EXHIBIT A

UNITED STATES DISTRICT COURT FOR THE DISTRICT OF SOUTH CAROLINA CHARLESTON DIVISION

STATE OF NEW MEXICO, *ex rel.* RAÙL TORREZ, Attorney General, JAMES KENNEY in his official capacity as Cabinet Secretary for the NEW MEXICO ENVIRONMENT DEPARTMENT, and MAGGIE HART STEBBINS in her official capacity as Trustee for the NEW MEXICO OFFICE OF NATURAL RESOURCES TRUSTEE, **Plaintiffs,** **v.** **THE UNITED STATES, THE UNITED STATES DEPARTMENT OF THE ARMY, and THE UNITED STATES DEPARTMENT OF THE AIR FORCE,** **Defendants.**	**MDL No. 2873** **Master Docket No. 2:18-mn-2873** **Judge Richard Mark Gergel** **Civil Action No. 2:20-cv-02115-RMG** **SECOND AMENDED COMPLAINT**

THE STATE OF NEW MEXICO, by and through New Mexico Attorney General Raúl Torrez, the New Mexico Environment Department, and the New Mexico Office of Natural Resources Trustee (collectively, "Plaintiffs" or the "State"), file this Second Amended Complaint against the above-named Defendants and in support thereof allege as follows:

INTRODUCTION AND STATEMENT OF THE CASE

1. This is a civil action by the State against Defendants United States ("U.S."), the U.S. Department of the Air Force, and the U.S. Department of the Army (collectively, "Defendants") brought pursuant to the New Mexico Hazardous Waste Act, NMSA 1978, §§ 74-4-1 to -14, the Resource Conservation and Recovery Act, 42 U.S.C. § 6901 *et seq.*, and the

Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. § 9601 *et seq.*

2. This action arises from the improper disposal of and the unlawful failure to contain or address contaminants, hazardous wastes, and hazardous substances at Cannon Air Force Base ("Cannon"), located approximately seven miles southwest of Clovis, New Mexico and above the Ogallala Aquifer; and Holloman Air Force Base ("Holloman"), located in the Tularosa Basin between the Sacramento and San Andreas mountain ranges ten miles west of Alamogordo, New Mexico; Kirtland Air Force Base ("Kirtland"), located south of the city of Albuquerque; White Sands Missile Range ("White Sands"), located 20 miles east of Las Cruces, New Mexico; and Fort Wingate, located approximately eight miles east of the city of Gallup. Defendants' actions and omissions have resulted in contamination and pollution of the environment, including public and private water sources both on- and off-site, with per- and polyfluoroalkyl substances ("PFAS"), also known as fluorochemicals, such as perfluorooctanoic acid ("PFOA") and perfluorooctanesulfonic acid ("PFOS"), and other known or suspected toxic compounds.

3. Defendants' discharges and the resulting contamination at Cannon and Holloman have created an imminent and substantial endangerment to human health and the environment. *See* 42 U.S.C. § 6972(a)(B); NMSA 1978, § 74-4-13.

4. Additionally, the State has suffered a direct injury as a result of the continued presence of PFAS in the resources of the State and the United States' refusal to take timely action to clean up the contamination or mitigate the damages associated with the same. Among these, the State has suffered an injury to the State's sovereign interest in the enforcement of its laws, damage to its natural resources, including to the soil, sediments, groundwater, surface water,

aquifers, playas, and injury and imminent threat of injury to its wildlife, which are owned by the State in its sovereign capacity, and to its agricultural economy, outdoor recreation, and tourism.

5. As a result of this ongoing and persistent contamination and pollution, the State seeks declaratory and injunctive relief, and reimbursement of past and future costs incurred by the State associated with these environmental and public health risks and injuries at Cannon, Holloman, Kirtland, White Sands, and Fort Wingate. This includes, but is not limited to, the recovery of any and all of its costs for removal and remedial actions it has performed at Cannon, Holloman, Kirtland, White Sands, and Fort Wingate in response to the contamination of those sites with hazardous substances. *See* 42 U.S.C. § 9607(a).

JURISDICTION AND VENUE

6. This Court has subject matter jurisdiction over this action under 28 U.S.C. § 1331 and 42 U.S.C. § 9613(b).

7. This Court has the authority to grant declaratory relief, 28 U.S.C. § 2201, as well as further relief requested in this Complaint, including injunctive relief, 28 U.S.C. § 2202.

8. This Court has personal jurisdiction over Defendants as they conduct sufficient business with sufficient minimum contacts in the State, and/or intentionally subjected themselves to this jurisdiction through the commission of tortious activity within the State.

9. Venue is proper in the United States District Court for the District of New Mexico pursuant to 28 U.S.C. § 1391, because the acts described in this Complaint occurred in that judicial district. However, this action was transferred into the multi-district litigation captioned *In re: Aqueous Film-Forming Foam Products Liability Litigation*. The State files this Amended Complaint in the District of South Carolina consistent with the Case Management Orders entered

in this multi-district litigation, but reserves all rights to a trial in the United States District Court for the District of New Mexico and/or to seek remand at the appropriate time.

PARTIES

Plaintiffs

10. Plaintiff, James Kenney is a plaintiff in his official capacity as the Cabinet Secretary for the New Mexico Environment Department ("NMED"). NMED is a state executive agency pursuant to the Department of Environment Act, NMSA 1978, §§ 9-7A-1 to -17. NMED is charged with the administration and enforcement of the New Mexico Hazardous Waste Act ("HWA") and the Hazardous Waste Management Regulations, 20.4.1-20.4.1.1107 NMAC, and Secretary Kenney has authority to bring this lawsuit. NMSA 1978, § 74-1-6(A); § 74-4-13(A).

11. Plaintiff, Maggie Hart Stebbins in her official capacity as Trustee for the New Mexico Office of Natural Resources Trustee ("NMONRT"), represents a state executive agency pursuant to the Natural Resource Trustee Act, NMSA 1978, §§ 75-7-1 to -5. The Trustee acts on behalf of the public as trustee of natural resources within the State or belonging to, managed by, controlled by, or appertaining to the state, including protecting and representing the State's interest under applicable federal laws relating to injury to, destruction of, or loss of natural resources in the state. *Id.* § 75-7-2 and -3. NMONRT has authority to bring this suit. *Id.* § 75-7-3(A)(5).

12. New Mexico Attorney General Raúl Torrez is the "attorney for the State of New Mexico," *State ex rel. Norvell v. Credit Bureau of Albuquerque, Inc.*, 1973-NMSC-087, ¶ 5, 85 N.M. 521, 514 P.2d 40, and his office is recognized in Article V, Section 1 of the New Mexico Constitution. The New Mexico Legislature has authorized the Attorney General to prosecute and defend, in any court, civil actions in which the State is a party, when, in his judgment, the interest of the State requires such an action. NMSA 1978, § 8-5-2; *State ex rel. Att'y Gen. v. Reese*, 1967-

NMSC-172, ¶ 14, 78 N.M. 241, 430 P.2d 399. The Attorney General represents the natural resources trustee and the NMONRT pursuant to NMSA 1978, § 75-7-3(C).

13. Plaintiffs bring these claims, in part, pursuant to their authority to guard against adverse environmental and health impacts and risks associated with contamination such as that which is present at Cannon and Holloman.

14. Plaintiffs also bring this suit under the citizen suit enforcement provision of the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. § 6972. The State provided notice to the United States prior to the commencement of this action in accordance with RCRA, 42 U.S.C. § 6928(a)(2). As a signatory to this Complaint, NMED has notice of the commencement of this action as required by that Section.

15. New Mexico has been delegated the primary responsibility to implement and enforce RCRA within the State, and New Mexico's HWA and regulations promulgated pursuant to it are incorporated by reference into RCRA. 40 C.F.R. § 272.1601.

16. New Mexico also brings this suit to recover natural resource damages, costs for the assessment of said natural resource damages, and costs of removal and remedial actions taken by the State at Cannon, Holloman, Kirtland, White Sands, and Fort Wingate, under Section 107 of the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), 42 U.S.C. § 9607(a)(4)(A).

17. New Mexico also brings this suit to redress direct injuries to the State.

18. In New Mexico, as in other states, '"[t]he wild animals within its borders are, so far as capable of ownership, owned by the state in its sovereign capacity for the common benefit of all of its people.'" *State ex rel. Sofeico v. Heffernan*, 1936-NMSC-069, ¶ 27, 41 N.M. 219, 67 P.2d 240 (quoting *Lacoste v. Dep't of Conservation*, 263 U.S. 545, 549 (1924)).

19. Finally, under Article XX, Section 21 of the New Mexico Constitution, "protection of the state's beautiful and healthful environment is . . . declared to be of fundamental importance to the public interest, health, safety and the general welfare." This provision "recognizes that a public trust duty exists for the protection of New Mexico's natural resources . . . for the benefit of the people of this state." *Sanders-Reed ex rel. Sanders-Reed v. Martinez*, 2015-NMCA-063, ¶ 15, 350 P.3d 1221.

Defendants

20. Defendant is the United States of America, including all federal government agencies and departments responsible for the acts alleged in this Complaint.

21. The Department of the Air Force ("Air Force") is one of three military departments of the U.S. Department of Defense and is responsible for the administration and operation of the United States Air Force. The Department of the Air Force is and was at all times relevant to this Complaint the owner and operator of Cannon, Holloman, and Kirtland.

22. The Department of the Army ("Army") is one of three military departments of the U.S. Department of Defense and is responsible for the administration and operation of the United States Army. The Department of the Army is and was at all times relevant to this Complaint the owner and operator of White Sands and Fort Wingate.

GENERAL FACTUAL ALLEGATIONS

A. PFAS Background

23. PFAS comprise a family of approximately 3,500 manmade chemicals not found in nature. The backbone of a PFAS chemical is a chain of carbon atoms, which may be fully (per) or partly (poly) fluorinated. *See, e.g.*, U.S. EPA, *Technical Fact Sheet—Perfluorooctane Sulfonate (PFOS) and Perfluorooctanoic Acid (PFOA)* (Nov. 2017), at 2, *available at*

https://19january2021snapshot.epa.gov/sites/static/files/2017-12/documents/ffrrofactsheet_contaminants_pfos_pfoa_11-20-17_508_0.pdf (hereinafter "*EPA Fact Sheet*").

24. The two most recognized members of the PFAS family are PFOS and PFOA, which are long, eight-chain PFAS. *EPA Fact Sheet*, at 1. PFOS and PFOA easily dissolve in water and thus they are mobile and readily spread in the environment. *Id.* They are also persistent, and as a result have been widely dubbed "forever chemicals." *Id.* PFOS and PFOA have degradation periods of years, decades, or longer under natural conditions and have a half-life in the human body of two to nine years. ATDSR, *An Overview of Perfluoroalkyl and Polyfluoroalkyl Substances and Interim Guidance for Clinicians Responding to Patient Exposure Concerns*, at 2 (June 7, 2017), *available at* https://stacks.cdc.gov/view/cdc/77114.

25. PFOA and PFOS also readily contaminate soils and leach from soil into groundwater, where they can travel significant distances. *EPA Fact Sheet*, at 1.

26. PFOS and PFOA are strong, stable, bioaccumulative, and biomagnifying, meaning that they resist degradation due to light, water, and biological processes and tend to accumulate in organisms up the food chain. *Id.*

27. Further, PFOS and PFOA are toxic, meaning that they pose significant threats to public health and the environment. *Id.* Exposure to PFOS and PFOA presents health risks even when PFOS and PFOA are ingested at seemingly low levels.[1]

[1] *See, e.g.*, EPA, Drinking Water Advisory for Perflurooctanoic Acid (PFOA) (May 2016), *available at* https://www.epa.gov/sites/production/files/2016-05/documents/pfoa_health_advisory_final_508.pdf (hereinafter "EPA Drinking Water Advisory for PFOA"); EPA, Drinking Water Advisory for Perflurooctane Sulfonate (PFOS) (May 2016), https://www.epa.gov/sites/production/files/2016-05/documents/pfos_health_advisory_final_508.pdf (hereinafter "EPA Drinking Water Advisory for PFOS"); *PFAS National Primary Drinking Water Regulation* (April 26, 2024), 89 FR 32532.

28. PFOS and PFOA exposure is associated with increased risk of a variety of illnesses including testicular cancer, kidney cancer, thyroid disorders, high cholesterol, ulcerative colitis, and pregnancy-induced hypertension. The chemicals are particularly dangerous for pregnant woman and young children. *EPA Fact Sheet*, at 3; EPA Drinking Water Advisory for PFOA, at 39-42; National Academies of Sciences, Engineering, and Medicine, *Guidance on PFAS Exposure, Testing, and Clinical Follow-Up*. The National Academies Press (2022), at 62-63, *available at* https://doi.org/10.17226/26156.

29. Toxicology studies show that PFOS and PFOA are readily absorbed after oral exposure and are relatively stable once ingested so that they accumulate over time in individual organs, primarily the blood serum, kidney, and liver. *EPA Fact Sheet*, at 3.

30. Studies further found that individuals with occupational exposure to PFOA run higher risks of bladder and kidney cancer. EPA Drinking Water Advisory for PFOA, at 39-42.

31. In studies involving laboratory animals, PFOA and PFOS exposure increased the risk of tumors, changed hormone levels, and affected the function of the liver, thyroid, pancreas, and the immune system. *See* EPA Drinking Water Advisory for PFOA, at 35-39, 44-45; EPA Drinking Water Advisory for PFOS, at 36-37, 42.

32. The adverse effects associated with both PFOS and PFOA are additive when both chemicals are present, meaning that their individual adverse effects are cumulative. *See* U.S. Dep't of Health and Human Services and Centers for Disease Control and Prevention, *Fourth National Report on Human Exposure to Environmental Chemicals*, Updated Tables (March 2018), *available at* https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/10/CDC_Report_2.pdf.pdf.

33. However, injuries are not sudden and can arise months or years after exposure to PFOS and/or PFOA.

34. PFAS chemicals are often found together in the environment, and some PFAS chemicals degrade to other PFAS chemicals. EPA, Long-chain Perfluorinated Chemicals (PFCs) Action Plan (Dec. 30, 2009), https://www.epa.gov/sites/production/files/2016-01/documents/pfcs_action_plan1230_09.pdf.

35. Ecological receptors may also suffer from developmental, reproductive, and systemic effects when exposed to PFOA or PFOS. *EPA Fact Sheet*, at 1; Interstate Technology and Regulatory Council, *Human and Ecological Health Effects and Risk Assessment of Per- and Polyfluoroalkyl Substances (PFAS)* (September 2023) ("ITRC Fact Sheet"), at 2-3, *available at* https://pfas-1.itrcweb.org/wp-content/uploads/2023/10/HH_Eco_PFAS_Fact-Sheet_Sept2023_final.pdf. For example, PFOS has been found to be chronically toxic to avian forms of wildlife, resulting in decreased weight gain in pregnant females and a decreased rate of hatching. Dennis, Nicol, *et al.*, *Chronic Reproductive Toxicity of PFOS and a Simple Mixture of PFOS and PFHxS to Northern Bobwhite Quail (Colinus virginianus)*, Environmental Toxicology and Chemistry (2020), *available at* https://www.researchgate.net/publication/339601554_Chronic_Reproductive_Toxicity_of_PFOS_and_a_Simple_Mixture_of_PFOS_and_PFHxS_to_Northern_Bobwhite_Quail_Colinus_virginianus. Because PFAS bioaccumulate, even extremely low or undetectable levels of PFAS in the environment can cause health risks to ecological receptors, either through direct exposure to environmental media (contaminated water, sediment, or soil) or through the food chain. ITRC Fact Sheet at 2-3.

36. PFAS were formally identified as "emerging contaminants" by the U.S. Environmental Protection Agency ("EPA") in 2014. EPA, *Emerging Contaminants Fact Sheet – Perfluorooctane Sulfonate (PFOS) and Perfluorooctanoic Acid (PFOA)* (March 2014), *available*

at https://nepis.epa.gov/Exe/ZyPDF.cgi/P100LTG6.PDF?Dockey=P100LTG6.PDF (hereinafter "*EPA Emerging Contaminants Fact Sheet*"). This term describes contaminants about which the scientific community, regulatory agencies, and the public have an evolving awareness regarding their movements in the environment and effects on public health. *Id.* PFAS, like other emerging contaminants, are the focus of active research and study, which means new information is released periodically regarding the effects on the environment and human health as a result of exposure to the chemicals. *Id.*

37. Six PFAS were included by the EPA in the Third Unregulated Contaminant Monitoring Rule per the 1996 Safe Drinking Water Act Amendments in May 2012. *See* EPA Unregulated Contaminant Monitoring Rule UCMR 3 (2012 – 2016), 77 FR 26072, 2012. Monitoring of these substances was required between 2013 and 2015 to provide a basis for future regulatory action to protect public health. *Id.* In the current Fifth Unregulated Contaminant Monitoring Rule (to be completed in 2025), EPA has required the monitoring of an additional 23 PFAS. 86 FR 73131 (requiring monitoring of a total of 29 PFAS).

38. In January 2009, EPA established a drinking water Provisional Health Advisory ("HA") level for PFOA and PFOS—two of the PFC compounds about which we have the most toxicological data. EPA set the HA level at 0.4 parts per billion ("ppb") for PFOA and 0.2 ppb for PFOS. *EPA Emerging Contaminants Fact Sheet*, at 5.

39. In 2016, following additional study, the EPA lowered the HA for PFOS and PFOA. EPA established the HA levels for PFOS and PFOA at 70 parts per trillion ("ppt"), equivalent to 0.07 parts per billion or 0.07 micrograms per liter ("µg/L"). *EPA Fact Sheet*, at 4. In addition, EPA, in issuing its 2016 HAs, directs that when both PFOA and PFOS are found in

drinking water, the *combined* concentrations of PFOA and PFOS should be compared with the 70 ppt HA. *Id.*

40. In 2018, the Agency for Toxic Substances and Disease Registry ("ATSDR") released an updated Toxicological Profile for PFAS that revised its minimal risk levels ("MRLs") for PFOA and PFOS. An MRL is the estimated amount of a chemical a person can eat, drink, or breathe each day without a detectable risk to health. The intermediate oral (15 to 364 days) MRL for PFOA was revised from the previous level of $2x10^{-5}$ (0.00002) mg/kg/day to $3x10^{-6}$ (0.000003) mg/kg/day and for PFOS was revised from the previous level of $3x10^{-5}$ (0.00003) mg/kg/day to $2x10^{-6}$ (0.000002) mg/kg/day. These new MRLs were lowered because they now take into consideration immune system effects; the former thresholds were based only developmental health effects. *See* ATDSR, Toxicological Profile for Perfluoroalkyls (June 2018), https://www.atsdr.cdc.gov/toxprofiles/tp200.pdf (hereinafter "ATSDR Toxicological Profile").

41. In 2022, the EPA again lowered the HA for PFOS and PFOA. EPA established an interim HA of .02 ppt (.00002 µg/L) for PFOS and an interim HA of .004 ppt (.000004 µg/L) for PFOA. EPA Lifetime Drinking Water Health Advisories for Four Perfluoroalkyl Substances, 87 FR 36878, 2022. At the same time, EPA established final HAs for two additional PFAS, hexafluoropropylene oxide ("HFPO") dimer acid and its ammonium salt (together referred to as "GenX chemicals") and perfluorobutane sulfonic acid and its related compound potassium perfluorobutane sulfonate (together referred to as "PFBS"). EPA established an HA of 10 ppt (.01 µg/L) for GenX chemicals, and 2,000 ppt (2 µg/L) for PFBS.

42. In April 2024, the EPA established the first enforceable federal standards for PFAS by promulgating "maximum contaminant levels" ("MCL") for five PFAS under the Safe Drinking Water Act, 42 U.S.C. § 300(f), *et seq.* EPA, PFAS National Primary Drinking Water Regulation,

89 FR 32532, 2024 ("2024 MCL"). EPA established an MCL of 4 ppt (.004 µg/L) for PFOS and PFOA, and an MCL of 10 ppt (.01 µg/L) for GenX chemicals, perflourononanoic acid ("PFNA"), and perflourohexane sulfonic acid ("PFHxS"). *Id.* EPA also established a unitless "Hazard Index" of 1 for a mixture of two or more of the following PFAS: PFHxS, PFNA, GenX chemicals, and PFBS. *Id.*

43. In May 2024, EPA designated PFOS and PFOA as "hazardous substances" under CERCLA. EPA, Designation of Perfluorooctanoic Acid (PFOA) and Perfluorooctanesulfonic Acid (PFOS) as CERCLA Hazardous Substances, 89 FR 39124. Notably, this is the first time in history that the EPA has directly designated a chemical as a "hazardous substance" under CERCLA.[2] *See id.* at 39170.

44. On April 8, 2024, the EPA has also proposed to list nine PFAS as "hazardous constituents" (a preliminary step to listing as "hazardous waste") under RCRA. EPA, Listing of Specific PFAS as Hazardous Constituents, 89 FR 8606 (Proposed Rule), 2024. The PFAS to be listed include PFOS, PFOA, PFBS, GenX chemicals, PFNA, PFHxS, perfluorohexanoic acid ("PFHxA"), perfluorodecanoic acid ("PFDA"), and perfluorobutanoic acid ("PFBA").

45. On the very same day, April 8, 2024, the EPA also proposed a rule to codify its longstanding policy that its authority to require "Corrective Action" (*i.e.* the investigation and cleanup of environmental contamination at permitted facilities, *see* 42 U.S.C. § 6924(u)-(v)) under RCRA extends not only to substances which have been listed as "hazardous waste" under the

[2] Because CERCLA's definition of "hazardous substances" refers to listings under other federal environmental statutes (the Clean Air Act, the Clean Water Act, RCRA, or the Toxic Substances Control Act), substances typically become a "hazardous substance" under CERCLA when they are listed or designated under those other federal environmental statutes. However, CERCLA's definition also refers to substances designated pursuant to "section 9602 of this title", 42 U.S.C. § 9601(14)(B), which authorizes the EPA to directly designate a "hazardous substance" under CERCLA, *id.* at § 9602.

statute, but also to substances which meet the statutory definition of "hazardous waste."[3] EPA, Definition of Hazardous Waste Applicable to Corrective Action for Releases from Solid Waste Management Units, 89 FR 8598, 2024. The proposed rule makes clear that it applies to State's authority under delegated programs (such as the New Mexico's, *supra* at ¶ 15)[4] as well. *Id.* at 8601, 8604.

46. PFAS clearly fit RCRA's definition of "hazardous waste" (which is essentially identical to the definition in the New Mexico Hazardous Waste Act, *see* NMSA 1978 § 74-4-3(K)) because they are known to cause, or significantly contribute to an increase in mortality or an increase in irreversible, or incapacitating reversible, illness even at extremely low levels. *See* footnote 4 (RCRA definition of "hazardous waste"); ¶¶ 27-33 (describing toxicity of PFAS); 89 FR 8506 (proposed RCRA listing, finding that the nine PFAS addressed by the proposed rule "have been shown in scientific studies to have toxic, carcinogenic, mutagenic, or teratogenic effects on humans or other life forms"); 89 FR 39124 (CERCLA designation finding that PFOS and PFOA "may present a substantial danger to the public health or welfare or the environment").

47. In July 2018, the New Mexico Water Quality Control Commission added perfluorinated compounds that include PFOA and PFOS to the list of toxic pollutants the State

[3] RCRA defines "hazardous waste" as "a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may--(A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed." 42 U.S.C. § 6903(5).

[4] The proposed rule actually references the permit issued to Cannon by New Mexico, which as discussed *infra* requires Corrective Action for PFAS. *Id.* at 8600. The proposed rule also references the Defendant's appeal of that permit, which is ongoing, noting that it caused the agency to "take a fresh look at its regulations" and propose this rule codifying EPA's longstanding policy. *Id.*

regulates at a risk-based level "shown by credible scientific data." 20.6.2.3103(A)(2) NMAC; 20.6.2.7(T)(2)(s) NMAC.

48. NMED's Hazardous Waste Bureau, with the Ground Water Quality Bureau, developed the NMED Risk Assessment Guidance for Site Investigation and Remediation, which helps to determine if a site is contaminated to a point that warrants further investigation or action. The associated screening levels and soil screening levels were developed based on the standards found in 20.6.2.3103. The Hazardous Waste Bureau uses those screening levels in its administration of the HWA and the Hazardous Waste Management Regulations.

49. In December 2018, New Mexico issued a renewed RCRA permit to Cannon pursuant to the New Mexico Hazardous Waste Act (and New Mexico's delegated RCRA authority, *see* ¶ 15) and in accordance with the New Mexico Hazardous Waste Management Regulations. NMED, Corrective Action Only Permit (December 19, 2018), EPA ID #NM7572124454 (hereinafter "Cannon RCRA Permit"), *available at* https://www.env.nm.gov/wp-content/uploads/sites/12/2016/05/CAFB-CA-Permit-12-19-2018.pdf.

50. The Cannon RCRA Permit requires Defendants to conduct Corrective Action (*i.e.* investigation and cleanup) at the facility "for all releases of hazardous waste or hazardous constituents . . . at all solid waste management units (SWMUs) and areas of concern (AOCs) identified in Permit Attachment 3, any newly identified SWMUs and AOCs, and releases of hazardous constituents from SWMUs and AOCs". *Id.* at 32. Critically, the permit defines "hazardous waste, for purposes of corrective action" to include "a hazardous waste as defined in 74-4-3(I) of the [New Mexico Hazardous Waste Act]. . . includ[ing] . . . any groundwater contaminant listed in the Water Quality Control Commission (WQCC) Regulations in 20.6.2.3103 NMAC, any toxic pollutant listed in 20.6.2.WW NMAC [now located at 20.6.2.7(T)(2)], any

contaminant . . . for which the EPA has promulgated a maximum contaminant level (MCL) . . . [and] perfluorinated compounds including [PFOS] and [PFOA]." *Id.* at 16.

51. Upon information and belief, New Mexico is the first State to address PFAS through a RCRA permit. However, in the years since the Cannon RCRA Permit was issued, the EPA has exercised RCRA authority to require the investigation of PFAS at a West Virginia facility currently owned by the Chemours Company FC, LLC and made infamous in the 2019 *Dark Waters*. *See* Administrative Order on Consent for Chemours Company FC, LLC, RCRA Docket No. RCRA-HQ-2024-001, at 6-7 (finding that PFAS fit RCRA's definition of "hazardous waste," that PFAS are present at the facility, and ordering investigation under EPA oversight), *available at* https://www.epa.gov/system/files/documents/2023-12/chemours-washington-works-admin-order-on-consent.pdf.

52. While more studies have been conducted and thus more is known regarding PFOS and PFOA, all PFAS have generally demonstrated similar characteristics to PFOS and PFOA.

53. By 2015, PFOA was voluntarily phased out of production by the major manufacturers. *EPA Fact Sheet*, at 2. However early studies of some of the replacement PFAS indicate they are nearly as harmful. *See* A. Blum et al., *The Madrid Statement on Poly-and Perfluoroalkyl Substances (PFASs)*, ENVIRON. HEALTH PERSPECT. 123:A107–A111 (2015). While there are thousands of replacement PFAS, only a subset have been studied to-date.

B. PFAS in AFFF Used at Military Facilities

54. In the 1960s, 3M Company and the U.S. Navy developed "aqueous film-forming foam" ("AFFF"), a firefighting foam containing PFOS and PFOA. AFFF concentrate contains fluorochemicals used to meet required performance standards for fire extinguishing agents.

55. The United States Air Force began purchasing and using AFFF-containing PFAS for firefighting training activities and petroleum fire extinguishment in 1970. Upon information and belief, the United States Army likewise began purchasing and using AFFF in the 1970s.

56. AFFF was primarily used on Air Force and Army installations at fire training areas, but may have also been used, stored, or released from hangar fire suppression systems, at firefighting equipment testing and maintenance areas, and during emergency response actions for fuel spills and mishaps.

57. A 1980s study by the U.S. Navy found that AFFF has "adverse effects environmentally" and kills aquatic life. Edward S. K. Chian, et al., *Membrane Treatment of Aqueous Film Forming Foam (AFFF) Wastes for Recovery of its Active Ingredients* (Oct. 1980), at 1, *available at* https://apps.dtic.mil/sti/citations/ADA136612.

58. As early as 2011, the U.S. Department of Defense acknowledged that there was a PFAS crisis among its facilities. *See* Dep't of Defense, Alternatives to Aqueous Film Forming Foam Report to Congress (June 2018), at 1, *available at* https://www.denix.osd.mil/derp/home/documents/alternatives-to-aqueous-film-forming-foam-report-to-congress/. An internal study identified 594 military sites that were likely to have contaminated groundwater, although it was noted that this number may underestimate the problem by not including AFFF spills, pipeline leaks, or aircraft hangar fire suppression systems. *EPA Emerging Contaminants Fact Sheet*, at 4.

59. In March 2018, the military acknowledged that PFAS were present at 121 military sites and suspected at hundreds of others. At least 524 drinking water supplies in communities near military sites have PFAS levels that exceed EPA's 2016 HA. Maureen Sullivan, Deputy Assistant Secretary of Defense, *Addressing Perfluorooctane Sulfonate (PFOS) and*

Perfluorooctanoic Acid (PFOA), at 8 (March 2018), *available at* https://www.epa.gov/sites/default/files/2018-05/documents/dod_presentation_epa_summit_pfos_pfoa_may2018_final.pptxx_.pdf.

60. In April 2024, the United States advised this Court that the Department of Defense had identified PFAS contamination at over 400 of its facilities nationwide. United States Motion to Dismiss for Lack of Jurisdiction Based on CERCLA Section 113(h) (ECF 4550-1) (filed February 26, 2024). Plaintiffs believe the exact number to be 452 at this time, though the Department of Defense has not yet completed its preliminary assessments (despite over 5 years of effort). *See* Department of Defense's PFAS Task Force, *Fiscal Year 2023 Third and Fourth Quarter Report* (April 2024), at A-2, *available at* https://www.acq.osd.mil/eie/eer/ecc/pfas/docs/reports/FY23-Q3-and-Q4-Report-PFAS.pdf.

61. The Air Force is working to replace its current inventory of AFFF with more formulations based on shorter carbon chains, such as Phos-Chek, a six-carbon chain ("C6") based foam. Dep't of Defense, Alternatives to Aqueous Film Forming Foam Report to Congress (June 2018), at 4. The Army has restricted its use of PFAS-containing AFFF to fire emergencies and is also working to develop a replacement.

62. C6 PFAS are the most prominent replacements for traditional eight-carbon chain PFAS as they are thought to degrade faster. DuPont, one of the major consumers and producers of PFOA, has a spinoff company, Chemours, that manufactures the most well-known C6 product known as GenX.

63. C6 products are still PFAS and present similar health and environmental concerns to longer-chain PFAS. *See, e.g.*, EPA *Human Health Toxicity Assessment for GenX Chemicals, Fact Sheet* (March 2023), *available at* https://www.epa.gov/system/files/documents/2023-

03/GenX-Toxicity-Assessment-factsheet-March-2023-update.pdf. In May 2015, 200 scientists signed the Madrid Statement, "which expresses concern about the production of all fluorochemicals, or PFAS, including those that have replaced PFOA. PFOA and its replacements are suspected to belong to a large class of artificial compounds called endocrine-disrupting chemicals; these compounds, which include chemicals used in the production of pesticides, plastics, and gasoline, interfere with human reproduction and metabolism and cause cancer, thyroid problems and nervous system disorders." A. Blum et al., *The Madrid Statement on Poly- and Perfluoroalkyl Substances (PFASs)*, ENVIRON. HEALTH PERSPECT. 123:A107–A111 (2015).

64. To the extent the Air Force and Army intend to utilize these alternatives, their use must similarly be compliant with applicable statutes and common laws that are protective of human health and the environment.

C. PFAS Contamination at New Mexico Military Facilities

Cannon Air Force Base

65. Cannon is located in eastern New Mexico, near the city of Clovis. Cannon encompasses approximately 3,789 acres of land owned by the United States and hosts a population of roughly 7,800 people.

66. Cannon is located above the Ogallala Aquifer.

67. Clovis, New Mexico is a city with a population of approximately 39,000 that relies upon the Ogallala Aquifer for its potable water.

68. Cannon includes two perpendicular active runways in the central and southwest portions; maintenance, support, and operational facilities west of the central runway/flightline; supplemental hangars and apron areas in the south-central region; a wastewater treatment plant to the east; and a golf course and residential and service facilities in the northwest portion.

69. Adjacent land to Cannon includes mixed-use land utilized as residential, agricultural, and farmland to the north; agricultural and farmland to the east and south; and agricultural and open grassland to the west. Cannon is an active military installation that currently houses the 27th Special Operation Wing, which conducts sensitive special missions including close air support, unmanned aerial vehicle operations, and non-standard aviation.

70. Cannon was developed in 1929 when Portair Field was established as a civilian passenger terminal. The Army Air Corps acquired control of the facility in 1942, and it became known as the Clovis Army Air Base. Clovis Army Air Base operated as an installation for aviation, bombing, and gunnery training until 1947 when the facility was deactivated. The Base was reactivated as Clovis Air Force Base in 1951 and became a permanent military installation in June 1957, when it was renamed Cannon Air Force Base. Defendants have used AFFF at Cannon for more than fifty years in training and actual firefighting events at the base. During routine training exercises, AFFF was sprayed directly on the ground and/or tarmac at several fire training areas, allowing PFOA and PFOS to travel to the surrounding groundwater, causing contamination on and offsite. PFAS remains at very high concentrations in groundwater both on and off the base.

71. In addition to routine training for personnel, additional releases of PFAS-containing AFFF have occurred at Cannon through testing of the equipment, false alarms, equipment malfunctions, and other incidental releases in the hangars, fire stations, and other locations. Once the AFFF-containing PFAS was released into the environment, the contamination migrated off-site.

72. On July 26, 2017, Defendants provided NMED with a "Site Inspection of Aqueous Film Forming Foam (AFFF) Release Areas Environmental Programs Worldwide Installation-Specific Work Plan" for Cannon ("Cannon SI Work Plan"). The provision of this report to NMED

was described "as a courtesy" in a July 27, 2017 letter to NMED, despite Defendants' obligation to provide this information to the State.

73. The purpose of the Cannon SI Work Plan was to identify locations where PFAS may have been used and released into the environment and to provide an initial assessment of possible migration pathways and receptors of potential contamination.

74. Twenty-one potential AFFF release areas were identified during the preliminary assessment. The Air Force recommended fifteen of those AFFF release for site investigation, although it did not preclude the presence of PFAS contamination at other areas throughout the site. See Cannon SI Work Plan, at 3-6. As stated in the Cannon SI Work Plan, the following areas are known to have confirmed releases of AFFF:

a. **Former Fire Training Area ("FTA") No. 2**—Former FTA No. 2 is located in the southeast corner of Cannon, approximately 1,000 feet south of the active FTA, and was used for fire training exercises from approximately 1968 to 1974. The area includes two round depressions in the land surface, each measuring approximately 100 feet in diameter. Fire training exercises were conducted twice per quarter using approximately 300 gallons of the unused jet propellant JP-4. No specific AFFF use was reported at Former FTA No. 2; however, since the FTA operated after initial use of AFFF at the base, it is likely that AFFF was used at this location.

b. **Former FTA No. 3**—Former FTA No. 3 is located in the southeast corner of the base, approximately 800 feet southeast of the active FTA, and was used concurrently with FTA No. 2 between approximately 1968 and 1972. Training exercises were conducted twice per quarter in an unlined, half-moon shaped area approximately 100 feet in length. No specific use of AFFF at Former FTA No. 2 was recorded; however, since the FTA operated after initial use of AFFF at the base, it is likely that AFFF was used at this location.

c. **Former FTA No. 4**—Former FTA No. 4 was used form 1974 through 1995 for fire training exercises. Training activities were conducted twice per quarter, during which an unknown volume of AFFF was used. FTA No. 4 consisted of an unlined circular area approximately 400 feet in diameter with a mock aircraft located in the center. Prior to 1985, the jet propellant JP-4 and AFFF runoff generated during fire training exercises collected in an unlined pit. The pit was backfilled in 1985 and a new, lined pit with an oil/water separator was installed to handle collected runoff. The oil/water separator was subsequently removed in 1996.

d. **Hangar 119**—General storage warehouse hangar located in the west central portion of the base, west of the flight apron, with three accidental AFFF releases. The first incident occurred in September 2006 when approximately 60 gallons of AFFF discharged into a storm drain after the AFFF system was accidentally activated, possibly due to a corroded valve. The second incident occurred in September 2012 when a "significant amount" of AFFF was discharged into bay number one and flowed onto asphalt on the north side of the structure between Hangar 119 and Building 102. Incident reports indicate that a "huge amount" of AFFF entered a storm drain while the rest was left to evaporate. The third incident occurred in July 2013 when an unknown quantity of AFFF was discharged onto the concrete flight ramp outside of the bays, which convey liquid directly to the South Playa Lake. Due to the large quantity of AFFF released at Hangar 119, AFFF potentially migrated to grassy areas to the south and southwest of the structure.

e. **Hangar 133**—Small aircraft hangar located in the west central portion of the base, immediately south of Hangar 119, with two additional AFFF releases. Several hundred gallons of AFFF were released during a scheduled rinsing of the hangar fire system in December 2000 and entered a nearby storm drain. Approximately 200 gallons of AFFF were released into a hangar bay following a power outage in July 2001. Most of the AFFF entered a floor trench and was routed to the wastewater treatment plan ("WWTP"); however, AFFF that did not enter the floor trench was washed into nearby infield soil and allowed to evaporate.

f. **Former Sewage Lagoon**—The former sewage lagoons consisted of two unlined surface impoundments that were used from 1966 to 1998 and received sanitary and industrial waste from base facilities prior to the construction of the WWTP. The former sewage lagoons would have received any AFFF that entered the sanitary sewer system from 1966 to 1998. Documented releases of AFFF to the sanitary system from Hangars 199 and 208 were reported prior to and during 1998. As such, there is evidence that AFFF was released to the environment at the former sewage lagoons.

g. **North Playa Lake Outfall**—North Playa Lake, located southeast of the WWTP, received all Cannon sanitary and industrial wastewater from 1943 to 1966. Currently, all treated effluent from the WWTPP is released primarily to North Playa Lake with a portion also released to the golf course for irrigation. Since there is no accepted wastewater treatment process for PFAS, any wastewater collected at the WWTP containing PFAS would be passed on to North Playa Lake.

h. **South Playa Lake Outfall**—South Playa Lake is located in the southwestern portion of Cannon and serves as the base's primary stormwater collection point. The lake has received stormwater runoff from portions of the flightline area since 1943. Solvents, fuels, oils, greases, and AFFF are all potential contaminants that would have discharged to the lake from the flightline area. Documented releases of AFFF in the hangars resulted in AFFF entering storm drains with liquid being subsequently routed to South Playa Lake.

i. **Hangar 109**—Parking and general maintenance hangar located in the west central portion of Cannon, with two accidental AFFF releases. The first release occurred in December

1999 when an office fire activated the AFFF fire suppression system, releasing approximately 500 gallons of AFFF in the hangar bay that reportedly entered the floor trench and was routed to the WWTP. No AFFF was reportedly released outside the hangar in 1999. A second release of approximately twenty-five gallons of AFFF solution occurred in 2016. Installation personnel reported that AFFF was released outside the hangar and was allowed to evaporate west and southwest of the hangar.

j. **Active FTA**—Active FTA located in the southeast portion of Cannon, immediately northwest of FT-07, FT-08, and FTA-4. The FTA became operational in 1997 and consists of a circular lined burn pit with a mockup of a large aircraft, a propane fuel tank, a control panel, and a lined evaporation pond. Fire training exercises are conducted at the active FTA approximately monthly using water or AFFF. The fire department also conducts annual vehicle foam checks at the FTA. Liquids discharged into the lined burn pit, including water and AFFF, drain to the lined evaporation pond located approximately 300 feet southwest of the pit and are left to evaporate. The liner of the evaporation pit has required repairs in the past, and breaches in the liner have allowed AFFF to infiltrate the soils beneath the liner. Additionally storms in May 2015 resulted in significant flash flooding across Cannon, which likely resulted in any residual AFFF located in the evaporation basin to overflow and be released in the surrounding environment.

k. **Landfill #4**—Closed landfill covering approximately 7 acres in the east central portion of Cannon that was only operational for one year between 1967 and 1968. The landfill received domestic and industrial wastes including solvents, paints, thinners, and waste oils. Disposal activities consisted of placing waste material into a trench, burning the accumulated waste, and then covering the burned material with soil. Due to the period of operation, AFFF would not have been included in landfilled refuse; however, the landfill cover was revegetated and used water from North Playa Lake, located immediately south of Landfill #4, which receives treated effluents from the WWTP.

l. **Perimeter Road Fuel Spill**—A fuel tanker truck overturned while traveling along Perimeter Road in the southeast corner of the base. All fuel from the tanker was released on the southeast side of the road. The fire department responded with crash trucks and reportedly sprayed AFFF on the fuel spill. The response was conducted over several days with multiple fire trucks discharging the entire supply of AFFF on the release. Contaminated soils were excavated, but the excavation depth is unknown.

m. **Flightline Crash Areas**—Three aircraft crashes have occurred along the flightline where the fire department responded with the use of AFFF. Two incidents involving F-16 aircraft were identified at the southern end of the flightline, and a third incident involving an F-111 aircraft occurred at the north end of the flightline. No information regarding the amount of AFFF released is known at this time.

n. **Whispering Winds Golf Course Outfall**—The base golf course began receiving a portion of treated effluent from the WWTP to fill ponds and irrigate the greens in approximately 2002. The golf course is irrigated five nights per week for approximately four hours using

a sprinkler system. Any wastewater collected at the WWTP containing AFFF therefore could be released at the golf course.

o. **Hangar 204**—Hangar 204 was identified as an area for additional investigation due to the release of AFFF outside the structure; however, it was determined during a scoping visit that based on surface topography surrounding the hangar, any AFFF released from hangar doors would drain directly to storm drains in the apron or would evaporate on the concrete apron. Any AFFF that entered the storm drain would have been routed to South Playa Lake. Infiltration of AFFF into soils in the vicinity of Hangar 204 was thus thought to be unlikely and, therefore, it was removed from further investigation.

75. In August 2018, Cannon submitted a "Final Site Investigation Report, Investigation of Aqueous Film Forming Foam Cannon Air Force Base, New Mexico" to NMED ("Cannon SI Report"). As stated in the Cannon SI Report, exceedances of the EPA's HA of 70 ppt for groundwater were detected in six of the eighteen environmental restoration program monitoring wells at the base.

76. Fourteen AFFF release areas at Cannon were analyzed for PFAS contamination in the soil and groundwater. PFOS and PFOA concentrations in soil and sediment were compared against the regional screening level ("RSL") of 0.126 mg/kg.5 Groundwater concentrations for PFOA and PFOS, or PFOA and PFOS combined, were compared against the EPA's 2016 HA of 70 ppt.

77. At Former FTA No. 3, PFOS was detected above the RSL in the surface sample at 0.24 mg/kg, nearly twice the RSL.

78. At Former FTA No. 4, PFOS was detected above the RSL in the surface soil samples at each of the three locations with the highest detected concentration being 0.61 mg/kg, nearly five times the RSL.

[5] RSLs are risk-based concentrations derived from standardize equations combining exposure information assumptions with EPA toxicity data. RSLs are considered protective for humans over a lifetime, but do not address non-human health endpoints, such as ecological impacts.

79. At Hangars 119 and 113, PFOS was detected above the RSL at each location with the highest detected concentration being 0.42 mg/kg, more than three times the RSL.

80. At the Former Sewage Lagoons, PFOS was detected above the RSL at two subsurface sample sites with the highest detected concentration being 0.29 mg/kg, more than twice the RSL.

81. At the North Playa Lake Outfall, PFOS and PFOA combined were detected above the 2016 HA values at both surface water sample sites, with the highest detected combined value being 0.123 µg/L, nearly two times the 2016 HA and over 30 times the 2024 MCL.

82. At Hangar 109, PFOS was detected above the RSL at a maximum concentration of 0.23 mg/kg, nearly twice the RSL.

83. At the Active FTA, PFOS was detected above the RSL at a surface soil location at a concentration of 1.1 mg/kg, more than eight times the RSL, the highest of all soil samples on the base.

84. Two locations, Landfill #4 and Flightline Aircraft Crashes, were presented in the Basewide Groundwater Sampling. PFOS was detected above the HA at five sample sites with a maximum detected concentration of 24 µg/L, 342 times the 2016 HA and 6,000 times the 2024 MCL. PFOA was detected above the 2016 HA at four sample sites with a maximum detected concentration of 3.1 µg/L, forty-four times the 2016 HA and 775 times the 2024 MCL. PFOS and PFOA combined exceeded the 2016 HA at six sample sites with the maximum concentration of 26.2 µg/L, 374 times the 2016 HA and 6,550 times the 2024 MCL.

85. Notably, because these compounds are persistent and bioaccumulative, any detectable amount that can be ingested, regardless of whether or not it exceeds the HA or RSLs, will add to the lifetime concentration of PFAS in any given individual and in the food chain.

86. In October 2017, NMED released for public comment a draft renewal of the 2003 permit NMED had issued to the United States, the owner and operator of Cannon, pursuant to its authority under the HWA, in accordance with the New Mexico Hazardous Waste Management Regulations, 20.4 NMAC.

87. NMED learned in late 2018 that following a preliminary assessment in 2015 and a scoping visit in in 2016, the Air Force collected samples at four of its public supply wells in 2016, at fourteen potential PFAS release sites in 2017, and at off-base private water supply wells in 2018. The Air Force test results documented high concentrations of PFAS compounds in both on- and off-base groundwater.

88. PFAS have contaminated the Ogallala Aquifer under Cannon, although the nature and extent of the plume is not yet fully known.

89. PFAS are migrating along the known hydraulic gradient within the Aquifer, and are moving generally in a southeast direction.

90. Sampling has detected PFAS in some off-base wells, which provide drinking water and livestock and irrigation water to local dairies, including the Highland Dairy, half of a mile south and slightly east of Cannon. Amec Foster Wheeler, *Final Site Inspection Report Addendum 01, Cannon Air Force Base, NM* (March 2019).

91. While the Air Force's efforts to delineate the groundwater PFAS plume are ongoing, it has partially mapped the plume to extend approximately four miles southeast of Cannon. Air Force Civil Engineer Center, *Cannon AFB PFAS Public Update* (May 17, 2023), at slide 5, *available at* https://www.cannon.af.mil/Portals/85/17May2023%20CAFB%20PFAS%20Public%20Update.pdf.

92. Highland Dairy, a major agricultural business in Clovis, shut down in 2019 due to PFAS contamination in its cattle, milk, and land. The dairy is located about a mile southeast of Cannon.

93. Air Force sampling showed a maximum of 539 ppt for PFOA in the Highland Dairy well (7.7 times the EPA 2016 HA and 135 times the 2024 MCL), and Highland Dairy's own sampling showed 2,920 ppt PFOA (nearly 42 times the 2016 HA and 730 times the 2024 MCL), with a total PFOS/PFOA of 14,320 ppt in an irrigation well (more than 204 times the 2016 HA). *Id.*

94. Highland Dairy owner Art Schaap has reported to the press that his and his wife's exposure to PFAS is anticipated to lead to acute health problems.

95. Three additional dairies operate downgradient of the suspected plume and only slightly farther away.

96. The agricultural area downgradient of the suspected plume supports numerous farms and additional businesses dependent upon the local water supply, including Southwest Cheese and Westway Feed Products.

97. Numerous private wells also operate in the agricultural areas downgradient of the suspected plume at Cannon.

98. The Air Force itself has determined that the "presence [of PFOS and PFOA at Cannon] in drinking water at levels above the EPA [2016 HAs] poses an imminent and substantial danger to public health or welfare," and notified NMED of this determination via letter on January 10, 2019.

99. Currently, the Air Force's efforts to investigate and remediate PFAS at Cannon are in the "Remedial Investigation" phase.

100. The Air Force has also constructed a facility to remove PFAS from the groundwater at Cannon, what is known colloquially as a "pump-and-treat" facility. *E.g.* Air Force Civil Engineer Center, *Cannon AFB PFAS Public Update* (May 17, 2023), at slide 7, *available at* https://www.cannon.af.mil/Portals/85/17May2023%20CAFB%20PFAS%20Public%20Update.pdf.

101. While the Air Force describes its pump-and-treat project at Cannon as an "Engineering Evaluation/Cost Analysis – Pilot Study," *id.*, it is designed to treat over a thousand gallons of groundwater per minute, and the Air Force has already planned and begun construction of a second (even larger) pump-and-treat facility at another area of the base. In public meetings, the Air Force has also told the community that the project's treatment of groundwater will remediate the groundwater plume affecting off-site properties, such as the neighboring dairy farms. Thus, rather than a "pilot project," the Air Force's pump-and-treat facility constitutes a de facto (but inadequate) remedy under CERCLA, *see* 42 U.S.C. § 9601(24) (defining "remedial action" as "those actions consistent with permanent remedy" including "onsite treatment").

102. The Air Force has refused to accept the oversight of the State (authority the State has under RCRA and the HWA) during its investigation and remediation of PFAS at and around Cannon. *See id.* at § 9621(f) (guaranteeing "substantial and meaningful involvement by each State in initiation, development, and selection of remedial actions to be undertaken in that State"); *see also id.* at § 9614(a) ("Nothing in this chapter shall be construed or interpreted as preempting any State from imposing any additional liability or requirements with respect to the release of hazardous substances within such State.").

103. On September 26, 2018, NMED sent a letter confirming that a teleconference with the Air Force on August 13, 2018, in which the State noted that the detection of PFAS compounds

in groundwater exceeding the HA counted as "a notifiable discharge even if the specific date, sources and volumes of the discharge are not yet known." The Air Force provided a formal notice of the discharge event to NMED on August 14, 2018.

104. NMED advised that the Cannon SI Report submitted on August 27, 2018, would count as an Interim Corrective Action report subject to several conditions as well as additional corrective actions.

105. The Air Force responded to NMED's September 26 letter on October 26, 2018, and declined to make the revisions requested by NMED.

106. In December 2018, NMED issued the final renewal of Cannon's 2003 HWA Permit, RCRA Permit EPA #NM752124454 (Dec. 2018) (the "Cannon RCRA Permit").

107. Pursuant to RCRA, the State, through the NMED, is authorized to administer and enforce the state hazardous waste management program under the HWA in lieu of the federal program. 40 C.F.R. § 272.1601(a); 40 C.F.R. §272.1601(b).

108. Cannon is a large quantity generator of hazardous waste.

109. The Cannon RCRA Permit contains terms and conditions that the NMED has determined are necessary to protect human health and the environment in accordance with 20.4.1.900 NMAC, incorporating 40 C.F.R. § 270.32 (b)(2). This includes a requirement to perform Corrective Action (*i.e.* investigation and cleanup) for PFAS contamination at the base under the oversight of NMED. *See* ¶ 51; Cannon RCRA Permit at Part 3.

110. Despite the requirements of the Cannon RCRA Permit, the Air Force has failed to perform its investigation and cleanup efforts at Cannon under New Mexico's oversight.[6]

[6] Despite failing to dispute the Cannon RCRA Permit with NMED at the time of its issuance, the United States has appealed the permit in federal court. In August 2022, the District Court for the District of New Mexico dismissed the appeal for lack of subject matter jurisdiction, finding that the United States was required to appeal the permit in state court pursuant to the New Mexico

111. New Mexico has incurred significant costs to investigate and respond to the PFAS contamination at Cannon, including but not limited to:

a. At least $123,000 overseeing the Air Force's efforts. This costs is made up primarily of employee time in reviewing and responding to documents produced by the Air Force during its ongoing investigation and remediation of PFAS at Cannon. The State will have additional such costs in the future.

b. At least $800,000 investigating the PFAS contamination at Cannon. This includes expenditures for sampling at and around the base (and related overhead) as well as expenditures for a study performed by an environmental consultancy (Daniel B. Stephens & Associates, Inc.). The State will have additional such costs in the future.

c. At least $850,000 to remove contaminated livestock from a dairy farm neighboring Cannon (Highland Dairy, discussed *supra*). The State will likely have additional such costs in the future.

d. Though not yet spent, New Mexico is also planning to conduct a medical monitoring program for residents at and around Cannon, to monitor their exposure to PFAS and any resulting illnesses in an attempt to better assess the extent of the PFAS contamination at Cannon and its effect on the public. The State expects to expend at least $870,000 on this effort.

112. New Mexico has also suffered natural resource damages at Cannon. Through exposure to PFAS (including but not limited to PFOA and PFOS), the site's soil, sediment, surface waters, and groundwater have been contaminated. Contamination of the site's groundwater (one of the more severely impacted environmental mediums, as described above) has further migrated at least four miles (southeast) off-site. The concentration of PFAS (including but not limited to PFOA and PFOS) at the site are at concentrations sufficient to have adverse health effects, not only on residents who drink the water but also on ecological receptors at the site. For example, birds may be exposed by drinking from one of the surface water bodies or ingesting contaminated

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Hazardous Waste Management Act. *United States v. NMED,* No. 19-CV-46 KG/SMV, 2022 WL 3543143 (D.N.M. Aug. 18, 2022). While the United States has appealed that decision to the 10th Circuit Court of Appeals, it has correctly acknowledged that "the permit remains in effect during that suit." Opp'n to Mtn. for Prelim. Inj. and Cross Mtn. to Dismiss, *New Mexico v. U.S.*, No. 2:20-cv-2115-RMG (filed Sept. 7, 2019) at 9 n.3.

invertebrates. Terrestrial vegetation may be exposed to PFAS in soil and soil pore water through root uptake. Consumption of exposed plants, invertebrates, and other lower-trophic level organisms by higher predators can indirectly expose these predators to PFAS. Use of contaminated groundwater by nearby dairy and farming operations to irrigate agricultural lands and water livestock has resulted in further distribution of PFAS. This has likely also exposed natural resources, including wildlife. These injuries have likely resulted in a reduction in natural resource services, including ecological services and human use services, such as water use.

113. New Mexico has also incurred significant costs to assess said natural resource damages at Cannon, an ongoing effort. These costs include, but are not limited to, $52,267 paid to contractors for such assessments, and additional amounts for ongoing NMONRT employee time. These assessment costs include amounts spent on conducting a Preliminary Assessment Screen, which has been completed. The NMONRT will have similar future costs as well,[7] which are currently estimated to be at least $750,000 in contractor costs and $125,000 in employee time.

Holloman Air Force Base

114. Holloman is located in Otero County near the city of Alamogordo within the Tularosa Basin. The base covers approximately 59,800 acres and hosts a population of roughly 21,000.

115. Alamogordo, New Mexico is a city with a population of approximately 31,000 people who rely partially upon groundwater in the Tularosa Basin for potable water.

[7] Future costs for natural resource damage assessment will include costs for: (1) conducting a preliminary estimate of damages; (2) development of an assessment plan; (3) conducting of a data sufficiency analysis, (4) conducting an injury assessment (which includes identifying and analyzing available data, primary data collection as needed, and the employ of scientific assessment techniques to quantify the injury to natural resources and services lost); and (5) conducting a damage assessment (which includes identification of resource restoration or replacement opportunities, economic analysis, and the calculation of damages).

116. Holloman, formerly known as Alamogordo Army Air Field, was initiated as a wartime temporary facility in 1942. In March 1947, after a brief inactivation at the end of World War II, the installation was transferred to the Air Material Command with the mission of providing facilities and testing of pilotless aircraft, guided missiles, and allied equipment in support of the Air Material Command Research and Development Program. The base was renamed Holloman Air Force Base in 1948.

117. Holloman is currently home of the 49th Wing of the Air Combat Command, 96th Test Group, 54th Fighter Group, and the German Air Force Flying Training Center. Operations at Holloman include missile testing, aircraft and pilot training, operational equipment and systems testing, and aircraft maintenance and storage.

118. In 2015, the "*Final Preliminary Assessment Report for Perfluorinated Compounds at Holloman Air Force Base, Alamogordo, New Mexico*" identified thirty-one potential PFAS release areas at Holloman. The Preliminary Assessment was provided to NMED as part of the EPA's Health Advisory proceedings.

119. In November 2018, Defendants released the "*Final Site Inspection of Aqueous Film Forming Foam (AFFF) Release Areas Environmental Programs Worldwide*" for Holloman. ("Holloman SI Report").

120. The Holloman SI Report detailed five AFFF release areas, *see* Holloman SI Report at 13-25, but did not rule out the possibility that releases had occurred elsewhere at the Base:

a. **Former FTA**—Fire training activities were conducted generally at the Former FTA since 1942, although the exact dates of fire training in this area is unknown. Fire training was conducted in two unlined burn pit areas within the Former FTA. The volume of AFFF used during each training exercise is unknown. Fire training activities continued at this location until 1990 when training exercises were moved to the current FTA.

b. **Sewage Lagoon Area Outfall**—Prior to construction of a WWTP in 1996, wastewater from Holloman was discharged directly into the sewage lagoon area that was comprised of

seven unlined lagoons. Approximately 1.2 million gallons of domestic and industrial wastewater were discharged into the sewage lagoon daily.

c. **Apache Mesa Golf Course Outfall**—In 2011, the golf course began receiving a portion of the effluent from the WWTP to fill two golf course ponds and irrigate greens. Releases of AFFF from within the industrial shops and Holloman would be routed through the WWTP and eventually lead to the water holding tank at the Apache Mesa Golf Course.

d. **Lake Holloman Outfalls**—Wastewater from Holloman was discharged directly into the sewage lagoon area and eventually to Lake Holloman prior to construction of the WWTP in 1996.

e. **Evaporation Pond No. 2**—The evaporation basin was installed in 1991 and currently collects all discharges containing AFFF, routed through hangar bay floor drains from hangars located in the western ramp area of the West Hangar Group. The Holloman Fire Department uses this basin for monthly AFFF tests and firehose washouts. AFFF is reportedly sprayed from vehicles into the pond until a consistent flow pattern is established.

121. The Former FTA (FT-31), the Sewage Lagoon Area Outfall, the Apache Mesa Golf Course Outfall, the Lake Holloman Outfalls, and Evaporation Pond No. 2 release areas were analyzed for PFAS contamination in the soil, sediment, surface water, and groundwater. PFOS and PFOA concentrations in soil and sediment were compared against the RSL of 0.126 mg/kg. Groundwater concentrations for PFOA and PFOS, or PFOA and PFOS combined were compared against the EPA 2016 HA of 70 ppt.

122. Six surface soil samples, including one duplicate, and six subsurface soil samples, including one duplicate, from a total of five locations, were taken and analyzed for PFAS at the Former FTA (FT-31). The soils were analyzed for PFOA and PFOS, with each being detected at each sample site. PFOS was detected above the RSL more than half the time with the highest concentration exceeding the 0.126 mg/kg RSL at 1.13 mg/kg, nearly nine times the limit. At the three groundwater sample sites at FT-31, PFOS, PFOA, and PFOA and PFOS combined were detected well above the EPA 2016 HA of 0.07 µg/L, with the highest concentrations being 48.4

µg/L (691 times the 2016 HA and 12,100 times the 2024 MCL), 254 µg/L (3,628 times the 2016 HA and 63,500 times the 2024 MCL), and 302.4 µg/L (4,314 times the 2016 HA), respectively.

123. At the Sewage Lagoon Area Outfall, groundwater results at three locations revealed PFOS, PFOA, and PFOS and PFOA combined all exceeding EPA's 2016 HA. The surface water sample also revealed PFOS, PFOA, and combined concentrations exceeding the HA.

124. One groundwater, two sediment, two surface water, and two effluent samples were taken at the Apache Mesa Golf Course Outfall. PFOA and PFOS combined were detected above the 2016 HA in the groundwater sample with a maximum concentration of 0.1371 µg/L, nearly twice the 2016 HA. PFOS, PFOA, and PFOS and PFOA combined exceeded the 2016 HA at both of the surface water sample locations, with the highest concentration of 1.317 µg/L. Likewise, PFOS, PFOA, and the two combined exceeded the 2016 HA in both of the effluent samples with the highest concentration of 0.995 µg/L, fourteen times the 2016 HA.

125. Soil and groundwater were analyzed at Evaporation Pond No. 2. PFOS was detected above the RSL at the surface and subsurface intervals for each of the soil samples with a maximum concentration of 5.71 mg/kg, the highest of all soil samples for Holloman and forty-five times the RSL. PFOA was also detected above the RSL at the surface level for each sample. PFOS, PFOA, and PFOS and PFOA combined were detected above the 2016 HA in the groundwater sample with a maximum PFOS and PFOA combined concentration of 1066.6 µg/L, more than 15,000 times the 2016 HA and the highest of all groundwater samples at the base.

126. Sediment and surface water samples were taken at Lake Holloman Outfalls. PFOS was detected in sediment above the RSL at 0.519 mg/kg, four times the RSL. The surface water samples each had concentrations of PFOS, PFOA, and PFOS and PFOA combined that exceed the

EPA 2016 HA, with the maximum concentration of PFOS and PFOA combined at 3.188 µg/L, forty-five times the 2016 HA.

127. PFAS were detected at high levels in on-base sewage lagoons at Holloman as well as at monitoring wells on Apache Mesa Golf Course that utilizes the treated wastewater for irrigation.

128. Exceedingly high levels of PFAS were detected in Lake Holloman. Specifically, PFOA was detected at levels as high as 5900 ng/L, more than 84 times the 2016 EPA health advisory level of 70 ng/L and 1,475 times the 2024 MCL, and PFOS was detected as high as 1600 ng/L, more than 22 times the 2016 EPA health advisory level and 400 times the 2024 MCL.

129. Lake Holloman is considered an important habitat for birds, including migrating ducks, shorebirds, and a number of federally-listed endangered species and state-listed species of concern. Lake Holloman also serves as a valuable recreational resource to the community surrounding the base, as it is used for boating, bird watching, and camping.

130. The Lake Holloman Wetlands Complex is recognized as a refuge for wildlife.

131. PFAS are migrating along the known hydraulic gradient within the Aquifer, and are moving generally in a southwest direction.

132. White Sands National Monument is southwest of the suspected plum at Holloman and within the Tularosa Basin.

133. Hydrologically, the Tularosa Basin is an endoheric (closed) basin, as no water flows out of it.

134. Although much of the groundwater within the Basin is too salty for use as drinking water without treatment, pockets of the Aquifer have lower salinity content and are used for municipal, domestic, agricultural and industrial supply.

135. In Alamogordo, the Bureau of Land Management operates The Brackish Groundwater National Desalination Research Facility.

136. Despite the significant PFAS contamination present at Holloman, in 2021 the Air Force elected not to perform off-site testing at that time based on its conclusion that "groundwater in the region . . . is not drinkable." Air Force Civil Engineer Center, *Final Site Inspection Addendum, May 2021, Holloman Air Force Base, New Mexico.*

137. However, the State has found that wildlife at Lake Holloman is severely contaminated with PFAS, and has warned hunters not to consume any captured game therefrom. See C. Witt, et al., *Extraordinary levels of per- and polyfluoroalkyl substances (PFAS) in vertebrate animals at a New Mexico desert oasis: Multiple pathways for wildlife and human exposure*, Environmental Research, Volume 249 (2024).

138. Sampling at both Cannon and Holloman is ongoing in an effort to more fully characterize the extent of the groundwater contamination plumes and their migration outside of the site boundaries.

139. New Mexico has incurred significant costs to investigate and respond to the PFAS contamination at Holloman, including but not limited to:

a. At least $1,500 overseeing the Air Force's efforts. These costs are made up primarily of employee time in reviewing and responding to documents produced by the Air Force during its ongoing investigation and remediation of PFAS at Holloman.

b. At least $510,000 investigating the PFAS contamination at Holloman. This includes expenditures for a study performed by an environmental consultancy (Daniel B. Stephens & Associates, Inc.), and a study of the wildlife at Holloman Lake performed by the University of New Mexico.

140. The State will have additional such costs in the future.

141. New Mexico has also suffered natural resource damages at Holloman. Through exposure to PFAS (including but not limited to PFOA and PFOS), the site's soil, surface waters, and groundwater have been contaminated. In particular, Lake Holloman (which serves as a habitat for numerous species of wildlife) has been contaminated. Extremely elevated concentrations have been measured in avian and small mammal tissue samples collected at the facility, confirming that wildlife have been exposed through these pathways. For example, PFOS concentrations up to 2,600 µg/kg, 2,300 µg/kg, 2,100 µg/kg, and 1,900 µg/kg were found in the muscle tissue of the green-winged teal, ruddy duck, northern shoveler, and redhead duck, respectively. In the small mammals, PFOS concentrations up to 6,600 ng/ml were measured in the blood, and concentrations up to 43,000 µg/kg were found in the liver. The site's groundwater is also severely contaminated, with concentrations as high as 1,040,000 ng/L PFOS and up to 254,000 ng/L PFOA. Likewise, terrestrial vegetation may be exposed to PFAS in soil and soil pore water through root uptake. Consumption of exposed plants, invertebrates, and other lower-trophic level organisms by higher predators could then indirectly expose these predators to PFAS. A reduction in ecological and human services may then flow from the injured resources. Human service losses have likely occurred at the facility as a result of PFAS exposure and injuries, including recreational and other human use losses, as well as ecological service losses.

142. New Mexico has also incurred significant costs to assess said natural resource damages at Holloman, an ongoing effort. These costs include, but are not limited to, $24,655 paid to contractors for such assessments, and additional amounts for ongoing NMONRT employee time. These assessment costs include amounts spent on conducting a Preliminary Assessment

Screen, which has been completed. The NMONRT will have similar future costs as well,[8] which are currently estimated to be at least $1,000,000.

Kirtland Air Force Base

143. Kirtland is located in central New Mexico just south of the city of Albuquerque and it encompasses approximately 51,558 acres of developed and undeveloped land on the eastern edge of the Rio Grande River in the high desert of New Mexico. _____

144. Kirtland lies within the Middle Rio Grande Basin (Albuquerque Basin) of the Rio Grande Rift. Water supply for Kirtland is primarily derived from onsite groundwater production wells in the northern portion of the base. Additionally, water may be purchased from the Albuquerque Bernalillo County Water Utility Authority municipal supply wells located north and downgradient of Kirtland.

145. The nearby city of Albuquerque, New Mexico has a population of approximately 580,000 that relies on groundwater production wells as well as Rio Grande surface water.

146. Kirtland facilities are primarily located in the northern portion of the base and include vehicle maintenance support facilities, administrative offices, family housing, an aircraft runway, fuel storage facilities, among other Air Force facilities. Known releases of AFFF largely occurred in the northwest portion of the base in locations surrounding the aircraft runway.

147. Adjacent land to Kirtland includes mixed-use land and residential areas to the north and northeast; and undeveloped land to the south.

[8] Future costs for natural resource damage assessment will include costs for: (1) conducting a preliminary estimate of damages; (2) development of an assessment plan; (3) conducting of a data sufficiency analysis; (4) conducting an injury assessment (which includes identifying and analyzing available data, primary data collection as needed, and the employ of scientific assessment techniques to quantify the injury to natural resources and services lost); and (5) conducting a damage assessment (which includes identification of resource restoration or replacement opportunities, economic analysis, and the calculation of damages).

148. Construction of what was then known as Albuquerque Army Air Base began in 1941. During World War II the base hosted the training of B-17 and B-24 crews, and in 1945 the training of crews for the B-29. In 1946 Kirtland was placed under Air Material Command for testing weaponry delivery systems developed by the Manhattan Engineering District. In December 1949 Kirtland became the headquarters for Air Force Special Weapons Center. In 1971 the Manzano and Sandia Air Force Bases were merged into Kirtland. Kirtland is operated by the 377th Air Base Wing whose mission is to execute nuclear, readiness, and support operations for American air power.

149. Defendants have used AFFF at Kirtland for over fifty years in fire training and testing activities. During routine training and testing exercises, AFFF and water would regularly be sprayed directly on the ground and/or tarmac, allowing PFOA and PFOS to travel to the surrounding surface water, groundwater, causing contamination on and offsite. PFAS remains at elevated concentrations in groundwater and surface water both on and off the base.

150. In addition to routine training and testing for personnel, a substantial 1995 spill of approximately 100 to 125 gallons of 3 percent AFFF occurred south of the taxiway while siphoning the AFFF from a Fire Department P-19 crash truck. The spill was not immediately detected and resulted in the spill spreading across more than 4,000 linear feet of runway.

151. In September 2017, Defendants completed a final Site Inspection for less than a handful of suspected AFFF release areas at Kirtland. The objective of this SI was to identify locations where PFAS may have been used and released into the environment and to provide an initial assessment of possible migration pathways and receptors of potential contamination. As identified in the SI, four release areas at Kirtland, defined as "specific locations that received AFFF due to fire suppression, equipment testing, equipment leaks, spillage or any other release of AFFF

into the environment" were identified as "potential AFFF contamination areas" to be evaluated. These areas known to have confirmed releases of AFFF include the following:

a. **AFFF Area 1: Air Force Fire Training ("FT") FT-013 –** FT-013 is an open area south of the runway in the northwest portion of Kirtland, located to the southwest of Air Force Fire Station No. 5 and due west of the active current fire training area. FT-013 was formerly used for fire training activities utilizing AFFF from the 1950s to 1990. It originally consisted of two unlined pits used until 1976, which were capped with 18 inches of asphalt in 1992. From 1976 to 1990 training was done on a mock place on a concrete pad using AFFF as the extinguishing agent.FT-013 was closed under RCRA in 2003 but was not previously investigated for PFAS.

b. **AFFF Area 3: AFFF Spray Area ("AFA")** – AFA is a flat area of bare ground located between the Echo Taxiway and Hangar 1000 on the north side of the main runway. The ground is a slight depression of bare ground surrounded by aircraft pavement on all sides with no storm drains where surface water accumulates following application of several hundreds of gallons of AFFF and water, which evaporates and infiltrates. Since 1992 AFA was used for training and testing of 3% AFFF carried on crash trucks at a frequency of 8 to 10 times per year.

c. **AFFF Area 4: South Taxiway Spill Area ("STSA")** – STSA is the location of a 1995 AFFF spill from a Fire Department P-19 crash truck. The spill was not immediately detected and resulted in a spill of 3% AFFF from a holding tank on the crashed vehicle spreading more than 4,000 linear feet of runway. The spill response team covered the liquid in sand to absorb them, brushed up and containerized the spilled material for offsite disposal. Approximately 100 to 125 gallons of 3% AFFF were spilled.

152. In February 2017, a total of 36 soil samples and 4 groundwater samples were analyzed from the four known areas where AFFF was likely used, stored or disposed of at Kirtland. While none of the samples were found to exceed the then existing "project action levels" ("PALs"), PFAS were detected at each of the four areas identified at Kirtland. Notably, because these compounds are persistent and bioaccumulative, any detectable amount that can be ingested, regardless of whether it exceeds PALs, HAs, or RSLs, will add to the lifetime concentration of PFAS in any given individual and in the food chain.

153. Given the limited investigation, the exposure pathways for PFAS contamination at and around Kirtland remain incomplete. Upon information and belief, it is likely that PFAS have

contaminated areas of the Albuquerque Basin under Kirtland, although the nature and extent of the plume is not yet fully known.

154. The State has expended costs overseeing the Air Force's cursory efforts at Kirtland. These costs include employee time in reviewing and responding to documents produced by the Air Force and its contractors during its ongoing investigation of PFAS at Kirtland. And the State will incur such additional costs in the future.

155. Though not yet spent, New Mexico is planning additional investigation to fully assess and evaluate the quality and nature of the PFAS contamination throughout White Sands and off-installation areas.

156. New Mexico has also suffered natural resource damages at Kirtland. Through exposure to PFAS (including but not limited to PFOA and PFOS), the site's soil, surface waters, and groundwater have been contaminated. Biological resources at the site have also been affected. Human service losses have likely occurred at the facility as a result of PFAS exposure and injuries, including recreational and other human use losses, as well as ecological service losses.

157. New Mexico has also incurred significant costs to assess said natural resource damages at Kirtland, an ongoing effort. These costs include, but are not limited to, amounts for ongoing NMONRT employee time. The NMONRT will have similar future costs as well,[9] including payments for contracted work, which are currently estimated to be at least $750,000.

White Sands Missile Range

[9] Future costs for natural resource damage assessment will include costs for: (1) conducting a preliminary estimate of damages; (2) development of an assessment plan; (3) conducting of a data sufficiency analysis; (4) conducting an injury assessment (which includes identifying and analyzing available data, primary data collection as needed, and the employ of scientific assessment techniques to quantify the injury to natural resources and services lost); and (5) conducting a damage assessment (which includes identification of resource restoration or replacement opportunities, economic analysis, and the calculation of damages).

158. White Sands is the largest military installation in the country. It spans five New Mexico counties including Dona Ana, Socorro, Lincoln, Oterto and Sierra, and is comprised of 2,048,000 acres. White Sands' headquarters area is located approximately 20 miles east of Las Cruces, New Mexico, with a population of approximately 113,000. To the east of the installation is Holloman and to the south is Fort Bliss Military Reservation. The Dona Ana Range borders the installation to the south.

159. The installation's mission is to provide the Army, Navy, Air Force, Department of Defense, and other customers with high quality services for experimentation, testing, research, assessment, development, and training. Originally established as White Sands Proving Ground in 1945, the missile range was initially established to develop a missile defense program, testing captured German V-2 rockets. The area was formed from privately held grazing land or land condemned for government use. Subsequently in 1961, the Green River Test Site was acquired by the government to provide support for missile testing and is identified as a primary sub-installation of White Sands 400 miles away.

160. White Sands is currently an active installation and serves as the Army's largest rocket and missile development, firing, and testing facility. It is comprised of instrumentation sites, impact areas, support facilities, and launch sites. The northern portion of the facility is not densely developed but has a few regularly inhabited facilities, such as the Stallion Range Center ("SRC"). The southern portion of the range is much more densely populated and developed, with facilities that include Launch Complexes, a High Energy Laser Systems Test Facility ("HELSTF"), and others.

161. Also in the southern portion of White Sands is the NASA White Sands Test Facility ("WSTF"). While the Army owns the land used at WSTF, NASA and the Army have a co-use

agreement for the site, which includes a Fire Training Area. WSTF is currently being investigated for PFAS by NASA, and while the results of the Site Investigation have not yet been made public, it has detected PFAS. *See NASA WSTF Groundwater Monitoring Plan Update for 2022* (April 29, 2022), at 42 (selection criteria for new monitoring wells based on "proximity to the potential [PFAS] source areas . . . and the concentration of PFAS detections"), *available at* https://www.nasa.gov/wp-content/uploads/2023/10/2022-04-29-re-22-053-nmed-gmp-2022update.pdf.

162. The Tularosa Basin makes up the southern and eastern portions of the installation. White Sands is bounded on the west by the Organ and San Andreas Mountains, which are separated by the St. Augustine Pass (U.S. Highway 70). The Main Post and the HELSTF both lie within the Tularosa Basin, while the SRC lies outside the basin in the far northern areas of White Sands.

163. White Sands lies primarily within three watersheds: Jornada del Muerto, Tularosa Valley, and Jornada Draw. These are closed basins, with no outlet for surface water flow. Ephemeral arroyos and washes drain from the mountain range eastward toward the Tularosa Valley watershed and westward into the Jornada del Muerto watershed. The majority of White Sands drains into the Tularosa Valley watershed. A third of this watershed's acreage lies within the boundaries of the installation. It receives recharge from the mountain front with loss to evaporation occurring in the lowest portion of the basin at Lake Lucero. Generally, groundwater flows away from the mountain ranges. Water quality and availability depletes as distance from these mountain ranges grows.

164. Groundwater flows generally to the southeast in the Main Post area. At HELSTF, perched groundwater also flows to the southeast. The SRC in the northern portion of the White Sands lies atop the Rio Grande Region aquifer of systems and groundwater flows to the south-

southeast. Groundwater flow throughout White Sands is influenced by the pumping from local water supply wells.

165. The source of potable water for White Sands is from groundwater in alluvial aprons. Each area of the installation has its own distribution system. There are 18 raw water supply wells throughout the installation which provide drinking water. Of these wells, 11 can be found within the Main Post area, where water is withdrawn from the Tularosa Valley basin. Four other wells can be found 6 to 10 miles southeast of the Main Post in the Soledad Canyon area. These wells withdraw water from the Tularosa Basin which is conveyed to the Main Post wastewater treatment plant. In the northwest portion of White Sands, two wells at the SRC withdraw brackish water from the Quartnernay/Tertiary alluvial and upper bolson-fill deposits within the Jordana del Muerto Basin. These wells supply water to a reverse osmosis plant.

166. White Sands is in the Bolson sub-section, Mexican Highlands section of the Basin and Range physiographic province. Higher elevations support limited ponderosa pine forest and woodlands. Valleys and slopes of mid-elevations support Plains-Mesa Foothill grasslands, Chihuahuan Desert shrublands, and Chihuahuan Desert grasslands. Grasslands make up the most abundant vegetative communities. Vegetation classification of White Sands resulted in 71 major plant associations. Twenty-two of these are considered imperiled and 41 are vulnerable. The two most abundant communities are Lowland Basin Grassland and Mixed Foothill-Piedmont Desert Grassland. On White Sands, 73 mammal species occur, as well as 291 bird species, seven amphibian species, and 47 reptile species.

167. The 2023 Final Preliminary Assessment and Site Inspection for White Sands identified multiple locations as areas of potential interest for PFAS contamination based on the use, storage and/or disposal of PFAS-containing materials. PFAS (PFOS, PFOA and/or PFBS)

were detected in the groundwater or in the soils at greater than OSD Risk Screening Levels[10] at the following locations at White Sands and identified for further study in remedial investigation:

a. **Fire Station 4 High Energy Laser System Test Facility (FS4) (Building 26020)** – PFOS and PFOA were detected in both the groundwater and soil samples taken at Fire Station 4 and PFBS was detected in exceedance of residential risk levels for tap water in this area. It is estimated that this building stored AFFF since 1987 including pallets of AFFF foam concentrate in buckets as well as in a 50-gallon tank in a vehicle. From 1987 to present, nozzle testing and maintenance of vehicles containing AFFF were likely performed at this location.

b. **Former Firefighting Training Area ("FTA") Pit (SWMU-21)** - this FTA Pit was used until 1982 to stimulate fire emergencies for training purposes utilizing AFFF and is located to the southern fringe of the Main Post. PFOA was detected in all samples in this area and PFOS concentrations were detected in some areas over twice the residential risk screening levels. Groundwater was not sampled in this area.

c. **Former FTA Waste Pile (SWMU-22) –** oil contaminated soils excavated from the FTA Pit where AFFF was likely used to conduct fire training exercises and extinguish fuel fires were placed in this stockpile area. PFOS concentration in the soil in this area were detected at 0.21 ppm in exceedance of the residential risk screening level of 0.13 ppm.

d. **Former FTA at Martin Luther King Ave and Hughes St (FFTAMLK) –** is estimated to have been constructed between 1998 and 2003 based on satellite imagery. No documentation was available to review for this area but during the PA visit, fire training equipment and a full 5-gallon container of AFFF, which was cracked and weathering, was identified and later removed to be disposed of with other AFFF material. PFOS concentrations in the soil in this area were found to be as high as 2.1 ppm, exceeding both the residential and industrial / commercial risk screening level.

e. **Former Fire Department Storage Building (Building 1713) –** This Building is located in the southern portion of the Main Post and it is believed that drums of Class A and B AFFF were stored in this building until at least 2008. This Building also stored apparatuses and vehicles that have the

[10] Notably, the 2023 Preliminary Assessment and Site Inspection for White Sands identifies the residential risk screening level in tap water for PFOS and PFOA as 40 ppt and 600 ppt for PFBS. These values are lower than the aforementioned 2016 EPA HA limits of 70 ppt for PFOS and PFOA, demonstrating Defendants' awareness and anticipation of lower threshold risk levels. The Preliminary Assessment and Site Inspection for White Sands further identified the residential and industrial risk screening level in soil for PFOS and PFOA as 0.13 ppm and 1.6 ppm, and 1.9 ppm and 25 ppm for PFBS respectively.

potential to contain AFFF, including a Striker and other aircraft rescue and firefighting vehicles. PFOS concentrations were detected in this area at over ten times the residential risk screening level (1.6 ppm).

f. **Fire Station 2 Launch Complex (FS2) (Building 23480) –** The Complex has been in commission since 1967 and it housed a 1,500-gallon water and foam tanker capable of spraying AFFF. Firefighters may have conducted vehicle washing and maintenance of nozzle testing here, resulting in releases of PFAS-containing AFFF. PFOA was present in all soil samples in this area and PFOS concentrations were detected in exceedance of residential risk screening levels (0.15 ppm and 0.2 ppm).

g. **SRC FTA (SWMU-162)-** firefighting activities including setting small fires with flammable liquids to practice extinguishing with AFFF was done at this area until at least the 1980s. In 2011, approximately 60 cubic yards of soil with exceedances of arsenic and diesel-range organics were removed from this area and disposed offsite as non-hazardous waste. PFOS concentrations in the soil within this area were detected at levels over sixteen times greater than and PFOA concentrations over twice the residential risk screening levels. According to the PA/SI, this "possibly impacted soil may have contributed to PFAS constituents migrating through desorption or dissolution to groundwater in the area around the SRC Landfill, which is still active."

168. Notably, because these compounds are persistent and bioaccumulative, any detectable amount that can be ingested, regardless of whether it exceeds PALs, HAs, or RSLs, will add to the lifetime concentration of PFAS in any given individual and in the food chain.

169. Given the limited investigation of the White Sands Preliminary Assessment and Site Inspection, the exposure pathways for further PFAS contamination of drinking water both at White Sands and off-installation remain incomplete. Despite the significance of PFAS contamination in the soils and groundwater at White Sands and the acknowledged groundwater flow off-post, Defendants elected not to perform off-site groundwater testing "[d]ue to the absence of land use controls preventing potable use of groundwater" and given it was deemed "unlikely to be used as a source of drinking water in the future." Upon information and belief, it is likely that PFAS have contaminated areas of the Rio Grande region aquifers under White Sands and off-

installation, although the nature and extent of the plume is not yet fully known. Similarly, it is likely that PFAS have contaminated surface water areas throughout White Sands that a wide variety of species vitally rely on and will continue to bioaccumulate in the food chain.

170. The State has expended costs overseeing Defendants' preliminary assessment and cursory efforts at evaluating PFAS contamination at and around White Sands. These costs include employee time in reviewing and responding to documents produced by defendants and their respective contractors during the ongoing investigation of PFAS at White Sands. And the State will undoubtedly incur additional such costs in the future.

171. Though not yet spent, New Mexico is planning additional investigation to fully assess and evaluate the quality and nature of the PFAS contamination throughout White Sands and off-installation areas.

172. New Mexico has also suffered natural resource damages at White Sands. Through exposure to PFAS (including but not limited to PFOA and PFOS), the site's soil, surface waters, and groundwater have been contaminated. Biological resources at the site have also been affected. For example, terrestrial vegetation may be exposed to PFAS in soil and soil pore water through root uptake. Consumption of exposed plants, invertebrates, and other lower-trophic level organisms by higher predators could then indirectly expose these predators to PFAS. A reduction in ecological and human services may then flow from the injured resources.

173. Human service losses have likely occurred at the facility as a result of PFAS exposure and injuries, including recreational and other human use losses, as well as ecological service losses.

174. New Mexico has also incurred significant costs to assess said natural resource damages at White Sands, an ongoing effort. These costs include, but are not limited to, $16,485

paid to contractors for such assessments, and additional amounts for ongoing NMONRT employee time. These assessment costs include amounts spent on conducting a Preliminary Assessment Screen, which has been completed. The NMONRT will have similar future costs as well,[11] which are currently estimated to be at least $750,000.

Fort Wingate

175. Fort Wingate is located in western New Mexico, approximately eight miles east of the city of Gallup. Fort Wingate encompasses approximately 21,100 acres of land. It is owned and operated by the Army.

176. Fort Wingate was developed in a 1868 treaty between the United States and the Navajo Tribe. The land falls within the traditional territory of both the Navajo and Pueblo of Zuni people.

177. Fort Wingate is located above the San Andreas-Glorieta aquifer, which is the primary groundwater source for Fort Wingate. The aquifer also serves as a water source for the surrounding region, and there are several public and private wells within five miles of Fort Wingate's boundary.

178. Fort Wingate was used as a storage area for excess munitions and high explosives until 1928, when it was activated as an active military post. After World War II, the installation was reconstructed and renamed "FWDA Ordnance Depot," with its primary mission being munitions storage. The majority of facilities at Fort Wingate were constructed after 1941.

[11] Future costs for natural resource damage assessment will include costs for: (1) conducting a preliminary estimate of damages; (2) development of an assessment plan; (3) conducting of a data sufficiency analysis; (4) conducting an injury assessment (which includes identifying and analyzing available data, primary data collection as needed, and the employ of scientific assessment techniques to quantify the injury to natural resources and services lost); and (5) conducting a damage assessment (which includes identification of resource restoration or replacement opportunities, economic analysis, and the calculation of damages).

179. In the 1950s and 1960s, Fort Wingate hosted ballistic missile testing, including of the Redstone and Pershing 1 rockets. In 1971, the installation was placed on reserve status and was redesignated to its current formal name, "Fort Wingate Depot Activity."

180. In 1988, the Defense Base Realignment and Closure Commission directed the closure of Fort Wingate. The installation ceased operations in 1994, with the exception of a 6,460-acre enclave that is permitted to the Missile Defense Agency for use as a target launch area in support of the agency's Theater Missile Defense program, now known as the Fort Wingate Launch Complex.

181. Fort Wingate has a stormwater system consisting of culverts, bridges, and drainage channels. The facility also has a sewer system to handle wastewater from the administrative area of the facility. During its operation, the system drained to the now closed Sewage Disposal Plant northwest of the administrative area where it was treated (though said treatment would not have affected AFFF or PFAS in the water). The Sewage Disposal Plant had three stabilization ponds, an unlined evaporation-infiltration lagoon, and three sludge-drying beds. The Sewage Disposal Plant ceased operations after 2013.

182. The Puerco River is the ultimate receiver of both storm water and sanitary drainage. Stormwater runoff is allowed to infiltrate the soil of the area.

183. Industrial activities were also performed at Fort Wingate. Hazardous liquid wastes (including explosives, leachate, acid, thinners, waste oils, and solvents) were generated.

184. Fort Wingate has or had at least one fire station in its history (located in Building 34). The fire station housed fire protection equipment, fire trucks, and personnel. The fire station also housed AFFF. Interviews with former firefighters at Fort Wingate (performed during the United States' Preliminary Assessment, discussed further below) revealed that firefighters would

respond to minor spills with AFFF. Those interviews also revealed that AFFF was stored at another site, the Maintenance Garage in Building 15.

185. PFAS may have also been used at Fort Wingate as wetting agents, pigment dispersants, and binder emulsifiers in paints. Enamels containing polytetrafluoroethylene ("PTFE") have historically been used in military operations. The military also historically used Teflon® (containing PFAS) coatings on metals to prevent cracks and to inhibit corrosion. The Former Ammunition Painting and Acid Washout Pond at Fort Wingate was used as a paint shop to paint metal surfaces.

186. In 2022, the Army performed a Preliminary Assessment at Fort Wingate to (a) identify locations at Fort Wingate where there was use, storage, or disposal of PFAS-containing materials resulting in the release of PFAS into the environment; and (b) assess possible migration pathways of potential contamination. *Final Preliminary Assessment Report of PFAS, Fort Wingate Army Depot (FWDA), New Mexico* (September 13, 2023), *available at* https://aec.army.mil/application/files/6217/0334/8610/Wingate_PFAS_PA.pdf.

187. The Preliminary Assessment revealed six (6) Areas of Potential Interest (*i.e.* areas where PFAS may have been used, stored, disposed of, or otherwise released into the environment):

d. The Fire Station—The Fire Station is located in Building 34 in Parcel 11. The Fire Station housed fire protection equipment, which was confirmed to include AFFF by former FWDA personnel. The building is comprised of a garage to the west and an attached living space to the east. In the 1960s, the station housed fire trucks which had the capacity to carry and deploy AFFF. The Fire Station is located in the administrative area with grassy area to the south and north. Runoff would likely flow to the west toward the street, where there was no apparent stormwater drain nearby.

e. **Building 5 Maintenance Garage**—Building 5 Maintenance Garage is located in the administrative area, across the street from the Fire Station. It was used since the 1940s for vehicle maintenance and washing. A wash rack is located outside of the building, to the west. Fire trucks with AFFF residual on them may have been

washed here, where wash water would have then flowed to the Sewage Disposal Plant.

f. **Building 15 Maintenance Garage**—Building 15 Maintenance Garage is located in the administrative area, north of Building 5 Maintenance Garage. Prior to 1980, it was used for mixing insecticides and pesticides. From 1980 until closure, it was used for AFFF storage and minor maintenance activities.

g. **Fire Training Ground**—The Fire Training Ground is located in the northern portion of Fort Wingate. The facility's fire department would train here at least twice a year, and the Bureau of Indian Affairs trained there at least three times a year. A fire pit was used for diesel- and gasoline-based firefighter training, where AFFF would be used as the extinguishing media. As much as 55 gallons of fuel would be dispensed as a fuel source. The fire pit was unlined.

h. **Sewage Disposal Plant**—The Sewage Disposal Plant is located in the norther portion of Fort Wingate. The Sewage Disposal Plant received waste from the Former TNT Washout Building, Building 5 Maintenance Garage, and Building 15 Maintenance Garage. Overflow from the system may have entered an open drainage ditch located north of the installation, which flows into the South Fork of the Puerco River.

i. **Central Landfill**—The Central Landfill is located in the norther portion of Fort Wingate. It may have housed PFAS-containing sludge from the Sewage Disposal Plant being disposed of here. An arroyo runs from south to north on the western portion of the landfill.

Id.

188. In December 2023, the Army performed a Site Inspection at Fort Wingate. *Site Inspection Executive Summary for Per- and Polyfluoroalkyl Substances at Fort Wingate, New Mexico* (December 2023), *available at* https://aec.army.mil/application/files/2417/0378/3777/Wingate_PFAS_SI-EXSUM.pdf. During the Site Inspection, soil and groundwater samples were taken at the Areas of Potential Interest identified in the Preliminary Assessment. The purpose of the Site Inspection was to confirm either absence or a release of PFAS compounds. *Id.*

189. The Site Inspection detected PFAS at every Area of Potential Interest identified in the Preliminary Assessment. *Id.* Specifically, PFOA and PFOS were detected at the following concentrations:[12]

j. The Fire Station
- **i.** Groundwater—PFOS detected at maximum concentration of 7,780 ng/L
- **ii.** Soil—PFOS detected at maximum concentration of .0224 mg/kg; PFOA detected at maximum concentration of .498 mg/kg

k. **Building 5 Maintenance Garage**
- i. Groundwater—PFOA detected at maximum concentration of 2510 ng/L
- ii. Soil—PFOS detected at .00066 mg/kg

l. **Building 15 Maintenance Garage**
- i. Groundwater—PFOA detected at maximum concentration of 58.4 ng/L
- ii. Soil—PFOS detected at maximum concentration of .00033 mg/kg; PFOA detected at maximum concentration of .0031 mg/kg

m. **Fire Training Ground**
- i. Groundwater—PFOA detected at maximum concentration of 4.2 ng/L
- ii. Soil—PFOA detected at maximum concentration of .198 mg/kg; PFOS detected at maximum concentration of .449 mg/kg

n. **Sewage Disposal Plant**
- i. Groundwater—The Army failed to sample groundwater at this location due to "monitoring well condition"
- ii. Soil—PFOA detected at maximum concentration of .0068 mg/kg; PFOS detected at maximum concentration of .0127 mg/kg

o. **Central Landfill**
- i. Groundwater—The Army failed to sample groundwater at this location for unknown reasons
- ii. Soil—PFOA detected at maximum concentration of .0004 mg/kg

Id.

190. New Mexico has expended costs overseeing Defendants' preliminary assessment and cursory efforts at evaluating PFAS contamination at and around White Sands. These costs include employee time in reviewing and responding to documents produced by defendants and

[12] Note that this Complaint presents only the highest level detected at the given sites. Multiple areas of each site were sampled, and in the majority of cases PFAS were present at numerous locations at various concentrations.

their respective contractors during the ongoing investigation of PFAS at White Sands. And the State will undoubtedly incur additional such costs in the future.

191. Though not yet spent, New Mexico is planning additional investigation to fully assess and evaluate the quality and nature of the PFAS contamination throughout White Sands and off-installation areas.

192. New Mexico has also suffered natural resource damages at Kirtland. Through exposure to PFAS (including but not limited to PFOA and PFOS), the site's soil, surface waters, and groundwater have been contaminated. Other natural resources may then be exposed to PFAS via contact with the contaminated soil, surface water, and groundwater. For example, biological resources such as vegetation and wildlife may be exposed to PFAS through contact and/or ingestion of the soil, and higher predators may be exposed and injured through consumption of exposed plants, invertebrates, and other lower-trophic level organisms. A reduction in ecological and human services may then flow from injured resources.

193. New Mexico has also incurred significant costs to assess said natural resource damages at Fort Wingate, an ongoing effort. These costs include, but are not limited to, amounts for ongoing NMONRT employee time. The NMONRT will have similar future costs as well,[13] including payments for contracted work, which are currently estimated to be at least $200,000.

STATUTORY AND REGULATORY BACKGROUND

RCRA and the New Mexico Hazardous Waste Act

[13] Future costs for natural resource damage assessment will include costs for: (1) conducting a preliminary estimate of damages; (2) development of an assessment plan; (3) conducting of a data sufficiency analysis; (4) conducting an injury assessment (which includes identifying and analyzing available data, primary data collection as needed, and the employ of scientific assessment techniques to quantify the injury to natural resources and services lost); and (5) conducting a damage assessment (which includes identification of resource restoration or replacement opportunities, economic analysis, and the calculation of damages).

194. Congress enacted the Resource Conservation and Recovery Act in 1976 in response to "a rising tide of scrap, discarded, and waste materials" that had become a matter of national concern. 42 U.S.C. § 6901(a)(2), (4) (1984). In enacting RCRA, Congress declared it a national policy "that, wherever feasible, the generation of hazardous waste is to be reduced or eliminated as expeditiously as possible. Waste that is nevertheless generated should be treated, stored, or disposed of so as to minimize the present and future threat to human health and the environment." 42 U.S.C. § 6902(b).

195. Congress recognized, however, that the "collection of and disposal of solid wastes should continue to be primarily the function of the State, regional, and local agencies." 42 U.S.C. § 6901(a)(4). Thus, RCRA allows any state to administer and enforce a hazardous waste program subject to authorization from the EPA. 42 U.S.C. § 6926(b).

196. RCRA includes a clear and unambiguous waiver of sovereign immunity:

> Each [federal entity] . . . engaged in . . . disposal or management of hazardous waste shall be subject to, and comply with, all Federal, State, interstate, and local requirements, both substantive and procedural (including any requirement for permits or reporting or any provisions for injunctive relief and such sanctions as may be imposed by a court to enforce such relief), respecting control and abatement of solid waste or hazardous waste disposal and management in the same manner, and to the same extent, as any person is subject to such requirements[.] . . . The United States hereby expressly waives any immunity otherwise applicable to the United States with respect to any such substantive or procedural requirement (including, but not limited to, any injunctive relief, administrative order or civil or administrative penalty or fine . . .).

42 U.S.C. § 6961(a).

197. EPA authorized New Mexico's state program pursuant to RCRA in 1985, 40 C.F.R. § 272.1601(a), and delegated to New Mexico "primary responsibility for enforcing its hazardous

waste management program." 40 C.F.R. § 272.1601(b). New Mexico's HWA and regulations promulgated pursuant to it are incorporated by reference into RCRA. 40 C.F.R. § 272.1601(c)(1).

198. The purpose of New Mexico's HWA is to "ensure the maintenance of the quality of the state's environment; to confer optimum health, safety, comfort and economic and social well-being on its inhabitants; and to protect the proper utilization of its lands." Section 74-4-2.

199. Pursuant to the HWA, NMED is authorized to issue permits, Section 74-4-4.2(C), and must deny them if an applicant has made a material misrepresentation or has violated any provision of the HWA, among other reasons, Section 74-4-4.2(D).

200. Pursuant to Section 74-4-13, NMED

> may bring suit in the appropriate district court to immediately restrain 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 to or is contributing to the past or current handling, storage, treatment, transportation, or disposal of solid waste or hazardous waste or the condition or maintenance of a storage tank that may present an imminent and substantial endangerment to health or the environment.

201. The HWA, Section 74-4-3(K) defines "hazardous waste" as:

> [A]ny solid waste or combination of solid wastes that because of their quantity, concentration or physical, chemical or infections characteristics may:
>
> (1) cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness; or
>
> (2) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of or otherwise managed. 'Hazardous waste' does not include any of the following, until the board determines that they are subject to Subtitle C of the federal Resource Conservation and Recovery Act of 1976, as amended, 42 U.S.C. 6901 et seq.:

> (a) drilling fluids, produced waters and other wastes associated with the exploration, development or production of crude oil or natural gas or geothermal energy;
> (b) fly ash waste;
> (c) bottom ash waste;
> (d) slag waste;
> (e) flue gas emission control waste generated primarily from the combustion of coal or other fossil fuels;
> (f) solid waste from the extraction, beneficiation or processing of ores and minerals, including phosphate rock and overburden from the mining of uranium ore; or
> (g) cement kiln dust waste.

202. New Mexico's Legislature has granted wide latitude to its environmental programs in order to ensure protection of its natural resources, including through a robust regulatory program, *see, e.g.*, Hazardous Waste Management Regulations 20.4.1 through 20.4.1.110.5 NMAC, and the explicit authority to compel compliance therewith, Section 74-4-10. New Mexico's Environmental Protection Regulations and the rulemaking procedures thereunder are to be "liberally construed to carry out their purpose." 20.1.1.108 NMAC.

203. Cannon and Holloman are subject to cleanup obligations applicable to PFAS under RCRA permits.

CERCLA

204. Congress enacted CERCLA in 1980 to "promote the timely cleanup of hazardous waste sites and to ensure that the costs of such cleanup efforts were borne by those responsible for the contamination." *CTS Corp. v. Waldburger*, 573 U.S. 1, 4 (2014) (citation and internal quotation marks omitted).

205. To that end, Section 107 of CERLCA makes four classes of parties liable for the costs of response to contamination due to hazardous substances: (1) the current owner/operator of the contaminated site; (2) the owner/operator at the time hazardous substances were released at the contaminated site; (3) any person who arranged for the transport of hazardous substances to the

contaminated site; and (4) any person who transported hazardous substances to the site. 42 U.S.C. § 9607(a)(1)-(4).

206. Liability under Section 107 is strict, joint, and several. *United States v. Monsanto Co.*, 858 F.2d 160, 167, 171-72 (4th Cir. 1988). Liability is also retroactive, in that parties may be held liable even where the release of hazardous substances occurred prior to CERCLA's enactment or prior to the substance in question being designated or otherwise considered a "hazardous substance" under CERCLA. *United States v. Olin Corp.*, 107 F.3d 1506, 1513-14 (11th Cir. 1997).

207. CERCLA contains a clear and unambiguous waiver of sovereign immunity for Section 107 claims:

> Each department, agency, and instrumentality of the United States (including the executive, legislative, and judicial branches of government) shall be subject to, and comply with, this chapter in the same manner and to the same extent, both procedurally and substantively, as any nongovernmental entity, including liability under section 9607 of this title.

42 U.S.C. § 9607(a)(1).

208. Liability under Section 107 extends to "all costs of removal or remedial action incurred by the United States Government or a State or an Indian tribe not inconsistent with the national contingency plan"; "any other necessary costs of response incurred by any other person consistent with the national contingency plan"; "damages for injury to, destruction of, or loss of natural resources, including the reasonable costs of assessing such injury, destruction, or loss resulting from such a release"; and "the costs of any health assessment or health effects study carried out under section 9604(i) of [CERCLA]." 42 U.S.C. § 9607(a)(4)(A)-(D). The amounts recoverable for these costs and damages includes interest at the rate specified for interest on investments of the Hazardous Substance Superfund. *Id.* at § 9607(a)(4)(D); *see* 26 U.S.C. § 9507(d)(3)(C) (specifying interest rate as "equal to the current average market yield on outstanding

marketable obligations of the United States with remaining periods to maturity comparable to the anticipated period during which the advance will be outstanding and shall be compounded annually.").

209. A State's "costs of removal or remedial action" are presumed to be consistent with the National Contingency Plan (CERCLA regulations), and the burden is on the defendant to prove inconsistency. *Com. of Mass. v. Blackstone Valley Elec. Co.*, 867 F. Supp. 78 (D. Mass. 1994); *see United States v. Hardage*, 982 F.2d 1436, 1442 (10th Cir. 1992).

210. Natural resource damages under Section 107 are recoverable by the NMONRT for use to restore, replace, or acquire equivalent natural resources, but the measure of such damages are not limited to what can be used to do so. 42 U.S.C. § 9607(f)(1). Rather, they include (1) injuries occurring from the onset of the release, less any mitigation of those injuries by response actions, plus any increase that are reasonably unavoidable as a result of response actions taken or anticipated; (2) the costs of emergency restoration efforts; (3) reasonable and necessary costs of natural resource damage assessment, including administrative costs and expenses incidental to such assessments, assessment planning, or the planning of restoration, rehabilitation, replacement, and/or acquisition of equivalent resources; and (4) interest as set forth in Section 107. 43 C.F.R. § 11.15; *see also* NMSA 1978 § 75-7-4.

211. The EPA is not engaged in a removal action under the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA") at either of the Bases, and the Bases are not listed on the National Priorities List. Neither has the EPA incurred costs to initial a Remedial Investigation and Feasibility Study under CERCLA, nor is it diligently proceeding with a remedial action under CERCLA.

Military Regulations

212. Defendants' discharges of PFAS also violated mandatory Air Force Instructions, including Air Force Instruction 32-1067, February 4, 2015, Civil Engineering: Water and Fuel Systems ("AFI 32-1067"), which provides mandatory instructions on how to handle wastewater and PFAS. AFI 32-1067 became effective on February 4, 2015, and currently remains in effect.

213. AFI 32-1067 provides that "Firefighting foam of all types will not be released to storm water conveyance structures." AFI 32-1067, at 24.

214. The Air Force Policy Directive also expressly prohibits the unpermitted discharge of "substances to sanitary or storm systems that contain perfluorinated compounds (PFCs) like perfluorooctane sulfonic acid (PFOS), perfluorooctanoic acid (PFOA), perfluorononanoic acid (PFNA), perflourohexane sulfonic acid (PFHxS), perfluoroheptanoic acid (PFHpA), or perflurobutanesulfonic acid (PFBS). PFC-containing firefighting foams will not be discharged to a POTW or FOTW. Release of firefighting solutions that contain PFCs from fire systems test activation and fire vehicle chemical discharges will be captured, contained, and disposed of to meet applicable regulatory requirements or applicable policy directives." *Id*. at 19.

215. AFI 32-1067 also prohibits the discharge of "substances that contain pentadecafluorooctanoic acid, perfluorooctanoic acid, perfluorocaprylic acidoerfluorooctanoate (PFOA) or perfluorooctanyl sulfate, perfluoronoanoic acid (PFOS)." Further,"[r]elease of firefighting solutions from fire systems test activation and fire vehicle chemical discharges will be captured, contained and disposed to meet applicable regulatory requirements." *Id.*

216. AFI 32-1067 also requires "[m]ilitary installations located in the United States [to] comply with applicable Federal, state, and local water, natural gas, and liquid fuel regulations," as well as "all environmental laws, acts and regulations" including RCRA.

217. Upon information and belief, from February 4, 2015 into the present, Defendants failed to capture or contain or treat firefighting foam containing PFAS, including PFOA and PFOS, in violation of AFI 32-1067.

218. Further, this directive confirms the Air Force's knowledge of the hazards associated with PFAS prior to 2015.

CAUSES OF ACTION

First Cause of Action:
Violation of the New Mexico Hazardous Waste Act

219. All allegations above are incorporated herein as if specifically set forth at length.

220. Defendants are a "person" under Section 74-4-3(M).

221. PFAS, as described herein, are discarded materials and each is a "solid waste" as defined under the HWA, Section 74-4-3(O), and a "hazardous waste" as defined under Section 74-4-3(K).

222. As a result of the releases of PFAS and other hazardous wastes at Cannon and Holloman as described herein, Defendants have contributed to and will continue to contribute to the past and present handling, storage, treatment, transportation, and/or disposal of solid or hazardous waste which has or may present an imminent and substantial endangerment to health and/or the environment in violation of the HWA, Section 74-4-13.

223. Conditions at Cannon and Holloman, as described herein, have presented or may present an imminent and substantial endangerment to health and/or the environment via continued migration of contamination in groundwater and/or drinking water, as well as recreational waters and those supporting wildlife, at and around the Bases. In addition to natural resources throughout the environment, members of the public and those living in or visiting surrounding areas are or will be directly exposed to contaminants through all pathways of migration.

224. Although Defendants have acknowledged that the presence of PFOA and PFOS presents an imminent and substantial danger at Cannon, Defendants have declined to take remedial action required under the law.

225. By reason of the foregoing acts and omissions of Defendants, the State is entitled to an order for such relief as may be necessary to remedy the results of Defendants' conduct. Such relief includes but is not limited to injunctive relief compelling Defendants to take all steps necessary to achieve permanent and consistent compliance with the HWA.

Second Cause of Action:
Resource Conservation and Recovery Act (Imminent and Substantial Endangerment)

226. All allegations above are incorporated herein as if specifically set forth at length.

227. The contamination at the Cannon and Holloman AFBs as described herein present an imminent and substantial endangerment to health and/or the environment via continued migration of contamination in groundwater and/or drinking water at and around the Bases. In addition to natural resources throughout the environment, members of the public and those living in or visiting surrounding areas are or will be directly exposed to contaminants through all pathways of migration.

228. Defendants are a "person" under 42 U.S.C. § 6972(a).

229. The hazardous substances present at Cannon and Hollomon, including but not limited to PFAS, as described herein, are "solid wastes," as defined in 42 U.S.C. § 6903(27), because they were discarded material resulting from operations at the Bases, and they resulted in contamination in the natural resources at the Bases.

230. The hazardous substances present at Cannon and Hollomon, including but not limited to PFAS, as described herein, "hazardous wastes" as defined in 42 U.S.C. § 6903(5), because, as described above, they "cause, or significantly contribute to an increase in morality or

an increase in serious irreversible, or incapacitating reversible, illness" and "pose a substantial present or potential hazard to human health or the environment" because they have been "improperly treated, stored, transported, or disposed of, or otherwise managed."

231. Defendants have jurisdiction over Cannon and Holloman and are engaged in "activity resulting . . . in the disposal or management of solid waste or hazardous waste" at the Bases, and are therefore required to comply with the requirements of RCRA, pursuant to 42 U.S.C. § 6961.

232. Defendants are "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 is contributing to the past and present handling, storage, treatment, transportation and/or disposal of solid or hazardous waste," which has resulted in contamination that presents an imminent and substantial endangerment to health and/or the environment in violation of 42 U.S.C. § 6272(a)(1)(B).

233. By reason of the foregoing acts and omissions of Defendant, the State is entitled to an order for such relief as may be necessary to remedy the results of Defendant's conduct. Such relief includes but is not limited to injunctive relief compelling Defendant to take all steps necessary to achieve permanent and consistent compliance with RCRA.

234. The State is also entitled to recover all costs of litigation including reasonable attorney fees and expert fees, pursuant to 42 U.S.C. § 6972.

Third Cause of Action:
Comprehensive Environmental Response, Compensation, and Liability Act (Cost Recovery)

235. All allegations above are incorporated herein as if specifically set forth at length.

236. PFOS and PFOA are "hazardous substances" under 42 U.S.C. § 9601. 89 FR 39124.

237. Cannon, Holloman, Kirtland, White Sands, and Fort Wingate are all a "facility" under 42 U.S.C. § 9601.

238. Releases of hazardous substances into the environment have occurred at Cannon, Holloman, Kirtland, White Sands, and Fort Wingate.

239. Defendants are a "person" under 42 U.S.C. § 9601.

240. Defendants are the "owner or operator" of Cannon, Holloman, Kirtland, White Sands, and Fort Wingate under 42 U.S.C. § 9601, both currently and at the time when hazardous substances were released at those locations.

241. Said releases of hazardous substances have caused the State to incur response costs, including but not limited to the following:

p. At least $850,000 for the removal of contaminated cow carcasses from a dairy farm (Highland Dairy) neighboring Cannon;

q. At least $1,310,000 for the investigation of PFAS contamination at and around Cannon, Holloman, Kirtland, White Sands, and Fort Wingate;

r. At least $124,500 for the oversight of Defendants' ongoing efforts to investigate and remediate PFAS contamination at and around Cannon, Holloman, Kirtland, White Sands, and Fort Wingate, which primarily consists of employee time and administrative expenses;

242. Said releases of hazardous substances will also cause the State to incur response costs in the future, including but not limited to:

1. An unknown amount for the oversight of Defendants' ongoing efforts to investigate and remediate PFAS contamination from Cannon, Holloman, Kirtland, White Sands, and Fort Wingate.

2. At least $1,625,000 for the continued investigation and assessment of PFAS contamination at Cannon, Holloman, Kirtland, White Sands, and Fort Wingate. This includes but is not limited to at least $100,000 in well testing and $1,525,000 in groundwater plume delineation efforts, which have already been appropriated by the state legislature;

3. At least $870,000 for a planned medical monitoring program for New Mexico residents living at and around Cannon;

4. At least $4,000,000 to address PFAS contamination in Curry and Otero Counties; and

243. Said releases of hazardous substances have caused damage to the State's natural resources held in trust by the State for the public, including but not limited to: air, soil, surface water, groundwater, aquifers, playas, and wildlife.

244. Said releases of hazardous substances have caused the State to incur costs to assess said natural resource damages, including but not limited to:

a. $103,407 in payments for contracted work to assess natural resource damages at Cannon, Holloman, Kirtland, White Sands, and Fort Wingate; and

b. $40,680 in NMONRT employee time.

245. Said releases of hazardous substances will cause the State to incur costs to assess said natural resource damages in the future, including but not limited to NMONRT employee time and payments for contracted work. Such costs are currently estimated to be at least $3,625,000.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff, the State of New Mexico, respectfully requests that the Court enter judgment in its favor and against Defendants by granting relief as follows:

a. An order declaring that Defendants' conduct violated the HWA and RCRA;

b. Immediate injunctive relief requiring the abatement of ongoing violations of the HWA and RCRA, abatement of the conditions creating an imminent and substantial endangerment, and to fund any costs associated with each compliance whether incurred by the State or third parties performing abatement;

c. A permanent injunction directing Defendants to take all steps necessary to achieve permanent and consistent compliance with HWA and RCRA;

d. All available civil penalties under applicable statutes;

e. The payment for past costs incurred by the State and not yet reimbursed by the Defendants in connection with its oversight and efforts to obtain compliance with the HWA and RCRA in this matter;

f. A declaratory judgment providing the State with a mechanism for reimbursement of future costs incurred by the State in connection with its oversight and efforts to monitor compliance with the HWA and RCRA in this matter;

g. A judgment awarding the State costs and reasonable attorneys' fees incurred in prosecuting this action, together with prejudgment interest, to the full extent permitted by law;

h. The payment of past costs incurred by the State and not yet reimbursed by the Defendants in connection with its removal and remedial actions at and around the facilities at issue in this matter;

i. A declaratory judgment providing the State with a mechanism for reimbursement of future costs incurred by the State in connection with its removal and remedial actions at and around the facilities at issue in this matter;

j. The payment of past costs incurred by the State and not yet reimbursed by the Defendants in connection with its investigation and assessment of natural resource damages caused by the release of PFAS from the facilities at issue in this matter;

k. A declaratory judgment providing the State with a mechanism for reimbursement of future costs incurred by the State in connection with its investigation and assessment of natural resource damages cause by the release of PFAS from the facilities at issue in this matter;

l. Damages for the injury to, destruction of, or loss of the State's natural resources caused by the release of PFAS from the facilities at issue in this matter; and

m. A judgment awarding the State such other relief as may be necessary, just, or appropriate under the circumstances.

Dated: July 8, 2024

Respectfully submitted:

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