlorine and flowing off-site.

Id. Fortunately, "BioLab and most of the businesses and homes in the area evacuated before the storm. If that had not occurred, the fire and gas releases likely would have affected more people."

Id. The risks of extreme weather have continued to escalate. Overall, 2020 was a standout year for hurricane activity in the Atlantic. According to NOAA, "the 2020 season produced 30 named storms (top winds of 39 mph or greater), of which 13 became hurricanes (top winds of 74 mph or greater), including six major hurricanes (top winds of 111 mph or greater). This is the most storms on record, surpassing the 28 from 2005, and the second-highest number of hurricanes on record."

Record-breaking Atlantic hurricane season draws to an end: Improved forecasts, extensive preparedness helped protect lives and property, NOAA (Nov. 24, 2020), available at <https://www.noaa.gov/media-release/record-breaking-atlantic-hurricane-season-draws-to-end> (last visited Jun.2, 2021).

311. 2020 was "the fifth consecutive year with an above-normal Atlantic hurricane season, with 18 above-normal seasons out of the past 26. This increased hurricane activity is attributed to the warm phase of the Atlantic Multi-Decadal Oscillation (AMO) — which began in 1995 — and has

avored more, stronger, and longer-lasting storms since that time.” *Id.* The historic season “saw record water levels in several locations, including the Gulf Coast where Hurricane Sally brought the highest observed water levels since Hurricane Katrina in 2005 to Pensacola, Florida.” *Id.*

312. Climate change increases the likelihood that extreme rainfall will accompany storms like Harvey, Laura, and Sally because a warmer atmosphere holds more water and warmer oceans help pack these storms with even more moisture. Climate change is also increasing the severity of storm-related damages, largely because of rising sea levels.

313. These examples have put Gulf on notice of the risk to its Terminal of relying on past weather conditions and the drastic consequences that could result if the physical infrastructure and stormwater management procedures at its Terminal are not updated.

V. Gulf’s Terminal is Currently Discharging Pollutants and Is at Imminent Risk of Greater Pollutant Releases Caused by Climate-Related Factors

314. Human emissions of greenhouse gases were causing changes to Earth’s climate and referred to generally as “climate change” since before 2015.

315. Climate change has been causing increases in the frequency of storms since before 2015.

316. Climate change has been causing increases in the intensity of storms since before 2015.

317. The risk that Connecticut experiences an intense storm has been increasing since before 2015.

318. The risk that Connecticut experiences an intense storm is expected to continue to increase for at least the next 50 years.

319. More intense storms in and around coastal areas have resulted in greater storm surge since at least 2015.

320. Greater storm surge has resulted in greater flooding in coastal areas since at least 2015.

321. Storm surge has been increasing in New England since at least 2015.

- 322. Storm surge has been increasing in Connecticut since at least 2015.
- 323. The severity of coastal flooding has been increasing in New England since at least 2015.
- 324. The severity of coastal flooding has been increasing in Connecticut since at least 2015.
- 325. The frequency of coastal flooding has been increasing in New England since at least 2015.
- 326. The frequency of coastal flooding has been increasing in Connecticut since at least 2015.
- 327. Climate change has caused sea levels to rise since at least 2015.
- 328. Sea levels have been rising in Connecticut since at least 2015.
- 329. Sea level rise has been contributing to increases in the frequency of flood events in New England since at least 2015.
- 330. Sea level rise has been contributing to increases in the intensity of flood events in New England since at least 2015.
- 331. Sea level rise has been contributing to increases in the frequency of flood events in Connecticut since at least 2015.
- 332. Sea level rise has been contributing to increases in the intensity of flood events in Connecticut since at least 2015.
- 333. Sea levels are expected to continue to rise in Connecticut for at least the next 50 years.
- 334. Climate change has been increasing sea surface temperatures in areas of the United States since before 2015.
- 335. Increases in sea surface temperatures have been causing more intense storms since before 2015.
- 336. Increases in sea surface temperatures have been causing more frequent storms since at least 2015.
- 337. Sea surface temperatures in New England have been rising since at least 2015.

338. Sea surface temperatures in New England are expected to continue to rise for at least the next 50 years.

339. Climate change can cause average annual precipitation in an area to increase.

340. The average annual precipitation has been increasing in Connecticut since at least 2015.

341. Average annual precipitation in Connecticut is expected to continue to increase for at least the next 50 years.

342. As explained above, the Permit requires that Gulf “minimize the discharge of pollutants” by “using control measures that are technologically available and economically practicable and achievable *in light of best industry practice*.” See Permit § 5(b) (emphasis added). In furtherance of this condition, Gulf is obligated to obtain a certification from a professional engineer attesting to the sufficiency of Gulf’s stormwater system. See Permit § 5(c)(2)(F).

343. A professional engineer must also sign off on any changes to the Terminal’s stormwater drainage system. See Permit 5(b)(7).

344. Engineers and other qualified professionals addressing Permit compliance take the factors discussed in Section IV.A, *supra*, into account throughout their facility planning, decision-making, construction and design, engineering certification, and operation processes in order to assure adequate control and treatment of pollutant discharges and/or releases.

345. Engineers and other qualified professionals addressing Permit compliance exercising skill and judgment reasonably expected of similarly situated professionals make decisions based on information regarding the factors discussed in Section IV.A *supra*.

346. For example, the Army Corps of Engineers issued a regulation in 2013 entitled “Incorporating Sea Level Change in Civil Works Programs.” That regulation states that

[sea level change] can cause a number of impacts in coastal and estuarine zones, including changes in shoreline erosion, inundation or exposure of low-lying coastal

areas, changes in storm and flood damages, shifts in extent and distribution of wetlands and other coastal habitats, changes to groundwater levels, and alterations to salinity intrusion into estuaries and groundwater systems.

Army Corps of Engineers, Regulation No. 1100-2-8162, at Appendix B, B-1 (Dec. 31, 2013), *available at* https://www.publications.usace.army.mil/Portals/76/Publications/EngineerRegulations/ER_1100-2-8162.pdf (last visited Jun. 2, 2021).

347. The Army Corps of Engineers acknowledges that sea level change is likely to impact coastal projects, and “[a]s a result, managing, planning, engineering, designing, operating, and maintaining for [sea level change] must consider how sensitive and adaptable 1) natural and managed ecosystems and 2) human and engineered systems are to climate change and other related global changes.” *Id.* at 2.

348. The Army Corps of Engineers’ regulation also states that “[h]istoric trends in local MSL [mean sea level] are best determined from tide gauge records. The NOAA Center for Operational Oceanographic Products and Services (CO-OPS) provides historic information and local MSL trends for tidal stations operated by NOAA/NOS in the U.S.” *Id.* at Appendix B, B-2.

349. The historic rate of relative sea level change at relevant local tide stations should be used as *the low rate* for analysis because it is a linear extrapolation from historic tide gauge measurements and does not account for future acceleration of sea level rise, ice sheet melt, or sea level rise due to warmer water occupying a greater volume. *Id.* at B-6.

350. The Army Corps of Engineers conducted a Coastal Storm Risk Management Study for Fairfield and New Haven Counties and its December 2019 proposed plan suggested a seawall built to a height that accounted for two feet of sea level rise. CT DEEP & U.S. ARMY CORPS OF ENGINEERS, *Coastal Storm Risk Management Feasibility Study: Draft Integrated Feasibility Report & Environmental Assessment*, v–vi, (Dec. 2019), *available at* <https://>

www.nae.usace.army.mil/Portals/74/docs/Topics/FairField/Draft-Main-Report-EA-13DEC2019.pdf (last visited Jun. 2, 2021).

351. The *Coastal Risk Management Study* is a good example of coastal infrastructure implementing best industry practice in the same region as the Terminal.

352. The type of information considered and planned for in the *Coastal Risk Management Study* is the type of information Gulf should be using to determine appropriate best management practices at its Terminal, including, among other things, the proper height of its berms.

353. Gulf has not used information known to it regarding the factors discussed in Section IV.A, *supra*, in designing, the Terminal.

354. Gulf has not used information known to it regarding the factors discussed in Section IV.A, *supra*, in constructing, the Terminal.

355. Gulf has not used information known to it regarding the factors discussed in Section IV.A, *supra*, in operating the Terminal.

356. “The Terminal’s current conditions and operations render it vulnerable to catastrophic failure and oil spills similar to those experienced at other coastal oil facilities during Hurricanes Ida (Category 4 storm; total 230,000 gallons; 2021), Harvey (Category 4 storm; total 800,000 gallons; 2017), Sandy (Category 1 equivalent superstorm; 300,000 gallons from Motiva facility alone; 2012), and Katrina (Category 3 storm; total 8 million gallons; 2005).” Ex. G, ¶114.

357. “Current physical conditions and documents relevant to the terminal provide no indication that Gulf has considered these substantial risks let alone modified the Terminal to be prepared for these risks.” *Id.* at ¶21.

358. “The likelihood of a severe storm striking the Terminal is unacceptably high, given that even when proposed improvements are complete, they will remain inadequate to prevent the type

of inundation which will inevitably lead to significant pollutant releases. The potential for a catastrophic oil spill exists, and even with ongoing so-called improvements, it will continue. Moreover, Gulf's continuing failure to apply best industry practices at the Terminal (as evidenced by its multiple contradictory permitting documents over recent years) not only neglects to comply with Permit terms, but it exhibits the prime management and operational conditions seen repeatedly to set the stage for the level of major (preventable) spills which have continued to occur in foreseeable storms." *Id.* at ¶119.

359. "Without upgrades in the Terminal infrastructure, spills and releases such as have occurred in recent years from the Caribbean to the Gulf Coast to New England and beyond are virtually certain to occur at the Terminal and in New Haven Harbor more broadly." Ex. G, ¶10.

360. Gulf's disregard of the reasonably foreseeable substantial and imminent risks to the Terminal and its continuing failure to protect the Terminal against such risks make Gulf liable for violations of the Clean Water Act and RCRA, as described below.

CLAIMS FOR RELIEF

COUNT I: VIOLATION OF THE CLEAN WATER ACT – FAILURE TO ELIMINATE NON-STORMWATER DISCHARGES

361. Plaintiff incorporates the allegations contained in the above paragraphs as though fully set forth herein.

362. As explained in Paragraphs 152, 174, and *supra*, the Permit requires Gulf to eliminate all non-stormwater discharges and requires that the SWPPP document the control measures it will use to eliminate the non-stormwater discharges. Permit 5(b)(11), 5(c)(2)(E).

363. Pollutant discharges from storm surge flooding and sea-level rise are unpermitted non-stormwater discharges.

364. CT DEEP's guidance for preparing SWPPPs further underscores this requirement:

Non-Stormwater Discharges (Sections 5(b)(11) and 5(c)(2)(F))

In Section II, you were required to identify and eliminate all non-stormwater discharges with the exception of the allowable non-stormwater discharges listed in Section 5(c)(2)(F) of the general permit, and wastewater discharges permitted pursuant to section 22a-430 and 22a-430(b) of the Connecticut General Statutes.

In this section of your Plan, describe management practices and/or inspection procedures to ensure that new non-stormwater discharges do not occur in the future.

CT DEEP, *Guidance Document for Preparing a Stormwater Pollution Prevention Plan* (Mar. 2011) (emphasis added), available at https://portal.ct.gov/-/media/DEEP/Permits_and_Licenses/Water_Discharge_General_Permits/swpppguidpdf.pdf (last visited Jun. 2, 2021).

365. Gulf's SWPPP does not refer to the potential for flooding at the Terminal from storm surge and sea-level rise, despite the past incidences of storm surge flooding referred to *supra*.

366. Because the SWPPP for the Terminal fails to describe or ensure implementation of BMPs that will be used to ensure that non-stormwater pollutant discharges resulting from the factors discussed in Section IV.A, *supra*, including storm surge flooding, do not occur in the future and are eliminated, Gulf is violating the Permit and the Clean Water Act.

367. These violations are ongoing and continuous, and barring a change at the Terminal and full compliance with the permitting requirements of the Clean Water Act, these violations will continue indefinitely.

COUNT II: VIOLATION OF THE CLEAN WATER ACT – ACTIVITY INCONSISTENT WITH THE COASTAL MANAGEMENT ACT AND CAUSING ADVERSE IMPACTS TO COASTAL RESOURCES

368. Plaintiff incorporates the allegations contained in the above paragraphs as though fully set forth herein.

369. Gulf's activity at the Facility is in violation of the Permit because it is inconsistent with the applicable goals and policies in section 22a-92 of the Connecticut General Statutes.

370. Gulf has failed to consider in the planning process the potential impact of a rise in sea level, coastal flooding, and erosion patterns in operating the Terminal.

371. As described above, Gulf's SWPPP for the Terminal does not detail or ensure implementation of control measures that will be used to ensure that pollutant discharges resulting from the factors discussed in Section IV.A do not occur.

372. Therefore, Gulf has failed to implement control measures to minimize damage to and destruction of life and property and has failed to implement control measures to minimize the necessity of public expenditure and shoreline armoring to protect future new development from such hazards.

373. Gulf has failed to design the Terminal to minimize the risk of oil and chemical spills.

374. Gulf has failed to minimize the risk of spillage of petroleum products and hazardous substances, to provide effective containment and sufficient cleanup facilities for accidental spills.

375. Gulf's Terminal is designed and operated in a manner that will cause adverse impacts to coastal resources as defined in section 22a-93(15) of the Connecticut General Statutes because of Gulf's failure to address the known imminent risks associated with severe precipitation, extreme weather, storm surge, and sea level rise. *See generally* Section IV.A. This will result in harmful pollutant discharges when these foreseeable events occur.

376. These violations are ongoing and continuous, and barring a change at the Terminal and full compliance with the permitting requirements of the Clean Water Act, these violations will continue indefinitely.

**COUNT III: VIOLATION OF THE CLEAN WATER ACT – UNLAWFUL
CERTIFICATION OF SWPPP**

377. Plaintiff incorporates the allegations contained in the above paragraphs as though fully set forth herein.

378. The Permit requires that the SWPPP be signed “by a responsible corporate officer or duly authorized representative thereof.” Permit § 5(c)(4)(A).

379. The SWPPP must also include a certification as follows:

“I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in the submitted information may be punishable as a criminal offense, in accordance with section 22a-6 of the General Statutes, pursuant to section 53a-157b of the General Statutes, and in accordance with any other applicable statute.”

Permit § 6(d).

380. In addition, the Permit requires that each SWPPP contain a certification from a licensed professional engineer:

“I certify that I have thoroughly and completely reviewed the Stormwater Pollution Prevention Plan prepared for this site. I further certify, based on such review and site visit by myself or my agent, and on my professional judgment, that the Stormwater Pollution Prevention Plan meets the criteria set forth in the General Permit for the Discharge of Stormwater Associated with Industrial Activity effective on October 1, 2019. I am aware that there are significant penalties for false statements in this certification, including the possibility of fine and imprisonment for knowingly making false statements.”

Permit § 5(c)(7).

381. Gulf made the required certifications at the time of development and submission of its SWPPP in 2017.

382. Gulf made these certifications without disclosing information known to it regarding the factors discussed in Paragraph 356, *supra*, and the reasonably foreseeable substantial risks of pollutant discharges associated with these factors.

383. Gulf made these certifications without developing and implementing a SWPPP that included discussion or disclosure of information known to it about climate change and the

reasonably foreseeable substantial risks of pollutant discharges associated with climate change, *see generally* Section IV.A, *supra*.

384. Gulf made these certifications without considering the spill prevention and control procedures that would be necessary to address the factors discussed in Section IV.A, *supra*, and the substantial risks of pollutant discharges and/or releases associated with these factors.

385. Gulf's SWPPP also falsely states that all stormwater discharges are pumped through the treatment system and out through an outfall to the New Haven MS4, SWPPP at 54, when, in fact, most stormwater discharges from the tank farm are made directly to New Haven Harbor through two outfalls that are not identified in the SWPPP.

386. Gulf's SWPPP falsely asserts that Gulf does not need to consider additional monitoring to impaired waterbodies because all discharges are made to the New Haven MS4. SWPPP at 49.

387. The SWPPP is incomplete because it fails to include information for monitoring discharges to impaired waterbodies.

388. Gulf's failure to disclose and consider the factors discussed in Section IV.A, *supra*, and the substantial risks of pollutant discharges associated with these factors, renders its SWPPP certification untrue, inaccurate, and incomplete, and therefore violates the Permit and the Clean Water Act.

389. These violations are ongoing and continuous, and barring a change at the Terminal and full compliance with the permitting requirements of the Clean Water Act, these violations will continue indefinitely.

**COUNT IV: VIOLATION OF THE CLEAN WATER ACT – FAILURE TO IDENTIFY
POTENTIAL POLLUTION SOURCES**

390. Plaintiff incorporates the allegations contained in the above paragraphs as though fully set forth herein.

391. As explained in Paragraphs 175—182 *supra*, the Permit requires that “[t]he [SWPPP] shall map and describe the potential sources of pollutants that may reasonably be expected to affect stormwater quality at the site or that may result in the discharge of pollutants during dry weather from the site. The [SWPPP] shall identify all activities and materials that may be a source of stormwater pollution at the site.” Permit § 5(c)(2)(D).

392. Gulf has failed to identify sources of pollutants resulting from the factors discussed in Section IV.A, *supra*, as sources of pollution reasonably expected and anticipated by Gulf to affect the quality of the stormwater discharges from the Terminal.

393. The SWPPP does not refer to the potential for flooding at the Terminal from storm surge and sea-level rise, despite the past incidences of storm surge flooding referred to *supra*.

394. By failing to develop a SWPPP that complies with the requirements of the Permit, Gulf is violating the Permit and the Clean Water Act.

395. These violations are ongoing and continuous, and barring a change at the Terminal and full compliance with the permitting requirements of the Clean Water Act, these violations will continue indefinitely.

COUNT V: VIOLATION OF THE CLEAN WATER ACT – FAILURE TO DESCRIBE AND IMPLEMENT PRACTICES TO REDUCE POLLUTANTS AND ENSURE PERMIT COMPLIANCE

396. Plaintiff incorporates the allegations contained in the above paragraphs as though fully set forth herein.

397. The Permit requires that:

The permittee must document the location and type of control measures installed and implemented at the site in accordance with “Control Measures” (Section 5(b)). The permittee shall discuss the appropriateness and priorities of control measures in the Plan and how they address identified potential sources of pollutants at the site. The Plan shall include a schedule for implementing such control measures if not already implemented.

Permit § 5(c)(2)(E).

398. According to the Permit:

Control Measures are required Best Management Practices (BMP) that the permittee must implement to minimize the discharge of pollutants from the permitted facility. The term “minimize” means reduce and/or eliminate to the extent achievable using control measures that are technologically available and economically practicable and achievable in light of best industry practice.

Permit § 5(b).

399. The SWPPP does not refer to the potential for flooding at the Terminal from storm surge and increased rainfall despite past incidences of storm surge flooding referred to *supra*, and as a result does not include control measures or BMPs to minimize this potential unpermitted discharge.

400. To the extent the Terminal has such plans, they are located in the Terminal’s FRP. “While including storm preparation in the FRP is a substantial improvement, these types of considerations also need to be included in the SWPPP—the document specifically required to *prevent* pollution, rather than the document required to deal with spill events *after* they occur.” Ex. G, ¶ 62.

401. Because the SWPPP for the Terminal fails to describe or ensure implementation of BMPs that will be used to address pollutant discharges resulting from the factors discussed in Paragraph 394, *supra*, Gulf is violating the Permit and the Clean Water Act.

402. These violations are ongoing and continuous, and barring a change at the Terminal and full compliance with the permitting requirements of the Clean Water Act, these violations will continue indefinitely.

COUNT VI: VIOLATION OF THE CLEAN WATER ACT – FAILURE TO IMPLEMENT MEASURES TO MANAGE RUNOFF

403. Plaintiff incorporates the allegations contained in the above paragraphs as though fully set forth herein.

404. As described above, the “Control Measures” section of the Permit requires Gulf to implement measures to “minimize the discharge of pollutants from the site” including:

The permittee shall consider the potential of various sources at the facility to contribute pollutants to stormwater discharges associated with industrial activity when determining reasonable and appropriate measures. Where feasible, the permittee shall divert uncontaminated run-on to avoid areas that may contribute pollutants.

Permit § 5(b)(7).

405. The SWPPP does not refer to the potential for flooding at the Terminal from storm surge and increased rainfall, despite previous flooding referred to *supra*.

406. Because the SWPPP for the Terminal fails to describe or ensure implementation of BMPs that will be used to address run-on to avoid areas that may contribute pollutants, despite previous flooding and the factors discussed in Section IV.A, *supra*, including storm surge flooding, Gulf is violating the Permit and the Clean Water Act.

407. These violations are ongoing and continuous, and barring a change at the Terminal and full compliance with the permitting requirements of the Clean Water Act, these violations will continue indefinitely.

**COUNT VII: VIOLATION OF THE CLEAN WATER ACT – FAILURE TO MINIMIZE THE
POTENTIAL FOR LEAKS AND SPILLS**

408. Plaintiff incorporates the allegations contained in the above paragraphs as though fully set forth herein.

409. The Permit requires that “[t]he permittee must minimize the potential for leaks and spills.” Permit § 5(b)(9).

410. The previous instances of flooding and the factors discussed in Section IV.A *supra*, increase the potential for leaks and spills.

411. Because the SWPPP for the Terminal fails to describe or ensure implementation of BMPs that will be used to minimize the potential for leaks and spills resulting from the factors discussed in Section IV.A, *supra*, Gulf is violating the Permit and the Clean Water Act.

412. These violations are ongoing and continuous, and barring a change at the Terminal and full compliance with the permitting requirements of the Clean Water Act, these violations will continue indefinitely.

**COUNT VIII: VIOLATION OF THE CLEAN WATER ACT – FAILURE TO SUBMIT
REQUIRED FACTS OR INFORMATION TO CONNECTICUT DEPARTMENT OF
ENERGY AND ENVIRONMENTAL PROTECTION**

413. Plaintiff incorporates the allegations contained in the above paragraphs as though fully set forth herein.

414. The Permit requires that:

Within fifteen (15) days after the date a permittee becomes aware of a change in any of the information submitted pursuant to this general permit, becomes aware that any such information is inaccurate or misleading, or that any relevant information has been omitted, such permittee shall correct the inaccurate or misleading information or supply the omitted information in writing to the commissioner. Such information shall be certified in accordance with Section 6(d) of this general permit. The provisions of this subsection shall apply both while a request for registration is pending and after the commissioner has approved such request.

Permit § 6(g).

415. Gulf has failed to submit relevant facts and/or submitted incorrect and incomplete information regarding the risks of climate-change discussed above, and the substantial risks of pollutant discharges and/or releases associated with these factors, in its SWPPP and reports to CT DEEP.

416. Gulf has not promptly submitted such facts or information to CT DEEP, despite Gulf's knowledge of the extreme conditions caused by climate change, *see* Section IV.A, *supra*, and the impacts such conditions have on industrial sites, *see supra* Section IV.B.

417. Gulf has also failed to submit to CT DEEP the information identified in the immediately following claim concerning Gulf's failures to amend or update its SWPPP.

418. By failing to submit relevant facts and/or submitting incorrect and incomplete information and failing to promptly submit such information upon becoming aware that it had not previously been submitted, Gulf is violating the Permit and the Clean Water Act.

419. These violations are ongoing and continuous, and barring a change at the Terminal and full compliance with the permitting requirements of the Clean Water Act, these violations will continue indefinitely.

**COUNT IX: VIOLATION OF THE CLEAN WATER ACT – FAILURE TO AMEND OR
UPDATE THE SWPPP**

420. Plaintiff incorporates the allegations contained in the above paragraphs as though fully set forth herein.

421. The Permit requires that the permittee amend the SWPPP under certain circumstances, including whenever:

(A) there is a change at the site which has an effect on the potential to cause pollution of the surface waters of the state;

(B) the actions required by the Plan fail to ensure or adequately protect against pollution of the surface waters of the state; or

....

(F) necessary to address any significant sources or potential sources of pollution identified as a result of any inspection or visual monitoring;

Permit § 5(c)(5).

422. Gulf has not amended or updated its SWPPP based on information known to it regarding the factors discussed in Section IV.A, *supra*, and the substantial risks of pollutant discharges and/or releases associated with these factors, in violation of the Permit and the Clean Water Act.

423. Gulf failed to update its SWPPP to disclose the existence of the two outfalls discharging directly to New Haven Harbor.

424. Gulf failed to update its SWPPP to address the additional monitoring requirements for discharges to impaired waterbodies.

425. By failing to submit relevant facts and/or submitting incorrect and incomplete information and failing to promptly submit such information upon becoming aware that it had not previously been submitted, Gulf is violating the Permit and the Clean Water Act.

426. By failing to properly amend or update its SWPPP, Gulf is violating the Permit and the Clean Water Act.

427. These violations are ongoing and continuous, and barring a change at the Terminal and full compliance with the permitting requirements of the Clean Water Act, these violations will continue indefinitely.

COUNT X: VIOLATION OF THE CLEAN WATER ACT – FAILURE TO IDENTIFY DISCHARGES TO IMPAIRED WATERS IN SWPPP

428. Plaintiff incorporates the allegations contained in the above paragraphs as though fully set forth herein.

429. The Permit requires Gulf to identify in its SWPPP any impaired waters to which the Terminal discharges and to state whether or not a Total Maximum Daily Load allocation (“TMDL”) has been established for them. Permit § 5(c)(2)(D)(i)(7).

430. In addition, if the Terminal discharges to an impaired waterbody, the SWPPP must also document schedules and procedures for implementing impaired waters monitoring. Permit § 5(c)(2)(K).

431. The Terminal discharges to New Haven Harbor in two ways: (i) via the City of New Haven’s MS4, and (ii) through the two outfalls from the tank farm not disclosed in the SWPPP.

432. The State of Connecticut has identified New Haven Harbor as impaired for dissolved oxygen, nutrients, oil and grease, polychlorinated biphenyls (“PCBs”), and bacteria.

433. New Haven Harbor is also included in the Connecticut State Bacteria TMDL.

434. Gulf’s SWPPP fails to disclose the discharge to the impaired New Haven Harbor. It instead asserts that because the Terminal discharges to the MS4, it is “not subject to additional monitoring requirements associated with monitoring of discharges to impaired waters.” SWPPP at 49.

435. Gulf’s failure to identify its discharges to an impaired waterbody and failure to document procedures for monitoring those discharges are a violation of the Permit and the Clean Water Act.

436. These violations are ongoing and continuous, and barring a change at the Terminal and full compliance with the permitting requirements of the Clean Water Act, these violations will continue indefinitely.

COUNT XI: VIOLATION OF THE CLEAN WATER ACT – FAILURE TO CONDUCT MONITORING FOR DISCHARGES TO IMPAIRED WATERS

437. Plaintiff incorporates the allegations contained in the above paragraphs as though fully set forth herein.

438. If the Terminal discharges to an impaired waterbody, the Permit imposes special monitoring requirements for indicator pollutants. Permit § 5(e)(1)(D)(i).

439. As explained above, Gulf discharges to New Haven Harbor, which is impaired for the following pollutants for which no TMDL has been established: dissolved oxygen, nutrients, oil and grease, and PCBs.

440. Through 2016, the Terminal’s stormwater monitoring reports to CT DEEP identified it as discharging to an impaired waterbody (New Haven Harbor) and included the additional monitoring.

441. Gulf's failure to monitor for indicator pollutants for the impairments in New Haven Harbor is a violation of the Permit and the Clean Water Act.

442. These violations are ongoing and continuous, and barring a change at the Terminal and full compliance with the permitting requirements of the Clean Water Act, these violations will continue indefinitely.

**COUNT XII: VIOLATION OF THE CLEAN WATER ACT – FAILURE TO IDENTIFY
OUTFALLS IN SWPPP**

443. Plaintiff incorporates the allegations contained in the above paragraphs as though fully set forth herein.

444. The Permit requires that Gulf identify all stormwater outfalls in its SWPPP. *See, e.g.*, Permit § 5(c)(2)(D)(i); *id.* § 5(e)(2).

445. Gulf's SWPPP for the Terminal identifies only one outfall which flows through an oil/water separator before discharging to the New Haven MS4. Gulf's SWPPP fails to identify the two outfalls that discharge directly from the tank farm to New Haven Harbor, bypassing the Terminal's treatment system.

446. Gulf's failure to identify these outfalls is a violation of the Permit and the Clean Water Act.

447. These violations are ongoing and continuous, and barring a change at the Terminal and full compliance with the permitting requirements of the Clean Water Act, these violations will continue indefinitely.

**COUNT XIII: VIOLATION OF THE CLEAN WATER ACT – FAILURE TO MONITOR
DISCHARGES FROM ALL OUTFALLS**

448. Plaintiff incorporates the allegations contained in the above paragraphs as though fully set forth herein.

449. The Permit requires that Gulf perform monitoring of discharges for all outfalls unless it reasonably believes that multiple outfalls discharge "substantially identical" effluents such that

one outfall may be representative of the other substantially identical outfalls. Permit § 5(e)(1); *id.* § 5(e)(2)(B).

450. Even if Gulf takes the representative outfall exemption, it is required to describe the basis for the exemption in the SWPPP. Permit § 5(e)(2)(B).

451. Of the three outfalls at the Terminal, Gulf has only conducted monitoring from the outfall that discharges to the New Haven MS4.

452. Gulf's failure to monitor the other two outfalls is a violation of the Permit and the Clean Water Act.

453. These violations are ongoing and continuous, and barring a change at the Terminal and full compliance with the permitting requirements of the Clean Water Act, these violations will continue indefinitely.

COUNT XIV: VIOLATION OF THE CLEAN WATER ACT – ILLEGAL INFILTRATION OF STORMWATER

454. Plaintiff incorporates the allegations contained in the above paragraphs as though fully set forth herein.

455. As an industrial facility, the Terminal is categorized as a "Land Use . . . with Potential for Higher Pollutants Loads." *See* Permit § 5(b)(7) & App. C.

456. The Permit does not allow Gulf to infiltrate stormwater into the ground unless it is (i) expressly allowed by CT DEEP, and (ii) the stormwater undergoes "appropriate pretreatment" before infiltration. *Id.* at App. C.

457. The Permit similarly restricts stormwater infiltration at sites where the soil or groundwater is contaminated, such as the Terminal. *Id.*

458. Gulf's SWPPP states that some of the stormwater in the tank farm is infiltrated into the ground. SWPPP at 22; *id.* at App. D.

459. On information and belief, CLF asserts that Gulf has not received permission to infiltrate from CT DEEP and it does not pretreat the stormwater before infiltration.

460. Gulf's infiltration of stormwater from the tank farm is a violation of the Permit and the Clean Water Act.

461. These violations are ongoing and continuous, and barring a change at the Terminal and full compliance with the permitting requirements of the Clean Water Act, these violations will continue indefinitely.

COUNT XV: VIOLATION OF THE CLEAN WATER ACT – FAILURE TO MAINTAIN AN IMPERVIOUS CONTAINMENT AREA

462. Plaintiff incorporates the allegations contained in the above paragraphs as though fully set forth herein.

463. The Permit requires that the Terminal's tank farm have an "impermeable secondary containment area" capable of holding either 100% or 110% of the volume of the largest tank or 10% of the total volume of all tanks." Permit § 5(b)(9)(A)(i)(2).

464. Gulf's SWPPP states that stormwater infiltrates into the ground and that Gulf has not confirmed that the ground of the secondary containment area is impermeable. SWPPP at 22; *id.* at App. D.

465. In fact, the SWPPP states that it "does not certify that a release of petroleum products would not migrate to a navigable water body or adjoining shoreline." SWPPP, App. D at 2.

466. Gulf's failure to ensure that the secondary containment area is impermeable is a violation of the Permit and the Clean Water Act.

467. These violations are ongoing and continuous, and barring a change at the Terminal and full compliance with the permitting requirements of the Clean Water Act, these violations will continue indefinitely.

COUNT XVI: VIOLATION OF THE RESOURCE CONSERVATION AND RECOVERY ACT AND STATE REGULATIONS – OPEN DUMPING

468. Plaintiff incorporates the allegations contained in the above paragraphs as though fully set forth herein.

469. As described *supra* at Paragraphs 100—105, Gulf’s Terminal generates, stores, handles, and disposes of refined petroleum products containing and/or comprised of hazardous waste constituents, toxic and hazardous chemicals, metals, and compounds, including but not limited to: extractable total petroleum hydrocarbons, semi-volatile organic compounds, volatile organic compounds, lead, benzene, benzo (a) pyrene, benzo (g, h, i) perylene, chrysene, 2-Methylnaphthalene, 1-Methylnaphthalene, ethylbenzene, isopropylbenzene, n-propylbenzene, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, and m,p-Xylene. *See* ¶ 103, above.

470. In addition, the petroleum products stored at the Terminal qualify as “solid waste” under RCRA because Gulf’s failure to address the known imminent risks associated with severe precipitation, extreme weather, storm surge, and sea level rise, *see generally* Section IV.A will result in release of these products when these foreseeable events occur. Gulf’s inaction in the face of its own knowledge regarding these risks represents an “intent to discard” useful products because the outcome of this inaction is certain to occur.

471. As explained *supra*, Gulf is a Small Quantity Generator of hazardous waste at the Terminal.

472. As explained, *supra*, the soil and groundwater at the Terminal also contains high volumes of hazardous waste.

473. The RCRA regulations provide that:

Practices failing to satisfy any of the criteria in §§ 257.1 through 257.4 or §§ 257.5 through 257.30 or §§ 257.50 through 257.107 constitute open dumping, which is prohibited under section 4005 of the Act.

40 C.F.R. § 257.1(a)(2).

474. Connecticut regulations define an “Open dump” as “a site at which solid waste is disposed of in a manner which does not comply with Subtitle D of the Resource Conservation and Recovery Act of 1976, (42 USC 6901 et seq.), as amended, and regulations promulgated thereunder.” Conn. Regs. § 22a-209-1. The same regulations prohibit open dumps. Conn. Regs. § 22a-209-2.

475. The “open dumping” criteria established by 40 C.F.R. 257.3-1(a) provides:

Facilities or practices in floodplains shall not restrict the flow of the base flood, reduce the temporary water storage capacity of the floodplain, or result in washout of solid waste, so as to pose a hazard to human life, wildlife, or land or water resources.

476. Connecticut state regulations similarly provide that:

Solid waste facilities in floodplains shall not restrict the flow of the base flood, reduce the temporary water storage capacity of the floodplain, or result in washout of solid waste, so as to pose a hazard to persons or property, wildlife, or land or water resources.

Conn. Regs. § 22a-209-7(c)(4).

477. The RCRA regulations define “Base flood” to mean “a flood that has a 1 percent or greater chance of recurring in any year or a flood of a magnitude equaled or exceeded once in 100 years on the average over a significantly long period.” 40 C.F.R. § 257.3-1(b)(1).

478. Connecticut regulations similarly define “Base flood” to mean “a flood that has a one percent or greater chance of recurring in any year or a flood of a magnitude equaled or exceeded once in 100 years on the average over a significantly long period. If the Commissioner deems it necessary for a particular location, the base flood shall represent a less common occurrence as specified by him or her.” Conn. Regs. § 22a-209-1.

479. The RCRA regulations define “Floodplain” to mean “the lowland and relatively flat areas adjoining inland and coastal waters, including flood-prone areas of offshore islands, which are inundated by the base flood.” 40 C.F.R. § 257.3-1(b)(3).

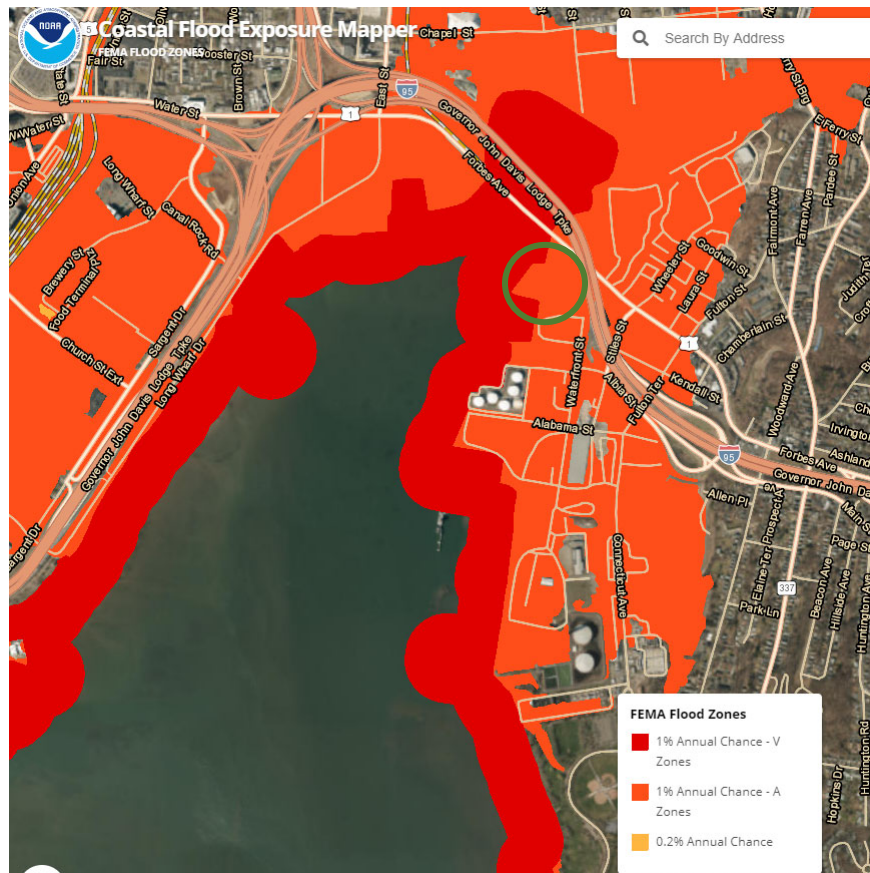
480. Connecticut regulations similarly define “Floodplain” to mean “the lowland and relatively flat areas adjoining inland and coastal waters, including flood-prone areas of offshore islands, which are inundated by the base flood.” Conn. Regs. § 22a-209-1.

481. The RCRA regulations define “Washout” to mean “the carrying away of solid waste by waters of the base flood.” 40 C.F.R. § 257.3-1(b)(3).

482. Connecticut regulations similarly define “Washout” to mean “the carrying away of solid waste by waters of the base flood.” Conn. Regs. § 22a-209-1.

483. The Terminal is in a 100-year floodplain as determined by FEMA.

484. NOAA hosts a mapping tool entitled the Coastal Flood Exposure Mapper. The Coastal Flood Exposure Mapper includes a data layer identifying which areas fall within FEMA Flood Zones. The floodplains for the Port of New Haven are:



NOAA, Coastal Flood Exposure Mapper, *available at* <https://coast.noaa.gov/digitalcoast/tools/flood-exposure.html> (last visited Jun. 2, 2021) (annotation added).

485. As described in Paragraphs 207–212 above, the Terminal has been subject to storm surge inundation in the past.

486. Inundation by flood waters result in the washout and carrying away of discarded petroleum products and other contaminants.

487. Far worse is the real risk that flood waters could cause a rupture of one or more of the ASTs, releasing millions of gallons of oil to be carried away, as described above.

488. As explained above, the severity of storms and storm surge will continue to rise due to climate change impacts.

489. On information and belief, Gulf has taken no steps to guard against the further washout of pollutants and solid waste from the Terminal.

COUNT XVII: VIOLATION OF THE RESOURCE CONSERVATION AND RECOVERY ACT – IMMINENT AND SUBSTANTIAL ENDANGERMENT TO HUMAN HEALTH AND THE ENVIRONMENT

490. Plaintiff incorporates the allegations contained in the above paragraphs as though fully set forth herein.

491. The Terminal holds both hazardous waste and solid waste.

492. At the Terminal, Gulf is regulated under RCRA as a generator of hazardous waste, Handler ID No. CTD002901510.

493. As described in Paragraphs 100–105, *supra*, Gulf’s Terminal generates, stores, handles, and disposes of refined petroleum products containing and/or comprised of hazardous waste constituents, toxic and hazardous chemicals, metals, and compounds, including but not limited to: extractable total petroleum hydrocarbons, semi-volatile organic compounds, volatile organic compounds, lead, benzene, benzo (a) pyrene, benzo (g, h, i) perylene, chrysene, 2-

Methylnapthalene, 1-Methylnapthalene, ethylbenzene, isopropylbenzene, n-propylbenzene, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, and m,p-Xylene. *See* Paragraph 105, above.

494. Also, as explained *supra*, the soils and groundwaters at the Terminal are contaminated from Gulf's past, present, and ongoing handling, storage, treatment, transportation, or disposal of hazardous and solid waste.

495. The petroleum products stored at the Terminal qualify as "solid waste" under RCRA because Gulf's failure to address the known imminent risks associated with severe precipitation, extreme weather, storm surge, and sea level rise, *see generally* Section IV.A, will result in release of these products when these foreseeable events inevitably occur. Gulf's inaction in the face of its own knowledge regarding these risks represents an "intent to discard" useful products because the outcome of this inaction is certain to occur.

496. The hazardous and solid waste at the Terminal is generated, handled, stored, treated, transported and/or disposed of at or near sea level in close proximity to major human population centers, the New Haven Harbor, and the Quinnipiac and Mill Rivers.

497. There is a substantial and imminent risk of the Terminal discharging and/or releasing pollutants because the Terminal has not been properly engineered, managed, operated, or fortified to protect against the factors discussed in Section IV.A, *supra*.

498. Gulf has not integrated the factors discussed in Section IV.A, *supra*, and the substantial risks of pollutant discharges and/or releases associated with these factors, into its systems for handling, storage, or disposal of hazardous waste at the Terminal.

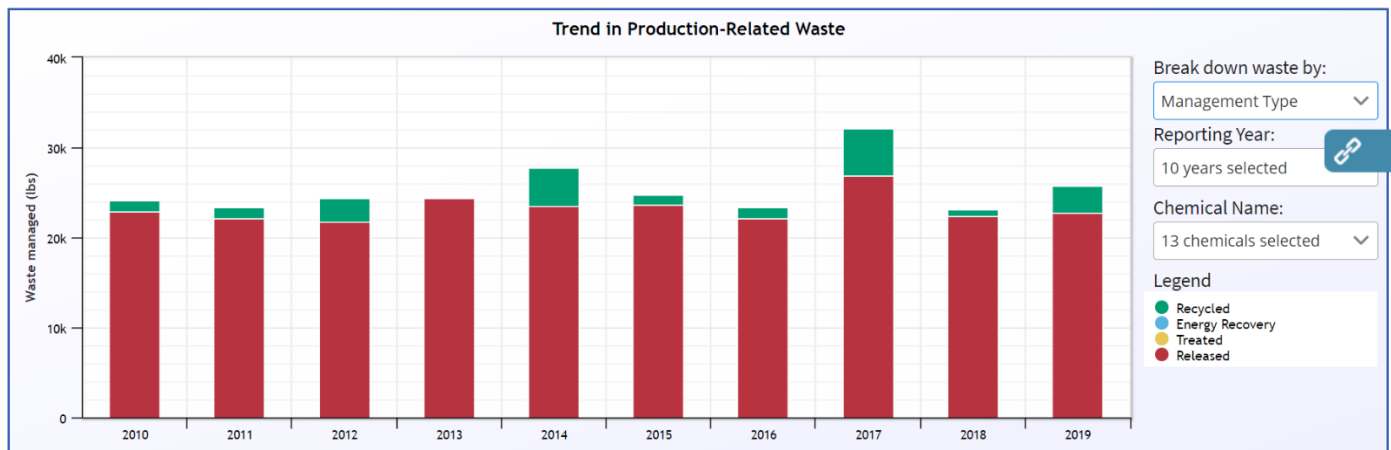
499. Gulf has failed to address the factors discussed in Section IV.A, *supra*, and the substantial risks of pollutant discharges and/or releases associated with these factors, in its RCRA and other compliance and permitting filings.

500. Gulf has not modified the Terminal to prevent pollutant discharges and/or releases associated with the factors discussed in Section IV.A, *supra*.

501. The design of the Terminal, and any regulatory filing associated therewith, is premised on standards for spill containment, drainage, and resistance to weather events that do not integrate information related to the factors discussed in Section IV.A *supra*, and the substantial risks of pollutant discharges and/or releases associated with these factors.

502. Gulf's failure to adapt the Terminal to the factors discussed in Section IV.A *supra*, puts the facility, the public health, and the environment at substantial and imminent risk of pollutant discharges and/or releases from the Terminal into the New Haven Harbor, the Quinnipiac River, and the Mill River, which flow through the communities of New Haven on the way to Long Island Sound.

503. The resulting harm and ongoing risk of harm to the Terminal, the public health and the environment has been and will continue to be significant, due to the magnitude of waste managed by the Terminal:



EPA, *TRI Trend in Production-Related Waste at Gulf New Have Terminal*, <https://enviro.epa.gov/facts/tri/ef-facilities/#/Waste/06517GLFLL42850> (last visited Jun. 2, 2021).

504. Gulf's operation of the Terminal presents an "imminent and substantial endangerment to health or the environment" because the factors discussed in Section IV.A, *supra*, have resulted and will result in discharges and/or releases of solid and/or hazardous wastes into the environment and surrounding residential communities.

505. Gulf has not disclosed its creation of this imminent and substantial risk at the Terminal to the EPA, state regulators, or the public. Gulf failed to disclose required information in its possession to the federal and state regulators and the public regarding the effects of the factors discussed in Section IV.A, *supra*, on the Terminal. Gulf's failure to disclose has contributed to the imminent and substantial endangerment to health and the environment.

506. Due to its failure to mitigate these foreseeable risks, Gulf has contributed and is contributing to the past or present handling, storage, treatment, transportation, or disposal of solid and hazardous wastes which may present an imminent and substantial endangerment to health or the environment under 42 U.S.C. § 6972(a)(1)(B), in violation of RCRA.

COUNT XVIII: VIOLATION OF THE RESOURCE CONSERVATION AND RECOVERY ACT – FAILURE TO COMPLY WITH STATE AND FEDERAL RCRA REGULATIONS APPLICABLE TO GENERATORS OF HAZARDOUS WASTES

507. Plaintiff incorporates the allegations contained in the above paragraphs as though fully set forth herein.

508. As described above, Gulf's Terminal generates, stores, handles, and disposes of refined petroleum products containing and/or comprised of hazardous waste constituents, toxic and hazardous chemicals, metals, and compounds, including, but not limited to: extractable total petroleum hydrocarbons, semi-volatile organic compounds, volatile organic compounds, lead, benzene, benzo (a) pyrene, benzo (g, h, i) perylene, chrysene, 2-Methylnaphthalene, 1-Methylnaphthalene, ethylbenzene, isopropylbenzene, n-propylbenzene, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, and m,p-Xylene. *See* Paragraph 105, above.

509. The soils and groundwaters at the Terminal are contaminated from Gulf's past, present and ongoing handling, storage, treatment, transportation, or disposal of hazardous and solid waste and hazardous waste constituents.

510. The petroleum products stored at the Terminal qualify as "solid waste" under RCRA because Gulf's failure to address the known imminent risks associated with severe precipitation, extreme weather, storm surge, and sea level rise, *see generally* Section IV.A, will result in release of these products when these foreseeable events occur. Gulf's inaction in the face of its own knowledge regarding these risks represents an "intent to discard" useful products because the outcome of this inaction is certain to occur.

511. The hazardous and solid waste at the Terminal is generated, handled, stored, treated, transported, and/or disposed of at or near sea level in close proximity to major human population centers, the New Haven Harbor, the Quinnipiac River, and the Mill River.

512. As described above, Gulf has discharged and/or released pollutants and hazardous waste constituents from the Terminal, and will likely continue to do so due to, including but not limited to, infrastructure failures and inadequate infrastructure design.

513. It is highly likely that the Terminal will have an unplanned spill, discharge, and/or release of pollutants, hazardous waste, and/or hazardous waste constituents, because the Terminal has not been properly engineered, managed, operated, maintained, or fortified in recognition of the factors discussed in Section IV.A, *supra*.

514. Gulf has not integrated the factors discussed in Section IV.A, *supra*, and the risks of spills, discharges, and/or releases of pollutants, hazardous waste, or hazardous waste constituents into planning, operation, or maintenance at the Terminal.

515. As a consequence of these failures, Gulf is not maintaining and operating the facility in a manner that “minimize[s] or prevent[s] any discharge . . . which has a reasonable likelihood of adversely affecting human health or the environment.” Conn. Regs. § 22a-430-3(h).

516. As a Small Quantity Generator, Gulf’s acts and omissions are in violation of 40 C.F.R. § 262.16(b)(8)(i), which requires that: “A small quantity generator must maintain and operate its facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.” This section of the RCRA regulations is incorporated by reference into Connecticut’s regulations. Conn. Regs. § 22a-449(c)-102(a)(1).

517. Gulf’s ongoing failure to disclose information in its possession regarding the factors discussed in Section IV.A, *supra*, to federal and state regulators and the public has resulted in an inability to maintain and operate the Terminal to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.

518. Gulf’s ongoing failure to maintain and operate its facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment causes Gulf to be in “violation of [a] permit, standard, regulation, condition, requirement, prohibition, or order which has become effective pursuant to [RCRA].” 42 U.S.C. § 6972(a)(1)(A).

RELIEF REQUESTED

WHEREFORE, Plaintiff prays that this Court grant:

1. declaratory and injunctive relief to prevent further violations of the Clean Water Act pursuant to Sections 505(a) and (d) of the Clean Water Act, 33 U.S.C. §§ 1365(a) and (d);

2. civil penalties of up to \$55,800 per day per violation, pursuant to Section 309(d) of the Clean Water Act, 33 U.S.C. § 1319(d), and the regulations governing the Adjustment of Civil Monetary Penalties for Inflation, 40 C.F.R. §§ 19.1–19.4;
3. environmental restoration and compensatory mitigation to address the impacts of past violations of the Permit;
4. injunctive relief pursuant to Section 7002 of RCRA, 42 U.S.C. § 6972, ordering Gulf to perform and pay for such work as may be required to respond to the hazardous waste and solid waste present at the Terminal and restraining Gulf from further violating RCRA and the Hazardous Waste Regulations of Connecticut;
5. civil penalties of up to \$76,764 per day per violation pursuant to Section 3008(g) of RCRA, 42 U.S.C. § 6928(g), and the regulations governing the Adjustment of Civil Monetary Penalties for Inflation, 40 C.F.R. §§ 19.1-19.4;
6. an award of the costs of litigation, including reasonable attorney and expert witness fees, under Section 505(d) of the Clean Water Act, 33 U.S.C. § 1365(d), and Section 7002(e) of RCRA, 42 U.S.C. § 6972(e); and
7. all other relief as permitted by law.

JURY DEMAND

Plaintiff requests a jury trial on the issue of liability and any other issues cognizable by a jury.

Respectfully submitted,

CONSERVATION LAW FOUNDATION,
inc., by its attorneys

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