IN THE UNITED STATES DISTRICT COURT
DISTRICT OF SOUTH CAROLINA
AIKEN DIVISION

STATE OF SOUTH CAROLINA, Plaintiff, v. UNITED STATES; UNITED STATES DEPARTMENT OF ENERGY; RICK PERRY, in his official capacity as Secretary of Energy; NATIONAL NUCLEAR SECURITY ADMINISTRATION; and LISA E. GORDON-HAGERTY, in her official capacity as Administrator of the National Nuclear Security Administration and Undersecretary for Nuclear Security; Defendants.	)	Civil Action No. 1:18-1431-JMC

COMPLAINT

The State of South Carolina (South Carolina or State) sets forth and complains as follows:

INTRODUCTION

1. This action arises from final agency action by the Department of Energy (DOE) and National Nuclear Security Administration (NNSA) and their respective officials to terminate the mixed oxide fuel fabrication facility project (MOX Facility or Project) currently under construction at the Savannah River Site (SRS) in Aiken County, South Carolina. *See* 50 U.S.C.A. § 2566(h)(2) ("The term 'MOX facility' means the mixed-oxide fuel fabrication facility at the

Savannah River Site, Aiken, South Carolina."). *See* Ex. 1, Ltr. of Secretary Perry dated May 10, 2018.

2. By terminating the Project, DOE and NNSA are acting in direct contravention of Congressional directive and instruction regarding the MOX Facility and plutonium disposition activities at SRS and are violating the National Environmental Policy Act (NEPA).

3. DOE and NNSA's arbitrary and capricious action also now renders South Carolina as the permanent repository for weapons-grade defense plutonium.

4. The State seeks declaratory and injunctive relief to compel DOE and NNSA's compliance with federal law and to redress the injuries caused by these violations of the law.

PARTIES

5. South Carolina is a sovereign state of the United States and home to SRS, which borders the Savannah River and covers approximately 310 square miles, encompassing parts of Aiken, Barnwell, and Allendale counties. South Carolina also is the owner of property located within, nearby, and adjacent to SRS, including at least one road traversing the site, thereby making it susceptible to the "risk inherent in storing nuclear materials." Ex. 2, DOE, *Am. Interim Action Determination* 1 (Oct. 13, 2011). Congress has declared that "the State of South Carolina [has] a compelling interest in the safe, proper, and efficient operation of the plutonium disposition facilities at the Savannah River Site." Bob Stump National Defense Authorization Act for Fiscal Year 2003 (NDAA FY03), Pub. L. No. 107-314, 116 Stat. 2458, Subtitle E, § 3181. Furthermore, "the MOX facility will also be economically beneficial to the State of South Carolina, and that economic benefit will not be fully realized unless the MOX facility is built." *Id.*

6. Defendant United States is the federal government of the United States of America, and includes its Federal corporations, departments, agencies, commissions, boards,

instrumentalities, entities, and officials acting in their official capacities of same, including DOE and NNSA.

7. Defendant DOE is a federal agency of the United States and is responsible for, among other things, the administration of federal programs concerning the production of nuclear materials for the weapons program and their disposition. *See* 42 U.S.C.A. §§ 7111 *et seq*. DOE is the owner of SRS. Defendant Rick Perry is the United States Secretary of Energy (Secretary of Energy) and is sued in his official capacity. The Secretary of Energy is responsible for the administration, operations, and activities of DOE, including the administration of programs related to the MOX Facility and defense plutonium at SRS.

8. Defendant NNSA is a separately organized agency within the DOE created by Congress in 2000. 50 U.S.C.A. § 2401. NNSA generally is responsible for the nation's nuclear weapons, nonproliferation, and naval reactors programs, *id.*, and specifically administers and manages activities related to the MOX Facility. Defendant Lisa E. Gordon-Hagerty is the Administrator of the NNSA and Undersecretary for Nuclear Security (Administrator) and is sued in her official capacity. The Administrator is responsible for the administration, operations, and activities of NNSA, including programs related to the MOX Facility.

JURISDICTION

9. This action arises under the Constitution of the United States; the Atomic Energy Defense Provisions, 50 U.S.C.A. §§ 2501 *et seq.*; the National Environmental Protection Act, 42 U.S.C.A. §§ 4321-4370h (NEPA); the Federal Administrative Procedure Act, 5 U.S.C.A. §§ 701 *et seq*. (APA); the Mandamus and Venue Act, 28 U.S.C.A. § 1361; multiple National Defense Authorization Acts (NDAAs); and multiple appropriations acts.

10. This Court has jurisdiction over this matter pursuant to 28 U.S.C.A. § 1331 (federal question), 28 U.S.C.A. § 1361 (mandamus), and 5 U.S.C.A. §§ 702, 704, and 706.

11. The Court has the authority to issue the requested declaratory and injunctive relief pursuant to 28 U.S.C.A. §§ 2201-2202 and 5 U.S.C.A. §§ 705-706. Injunctive relief is authorized by Rule 65 of the Federal Rules of Civil Procedure.

VENUE

12. Venue is proper in this Court pursuant to 28 U.S.C.A. § 1391(b) and Local Civil Rule 3.01(A)(1), as the facility and property that are the subject of this action are within the boundaries of the State of South Carolina and Aiken County.

GOVERNING LAW

United States Constitution

13. The Constitution provides that all "legislative Powers herein granted shall be vested in a Congress, which shall consist of a Senate and House of Representatives." U.S. Const. art. I § 1.

14. The Constitution further provides that the "[t]he executive Power shall be vested in a President," U.S. Const. art. II, § 1, and that "he shall take Care that the Laws be faithfully executed," U.S. Const. art. II, § 2.

15. The Appropriations Clause of the Constitution provides that "[n]o Money shall be drawn from the Treasury, but in Consequence of Appropriations made by Law." U.S. Const. art. I, § 9, cl. 7.

Administrative Procedure Act

16. The APA entitles a party suffering a legal wrong because of agency action, or adversely affected by agency action, the right to judicial review. 5 U.S.C.A. § 702.

17. The APA provides judicial review of final agency actions for which there is no other adequate remedy in a court. 5 U.S.C.A. § 704.

18. A reviewing court shall (1) compel agency action unlawfully withheld or unreasonably delayed; and (2) hold unlawful and set aside agency action found to be arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law, or in excess of statutory jurisdiction or authority, or without observance of procedure required by law. 5 U.S.C.A. § 706.

Mandamus

19. "The district courts shall have original jurisdiction of any action in the nature of mandamus to compel an officer or employee of the United States or any agency thereof to perform a duty owed to the plaintiff." 28 U.S.C.A. § 1361.

Plutonium Disposition Statutes

20. Section 2567 of the Atomic Energy Defense Provisions is entitled "Disposition of Surplus Defense Plutonium at Savannah River Site, Aiken, South Carolina" (Section 2567).

21. Pertinent here, Section 2567(a) provides:

> The Secretary of Energy shall consult with the Governor of the State of South Carolina regarding any decisions or plans of the Secretary related to the disposition of surplus defense plutonium and defense plutonium materials located at the Savannah River Site, Aiken, South Carolina.

50 U.S.C.A. § 2567(a) (entitled "Consultation required").

22. Section 2566 of the Atomic Energy Defense Provisions is entitled, "Disposition of Weapons-Usable Plutonium at Savannah River Site" (Section 2566).

23. Section 2566 sets forth the Congressional mandate for the "construction and operation of [the MOX Facility]." 50 U.S.C.A. § 2566(a).

24. Section 2566(h) defines the "MOX production objective" as meaning

> production at the MOX facility of mixed-oxide fuel from defense plutonium and defense plutonium materials at an average rate equivalent to not less than one metric ton of mixed-oxide fuel per year. The average rate shall be determined by measuring production at the MOX facility from the date the facility is declared operational to the Nuclear Regulatory Commission through the date of assessment.

50 U.S.C.A. § 2566(h)(2).

25. Section 2566(h)(3) defines "defense plutonium" and "defense plutonium materials" as meaning "weapons-usable plutonium." The weapons-usable plutonium that is the subject of this litigation and the governing law is generally Pu-239, *see Hodges v. Abraham*, 300 F.3d 432, 436 n.1 (4th Cir. 2002), which has a half-life of approximately 24,100 years. Ex. 3, *Backgrounder on Plutonium*, U.S. Nuclear Regulatory Comm'n.

26. Section 2566(a)(1) required the Defendants to submit to Congress by February 1, 2003, "a plan for the construction and operation" of the MOX Facility.

27. Section 2566(a)(3) required the Defendants to submit a report to Congress by February 15 of every year (beginning in 2014) that addresses "whether the MOX production objective has been met" and assesses "progress toward meeting the obligations of the United States under the [PMDA]."

28. The MOX Facility is behind schedule by more than 12 months. Per Section 2566(b)(1) and (2), because the schedule is more than 12 months behind, the Defendants must submit to Congress a corrective action "to be implemented by the Secretary to ensure that the MOX facility project is capable of meeting the MOX production objective" and to "include corrective actions to be implemented by the Secretary to ensure that the MOX production objective is met."

29. As the Defendants were required to submit a corrective action plan on the MOX Facility pursuant to Section 2566(b)(1) or (2), Section 2566(b)(3) required the Defendants to "include established milestones under such plan for achieving compliance with the MOX production objective."

30. The Defendants have failed to meet the MOX production objective to date.

31. Because the Defendants have not met the MOX production objective, all "transfers of defense plutonium and defense plutonium materials to be processed by the" MOX Facility are suspended by operation of law "until the Secretary certifies that the MOX production objective can be met." 50 U.S.C.A. § 2566(b)(5).

32. Because the Defendants have not met the MOX production objective, the Defendants are required (and have been required for several years) to "submit to Congress a report on the options for removing from the State of South Carolina an amount of defense plutonium or defense plutonium materials equal to the amount of defense plutonium or defense plutonium materials transferred to the State of South Carolina after April 15, 2002." 50 U.S.C.A. § 2566(b)(6)(A). This report must "include an analysis of each option set forth in the report, including the cost and schedule for implementation of such option, and any requirements under the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.) relating to consideration or selection of such option." 50 U.S.C.A. § 2566(b)(6)(B). Upon submitting the report, the Defendants must commence any required analysis under NEPA in order to select among the options set forth in the report.

33. The Defendants have never prepared this report, although they have been obligated to do so since at least 2012. 50 U.S.C.A. § 2566(b)(4)-(6). *See* DOE Submission to the Court dated

January 19, 2018, per the Dec. 20, 2017 Order of Injunctive Relief, *South Carolina v. United States*, C/A No. 1:16-cv-00391-JMC.

34. Because the Defendants did not meet the MOX production objective by January 1, 2014, Defendants were required to "remove from the State of South Carolina, for storage or disposal elsewhere . . . not later than January 1, 2016, not less than 1 metric ton of defense plutonium or defense plutonium materials" and are required to "remove from the State of South Carolina, for storage or disposal elsewhere . . . not later than January 1, 2022, an amount of defense plutonium or defense plutonium materials equal to the amount of defense plutonium or defense plutonium materials transferred to the Savannah River Site between April 15, 2002, and January 1, 2022, but not processed by the MOX facility." 50 U.S.C.A. § 2566(c).

35. Because the Defendants did not comply with the statutory mandate of Section 2566(c)(1), this Court has enjoined the Defendants to remove one metric ton of defense plutonium or defense plutonium materials from the State by no later than January 1, 2020. Dec. 20, 2017 Order of Injunctive Relief, *South Carolina v. United States*, C/A No. 1:16-cv-00391-JMC. This Court also retained jurisdiction to enforce the terms of the injunctive order and required the Defendants to submit semiannual progress reports to this Court and the State setting forth in detail:

> i. the projected date for removal of not less than one metric ton of defense plutonium or defense plutonium materials from the State;
>
> ii. the status and substance of any NEPA review, including the projected timeline for completion of the NEPA process; and
>
> iii. any impediment(s) to Defendants' compliance with this injunctive order and any steps Defendants are taking to address such impediment(s).

Id. The first of these reports is due June 15, 2018. *Id*. The Defendants have appealed this Court's imposition of the two-year deadline for removal, but have not appealed this Court's retention of

jurisdiction over that case or the requirement that Defendants submit semiannual progress reports. *South Carolina v. United States*, No. 18-1148.

The National Environmental Policy Act

36. NEPA directs all federal agencies to assess the environmental impact of proposed actions that significantly affect the quality of the environment. 42 U.S.C.A. § 4332(2)(C). NEPA was enacted to ensure that federal agencies carefully and fully contemplate the environmental impact of their actions and to ensure that sufficient information on the environmental impact is made available to the public before actions are taken.

37. The Council on Environmental Quality (CEQ) has promulgated uniform regulations to implement NEPA that are binding on all federal agencies. 42 U.S.C.A. § 4342; 40 C.F.R. §§ 1500-1508. DOE has also promulgated its own NEPA regulations to supplement the uniform CEQ regulations. 10 C.F.R. §§ 1021.100 *et seq.*

38. NEPA requires federal agencies to prepare an Environmental Impact Statement (EIS) when a major federal action is proposed that may significantly affect the quality of the environment. 42 U.S.C.A. § 4332(2)(C); 40 C.F.R. § 1501.4(a)(1); 10 C.F.R. § 1021.310.

39. An EIS is a "detailed written statement" that "provide[s] full and fair discussion of significant environmental impacts and shall inform decisionmakers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment." 40 C.F.R. §§ 1502.1, 1508.11.

40. If after an EIS has been prepared for a proposed action, the federal agency makes substantial changes in the proposed action or there are new circumstances bearing on the proposed action or its impacts, the agency must prepare a supplemental EIS. 40 C.F.R. § 1502.9(c); *see* 10

C.F.R. § 1021.314 ("DOE shall prepare a supplemental EIS if there are substantial changes to the proposal or significant new circumstances or information relevant to environmental concerns….").

41. The NEPA regulations state that during the NEPA process "[a]gencies shall not commit resources prejudicing selection of alternatives before making a final decision." 40 C.F.R. § 1502.2(f).

42. Therefore, "[u]ntil an agency issues a record of decision…., no action concerning the proposal shall be taken which would: (1) Have an adverse environmental impact; or (2) Limit the choice of reasonable alternatives." 40 C.F.R. 1506.1(a); *see* 10 C.F.R. § 1021.211 ("Interim actions: Limitations on actions during the NEPA process.").

43. Finally, at the time of its ultimate decision, in its record of decision (ROD), the agency must:

> Identify all alternatives considered by the agency in reaching its decision, specifying the alternative or alternatives which were considered to be environmentally preferable. An agency may discuss preferences among alternatives based on relevant factors including economic and technical considerations and agency statutory missions. An agency shall identify and discuss all such factors including any essential considerations of national policy which were balanced by the agency in making its decision and state how those considerations entered into its decision.

40 C.F.R. § 1505.2.

National Defense Authorization Act for Fiscal Year 2018

44. Section 3121 of the National Defense Authorization Act for Fiscal Year 2018, Public Law 115–91 (NDAA FY18), provides that the "Secretary of Energy shall carry out construction and project support activities relating to the MOX facility using funds authorized to be appropriated by this Act or otherwise made available for fiscal year 2018 for [NNSA] for the MOX facility."

45. The Secretary can avoid this Congressional mandate ***only*** if the Secretary submits to the Congressional defense committees:

> (A) the commitment of the Secretary to remove plutonium intended to be disposed of in the MOX facility from South Carolina and ensure a sustainable future for the Savannah River Site;
>
> (B) a certification that—
>
> (i) an alternative option for carrying out the plutonium disposition program for the same amount of plutonium as the amount of plutonium intended to be disposed of in the MOX facility exists, meeting the requirements of the Business Operating Procedure of the National Nuclear Security Administration entitled 'Analysis of Alternatives' and dated March 14, 2016 (BOP–03.07); and
>
> (ii) the remaining lifecycle cost, determined in a manner comparable to the cost estimating and assessment best practices of the Government Accountability Office, as found in the document of the Government Accountability Office entitled 'GAO Cost Estimating and Assessment Guide' (GAO–09–3SP), for the alternative option would be less than approximately half of the estimated remaining lifecycle cost of the mixed oxide fuel program; and
>
> (C) the details of any statutory or regulatory changes necessary to complete the alternative option.

NDAA FY18, § 3121(b)(1).

46. In making the certification under Section 3121(b)(1)(B), the Secretary also must ensure that the estimates used "are of comparable accuracy." NDAA FY18, § 3121(b)(2).

Consolidated Appropriations Act for Fiscal Year 2018

47. Section 309 of the Consolidated Appropriations Act of Fiscal Year 2018, Pub. L. 115-41 (CAA FY 18), provides that "Funds provided by this Act for Project 99–D–143, Mixed Oxide Fuel Fabrication Facility, and any funds provided by prior Acts for such Project that remain

unobligated, may be made available only for construction and project support activities for such Project."

48. The Secretary can avoid this congressional mandate ***only*** if the requirements under Section 3121(b)(1) of the NDAA FY18 are met and the Secretary submits to the Committees on Appropriations of both Houses of Congress the lifecycle cost estimate used to make the certification under Section 3121(b)(1) of the NDAA FY18.

49. However, the Defendants cannot use any funds provided for the Project to eliminate the Project until 30 days after the submission of the lifecycle cost estimate to the Committees on Appropriations of both Houses of Congress.

BACKGROUND AND FACTS

SRS and the MOX Facility Project

50. Built in the 1950s, the United States and DOE-owned SRS "processes and stores nuclear materials in support of national defense and U.S. nuclear nonproliferation efforts" through several programs or "missions." DOE Office of Environmental Management Website, *Savannah River Site*, http://energy.gov/em/savannah-river-site (last visited May 24, 2018). DOE identifies SRS as "a key [DOE] industrial complex responsible for environmental stewardship, environmental cleanup, waste management and disposition of nuclear materials." *Id.*

51. SRS also serves as the construction site for DOE's MOX Facility, which DOE and NNSA previously identified as the "cornerstone of the surplus disposition mission." Ex. 4, DOE, *SPD Supplemental EIS* Factsheet (July 19, 2012). "This mission, which converts excess weapons-usable plutonium into a form that can be used in commercial nuclear power reactors, establishes SRS's vital role in plutonium management for DOE." *Id.* The MOX Facility will take surplus weapons-grade plutonium, remove impurities, and mix it with depleted uranium oxide to form

MOX fuel pellets for reactor fuel assemblies that will be irradiated in commercial nuclear power reactors. *Id.*

Surplus Plutonium Disposition

52. With the end of the Cold War and the collapse of the Soviet Union, significant quantities of nuclear weapons, including large amounts of weapons grade plutonium, became surplus to the defense needs of the United States and Russia. Control of these surplus materials became an urgent U.S. foreign policy goal. Particular concern focused on plutonium from Soviet nuclear warheads, which the United States feared posed a major nuclear weapons proliferation risk.

53. The "United States has declared as excess to U.S. defense needs a total of 61.5 metric tons (67.8 tons) of plutonium." Ex. 5, *Final Surplus Plutonium Disposition Supplemental Environmental Impact Statement*, DOE/EIS-0283-S2 (April 2015) (*2015 SPD Supp. EIS*) at S-3, 1-9.

54. In an effort to consolidate and eventually reduce the United States' and Russia's surplus weapons-grade plutonium, the United States and Russia jointly developed a plan for the nonproliferation of weapons of mass destruction worldwide. *See* Ex. 6, Excerpt from D.J. Spellman *et al.*, *History of the U.S. Weapons-Usable Plutonium Disposition Program Leading to DOE's Record of Decision* 2 (1997) (detailing important events and studies concerning surplus weapons-usable plutonium disposition in United States from end of Cold War to 1997).

55. Consistent with this joint plan, in the early 1990s, the United States began exploring options for the long-term storage and the safe disposition of weapons-usable plutonium declared surplus to national security needs. *Id.*

56. On or about January 24, 1994, then-Secretary of Energy Spencer Abraham created a DOE-wide project for the control and disposition of surplus fissile materials, which led to the creation of the Office of Fissile Materials Disposition later that year. *Id*. at 3.

57. Also in early 1994, DOE's National Laboratory and several independent experts began evaluating 37 different plutonium disposition technology options. *See* Ex. 7, NNSA *Report to Congress: Disposition of Surplus Defense Plutonium at Savannah River Site* 2-1 (Feb. 15, 2002) (hereinafter *Report to Congress*).

58. In December 1996, DOE issued the *Storage and Disposition of Weapons-Usable Fissile Materials Final Programmatic Environmental Impact Statement* (*PEIS*) detailing its evaluation of alternatives for both the storage of weapons-usable fissile materials and the disposition of surplus plutonium. *See* Ex. 8, PEIS; Ex. 9, DOE, *Record of Decision (ROD) for PEIS* (Jan. 21, 1997).

59. In the PEIS, DOE analyzed the environmental impacts of various alternatives for "long term" storage of plutonium and other nuclear materials for a period up to fifty years. *Id*.

60. For disposition, DOE's "preferred alternative" consisted of a hybrid, or dual-path, strategy that proposed to immobilize a portion of the surplus plutonium in glass or ceramic materials and to irradiate the remaining plutonium in MOX fuel in existing domestic, commercial reactors. *Id*.

61. In January 1997, DOE announced its intention to pursue this hybrid plutonium disposition strategy. *Id*. According to DOE, this strategy would entail the construction and operation of three major facilities for surplus plutonium disposition:

- A pit disassembly and conversion facility to convert surplus U.S. plutonium weapons components (pits) into an unclassified oxide form suitable for disposition and inspection.

- A MOX fuel fabrication facility to fabricate surplus plutonium oxide into MOX fuel for irradiation in existing U.S. commercial nuclear reactors.

- A plutonium immobilization plant to immobilize surplus non-pit plutonium in a ceramic material that is then surrounded by vitrified high-level radioactive waste.

Ex. 7, *Report to Congress*, at 2-1. This strategy would allow DOE to convert the surplus plutonium to forms that meet the "Spent Fuel Standard" recommended by the National Academy of Sciences by making the "material as inaccessible and unattractive for weapons use as the much larger and growing inventory of plutonium that exists in spent nuclear fuel from commercial power reactors." *Id.*

62. At the time of the 1997 PEIS ROD, DOE had not yet decided the locations where the plutonium disposition would take place, *i.e.*, where the MOX Facility would be built, or the exact amounts of material to be dispositioned by either immobilization or irradiation in MOX fuel. Because the disposition effort was considered a "major federal action" under NEPA, DOE needed to conduct additional NEPA reviews to analyze the different options for the disposition facilities. *Id*. DOE announced its intention to conduct this analysis on May 22, 1997. *See* Ex. 10, DOE Notice of Intent for SPD EIS-0283.

63. While this analysis was being conducted, in October 1998, Congress enacted the Strom Thurmond National Defense Authorization Act for Fiscal Year 1999, Pub. L. 105-261, 112 Stat. 1920, which gave the U.S. Nuclear Regulatory Commission (NRC) licensing authority over the construction and operation of MOX fuel fabrication and other irradiation facilities.

64. In November 1999, after further evaluating the alternatives for surplus plutonium disposition, DOE issued the *Surplus Plutonium Disposition Final EIS* (*SPD EIS*) stating that the "purpose of and need for the proposed action is to reduce the threat of nuclear weapons

proliferation worldwide by conducting disposition of surplus plutonium in the United States in an environmentally safe and timely manner." Ex. 11, DOE, Excerpt from *SPD EIS*, Vol. I – Part A, at 1-3 (Nov. 1999).

65. The "No Action Alternative" in the SPD EIS did not involve disposition of any surplus plutonium but rather addressed storage of the plutonium in accordance with the prior PEIS, which only analyzed the impacts of continued storage of the surplus plutonium for a period up to 50 years.

66. DOE also again concluded that the "Preferred Alternative" was the hybrid approach to immobilize a portion of the surplus weapons-grade plutonium in glass and ceramic materials and to irradiate the remaining plutonium in MOX fuel in existing domestic, commercial reactors. *Id.* at 1-10 to 1-11. DOE selected SRS as the preferred site to implement both of these approaches and upon which to construct and operate the MOX Facility. *Id.*

67. In 1999, DOE signed a contract with a consortium, now CB&I AREVA MOX Services, LLC (MOX Services), to design, build, and operate the MOX Facility. *See* Ex. 12, DOE, Excerpt from *Surplus Plutonium Disposition Final EIS* (*SPD EIS*), Summary, at S-1 (Nov. 1999).

68. In January 2000, consistent with the conclusions in the *SPD EIS*, DOE officially decided to construct and operate the MOX Facility at SRS to fabricate MOX fuel using approximately 33 metric tons of surplus plutonium, as well as a new immobilization facility. Ex. 13, DOE, ROD for *SPD EIS* (Jan. 11, 2000). DOE reasoned that pursuing this dual-track approach provided "the best opportunity for U.S. leadership in working with Russia to implement similar options for reducing Russia's excess plutonium" and would "send the strongest possible signal to the world of U.S. determination to reduce stockpiles of surplus weapons-usable plutonium as quickly as possible and in an irreversible manner." *Id.*

69. In September 2000, the United States and Russia entered into the Plutonium Management and Disposition Agreement (PMDA) whereby each nation agreed to dispose of no less than 34 metric tons of weapons-grade plutonium. Ex. 14, PMDA (Sept. 1, 2000); *see* Ex. 15, Congressional Research Serv., Mem., *U.S.-Russia Plutonium Management Disposition Agreement*, dated Oct. 20, 2015 (describing history of PMDA) (hereinafter *CRS PMDA Report*).

70. Continuing on the path towards construction and operation of the MOX Facility, on or about February 28, 2001, MOX Services submitted a request to the NRC for a license to construct the MOX Facility at SRS. *See* Ex. 16, NRC, Excerpt from *Environmental Impact Statement on the Construction and Operation of a Proposed Mixed Oxide Fuel Fabrication Facility at Savannah River Site, South Carolina* 1-3 (Jan. 2005) (*NRC EIS*).

71. In late 2001, Congress enacted the National Defense Authorization Act for Fiscal Year 2002, Pub. L. No. 107-107, 115 Stat. 1378 (NDAA FY02). Section 3155 of NDAA FY02 was entitled "Disposition of Surplus Defense Plutonium at Savannah River Site, Aiken, South Carolina" (SRS Plutonium Disposition Provisions). Therein, Congress directed DOE to provide, not later than February 1, 2002, a plan for the disposal of surplus defense plutonium located at SRS and to be shipped to SRS in the future. NDAA FY02, § 3155.

72. The SRS Plutonium Disposition Provisions also required the Secretary of Energy to:

- Consult with the Governor of South Carolina regarding "any decisions or plans of the Secretary related to the disposition of surplus defense plutonium and defense plutonium materials located at [SRS]";
- Submit a report to the congressional defense committees providing notice for each shipment of defense plutonium and defense plutonium materials to SRS;
- If DOE decides not to proceed with construction of the immobilization facilities or the MOX Facility, prepare a plan

> that identifies a disposition path for all defense plutonium and defense plutonium materials; and
>
> - Include with the budget justification materials submitted to Congress in support of DOE's budget for each fiscal year "a report setting forth the extent to which amounts requested for the [DOE] for such fiscal year for fissile materials disposition activities will enable the [DOE] to meet commitments for the disposition of surplus defense plutonium and defense plutonium materials located at [SRS]…."

73. Consistent with its duties under the SRS Plutonium Disposition Provisions, in January 2002, DOE decided not to proceed with the immobilization portion of the hybrid strategy, leaving the construction and operation of the MOX Facility as the only strategy to dispose of surplus plutonium in the United States. In support of its decision, DOE stated that moving to a MOX-only disposition strategy followed "an exhaustive Administration review of non-proliferation programs, including alternative technologies to dispose of surplus plutonium to the meet the non-proliferation goals agreed to by the United States and Russia." Ex. 17, DOE, Release No. PR-02-007 (Jan. 23, 2002).

74. On or about February 15, 2002, DOE/NNSA submitted its *Report to Congress: Disposition of Surplus Plutonium at Savannah River Site*. Ex. 7, *Report to Congress*. The report's conclusions reiterated DOE's previous announcement 3 weeks prior that it was moving to the MOX-only approach at SRS for the United States' surplus plutonium disposition. *Id.* Advocating for the construction of the MOX Facility at SRS, the report provided an in-depth historical look at the plutonium disposition program and the myriad studies and reports conducted to find the "most advantageous option for disposition of U.S. surplus plutonium," ultimately concluding, once again, that constructing the MOX Facility at SRS was the "preferred option." *Id.*

75. DOE/NNSA also stated in the report that:

> **[The long-term storage option without disposition] does not achieve the U.S. plutonium disposition mission and it renounces the U.S.-Russian**

> **PMDA**….This option would represent a reversal of the U.S. position on disposition of surplus plutonium, be derided internationally, and be opposed by the states and the public.

Id. (emphasis added).

76. Under the PMDA, the United States and Russia also had decided to use MOX technology as the preferred method of disposition, and, in 2002, Linton F. Brooks, Deputy Administrator for Defense Nuclear Nonproliferation for DOE/NNSA testified that any delay or uncertainty in the MOX program could "kill" the PMDA. Ex. 18, Brooks Aff., *Hodges v. Abraham*, C/A No. 1:02-cv-01426-CMC. He further testified that failure to comply with the PMDA "would call into question the United States' commitment to other nonproliferation efforts and diminish our credibility in continuing to provide leadership on these issues internationally." Ex. 18, Brooks Aff. at ¶16.

77. On or about April 19, 2002, DOE amended the *PEIS* and *SPD EIS* RODs to reflect its decision to cancel the immobilization portion of the plutonium disposition strategy. Ex. 19, DOE, *Am. ROD for PEIS & SPD EIS* (April 19, 2002). DOE added:

> In response to a statutory directive, DOE/NNSA has submitted to Congress a report on a strategy for the disposal of surplus plutonium currently located at, or to be shipped to SRS. That strategy involves converting this plutonium to a mixed-oxide (MOX) fuel and irradiating it in commercial power reactors. DOE/NNSA is currently evaluating the changes to the MOX fuel portion of the surplus plutonium disposition program necessitated by this strategy, including the need for additional environmental reviews pursuant to the National Environmental Policy Act (NEPA). No final decisions regarding the MOX portion of the program will be made until these reviews are completed.

Id. As discussed below, these "additional environmental reviews" were later conducted and DOE (and Congress) did make a "final decision" regarding the MOX Facility at SRS. *See* ¶ 83 (discussing 2003 SPD EIS Amended ROD).

78. Following the issuance of DOE/NNSA's report, Congress enacted statutory requirements for the construction and operation of the MOX Facility by DOE. NDAA FY03, Pub. L. No. 107-314, 116 Stat. 2458, § 3182, *subsequently codified by* the National Defense Authorization Act for Fiscal Year 2004, Pub. L. No. 108-136, 117 Stat. 1392, as 50 U.S.C.A. § 2566.

79. In support of Section 2566, Congress made the following findings:

> (1) In September 2000, the United States and the Russian Federation signed a Plutonium Management and Disposition Agreement by which each agreed to dispose of 34 metric tons of weapons-grade plutonium.
>
> (2) The agreement with Russia is a significant step toward safeguarding nuclear materials and preventing their diversion to rogue states and terrorists.
>
> (3) The Department of Energy plans to dispose of 34 metric tons of weapons-grade plutonium in the United States before the end of 2019 by converting the plutonium to a mixed-oxide fuel to be used in commercial nuclear power reactors.
>
> (4) The Department has formulated a plan for implementing the agreement with Russia through construction of a mixed-oxide fuel fabrication facility, the so-called MOX facility, and a pit disassembly and conversion facility at the Savannah River Site, Aiken, South Carolina.
>
> (5) The United States and the State of South Carolina have a compelling interest in the safe, proper, and efficient operation of the plutonium disposition facilities at the Savannah River Site. The MOX facility will also be economically beneficial to the State of South Carolina, and that economic benefit will not be fully realized unless the MOX facility is built.
>
> (6) The State of South Carolina desires to ensure that all plutonium transferred to the State of South Carolina is stored safely; that the full benefits of the MOX facility are realized as soon as possible; and, specifically, that all defense plutonium or defense plutonium materials transferred to the Savannah River Site either be processed or be removed expeditiously.

NDAA FY03, Subtitle E, § 3181.

80. Section 2566 is the Congressional mandate for the "construction and operation of [the MOX Facility]."

81. Section 2566 was enacted to codify the commitments of the United States and DOE to the State of South Carolina that while plutonium may be placed in South Carolina, such placement was not for long-term storage of plutonium in the State, but rather temporary storage to implement the disposition method of MOX processing in the MOX Facility. Specifically, NNSA recognized in 2002 that "**[s]torage in place undercuts existing commitments to the states, particularly South Carolina**, which is counting on disposition as a means to **avoid becoming a permanent 'dumping ground' for surplus weapons-grade plutonium** by providing a pathway out of the site for plutonium brought there for disposition." Ex. 7, *Report to Congress* 5-2 (emphasis added).

82. Section 2566(c) and (e) require the removal of defense plutonium from South Carolina when milestones are not met. DOE and NNSA have missed and will miss the requisite milestones, requiring all defense plutonium to be removed from South Carolina and conversely prohibit the importation of any additional defense plutonium.

83. DOE/NNSA also recognized its duties under Section 2566 in its 2003 Amended *SPD EIS* ROD in which it stated:

> Finally, DOE/NNSA takes note of Division C, Title XXXI, Subtitle E of the recently enacted Bob Stump National Defense Authorization Act for Fiscal Year 2003 (Pub. L. 107–314, December 2, 2002). That Subtitle, entitled 'Disposition of Weapons-Usable Plutonium at Savannah River, South Carolina,' directs the Secretary to submit to Congress a plan for and series of reports regarding construction and operation of a MOX facility at SRS under a specific timetable. It also directs the Secretary to take certain actions if that schedule is not being met, which depending on the circumstance may include preparation of a corrective action plan,

> cessation of further transfers of weapons-usable plutonium to SRS until the Secretary certifies that the MOX production objective can be met, removal of weapons-usable plutonium transferred to SRS, and payment of economic assistance to SRS from funds available to the Secretary. In DOE/NNSA's view, enactment of this legislation demonstrates strong congressional interest in seeing DOE/NNSA proceed with the MOX facility as promptly as is reasonably possible, and DOE/NNSA is proceeding accordingly.

Ex. 20, DOE, *Am. ROD for SPD EIS* (April 24, 2003), 68 Fed. Reg. 20134.

84. Based on the decision to construct and operate the MOX Facility at SRS, the United States and DOE began transferring plutonium to SRS for processing into MOX fuel. *See, e.g.*, Ex. 21, DOE, *Storage of Surplus Plutonium Materials at the Savannah River Site Supplemental Analysis* (Sept. 5, 2007).

85. On or about March 30, 2005, after its own evaluation and analysis, NRC issued a license for construction to MOX Services. Ex. 22, NRC Construction Authorization No. CAMOX-001 (Mar. 30, 2005). NRC found that radiation exposure to the public is greater in a "no action" alternative than with the Project, noting that "continued storage would result in higher annual impacts" of public radiation exposure than implementation of the Project. Ex. 16, Excerpt from NRC EIS, at 4-96. NRC further found that:

> The primary benefit of operation of the proposed MOX facility would be the resulting reduction in the supply of weapons-grade plutonium available for unauthorized use once the plutonium component of MOX fuel has been irradiated in commercial nuclear reactors. ***Converting surplus plutonium in this manner is viewed as being a safer use/disposition strategy than the continued storage of surplus plutonium at DOE sites***, as would occur under the no-action alternative, since it would reduce the number of locations where the various forms of plutonium are stored (DOE 1997). Further, converting weapons-grade plutonium into MOX fuel in the United States — as opposed to immobilizing a portion of it as DOE had previously planned to do — lays the foundation for parallel disposition of weapons-grade plutonium in Russia, which distrusts immobilization for its failure to degrade the plutonium's isotopic composition (DOE 2002a). ***Converting surplus plutonium***

> ***into MOX fuel is thus viewed as a better way of ensuring that weapons-usable material will not be obtained by rogue states and terrorist groups***. Implementing the proposed action is expected to promote the above nonproliferation objectives. Additionally, building and operating the proposed MOX facility is expected to result in a gain of scientific knowledge relative to the conversion of weapons-grade plutonium into reactor fuel.

Id. at 2-36 (emphasis added).

86. The NRC approval of the MOX Project was based in part on the "national policy decision to reduce supplies of surplus weapons-grade plutonium, as reflected in agreements between the United States and Russia." *Id.* at 2-39.

87. Construction began on the MOX Facility on or about August 1, 2007.

88. Since 2007, Congress has invested billions of dollars in the MOX Facility.

89. Also in 2007, DOE/NNSA announced its intention to prepare a SPD Supplemental EIS to study alternatives for additional surplus plutonium for which a disposition pathway had not yet been chosen. *See* Ex. 23, DOE Notice of Intent, March 28, 2007. Several alternatives to be studied included utilizing the MOX Facility. *Id*.

90. In 2010, the United States and Russia amended the PMDA agreeing to begin plutonium disposition in 2018 and confirming that the MOX approach was the only option for plutonium disposition. The amended PMDA entered into force on July 13, 2011. Ex. 15, CRS PMDA Report.

91. In 2011, the Defendants informed Congress that they believed they would meet the MOX production objective by March 2018. Ex. 24, DOE/NNSA Report to Congress (Oct. 3, 2011).

92. In July 2012, after 5 years of analysis and public comment, DOE issued a Draft SPD Supplement EIS regarding its study of alternatives for additional surplus plutonium for which

a disposition pathway had not yet been chosen. Ex. 25, DOE, Excerpt from *Draft SPD Supplemental EIS* (July 2012). DOE stated that the "purpose and need for action remains, as stated in the [SPD EIS issued in 1999], to reduce the threat of nuclear weapons proliferation worldwide by conducting disposition of surplus plutonium in the United States in an environmentally sound manner, ensuring that it can never again be readily used in nuclear weapons." *Id.* at S-2.

93. After analysis of all the alternatives, DOE once again concluded that the "MOX Fuel Alternative is DOE's Preferred Alternative for surplus plutonium disposition." *Id*. at S-33. DOE added that "[i]t is important that [the MOX Facility] begin operations to demonstrate progress to the Russian government, meet U.S. legislative requirements, and reduce the quantity of surplus plutonium and the concomitant cost of secure storage." *Id.* at S-12.

94. The original deadline to achieve the MOX production objective was 2011. In 2005, the Section 2566(d) MOX production objective deadline was amended to extend that deadline by three years. Pub. L. No. 109-103, 119 Stat. 2247, § 313(3)(B).

95. In 2013, the MOX production objective deadline was further extended by another two years. Pub. L. No. 112-239, 126 Stat. 1633, § 3116(3)(B).

96. Then, in 2014, the Defendants sought to undermine and abandon the Project by recommending that the MOX Facility be funded only at a level sufficient to place the MOX project into "cold standby," which was the equivalent to an indefinite suspension of the project. Notwithstanding the absence of any change in funding or congressional authorization, DOE announced its intention to place the MOX facility into immediate cold standby even before the end of Fiscal Year 2014 without any plan for disposition or removal of the plutonium in South Carolina.

97. On March 18, 2014, in light of DOE's stated intentions, the State of South Carolina filed a lawsuit against the DOE, NNSA, and its officials to force DOE and NNSA to comply with the legal obligations, international agreement with Russia, and public policy for the expeditious disposal of weapons-grade plutonium. *South Carolina v. U.S. Dep't of Energy*, 1:14-cv-00975-JMC (dkt. # 1).

98. After the filing of the above lawsuit, DOE and NNSA agreed to continue construction of the Project in compliance with law, and the pending case was resolved through a stipulation of dismissal and was dismissed without prejudice. *South Carolina v. U.S. Dep't of Energy*, 1:14-cv-00975-JMC (dkt. # 19).

99. Since then, DOE's budget requests have all requested funding to terminate construction of the MOX Facility.

100. However, Congress has specifically required the DOE and NNSA to utilize any MOX-specific appropriations for the construction of the MOX Facility, denying and rebuffing the attempts by DOE and NNSA to utilize Congressional appropriations to terminate to the Project.

101. Nevertheless, DOE has continuously sought termination of the MOX project and has advocated for its proposed alternative, which is a process called "downblending" or "dilute and dispose." Under this proposed alternative, DOE would prepare surplus non–pit plutonium at SRS for disposal at the Waste Isolation Pilot Plant (WIPP) near Carlsbad, New Mexico, a geologic repository for disposal of transuranic (TRU) waste generated by atomic energy defense activities.

102. In April 2015, DOE issued the Final SPD Supplemental EIS for the approximately 13.1 metric tons (14.4 tons) of surplus plutonium for which a disposition pathway is not yet assigned. Ex. 26, *SPD Supplemental EIS*, Foreword. Despite the Draft SPD Supplemental EIS in July 2012 concluding that the "MOX Fuel Alternative is DOE's Preferred Alternative for surplus

plutonium disposition," this Final SPD Supplemental EIS stated that DOE did not have a preferred alternative. *Id*.

103. Notably, the Final SPD Supplemental EIS stated that its purpose was "to evaluate the environmental impacts from alternatives for safe and timely disposition of approximately 13.1 metric tons (14.4 tons) of surplus plutonium for which a disposition pathway is not yet assigned, ***not to reconsider DOE's previous decisions about pursuing the MOX fuel approach for 34 metric tons (37.5 tons) of weapons-grade plutonium***." *Id*. Moreover, all the alternatives evaluated assumed that the MOX Facility would be operational and would disposition as MOX fuel the 34 metric tons. *Id*. ("Under all alternatives, DOE would also disposition as MOX fuel 34 metric tons (37.5 tons) of surplus plutonium in accordance with previous decisions. The 34 metric tons (37.5 tons) of plutonium would be fabricated into MOX fuel at MFFF for use at domestic commercial nuclear power reactors.").

104. On December 24, 2015, DOE announced that its "Preferred Alternative" for 6 of the 13.1 metric tons of surplus plutonium for which a disposition pathway had yet been assigned was the "Dilute and Dispose" method, and on April 5, 2016, DOE issued its Record of Decision. Ex. 27, DOE, *ROD for Surplus Plutonium Disposition* (April 5, 2016). No decision was or has been made with respect to the remaining 7.1 metric tons for which a disposition pathway is not yet assigned.

105. There has been no NEPA analysis completed for using the "Dilute and Dispose" method as an alternative to the MOX project to process and dispose of the 34 metric tons of MOX-able defense plutonium. *See* Ex. 28, April 2, 2018 EPA Ltr. to Rick Lee, Chairman, Governor's Nuclear Advisory Council.

106. As proposed by DOE, "Dilute and Dispose" requires the importation of over 26 metric tons of weapons-grade plutonium to SRS, with almost 8 metric tons of weapons-grade, MOX-able plutonium already at SRS. Ex. 29, NNSA, *Surplus Plutonium Disposition Dilute and Dispose Option Independent Cost Estimate (ICE) Report* at 6.

107. There are significant obstacles to the "Dilute and Dispose" process and, although Congress has made available a limited amount of appropriated funds to study this process, Congress has not approved Dilute and Dispose as an alternative to the MOX Project to process and dispose of the MOX-able defense plutonium and has continued to fund construction of the MOX Facility.

108. By statute, the "Dilute and Dispose" method, as planned by DOE, cannot legally be undertaken at SRS to dispose of the 34 metric tons of weapons-grade plutonium.

109. Nevertheless, on the purported basis that the Secretary has complied with the "waiver" requirements of Section 3121 of NDAA FY18 and Section 309 of the CAA FY18, *see* Paragraphs 44 to 49, the Defendants have decided to terminate and cease construction of the MOX Facility and pursue the "Dilute and Dispose approach to plutonium disposition." Ex. 1, May 10, 2018 Secretary Perry Letter; Ex. 29, NNSA, *Surplus Plutonium Disposition Dilute and Dispose Option Independent Cost Estimate (ICE) Report*.

110. Termination of the MOX Project violates the PMDA, thus placing the United States in default of a nuclear nonproliferation agreement with the Russian Federation.

111. On May 14, 2018, DOE/NNSA issued a Partial Stop Work Order that halted any new contracts or new hires at SRS for the MOX Project. Ex. 30, May 14, 2018 NNSA Letter to CB&I AREVA MOX Services, LLC RE: Contract DE-AC02-99CH10888 (Mixed Oxide Fuel Fabrication Facility).

112. Upon information and belief, DOE and NNSA have acted in bad faith and contrary to law to undermine and sabotage the MOX project, including, but not limited to knowingly and willfully denying payment to the contractor. *See, e.g., CB&I AREVA MOX Services, LLC v. United States*, Case No. 1:16-cv-00950-TCW (Fed. Cl.); *CB&I AREVA MOX Services, LLC v. United States*, Case No. 1:18-cv-00677-TCW (Fed. Cl.). This misconduct and malfeasance includes, but is not limited to, the denial by DOE and NNSA of the procurement of personal protective equipment (PPE) and other safety equipment for the benefit of the employees for protection against among other things, radiation exposure and potential accidents.

113. On information and belief, DOE intends to issue a full stop work order to begin the wind-down of the MOX project and termination of employment of employees at SRS related to the MOX project on or about June 11, 2018.

FOR A FIRST CAUSE OF ACTION
(Violation of 50 U.S.C.A. § 2567 – Failure to Consult with the Governor)

114. The relevant allegations contained in the preceding and subsequent paragraphs are reasserted and reincorporated as fully as if set forth verbatim herein, insofar as they are not inconsistent with the allegations of this cause of action.

115. Section 2567(a) of the Atomic Energy Defense Provisions provides:

> The Secretary of Energy shall consult with the Governor of the State of South Carolina regarding any decisions or plans of the Secretary related to the disposition of surplus defense plutonium and defense plutonium materials located at the Savannah River Site, Aiken, South Carolina.

50 U.S.C.A. § 2567(a) (entitled "Consultation required").

116. The termination of the MOX Facility relates to the disposition of surplus defense plutonium and defense plutonium materials located at SRS. Ex. 1, May 10, 2018 Secretary Perry Letter.

117. The decision to pursue the Dilute and Dispose approach relates to the disposition of surplus defense plutonium and defense plutonium materials located at SRS. Ex. 1, May 10, 2018 Secretary Perry Letter.

118. Nevertheless, prior to these decisions related to the disposition of surplus defense plutonium and defense plutonium materials located at SRS, the Secretary of Energy did not consult with the Governor of South Carolina.

119. Representatives of DOE and NNSA, but not the Secretary, informed the Governor and other State representatives of decisions that were forthcoming or had been made, but the Federal Defendants did not engage in any meaningful discussion or information exchange with the Governor prior to rendering any decision regarding the MOX Project or the disposition pathway for plutonium. The Federal Defendants have consistently refused to engage in any meaningful discussion or information exchange with the State. Ex. 31, April 18, 2018 Lowell Letter. The Federal Defendants did not act reasonably or in good faith, as no "consultation" occurred.

120. The Secretary of Energy has a nondiscretionary, mandatory duty and obligation to the State of South Carolina pursuant to Section 2567(a) which has been unlawfully withheld.

121. For the foregoing reasons, South Carolina is entitled to a declaration and order (1) enjoining and requiring the Secretary of Energy to consult with the Governor of South Carolina regarding all decisions and plans related to the disposition of surplus defense plutonium and defense plutonium materials located at SRS, and (2) enjoining the Defendants from taking any further action with respect the decision to terminate the MOX Facility or pursue the Dilute and Dispose approach until the Secretary of Energy complies with Section 2567(a).

FOR A SECOND CAUSE OF ACTION
(Violation of NEPA – Failure to Prepare a Supplemental EIS for Over 50 Years of Storage of Plutonium at SRS)

122. The relevant allegations contained in the preceding and subsequent paragraphs are reasserted and reincorporated as fully as if set forth verbatim herein, insofar as they are not inconsistent with the allegations of this cause of action.

123. NEPA requires federal agencies to prepare an Environmental Impact Statement (EIS) when a major federal action is proposed that may significantly affect the quality of the environment. 42 U.S.C.A. § 4332(2)(C); 40 C.F.R. § 1501.4(a)(1); 10 C.F.R. § 1021.310.

124. If after an EIS has been prepared for a proposed action, the federal agency makes substantial changes in the proposed action or there are new circumstances bearing on the proposed action or its impacts, the agency must prepare a supplemental EIS. 40 C.F.R. § 1502.9(c); *see* 10 C.F.R. § 1021.314 ("DOE shall prepare a supplemental EIS if there are substantial changes to the proposal or significant new circumstances or information relevant to environmental concerns….").

125. The Defendants' decision to terminate the MOX Facility means there is no disposition strategy for the defense plutonium stored at SRS that was intended to be processed by the MOX Facility.

126. There also is no pathway for the removal of this defense plutonium from South Carolina. In fact, DOE and NNSA have already violated (and are currently in violation of) the requirement under Section 2566(c)(1) for the removal of one metric ton of defense plutonium from South Carolina by January 1, 2016, and they have indicated that they have no intention of complying with the requirement under Section 2566(c)(2) for removal of all of the plutonium shipped to South Carolina since 2002 by January 1, 2022.

127. DOE and NNSA also have violated the requirements of Section 2566(b)(6) to provide to Congress a report on the options for removing from the State of South Carolina all of the plutonium shipped to South Carolina since 2002 and to conduct any analysis that may be required under NEPA in order to select among the options set forth in that report.

128. Based on the lack of any disposition strategy or removal strategy for the defense plutonium stored at SRS that was intended to be processed by the MOX Facility, this defense plutonium is now set to be stored at SRS permanently.

129. In other words, with its decision to terminate the MOX Project without any feasible pathway for processing or removal, DOE has rendered SRS the *de facto* dumping ground for weapons-grade plutonium.

130. However, in the prior NEPA analysis conducted by DOE and NNSA in 1996 for the storage of defense plutonium at SRS, storage was analyzed only for a period of 50 years. Ex. 8, PEIS; Ex. 13, DOE, ROD for *SPD EIS* (Jan. 11, 2000), 65 Fed. Reg. 1608.

131. There is no studied alternative for the storage of defense plutonium at SRS beyond that 50-year period, and DOE and NNSA did not prepare a supplemental EIS to analyze the environmental impact of storing defense plutonium at SRS for over 50 years prior to deciding to terminate the MOX Facility without any other disposition strategy or a removal strategy.

132. DOE has recognized on numerous occasions that the storage of plutonium has a significant environmental impact that requires the proper analysis under NEPA.

133. The conversion of the storage of weapons-grade plutonium at SRS from 50 years or less to indefinitely, and in consideration of the half-life of the weapons-grade plutonium existing at SRS is 24,100 years, is a substantial change and a significant new circumstance.

134. DOE and NNSA's decision to store defense plutonium at SRS beyond the 50-year period by terminating the MOX Facility without any other feasible or viable disposition strategy or removal strategy for the defense plutonium, which renders such storage longer than 50 years and indefinitely without any analysis or study, violates NEPA.

135. The May 10 decision certifying the selection of "dilute and dispose" as the "alternative" for the disposition of MOXable plutonium also is void because DOE and NNSA failed to comply with NEPA prior to selecting "dilute and dispose" as the new preferred alternative for plutonium disposition at SRS.

136. For the foregoing reasons, South Carolina is entitled to a declaration and order enjoining and requiring Defendants to analyze in accordance with NEPA the environmental impact of storing defense plutonium at SRS for a period greater than 50 years; and (2) enjoining the Defendants from taking any further action with respect to the termination decision of the MOX Facility until the required NEPA analyses have been conducted.

137. For the foregoing reasons, South Carolina is entitled to a declaration and order vacating the termination decision.

FOR A THIRD CAUSE OF ACTION
(NDAA FY18 and CAA FY18 – Failure to Meet Waiver Certification Requirements)

138. The relevant allegations contained in the preceding and subsequent paragraphs are reasserted and reincorporated as fully as if set forth verbatim herein, insofar as they are not inconsistent with the allegations of this cause of action.

139. Section 3121 of the NDAA FY18 provides that the "Secretary of Energy shall carry out construction and project support activities relating to the MOX facility using funds authorized to be appropriated by this Act or otherwise made available for fiscal year 2018 for [NNSA] for the MOX facility."

140. The Secretary can avoid this congressional mandate ***only*** if the Secretary submits to the congressional defense committees:

> (A) the commitment of the Secretary to remove plutonium intended to be disposed of in the MOX facility from South Carolina and ensure a sustainable future for the Savannah River Site;
>
> (B) a certification that—
>
> (i) an alternative option for carrying out the plutonium disposition program for the same amount of plutonium as the amount of plutonium intended to be disposed of in the MOX facility exists, meeting the requirements of the Business Operating Procedure of the National Nuclear Security Administration entitled 'Analysis of Alternatives' and dated March 14, 2016 (BOP–03.07); and
>
> (ii) the remaining lifecycle cost, determined in a manner comparable to the cost estimating and assessment best practices of the Government Accountability Office, as found in the document of the Government Accountability Office entitled 'GAO Cost Estimating and Assessment Guide' (GAO–09–3SP), for the alternative option would be less than approximately half of the estimated remaining lifecycle cost of the mixed oxide fuel program; and
>
> (C) the details of any statutory or regulatory changes necessary to complete the alternative option.

NDAA FY18, § 3121(b)(1).

141. In making the certification under Section 3121(b)(1)(B), the Secretary also must ensure that the estimates used "are of comparable accuracy." NDAA FY18, § 3121(b)(2).

142. Section 309 of the CAA FY18 provides that "Funds provided by this Act for Project 99–D–143, Mixed Oxide Fuel Fabrication Facility, and any funds provided by prior Acts for such Project that remain unobligated, may be made available only for construction and project support activities for such Project."

143. The Secretary can avoid this congressional mandate ***only*** if the requirements under Section 3121(b)(1) of the NDAA FY18 are met and the Secretary submits to the Committees on Appropriations of both Houses of Congress the lifecycle cost estimate used to make the certification under Section 3121(b)(1) of the NDAA FY18.

144. By letter dated May 10, 2018, the Secretary of Energy stated that the requirements of Section 3121 of NDAA FY18 and Section 309 of the CAA FY18 have been met and that the Secretary of Energy was therefore exercising his authority to "cease MOX construction." Ex. 1, Secretary Perry Ltr.

145. However, the requirements of Section 3121 of NDAA FY18 and Section 309 of the CAA FY18 have not been met.

146. In the May 10, 2018 letter, the Secretary of Energy provides, "I confirm that the Department is committed to removing plutonium from South Carolina intended to be disposed of in the MOX facility[,]" in an apparent attempt to satisfy Section 3121(b)(1)(A) of the NDAA FY18.

147. However, there has been no commitment by the DOE and NNSA to remove defense plutonium from South Carolina—in fact, quite the opposite.

148. DOE and NNSA are currently in violation of their obligations under federal law (*i.e.*, Section 2566) to remove defense plutonium from South Carolina and, although admitting such obligations, are refusing to remove defense plutonium in accordance with those statutory obligations.

149. As primary support for his claim of DOE and NNSA's "commitment," the Secretary of Energy also states, "[w]e are currently processing plutonium in South Carolina for shipment to the Waste Isolation Pilot Plant (WIPP) and intend to continue to do so."

150. However, none of the defense plutonium currently being processed in South Carolina for shipment to WIPP was intended to be disposed of by the MOX Facility.

151. The Secretary of Energy's claim of DOE and NNSA's "commitment" to remove defense plutonium from South Carolina is therefore without any support in law or fact.

152. In an apparent attempt to meet the requirements of Section 3121(b)(1)(B)(ii) and (b)(2) of the NDAA FY18, the Secretary of Energy states in his letter:

> I certify that the remaining lifecycle cost for the Dilute and Dispose approach will be less than approximately half of the estimated remaining lifecycle cost of the MOX fuel program. The Department's independent cost estimate concluded that the remaining Dilute and Dispose lifecycle cost is $19.9 billion. The Department estimated the remaining lifecycle cost of the MOX fuel program to be $49.4 billion. The independent cost estimate for the Dilute and Dispose lifecycle cost was determined in a manner comparable to the cost estimating and assessment best practices of the Government Accountability Office, as found in the document entitled 'GAO Estimating and Assessment Guide' (GAO-09-3SP), and the estimates used were of comparable accuracy.

153. However, the estimates used for the lifecycle costs of the MOX program and the Dilute and Dispose approach are ***not*** of comparable accuracy.

154. The lifecycle cost estimate completed in September 2016 that DOE/NNSA compared to the Dilute and Dispose lifecycle cost was not determined in a manner comparable to GAO best practices, as GAO determined a few months ago and DOE/NNSA now admits. Ex. 32, GAO, *Plutonium Disposition, Proposed Dilute and Dispose Approach Highlights Need for More Work at the Waste Isolation Pilot* (Sept. 2017) ("DOE's National Nuclear Security Administration (NNSA) has not yet applied best practices when revising its life-cycle cost estimate of $56 billion for the Plutonium Disposition Program using the MOX approach, as GAO previously recommended. This is because NNSA officials developed the revised life-cycle cost estimate to satisfy an annual requirement to record the plutonium environmental liability on departmental

financial statements that were due in September 2016."); Ex. 29, ICE Report at 48 ("The GAO notes, however, in their report 'Plutonium Disposition: Proposed Dilute and Dispose Approach Highlights Need for More Work at the Waste Isolation Pilot Plant' (GAO-17-390) that the 2016 MOX fuel program lifecycle estimate does not exhibit the characteristics of an estimate developed in alignment with GAO best practices (and was never intended as such).").

155. The cost estimate for the Dilute and Dispose approach utilizes more generous and liberal underlying assumptions in funding and risk while the cost estimate for the MOX Project utilizes more stringent and conservative underlying assumptions in funding and risk. It is not a comparable approach to assume that one project is funding constrained, but the competing project is not.

156. There is a wide difference in the confidence level of the estimates, which are not properly accounted for in the comparison.

157. Accordingly, the costs estimates are not—and cannot be—of comparable accuracy, and thus, the requirement of Section 3121(b)(2) of the NDAA FY18 has not been met.

158. In his letter, the Secretary of Energy also did not provide any details of the statutory or regulatory changes that are necessary to complete the proposed Dilute and Dispose approach, and thus, the requirement of Section 3121(b)(1)(C) of the NDAA FY18 has not been meet.

159. Rather, the Secretary of Energy, although recognizing the "capacity issues related to the receipt of the full 34 metric tons at WIPP," states that all that is needed to proceed with the Dilute and Dispose approach is a proposed permit modification.

160. However, DOE/NNSA have no basis in law or fact to simply assume that any permit modification will be granted, and DOE/NNSA cannot use this baseless assumption to avoid reporting to Congress, as required by Section 3121(b)(1)(C) of the NDAA FY18, the statutory and

regulatory changes that will be necessary for DOE/NNSA to pursue the Dilute and Dispose approach.

161. DOE also is statutorily obligated to remove all weapons-grade plutonium that arrived at SRS since 2002 from SRS by January 1, 2022. 50 U.S.C.A. § 2566.

162. Through its Dilute and Dispose proposal, DOE/NNSA would not remove the defense plutonium that arrived at SRS since 2002 from SRS by January 1, 2022 and would also import over an additional 26 metric tons of weapons-grade plutonium into SRS in the future, which necessarily means Section 2566 would have to be amended and revised for the Dilute and Dispose proposal to go forward.

163. However, DOE did not inform the Congressional committees of this necessary change as required by Section 3121(b)(1)(C) of the NDAA FY18.

164. In sum, the Secretary's purported "commitments" and "certifications" have no basis in law or fact.

165. Accordingly, the decision of DOE and NNSA to terminate the MOX Facility is arbitrary and capricious, constitutes an abuse of discretion, is not in accordance with the law, is in excess of statutory jurisdiction or authority, and is without observance of procedure required by law.

166. For the foregoing reasons, South Carolina is entitled to a declaration and order enjoining the Defendants from expending any funds authorized and appropriated for the construction of the MOX Facility to terminate the MOX Facility or pursue the Dilute and Dispose approach until Defendants comply with the requirements of Section 3121 of NDAA FY18 and Section 309 of the CAA FY18.

167. For the foregoing reasons, South Carolina is entitled to a declaration and order enjoining Defendants from undertaking any action in furtherance of or reliance upon the proposed termination decision or the partial stop work order.

168. For the foregoing reasons, South Carolina is entitled to a declaration and order vacating the termination decision.

PRAYER FOR RELIEF

WHEREFORE, the State of South Carolina prays that the Court grant the following relief:

A. A declaration and order that Defendants' decision to terminate the MOX Facility without consultation with the Governor of South Carolina violates Section 2567(a).

B. A declaration and order that Defendants' decision to terminate the MOX Facility and therefore leave South Carolina as a permanent depository for defense plutonium violates NEPA.

C. A declaration and order that Defendants' decision to terminate the MOX Facility is arbitrary and capricious, constitutes an abuse of discretion, is not in accordance with the law, is in excess of statutory jurisdiction or authority, and is without observance of procedure required by law.

D. A declaration and order that Defendants' decision to expend funds to terminate the MOX Facility is a violation of Section 3121 of NDAA FY18 and Section 309 of the CAA FY18.

E. A declaration and order preliminarily and permanently enjoining and requiring Defendants to comply with Section 2567(a).

F. A declaration and order preliminarily and permanently enjoining Defendants from terminating the MOX Facility until Defendants comply with Section 2567(a).

G. A declaration and order preliminarily and permanently enjoining Defendants from terminating the MOX Facility until Defendants comply with NEPA and study the environmental impact of storing defense plutonium at SRS for a period greater than 50 years.

H. A declaration and order preliminarily and permanently enjoining Defendants from terminating the MOX Facility until Defendants comply with Section 3121 of NDAA FY18 and Section 309 of the CAA FY18.

I. A declaration and order preliminarily and permanently enjoining Defendants from expending any appropriated funds to terminate the MOX Facility or pursue the "Dilute and Dispose" approach until Defendants comply with Section 3121 of NDAA FY18 and Section 309 of the CAA FY18.

J. A declaration and order preliminarily and permanently enjoining Defendants from transporting any defense plutonium or defense plutonium materials into the State of South Carolina.

K. A declaration and order vacating the termination decision by the Defendants, vacating and rescinding the Partial Stop Work Order, and preventing the Defendants from issuing a full or complete work stop order or otherwise terminate the MOX Project, and restoring the MOX Project to the status quo prior to the certification letter of Secretary Perry dated May 10, 2018.

L. A declaration and order requiring Defendants to pay the attorneys' fees and costs of the State of South Carolina for this action.

M. An order granting such other relief as the Court may deem just and proper.

[SIGNATURE PAGE FOLLOWS]

Respectfully submitted,

Alan Wilson, Fed. Bar No. 10457
Robert D. Cook, Fed. Bar No. 285
T. Parkin Hunter, Fed. Bar No. 2018
ATTORNEY GENERAL FOR THE STATE OF SOUTH CAROLINA
Post Office Box 11549
Columbia, South Carolina 29211-1549
awilson@scag.gov
bcook@scag.gov
phunter@scag.gov
(803) 734-3970

s/John W. Roberts
Randolph R. Lowell, Fed. Bar No. 9203
John W. Roberts, Fed. Bar No. 11640
WILLOUGHBY & HOEFER, P.A.
Post Office Box 8416
Columbia, South Carolina 29202-8416
rlowell@willoughbyhoefer.com
jroberts@willoughbyhoefer.com
(803) 252-3300

Attorneys for the State of South Carolina

May 25, 2018
Columbia, South Carolina

TABLE OF EXHIBITS

Exhibit Number	Document Name
Exhibit 1	Ltr. of Secretary Perry (May 10, 2018)
Exhibit 2	*Am. Interim Action Determination* (Oct. 13, 2011)
Exhibit 3	*Backgrounder on Plutonium*
Exhibit 4	*SPD Supplemental EIS* Factsheet (July 19, 2012)
Exhibit 5	Excerpt from *Final Surplus Plutonium Disposition Supplemental Environmental Impact Statement,* DOE/EIS-0283-S2 (April 2015)
Exhibit 6	Excerpt from *History of the U.S. Weapons-Usable Plutonium Disposition Program Leading to DOE's Record of Decision* (1997)
Exhibit 7	*Report to Congress: Disposition of Surplus Defense Plutonium at Savannah River Site* (Feb. 15, 2002)
Exhibit 8	PEIS (Dec. 1996)
Exhibit 9	*Record of Decision for PEIS* (Jan. 21, 1997)
Exhibit 10	DOE Notice of Intent for SPD EIS-0283 (May 22, 1997)
Exhibit 11	Excerpt from *SPD EIS,* Vol. I – Part A (Nov. 1999)
Exhibit 12	Excerpt from *Surplus Plutonium Disposition Final EIS,* Summary (Nov. 1999)

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Exhibit Number	Document Name
Exhibit 13	*Record of Decision for SPD EIS* (Jan. 11, 2000)
Exhibit 14	PMDA (Sept. 1, 2000)
Exhibit 15	Congressional Research Serv., Mem., *U.S.-Russia Plutonium Management Disposition Agreement* (Oct. 20, 2015)
Exhibit 16	Excerpt from *Environmental Impact Statement on the Construction and Operation of a Proposed Mixed Oxide Fuel Fabrication Facility at Savannah River Site, South Carolina* (Jan. 2005)
Exhibit 17	Press Release, No. PR-02-007 (Jan. 23, 2002)
Exhibit 18	Brooks Affidavit *Hodges v. Abraham*, C/A No. 1:02-cv-01426-CMC
Exhibit 19	*Am. ROD for PEIS & SPD EIS* (Apr. 19, 2002)
Exhibit 20	*Am. SPD EIS ROD* (Apr. 24, 2003)
Exhibit 21	*Storage of Surplus Plutonium Materials at the Savannah River Site Supplemental Analysis* (Sept. 5, 2007)
Exhibit 22	NRC Construction Authorization No. CAMOX-001 (Mar. 30, 2005)
Exhibit 23	DOE Notice of Intent (Mar. 28, 2007)
Exhibit 24	DOE/NNSA Report to Congress (Oct. 3, 2011)

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Exhibit Number	Document Name
Exhibit 25	Excerpt from *Draft SPD Supp. EIS* (July 2012)
Exhibit 26	Excerpt from *SPD Supplemental EIS* (April 2015)
Exhibit 27	*ROD for Surplus Plutonium Disposition* (April 5, 2016)
Exhibit 28	EPA Ltr. to Rick Lee (April 2, 2018)
Exhibit 29	*Surplus Plutonium Disposition Dilute and Dispose Option Independent Cost Estimate (ICE) Report* (April 2018)
Exhibit 30	NNSA Letter to CB&I AREVA MOX Services, LLC (May 14, 2018)
Exhibit 31	Lowell Letter to Federal Defendants (April 18, 2018)
Exhibit 32	GAO, *Plutonium Disposition, Proposed Dilute and Dispose Approach Highlights Need for More Work at the Waste Isolation Pilot* (Sept. 2017)