UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF CONNECTICUT

CONSERVATION LAW FOUNDATION, INC., Plaintiff, v. SHELL OIL COMPANY, EQUILON ENTERPRISES LLC D/B/A SHELL OIL PRODUCTS US, SHELL PETROLEUM, INC., SHELL TRADING (US) COMPANY, TRITON TERMINALING LLC, and MOTIVA ENTERPRISES LLC, Defendants.	July 7, 2021 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 Defendants Shell Oil Company, Equilon Enterprises LLC d/b/a Shell Oil Products US, Shell Petroleum, Inc., Shell Trading (US) Company, Triton Terminaling LLC, and Motiva Enterprises LLC's (hereinafter, collectively, "Defendants" or "Shell") violations of federal law, which include: (1) Shell's past and ongoing failures to comply with Connecticut Industrial Stormwater Permit No. GSI002800 (the "Permit"), and the Clean Water Act; (2) the Shell facility's location in a floodplain and improperly managed susceptibility to washout of solid waste, which poses a hazard to human life, wildlife, and land and water resources; (3) Shell's past

and present contribution to handling, storage, treatment, transportation, or disposal of solid and hazardous wastes, which may present an imminent and substantial endangerment to health or the environment in violation of RCRA; and (4) Shell'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 and are occurring at Shell's New Haven Terminal, formerly the Motiva Enterprises LLC New Haven Terminal, a bulk storage and fuel terminal located at 481 East Shore Parkway, New Haven, Connecticut (hereinafter the "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 Shell 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(a)(1), and the corresponding regulations at 40 C.F.R. § 135.2, 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 (July 28, 2020) (hereinafter, "CLF's Notice Letter"). A true and accurate copy of CLF's Notice Letter is appended hereto as Exhibit A.

6. Thereafter, on February 17, 2021, CLF issued a supplemental notice letter. In addition to the violations alleged in the July 28, 2020 Letter, CLF identified an additional party responsible for violations of the Clean Water Act and RCRA: Triton Terminaling LLC. CLF's Supplemental Notice Letter (Feb. 17, 2021) (hereinafter, CLF's Supplemental Notice Letter"). A true and accurate copy of CLF's Supplemental Notice Letter is appended hereto as Exhibit B.

7. More than ninety days have elapsed since both CLF's Notice Letter and CLF's Supplemental Notice Letter were served on Shell, during which time neither the Environmental Protection Agency ("EPA") nor the Connecticut Department of Energy and Environmental Protection ("CT DEEP") has commenced and diligently prosecuted a court action to redress the Clean Water Act and RCRA violations described in the notice letters and alleged in this complaint. *See* 33 U.S.C. § 1365(b)(1)(B); 42 U.S.C. § 6972(b).

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

PARTIES

I. Plaintiff

9. 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.

10. CLF members live near, recreate on, and regularly visit the area and waters near Shell'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.

11. CLF and its members are harmed and threatened by Shell's acts and omissions at the Terminal and its violations of environmental laws and regulations.

12. CLF and its members are 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.

13. CLF and its members are affected by, and concerned with, pollutant discharges and/or releases resulting from Shell's failure to satisfy its obligations under the Clean Water Act and RCRA.

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 Shell'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 Shell'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. Shell 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, Shell'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) open dumping of waste in violation of RCRA; (xiii) creation of an imminent and substantial endangerment to health or the environment in violation of RCRA; and (xiv) failure to comply with state and federal RCRA regulations applicable to generators of hazardous wastes.

II. Defendants

17. Defendant Shell Oil Company, founded in 1912 by the Royal Dutch/Shell Group as the American Gasoline Company, is headquartered in Houston, Texas. Shell Oil Company is a wholly owned indirect subsidiary of Royal Dutch Shell plc that produces oil and gas in deep water in the Gulf of Mexico, heavy oil in California, and oil and gas from shale in Pennsylvania.

18. Defendant Equilon Enterprises LLC ("Equilon") is a wholly owned subsidiary of Defendant Shell Oil Company and an indirect subsidiary of Royal Dutch Shell plc. It was initially founded as a joint venture of Shell Oil Company and Texaco in 1998. On February 8, 2002, Texaco divested all interests in Equilon to Shell Oil Company. Equilon is currently doing business as Shell Oil Products US. Equilon holds Connecticut Industrial Stormwater Permit No. GSI002800 for the Terminal.

19. Defendant Shell Petroleum, Inc. was founded in 1984 and is headquartered in Houston, Texas. Shell Petroleum, Inc. is a wholly owned subsidiary of Royal Dutch Shell plc that produces, refines, and markets petroleum products and chemicals.

20. Defendant Shell Trading (US) Company became operational in 1998 and is headquartered in Houston, Texas. Shell Trading (US) Company is a wholly owned subsidiary of Royal Dutch Shell plc and is one of the world's largest energy trading companies, operating as the market interface of Royal Dutch Shell's US companies and affiliates.

21. Defendant Triton Terminaling LLC ("Triton") is a subsidiary of Shell Oil Company and in 2017, became the owner of the Terminal.

22. Defendant Motiva Enterprises LLC ("Motiva"), a wholly owned subsidiary of Saudi Refining Inc. and Aramco Financial Services Co., is a fuel refining, distribution, production, and marketing company headquartered in Houston, Texas. Motiva operated the Terminal between 2000 and 2017. Motiva was formed in 1998 as a joint venture between Shell Oil Company, Texaco Inc., and the Saudi Arabian Oil Company. *See Saudi-Texaco Joint Venture*, N.Y. Times, Jan. 3, 1989, at D11, *available at* https://www.nytimes.com/1989/01/03/business/saudi-texaco-joint-venture.html. In 2002, Shell Oil Company took over Texaco's interest in Motiva. *See* Letter Approving Application to Divest Texaco Refining and Marketing Inc. to Shell Oil Company and

Saudi Refining, Inc., Fed. Trade Comm'n (Feb. 5, 2002), *available at* https://www.ftc.gov/sites/default/files/documents/cases/2002/02/ftc.gov-chevronltr.htm. In 2017, Motiva was dissolved and Shell maintained control over its assets in the Northeastern region of the United States, including ownership of the Terminal. *See Shell Announces the Completion of Transaction to Separate Motiva Assets*, Shell (May 1, 2017), https://www.shell.com/media/news-and-media-releases/2017/completion-transaction-to-separate-motiva-assets.html. Per the dissolution agreement, references to Shell herein include any predecessors, successors, parents, subsidiaries, affiliates, and divisions of Shell, including Motiva Enterprises LLC.

23. The dissolution of the Motiva Joint Venture included a "Permit Assignment and Assumption Agreement." Defendant Motiva was defined as "Assignor" and Defendants Triton and Equilon were collectively defined as "Assignee" in the Permit Assignment and Assumption Agreement. The Permit Assignment and Assumption Agreement states, in pertinent part:

> Assignment and Assumption of Permits. As of the Closing Date, and subject in all respects to the occurrence of the Closing, Assignor does hereby convey, transfer, assign, and deliver the Triton Assumed Permits listed in Exhibit A-1 to this Agreement together with all associated responsibility, coverage and liability, to Assignee, and Assignee does hereby agree to accept and assume such Triton Assumed Permits, together with all associated responsibility, coverage and liability.

24. Non-party Royal Dutch Shell plc is the parent company of the Royal Dutch/Shell Group, a multinational oil and gas corporation incorporated in England and Wales and headquartered in The Hague, The Netherlands. The Royal Dutch/Shell Group formed in 1907 upon the merger of the Royal Dutch Petroleum Company and the Shell Transport and Trading Company.

25. Royal Dutch Shell plc is the world's fifth largest company and third largest oil and gas company by 2020 revenues. *Global 500*, Fortune, https://fortune.com/global500/ (last visited June 28, 2021).

26. Shell is a large producer, refiner, distributor, and marketer of petrochemicals. Shell produces approximately 3.4 million barrels of oil equivalent ("BOE") every day. *Annual Report 2020: Summary of Results*, Shell, https://reports.shell.com/annual-report/2020/strategic-report/summary-of-results.php (last visited June 28, 2021).

27. Upon information and belief, Shell's "proved reserves" (the amount of oil and gas that Shell could presently extract based on current technology and capabilities) as of December 31, 2020, are approximately 9.124 billion BOE. *Id.* Shell has interests in 13 oil refineries and operations in over 70 countries. Royal Dutch Shell plc, *Annual Report and Accounts* 10, 72 (2020), *available at* https://reports.shell.com/annual-report/2020/servicepages/downloads/files/shell-annual-report-2020.pdf.

28. Shell owns and operates the bulk petroleum storage facility located at 481 East Shore Parkway, New Haven, Connecticut 06512.

OVERVIEW

29. 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 (July 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 June 28, 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 June 28, 2021). This increase is alarming because increases in sea surface temperature lead to a higher frequency and magnitude of storm

events, as evidenced by the 10% increase per decade in precipitation in the Northeast. U.S. Global Change Research Program, *Climate Change Impacts in the United States: The Third National Climate Assessment* 373 (Jerry M. Melillo et al. eds., 2014), *available at* https://nca2014.globalchange.gov/downloads/low/NCA3_Climate_Change_Impacts_in_the_United%20States_LowRes.pdf ("Third National Climate Assessment"). 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.

30. 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., *Floodplain Building Elevation Standards: Current Requirements & Enhancement Options for Connecticut Shoreline Municipalities* 2 (May 1, 2018) (internal citations omitted), *available at* https://circa.uconn.edu/wp-content/uploads/sites/1618/2018/03/Floodplain-Building-Elevation-Standards.pdf.

31. "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. Mohsen Taherkhani et al., *Sea-level Rise Exponentially Increases Coastal Flood Frequency*, 10 Sci. Rep. 6466, 5 (Apr. 16, 2020), *available at* https://doi.org/10.1038/s41598-020-62188-4.

32. 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.*

33. 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.

34. Shell 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.

35. As laid out more fully below, the Terminal is immediately adjacent to the New Haven Harbor, houses multiple, large petroleum storage tanks near sea-level, and has suffered spills before, the detrimental impacts of which are still present in the Terminal's soil and groundwater today.

36. The Terminal also abuts a residential neighborhood and is 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.

37. The Terminal is subject to the Clean Water Act and the Resource Conservation and Recovery Act. 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. Shell's 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

38. 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*.

39. 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.

40. 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).

41. 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).

42. 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.

43. 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.

44. 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.

45. 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.

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

47. 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."

48. 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

49. The Resource Conservation and Recovery Act "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).

50. 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 . . .

51. "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)).

52. 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).

53. 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).

54. 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 . . . ."

55. 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."

56. 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).

57. 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).

58. 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).

59. 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).

60. 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).

61. 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."

62. The plain meaning definition for "discharge" is "to send out a substance, especially waste liquid or gas." *See* Discharge, *Cambridge Dictionary*, https://dictionary.cambridge.org/us/dictionary/english/discharge (last visited June 28, 2021).

63. 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] . . . ."

64. 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.

65. 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 . . . ."

66. 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. Shell's Terminal

67. Shell, acting through its officers, managers, subsidiary companies, and instrumentalities, owns and operates the Terminal.

68. Triton Terminaling LLC owns the Terminal.

69. Triton acquired the Terminal in 2017, before which it was owned by Motiva and was permitted under Registration No. GSI001341. *See* Semi-Annual Stormwater Monitoring Report submitted to CT DEEP by Shell Oil Products US 1 (Aug. 9, 2017), attached hereto as Exhibit C.

70. Motiva purchased the Terminal from Northeast Petroleum, Division of Cargill, Inc. in May 2000. *See* Letter from Paul Simonetta to CT DEEP Air Bureau Director Gary Rose (Nov. 15, 2002), attached hereto as Exhibit D.

71. Northeast Petroleum, Division of Cargill, Inc. acquired the Terminal from Exxon Company, U.S.A. on or about June 15, 1993. See Letter from Malcolm T. Newell to Susan Amarello, CT DEEP (June 1, 1993), attached hereto as Exhibit E.

72. The Terminal is a bulk storage and fuel terminal that has operated since at least 1954. *See* Environmental Condition Assessment Form (May 9, 2017), attached hereto as Exhibit F, at 6.

A. Facility Description

73. Upon information and belief, the Terminal occupies approximately 38 acres of land.

74. As described in the Terminal's 2017 SWPPP, which is attached as Exhibit G hereto, petroleum products arrive at the Terminal dock by tanker ship:

> The facility is a bulk petroleum storage terminal with operations principally consisting of the receipt, storage, and truck loading of petroleum products and additives. Products are received at the terminal via product transfer lines at the dock to aboveground storage tanks (ASTs) and via trucks. Product is primarily distributed from the truck loading rack. Product is also shipped via pipeline.

SWPPP at 2.

75. The operations at the Terminal,

> consist of receipt, storage, blending, and distributing of gasoline and petroleum distillate products. All products are received primarily via vessel and distributed via truck, vessel, and pipeline. The Facility is capable of receiving pipeline receipts, however, this method is not commonly used. Product additives are trucked in.

Spill Prevention Controls and Countermeasures Plan ("SPCC") (attached as Exhibit H hereto) § 1.1 at 1-2.

76. According to the SPCC, the Terminal has a total bulk oil storage capacity of 76,328,498 gallons. SPCC § 1.1 at 1-2.

77. The oil products at the terminal are stored in a series of ASTs. The Terminal has 39 ASTs storing: gasoline, No. 2 fuel oil, ethanol, jet fuel, ultra-low-sulfur diesel, petroleum additives, and heating oil. SWPPP at 3-5.

78. The SWPPP describes the ASTs as follows:

Aboveground Storage Tank	Tank Location (Containment)	Tank Location (Drainage Area)	Product	Shell Capacity (gal.)
T-1	Containment Area 1	Drainage Area 001C	Gasoline	4,087,554
T-2	Containment Area 1	Drainage Area 001C	Gasoline	4,084,106
T-3	Containment Area 1	Drainage Area 001C	Gasoline	3,917,793
T-21	Containment Area 2	Drainage Area 001B	Gasoline	9,182,087
T-22	Containment Area 2	Drainage Area 001B	No. 2 Fuel Oil	9,261,073
T-23	Containment Area 2	Drainage Area 001B	No. 2 Fuel Oil	9,267,454
T-24	Containment Area 2	Drainage Area 001B	Gasoline	8,999,609
T-25	Containment Area 2	Drainage Area 001B	Ethanol	3,814,222
T-26	Containment Area 3	Drainage Area 001A	Gasoline	3,823,653
T-27	Containment Area 3	Drainage Area 001A	Jet A	2,537,183
T-28	Containment Area 2	Drainage Area 001B	Ethanol	2,017,133
T-29	Containment Area 3	Drainage Area 001A	Gasoline	2,021,907
T-30	Containment Area 3	Drainage Area 001A	JP 8	2,935,434
T-31	Containment Area 3	Drainage Area 001A	Gasoline	1,640,611
T-32	Containment Area 3	Drainage Area 001A	Gasoline	1,671,308
T-33	Containment Area 3	Drainage Area 001A	Gasoline	1,166,904
T-34	Containment Area 3	Drainage Area 001A	ULSD	449,341
T-35	Containment Area 3	Drainage Area 001A	ULSD	450,338
T-36	Containment Area 3	Drainage Area 001A	ULSD	450,382
T-37	Containment Area 3	Drainage Area 001A	Jet A	448,369
T-38	Containment Area 3	Drainage Area 001A	ULSD	3,987,076

T-39	Containment Area 2	Drainage Area 001B	Additive/Dye	10,251
T-40	Containment Area 2	Drainage Area 001B	Additive/Dye	10,251
T-41	Containment Area 2	Drainage Area 001B	Additive/Dye	10,251
T-42	Containment Area 2	Drainage Area 001B	Additive/Dye	10,251
T-43	Containment Area 2	Drainage Area 001B	Additive/Dye	10,251
T-44	Containment Area 2	Drainage Area 001B	Additive/Dye	10,364
T-45	Containment Area 2	Drainage Area 001B	Additive/Dye	10,364
T-46	Containment Area 2	Drainage Area 001B	Additive/Dye	10,364
T-47	Near Fire House F-1	Drainage Area 001A	Additive	6,016
T-48	Near Garage	Drainage Area 001D	No. 2 Fuel Oil	2,000
T-49	Outside Warehouse	Drainage Area 001D	Heating Oil	2,000
T-50	Adjacent to Truck Exit	Drainage Area 001D	Diesel	280
T-53	Containment Area 3	Drainage Area 001A	JetA	500
T-54	Near Fire House F-3	Drainage Area 001D	Additive	510
T-57	Under Butane Lab	Drainage Area 001D	Gasoline	225
S-1	Containment Area 3	Drainage Area 001A	Jet A	300
S-2	Containment Area 3	Drainage Area 001A	Jet A	500
S-3	Containment Area 3	Drainage Area 001A	Jet A	500

79. Petroleum additives are trucked to the Terminal. The additives are pumped from tanker trucks to storage tanks at the Additive Tanks Transfer Area. SWPPP at 7.

80. Petroleum products leave the terminal by truck. The petroleum products are pumped from the ASTs into tanker trucks at the Truck Loading Rack. *Id.*

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

82. Defendants are, and/or have been, responsible for the operation and maintenance of the Terminal, including compliance with the Permit.

B. Drainage

83. Stormwater from the Shell Terminal flows through a series of catch-basins and pumps into a set of two retention basins. The stormwater from the basins is then manually pumped into the New Haven city storm sewer. SWPPP at 9.

84. For purposes of stormwater management, the Terminal is divided into four "Drainage Areas," identified as 001A, 001B, 001C, and 001D.

85. Drainage Areas 001A, 001B, and 001C are also designated as "Containment Areas," Containment Areas 1–3 respectively, because they are intended to contain oil products that might spill from the tanks. *See* SWPPP at 2.

86. To contain potential oil spills, the "Containment Areas" lie below the surrounding ground level and have rammed earth berms at certain locations around the periphery of the containment areas.

87. The containment berms do not surround the entirety of the Containment Areas and have openings in several places. As noted in the chart above, the majority of the ASTs lie within a Containment Area.

88. In the section entitled "Diked Storage Area Drainage," the SPCC describes the containment areas as follows:

> All aboveground storage tanks at the New Haven Terminal are completely surrounded by containment basins. Spills from the storage tanks of related product and pipeline will be contained within the diked area.

SPCC § 4.1 at 4-2.

89. Importantly, the purpose of the Containment Areas around the ASTs is not to keep water out. Instead, the Containment Areas are intended to contain oil in the event that one of the storage tanks ruptures:

> Bulk storage containers are situated such that secondary containment is provided, either by dikes or by means of drainage patterns that direct product releases to a location where it can be contained for recovery. Environmental Equivalencies are used for the double wall tanks (e.g., visual site gauges and facility being manned 24/7). The containment areas are designed to contain the entire contents of the largest container plus sufficient freeboard to allow for precipitation. Additional details and capacities are provided in Appendix A.
>
> The Shell main tank farm is divided into three (3) principal secondary containment areas which are all interconnected forming one large containment. The secondary containment dikes are earthen dikes surfaced with processed stone or vegetated with maintained grass.
>
> The floor across the entire tank farm generally slopes from the east to the west. Floor grading within the tank farm promotes drainage to low elevations where a number of lift stations pump drainage to the Facility retention basin.

SPCC § 5.2 at 5-2.

90. Stormwater collects in the containment areas and is pumped to a "retention basin":

> Stormwater in the diked areas that does not evaporate/percolate is visually inspected to verify that contamination is not present and then pumped to the retention basin, from where it is inspected and then discharged to Outfall 001 and the City storm sewer on East Shore Parkway. (Flapper-type drains are not utilized on site.).

SPCC § 4.1 at 4-2.

91. The SPCC explains the retention basin as follows:

> The retention basin is designed to accept stormwater from secondary containment drainage areas and other storm drains located throughout the Facility. The basin is bisected by an intermediate earthen dike that creates primary and secondary areas within the retention basin. This intermediate earthen dike contains an 18-inch diameter (high level) and 12-inch diameter (low level) drain pipe assembly (below the surface) that prevents potential floating petroleum within the primary basin from entering the secondary basin. A lift station is located within the secondary basin that allows, after verification that contamination is not present, discharges from Outfall 001 to the City storm sewer located on East Shore Parkway.

SPCC § 4.2 at 4-2.

92. The retention basin is located in Drainage Area 001C.

93. The stormwater from the tank farm in Containment Areas 1–3 is not treated before it is pumped into the retention basins.

94. The stormwater from the retention basins is not treated before it is pumped to the New Haven storm sewer.

95. Drainage Area 001D is not in a Containment Area. It is at ground level and has no containment berms.

96. Drainage Area 001D contains the Truck Loading Rack and Additive Tanks Transfer Area.

97. The SPCC describes operations at the Truck Loading Rack:

> Product additives are trucked in. The loading rack is equipped with eight (8) bays from which product can be loaded. Transfers to the truck (loading arm) loading rack are at the rate of 600 gallons per minute. The perimeter strip drains gravity feed to an oil/water separator with a storage capacity sufficient to contain an anticipated worst case spill.

SPCC § 7.1 at 7-2.

98. The SPCC describes the operation of this oil/water separator as follows:

> The loading rack is equipped to contain the worst-case truck rupture (9,000 gallons) or overfill. Drainage at the loading rack is directed into trough drains located at the perimeter of the rack area. Drainage from the loading rack trough drains flow to a 15,000 gallon steel oil/water separator. The water phase effluent from the oil/water separator gravity flows to the primary retention basin. The oil/water separator is equipped with sensors that trigger a visual alarm when the petroleum level reaches 10% of the separator's volume and a visual and audible alarm at 20% of the separator's volume. In the event of a large release at the loading rack, the oil/water separator is equipped with manually operated block valves on both the outlet and inlet piping.

SPCC § 7.3 at 7-5.

99. The only stormwater that is treated onsite flows from the Truck Loading Rack and the Additive Tanks Transfer Area to this 15,000-gallon oil/water separator before being pumped into the retention ponds. SWPPP at 10, 14.

100. The terminal contains four additional oil/water separators, described by the SPCC as follows:

> A total of five (5) underground oil/water separators are also located at the Facility. Of the five oil/water separators, one (1) is currently in use. The inactive oil/water separator, as well as two of the active separators, are also located in the tank farm and originally functioned to handle water draw off effluent from the Facility's aboveground storage tanks as well as minor drips/spills associated with pump containment areas at the Facility. The Facility no longer conducts water draw-off operations. Therefore, two (2) of the active oil/water separators solely provide containment for drips/spills associated with pump containment areas as shown on the Plan. The third active oil/water separator provides initial separation for drips/spills originating from the undiked areas. The fourth active oil/water separator provides separation for drips/spills originating from the truck loading rack and the product pump off area.

SPCC § 5.3 at 5-3.

101. The SWPPP claims that "catch basins inside the bermed areas collect and direct stormwater to the retention basins allowing for treatment of stormwater prior to discharge from the site." SWPPP at 26.

102. The SWPPP does not explain how stormwater in the retention basins could be treated "prior to discharge from the site," as there are no treatment facilities between the retention basins and the outfall to the New Haven storm sewer.

103. The Terminal also contains a drainage ditch described in the SWPPP as follows:

> A drainage ditch which originates off site runs through the terminal. The ditch enters the terminal property on the northeastern edge of the property and flows south and west between Containment Area 1 and 2. At the south end of the terminal the drainage ditch is joined by a second ditch which originates off the southeast edge of the terminal. The ditch continues between Containment Areas 1 and 2 before exiting the southwest portion of the property.

SWPPP at 10.

C. Hazardous Materials Handled and Stored

104. At the Terminal, Shell is regulated under RCRA as a generator of hazardous waste, Handler ID No. CTD064827942.

105. At the time of the filing of this Complaint, the Terminal is categorized as a Small Quantity Generator under RCRA.

106. 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, Anthracene, Benzene, Cumene, Cyclohexane, Ethylbenzene, Lead Compounds, Naphthalene, Polycyclic Aromatic Compounds, Toluene, Xylene (mixed isomers), and n-Hexane.

107. The Terminal is also subject to the "risk management plan" ("RMP") requirements of Clean Air Act Section 112(r). Section 112(r) requires that a facility submit a "risk management plan" anytime that it has a process using more than a threshold amount of a "regulated substance," meaning a substance that "in the case of an accidental release, are known to cause or may reasonably be anticipated to cause death, injury, or serious adverse effects to human health or the environment." Clean Air Act § 112(r)(1)-(3), 42 U.S.C. § 7412(r)(1)-(3).

108. The Terminal is subject to this requirement because, according to its RMP, it holds approximately 790,000 pounds of butane for use in a "butane blending system" where butane is blended with gasoline, well in excess of the 10,000-pound RMP threshold.

109. The soil and groundwater within the Terminal are contaminated.

110. Environmental remediation reports submitted by Defendants to the CT DEEP indicate that various chemical spills have occurred on the site since at least the 1970s. *See* Environmental Condition Assessment Form (May 9, 2017), Ex. F, at 18.

111. Investigation and remediation activities to address contamination from these spills began in 1992 and have continued until the present day. *See Id.* at 7.

112. Shell's remediation filings indicate that the soil and groundwater at the Terminal contain several toxic pollutants in excess of Connecticut remediation standards, including benzene, lead, copper, arsenic, zinc, phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(a)pyrene, and Benzo(k)fluoranthene. *See Id.* at 11–17.

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

113. 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.

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

A. Quinnipiac River

114. The Quinnipiac River runs 38 miles from its headwaters into the New Haven Harbor and Long Island Sound. *River History*, The Quinnipiac River Fund, http://www.thequinnipiacriver.com/about/river-history (last visited June 28, 2021).

115. 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.*

116. 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.*

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

118. 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.*

119. 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.*

120. 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.

121. "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 (Apr. 2017), *available at* https://www.newhavenct.gov/civicax/filebank/blobdload.aspx?blobid=26456.

122. 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.

123. The Quinnipiac River is tidally influenced and boasts six miles of tidal marshes along its banks. Quinnipiac River Watershed Assoc. et al., *Quinnipiac River Watershed Based Plan* app. A at 37 (June 2013), *available at* https://portal.ct.gov/-/media/DEEP/water/watershed_management/wm_plans/quinnipiac/quinnipiacwbpappendicespdf.pdf. "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*, Nat'l Audubon Soc'y, https://www.audubon.org/important-bird-areas/quinnipiac-river-tidal-marsh (last visited June 28, 2021).

124. 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, *City of New Haven Natural Hazard Mitigation Plan Update II*, 3-7–8 (Apr. 2017), *available at* https://www.newhavenct.gov/civicax/filebank/blobdload.aspx?blobid=26456.

125. The future of the Quinnipiac River, including its attendant benefits for surrounding communities and ecosystems, is jeopardized by Shell's failure to prepare the Terminal for the effects of climate change.

B. Mill River

126. The Mill River begins its journey in Cheshire, Connecticut, winding its way through several towns before emptying in New Haven Harbor. Quinnipiac River Watershed Assoc. et al., *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.

127. 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." City of New Haven et al., *Mill River Trail Framework Plan* 15 (2017), *available at* https://issuu.com/millrivertrail/docs/mrt_frameworkplan.

128. 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.*

129. 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* Thomas Breen, *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/ ("[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.").

130. Shell's failure to prepare its Terminal for the impacts of climate change leaves the Mill River and the community benefits it provides at risk, putting the burden and cost of a climate disaster on the New Haven community.

C. New Haven Harbor and the Port of New Haven

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

132. According to the City 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." *Port of New Haven*, City of New Haven, https://www.newhavenct.gov/gov/depts/port_authority/port.htm (last visited June 28, 2021).

133. 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 and Wildlife Serv., *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 June 28, 2021); *see also Urban Oases in the New Haven Harbor Watershed*, Audubon Connecticut, https://ct.audubon.org/conservation/urban-oases-new-haven-harbor-watershed (last visited June 28, 2021).

134. 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, *City of New Haven Natural Hazard Mitigation Plan Update II* 3-29 (Apr. 2017), *available at* https://www.newhavenct.gov/civicax/filebank/blobdload.aspx?blobid=26456.

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

III. Shell's Clean Water Act Permit

136. Shell operates the Terminal pursuant to the General Permit for Discharge of Stormwater Associated with Industrial Activity issued by CT DEEP ("General Permit" or the "Permit"). A version of the General Permit was first effective on October 1, 2011. The General Permit has been extended three times, on October 1, 2016, October 1, 2018, and October 1, 2019. It is set to expire on September 30, 2021. *See* CT DEEP, *Notice of Reissuance without Modifications* (Oct. 4, 2019), *available at* https://portal.ct.gov/-/media/DEEP/water_regulating_and_discharges/stormwater/industrial/190930GSINoticeofReissuancewithoutModificationspdf.pdf.

137. The Registration Number for the Terminal's permit is GSI002800.

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

139. 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.*

140. 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.

141. 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.

142. 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.

143. Because the Permit is limited to 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 Shell "must eliminate non-stormwater discharges." Permit § 5(b)(11).

144. 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. Connecticut Coastal Management Act

145. 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).

146. The Connecticut Coastal Management Act ("CMA") applies to "all property lying within the coastal boundary." Conn. Gen. Stat. § 22a–94(g).

147. 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. It "shows the extent of lands and coastal waters as defined by Connecticut General Statute within Connecticut's coastal area."

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

149. 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.

150. 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 June 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.").

151. 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 ("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.").

152. The CMA goals and policies state further:

> (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.

B. Control Measures

153. The Permit requires Shell to implement "Control Measures" to guard against the risks of pollutant discharges in its stormwater.

154. 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).

155. 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.

156. The Permit identifies 13 categories of "Control Measures."

157. 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).

158. 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).

159. 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).

160. 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).

161. 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).

C. Stormwater Pollution Prevention Plan

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

163. 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).

164. 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).

165. 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 pollutants 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).

166. 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).

167. 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).

168. 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).

169. 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).

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

170. Climate change has exacerbated and continues to exacerbate changes in 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.

171. While 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* 2 (May 1, 2018) (internal citations omitted), *available at* https://circa.uconn.edu/wp-content/uploads/sites/1618/2018/03/Floodplain-Building-Elevation-Standards.pdf.

172. 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.

173. Shell has long been aware of the present impacts and risks of climate change.

174. A 1988 Shell confidential report entitled "The Greenhouse Effect" includes a thorough review of climate science literature, an analysis of the contribution of Shell's own products to global CO_2 emissions, and a detailed analysis of potential climate impacts, including rising sea levels, ocean acidification, and human migration. R.P.W.M. Jacobs et al., Shell Internationale Petroleum, *The Greenhouse Effect* (1988), available at http://www.climatefiles.com/shell/1988-shell-report-greenhouse/. The report's summary states that "[m]an-made carbon dioxide, released into and accumulated in the atmosphere, is believed to warm the earth through the so-called greenhouse effect." *Id.* at 1. The report predicts the impacts of such warming, stating that "[m]athematical models of the earth's climate indicate that if this warming occurs then it could create significant changes in sea level, ocean currents, precipitation patterns, regional temperature and weather." *Id.* The report further acknowledges that "[w]ith fossil fuel combustion being the major source of CO2 in the atmosphere, a forward looking approach by the energy industry is clearly desirable . . . ." *Id.*

175. "We at Shell have long recognised the importance of the climate challenge along with the ongoing critical role energy plays in enabling a decent quality of life for people across the globe." Shell, *A Better Life with a Healthy Planet – Pathways to Net-Zero Emissions* 3 (2016), *available at* https://www.shell.com/energy-and-innovation/the-energy-future/scenarios/a-better-life-with-a-healthy-planet/_jcr_content/par/textimage_494361683.stream/1475857583070/830baf3cf119dce4eec1e4a83cab7d243c18dfc7/scenarios-nze-brochure-local-print-awv9.pdf.

176. "The need for urgent action in response to climate change has become ever more obvious since the signing of the Paris Agreement in 2015." Royal Dutch Shell plc, *Industry Associations Climate Review* 2 (Apr. 2019), *available at* https://www.shell.com/promos/sustainability/industry-

association-climate-review-2019/_jcr_content.stream/1554466210642/0a46ab13e36e99f8762ebb021bd72decec2f47b2/final-industry-association-climate-review-april-2019.pdf.

177. According to Shell, they "were one of the first energy companies to recognise the climate change threat and to call for action." Royal Dutch Shell plc, *Responsible Energy Sustainability Report* 12 (2008), *available at* https://www.shell.com/about-us/annual-publications/annual-reports-download-centre/_jcr_content/par/tabbedcontent_f645/tab_1430292389/textimage.stream/1519790931376/6b314ba848da94854d7291444e9c4e4e1219c419/shell-sustainability-report-english-2008.pdf.

178. In 1991, 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, https://www.theguardian.com/environment/2017/feb/28/shell-film-warning-climate-change-rate-faster-than-end-ice-age. 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).

179. For 50 years, Shell claims to have developed "scenarios" in order to "make crucial choices in uncertain times and tackle tough energy and environmental issues." *Earlier Scenarios*, Shell, https://www.shell.com/energy-and-innovation/the-energy-future/scenarios/new-lenses-on-the-future/earlier-scenarios.html (last visited June 28, 2021).

180. Since the 1990s, Shell claims to have "helped other organisations in developing their own scenarios in various subject areas," including "climate change with the Intergovernmental Panel on Climate Change [("IPCC")]." Peter Knight, Shell, *The Shell Report 1998: Profits and Principles – Does There Have to Be a Choice?* 25 (1998), *available at* https://www.shell.com/sustainability/transparency-and-sustainability-reporting/sustainability-reports/_jcr_content/par/expandablelist_copy/expandablesection_851513162.stream/1519790990923/8c7cf7e17abcd9772af39994b88ed37a5a86e216/shell-sustainability-report-1998-1997.pdf.

181. The 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 30th Anniversary*, IPCC, https://www.ipcc.ch/reports/ipcc-30th-anniversary/#:~:text=The%20IPCC%20was%20established%20by,environmental%20and%20socio%2Deconomic%20impacts (last visited June 28, 2021).

182. Shell has contributed its "scenarios" to IPCC Assessment Reports and Special Reports since as early as 1995 and as recently as 2014.

183. Shell scientists have contributed to IPCC Assessment Reports in the capacities of Reviewer, Contributing Author, Expert Reviewer, and Lead Author since the Second Assessment Report and up until the most recent Fifth Assessment Report. Shell scientists served in Working Groups I and III on the topics of Scientific Basis and Mitigation of Climate Change, respectively.

184. Shell scientists have further contributed to IPCC Special Reports, including working on the 1994 report entitled *Radiative Forcing of Climate Change and An Evaluation of the IPCC IS92 Emission Scenarios*, *available at* https://www.ipcc.ch/report/climate-change-1994-radiative-

forcing-of-climate-change-and-an-evaluation-of-the-ipcc-is92-emission-scenarios-2/; the 2000 report entitled *Emissions Scenarios, available at* https://www.ipcc.ch/site/assets/uploads/2018/03/emissions_scenarios-1.pdf; the 2000 report entitled *Methodological and Technological Issues in Technology Transfer*, *available at* https://www.ipcc.ch/site/assets/uploads/2018/03/srtt-en-1.pdf; and the 2005 report entitled *Carbon Dioxide Capture and Storage*, *available at* https://www.ipcc.ch/site/assets/uploads/2018/03/srccs_wholereport-1.pdf.

185. Shell's decades-long development of scenarios suggests an embedded company practice of advanced knowledge and preparedness. Shell claims that the scenarios have "helped us anticipate and adapt to momentous events like the oil shocks of the 1970s, the collapse of communist Europe in 1989, the surge in world energy demand and the threat of climate change." *Earlier Scenarios*, Shell, http://www.shell.com/energy-and-innovation/the-energy-future/scenarios/new-lenses-on-the-future/earlier-scenarios.html (last visited June 28, 2021).

186. Shell was an early member of the Global Climate Coalition ("GCC"), but withdrew its membership in April 1998 when the GCC began lobbying against establishing legally binding targets and timetables in the Kyoto Protocol, which developed milestones aimed at reducing CO_2 emissions. *See* Peter Knight, Shell, *The Shell Report 1998: Profits and Principles – Does There Have to Be a Choice?* 41 (1998), *available at* https://www.shell.com/sustainability/transparency-and-sustainability-reporting/sustainability-reports/_jcr_content/par/expandablelist_copy/expandablesection_851513162.stream/1519790990923/8c7cf7e17abcd9772af39994b88ed37a5a86e216/shell-sustainability-report-1998-1997.pdf.

187. According to Shell, "[t]he main disagreement centred on the Kyoto protocol which aims to cut overall greenhouse gas emissions by 5% by the year 2012. The GCC is actively campaigning

against legally binding targets and timetables as well as ratification by the US government. The Shell view is that prudent precautionary measures are called for." *Id.*

188. Shell has since continued to publicly reiterate its support for international agreements, such as the Kyoto Protocol and the Paris Climate Agreement. *See* Chris Noon, *Shell CEO Targets Washington Over Kyoto*, Forbes, Dec. 5, 2006, https://www.forbes.com/2006/12/05/shell-kyoto-ceo-face-cx_cn_1205autofacescan02.html#689012c2c4fd (Former Shell CEO Jeroen van der Veer on the Kyoto Protocol: "For us as a company, the debate about CO2 is over. We've entered a debate about what we can do about it."); Samantha Raphelson, *Energy Companies Urge Trump to Remain in Paris Climate Agreement*, Nat'l Pub. Radio, May 18, 2017, https://www.npr.org/2017/05/18/528998592/energy-companies-urge-trump-to-remain-in-paris-climate-agreement (Shell CEO Ben Van Beurden on the Paris Climate Agreement: "We believe climate change is real;" "We believe that the world needs to go through an energy transition to prevent a very significant rise in global temperatures. And we need to be part of that solution in making it happen.").

189. Regardless of the cause, 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."
- "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."
- "Human-induced climate change is projected to continue, and it will accelerate significantly if global emissions of heat-trapping gases continue to increase."
- "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."

- "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."

- "Infrastructure is being damaged by sea level rise, heavy downpours, and extreme heat; damages are projected to increase with continued climate change."

Third National Climate Assessment at 15-16.

190. 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.

191. "Infrastructure will be increasingly compromised by climate-related hazards, including sea level rise, coastal flooding, and intense precipitation events." *Id.* at 379.

1. Flooding

192. 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

193. Climate change can cause increases in the frequency of storms.

194. Climate change can cause increases in the intensity of storms.

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

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

197. 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.

198. "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." *Id.* at 378.

199. "[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." IPCC, *Climate Change 2014 Synthesis Report* 2 n.1, 53 (2015), *available at* https://www.ipcc.ch/site/assets/uploads/2018/05/SYR_AR5_FINAL_full_wcover.pdf.

200. 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 National Climate Assessment at 41.

201. 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(2) J. Coast. Res. 479, 487 (Mar. 2008).

202. 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 and Disasters to Advance Climate Change Adaptation* 181 (Christopher B. Field et al. eds. 2012), *available at* https://www.ipcc.ch/site/assets/uploads/2018/03/SREX_Full_Report-1.pdf.

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

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

205. Storm surge is increasing in New England.

206. Storm surge is increasing in Connecticut.

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

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

209. The frequency of coastal flooding is increasing in New England.

210. The frequency of coastal flooding is increasing in Connecticut.

211. 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), https://www.wunderground.com/blog/JeffMasters/climate-change-impact-on-noreasters-an-increased-storm-surge-threat.html. 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), https://www.wunderground.com/blog/JeffMasters/the-future-of-intense-winter-storms.html.

212. The Connecticut 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 Subcomm. to the Governor's Steering Comm. on Climate Change, *The Impacts of Climate Change on Connecticut Agriculture, Infrastructure, Natural Resources and Public Health*

103 (Apr. 2010), *available at* https://portal.ct.gov/-/media/DEEP/climatechange/ImpactsofClimateChangepdf.pdf.

213. "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, *City of New Haven Natural Hazard Mitigation Plan Update II* 5-1 (Apr. 2017), *available at* https://www.newhavenct.gov/civicax/filebank/blobdload.aspx?blobid=26456.

214. "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 (July 31, 2017), *available at* https://circa.uconn.edu/wp-content/uploads/sites/1618/2016/03/CIT-CIRCA-Final-Report-With-JPEG-Appendices-attached.pdf.

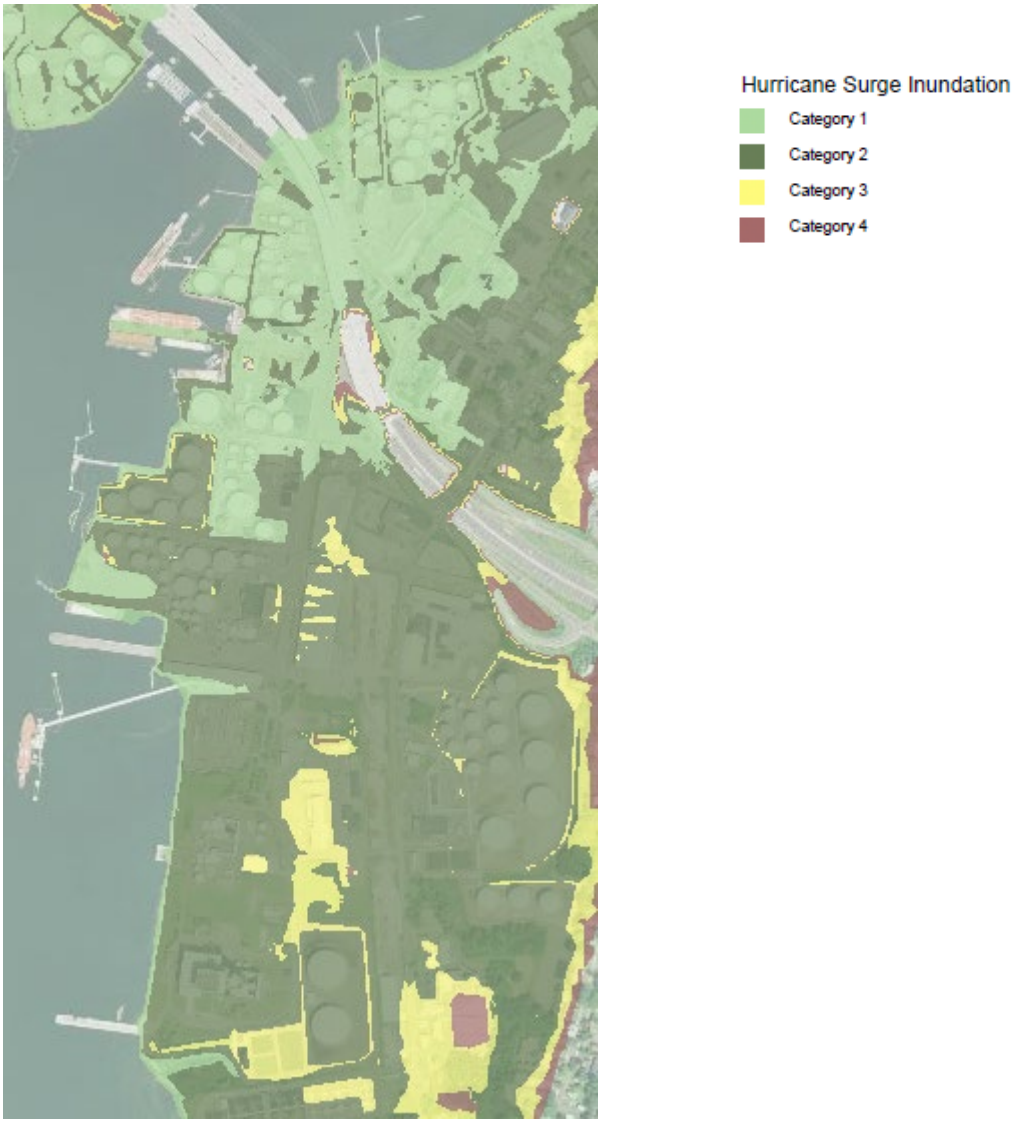
215. CT DEEP maintains an online mapping tool, entitled the "Connecticut Coastal Hazards Viewer," which grants the public access to environmental data and projections.

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

217. 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.

218. 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. The following image is a screen

capture of the SLOSH model's rendition of present-day risks to the Port of New Haven as presented in the Connecticut Coastal Hazards Viewer:



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

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

221. Shell reported to CT DEEP that the Terminal flooded during Tropical Storm Irene in 2011, causing the Terminal to discharge several pollutants well beyond Benchmark levels. In its October 12, 2011 Stormwater Monitoring Report to CT DEEP, which is attached hereto as Exhibit I, Motiva stated:

> The reported laboratory analytical results for [chemical oxygen demand ("COD")] from the sample collected from Outfall 001 and several parameters for the sample collected from Outfall 003 were above the numbers for chemical parameters in Section 5.(c)(l)(E)(i) of the permit. After investigation, Motiva believes that extensive rainfall, wind and flooding associated with tropical storm Irene on August 28 and 29 contributed to the unusual results detected in samples collected the following week. Based on historical results from these outfalls, Motiva does not believe these samples are representative of normal operating conditions at the terminal.

Ex. I at 1.

222. Shell reported the following pollutant levels for Outfall 001:

Parameter	Results (units)
COD	130.0 mg/l

Id. at 3.

223. Shell reported the following pollutant levels for Outfall 003:

Parameter	Results (units)
COD	1,800.0 mg/l
TSS	120.0 mg/l
TP	1.7 mg/l
TKN	4.9 mg/l
NO3-N	18.0 mg/l
Total Copper	0.27 mg/l
Total Zinc	0.71 mg/l
Total Lead	0.18 mg/l
24 Hr. LC50	22.5%
48 Hr. LC50	21.0%

Id. at 4.

224. The Benchmark pollutant levels in the Permit for these pollutants are as follows:

Chemical Oxygen Demand (mg/l)	75
Total Oil and Grease (mg/l)	5
Sample pH	5–9
Total Suspended Solids (mg/l)	90
Total Phosphorus (mg/l)	0.40
Total Kjeldahl Nitrogen (mg/l)	2.30
Nitrate as Nitrogen (mg/l)	1.10
Total Copper (mg/l)	0.059
Total Lead (mg/l)	0.076
Total Zinc (mg/l)	0.160

Permit § 5(e)(1)(B)(ii).

225. Storm surge can cause ASTs to buckle or float off their foundations, resulting in catastrophic oil spills. *See* Dave Fehling, *How Hurricanes that Hit the Texas Coast Can Float Giant Tanks*, Nat'l Pub. Radio, Oct. 7, 2013, https://stateimpact.npr.org/texas/2013/10/07/how-hurricanes-that-hit-the-texas-coast-can-float-giant-tanks/. During Hurricane Katrina, five or six major spills were caused by ASTs lifted by storm surge. *Id.*

226. AST's must also be designed and protected by containment structures sufficient to protect against releases of spilled materials in the case of tank failures. These volume of containment structures must be designed with sufficient freeboard to accommodate foreseeable precipitation and flooding. Shell's containment structures, which are not designed to protect against floodwaters or storm surge flowing onto the Terminal, were not designed with sufficient freeboard to accommodate extreme precipitation or coastal flooding, including reasonably foreseeable impacts of climate change.

227. Yet, Shell's SWPPP does not include any measures that Shell 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

228. Sea levels are rising in Connecticut.

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

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

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

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

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

234. Sea level rise that has already happened, and that will certainly happen in the near future, interacts with tidal movement, heavy precipitation, and storm surge, which causes and contributes to pollutant discharges and/or releases from the Terminal. These pollutant discharges and/or releases are due to inadequate infrastructure design and infrastructure failure, among other things.

235. "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 National Climate Assessment at 373.

236. 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 and Regional Sea Level Rise Scenarios for the United States* 9 (Jan. 2017), *available at* https://tidesandcurrents.noaa.gov/publications/techrpt83_Global_and_Regional_SLR_Scenarios_for_the_US_final.pdf. 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.").

237. 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 United States National Climate Assessment* 10 (Dec. 6, 2012), *available at* https://cpo.noaa.gov/sites/cpo/Reports/2012/NOAA_SLR_r3.pdf. "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.

238. "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 National Climate Assessment at 374.

239. 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*." Mohsen 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.

240. Certain future changes are "committed" by "virtue of past or current forcings." IPCC, *Climate Change 2013: The Physical Science Basis* 128 (2013), *available at* http://www.climatechange2013.org/images/report/WG1AR5_ALL_FINAL.pdf. 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* 68, 77 (2007), *available at* https://www.ipcc.ch/site/assets/uploads/2018/05/ar4_wg1_full_report-1.pdf.

241. "[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* 28 (2013), *available at* http://www.climatechange2013.org/images/report/WG1AR5_ALL_FINAL.pdf.. The IPCC defines "virtually certain" as a "99-100% probability." *Id.* at 4.

242. Researchers have found that the amount of 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 U. Clark et al., *Consequences of Twenty-First-Century Policy for Multi-Millennial Climate and Sea-Level Change*, 6 Nature Climate Change 360, 365 (Feb. 2016), *available at* https://hwpi.harvard.edu/files/climatechange/files/clark_etal_2016.pdf. "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.*

243. According to NOAA's National Centers for Environmental Information ("NCEI") summary of Connecticut's climate, "[t]emperatures in Connecticut have increased about 3°F since the beginning of the 20th century." *State Climate Summaries: Connecticut*, NOAA NCEI, https://statesummaries.ncics.org/chapter/ct/ (last visited June 28, 2021).

244. The NCEI 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.

245. 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 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* 1 (July 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.

246. "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 14 (Aug. 2019), *available at* https://circa.uconn.edu/wp-content/uploads/sites/1618/2019/08/CTPCSAR-Aug2019.pdf.

247. 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, CIRCA, *Sea Level Rise in Connecticut* 4 (Feb. 2019), *available at* https://circa.uconn.edu/wp-content/uploads/sites/1618/2019/02/SeaLevelRiseConnecticut-Final-Report.pdf.

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

249. 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 Subcomm. to the Governor's Steering Comm. on Climate Change, *The Impacts of Climate Change on Connecticut Agriculture, Infrastructure, Natural Resources and Public Health*

104 (Apr. 2010) (emphasis added), *available at* https://portal.ct.gov/-/media/DEEP/climatechange/ImpactsofClimateChangepdf.pdf.

250. In 1972, the American Petroleum Institute ("API") released a status report on all group-sponsored environmental research projects. Shell is among thirty-nine "company affiliations of committee members" listed in the status report. API, *Environmental Research: A Status Report* 136 (Jan. 1972), *available at* http://files.eric.ed.gov/fulltext/ED066339.pdf. The report contains a summary of a 1968 report entitled "Sources, Abundance, and Fate of Gaseous Atmospheric Pollutants" prepared for API. *Id.* at 103. The API status report refers to the report's discussion of CO_2 as a "brief review of current thinking." *Id.*

251. The "Sources, Abundance, and Fate of Gaseous Atmospheric Pollutants" report, by Stanford Research Institute ("SRI"), discusses the implications of a CO_2-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." E. Robinson & R.C. Robbins, SRI, *Sources, Abundance, and Fate of Gaseous Atmospheric Pollutants* 108 (1968), *excerpt available at* https://www.smokeandfumes.org/documents/document16. In the report, SRI further states that "[a]lthough there are other possible sources for the additional CO_2 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.

252. A 1989 New York Times article describes Shell's efforts to design and construct a natural-gas production platform in the North Sea that would account for sea level rise. According to the article, in anticipation of sea level rise *throughout the duration of the platform's lifespan*, the

company's engineers "are considering raising the platform from the standard 30 meters – the height now thought necessary to stay above the waves that come in a once-a-century storm – to 31 or 32 meters." *Greenhouse Effect: Shell Anticipates a Sea Change*, N.Y. Times, Dec. 20, 1989, at D6, *available at* https://www.nytimes.com/1989/12/20/business/greenhouse-effect-shell-anticipates-a-sea-change.html. A Shell spokesperson said that the additional cost of a one-meter increase in platform height would be sixteen million dollars (1989 USD Value). *See id.*

253. However, Shell has not taken action to address the threat of sea level rise at the Terminal.

c. Increasing Sea Surface Temperatures Contribute to Flooding

254. Climate Change is increasing sea surface temperatures in areas of the United States.

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

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

257. Sea surface temperatures in New England are rising.

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

259. 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.

260. "The primary climatic forces affecting the coasts are changes in temperature, sea and water levels, precipitation, storminess, ocean acidity, and ocean circulation." Third National 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.*

261. 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.

262. 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.

263. According to a report by CT DEEP, average surface temperatures in Long Island Sound have been rising, with a change of almost 2 degrees Celsius between 1991 and 2015. CT DEEP, *2015 Long Island Sound Hypoxia Season Review* 27 (2015), *available at* https://portal.ct.gov/DEEP/Water/LIS-Monitoring/-/media/DEEP/water/lis_water_quality/monitoring/2015/2015SeasonReviewfinalpdf.pdf.

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

2. Precipitation

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

266. The average annual precipitation is increasing in Connecticut.

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

268. 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.

269. 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.

State Climate Summaries: Connecticut, NOAA NCEI, https://statesummaries.ncics.org/chapter/ct/ (last visited June 28, 2021).

270. 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* 35 (Aug. 2019), *available at* https://circa.uconn.edu/wp-content/uploads/sites/1618/2019/11/CTPCSAR-Aug2019.pdf.

271. "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*.

272. "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 National Climate Assessment at 373.

273. A 2013 Shell scenario report addressed an impending "resource stress nexus" between increasing demand and decreasing supply of food, water, and energy, stating: "[c]limate change could lead to extreme weather conditions, such as lengthy droughts and torrential flooding that would impact agriculture and livelihoods. Water shortages could intensify social and political instability, provoke conflicts, and cause irreparable environmental damage." Shell International BV, *New Lens Scenarios: A Shift in Perspective for a World in Transition* 11 (2013), *available at*

https://www.shell.com/content/dam/royaldutchshell/documents/corporate/scenarios-newdoc.pdf (last visited June 28, 2021).

274. One year later, Shell released a report entitled "New Lenses on Future Cities," which addressed "climate adaptation" in coastal cities demonstrating Shell's extensive knowledge of the climate change challenges facing coastal communities. Shell International BV, *New Lenses On Future Cities: A New Lens Scenarios Supplement* 13-15 (2014), *available at* https://www.shell.com/energy-and-innovation/the-energy-future/scenarios/new-lenses-on-future-cities.html (last visited June 28, 2021).

275. However, Shell has not taken action to address severe precipitation events at the Terminal.

B. Lessons from the Not-So-Distant Past

276. 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*.

277. Analogous risks have 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.

278. 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 June 28, 2021).

279. In August 2005, Shell'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 Report 2006: Meeting the Energy Challenge* 23 (2006), *available at* https://ungc-production.s3.us-west-2.amazonaws.com/attachments/1914/original/COP.pdf?1262614296.

280. 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.

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

282. 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), https://www.vox.com/science-and-health/2017/8/28/16211392/100-500-year-flood-meaning; *see also* Eric S. Blake & David Zelinsky, Nat'l Hurricane Ctr., *Tropical Cyclone Report: Hurricane Harvey* 9 (May 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).

283. 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.

284. Shell reported to the Texas Commission on Environmental Quality ("TCEQ") that at its Deer Park facility on August 28, 2017, "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 Report Database: Incident 266341*, https://www2.tceq.texas.gov/oce/eer/index.cfm?fuseaction=main.getDetails&target=266341 (last visited June 28, 2021).

285. In a separate incident report concerning activity at its Deer Park facility on August 28, 2017, Shell reported 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: Incident 267012*, https://www2.tceq.texas.gov/oce/eer/index.cfm?fuseaction=main.getDetails&target=267012 (last visited June 28, 2021).

286. From August 27 to September 1, 2017, Shell filed five reports with the National Response Center documenting incidents at its Deer Park and Houston facilities.

287. 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/.

288. 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. Jim Malewitz & Emma Platoff, *Explosions Reported at Harvey-Flooded Chemical Plant in Crosby*, Texas Trib., Aug. 31, 2017, *available at* https://www.texastribune.org/2017/08/31/harvey-flooded-chemical-plant-crosby-reportedly-explodes/.

289. According to the EPA's assessment of local Superfund sites, as of September 2, 2017, "13 sites have been flooded and/or are experiencing possible damage due to the storm." News Release, EPA, *Status of Superfund Sites in Areas Affected by Harvey* (Sept. 2, 2017), *available at* https://archive.epa.gov/epa/newsreleases/status-superfund-sites-areas-affected-harvey.html.

290. 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.

291. 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.*

292. 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*, NOAA (Nov. 24, 2020), https://www.noaa.gov/media-release/record-breaking-atlantic-hurricane-season-draws-to-end.

293. 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 favored 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.*

294. 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.

V. Shell Has Failed to Take Sufficient Steps to Minimize the Potential for Pollution from the Terminal

295. Human emissions of greenhouse gases have been causing changes to Earth's climate in a process referred to generally as "climate change" since before 2015.

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

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

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

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

300. More intense storms in and around coastal areas have resulted in greater storm surge since before 2015.

301. Greater storm surge has resulted in greater flooding in coastal areas since before 2015.

302. Storm surge has been increasing in New England since before 2015.

303. Storm surge has been increasing in Connecticut since before 2015.

304. The severity of coastal flooding has been increasing in New England since before 2015.

305. The severity of coastal flooding has been increasing in Connecticut since before 2015.

306. The frequency of coastal flooding has been increasing in New England since before 2015.

307. The frequency of coastal flooding has been increasing in Connecticut since before 2015.

308. Climate change has caused sea levels to rise since before 2015.

309. Sea levels have been rising in Connecticut since before 2015.

310. Sea level rise has been contributing to increases in the frequency of flood events in New England since before 2015.

311. Sea level rise has been contributing to increases in the intensity of flood events in New England since before 2015.

312. Sea level rise has been contributing to increases in the frequency of flood events in Connecticut since before 2015.

313. Sea level rise has been contributing to increases in the intensity of flood events in Connecticut since before 2015.

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

315. Climate change has been increasing sea surface temperatures in areas of the United States since before 2015.

316. Increases in sea surface temperatures have been causing more intense storms since before 2015.

317. Increases in sea surface temperatures have been causing more frequent storms since before 2015.

318. Sea surface temperatures in New England have been rising since before 2015.

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

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

321. The average annual precipitation has been increasing in Connecticut since before 2015.

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

323. As explained above, the Permit requires that Shell "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, Shell is obligated to obtain a certification from a professional engineer attesting to the sufficiency of Shell's stormwater system. *See* Permit § 5(c)(2)(F).

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

325. Engineers 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.

326. Engineers exercising skill and judgment reasonably expected of similarly situated professionals make engineering decisions based on information regarding the factors discussed in Section IV.A *supra*.

327. 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.

U.S. 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.

328. 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.

329. 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.

330. 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.

331. The Army Corps of Engineers conducted a Coastal Storm Risk Management Study for Fairfield and New Haven Counties in Connecticut. 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.

332. The 1998 Shell Sustainability Report says of the greenhouse effect: "there is concern that it will cause the world to warm up, which could lead to a change in climate and local weather patterns, possibly with increased droughts, floods, storms and sea level rise." Peter Knight, Shell, *The Shell Report 1998: Profits and Principles – Does There Have to Be a Choice?* 40 (1998), *available at* https://www.shell.com/sustainability/transparency-and-sustainability-reporting/sustainability-reports/_jcr_content/par/expandablelist_copy/expandablesection_851513162.stream/1519790990923/8c7cf7e17abcd9772af39994b88ed37a5a86e216/shell-sustainability-report-1998-1997.pdf.

333. Included among Shell's list of environmental standards is "preventing spills and leaks of hazardous materials." *Our Approach*, Shell, https://reports.shell.com/sustainability-report/2018/responsible-business/environment/our-approach.html (last visited June 28, 2021).

334. In discussing "Adaptation" to climate change in its 2016 Sustainability Report, Shell stated:

> [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 Report 2016* 19 (2016), *available at* https://reports.shell.com/sustainability-report/2016/servicepages/download-centre.html. The report further states that "Shell has a rigorous approach to understanding, managing and mitigating climate risks in our facilities." *Id.*

335. Contrary to these statements, Shell is not "understanding, managing and mitigating climate risks" at the Terminal.

336. Unlike others involved in large-scale engineering projects, Shell has not taken into account information known to it regarding the factors discussed in Section IV.A *supra* in designing, constructing, and operating the Terminal so as to protect the Terminal and surrounding communities from pollutant discharges and/or releases.

337. Shell'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 Shell 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

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

339. As explained in Paragraphs 143, 161, 168 *supra*, the Permit requires Shell 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).

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

341. 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.

342. Shell'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*.

343. 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, Shell is violating the Permit and the Clean Water Act.

344. 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

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

346. Shell'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.

347. Shell 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.

348. As described above, Shell'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.

349. Therefore, Shell 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.

350. Shell has failed to design the Terminal to minimize the risk of oil and chemical spills.

351. Shell 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.

352. Shell'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 Shell'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.

353. 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

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

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

356. 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).

357. 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, 2018. 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).

358. Shell made the required certifications at the time of development and submission of its SWPPP.

359. Shell made these certifications without disclosing information known to it regarding the factors discussed in Section IV.A *supra*, and the reasonably foreseeable substantial risks of pollutant discharges associated with these factors.

360. Shell 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 *supra*.

361. Shell 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.

362. Shell'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.

363. 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

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

365. As explained in Paragraphs 164–169 *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).

366. Shell 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 Shell to affect the quality of the stormwater discharges from the Terminal.

367. 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*.

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

369. 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

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

371. 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).

372. 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).

373. 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.

374. 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 Section IV.A *supra*, Shell is violating the Permit and the Clean Water Act.

375. 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

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

377. As described above, the "Control Measures" section of the Permit requires Shell 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).

378. 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*.

379. 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, Shell is violating the Permit and the Clean Water Act.

380. 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

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

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

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

384. 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*, Shell is violating the Permit and the Clean Water Act.

385. 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

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

387. 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).

Shell 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.

388. Shell has not promptly submitted such facts or information to CT DEEP, despite Shell'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* Section IV.B *supra*.

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

390. 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, Shell is violating the Permit and the Clean Water Act.

391. 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

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

393. 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).

394. Shell 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.

395. 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, Shell is violating the Permit and the Clean Water Act.

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

397. 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

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

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

400. 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).

401. The Terminal discharges to New Haven Harbor via the City of New Haven's Municipal Separate Storm Sewer System ("MS4").

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

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

404. Shell'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 21.

405. Shell'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.

406. 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

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

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

409. As explained above, Shell 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.

410. Until 2015, the Terminal's stormwater monitoring reports to CT DEEP identified it as discharging to an impaired waterbody (New Haven Harbor) and included the required additional monitoring. Since then, Shell has stopped stating that it discharges to an impaired waterbody and stopped monitoring for indicator pollutants, stating in its SWPPP that "[a]s the site's discharges are to an MS4, the site is not subject to additional monitoring requirements associated with monitoring of discharges to impaired waters." SWPPP at 21.

411. Shell'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.

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 XII: VIOLATION OF THE RESOURCE CONSERVATION AND RECOVERY ACT – OPEN DUMPING

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

414. As described *supra* at Paragraphs 104–112, Shell'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: 1,2,4-Trimethylbenzene, Anthracene, Benzene, Cumene, Cyclohexane, Ethylbenzene, Lead Compounds, Naphthalene, Polycyclic Aromatic Compounds, Toluene, Xylene (mixed isomers), and n-Hexane. *See* Paragraph 106 *supra*.

415. In addition, the petroleum products stored at the Terminal qualify as "solid waste" under RCRA because Shell'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. Shell'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.

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

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

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

419. 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).

420. 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.

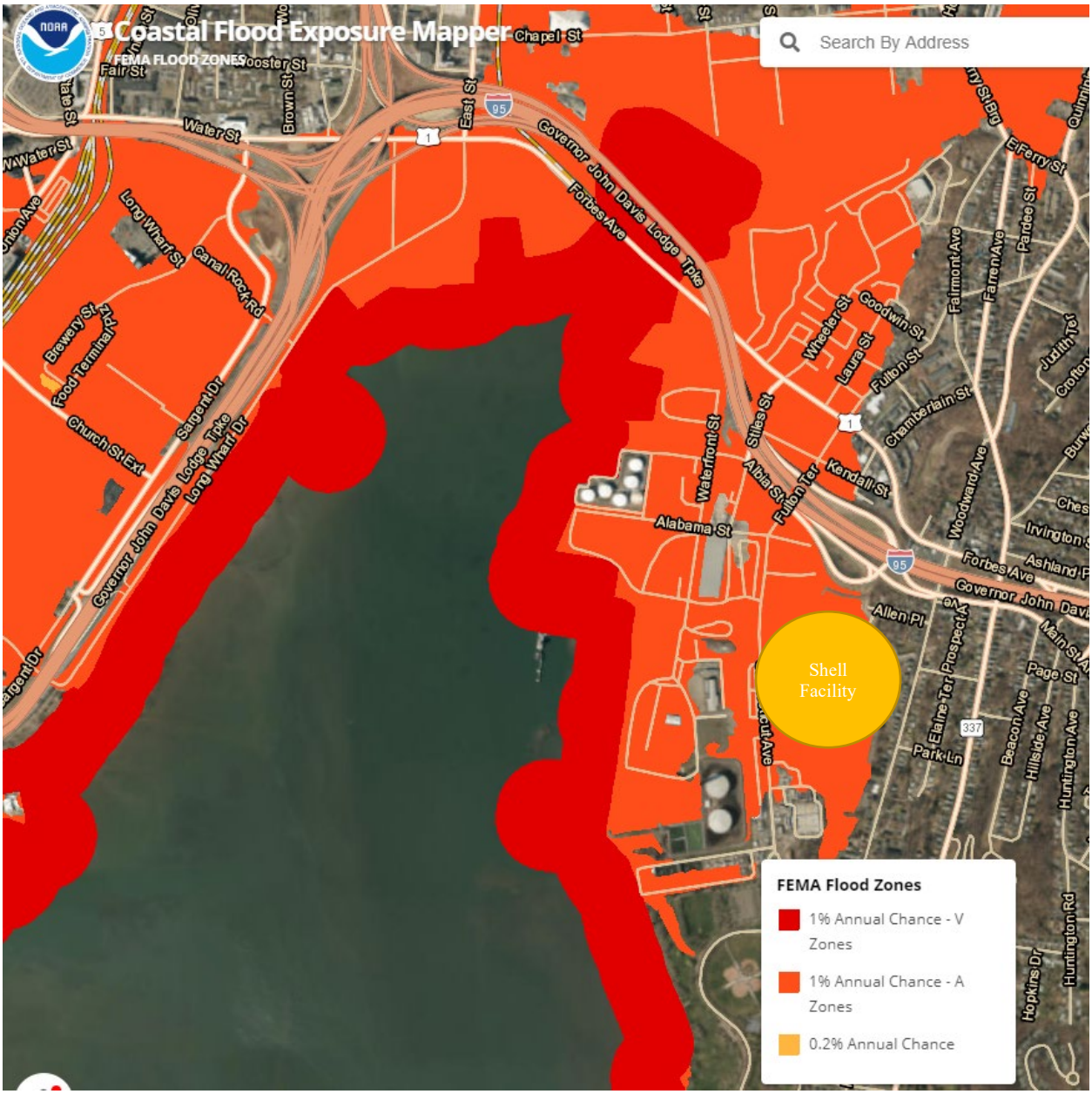
421. The RCRA regulations define "Base flood" to mean "a flood that has a 1 percent or greater chance of recurring in any year or a flood of a magnitude equaled or exceeded once in 100 years on the average over a significantly long period." 40 C.F.R. § 257.3-1(b)(1).

422. 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).

423. 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).

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

425. 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 depicted in the following image:



NOAA, *Coastal Flood Exposure Mapper*, https://coast.noaa.gov/digitalcoast/tools/flood-exposure.html (last visited June 28, 2021) (annotation added).

426. As described in Paragraphs 220–224 *supra*, the Terminal has been subject to storm surge inundation in the past in the containment areas.

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

428. For example, the truck loading area catches oil products spilled during loading in a "perimeter trough" and "catch basins" before flowing to an oil/water separator. SWPPP at 7, 10. Inundation of these perimeter troughs and catch basins by flood waters would carry the oil products away.

429. 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.

430. Indeed, Shell has admitted to this occurring from storm-based flooding at least once before. In an October 12, 2011 letter to CT DEEP with stormwater monitoring data, Shell explains that its discharges greatly exceeded the permit benchmarks because of flooding from Hurricane Irene:

> After investigation, Motiva believes that extensive rainfall, wind and flooding associated with tropical storm Irene on August 28 and 29 contributed to the unusual results detected in samples collected the following week. Based on historical results from these outfalls, Motiva does not believe these samples are representative of normal operating conditions at the terminal.

2011 Stormwater Monitoring Report (Oct. 12, 2011), Ex. I, at 1.

431. Shell reported the following for Outfall 001:

Parameter	Results (units)
COD	130.0 mg/l

Id. at 3.

432. Shell reported the following for Outfall 003:

Parameter	Results (units)
COD	1,800.0 mg/l
TSS	120.0 mg/l
TP	1.7 mg/l
TKN	4.9 mg/l
NO3-N	18.0 mg/l
Total Copper	0.27 mg/l
Total Zinc	0.71 mg/l
Total Lead	0.18 mg/l
24 Hr. LC50	22.5%

48 Hr. LC50	21.0%

Id. at 4.

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

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

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

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

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

437. At the Terminal, Shell is regulated under RCRA as a generator of hazardous waste, Handler ID No. CTD064827942.

438. As described in Paragraphs 104-112 *supra*, Shell'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: 1,2,4-Trimethylbenzene, Anthracene, Benzene, Cumene, Cyclohexane, Ethylbenzene, Lead Compounds, Naphthalene, Polycyclic Aromatic Compounds, Toluene, Xylene (mixed isomers), and n-Hexane. *See* Paragraph 106 *supra*.

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

440. The petroleum products stored at the Terminal qualify as "solid waste" under RCRA because Shell'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. Shell'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.

441. 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.

442. 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*.

443. Shell 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.

444. Shell 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.

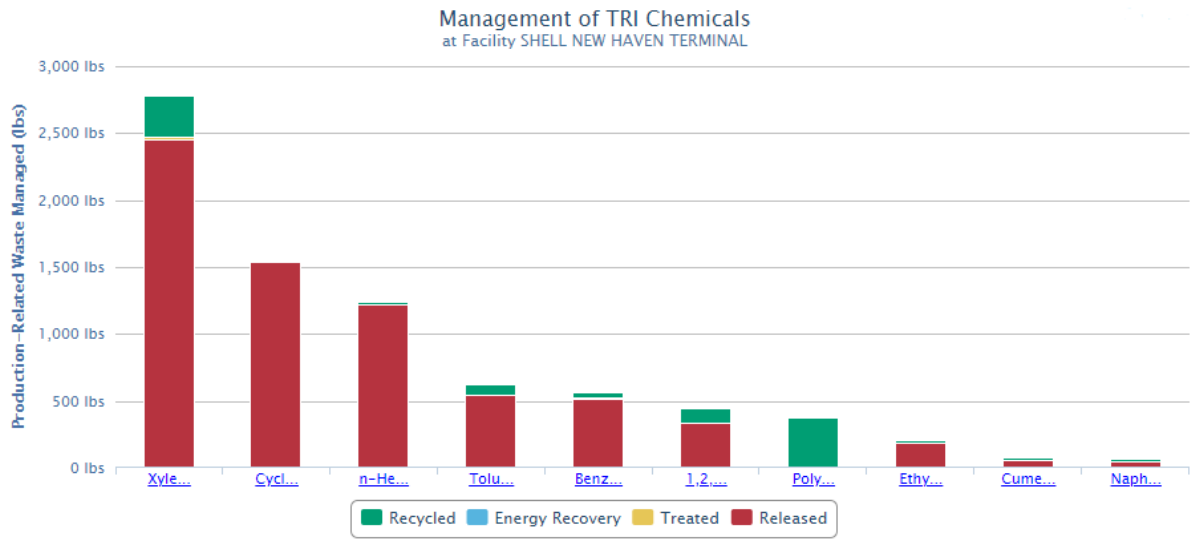
445. Shell has not modified the Terminal to prevent pollutant discharges and/or releases associated with the factors discussed in Section IV.A *supra*.

446. 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.

447. Shell'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.

448. 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:



2019 Production Related Waste Management for Selected Facility - Shell New Haven Terminal, EPA, https://enviro.epa.gov/enviro/P2_EF_Query.p2_report?FacilityId=06512NRTHS481ES&pReport=2 (last visited June 28, 2021).

449. Shell'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.

450. Shell has not disclosed its creation of this imminent and substantial risk at the Terminal to the EPA, state regulators, or the public. Shell 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. Shell's failure to disclose has contributed to the imminent and substantial endangerment to health and the environment.

451. Due to its failure to mitigate these foreseeable risks, Shell 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 XIV: VIOLATION OF THE RESOURCE CONSERVATION AND RECOVERY ACT – FAILURE TO COMPLY WITH STATE AND FEDERAL RCRA REGULATIONS APPLICABLE TO GENERATORS OF HAZARDOUS WASTES

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

453. As described above, Shell'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: 1,2,4-Trimethylbenzene, Anthracene, Benzene, Cumene, Cyclohexane, Ethylbenzene, Lead Compounds, Naphthalene, Polycyclic Aromatic Compounds, Toluene, Xylene (mixed isomers), and n-Hexane. *See* Paragraph 106 *supra*.

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

455. The petroleum products stored at the Terminal qualify as "solid waste" under RCRA because Shell'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. Shell'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.

456. 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.

457. As described above, Shell 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.

458. 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*.

459. Shell 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.

460. As a consequence of these failures, Shell 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." Connecticut Reg. § 22a-430-3(h).

461. As a Small Quantity Generator, Shell'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."

462. Shell'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.

463. Shell'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 Shell 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, Plaintiffs pray 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 Shell 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 Shell 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 attorney:

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