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UNITED STATES DISTRICT COURT

FOR THE NORTHERN DISTRICT OF CALIFORNIA

SAN FRANCISCO DIVISION

GREENACTION FOR HEALTH AND ENVIRONMENTAL JUSTICE, a non-profit corporation,

Plaintiff,

v.

UNITED STATES DEPARTMENT OF THE NAVY, a military department and agency of the United States; UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, a United States government agency,

Defendants.

Civil No. 3:24-cv-03899 (VC)

SECOND AMENDED COMPLAINT FOR DECLARATORY AND INJUNCTIVE RELIEF

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I. PRELIMINARY STATEMENT

1. Greenaction for Health and Environmental Justice ("Greenaction") seeks declaratory and injunctive relief for the U.S. Navy's and U.S. Environmental Protection Agency's ("EPA") violations of the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), 42 U.S.C. §§ 9601, *et seq*., the National Contingency Plan ("NCP"), 40 C.F.R. §§ 300.400, *et seq*., and the *Federal Facilities Agreement for Naval Station Treasure Island – Hunters Point Annex* ("FFA") relating to the cleanup of the former Hunters Point Naval Shipyard Superfund site ("Shipyard" or "HPNS") in San Francisco, California.

2. The FFA, mandated by 42 U.S.C. § 9620, requires that the Navy and EPA carry out their respective response actions in the Shipyard cleanup in accordance not only with CERCLA and the NCP, but with EPA CERCLA guidances. The Navy has failed to comply with its agreement, including improperly using non-EPA approved methods. EPA has failed to exercise its independent CERCLA obligation to assure a protective cleanup.

3. The Navy's radiological cleanup contractor, Tetra Tech EC, Inc. ("Tetra Tech"), committed fraud under the Navy's supervision, discovered in 2012. While the Navy defended the use of the fraudulent data for years, in December 2017, EPA released an analysis that found the data so riddled with fraud and quality assurance/quality control ("QA/QC") deficiencies that it all had to be discarded. In 2018, the Navy agreed to discard it. Accordingly, a complete and accurate understanding of the full nature and extent of contamination throughout the site remains unknown more than twenty years after the Navy initiated its CERCLA response actions.

4. The Navy and EPA agreed to a plan that called for retesting only a third of Tetra Tech's soil remediation. However, if the one-third retesting found **any** contamination, that discovery would trigger 100% retesting.

5. This action is prompted by two current and ongoing violations of CERCLA, the NCP and the FFA. First, the Navy has reneged on the Parcel G retesting agreement. Retesting found contamination there in 2021, but the Navy has failed to retest 100% of Tetra Tech's Parcel G soil work. Accordingly, the First Claim for Relief respectfully requests that the Court enforce the *Parcel G retesting Plan*.[1]

6. Second, the Navy's five-year reviews which were released within the statute of limitations, have been consistently published beyond the statutory deadline established by 42 U.S.C. § 9621(c) without legal or factual justification. In the current, *Fifth Five-Year Review* ("*Fifth FYR*"), issued in August 2024, the Navy already announced it intends to violate the statutory deadline for its next five-year review, the *Sixth Five-Year Review* ("*Sixth FYR*") ***by an entire year***. Thus, the issue is already ripe and can and must be challenged now, lest the unlawful intent in the current *FYR* be allowed to take place and be beyond the reach of this Court when the violation occurs. Accordingly, the Second Claim for relief respectfully requests that this Court issue declaratory relief to enforce CERCLA's non-discretionary five-year review deadline for the Navy's *Sixth FYR*.

7. The Third Claim for Relief addresses the Navy's failure to comply with a series of EPA guidance documents with which it must comply pursuant to the FFA, including EPA's *Comprehensive Five-Year Review Guidance*, *Data Quality Objectives for Remedial Response Activities*, the *Risk Assessment Guide for Superfund, Parts A* and *B*, *Human Health Toxicity Values in Superfund Risk Assessments*, *PRG User's Guide, Land Use Descriptions, Equations, and Technical Documentation*, *Radiation Risk Assessment at CERCLA Sites: Q & A*, the *Citizen's Guide to Capping*, and the *Draft Technical Guidance For RCRA/CERCLA Final Covers*.

[1] *Final Parcel G Removal Site Evaluation Work Plan* (*"Parcel G Retesting Plan"*), June 2019.

8. The Fourth Claim for Relief addresses the Navy's failure to assure the protectiveness of its remediation efforts at HPNS in its *Fifth FYR*, as required by 42 U.S.C. § 9621(c). The Navy's protectiveness determination abused its discretion because: 1) it failed to abide by the above-referenced EPA Guidance, including failing to gather necessary new radiological data since 2018, when all the previous data was discarded; 3) it failed to update the HPNS radiological remedial goals to ensure they will reduce cancer risks to a lifetime cancer risk range between 10^{-6} (one in a million) and 10^{-4} (one in ten thousand) as established in the NCP, including failing to update Preliminary Remediation Goals ("PRGs") to be consistent with EPA's most recent 2023 default PRGs for radionuclides in soil; 4) it adopted, without proper explanation, institutional controls such as "durable covers" and barriers to growing produce in Shipyard soil, that are unreasonable and will be ineffective in preventing exposure to future residents from home-grown produce without more effective enforcement than deed notices; and 5) it failed to consider the impacts on the remedies of the most recent scientific estimates of sea-level, Bay-level, and groundwater-level rise.

9. As a result of these deficiencies, the Court should issue an order requiring the Navy to comply with EPA Guidance and order the Navy to revise its *Fifth FYR*, within a deadline to be set by this Court, to assure that the HPNS remedies are protective of human health and the environment.

10. Though the story of the Shipyard cleanup is a long and complicated one, this Second Amended Complaint relates only to actions within the six-year statute of limitations concerning the Parcel G retesting and the *Fifth Five-Year Review*.

II. JURISDICTION

11. This Court has subject matter jurisdiction over this action pursuant to 42 U.S.C. §§ 9659(a)(1) and (a)(2), 42 U.S.C. § 9613(j), and 28 U.S.C. § 1331. This case involves a civil action arising under the laws of the United States including CERCLA, 42 U.S.C. §§ 9601, *et seq*., the NCP, 40 C.F.R §§ 300.400, *et seq*., and the FFA adopted pursuant to 42 U.S.C. § 9620.

12. Jurisdiction is also proper in this Court pursuant to 28 U.S.C. §§ 2201 and 2202, which authorize declaratory and injunctive relief, respectively.

13. This Court has personal jurisdiction over the defendants pursuant to 42 U.S.C. § 9613(b), which grants exclusive original jurisdiction over all controversies arising under CERCLA to the United States district courts.

14. Plaintiff Greenaction has satisfied the 60-day notice requirement imposed by 42 U.S.C. § 9659(d). Greenaction sent a Notice of Intent to Sue by certified mail, return receipt requested, on December 7, 2023, to all necessary parties. To correct inadvertent omissions, Greenaction sent an Amended Notice to all necessary parties by certified mail, return receipt requested, on January 17, 2024. Copies are attached hereto and incorporated herein by reference as Exhibit 1. The Navy and EPA did not resolve the issues alleged in the Notices between the December 7, 2023, Notice and the filing of this action. Accordingly, there exists an active case and/or controversy over the violations alleged in the 60-day Notice and this Second Amended Complaint.

III. VENUE

15. Venue is proper in this District under 42 U.S.C. § 9613(b), 42 U.S.C. § 9659(b), and 28 U.S.C. § 1391(b). The Navy and EPA reside in the Northern District of California for purposes of this action. The release and threatened release of hazardous substances into the environment, which form the basis of Greenaction's claims, occurred in San Francisco County, California. The failure to carry out CERCLA obligations by both agencies took place within this District. Assignment to the San Francisco Division of the Northern District is proper under Civil Local Rule 3-2(c)-(d).

IV. PARTIES

16. Greenaction for Health & Environmental Justice, a 501(c)(3) nonprofit corporation, is a multiracial grassroots organization partnering with low-income and working-class communities to

fight for health and environmental justice. Its principal address is 466 Geary Street, Suite 300, San Francisco, CA 94102. Greenaction is a "person," as defined by 42 U.S.C. § 9601(21).

17. Greenaction has advocated for San Francisco's Bayview Hunters Point neighborhood, a historically Black community overburdened by pollution adjacent to the Shipyard, for more than twenty-five (25) years. Greenaction brings this citizen action under 42 U.S.C. § 9659.

18. Greenaction's members, contributors, paid staff, volunteers, constituents, and community of supporters live, work and/or recreate in and around the San Francisco Bay area, including the Bayview Hunters Point neighborhood, abutting the Shipyard. Greenaction's mission is to mobilize community power to win victories that change government and corporate policies and practices to protect health and to promote environmental, social, economic and climate justice. Greenaction furthers its goals through education, community organizing, advocacy, and enforcement of environmental laws on behalf of itself and its members.

19. Greenaction's members include citizens, taxpayers, property owners, and residents, with recreational, health, educational, scientific, conservation, aesthetic, psychological, and/or spiritual interests in the air, soil, and water quality of the Bayview Hunters Point community. Greenaction has one or more members who live adjacent to or near the Shipyard and use, explore, research, and recreate in or adjacent to areas impacted by the contamination and environmental cleanup process at the Shipyard. Members of Greenaction have suffered and are currently suffering both actual and imminent recreational, aesthetic, health, psychological, scientific, conservational, or other injuries due to Defendants' unlawful actions. Delays in implementing an expeditious and effective cleanup of the contamination at the Shipyard have resulted in the continuing presence of radiation and other contamination that pose health threats to Greenaction's members and are adversely affecting their interests in securing a healthy and safe environment at the Shipyard and in the Bayview Hunters Point community. Thus, the interests of Greenaction and Greenaction's members have been, are being, and

will continue to be adversely affected by Defendants' failure to take expeditious remedial actions under CERCLA, the NCP, the FFA, and EPA CERCLA Guidance. Greenaction's and its members' injuries-in-fact are fairly traceable to Defendants' conduct. Retesting of the site and cleanup of contamination in accordance with the health-protective guidelines of the aforementioned statutes will redress the injuries to Plaintiff and its members, constituents, and community of supporters.

20. Defendants' failure to abide by their cleanup responsibilities and to promptly clean up contamination at the Shipyard is also subverting Greenaction's mission to protect the Bayview Hunters Point community and environment. As a consequence of Defendant's unlawful response actions, Greenaction has been compelled to expend resources (exclusive of this litigation) on alternative means of protecting the community, Bayview Hunters Point's environment and its members, which has diverted time and resources that could and would have been spent on other activities that are central to Greenaction's mission.

21. Continuing commission of the acts and omissions alleged herein will irreparably harm Greenaction and one or more of its members, for which harm they have no plain, speedy, or adequate remedy at law.

22. The United States Navy ("Navy") is the maritime service branch of the United States Armed Forces. Its principal address is 1000 Navy Pentagon, Washington, DC 20350. The Navy is a "person" as defined by 42 U.S.C. § 9601(21) and is the current owner and operator of the Shipyard within the meaning of 42 U.S.C. § 9607(a)(1).

23. The United States Environmental Protection Agency ("EPA") is an agency of the federal government tasked with protecting human health and the environment. Its principal address is 1200 Pennsylvania Avenue, NW, Washington, DC 20004. The EPA oversees CERCLA cleanups pursuant to 42 U.S.C. § 9620 for federal facilities like the Shipyard. The EPA is a "person" as defined by 42 U.S.C. § 9601(21).

V. LEGAL BACKGROUND

24. In 1980, Congress enacted CERCLA in response to demands for the federal government to oversee the cleanup of the nation's most contaminated sites and safeguard the public from their potential danger. Its primary mandate is protection of human health and the environment. 42 U.S.C. § 9621 requires responsible federal agencies to "select a remedial action that is protective of human health and the environment."

25. In 1986, Congress amended CERCLA through the Superfund Amendments and Reauthorization Act ("SARA"). SARA expanded the original statute and among other things, clarified that federal facilities must adhere to the same cleanup requirements as private entities. The 1986 amendments also included a provision requiring that, at sites where contamination remained, a review be conducted "no less often than each 5 years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented." 42 U.S.C. § 9621(c). *See also* 40 C.F.R. § 300.430(f)(4)(ii). Five-year reviews require that responsible parties like the Navy make successive protectiveness determinations—each a substantive decision—based on scientifically defensible data. Responsible parties face a choice; removing all contamination is likely more expensive in the short-term, but it precludes future liability. Leaving remaining contamination is likely less expensive, but triggers five-year reviews, perhaps in perpetuity, potentially requiring additional remedial actions and exposing responsible parties to future liability if circumstances change.

26. At federal facilities, 42 U.S.C. § 9620 also requires that federal agencies, in this case the Navy and EPA, enter an FFA governing the cleanup at HPNS under EPA oversight. Section 6.1 of the FFA states:

> The Parties agree to perform the tasks, obligations and responsibilities described in this Section **in accordance with CERCLA and CERCLA guidance and policy;** the **NCP**; pertinent provisions of RCRA and RCRA guidance and policy; Executive Order 12580; applicable State laws and regulations; **and all terms and conditions of this Agreement**

> including documents prepared and incorporated in accordance with Section 7 (Consultation). (Emphasis added.)

27. Under the statute, the EPA Administrator is the ultimate decisionmaker if there is a dispute between agencies over remedy selection. 42 U.S.C. § 9620(e)(4)(A).

28. NCP regulations establish a detailed federal blueprint for CERCLA cleanups, at 40 CFR part 300. For example, 40 C.F.R § 300.430(a)(1)(i) reiterates that remedies must be "protective of human health and the environment;" § 300.430(d)(1) requires site characterization; § 300.430(d)(2) requires gathering "data necessary to assess the extent to which" contamination threatens human health; § 300.430(e)(2) sets the CERCLA range for acceptable excess lifetime cancer risk to be from 10^{-6} (one in a million), the "the point of departure for remedial goals," to 10^{-4} (one in ten thousand); and § 300.430(f)(4)(ii) reiterates the CERCLA requirement for five-year reviews.

29. Citizen suits are authorized under 42 U.S.C. § 9659(a)(1) for "violation of any standard, regulation, condition, requirement, or order which has become effective pursuant to this chapter (including any provision of an agreement under section 9620 of this title, relating to Federal facilities)." 42 U.S.C. § 9659(a)(2) authorizes citizens suits for failure "to perform any act or duty under this chapter, including an act or duty under section 9620 of this title (relating to Federal facilities), which is not discretionary with the President or such other officer."

VI. STATEMENT OF FACTS

A. The Navy Established the Hunters Point Naval Shipyard.

30. This matter arises out of the Navy's mishandling of the cleanup of the former Hunters Point Naval Shipyard. During World War II, the Navy acquired the Hunters Point Dry Dock in southeastern San Francisco and transformed it from a small private dockyard into Hunters Point Naval Shipyard, a 500-acre naval base.

31. Ship repair resulted in both chemical and radiological contamination of the Shipyard. This action primarily concerns the improper remediation of radiological contamination.

32. In the early 1950s, the Navy used HPNS to decontaminate seventy-nine (79) Navy vessels that were contaminated with radiation during a series of nuclear weapons tests in the South Pacific called "Operation Crossroads." Because radioactivity cannot be neutralized, decontamination transferred the radioactivity from the ships to the Shipyard.

33. The Navy steam-cleaned and sandblasted the ships' surfaces to remove exterior radioactive contamination. The sandblast sand, known as "grit," became highly radioactive. Much of the radioactive grit was disposed of in barrels dumped in the Pacific Ocean near the Farallon Islands. However, a significant portion of the contaminated grit was buried or dumped on the Shipyard. Contaminated grit was washed from the drydocks in which the contaminated ships were sandblasted onto the ground around the drydocks, into San Francisco Bay, and into the Shipyard's sanitary sewer and stormwater systems, contaminating them.

34. The Navy also removed radioactive "deck markers," objects painted with radium to illuminate pathways for sailors on decks and in corridors. When workers removed these glow-in-the-dark markers, they treated them as novelties, as they were unaware of the dangers of their radiation. Workers and sailors disposed of them throughout the Shipyard including in its landfills, dumpsters, and other trash receptacles; deck markers were tossed aside along roadways and sailors and workers took them home.

35. The Navy ended Shipyard activities in 1974. From 1976 to 1986, the Navy leased HPNS to a private ship repair company.

36. In 1989, EPA listed HPNS on the National Priorities ("Superfund") List ("NPL").

B. The Navy and EPA Enter into a Federal Facilities Agreement.

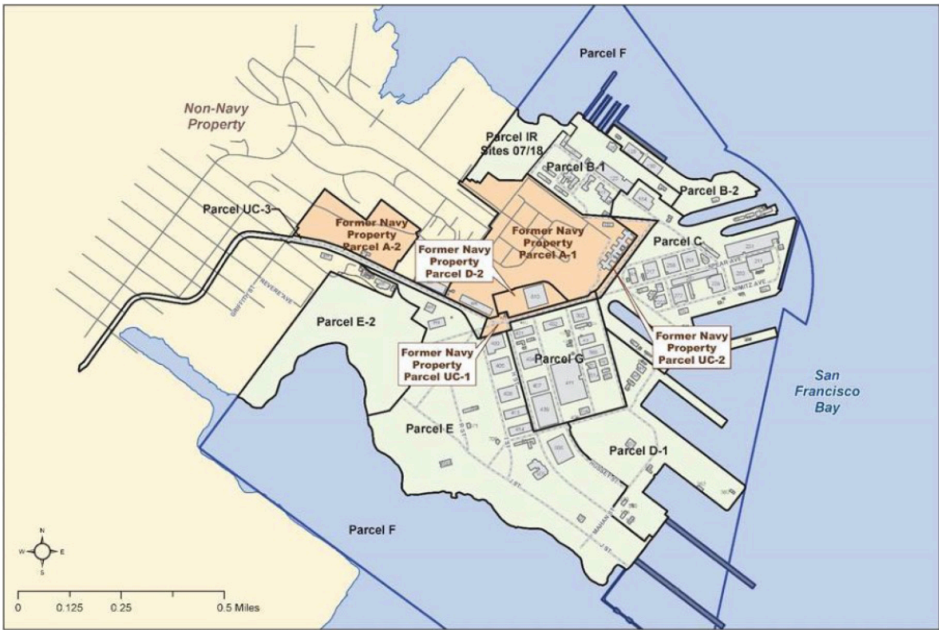
37. As required by 42 U.S.C. § 9620(e)(2), on January 22, 1992, the Navy, the EPA, and the State of California, through the Department of Toxic Substances Control ("DTSC"), entered into the *Federal Facilities Agreement for Naval Station Treasure Island – Hunters Point Annex* ("FFA"). The Parties' agreement in Section 6.1 to conduct the cleanup "in accordance with" EPA Superfund guidance is reiterated in sections 1.1, "Purpose;" 7, "Consultation, Notice and Opportunity to Comment;" and 26, "Public Participation and Community Relations."

38. As further discussed below, EPA has promulgated multiple CERCLA guidance documents to ensure consistent nationwide implementation of the federal cleanup program.

C. The Navy Initiated CERCLA Response Actions.

39. To facilitate the cleanup, the Navy divided the Shipyard into alphabetically designated geographic areas, entitled Parcels A through G. Each parcel represents an area of the shipyard delineated for future commercial, residential, and/or recreational development, except Parcel F, which consists of bay sediment around the Shipyard.

40. Following is a diagram depicting the division of the parcels at HPNS.



41. In 2004, the Navy produced its *Historical Radiological Assessment, Volume II, Use of General Radioactive Materials 1939-2003, Hunters Point Shipyard* ("*HRA*"), which purports to describe the history of radiological operations conducted by the Navy at the shipyard.

42. The radiological cleanup at HPNS involved two main contamination types: soil from contaminated sewers and buildings intended to be decontaminated and repurposed as part of the Shipyard's redevelopment. For reasons not relevant here, Parcels A and F were excluded.

43. The Navy adopted radiological remedial goals ("RGs") on April 21, 2006. *Basewide Radiological Removal Action, Action Memorandum* ("*Basewide Removal Memo*"). The Navy adopted the same remedial goals in each of the Parcels' Records of Decision ("RODs"). The Navy at first promised a full cleanup of the Shipyard that would meet cleanup standards necessary for unrestricted residential use. This would have required removing all contamination above a remedial goal and not leaving residual contamination at the Shipyard, obviating for long-term monitoring, restrictions on future land uses, and five-year reviews.

44. However, when the Navy began to investigate the contamination, it found the *HRA* was inaccurate. Contamination was far more extensive and widespread than the *HRA* described. Cleanup to residential standards would require much more work and expense than originally anticipated.

45. As a result, the Navy abandoned its promise to conduct a full cleanup to residential standards. Instead, it changed the fundamental nature of the remedy to include leaving residual contamination behind. To appear to meet the CERCLA risk range for protectiveness of human health, the Navy's modified remedy called for employing land-use restrictions called "institutional controls" ("ICs"). EPA defines institutional controls as "non-engineered instruments such as administrative and legal controls that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy."

46. According to the Navy, ICs will be enforced through deed restrictions.

D. Tetra Tech's Fraud Compromises the Cleanup.

47. The Navy contracted with Tetra Tech to perform remediation of radioactive contamination at HPNS. However, it committed fraud and violated proper quality assurance and quality control requirements, rendering all its data unusable.

48. The Navy discovered evidence of fraud in October 2012. It did not investigate. Instead, the Navy relied on Tetra Tech to investigate itself.

49. In April 2014, Tetra Tech produced a report later found to be so inaccurate it was discarded, claiming it was unable to determine the source of the fraudulent samples or to attribute responsibility. Although the Navy defended Tetra Tech's data after 2012, in 2018 the Navy agreed to discard it all.

50. The Navy and regulators agreed to a plan for retesting Tetra Tech's work that was memorialized in three (3) related, EPA-approved work plans. In short, the plan for soil consists of two phases: Phase 1 rescreens only one-third of the soil; however, if any sample exceeds a remedial goal, 100% of the soil is to be rescreened.[2] If Phase 1 does not discover contamination, the Navy will proceed to Phase 2. As further discussed below, Parcel G is currently in Phase 2; the Navy has not announced when it will be completed.

E. Retesting Found Strontium-90 Contamination in Parcel G.

51. In 2021, using the approved EPA testing Method 905 for strontium-90 ("Sr-90"), the Navy found that 62 soil samples exceeded the remedial goal.

52. Rather than conducting 100% retesting of Tetra Tech's purported soil remediation as the *Parcel G Retesting Plan* requires, the Navy instead sought to *invalidate* the Sr-90 data by

[2] In September and December 2023, the Navy disclosed that Phase 1 retesting found a radioactive deck marker and a small glass shard that were orders of magnitude above the radium-226 remedial goal. On July 22, 2024, the Navy announced it would retest 100% of soil in the affected Parcels.

questioning the accuracy of the analytical testing method set forth in the *Parcel G Retesting Plan* and using a method not previously approved by EPA (the "Eichrom method").

53. In a 2021 email, EPA objected to the Navy's use of the Eichrom method to *invalidate* the Sr-90 results and specifically rejected "using the new data to supersede existing results." It added: "**[t]he previous strontium-90 results are valid data.** It's inaccurate to suggest the data were not precise enough." (Emphasis added.)

54. At the same time the Navy was attempting to use the Eichrom method to *invalidate* its own EPA-approved data, the Navy concealed that the Eichrom method *confirmed* Sr-90 exceedances. More than 27 % exceeded the Sr-90 remediation goals.

55. The Navy then sought to invalidate the exceedances found by its own preferred method by modifying the Eichrom method, but without success: the modified method also produced results exceeding remedial goals. The Navy modified the Eichrom method a second time. This produced results showing no exceedances, but only by invalidating and superseding all previous tests by repeatedly rejecting evidence of exceedances and modifying the test until it got the desired result.

56. On or about September 25, 2024, the Navy released a study, *Final Technical Memorandum: Strontium Analysis, Parcel G* ("*Sr-90 Verification Study*"), which purports to demonstrate all the tests identifying remedial goal exceedances of Sr-90 were not accurate and/or precise, justifying invalidation of that data. The Navy has failed to state an adequate factual basis to discard the valid Sr-90 exceedances, violating the *Parcel G Retesting Plan*, CERCLA, the NCP and the FFA.

57. The Navy claimed the remedial goal was too low to reliably measure, stating that it "experienced project-specific challenges regarding analyzing strontium-90 (Sr-90) at HPNS's **uniquely low Sr-90 remedial goal** (RG)." (Emphasis added.) However, as further discussed below, the Sr-90 remedial goal at HPNS was precisely the same as EPA's published default soil preliminary

remedial goal for Sr-90 in 2004 and 2007. Presumably, EPA sets default goals that can be verified through testing. The Navy failed to demonstrate that the Sr-90 RG was too low for reliable testing. Furthermore, in 2023, EPA updated its published default soil preliminary goal for Sr-90, *lowering* it by more than an order of magnitude.

58. Although the Navy and EPA discarded all of Tetra Tech's data *three years* before the publication of the *Sr-90 Verification Study,* the Navy continues to try to rely on it, citing Tetra Tech data in the study.

59. Until the Navy and EPA have developed sufficient data to fully and comprehensively delineate the nature and extent of radiological contamination in Parcel G soil, they cannot claim to have implemented response actions that ensure protectiveness of human health and the environment as required by CERCLA. The actions of the Navy and EPA in invalidating the Sr-90 exceedances were also arbitrary and capricious, and not otherwise in accordance with the law.

F. The Navy's *Five-Year Reviews*.

1. The Navy Published Its Five-Year Reviews Late.

60. Because the HPNS remedies leave residual contamination onsite, 42 U.S.C. § 9621(c) requires that a review be conducted "no less often than each 5 years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented." *See also* 40 C.F.R. § 300.430(f)(4)(ii).

61. The FFA provides that:

> Consistent with 42 U.S.C. Section 962l(c) and in accordance with this Agreement, if the selected remedial action results in any hazardous substances, pollutants or contaminants remaining at the Site, the Parties shall review the remedial action program at least every five (5) years after the initiation of the final remedial action to assure that human health and the environment are being protected by the remedial action being implemented.

FFA ¶ 27.1.

62. The FFA further provides that:

> To synchronize the five-year reviews for all operable units and final remedial actions, the following procedure will be used: Review of operable units will be conducted every five years **counting from the initiation of the first operable unit**, until initiation of the final remedial action for the Site. At that time a separate review for all operable units shall be conducted. Review of the final remedial action (including all operable units) shall be conducted every five years, thereafter. (Emphasis added.)

FFA ¶ 27.3.

63. The initiation of remedial actions at HNPS took place in Parcel B on July 8, 1998. Five-Year Reviews are due on every fifth anniversary of that date. Every *FYR* has been late. While some were late by only a month or more, they have been getting later, and the current, *Fifth FYR* arrived a year late, in 2024 instead of 2023. The *Sixth FYR*, due in 2028, will not be delivered on time. The Navy announced in the *Fifth FYR* it would not meet the deadline. These delays are cascading because the EPA and the Navy take the position that every 5 years does not mean every 5 years. Rather, the five-year period restarts with the release of the previous report. This interpretation is arbitrary and capricious, contrary to the statute (Section 9621(c)) and thus unlawful.

64. The *Sixth FYR* should be completed no later than July 8, 2028.

2. The *Fifth Five-Year Review* Is Not in Accordance with EPA Guidances and Does Not Assure Protectiveness.

65. The Navy failed "to assure that human health and the environment are being protected by the remedial action being implemented," in its *Fifth FYR*. *See* 42 U.S.C. § 9621(c). The Navy did not: base its protectiveness determinations on scientifically sound data; update its nearly twenty-year-old remedial goals to account for new toxicity data; demonstrate the radiological remedies lowered the risk to an acceptable CERCLA cancer risk range; demonstrate the cumulative risk from all contaminants met the CERCLA cancer risk range; adequately justify the use of institutional controls; and adequately assess the future impact global warming will have on the protectiveness of the remedies.

a. The Navy has no data demonstrating the remedy is protective in any parcel.

66. EPA's *Comprehensive Five-Year Review Guidance* states, "Evaluation of the remedy and the determination of protectiveness should be **based on and sufficiently supported by data** and observations." (Emphasis added.) Furthermore, "[i]f the remedy is intended to meet a site-specific risk-based cleanup level, you should check to see whether toxicity or other contaminant characteristics used to determine the original cleanup level have changed."

67. EPA's *Risk Assessment Guide for Superfund, Part A*, requires the Navy to assure that investigation of contamination was comprehensive, obtaining "data on concentrations of contaminants in each of the source areas and media of concern." It also states, "because toxicity information may change rapidly and quickly become outdated," care must be taken to use "the most recent information available."

68. None of the remedies in radiologically impacted Parcels can be considered protective until the Navy retests one hundred percent (100%) of Tetra Tech's fraudulent and defective work to ensure that the full horizontal and vertical extent of soil contamination and the full extent of building contamination have been reliably determined and remediated.

69. The Navy has yet to publicly release any reports on building retesting.

70. The Navy has not obtained accurate data on which it can base a protectiveness determination. Tetra Tech's data was discarded in 2018. Soil retesting is not underway in all affected parcels, and in those where testing is being done, none has been completed. Accordingly, the Navy does not currently have accurate, scientifically defensible data on which to base any assertion that the remedies are or will be protective and did not have such data at the time it finalized its *Fifth FYR*.

71. Although the *Final Fourth FYR* stated it would evaluate protectiveness by the **next** five-year review, the *Final Fifth FYR* again failed to cite any data adequate to demonstrate protectiveness in

any parcel. The Navy has not provided factual, credible protectiveness determinations supported by data in accordance with CERCLA, the NCP, and EPA guidance, effectively negating the entire purpose of CERCLA five-year reviews.

b. The Navy has failed to update its remedial goals.

72. Since their adoption in 2006, the Navy has failed to update its remedial goals.

73. The *Comprehensive Five-Year Review Guidance* poses three questions that must be answered to demonstrate protectiveness, the second of which is, "Question B: Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of the remedy still valid?"[3] It also ties protectiveness determinations to "sufficiently supported" scientific data and observations, the "foundation for the technical assessment of the remedy at the time of the five-year review." It states, "check to see whether toxicity or other contaminant characteristics used to determine the original cleanup level have changed."

74. EPA has periodically published updated default Preliminary Remediation Goals. Most recently, EPA published new default soil PRGs in 2023. Chart 1 compares the remedial goals the Navy adopted in 2006 and continues to use and the EPA 2023 default soil PRGs. In many cases, the EPA's 2023 default PRGs are orders of magnitude more protective than the Navy's 2006 remedial goals.

Chart 1: SOIL RELEASE CRITERIA COMPARISON (Residential, pCi/g)

Radionuclide	**HPNS (2006)**	**EPA 2/20/23**
Americium-241	1.36	.4800
Cesium-137	0.113	.0401
Cobalt-60	0.0361	.0285
Europium-152	0.13	.0384
Europium-154	0.23	.0467
Plutonium-239	2.59	.4450
Radium-226	1.0	.00192

[3] The other two questions are: "Question A: Is the remedy functioning as intended by the decision documents?" and "Question C: Has any other information come to light that could call into question the protectiveness of the remedy?"

Strontium-90	0.331	.00477
Thorium-232	1.69	.00170
Tritium	2.28	no value listed
Uranium 235+D	0.195	no value listed

75. As the chart illustrates, the toxicity goals have significantly changed since 2006. The update of the soil default for Sr-90, the primary radionuclide at issue in the *Sr-90 Verification Study*, provides a good example. Its HPNS remedial goal in soil is .331 pCi/g, which was *identical* to EPA's default value for Sr-90 in in soil PRGs EPA published in 2004 and 2007. However, the 2023 default is now orders of magnitude lower, .00477 pCi/g. The Navy's protectiveness determination must explain how the outdated 2006 remedial goals can still be protective. The Navy failed to acknowledge the existence of the updated default PRGs, let alone calculate its impact on the HPNS remedial goals.

c. The Navy has not demonstrated the cancer risk is acceptable.

76. *Risk Assessment Guidance for Superfund, Part B* requires the Navy meet the CERCLA risk range for lifetime cancer risk, 10^{-6} (one in a million) or, if site specific circumstances justify and regulators approve, between 10^{-6} and 10^{-4} (one in 10,000). It also requires that total risk be calculated for each radioactive contaminant and for each exposure pathway to calculate cumulative radiological risk. Finally, it requires that the total risk for all contaminants and pathways be calculated by summing the risks of chemical and radiological contamination.

77. The *Comprehensive Five-Year Review Guidance* states that if a newly calculated risk does not fall within the risk range, a "newly revised (protective) standard should be adopted." Furthermore, it lists circumstances under which the remedy should **not** be considered protective, including when "[t]he remedy cannot meet a new cleanup level and the **previous cleanup level is outside the risk range**." (Emphasis added.) It also provides an example:

> You should recommend a follow-up action when the remedy is not protective. For example, based on revised risk information for a specific chemical, a new standard (e.g., more stringent MCL [maximum contaminant level] for a chemical) may result in a situation where the cleanup level to be achieved by the original remedy would pose a 10^{-3}

> cancer risk. In that circumstance, the five-year review could recommend that a new cleanup level based on the new standard be adopted and, if necessary, that the remedy be modified.

78. Although EPA commented on the *Draft Fourth FYR* that it "cannot support any conclusions about protectiveness or completeness of the remedy," the Navy failed to correct the error. The Navy did say it "anticipated that the radiological rework will be completed **prior to the next Five-Year Review**," that is, the *Fifth FYR.* (Emphasis added.) It was not.

79. Without acknowledging the *Fourth FYR* was deficient, the Navy published a series of addenda to the *Fourth FYR* purporting to reevaluate its radiological remedial goals, in 2019 and 2020.

80. On August 20, 2020, EPA sent its review of all these and found "[W]e cannot concur with the Navy's conclusions that the radiological building RGs remain protective of human health."

81. On or about November 15, 2019, EPA sent the Navy a comment letter unambiguously stating the 2019 Soil Addendum failed to meet its obligation to assure protectiveness: "[A]t this time, **EPA cannot verify that the soil radiological remediation goals are protective of human health for long-term protectiveness**."

82. The Navy acknowledged in the *Fifth FYR* that the old soil remedial goals exceed the CERCLA risk level but provided no justification for retaining them. Like the *Fourth FYR*, the *Fifth FYR* acknowledged "estimated risks for soils at the RGs may indeed exceed 1 x 10^{-4}," but deferred demonstrating that risk was acceptable.

d. The Navy failed to calculate cumulative risk.

83. *Risk Assessment Guidance for Superfund, Part B* requires that total risk be calculated for each radioactive contaminant and for each exposure pathway to calculate total cumulative radiological risk. It then requires that total risk for all contaminants and pathways be calculated by summing the risks of chemical and radiological contamination.

84. Neither the *Fourth n*or the *Fifth FYR* addressed cumulative radiological or total radiological and chemical risk. The Navy deferred it, stating it would demonstrate protectiveness much later, "upon property release." The *Fifth FYR* stated:

> While estimated risks for soils at the RGs may indeed exceed 1 x 10^{-4}, the Navy will demonstrate that the final risk from exposures upon property release, **including the risk from chemicals and other radionuclides**, will achieve the CERCLA risk range. Final site-specific data will be used to demonstrate the documented remedy was both achieved and is protective." (Emphasis added.)

85. The Navy has never publicly justified deferring cumulative risk analysis.

e. The Navy's institutional controls are not in accordance with EPA Guidance.

86. The EPA Guidance, *PRG User's Guide, Land Use Descriptions, Equations, and Technical Documentation*, allows for exposure pathways to be switched off only if "a route of exposure is considered to be unreasonable at the site, both currently and in the future."

87. ICs at the Shipyard include prohibiting future residents from gardening in native soil. It allowed "switching off" home-grown produce as a route of radiological exposure, reducing the risk enough to satisfy CERCLA's acceptable risk range, according to the Navy.

88. It is unreasonable to assume future residents will forever garden exclusively in raised beds if that limitation is enforced only by deed restrictions. Even if all residents were made aware of the institutional controls and tried to comply, it is unreasonable to assume that raised beds will continue to be protective in perpetuity. The Navy has not demonstrated the remedy will be protective in the long-term without an inspection and maintenance program to enforce this IC.

89. ICs also call for constructing "durable covers," over most of the site to prevent exposure to potentially contaminated soil below the covers. The EPA's September 2012 guidance, *Citizen's Guide to Capping*, states, "**When properly built and maintained**, a cap can safely keep contaminated

material in place. A cap will continue to isolate contamination as long as it does **not erode or develop cracks or holes** that allow water to reach the contaminated material." (Emphasis added.)

90. However, here any covers will be destroyed to develop the site, as envisioned by the anticipated future land use. The Navy has failed to delineate any specific protections that will be put in place to protect future construction workers and residents from contamination when covers are removed for development. It has not demonstrated the remedy will be protective in the long-term once the caps are removed.

f. The *Fifth Five-Year Review* did not properly account for climate change.

91. The Navy did not properly consider or address climate change in its *Fourth FYR* and *Fifth FYR*. It used outdated sea-level rise, Bay-level rise and groundwater-rise data which underestimated their impact on the selected remedies.

92. The *Comprehensive Five-Year Review Guidance*, as part of its inquiry into the continuing validity of assumptions, identifies physical site changes as a question to be investigated: "Have physical site conditions changed such that protectiveness may be affected (*e.g.*, changes in anticipated direction or rate of groundwater flow)? Has understanding of physical site conditions changed (*e.g.*, identification of a new groundwater divide)?"

93. The *Fourth FYR* estimated three future greenhouse gas emission scenarios and estimated the greatest sea-level rise by 2100 would range from 1.6 to 3.4 feet. The *Fourth FYR* considered "a contingency of up to a 3-foot increase in sea level." "No other information has been identified to suggest that the remedies may not be protective of human health or the environment," the *FYR* concluded.

94. Data available then and now contradicts the figures used and points to much greater sea-level rise than the Navy considered. For example, according to the 2018 State of California Sea-Level

Rise Guidance, "Sea level rise will reach 5.7 to 6.9 feet by 2100 under the medium to high risk aversion scenario," and may reach as much as 10.2 feet by 2100 under another scenario.

95. The *Final Fifth FYR* suffers from similar climate-study infirmities, including underestimating sea-level rise. It projects a maximum sea-level rise of 3.2 feet by 2065. However, the latest report from California's Ocean Protection Council recommends that planners use a longer timeframe and projections as high as 6.6 feet by 2100. Similarly, the Navy did not consider California DTSC's Sea-Level Rise Vulnerability Assessment ("SLRVA") program. Its *Sea-Level Rise Guidance* states: "The initial SLRVA should be based on the California SLR Work Plan recommendation to assess pathways to resiliency to 3.5 feet of SLR [sea-level rise] by 2050 and 6.0 feet by 2100."[4]

96. Furthermore, the *Fifth FYR* took a step backward. The *Fourth FYR*'s estimate of sea-level rise considered a timeframe through 2100. However, the *Fifth FYR* only looks as far forward as 2065. The Navy has failed to adequately explain the choice to decrease the timeframe, when it is obvious that sea- level rise will continue past that date whether the Navy takes it into account or not.

97. Rising sea and Bay water and a concomitant rise in groundwater all increase the risk that contamination remaining on the Shipyard could be spread, potentially allowing it to contaminate the Bay. Accordingly, the risk of remedy failure caused by sea-level rise is significantly higher than the unreasonably low assumptions made by the Navy and will impact the Shipyard remedies far beyond 2065.

[4] *Available at* https://opc.ca.gov/wpcontent/uploads/2024/01/SLR-Guidance-DRAFT-Jan-2024-508.pdf.

FIRST CLAIM FOR RELIEF

Violation of 42 U.S.C. § 9569(a)(1) – Violation of the *Parcel G Retesting Agreement*, a Condition, Requirement, and/or Order That Has Become Effective under the FFA

98. Greenaction incorporates by reference all paragraphs of this Complaint set out above as if fully set forth herein.

99. Citizen suits are authorized under 42 U.S.C. § 9659(a)(1) for "violation of any standard, regulation, condition, requirement, or order which has become effective pursuant to this chapter (including any provision of an agreement under section 9620 of this title, relating to Federal facilities)."

100. In June 2019, the Navy and EPA agreed to the *Final Parcel G Removal Site Evaluation Work Plan* ("*Parcel G Retesting Plan*"). The *Parcel G Retesting Plan* requires retesting one-third of the soil fraudulently remediated by Tetra Tech, with the proviso that 100% soil retesting would be required if the one-third retesting found any contamination.

101. The *Parcel G Retesting Plan* is a condition, requirement, and/or order, as defined by 42 U.S.C. § 9659(a)(1), that has become effective pursuant to the FFA required by 42 U.S.C. § 9620, relating to federal facilities.

102. In 2021, Phase 1 retesting using EPA approved analytical methods identified sixty-two (62) Sr-90 samples exceeding the Sr-90 remediation goal, .331 pCi/g.

103. The discovery of these exceedances triggered 100% retesting of Tetra Tech's soil work.

104. Rather than test 100% of the soil, the Navy instead sought to invalidate data showing exceedances by rejecting the testing method approved by EPA, then tweaking its own testing procedures after they confirmed the exceedances, to finally show no exceedances. The Navy invalidated the Sr-90 exceedances without a proper factual basis. Thus, the Navy has improperly reneged on the *Retesting Plan* in violation of CERCLA, the NCP and the FFA. It has also acted

arbitrarily, capriciously, and not otherwise in accordance with the law. The resulting delays to the completion of the radiological remediation continue, rather than abate, the risk of toxic and other harmful exposures to Greenaction's members and other residents of Bayview Hunters Point.

105. EPA has wrongfully approved the improper invalidation of the Sr-90 exceedances, violating its independent obligation under the FFA to assure the cleanup is and remains protective.

SECOND CLAIM FOR RELIEF

Pursuant to 42 U.S.C. § 9659(a)(2) – Violations of CERCLA, 42 U.S.C. § 9621(c), the NCP, and the FFA Regarding Five-Year Review Deadlines

106. Greenaction incorporates by reference all paragraphs of this Complaint set out above as if fully set forth herein.

107. 42 U.S.C. § 9621(c) requires five-year reviews "no less often than each 5 years after the initiation of [a] remedial action . . .."

108. 40 C.F.R. § 300.430(f)(4)(ii) also requires five-year reviews "no less often than every five years after initiation of the selected remedial action."

109. The FFA reconfirms that the five-year reviews for HPNS began "counting from the initiation of the first operable unit . . .."

110. Remedial actions were initiated at HNPS on July 8, 1998.

111. As a result, the statutory deadline for the Navy to complete and sign the *Sixth FYR* for HNPS is July 8, 2028.

112. The Navy has announced in writing that it will complete the *Sixth FYR* by July 30, 2029. That will violate the statutory deadline by more than one year.

113. The Navy's past and ongoing policy that the five-year review interval is reset by the signature date of the previously completed five-year review is inconsistent with the plain language of Section 9621(c). By application of this policy, the Navy has effectively granted itself a de facto

extension to its FYR deadlines, which violate the clear non-discretionary deadlines in 42 U.S.C. § 9621(c), 40 C.F.R. § 300.430(f)(4)(ii), and the FFA. There is a substantial controversy between Plaintiff and the Navy of sufficient immediacy and reality to warrant the issuance of a declaratory judgment declaring the illegality of the Navy's five-year review interval policy and preventing the Navy's continued violation of the statutory deadline for five-year reviews at HPNS. Accordingly, to remedy the Navy's ongoing delays in preparing five-year reviews for HPNS, Plaintiff seeks a declaration that the deadline by which the Navy must complete and sign the *Sixth FYR* is July 8, 2028.

THIRD CLAIM FOR RELIEF

Pursuant to 42 U.S.C. § 9659(a)(1) – Violations of the Federal Facilities Agreement for Failing to Adhere to EPA Guidance in Issuing the *Fifth Five-Year Review*

114. Greenaction incorporates by reference all paragraphs of this Complaint set out above as if fully set forth herein.

115. 42 U.S.C. § 9621(c) requires that the Navy conduct reviews every five years "to assure that human health and the environment are being protected by the remedial action being implemented." Five-year reviews require that the Navy make a protectiveness determination – a substantive decision based on scientifically defensible data.

116. 42 U.S.C. § 9621(a) mandates that the President "shall select appropriate remedial actions" which are "in accordance with this section and, **to the extent practicable, the national contingency plan**." (Emphasis added.)

117. Section 6.1 of the FFA states:

> The Parties agree to perform the tasks, obligations and responsibilities described in this Section **in accordance with CERCLA and CERCLA guidance and policy; the NCP**; pertinent provisions of RCRA and RCRA guidance and policy; Executive Order 12580; applicable State laws and regulations; **and all terms and conditions of this Agreement** including documents prepared and incorporated in accordance with Section 7 (Consultation). (Emphasis added.)

118. CERCLA response actions by the Navy and EPA at the Shipyard, described above, which violate CERCLA and the NCP, constitute violations of the FFA in that they are not "in accordance with" CERCLA and not in accordance, "to the extent practicable," with the NCP.

A. The Navy deviated from EPA guidance in its *Fifth Five-Year Review.*

119. The Navy violated and/or deviated from its obligation under Section 6.1 of the FFA to act "in accordance with" EPA guidances, including:

1. The *Comprehensive Five-Year Review Guidance* (July 2001). Among other violations, the Navy failed to:

   a. Determine whether there have been changes in toxicity or other contaminant characteristics that need to be investigated; and failed to identify "recent toxicity data and their sources;"

   b. Investigate whether the exposure assumptions, toxicity data, and cleanup levels are still valid;

   c. Consider EPA's 2023 soil PRG defaults, which strengthened them for radionuclides at issue at HPNS, in some cases by more than an order of magnitude, and modify its risk calculations and remedial goals accordingly.

   d. Investigate the question, "Has any other information come to light that could call into question the protectiveness of the remedy?"

   e. Failed to use the most current toxicity data to update risk characterization for both soil and building remedial goals;

   f. Failed to consider cumulative risk from all radionuclides as a whole, and from radionuclides and chemical contamination combined. The Navy indefinitely deferred doing so until the property is released for development, some ill-defined future time; and

g. Failed to justify the use of institutional controls. The Navy also failed to provide a realistic plan for the ICs to be enforced through deed restrictions. It has failed to provide a plan to monitor, maintain, and repair such controls, thereby failing to demonstrate ICs will continue to meet the Navy's duty to ensure protectiveness now and in the future. It is unreasonable to assume ICs will be effective if enforced only by deed notices.

2. *Data Quality Objectives for Remedial Response Activities* (February 1989), Appendix C Sampling Considerations. Among other deviations, the Navy failed to:

a. Conduct comprehensive sampling of the entire site "to ensure that no area of the site is overlooked."

b. Conduct sampling to "provide complete coverage of the area of interest," before making "general inferences" about the site.

3. *Risk Assessment Guide for Superfund, Part A* (December 1989). The Navy failed to:

a. Assure investigation of contamination is comprehensive, obtaining "data on concentrations of contaminants in each of the source areas and media of concern."

b. Recognize that "because toxicity information may change rapidly and quickly become outdated," decision making must be based on "the most recent information available," and instead using outdated toxicity data in making decisions.

c. Accurately estimate the nature, extent, and concentration of contaminants.

4. *Risk Assessment Guidance for Superfund, Part B* (December 1991). Among other deviations, the Navy failed to:

a. Meet the level of protectiveness required for lifetime cancer risk, 10^{-6} (one in a million) and if site specific circumstances justify and regulators approve, between 10^{-6} and 10^{-4} (one in 10,000).

b. Derive total risk posed for each radioactive contaminant and for each exposure pathway and then calculate total cumulative radiological risk.

c. Derive total risk for all contaminants and pathways by summing the risk of chemical and radiological contamination.

5. *Human Health Toxicity Values in Superfund Risk Assessments* (December 2003). The Navy failed to update Preliminary Remediation Goals with the most current toxicity data.

6. *PRG User's Guide, Land Use Descriptions, Equations, and Technical Documentation* (undated). The Navy violated the allowance for exposure pathways to be switched off in PRG calculations only if "a route of exposure . . . is considered to be unreasonable" at the site, "both currently and in the future."

7. *Radiation Risk Assessment at CERCLA Sites: Q & A* (June 2014). The Navy failed to use the CERCLA risk range (10^{-6} to 10^{-4}) in determining whether the HPNS remedies remain protective. Further, the Navy failed to modify the remedies to comply with the risk range when it exceeded that range in the *Fifth FYR.*

8. *Citizen's Guide to Capping* (September 2012). The Navy failed to plan for and implement regular inspections, maintenance, and repair to assure that caps or covers are not damaged by weather, plant roots, and human activity.

9. *Draft Technical Guidance for RCRA/CERCLA Final Covers* (April 2004). The Navy failed to assume a 30-year lifetime for proposed covers and failed to plan to monitor and maintain covers for that lifetime.

120. The Navy violated its obligations to conduct the clean-up efforts in accordance with "CERCLA and CERCLA guidance and policy" when it failed to provide a reasoned explanation, based on sufficient scientifically sound data, for deviating from these standards. Without a proper factual and legal basis for these deviations, these decisions were arbitrary and capricious or otherwise not in accordance with the law.

FOURTH CLAIM FOR RELIEF

Pursuant to 42 U.S.C. § 9659(a)(1) – Violations of 42 U.S.C. § 9621(c) and 40 C.F.R. § 300.430(a)(1)(i) – Failure to Assure the Protectiveness of the Remedies in its *Fifth Five-Year Review*

121. Greenaction incorporates by reference all paragraphs of this Complaint set out above as if fully set forth herein.

122. By failing to comply with each of the EPA Guidances above in preparing its *Fifth FYR*, the Navy's issuance of the *Fifth FYR*s failed to assure that human health and the environment are being protected by the remedial actions being implemented at HPNS.

1. The Navy Lacks Data Supporting Protectiveness

123. EPA's *Comprehensive Five-Year Review Guidance* (July 2001) states, "Evaluation of the remedy and the determination of protectiveness should be based on and sufficiently supported by data and observations," the "foundation for the technical assessment of the remedy at the time of the five-year review." Furthermore, it states that toxicity or other contaminant characteristics should be checked to determine if the basis for the original cleanup levels have changed. The Navy discarded all Tetra Tech's radiological remediation data as unreliable in 2018. Retesting of Tetra Tech's work has not been completed in any parcels as of the date of this Second Amended Complaint. Accordingly, the Navy did not have or rely on sufficient competent, scientifically defensible data at the time it made its protectiveness determinations for the *Fifth Five-Year Review*.

124. Because the Navy's protectiveness determinations were not based on sufficient data to support them, the Navy violated CERCLA, the NCP and the FFA and acted in a manner that was arbitrary and capricious and not otherwise in accordance with the law.

2. The Navy Failed to Update Its Remedial Goals in Its *Fifth Five-Year Review*.

125. Pursuant to 40 C.F.R. § 300.430(e)(2), to demonstrate remedies are protective they must reduce cancer risk to between 10^{-6} (one in a million) and 10^{-4} (one in ten thousand). The purpose of five-year reviews is to "assure protectiveness." Thus, the Navy's five-year reviews must show that the remedial goals are within the CERCLA risk range.

126. The Navy adopted HPNS radiological remedial goals in 2006. It failed to update the remedial goals for the 2008, 2013, and 2019 *FYR*s.

127. The Navy's *Fifth FYR* protectiveness determinations did not update the remedial goals, including failing to address EPA's updated 2023 soil default PRGs.

128. The Navy's protectiveness determinations also did not provide a sufficient explanation or basis for relying on institutional controls, including deed restrictions to prevent future residents from growing produce and the use of covers as ICs, which will have to be destroyed to develop the Shipyard as planned.

3. The Navy Did Not Properly Account for New Toxicity Data.

129. Under the *Comprehensive Five-Year Review Guidance*, the Navy was required to consider whether the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives used at the time the remedy was selected are still valid. It also ties the Navy's protectiveness determination to "sufficiently supported" scientific data and observations, the "foundation for the technical assessment of the remedy at the time of the five-year review."

130. As noted above in Chart 1, EPA published new, significantly more protective, default preliminary remediation goals for soil in 2023. Numerous radionuclides of concern at HPNS have been lowered, some by more than an order of magnitude.

131. The Navy did not address the updated EPA soil PRGs in its *Fifth Five-Year Review* of protectiveness, in violation of EPA guidance and the FFA.

4. The Navy Did Not Properly Justify Using Institutional Controls.

132. The Navy's institutional controls at HPNS include prohibiting growing food for consumption in Shipyard soil, to be enforced by deed restrictions and "durable covers." The effect is to "switch off" exposure pathways affecting the risk calculation for human health.

133. The EPA Guidance, *PRG User's Guide, Land Use Descriptions, Equations, and Technical Documentation*, allows for exposure pathways to be switched off only if "a route of exposure . . . is considered to be unreasonable at the site, both currently and in the future."

134. It is unreasonable to assume future residents will forever garden only in raised beds if that limitation is enforced only by deed restrictions. It is also unreasonable to assume that raised beds will continue to be protective in perpetuity without an inspection and maintenance program to enforce it. As to the "durable caps," they will not be durable; they will have to be removed to develop the Shipyard as planned. It is unreasonable for either IC to be used to affect the calculation of long-term risk without an inspection and maintenance program to assure the long-term protectiveness of the remedy or to use "durable covers" without considering risk once they are removed. These ICs deviated from EPA guidance and violated the FFA.

5. The Navy Failed to Properly Address Climate Change.

135. In its *Final Fourth FYR*, the Navy failed to address the potential impacts of climate change and global warming on the HPNS remedies, including rising sea-level, Bay-level and

groundwater-level rise. Greenaction, among others, submitted detailed comments on the subject. The Navy ignored them.

136. The Navy discussed climate change in its *Final Fifth FYR* but like the *Fourth FYR*, it failed to adequately consider the most recent scientific estimates of sea-level, Bay-level and groundwater-level rise. The Navy also failed to select an adequate timeframe for impacts on the HPNS remedies, limiting all consideration to 2065, and deferring any consideration of later impacts without factual or legal justification.

137. For all of these reasons, the Navy acted arbitrarily and capriciously and not otherwise in accordance with the law by adopting its *Fifth FYR* without addressing numerous relevant factors necessary to assure that human health and the environment are being protected by remedial actions at HPNS in violation of Section 9621(c) of CERCLA and 40 C.F.R. § 300.430(a)(1)(i).

PRAYER FOR RELIEF

WHEREFORE, Plaintiff, Greenaction for Health and Environmental Justice, respectfully requests that this Court:

A. Enter a declaratory judgment in favor of Greenaction and against the Navy and EPA regarding the cleanup of the former HPNS Superfund site for: (1) the Navy's and EPA's violations of CERCLA, the NCP and the FFA; (2) for their failure to perform non-discretionary duties under CERCLA (42 U.S.C. §§ 9601, *et seq*.); and (3) for actions and inactions that are arbitrary, capricious, and not otherwise in accordance with law.

B. Issue an injunction ordering the Navy and EPA to conduct the HPNS cleanup in compliance with CERCLA, the NCP, and EPA's CERCLA guidance and policy as required by the FFA, including but not limited to:

a. Implementing the *Parcel G Retesting Plan* requiring 100% retesting of the work done by the Navy's radiological remediation contractor, Tetra Tech, EC, Inc.;

and

b. Revising the *Fifth FYR*, within a deadline to be set by this Court, to:

1. Assure that the HPNS remedies are protective of human health and the environment by using the most up-to-date toxicological data, including EPA's default PRGs, to calculate updated remedial goals using EPA's PRG Calculators;

2. Assure that the HPNS remedies are protective of human health and the environment by calculating total cumulative risk for all radiological and chemical contamination combined and demonstrating that the total risk falls within the acceptable CERCLA risk range;

3. Address shortcomings of the identified institutional controls; and

4. Assure that the HPNS remedies are protective of human health and the environment by considering up-to-date climate change data, including the most current sea-level, Bay-level and groundwater-level rise data, evaluating reasonably foreseeable future impacts over a reasonably foreseeable timeframe considering anticipated future land uses, and revising the remedies, if necessary, to protect them from the future effects of climate change.

C. Meet the statutory five-year deadlines for each subsequent review on dates to be set by this Court, but in any case, not beyond a July 8, 2028, deadline for the *Sixth FYR*, and continuing for each successive review not less than every five years thereafter;

D. Retain jurisdiction over this matter for purposes of enforcing and effectuating the Court's opinion;

E. Award Greenaction its costs and attorneys' fees in this action; and

F. Grant Greenaction such other and further relief as this Court may deem appropriate.

Dated: April 3, 2025

Respectfully submitted,

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