No. 18-

IN THE

Supreme Court of the United States

STATE OF SOUTH CAROLINA,

Petitioner,

v.

UNITED STATES OF AMERICA, *et al.*,

Respondents.

ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FOURTH CIRCUIT

PETITION FOR A WRIT OF CERTIORARI

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QUESTION PRESENTED

The U.S. Department of Energy (DOE) shipped massive amounts of weapons-grade plutonium to South Carolina for a decade in anticipation of building a facility there—the "MOX Facility"—to process it. After running way behind schedule and far over budget, DOE sought to mothball the still-uncompleted MOX Facility. In response, Congress enacted a statute requiring DOE to keep building the MOX Facility unless DOE gets a "waiver" of that requirement. This lawsuit arose from DOE's decision to halt construction of the MOX Facility permanently after purportedly satisfying the statute's requirements for a waiver. South Carolina claims in this suit that DOE's decision violates the statute, which was specifically designed to protect South Carolina's interests, and the National Environmental Policy Act.

The question presented is whether the United States Court of Appeals for the Fourth Circuit erred in holding that South Carolina lacked standing to challenge the DOE's final action and that the challenge is not ripe.

PARTIES TO THE PROCEEDINGS

Pursuant to Rule 14.1(b), Petitioner states that the parties include:

1. State of South Carolina, Plaintiff and Petitioner;

2. United States of America, Defendant and Respondent;

3. United States Department of Energy, Defendant and Respondent;

4. Rick Perry, in his official capacity as Secretary of Energy, Defendant and Respondent;

5. National Nuclear Security Administration, Defendant and Respondent;

6. Lisa E. Gordon-Hagerty, in her official capacity as Administrator of the National Nuclear Security Administration and Undersecretary for Nuclear Security, Defendant and Respondent.

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PETITION FOR A WRIT OF CERTIORARI

Petitioner State of South Carolina (South Carolina or State) respectfully submits this petition for a writ of certiorari to review the judgment of the United States Court of Appeals for the Fourth Circuit in this case.

OPINIONS BELOW

The opinion of the court of appeals is reported at 912 F.3d 720. App. 1a–22a. The opinion of the district court is reported at 329 F. Supp. 3d 214. App. 34a–82a. The decision of the United States Secretary of Energy is unreported but is reproduced in the appendix. App. 107a–109a.

STATEMENT OF JURISDICTION

The United States Court of Appeals for the Fourth Circuit entered its judgment on January 8, 2019. On March 29, 2019, the Chief Justice extended the time to file a petition for a writ of certiorari up to and including June 7, 2019. The jurisdiction of this Court rests on 28 U.S.C. § 1254(1).

CONSTITUTIONAL AND STATUTORY PROVISIONS INVOLVED

Article III, § 2, of the U.S. Constitution provides in relevant part, "[T]he judicial Power shall extend to all Cases, in Law and Equity, arising under this Constitution, [and] the Laws of the United States. . . ."

Pertinent statutory and regulatory provisions are reproduced in the appendix to this petition. App. 83a–106a.

INTRODUCTION

This case involves the justiciability of a State's claims against the federal government for statutory violations, including violations of provisions expressly designed to protect the State's concrete interests. The decision below, which denied the justiciability of those claims, conflicts with this Court's decision in *Massachusetts v. EPA*, 549 U.S. 497 (2007), and provides an excellent vehicle for dispelling continuing confusion among the lower courts about the standing of States to sue the federal government.

South Carolina is home to the Savannah River Site (SRS), where Congress directed the U.S. Department of Energy (DOE) to build a facility to convert weapons-grade plutonium (also known as "defense plutonium") into mixed-oxide (MOX) fuel for use in commercial nuclear reactors. App. 3a–4a, 83a.[1] In the statute directing DOE to build this facility—known as the MOX Facility or Project—Congress included multiple provisions designed to address South Carolina's concern about becoming a permanent dumping ground for multiple tons of this admittedly dangerous material. 50 U.S.C. § 2566. Starting in 2014, DOE sought to terminate construction of the MOX Facility after its construction had fallen way behind schedule and gone way over budget.

On May 10, 2018, the Secretary of DOE announced his decision to permanently abandon construction of the

1. We use "DOE" to refer collectively to the respondents. Among the respondents is the National Nuclear Security Administration (NNSA). NNSA is "established within the Department of Energy [as] a separately organized agency." 50 U.S.C. § 2401(a). The NNSA administers and manages activities related to the MOX Facility. *See id.* §§ 2471(2)(D) & 2481(a).

MOX Facility and to pursue a new concept for processing weapons-grade plutonium called "Dilute and Dispose" or "downblending." In the letter announcing this decision, the Secretary purported to comply with the statutory requirements for a "waiver" of the statutory mandate to continue construction of the MOX Facility. DOE made this decision without any analysis under the National Environmental Policy Act, 42 U.S.C. §§ 4321–4370h (NEPA), or complying with the analysis requirements of the governing statute.[2]

To remedy these statutory violations, South Carolina brought this action against DOE. The district court granted a preliminary injunction to prevent DOE from terminating construction of the MOX Facility, but the Fourth Circuit reversed. Without reaching the merits, the Fourth Circuit held that South Carolina lacked Article III standing and that its claims are not ripe. The Fourth Circuit characterized South Carolina's standing argument as resting on its fear of being "the permanent repository of weapons-grade plutonium." App. 12a. The Fourth Circuit believed that this fear was "too speculative" to constitute injury in fact or present ripe claims. App. 12a. The Fourth Circuit did not cite *Massachusetts v. EPA* despite its obvious relevance and South Carolina's citation of that decision in its brief.

The Fourth Circuit's decision conflicts with this Court's decision in *Massachusetts v. EPA* and misreads

2. National Defense Authorization Act for Fiscal Year 2018 (NDAA FY18), § 3121(b)(1)(B)(i), 131 Stat. 1283, 1892-93 (2017) (App. 95a); Business Operating Procedure of the National Nuclear Security Administration, "Analysis of Alternatives," dated March 14, 2016 (BOP–03.07), available at https://directives.nnsa.doe.gov/bop/bop-0003-0007.

other decisions of this Court on Article III's standing and ripeness requirements. The decision warrants this Court's review because it could hamper South Carolina's ability to enforce statutory provisions that relate to the weapons-grade plutonium at SRS, and other States' ability to enforce statutory rights enacted to protect their interests.

STATEMENT OF THE CASE

South Carolina is home to 10 metric tons of weapons-grade plutonium, which are stored at SRS. If the decision below stands and DOE has its way, South Carolina will be forced to host at least an additional 20 metric tons indefinitely, while DOE tries to turn a new concept for processing it into a reality. DOE's track record in dealing (more accurately, in failing to deal) with the existing 10 metric tons does not inspire confidence that the proposed total of more than 30 metric tons, and their associated dangers, will be going anywhere any time soon. Remarkably, after the district court held that South Carolina was likely to succeed on the merits of its claims in this action, the Fourth Circuit foreclosed the State from even being able to question executive-branch compliance with statutory requirements that Congress specifically and expressly designed to protect South Carolina's interests.

I. Congress enacts statutory protections to prevent South Carolina from becoming the permanent repository of weapons-grade plutonium put there by the federal government.

In September 2000, the United States and Russia entered an agreement under which each country

would dispose of 34 metric tons of weapons-grade plutonium. App. 35a, 76a. To meet its obligations under this agreement, Congress in 2003 enacted legislation authorizing the construction of the MOX Facility at SRS. App. 39a, 76a–77a. The legislation included a finding that the "agreement with Russia is a significant step toward safeguarding nuclear materials and preventing their diversion to rogue states and terrorists." Bob Stump National Defense Authorization Act for Fiscal Year 2003 (NDAA FY03), § 3181(1), 116 Stat. 2458, 2747 (2002). Another finding stated that DOE planned—quite optimistically in hindsight—for the MOX Facility to begin operating in 2009 and to convert 34 metric tons of weapons-grade plutonium into mixed-oxide fuel "before the end of 2019." *Id.* § 3181(3) & (4).

South Carolina had protested selection of SRS as the site for the MOX Facility. In addition to the concern that weapons-grade plutonium could fall into the wrong hands, South Carolina worried about its citizens' prolonged exposure to multiple tons of this admittedly hazardous material. Indeed, the Nuclear Regulatory Commission (NRC) recognized, when it issued the construction license for the MOX Facility in 2005, that the primary benefit of the Facility's operation would be to reduce the supply of weapons-grade plutonium "available for unauthorized use." App. 62a. The NRC also recognized that "continued storage [of the plutonium] would result in higher annual impacts" of public radiation exposure than implementation of the Project. App. 62a. Besides concerns for its citizens, South Carolina had concerns as the owner of "extensive property adjoining, and one road traversing, the impacted area." App. 47a.

Congress addressed some of South Carolina's concerns in the 2003 statute authorizing the MOX Facility. NDAA FY03, § 3182, *subsequently codified* as 50 U.S.C.A. § 2566 (Section 2566). Section 2566 prescribes deadlines for construction of the Facility and for its processing of the plutonium. *E.g.*, *id.* § 2566. The key deadline provided that, as of January 1, 2012, the MOX Facility would be processing no less than one metric ton of weapons-grade plutonium per year. *Id.* 2566(a), (h). The statute also prescribes remedies against DOE for missing these deadlines. *Id.* § 2566(b)(6)(B), (b)(6)(C); *id.* § 2566(c); *id.* § 2461.

Beginning shortly after the enactment of § 2566 and continuing through 2012, DOE shipped significant amounts of defense plutonium to South Carolina for conversion into MOX fuel. Construction began on the MOX Facility on or about August 1, 2007. As the National Academy of Sciences observed, however, "Construction has encountered substantial schedule delays and cost overruns." National Academies of Sciences, Engineering, and Medicine, *Disposal of Surplus Plutonium at the Waste Isolation Pilot Plant: Interim Report* 2 (Washington, DC: The National Academies Press, Oct. 2018) [hereafter cited as NAS Interim Report].[3] Although the MOX Facility originally was supposed to begin operating in 2009, today DOE estimates construction will not be completed until at least 2048. App. 5a. The delay caused DOE to violate, among other statutory requirements, a requirement that it remove not less than one metric ton of weapons-grade plutonium by January 1, 2016. In a prior action, South Carolina successfully sued DOE for this statutory

3. Available at https://www.nap.edu/read/25272/chapter/1.

violation. *South Carolina v. United States*, 907 F.3d 742 (4th Cir. 2018).

II. DOE terminates construction of the MOX Facility with no approved alternative for disposition of the defense plutonium at SRS.

Since 2014, DOE has continuously sought termination of the MOX Project and advocated for its proposed "Dilute and Dispose" concept, under which DOE would prepare "dilute" plutonium at SRS for ultimate "disposition" at the Waste Isolation Pilot Plant (WIPP) in New Mexico. Despite DOE's new idea, Congress has continued to mandate that DOE build the MOX Facility. The current mandate is found in two statutory provisions: Section 3121(a) of the NDAA FY18, and Section 309(a) of the Consolidated Appropriations Act, 2018 (CAA FY18). App. 95a–98a.[4]

Recognizing South Carolina's concerns that it be left as an indefinite repository for defense plutonium, Congress specified that DOE can avoid the statutory mandate to construct the MOX Facility only if the Secretary of Energy obtained a waiver of it. The waiver requirements are prescribed in Section 3121(b) of NDAA FY18, and are incorporated by reference in Section 309(b) of CAA

4. *See* NDAA FY18, § 3121(a); CAA FY18, § 309(a), 132 Stat. 348, 530 (2018). After the district court issued its preliminary injunction and while this case was pending at the Fourth Circuit, Congress reaffirmed this mandate for fiscal year 2019. *See* John S. McCain National Defense Authorization Act for Fiscal Year 2019, § 3119, 132 Stat. 1636, 2292 (2018) (requiring continued construction of the MOX Facility unless the waiver requirements prescribed in Section 3121(b) of NDAA FY18 are met).

FY18. App. 95a–98a. To get a waiver, the Secretary must "submit to the congressional defense committees" (1) a commitment to remove defense plutonium from South Carolina and (2) a certification regarding certain points, including the existence of a viable and feasible alternative option.[5] This waiver requirement was enacted by Congress to ensure a legally viable and feasible disposition pathway existed to remove defense plutonium from South Carolina.

The Secretary of Energy purported to meet the waiver requirement in a letter dated May 10, 2018 ("May 10 Letter"). The May 10 Letter notified Congress of DOE's decision to permanently abandon construction of the MOX Facility and pursue its "Dilute and Dispose" concept for plutonium disposition. App. 107a–109a. In the May 10 Letter, the Secretary stated, "I confirm that the Department is committed to removing plutonium from South Carolina intended to be disposed of in the MOX facility." App. 107a. The Secretary also certified that "an alternative option for carrying out the plutonium disposition program . . . exists"—namely, the "Dilute and Dispose Approach." App. 108a. But the Secretary did not address the "many barriers" that the National Academy of Sciences has identified and said "must be addressed . . . before the dilute and dispose conceptual plans can be implemented." NAS Interim Report, *supra*, at 19. In particular, the Secretary did not address any of the legal barriers that exist, despite the waiver provision's requirement that he identify "the details of any statutory or regulatory changes necessary to complete" the Dilute and Dispose concept. NDAA FY18, § 3121(b)(1)(C).

5. NDAA FY18, § 3121(b)(1); CAA FY18, § 309(b), (c).

Based on the decision reported in the May 10 Letter, the Secretary issued a "partial stop work order" on May 14, 2018. App. 50a (quoting ECF No. 19-1 ¶ 10). The partial stop work order "halted any new contracts or new hires at SRS for the MOX Project." App. 44a, 72a. The order "was issued to minimize cos[t] to the government during the 30 day period leading up to an eventual full stop work order and the termination letter expected to be issued on June 11, 2018." App. 50a (quoting ECF No. 19-1 ¶ 10). South Carolina filed this action before the termination letter issued and obtained a preliminary injunction against its issuance.

Today, South Carolina continues to host about 10 metric tons of weapons-grade plutonium at SRS slated for MOX Facility processing. South Carolina has no reason to believe that this material is going anywhere anytime soon. To the contrary, as discussed above, DOE has repeatedly missed statutory deadlines for construction and operation of the MOX Facility. In the meantime, South Carolina and its people continue to live with the dangers that are associated with this material and that led to the international agreement with Russia and the Act of Congress directing construction of the MOX Facility in the first place.

III. The Proceedings Below.

A. Federal District Court

On May 25, 2018, the State filed a complaint in the United States District Court for the District of South Carolina challenging DOE's final agency action to terminate the Project. The complaint invoked subject-

matter jurisdiction under the federal-question statute, 28 U.S.C. § 1331. The State asserted two claims of statutory violations, both resting on the cause of action created by the Administrative Procedure Act (5 U.S.C. §§ 702, 704 & 706): DOE violated (1) NEPA by failing to prepare a supplemental Environmental Impact Statement analyzing its decision to terminate the MOX Facility in favor of the Dilute and Dispose approach; and (2) the statutory provisions requiring DOE to obtain a waiver before terminating construction of the MOX Facility (NDAA FY18, § 3121(b) and CAA FY18, § 309(b)). The State sought declaratory relief and a permanent injunction.

The State also moved for a preliminary injunction to maintain the status quo by enjoining DOE from terminating the Project during the pendency of this lawsuit. The district court granted the preliminary injunction on June 7, 2018. App. 34a–82a.

In its preliminary injunction order, the district court comprehensively addressed and rejected DOE's arguments that South Carolina lacks standing and that the May 10 Letter is not final agency action. App. 44a–54a. The court held that South Carolina has standing to assert its procedural rights under NEPA and the statutory waiver provisions "because the State owns extensive property adjoining, and one road traversing the impacted area." App. 47a. The court further held that the decision of the Secretary announced in the May 10 Letter is final agency action reviewable under the APA. The Secretary's "execution of the MOX termination waiver" in the May 10 Letter, if allowed to stand, waives the statutory requirements to continue building the MOX Facility. In addition to this legal effect, the May 10 Letter creates the

"practical reality that the full stop order that is planned for June 11, 2018 will shut down the MOX Facility." App. 50a. Furthermore, the court concluded, "[b]ecause the MOX Project is the only legally authorized disposition method for MOXable plutonium at SRS," the "practical effect" of the decision announced in the May 10 Letter "is that the plutonium will remain at SRS indefinitely." App. 54a.[6]

The court also held that South Carolina is likely to succeed on the merits of both its claims.

In analyzing the State's NEPA claim, the court observed that the relevant statutes, and DOE itself, contemplate that NEPA applies "when rendering decisions and taking action related to the disposition of defense plutonium at SRS." App. 60a. DOE relied, however, on an Environmental Impact Statement (EIS) issued in December 1996 that analyzed the storage of weapons-grade plutonium for a period of up to 50 years—*i.e.*, until 2046. App. 63a, 65a. DOE argued that this EIS sufficed because its use of the new Dilute and Dispose approach would remove all the MOXable plutonium before that 50-

6. The district court's reference to "MOXable plutonium" (App. 54a) reflects that, as the court explained, "[t]he plutonium at SRS can be divided into two general categories—the plutonium intended for disposition through the MOX Facility and the plutonium not intended for MOX disposition." App. 63a–64a. For the latter, "non-MOXable" plutonium at SRS, DOE has "assign[ed] Dilute and Dispose as the preferred alternative" in a supplemental Environmental Impact Statement published on April 5, 2016. App. 64a. As the district court further explained, "The ongoing Dilute and Dispose approach is limited in resources and legal authority and is not applicable to the plutonium intended for disposition through the MOX Facility." App. 64a.

year period ended. App. 63a. The district court rejected that argument on two grounds. First, DOE's past actions with regard to the MOX Facility "have called into question the viability" of DOE's timeline for removal using the Dilute and Dispose approach. App. 65a. Second, and in any event, "pursuing the Dilute and Dispose approach" for the MOXable plutonium "would have a significant impact on the environment." App. 65a. Therefore, the court held, DOE must "produce a supplemental EIS that addresses the conceivability, both practically and legally" of its proposed new approach. App. 65a–66a.

The court also held that the State is likely to succeed on its claim that the Secretary violated the statutory requirements for a waiver of the statutory mandate to continue building the MOX Facility. App. 66a–72a. The court identified three flaws in the May 10 Letter announcing the Secretary's decision to terminate the MOX Project. First, there is no basis for the Secretary's commitment to remove the MOXable plutonium from SRS, since it rests on the unauthorized and unanalyzed Dilute and Dispose approach. App. 68a. Second, the Secretary's cost comparison of the MOX Project and the Dilute and Dispose approach does not meet statutory requirements for accuracy. App. 69a–70a. Third, although the statutory waiver provision requires the Secretary to report to Congress "the details of any statutory or regulatory changes necessary to complete" the Dilute and Dispose alternative, the May 10 letter provides no such details. App. 70a–71a. The district court, however, held that adoption of the Dilute and Dispose approach would require, among other changes, the amendment of two federal statutes. App. 71a–72a.

DOE appealed the district court order granting the preliminary injunction to the Fourth Circuit under 28 U.S.C. § 1291(a)(1).[7]

B. Court of Appeals

The Fourth Circuit vacated and remanded, holding that "South Carolina lacks Article III standing to advance the two claims that serve as the basis of the district court's injunction and that those two claims are not ripe for review." App. 22a.

The court held that South Carolina lacks Article III standing because it cannot establish injury in fact. App. 10a–19a. The State argued that DOE's failure to comply with NEPA and Section 3121's waiver provision "results in increased radiation exposure to the public, increased risk of nuclear-related accidents, and an increased threat of action by rogue states or terrorists seeking to acquire weapons-grade plutonium." App. 12a (quoting State's brief on appeal). The court concluded that those alleged injuries were "too speculative" because they rest "on a . . . 'highly attenuated chain of possibilities.'" App. 13a (quoting *Clapper v. Amnesty Int'l USA*, 568 U.S. 398, 410 (2013)).

The court focused on the time frame "[b]etween now and 2046—when the analysis in the current [EIS] governing the risks associated with long-term storage of

7. The district court denied DOE's motion for a stay of the preliminary injunction pending appeal. App. 27a–33a. After briefing and oral argument before the Fourth Circuit, however, that court granted DOE's motion for a stay on October 9, 2018. App. 24a. On October 10, 2018, DOE issued a Project termination notice and began terminating employees at the Project.

weapons-grade nuclear material at the Savannah River Site expires." App. 15a. The court did not explain how the EIS's time frame bears on South Carolina's standing. Nonetheless, it assigned 2046 as "the year when South Carolina's alleged injur[ies] will mature." App. 19a. On this view, the court reasoned that the EIS gives DOE "twenty-eight years to identify an alternative method for disposing of the nuclear material or otherwise removing it from South Carolina." App. 15a. The court observed that DOE has already identified the Dilute and Dispose method as "one potential alternative," and it might come up with more. App. 15a. The court also observed that DOE is under a statutory deadline to remove, by January 1, 2022, any weapons-grade plutonium that have been slated for processing by the MOX Facility but not yet processed by then. App. 15a–16a (citing 50 U.S.C. § 2566(c)(2)). If DOE failed to meet that deadline, the court explained, South Carolina could sue it, just as it had for DOE's past failure to meet statutory deadlines. App. 16a.

"For reasons similar to" the ones that led the court of appeals to hold that South Carolina lacks standing, it also held that "the two claims at issue fail on ripeness grounds." App. 19a. The court recognized that "'ripeness turns on the fitness of the issues for judicial decision' and 'the hardship to the parties of withholding court consideration.'" App. 20a (quoting *Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 201 (1983)). The court apparently found the problem here to be a lack of fitness. *See* App. 20a–21a (paragraph discussing requirements for a case "[t]o be fit for review"). The court said that a case is fit "when the action is final and not dependent on future uncertainties." App. 21a (internal quotation marks omitted). Despite this reference to

"final[ity]," the court of appeals did not discuss, much less express disagreement with, the district court's conclusion that DOE's decision to terminate the MOX Project was final agency action. *Cf.* App. 21a. Instead, the court of appeals seemed to conclude that neither the NEPA claim nor the statutory-waiver-provision claim is ripe because of "uncertainties" about whether South Carolina will indeed become "the permanent repository of the weapons-grade nuclear material currently stored at the Savannah River Site." App. 21a.

REASONS FOR GRANTING THE PETITION

There are four compelling reasons for this Court to grant review of the Fourth Circuit's opinion on a writ of certiorari.

First, the Fourth Circuit's decision conflicts with *Massachusetts v. EPA*, *Lujan v. Defenders of Wildlife*, and other decisions of this Court addressing the justiciability of suits by States and other plaintiffs seeking to compel a federal agency to comply with express statutory directives. Rule 10(c). Instead, the Fourth Circuit rejected the precedent of this Court in favor of a novel standing and ripeness analysis that narrowly interprets and, thus, unduly restricts the ability of a State to seek enforcement of a statute that involves and pertains to its legitimate interests.

Second, the Fourth Circuit's opinion creates a conflict among the circuits in applying this Court's holdings on standing. By circumscribing the State's ability to invoke the federal judicial power in seeking the enforcement of an existing statutory framework, the Fourth Circuit went far

beyond any other circuit in heightening the level of injury sufficient to form the basis for a "case or controversy." This Court's intervention is necessary to address the conflict among the circuits. Rule 10(a).

Third, this case presents important Constitutional issues regarding the justiciability of claims brought by a State seeking to vindicate its sovereign interests. The State has a legitimate interest in protecting its environment and in enforcing its substantive and procedural rights in its relations with the federal government. The Fourth Circuit's opinion denies the State the ability to even adjudicate its claims, which strikes at the heart of the federalism principle accepted by the State and the United States upon the formation of the union.

Fourth, this case provides an excellent opportunity for this Court to provide the clarification of *Massachusetts v. EPA* that the Fourth Circuit's decision and the conflict among the circuits demonstrate is warranted. This case presents fundamental and well-defined questions about the nature of the "special solicitude" recognized in *Massachusetts v. EPA*, including how "special solicitude" relates to a State's possession of a "procedural right" and to the apparent limitations on suits against the federal government by States suing as *parens patriae*.

I. The decision below squarely conflicts with decisions of this Court.

A. The decision below conflicts with *Massachusetts v. EPA*.

The decision below conflicts in approach and result with this Court's decision in *Massachusetts v. EPA* by

failing to give "special solicitude" to South Carolina when analyzing the State's standing. South Carolina met all the requirements for Article III and statutory standing, and had the court below given South Carolina the "special solicitude" required by *Massachusetts v. EPA*, it would have been compelled to uphold South Carolina's standing in this case.

In *Massachusetts v. EPA*, this Court held that Massachusetts was "entitled to special solicitude in [its] standing analysis" because of (1) the State's possession of a "procedural right" and (2) its "stake in protecting its quasi-sovereign interests." 549 U.S. at 520. The State's "procedural right" was the statutory right to seek judicial review "for agency action unlawfully withheld." *Id.* at 517 (quoting 42 U.S.C. § 7607(b)(1)). The "quasi-sovereign interests" at stake were Massachusetts' "desire to preserve its sovereign territory" from harmful effects assertedly imposed on that State by greenhouse gases (GHGs). *Id.* at 519. The latter interests were reinforced by Massachusetts ownership of "a great deal of the territory alleged to be affected" by GHGs. *Id.* (internal quotation marks omitted).

Both conditions for "special solicitude" exist here. First, South Carolina asserts violations of its procedural rights under NEPA and the statutory provisions requiring DOE to get a waiver before terminating the MOX Facility. NEPA's creation of a procedural right was recognized by this Court in *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 572 n.7 (1992). And the statutory waiver provisions plainly create procedural rights designed to protect South Carolina's interests. *Cf. Maryland People's Counsel v. FERC*, 760 F.2d 318, 320 (D.C. Cir. 1985) (per Scalia, J.)

(stating that statute authorizing state agencies to seek judicial review of FERC orders showed "special solicitude" for States, removing prudential barriers on States' relying on *parens patriae* standing in litigation against federal government). Second, South Carolina asserts its quasi-sovereign interests in protecting its territory against the environmental harms threatened by the DOE's decision to terminate the MOX Facility. *See* App. 12a (quoting South Carolina's allegations that DOE's May 10 decision "results in increased radiation exposure to the public, increased risks of nuclear-related accidents, and an increase threat of action by rogue states or terrorists seeking to acquire weapons-grade plutonium"). Here, as in *Massachusetts v. EPA*, the State's quasi-sovereign interests are reinforced by its ownership of "extensive property adjoining, and one road traversing, the impacted area." App. 47a.

Given South Carolina's "procedural right[s] and [its] stake in protecting its quasi-sovereign interests," South Carolina was "entitled to special solicitude" in the Fourth Circuit's standing analysis. *Massachusetts v. EPA*, 549 U.S. at 520. South Carolina plainly identified those rights and interests in its brief for the Fourth Circuit, and cited *Massachusetts v. EPA* in its brief. Br. of Pl.-Appellee at 16-17, *South Carolina v. United States*, 912 F.3d 720 (4th Cir. 2019) (No. 18-1684), ECF No. 31. Yet the Fourth Circuit disregarded those rights and interests, and based its standing analysis—not on *Massachusetts v. EPA*—but instead primarily on *Clapper*, a case involving the standing of private plaintiffs. *Id.* at 406; App. 13a–17a (citing *Clapper*).[8]

8. The Fourth Circuit below erred in relying on *Clapper* not only because *Clapper* involved private plaintiffs but also because

The Fourth Circuit's disregard of *Massachusetts v. EPA* led to error. South Carolina's argument for standing closely resembles Massachusetts'. Both States attack agency decisions (to deny a rulemaking petition; to terminate the MOX Project) for failure to follow statutory requirements that, if followed, could have led to a different decision. As things stood, the challenged agency decisions exposed the States to increased risk of harms (additional loss of coastal land; additional radiation and risks of accidents and theft). The risks of harm associated with prolonged storage of weapons-grade plutonium are at least as well established and imminent as those associated with greenhouse gases. *See* App. 39a (district court decision quoting federal officials' acknowledgement of dangers posed by storage of weapons-grade plutonium). Thus, South Carolina's standing in this case follows *a fortiori* from this Court's decision upholding Massachusetts' standing in *Massachusetts v. EPA*.

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the plaintiff in *Clapper* did not assert procedural rights. Lacking procedural rights, the plaintiffs in *Clapper* were subject to a determination in an "injury-in-fact" analysis inapplicable to this case. *Massachusetts v. EPA*, 549 U.S. at 517–18 ("When a litigant is vested with a procedural right, that litigant has standing if there is some possibility that the requested relief will prompt the injury-causing party to reconsider the decision that allegedly harmed the litigant." (citing *Lujan v. Defenders of Wildlife*, 504 U.S. at 572 n.7)). Moreover, the plaintiffs—as "US persons"—did not fall into a class to which the FISA provision in *Clapper* was directed, and that provision did not create any legal rights or protections for the plaintiffs. But, here, through NDAA FY18 and CAA FY18, Congress established statutory protections specifically for South Carolina, and South Carolina also falls within the class entitled to bring claims for NEPA violations. Accordingly—"special solicitude" or not—South Carolina met all the requirements for Article III and statutory standing

B. The decision below conflicts with decisions of this Court on ripeness.

The Fourth Circuit held that South Carolina's claims are not ripe because they are not "fit" for review. App. 19a-21a. They are not fit for review, the Fourth Circuit concluded, because South Carolina might not "become[] the *permanent* repository" of "weapons-grade nuclear material currently stored at the Savannah River Site." App. 21a (emphasis in original). This conclusion, however, conflicts with decisions of this Court.

South Carolina's claims are fit for review under this Court's precedent. That precedent establishes that a claim is generally fit for review when it challenges agency action that is final, the challenge is purely legal, and the court's ability to resolve the challenge will not benefit from further factual development. *E.g.*, *Nat'l Park Hospitality Ass'n v. Dep't of Interior*, 538 U.S. 803, 811 (2003). The court of appeals below did not disturb the district court's holding that DOE's decision to terminate the MOX Facility is "final agency action" within the meaning of the federal APA. App. 48a–54a; 5 U.S.C. § 704. Furthermore, South Carolina's claims that DOE violated NEPA and the statutory waiver requirements are purely legal, as is clear from the district court's analysis of these claims. *See* App. 59a–72a. The court of appeals below did not identify any further factual developments that would facilitate the resolution of South Carolina's NEPA and statutory-waiver claims.

As this Court has held, "a person with standing who is injured by a failure to comply with the NEPA procedure may complain of that failure at the time the failure takes

place, for the claim can never get riper." *Ohio Forestry Ass'n v. Sierra Club*, 523 U.S. 726, 737 (1998). The decision below squarely conflicts with this holding in *Ohio Forestry Ass'n* by finding South Carolina's NEPA claim unripe. *See* App. 19a–21a. Moreover, this Court's holding in *Ohio Forestry Ass'n* also applies to South Carolina's claim that DOE violated the requirements for a waiver of the statutory mandate to continue construction of the MOX Facility: Nothing that happened after the date of the Secretary's May 10 Letter will affect analysis of South Carolina's claim that the DOE violated the requirements for a waiver of that mandate.[9]

Although the Fourth Circuit apparently, erroneously—and in conflict with this Court's precedent—relied on the "fitness" prong of ripeness analysis, its conclusion of unripeness seemed to rest on a supposed lack of hardship. That conclusion, in turn, rested on the Fourth Circuit's belief that only in the year 2046 will "South Carolina's alleged injury mature." App. 19a. The Fourth Circuit cited the year 2046 because it was the end date of the 50-year period analyzed in DOE's 1996 Programmatic EIS (PEIS) on storage of weapons-grade plutonium at SRS. App. 15a, 36a. The 1996 PEIS's 50-year period of analysis arguably *might* bear on the merits of South Carolina's claim that DOE must now prepare a supplemental EIS for its termination of the MOX Project. But it has no bearing on South Carolina's standing or the ripeness of its claims. In concluding otherwise, the Fourth Circuit's

9. Nor does South Carolina's lawsuit present a programmatic challenge of the sort that, if addressed now, would "inappropriately interfere with further administrative action." *Ohio Forestry Ass'n*, 523 U.S. at 733. South Carolina challenges a highly discrete agency action—DOE's decision to terminate the MOX Facility.

ruling reflects "the familiar confusion between standing and the merits." 13B Charles Alan Wright *et al.*, *Federal Practice and Procedure* § 3531.11.1, at 98 (3d ed. 2008).

Properly understood, South Carolina's standing and hardship stem from the *existing* 10 metric tons of weapons-grade plutonium stored within its borders, plus the additional 20 metric tons that DOE currently plans to ship to South Carolina. The existing plutonium exposes South Carolina's property and its citizens to ongoing radiation and the risks of nuclear accidents and threats. South Carolina reasonably fears that DOE's decision to terminate the MOX Facility to pursue the unstudied, unauthorized "Dilute and Dispose" concept will indefinitely *prolong* the storage of massive amounts of plutonium in South Carolina, and in turn cause South Carolina to incur additional costs associated with protecting against the radiation and risks. South Carolina's fear is well-founded considering DOE's dismal track record in meeting statutory deadlines for construction of the MOX Facility. *See* App. 5a.

The Fourth Circuit dismissed this fear, reasoning that South Carolina can always sue DOE when DOE fails to meet the *next* statutory deadline. App. 16a. But the likelihood that DOE will violate *additional* statutory requirements in the future surely cannot disable South Carolina from suing DOE for current statutory violations arising from its termination of the Project. To the contrary, the possibility that South Carolina will have to sue DOE again in the future represents just another realistic risk of future harm that supports its standing to bring this suit. *Cf. Monsanto v. Geertson Seed Farms*, 561 U.S. 139, 154–55 (2010) (upholding standing based

partly on costs incurred by plaintiffs to mitigate realistic risks); *Texas v. United States*, 497 F.3d 491, 497 (5th Cir. 2007) (upholding State's standing based partly on realistic risk that State would have to participate in compelled mediation over tribal gaming).

II. The Fourth Circuit's decision creates a conflict among the circuits concerning the justiciability of State suits against the federal government.

The Fourth Circuit's decision conflicts in approach with decisions in at least three other circuits: the Second, Fifth, and Tenth. Courts of appeals in these circuits rely on *Massachusetts v. EPA* to accord "special solicitude" to States in analyzing the States' standing to sue the federal government. The analysis in those decisions strongly suggest that those courts of appeals would have upheld South Carolina's standing to bring the present suit.

A. Second Circuit

The Second Circuit analyzed *Massachusetts v. EPA* in a decision that upheld the standing of eight States to sue electric power companies that allegedly contributed to global warming. *Connecticut v. Am. Elec. Power Co.*, 582 F.3d 109 (2d Cir. 2015), *rev'd on other grounds*, 564 U.S. 410 (2011).[10] As the Second Circuit understood

10. The Second Circuit's ruling on standing was affirmed by an equally divided Court. "Four Members of the Court would hold that at least some plaintiffs have Article III standing under *Massachusetts*. . . . Four Members of the Court, adhering to a dissenting opinion in *Massachusetts,* or regarding that decision as distinguishable, would hold that none of the plaintiffs have Article III standing." *Am. Elec. Power Co. v. Connecticut*, 564 U.S. 410, 420

Massachusetts v. EPA, in that case this Court "seemed to find that injury to a state as a quasi-sovereign is a sufficiently concrete injury to be cognizable under Article III, and its finding of such injury is reinforced by the fact that the State is also a landowner and suffers injury to its land." *Id.* at 338.

The Second Circuit upheld the States' standing using reasoning that, if applied in the present case, would have led it to uphold South Carolina's standing: The Second Circuit emphasized that the States were suffering present harms from the defendants' conduct—just as South Carolina's property and residents are currently exposed to radiation and other threats from the continued storage of plutonium—and the relief sought could incrementally reduce the harm—as could occur here, if DOE's compliance with its statutory obligations reduces the amount of time that massive amounts of weapons-grade plutonium are stored at SRS. *Id.* at 340–43.

Although *Connecticut* was a suit against private defendants, the Second Circuit relied on it, as well as on *Massachusetts v. EPA*, in a later decision upholding several States' standing to sue a federal agency for statutory violations. *Nat. Res. Def. Council v. Nat'l Highway Traffic Safety Admin.*, 894 F.3d 95, 103–04 (2d Cir. 2018) (internal citations omitted).

(2011). The Court reversed the Second Circuit's ruling on the merits, holding that the plaintiffs' federal common-law public nuisance claim was displaced by the Clean Air Act and EPA action authorized under the Act. *Id.* at 420–29.

B. Fifth Circuit

The Fifth Circuit accorded "special solicitude" to a State under circumstances close enough to those of this case to indicate that it would have upheld South Carolina's standing in this case.

Texas and other States sued the United States over the Deferred Action for Parents of Americans and Lawful Permanent Residents program (DAPA). *Texas v. United States*, 809 F.3d 134, 146 (5th Cir. 2015), *aff'd by an equally divided Court*, 136 S. Ct. 2271 (2016). After the federal district court preliminarily enjoined implementation of DAPA, the United States appealed. *Id.* On appeal, the Fifth Circuit affirmed the preliminary injunction and upheld Texas's standing to bring the suit. *Id.* at 151–62.

The Fifth Circuit said, "[O]ur determination that Texas has standing is based in part on the 'special solicitude' we afford it under *Massachusetts v. EPA*." *Id.* at 162. The court described "special solicitude" as a "presumption," presumably meaning a presumption that favors standing in close cases. *Id.*; *see also id.* at 159 (relying partly on "special solicitude" in finding traceability). The court afforded "special solicitude" based on the same two conditions that exist in the present case: The State was asserting procedural rights that required interpretation of federal statutes, and the challenged conduct implicated the State's "quasi-sovereign interests." *Id.* at 152–53.

Moreover, the Fifth Circuit's reasons for concluding that "quasi-sovereign interests" were at stake equally apply here. Texas challenged DAPA, a federal immigration program. The Fifth Circuit observed that "[w]hen the

states joined the union, they surrendered some of their sovereign prerogatives over immigration." *Id.* at 153. Consequently, the Fifth Circuit explained, States must rely on the federal government to protect their interests in immigration matters, just as they must with respect to their interests in the matters involved in *Massachusetts v. EPA*: namely, interstate and international pollution. *Id.* at 153–54. So too here: Because of the federal government's control over nuclear defense material, South Carolina cannot prevent it from storing that material at SRS as long as federal law allows. South Carolina must rely on the federal government to protect its interests and those of its citizens. This reliance warrants consideration when South Carolina sues to enforce the federal executive-branch's compliance with federal statutory requirements enacted, in part, to protect the State's interests. In short, South Carolina's present lawsuit provides at least as compelling a case for "special solicitude" as did the States' lawsuit in *Texas v. United States*.

C. Tenth Circuit

Like the Fifth Circuit, the Tenth Circuit has relied partly on "special solicitude" to uphold State standing.

Illustrative is *New Mexico v. Dep't of Interior*, 854 F.3d 1207 (10th Cir. 2017). In that case, New Mexico sued the Department of Interior (DOI) claiming that DOI lacked statutory authority for regulations on tribal gaming. *Id.* at 1211. Under the challenged regulations, DOI could allow tribal gaming without the State's input unless the State participated in a process that included mediation. *Id*. at 1213. The Tenth Circuit held that New Mexico had standing to challenge the regulations

on two grounds. First, the regulations caused New Mexico procedural injury by depriving it of its asserted statutory right to have a court determine that the State had bargained in bad faith before tribal gaming could be allowed without the State's input. *Id.* at 1216–17. Second, the regulations "injure[d] New Mexico by forcing it to choose between participating in a process it considers unlawful and forgoing any benefit from that allegedly unlawful process—viz., the benefit of being able to offer input, presumably beneficial to its interests, relating to the content of those procedures." *Id.* at 1218. After identifying these two injuries, the Tenth Circuit said, "[T]he Supreme Court's direction that we give states special solicitude in analyzing standing provides further support for each basis establishing New Mexico's standing." *Id.*

In *New Mexico v. Dep't of Interior* and other cases, the Tenth Circuit has, like the Fifth Circuit, apparently treated "special solicitude" as a presumption favoring standing in close cases, or possibly as a "plus factor" applicable in all cases. At the same time, the Tenth Circuit has remarked on "'the lack of guidance on how lower courts are to apply the special solicitude doctrine to state standing.'" *Id.* at 1219 (quoting *Wyoming v. United States Dep't of Interior*, 674 F.3d 1220, 1238 (10th Cir. 2012); *see also Ariz. State Legisl. v. Ariz. Indep. Redistricting Comm'n*, 135 S. Ct. 2652, 2664 n.10 (2015) ("The cases on the standing of states to sue the federal government seem to depend on the kind of claim that the state advances. The decisions . . . are hard to reconcile.") (quoting R. Fallon, J. Manning, D. Meltzer, & D. Shapiro, Hart and Wechsler's The Federal Courts and the Federal System 263–266 (6th ed. 2009)); *New Mexico ex rel. Richardson v. BLM*, 565 F.3d 683, 696 n.13 (10th Cir. 2009) ("In determining

that New Mexico has standing because of the threat of environmental damage to lands within its boundaries, we consider that states have special solicitude to raise injuries to their quasi-sovereign interest in lands within their borders."); *Utah ex rel. Div. of Forestry, Fire & State Lands v. United States*, 528 F.3d 712, 721 (10th Cir. 2008) (attaching "importan[ce]" to "special solicitude" in analyzing State's standing).

III. This case presents important issues of constitutional justiciability for a State seeking to vindicate its rights under federal law.

The proper handling of weapons-grade plutonium is a public policy matter of exceptional importance, implicating not only issues of national defense and national security but also the United States' obligations under an agreement with Russia. *Cf. New York v. United States*. 505 U.S. 144, 149 (1992). South Carolina does not challenge the federal government's broad authority to regulate this matter or to control operations at the SRS as a federal facility. *See, e.g.*, *Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190 (1983); *Hancock v. Train*, 426 U.S. 167 (1976). But being forced by virtue of the Supremacy Clause to host SRS, South Carolina seeks only to ensure federal executive-branch compliance with federal law. *See, e.g.*, *Alfred L. Snapp & Son, Inc. v. Puerto Rico*, 458 U.S. 592, 607-08 (1982) ("[T]he State has an interest in securing observance of the terms under which it participates in the federal system. . . . [A] State does have an interest . . . in assuring that the benefits of the federal system are not denied to its general population."). This petition thus poses a question of the justiciability of claims by a State against the federal government.

The importance of this question is reflected in the long line of cases in which this Court has addressed it. In addition to *Massachusetts v. EPA*, *see*, *e.g.*, *Nebraska v. Wyoming*, 515 U.S. 1, 20 (1995) (addressing State's standing to assert claim against the United States under prior decree); *U.S. Dep't of Energy v. Ohio*, 503 U.S. 607 (1992) (addressing scope of statutory waiver of federal government's sovereign immunity from State's suit); *South Carolina v. Katzenbach*, 383 U.S. 301, 324 (1966) (addressing standing of State to challenge constitutionality of federal statute); *Massachusetts v. Mellon*, 262 U.S. 447, 485–86 (1923) (addressing State's standing to challenge constitutionality of federal statute); *Kansas v. United States*, 204 U.S. 331 (1907) (addressing United States' sovereign immunity from suits by States); *Georgia v. Stanton*, 73 U.S. 50 (1867) (addressing justiciability of State's suit to enjoin federal Reconstruction Act).

Although the defense plutonium at issue implicates domestic and international concerns of broad significance, even in these areas, States play an important role. Implementing policies and actions involving defense plutonium necessarily require some degree of state involvement through state regulation of related, collateral matters (such as the issuance of certain environmental permits), the utilization of state infrastructure, and the emissions and impact on state proprietary interests.[11] For

11. All those elements are indisputably present here. South Carolina has and will continue to provide regulatory oversight on certain aspects of the operations at SRS, such as waste disposal. Much of the supporting infrastructure for SRS is provided by the State of South Carolina or its political subdivisions (such as roads and emergency services). *See generally* Nuclear Waste Policy Act, 42 U.S.C. §§ 10101 *et seq.*; Atomic Energy Act, 42 U.S.C. §§ 2201 *et seq.*

that reason, this case implicates the relationship between the federal government and the States. The Supremacy Clause gives the United States the upper-hand in this relationship. But the federal government's supremacy rests on the rule of law. The federal government's violation of the rule of law generally is objectionable, but for an executive agency to inflict violence upon statutory obligations enacted by the legislature to protect a State without any mechanism of accountability by the state through the judiciary is particularly harmful to our system of government. This Court's review is necessary to ensure a State can remedy that harm, especially when, as here, the harm concerns the State's concrete interests in the proper disposition of the massive amounts of weapons-grade plutonium within its borders.

IV. This case provides an excellent vehicle for clarifying *Massachusetts v. EPA*.

The decision below and the circuit split discussed above show the need for clarification of *Massachusetts v. EPA*. This Court has granted certiorari in two prior cases that offered opportunities to do so that were not subsequently realized. *See United States v. Texas*, 136 S. Ct. 2271; *Connecticut*, 546 U.S. at 420. This case provides an excellent opportunity to provide the needed clarification.

For one thing, the decision below is for all practical and legal purposes final. *Cf.*, *e.g.*, *Trump v. Hawaii*, 138 S. Ct. 2392 (2018) (granting certiorari to review court of appeals decision affirming preliminary injunction on dispositive grounds). Although the Fourth Circuit below addressed an interlocutory appeal from an order granting

a preliminary injunction, its holding that South Carolina lacks standing prevents the case from going forward on the merits. By the same token, this Court's reversal of the decision below will enable South Carolina to pursue legal claims that the district court held, in rulings not disturbed on appeal, are likely to succeed. App. 59a–72a.

For another thing, South Carolina preserved below the arguments that it would advance in this Court. The Fourth Circuit characterized South Carolina as advancing "one theory of injury" (App. 19a n.3) because the State's injuries all arise from the real risk of it becoming the indefinite—and, as a practical matter, the "permanent"—"repository of weapons-grade plutonium." App. 12a (quoting South Carolina's brief for the Fourth Circuit). As the Fourth Circuit's opinion reflects, however, South Carolina argued for standing based on its quasi-sovereign interests and its proprietary interests. App. 9a, 12a. Thus, South Carolina has asserted in the courts below precisely the same claims of injury-in-fact that Massachusetts advanced in *Massachusetts v. EPA*, 549 U.S. at 518–23.[12]

Finally, this case presents legal claims that crystallize key questions about the nature of the "special solicitude" recognized in *Massachusetts v. EPA*. One key question is how "special solicitude" relates to the

12. In the decision below, the Fourth Circuit purports to reserve the question "whether other theories of injury would presently confer standing on South Carolina." App. 19a n.3. There are no "other theories" of standing remaining to the State. Accordingly, DOE has given notice of its intent to move for dismissal of the action for lack of jurisdiction if this Court denies further review. Notice, *South Carolina v. United States*, No. 1:18-cv-01431-JMC (D.S.C. May 1, 2019), ECF No. 45.

State's possession of a "procedural right." That question is cleanly posed here by South Carolina's claim under NEPA, a statute that this Court has recognized creates a procedural right. *See Defenders of Wildlife*, 504 U.S. at 572 n.7. Another key question is how "special solicitude" relates to case law apparently limiting suits against the federal government by States suing as *parens patriae*. *See Massachusetts v. EPA*, 549 U.S. at 539 (Roberts, C.J. dissenting). That question is posed starkly by South Carolina's claim under SRS-specific statutory provisions that are designed partly for the precise purpose of protecting South Carolina's interests and therefore evince "special solicitude" for the State and a corresponding intention to allow South Carolina to sue for enforcement of those provisions. *Cf. Maryland People's Counsel*, 760 F.2d at 320; Richard H. Fallon, Jr., John F. Manning, Daniel J. Meltzer & David L. Shapiro, Hart & Wechsler's The Federal Courts and the Federal System 266 (6th ed. 2009). A decision by this Court addressing those questions would go far toward providing the needed clarification of *Massachusetts v. EPA*.

CONCLUSION

The petition for a writ of certiorari should be granted.

Respectfully submitted,

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June 7, 2019

APPENDIX

APPENDIX A — OPINION OF THE UNITED STATES COURT OF APPEALS FOR THE FOURTH CIRCUIT, FILED JANUARY 8, 2019

PUBLISHED

UNITED STATES COURT OF APPEALS
FOR THE FOURTH CIRCUIT

No. 18-1684

STATE OF SOUTH CAROLINA,

Plaintiff-Appellee,

v.

UNITED STATES OF AMERICA; UNITED STATES DEPARTMENT OF ENERGY; RICK PERRY, IN HIS OFFICIAL CAPACITY AS SECRETARY OF ENERGY; NATIONAL NUCLEAR SECURITY ADMINISTRATION; LISA E. GORDON-HAGERTY, IN HER OFFICIAL CAPACITY AS ADMINISTRATOR OF THE NATIONAL NUCLEAR SECURITY ADMINISTRATION AND UNDERSECRETARY FOR NUCLEAR SECURITY,

Defendants-Appellants.

Appeal from the United States District Court for the District of South Carolina, at Aiken. (1:18-cv-01431-JMC).

September 27, 2018, Argued;
January 8, 2019, Decided

Before NIEMEYER, KING, and WYNN, Circuit Judges.

Appendix A

Vacated and remanded by published opinion. Judge Wynn wrote the opinion, in which Judge Niemeyer and Judge King joined.

WYNN, Circuit Judge:

The State of South Carolina brought this action to enjoin the United States of America and other Defendants[1] (collectively, "the United States") from terminating the construction of a mixed-oxide fuel nuclear processing facility located at the Savannah River Site in South Carolina. South Carolina alleges that the United States Department of Energy unlawfully failed to (1) prepare a supplemental Environmental Impact Statement analyzing the long-term storage of plutonium in the state; and (2) follow statutory waiver provisions for terminating construction of the facility. We conclude that South Carolina has not established standing to pursue either of these claims. Accordingly, we vacate the preliminary injunction imposed by the district court.

I.

Following the collapse of the Soviet Union and the end of the Cold War, the United States of America and the Russian Federation began a worldwide nuclear nonproliferation effort that included developing plans for

1. The other Defendants are the United States Department of Energy; Rick Perry, in his official capacity as Secretary of Energy; the National Nuclear Security Administration; and Lisa E. Gordon-Hagerty, in her official capacity as Administrator of the National Nuclear Security Administration.

the safe disposition of nuclear weapons material. As part of this nonproliferation pact, the Department of Energy began studying the effects of various nuclear waste storage and disposal strategies. In its initial 1996 study, the Department of Energy prepared an Environmental Impact Statement in accordance with Section 4332 of the National Environmental Policy Act ("NEPA"), 42 U.S.C. § 4321 *et seq.*, analyzing the potential environmental consequences associated with the long-term storage of weapons-grade plutonium and highly enriched uranium prior to disposition. The Environmental Impact Statement addressed storage of these materials for a period of up to fifty years.

Ultimately, the Department of Energy determined that the best approach to nuclear waste disposal was a dual strategy involving (1) immobilization of a portion of the surplus plutonium in glass or ceramic; and (2) irradiation of the remaining plutonium in mixed oxide fuel (the "MOX process"). Both strategies would convert the surplus nuclear material into forms that would meet the National Academy of Science's Spent Fuel Standard, meaning that the material would be "inaccessible and unattractive for weapons" use. J.A. 78.

In 1997, the Department of Energy announced its intention to build a new mixed oxide fuel fabrication facility (the "MOX facility") to dispose of some of the nuclear material using the MOX process. Following completion of a supplemental Environmental Impact Statement and a Record of Decision in January of 2000, the Department of Energy announced that the MOX facility

would be located at the Savannah River Site along South Carolina's border with Georgia. The facility's original production goals included disposition of up to thirty-three metric tons of nuclear material using the MOX process and immobilization of up to seventeen metric tons of additional nuclear material. As part of its supplemental Environmental Impact Statement, the Department of Energy continued to look at the environmental impacts of long-term plutonium storage.

In 2002, the Department of Energy decided to drop the immobilization portion of the disposition strategy, leaving the MOX process as the sole plutonium disposal method. That same year, Congress directed the Secretary of Energy to submit a plan for the construction and operation of the MOX facility at the Savannah River site. Pub. L. No. 107-314, § 3182 (2002), *subsequently codified* as 50 U.S.C. § 2566. Congress further authorized the Secretary to take corrective actions if the construction timetable and operation schedule for the MOX facility were not being met. Additionally, Congress also required that in the event the MOX facility failed to achieve its production goals, the Department of Energy remove plutonium shipped to South Carolina for processing. *See* 50 U.S.C. § 2566(c), § 2566(e). Finally, as part of its findings, Congress mentioned the economic benefit that the MOX facility would bring to the State of South Carolina, noting that the economic benefit would not be fully realized unless the facility was built. *See* Pub. L. No. 107-314 at § 3181.

Three years later, in 2005, the Department of Energy began transferring plutonium to the Savannah River Site

for conversion, and in 2007, construction began on the MOX facility. The original cost estimate for construction of the facility was $4.8 billion, with completion anticipated in 2016. And the original production goal estimate for the facility was to have thirty-four metric tons of defense plutonium processed no later than January 1, 2019. 50 U.S.C. § 2566(a)(2)(B).

These original estimates proved grossly inaccurate due to delays and cost overruns in the construction of the MOX facility. The Department of Energy now estimates cost for construction of the facility to be $17.17 billion, with completion now anticipated to be in 2048, over thirty years beyond the original estimated schedule.

Since 2014, the Department of Energy has sought to terminate the MOX program and pursue an alternative method of plutonium disposal known as "Dilute and Dispose," which it contends is less costly, faster, and safer. Under the Dilute and Dispose method, nuclear material would be "downblended" with inhibitor materials to reduce the plutonium content to less than ten percent by weight. Upon completion of the downblending process, the material would then be shipped from the Savannah River Site to the Waste Isolation Pilot Plant near Carlsbad, New Mexico, for permanent disposal.

Thus far, Congress has continued to fund construction of the MOX facility and has, to date, restricted the Department of Energy from utilizing MOX-related appropriations to begin termination of the program. To that end, in 2017, Congress enacted a statute providing

that the Secretary of Energy "shall carry out construction and project support activities relating to the MOX facility." Pub. L. 115-91, § 3121(a), 131 Stat. 1283, 1892.

However, Section 3121(b) of that statute allows the Secretary of Energy to discontinue construction of the MOX facility if certain conditions have been met. Specifically, the Secretary of Energy must submit to the Congressional defense committees:

> (A) the commitment of the Secretary [of Energy] 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 ["GAO"], 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 costs of the mixed oxide fuel program; and
>
> (C) the details of any statutory or regulatory changes necessary to complete the alternative option.

§ 3121(b)(1).

Additionally, in exercising his authority to discontinue construction of the MOX facility, the Secretary of Energy

> (1) shall concurrently submit to the Committees on Appropriations of both Houses of Congress the lifecycle cost estimate used to make the certification under section 3121(b) of such Act; and
>
> (2) may not use funds provided for the Project to eliminate such Project until the date that is 30 days after the submission of

> the lifecycle cost estimate required under paragraph (1).

Pub. L. No. 115-141, § 309(c), 132 Stat. 348, 530 (2018).

Pursuant to these provisions, on May 10, 2018, the Secretary of Energy submitted a letter to the Chairman of the House Armed Services Committee that purported to execute the authority of the Secretary of Energy under Section 3121(b) to discontinue construction of the MOX facility. The Secretary of Energy certified, *inter alia*, that (1) the Department of Energy is committed to removing plutonium from South Carolina; (2) an alternative option for carrying out the plutonium disposition, the Dilute and Dispose method, exists and has a lifecycle cost of less than approximately half of the remaining lifecycle cost for the MOX program; (3) the Department of Energy estimated the cost of the Dilute and Dispose approach in a manner compatible with the best practices of the GAO; and (4) the Department of Energy is committed to ensuring a sustainable future for the Savannah River Site. The Secretary of Energy further reported that the Department of Energy expected the total cost of disposition via the Dilute and Dispose method to be $19.9 billion, compared to $49.4 billion for the total cost of construction of the MOX facility and conversion of all the plutonium into MOX fuel.

In accordance with the Secretary of Energy's letter, the Department of Energy and the National Nuclear Security Administration issued a Partial Stop Work Order on May 14, 2018, ending all new contracts and

hiring related to the MOX program. The Department of Energy further indicated its intent to issue a Full Stop Work Order and begin winding down the MOX program, including terminating employees currently working on the project, on or about June 11, 2018.

On May 25, 2018, before the Department of Energy issued a full stop work order, South Carolina brought this action in the United States District Court for the District of South Carolina and moved for a preliminary injunction barring the federal government from terminating the MOX program. In its complaint, South Carolina asserted that the United States (1) violated NEPA by failing to prepare a supplemental Environmental Impact Statement covering a period of more than fifty years and (2) failed to satisfy Section 3121(b) because of the alleged insufficiency of the Secretary of Energy's certifications.[2]

On June 7, 2018, the district court granted South Carolina's motion for preliminary injunction. The district court first found that South Carolina had standing due to environmental risks associated with long-term storage at the Savannah River Site, which abuts property owned by South Carolina. As to the merits, the district court held, in pertinent part, that South Carolina was likely to succeed on the merits of its NEPA claim and its claim that

2. South Carolina further claimed that the United States violated 50 U.S.C. § 2567 by failing to consult with the governor before deciding to terminate the MOX facility. The district court held that South Carolina failed to establish that that claim was likely to succeed on the merits, and therefore that claim is not before this Court.

the Secretary of Energy's certifications were insufficient. The district court further found that South Carolina would be irreparably harmed absent a preliminary injunction and that the balance of equities tilted in South Carolina's favor. Thus, the district court enjoined the federal government from ceasing construction of the MOX facility and issuing the full stop work order. The United States timely appealed.

After careful review, we dispositively hold that South Carolina failed to establish standing and therefore we do not reach the district court's determination on the merits of this matter.

II.

A.

On appeal, the United States contends that the district court erred in concluding that South Carolina established standing to pursue the two claims that serve as the basis of the district court's preliminary injunction order—the NEPA claim and the claim premised on the alleged insufficiency of the Secretary's certifications. The standing doctrine derives from "the Constitution's limitation on Article III courts' power to adjudicate 'cases and controversies.'" *Frank Krasner Enters. v. Montgomery Cty.*, 401 F.3d 230, 234 (4th Cir. 2005) (quoting *Allen v. Wright*, 468 U.S. 737, 750-51, 104 S. Ct. 3315, 82 L. Ed. 2d 556 (1984), *abrogated on other grounds by Lexmark Intern., Inc. v. Static Control Components, Inc.*, 572 U.S. 118, 134 S. Ct. 1377, 188 L. Ed. 2d 392

(2014)). Standing implicates the court's subject matter jurisdiction. *Long Term Care Partners, LLC v. United States*, 516 F.3d 225, 230 (4th Cir. 2008).

Here, South Carolina, as plaintiff, bears the burden of establishing standing to assert each of its claims. *See id.*; *see also Lewis v. Casey*, 518 U.S. 343, 359 n.6, 116 S. Ct. 2174, 135 L. Ed. 2d 606 (1996) ("[A] plaintiff who has been subject to injurious conduct of one kind [does not] possess by virtue of that injury the necessary stake in litigating conduct of another kind, although similar, to which he has not been subject." (internal quotation marks omitted)). We review the question of whether South Carolina possesses standing de novo. *Frank Krasner Enters.*, 401 F.3d at 234.

To establish Article III standing, "a plaintiff must show (1) it has suffered an 'injury in fact' that is (a) concrete and particularized and (b) actual or imminent, not conjectural or hypothetical; (2) the injury is fairly traceable to the challenged action of the defendant; and (3) it is likely, as opposed to merely speculative, that the injury will be redressed by a favorable decision." *Friends of the Earth, Inc. v. Laidlaw Envtl. Servs. (TOC), Inc.*, 528 U.S. 167, 180-81, 120 S. Ct. 693, 145 L. Ed. 2d 610 (2000). The United States contends South Carolina failed to show it has suffered an injury-in-fact sufficient to give rise to Article III standing.

To satisfy the injury-in-fact requirement, a plaintiff must establish a "realistic danger of sustaining a direct injury." *Peterson v. Nat'l Telcoms. & Info. Admin.*, 478 F.3d 626, 632 (4th Cir. 2007) (quoting *Babbitt v. United*

Farm Workers Nat'l Union, 442 U.S. 289, 298, 99 S. Ct. 2301, 60 L. Ed. 2d 895 (1979)). "[W]hile it is true 'that threatened rather than actual injury can satisfy Article III standing requirements,' . . . not all threatened injuries constitute an injury-in-fact." *Beck v. McDonald*, 848 F.3d 262, 271 (4th Cir. 2017) (quoting *Friends of the Earth, Inc. v. Gaston Copper Recycling Corp.*, 204 F.3d 149, 160 (4th Cir. 2000) (en banc)). "Rather, as the Supreme Court has 'emphasized repeatedly,' an injury-in-fact 'must be concrete in both a qualitative and temporal sense.'" *Id.* (quoting *Whitmore v. Arkansas*, 495 U.S. 149, 155, 110 S. Ct. 1717, 109 L. Ed. 2d 135 (1990)). The requirement that an alleged injury be palpable and imminent ensures that the injury "is not too speculative for Article III purposes." *Id.* (quoting *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 564-65 n.2, 112 S. Ct. 2130, 119 L. Ed. 2d 351 (1992)).

On appeal, South Carolina contends that it has suffered an injury-in-fact sufficient to support standing because "[South Carolina] is harmed by being rendered the permanent repository of weapons-grade plutonium as a result of [the Department of Energy's] decision to terminate the MOX Facility without first complying with NEPA or following the congressional mandates of § 3121." Appellee's Br. at 15-16. According to South Carolina, this "results in increased radiation exposure to the public, increased risks of nuclear-related accidents, and an increased threat of action by rogue states or terrorists seeking to acquire weapons-grade plutonium." *Id.* at 14. But this alleged injury is too speculative and thus, does not give rise to a concrete injury-in-fact sufficient to support either of South Carolina's claims.

The Supreme Court has repeatedly held that an alleged harm is too "speculative" to support Article III standing when the harm lies at the end of a "highly attenuated chain of possibilities." *Clapper v. Amnesty Int'l USA*, 568 U.S. 398, 410, 133 S. Ct. 1138, 185 L. Ed. 2d 264 (2013); *see also, e.g., Beck*, 848 F.3d at 275 (holding that plaintiffs, who received treatment at a medical center that suffered a data breach and alleged that they were at risk of experiencing identity theft, failed to establish standing because their theory of injury rested on an "attenuated chain of possibilities").

Illustratively in *Clapper*, the Supreme Court considered a challenge to Section 702 of the Foreign Intelligence Surveillance Act, which "authoriz[es] the surveillance of individuals who are not 'United States persons' and are reasonably believed to be located outside the United States." 568 U.S. at 401. The plaintiffs—a group of "attorneys and human rights, labor, legal, and media organizations"—alleged that their work demanded that they "engage in sensitive international communication with individuals who they believe are likely targets of surveillance under" Section 702, rendering it reasonably likely that the government would target and intercept the plaintiffs' communications. *Id.* at 401, 406.

The Supreme Court held that the plaintiffs failed to establish a concrete injury-in-fact based on the possibility that their communications would be intercepted, explaining that a series of hypothetical events would have to occur before the government would intercept any particular plaintiff's communications. *Id.* at 1148-50. The

Court held that among other steps, the government would have to decide to invoke its Section 702 authority to target a non-U.S. person with whom a plaintiff communicated, a panel of federal judges would have to "conclude that the Government's proposed surveillance procedures satisfy [the statute's] many safeguards and are consistent with the Fourth Amendment," and the government would have to succeed in intercepting one of the target's communications with the plaintiff. *Id.* Thus, the Court held that that the "highly attenuated chain of possibilities, d[id] not satisfy the requirement that threatened injury must be certainly impending." *Id.* at 1148 (citation omitted).

Applying *Clapper*, this Court reached a similar conclusion in *Beck*, in which a putative class of veterans who received medical treatment at a veterans' medical center alleged that they had been injured when two sets of records were stolen from the center. 848 F.3d at 262, 267. Although none of the named plaintiffs alleged any actual or attempted misuse of the personal information contained in their stolen records, they alleged that they suffered cognizable injuries-in-fact because they faced "(1) [an] increased risk of future identity theft, and (2) the costs of protecting against the same." *Id.* at 273. We concluded that both alleged injuries were too speculative to confer standing. *Id.* at 275-77. As to the alleged increased risk of identity theft, in particular, we explained that plaintiffs' theory of injury required us to "assume that the thie[ves] targeted the stolen items for the personal information they contained" and that the thieves would "then select, from thousands of others, the personal information of the named plaintiffs, and attempt successfully to use that

information to steal their identities." *Id.* at 275. "This 'attenuated chain' cannot confer standing," we held. *Id.* We likewise rejected the plaintiffs' costs of mitigation theory of standing as a "repackaged" version of their first theory of standing, amounting to an effort to recoup "costs they incurred in response to a *speculative threat*." *Id.* at 276 (emphasis added) (quoting *Clapper*, 568 U.S. at 416).

Here, South Carolina's theory of standing—that it will become "the permanent repository of weapons-grade plutonium" and all the environmental, health, and safety risks that entails, Appellee's Br. at 15-16—rests on a similarly "highly attenuated chain of possibilities," *Clapper*, 568 U.S. at 410. Between now and 2046—when the analysis in the current Environmental Impact Statement governing the risks associated with long-term storage of weapons-grade nuclear material at the Savannah River Site expires—the Department of Energy has twenty-eight years to identify an alternative method for disposing of the nuclear material or otherwise removing it from South Carolina. The Secretary of Energy already has certified that one potential alternative to the MOX program exists, the Dilute and Dispose method. And the Department of Energy may identify and develop other methods during that twenty-eight-year period. Or the Department of Energy may decide to transfer the plutonium out of South Carolina to another location.

Furthermore, Congress has put in place contingency plans for the removal of plutonium shipped to the Savannah River Site to forestall the indefinite storage of plutonium in South Carolina. A federal statute requires that, by 2022,

all additional plutonium transferred into South Carolina to the MOX facility, but not processed, must be removed. 50 U.S.C. § 2566(c)(2). Notably, because the Department of Energy already has failed to meet certain statutory time limits for disposing of nuclear material at the site, South Carolina has successfully brought suit pursuant to the Administrative Procedure Act to enforce these congressionally mandated deadlines via a mandatory injunction. *See id.* § 2566(c)(1) (requiring removal of one metric ton of plutonium no later than January 1, 2016); *South Carolina v. United States*, 243 F. Supp. 3d 673 (D.S.C. 2017), *aff'd*, 907 F.3d 742 (4th Cir. 2018) (ordering the Department of Energy to remove one metric ton of plutonium within two years).

In sum, for South Carolina's alleged injury—becoming "the permanent repository of weapons-grade plutonium," Appellee's Br. at 15-16—to occur: (1) the proposed Dilute and Dispose method must fail; (2) the Department of Energy must fail to identify an alternative method for disposing of the nuclear material; and (3) the Department of Energy must breach its statutory obligation to remove the nuclear material from South Carolina, Congress must repeal that obligation, or the courts must refuse to enforce that obligation. At this juncture, before the Department of Energy has even had an opportunity to finish analyzing the Dilute and Dispose method, this "chain of possibilities" is too speculative to give rise to a sufficiently concrete injury-in-fact.

That several of the links in this "chain of possibilities" the State's standing theory contemplates require our

coordinate branches to either breach or abandon their existing commitments to ensure timely removal of the nuclear material at the Savannah River Site further weighs against treating the South Carolina's alleged injury as conferring standing. As *Clapper* recognized, the standing doctrine is "built on separation-of-powers principles" and "serves to prevent the judicial process from being used to usurp the powers of the political branches." 568 U.S. at 408 (citations omitted); *see also Allen v. Wright*, 468 U.S. at 752 (1984) ("[Article] III standing is built on a single basic idea—the idea of separation of powers."). To confer standing on South Carolina at this juncture based on an alleged injury—becoming the permanent repository of nuclear material—that the political branches already have made written and legally binding commitments to forestall would improperly "usurp the powers of the political branches." *Clapper*, 568 U.S. at 408.

The "highly attenuated chain of possibilities" that must occur for South Carolina to become the permanent repository of nuclear material also sets this case apart from this Court's decision in *Hodges v. Abraham*, 300 F.3d 432 (4th Cir. 2002), upon which South Carolina principally relies.

Like the instant case, *Hodges* dealt with the storage of plutonium at the Savannah River Site. *Id.* at 436. In 2002, the Department of Energy issued a Record of Decision authorizing the immediate shipment of six metric tons of plutonium from a nuclear facility in Colorado to the Savannah River Site. *Id.* The Governor of South Carolina sought to enjoin shipment of the plutonium

into South Carolina, alleging that the Department of Energy's *existing* Environmental Impact Statement, and its supplemental analyses to the Environmental Impact Statement, related to storage of plutonium at the Savannah River Site violated NEPA in several ways. *Id.* at 445. This Court held that the Governor adequately alleged an injury-in-fact to support his NEPA claims because the South Carolina owned property adjacent to the Savannah River Site. *Id.* "[T]he Governor, in his official capacity, is essentially a neighboring landowner, whose property is at risk of environmental damage" as a result of the Department of Energy's shipment of plutonium to the Savannah River Site and storage of that plutonium there, we explained. *Id.*

Here, unlike in *Hodges*, South Carolina does not argue that its injury, as a neighboring landowner, is attributable to the *current* storage of nuclear material at the Savannah River Site or the inadequacy of the Environmental Impact Statement pursuant to which the nuclear material is *currently* stored—a question that *Hodges* already resolved in the federal government's favor. *Id.* at 446-49. Rather, South Carolina contends it is injured because the termination of the MOX program renders it the *permanent* repository of the nuclear material when the Department of Energy has not issued an Environmental Impact Statement analyzing the environmental impact of the storage of the material at the Savannah River Site *beyond the year 2046*, the year when the existing Environmental Impact Statement's analysis terminates, or, allegedly, satisfies its statutory obligations in terminating the MOX program. There is a meaningful

distinction between the alleged *immediate* environmental injuries associated with storing plutonium at the Savannah River Site, which were at issue in *Hodges*, and the alleged *future* adverse environmental impacts on South Carolina as a neighboring landowner if the Department of Energy continues to store the plutonium at the Savannah River Site *decades in the future*. That distinction is particularly meaningful because, as explained above, numerous contingencies must occur in order for the plutonium to remain in South Carolina after 2046, the year when South Carolina's alleged injury will mature.

In sum, the single theory of injury[3] that South Carolina relies on to support both of its claims is too speculative at this juncture to support Article III standing. The district court, therefore, was without jurisdiction to enter its preliminary injunction premised on those two claims.

B.

For reasons similar to those that lead us to find that South Carolina lacks standing, we also find that the two claims at issue fail on ripeness grounds. Like standing, the ripeness doctrine "originates in the 'case or controversy' constraint of Article III." *Scoggins v. Lee's*

3. Because South Carolina has advanced only one theory of injury to support the two claims before this Court—that South Carolina is harmed by becoming the permanent repository of weapons-grade nuclear material—we cannot and do not take any position on whether other theories of injury would presently confer standing on South Carolina to support either of the two claims before us on appeal.

Crossing Homeowners Ass'n, 718 F.3d 262, 269 (4th Cir. 2013) (citations omitted). "Analyzing ripeness is similar to determining whether a party has standing." *Miller v. Brown*, 462 F.3d 312, 319 (4th Cir. 2006). "Although the phrasing makes the questions of who may sue and when they sue seem distinct, in practice there is an obvious overlap between the doctrines of standing and ripeness." *Id.* (quoting Erwin Chemerinsky, *Federal Jurisdiction* § 2.4 (4th ed. 2003). As with standing, ripeness is a question of subject matter jurisdiction. *See Sansotta v. Town of Nags Head*, 724 F.3d 533, 548 (4th Cir. 2013) (citation omitted).

The question of whether a claim is ripe "turns on the 'fitness of the issues for judicial decision' and the 'hardship to the parties of withholding court consideration.'" *Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 201, 103 S. Ct. 1713, 75 L. Ed. 2d 752 (1983) (citation omitted). In the context of claims challenging agency actions, like the two at issue, the purpose of the ripeness doctrine is "to prevent the courts, through avoidance of premature adjudication, from entangling themselves in abstract disagreements over administrative policies, and also to protect the agencies from judicial interference until an administrative decision has been formalized and its effects felt in a concrete way by the challenging parties." *Abbott Labs. v. Gardner*, 387 U.S. 136, 148-49, 87 S. Ct. 1507, 18 L. Ed. 2d 681 (1967), *abrogated on other grounds by Califano v. Sanders*, 430 U.S. 99, 97 S. Ct. 980, 51 L. Ed. 2d 192 (1977).

To be fit for judicial review, a controversy should be presented in a "clean-cut and concrete form." *Miller*,

462 F.3d at 319 (citation omitted). This occurs when the action is "final and not dependent on future uncertainties or intervening agency rulings." *Franks v. Ross*, 313 F.3d 184, 195 (4th Cir. 2002) (citation omitted). On the other hand, just as a plaintiff cannot assert standing based on an alleged injury that lies at the end of a "highly attenuated chain of possibilities," *Clapper*, 568 U.S. at 410, a plaintiff's claim is not ripe for judicial review "if it rests upon contingent future events that may not occur as anticipated, or indeed may not occur at all." *Scoggins*, 718 F.3d at 270 (quoting *Texas v. United States*, 523 U.S. 296, 300, 118 S. Ct. 1257, 140 L. Ed. 2d 406 (1998)).

The two claims that South Carolina advances before this Court rest on the premise that South Carolina will be the permanent repository of the weapons-grade nuclear material currently stored at the Savannah River Site. But, numerous "contingent future events," *id.*, must occur before South Carolina becomes the *permanent* repository of the nuclear material, *see supra* Part II.A. In particular, the Dilute and Dispose method must prove unworkable. The Department of Energy must fail to identify an alternative method of disposal and breach its commitment to dispose of the waste. And Congress or the courts must set aside or refuse to enforce the statutory mechanisms currently in place to ensure timely removal of the nuclear material. All of these "future uncertainties," *Franks*, 313 F.3d at 195, lead us to conclude that the two claims at issue are not ripe for review at this time—at least as presented by South Carolina. Accordingly, the ripeness doctrine provides an additional basis for our holding that the district court was without jurisdiction to enter the preliminary injunction.

III.

In sum, the only theory of injury advanced by South Carolina—that South Carolina will be the permanent repository of the nuclear material currently stored at the Savannah River Site—rests upon a "highly attenuated chain of possibilities," *Clapper*, 568 U.S. at 410, and "contingent future events that may not occur as anticipated, or indeed may not occur at all." *Scoggins*, 718 F.3d at 270. In such circumstances, we must conclude that South Carolina lacks Article III standing to advance the two claims that serve as the basis of the district court's injunction and that those two claims are not ripe for review.

That the two claims are not currently justiciable does not mean that they never will be so. If uncertainty as to several links in the chain of possibilities is resolved, then South Carolina's alleged injury may move from the speculative to the concrete, and therefore the two claims also may become ripe for review. But until that uncertainty is lifted, the Constitution demands that we withhold judicial review.

Accordingly, we vacate the preliminary injunction imposed by the district court and remand the case for further proceedings not inconsistent with this opinion.

VACATED AND REMANDED

APPENDIX B — JUDGMENT OF THE UNITED STATES COURT OF APPEALS FOR THE FOURTH CIRCUIT, FILED JANUARY 8, 2019

UNITED STATES COURT OF APPEALS
FOR THE FOURTH CIRCUIT

No. 18-1684
(1:18-cv-01431-JMC)

STATE OF SOUTH CAROLINA,

Plaintiff-Appellee

v.

UNITED STATES OF AMERICA; UNITED STATES DEPARTMENT OF ENERGY; RICK PERRY, IN HIS OFFICIAL CAPACITY AS SECRETARY OF ENERGY; NATIONAL NUCLEAR SECURITY ADMINISTRATION; LISA E. GORDON-HAGERTY, IN HER OFFICIAL CAPACITY AS ADMINISTRATOR OF THE NATIONAL NUCLEAR SECURITY ADMINISTRATION AND UNDERSECRETARY FOR NUCLEAR SECURITY,

Defendants-Appellants

Filed: January 8, 2019

JUDGMENT

In accordance with the decision of this court, the judgment of the district court is vacated. This case is remanded to the district court for further proceedings consistent with the court's decision.

This judgment shall take effect upon issuance of this court's mandate in accordance with Fed. R. App. P. 41.

/s/ PATRICIA S. CONNOR, CLERK

APPENDIX C — ORDER OF THE UNITED STATES COURT OF APPEALS FOR THE FOURTH CIRCUIT, FILED OCTOBER 9, 2018

UNITED STATES COURT OF APPEALS
FOR THE FOURTH CIRCUIT

No. 18-1684
(1:18-cv-01431-JMC)

STATE OF SOUTH CAROLINA,

Plaintiff-Appellee,

v.

UNITED STATES OF AMERICA; UNITED STATES DEPARTMENT OF ENERGY; RICK PERRY, IN HIS OFFICIAL CAPACITY AS SECRETARY OF ENERGY; NATIONAL NUCLEAR SECURITY ADMINISTRATION; LISA E. GORDON-HAGERTY, IN HER OFFICIAL CAPACITY AS ADMINISTRATOR OF THE NATIONAL NUCLEAR SECURITY ADMINISTRATION AND UNDERSECRETARY FOR NUCLEAR SECURITY,

Defendants-Appellants.

Filed: October 9, 2018

ORDER

Upon review of submissions relative to the motion for stay pending appeal, the court grants the motion.

Entered at the direction of Judge Niemeyer with the concurrence of Judge King and Judge Wynn.

For the Court
/s/ Patricia S. Connor, Clerk

APPENDIX D — ORDER OF THE UNITED STATES COURT OF APPEALS FOR THE FOURTH CIRCUIT, FILED JUNE 29, 2019

UNITED STATES COURT OF APPEALS
FOR THE FOURTH CIRCUIT

No. 18-1684
(1:18-cv-01431-JMC)

STATE OF SOUTH CAROLINA,

Plaintiff-Appellee,

v.

UNITED STATES OF AMERICA; UNITED STATES DEPARTMENT OF ENERGY; RICK PERRY, IN HIS OFFICIAL CAPACITY AS SECRETARY OF ENERGY; NATIONAL NUCLEAR SECURITY ADMINISTRATION; LISA E. GORDON-HAGERTY, IN HER OFFICIAL CAPACITY AS ADMINISTRATOR OF THE NATIONAL NUCLEAR SECURITY ADMINISTRATION AND UNDERSECRETARY FOR NUCLEAR SECURITY,

Defendants-Appellants.

Filed: June 29, 2018

ORDER

Upon consideration of the submissions relative to appellants' motion for a stay pending appeal, the court denies the motion. Upon consideration of the submissions relative to appellants' motion to expedite the appeal,

the court grants the motion and expedites the briefing schedule as requested. Upon consideration of the submissions relative to appellee's motions to strike the motion for a stay pending appeal and to hold the appeal in abeyance, the court denies the motions.

Entered at the direction of Judge Wynn with the concurrence of Judge Traxler and Judge Thacker.

For the Court

/s/ Patricia S. Connor, Clerk

APPENDIX E— ORDER AND OPINION OF THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF SOUTH CAROLINA, AIKEN DIVISION, DATED JUNE 26, 2018

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

Civil Action No.: 1:18-cv-01431-JMC

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.

ORDER AND OPINION

This matter is before the court pursuant to Defendants the United States, the Department of Energy ("DOE"),

the National Nuclear Security Administration ("NNSA"), Secretary of Energy Rick Perry, and Administrator Gordon-Hagerty's Motion to Stay the Preliminary Injunction Pending Appeal (ECF No. 27). Defendants move under Federal Rule of Civil Procedure 62(c) to stay the Preliminary Injunction Order entered by the court on June 7, 2018 (ECF No. 23) ("the Injunction"), pending the resolution of their appeal to the United States Court of Appeals for the Fourth Circuit (*See* ECF No. 26). (ECF No. 27 at 1.) The Injunction prevents Defendants from terminating the mixed oxide fuel fabrication facility project ("MOX Facility") currently under construction at the Savannah River Site in Aiken County, South Carolina until this case can be decided on its merits. (ECF No. 23.) For the reasons below, the court **DENIES** Defendants' Motion to Stay the Preliminary Injunction Pending Appeal (ECF No. 27).

I. RELEVANT BACKGROUND

On May 25, 2018, the State concurrently filed a complaint against Defendants[1] (ECF No. 1), a Motion for

1. The State brought suit alleging (1) Defendants had not consulted with the Governor prior to notifying Congress of its May 10 decisions to terminate the MOX Facility and pursue the Dilute and Dispose method of disposition for defense plutonium stored at the Savannah River Site originally scheduled to be disposed through the MOX Facility; (2) Defendants failed to conduct the analysis required by the National Environmental Policy Act, 42 U.S.C. §§ 4321 *et seq.* ("NEPA"), prior to making its May 10 decisions; and (3) the commitment and certification sent to Congress constituted arbitrary and capricious action in violation of the Administrative Procedure Act, 5 U.S.C. §§ 551 *et seq.* ("APA"). (ECF No. 1.) In its

Preliminary Injunction (ECF No. 5), and a Motion for Expedited Briefing (ECF No. 6). On May 29, 2018, the court granted the Motion for Expedited Briefing. (ECF No. 8.) On June 4, 2018, Defendants filed a Response in Opposition to Plaintiff's Motion for Preliminary Injunction (ECF No. 19), and on June 5, 2018, the court held a hearing on the Motion for Preliminary Injunction (ECF No. 20). On June 6, 2018, the State filed a Reply in Support of the Motion for Preliminary Injunction (ECF No. 21), and on June 7, 2018, the court issued the Injunction. (ECF No. 23.)

On June 15, Defendants filed this Motion to Stay the Preliminary Injunction (ECF No. 27) along with a Notice of Appeal (ECF No. 26).[2]

II. LEGAL STANDARD

Under Rule 62(c), a court may "suspend, modify, restore, or grant" an injunction while an interlocutory appeal regarding the injunction is pending. Fed. R. Civ. P. 62(c). When considering whether to stay an order pending appeal under Rule 62(c), courts consider "(1) whether the stay applicant has made a strong showing that he is

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Amended Complaint, filed on June 9, 2018, the State removed the first cause of action regarding Defendants' failure to consult with the Governor. (ECF No. 25.)

2. The filing of an appeal does not divest this court of jurisdiction for a motion to stay a preliminary injunction. *See* Fed. R. Civ. P. 62(c) (allowing a court to stay an order "[w]hile an appeal is pending"); *see also* 11 Charles Alan Wright, Arthur R. Miller, & Edward H. Cooper, FEDERAL PRACTICE AND PROCEDURE § 2904 (3rd ed. 2018).

likely to succeed on the merits; (2) whether the applicant will be irreparably injured absent a stay; (3) whether issuance of the stay will substantially injure the other parties interested in the proceeding; and (4) where the public interest lies." *Hilton v. Braunskill*, 481 U.S. 770, 776 (1987).

III. ANALYSIS

Defendants assert that the Injunction should be stayed for two reasons. First, Defendants posit that their actions following the issuance of the Injunction make the Injunction unnecessary and, in essence, moot. (ECF No. 27 at 5.) The Injunction vacated Defendants' May 10 decisions to terminate the MOX Facility and pursue the Dilute and Dispose method of disposition, vacated the May 14 Partial Stop Work Order, and enjoined Defendants from continuing to pursue the termination of the MOX Facility. (ECF No. 23 at 35-36.) After the Injunction was issued, Defendants informed the MOX Facility contractor, CB&I AREVA MOX Services, LLC, that the May 14, 2018 Partial Stop Work Order had been rescinded. (ECF No. 27-1.) Additionally, Defendants instructed DOE personnel not to take any action to implement the Dilute and Dispose method of disposition for the 34 metric tons of defense plutonium designated for processing at the MOX Facility. (ECF No. 27 at 4.) Defendants' rescission of the Partial Stop Work Order was a direct response to the Injunction. (ECF No. 27-1) ("Pursuant to the June 7, 2018 Preliminary Injunction Order issued by the United States District Court for the District of South Carolina Aiken Division, the May 14, 2018 NNSA Partial Stop Work Order is cancelled

. . . ."). Similarly, DOE and NNSA personnel were directed to not pursue the Dilute and Dispose method of disposition in order to comply with the Injunction (ECF No. 27 at 4). When an injunction both nullifies previous actions and enjoins future actions, compliance with the injunction's retroactive portions does not make the injunction as a whole, and specifically its prospective portions, moot. *See Polaris Pool Sys., Inc. v. Great American Waterfall Co.*, 2006 WL 289118, at *4 (M.D. Fla. February 7, 2006) ("[M]odification of an injunction is proper only when there has been a change of circumstances between entry of the injunction and the filing of the motion that would render the continuance of the injunction in its original form inequitable.") (quoting *Favia v. Ind. Univ. of Pa.*, 7 F.3d 332, 37-38 (3rd Cir. 1993)). Defendants' actions do not render the continuance of the Injunction in its original form inequitable. Therefore, Defendants' actions following the issuance of the Injunction do not support staying the Injunction.

Secondly, Defendants submit the factors described in *Hilton* weigh in favor of staying the Injunction. (ECF No. 27 at 5-10.) The *Hilton* factors are functionally identical to the factors a court considers when deciding to grant a preliminary injunction. *Compare Hilton*, 481 U.S. at 776 *with Winter v. Natural Res. Def. Council, Inc.*, 555 U.S. 7, 20 (2008) ("A plaintiff seeking a preliminary injunction must establish that he is likely to succeed on the merits, that he is likely to suffer irreparable harm in the absence of preliminary relief, that the balance of equities tips in his favor, and that an injunction is in the public interest."). Defendants acknowledge that their arguments in favor

of the stay mirror their arguments against the issuance of the Injunction. (ECF No. 27 at 5) ("For the reasons stated in their brief in opposition to plaintiff's motion for a preliminary injunction, Defendants respectfully assert that they have satisfied [the *Hilton*] factors and that a stay is appropriate."). The court addressed these arguments in the Injunction and stands by its previous analysis.[3] Therefore, the court finds that the *Hilton* factors weigh against staying the injunction.

3. Defendants assert "[t]he [I]njunction could arguably be read to prohibit DOE from internally discussing, or taking any steps to perform the appropriate NEPA analysis for, using dilute and dispose for removing the defense plutonium designated for MOX processing from South Carolina." (ECF No. 27 at 7.) The Injunction should not be read as Defendants suggest. The Injunction does not prevent Defendants from conducting NEPA environmental analysis of the Dilute and Dispose method of disposition for plutonium designated for processing at the MOX Facility. Instead, the Injunction prevents Defendants from continuing their current plan to terminate the MOX Facility.

Appendix E

IV. CONCLUSION

For the reasons discussed above, the court **DENIES** Defendants' Motion for Stay of the Preliminary Injunction Pending Appeal (ECF No. 27).

IT IS SO ORDERED.

/s/
United States District Judge

June 26, 2018
Columbia, South Carolina

APPENDIX F — ORDER OF THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF SOUTH CAROLINA, AIKEN DIVISION, DATED JUNE 7, 2018

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

Civil Action No.: 1:18-cv-01431-JMC

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.

June 7, 2018, Decided
June 7, 2018, Filed

Appendix F

PRELIMINARY INJUNCTION ORDER

This matter is before the court pursuant to Plaintiff State of South Carolina's ("the State") Motion for Preliminary Injunction to prevent the Department of Energy ("DOE") and the National Nuclear Security Administration ("NNSA") and their officials (collectively, "the Federal Defendants") from terminating 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 until this case can be decided on its merits. (ECF No. 5.) On June 4, 2018, the Federal Defendants filed a response in opposition (ECF No. 19). For the reasons set forth below, the court **GRANTS** the State's Motion for Preliminary Injunction (ECF No. 5).

I. RELEVANT FACTUAL AND PROCEDURAL BACKGROUND

Following 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, with a particular focus on nuclear weapons. In an effort to consolidate and reduce surplus weapons-grade plutonium, the United States and Russia jointly developed a plan for the nonproliferation of weapons of mass destruction worldwide.[1]

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1. *See* Compl. Ex. 6, Excerpt from D.J. Spellman et al., *History of the U.S. Weapons-Usable Plutonium Disposition Program*

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After extensive study, including an environmental impact statement ("EIS") conducted pursuant to National Environmental Policy Act, 42 U.S.C.A. §§ 4321-4370h ("NEPA") in 1996, DOE concluded that the "preferred alternative" for plutonium disposition consisted of a dual-path strategy that proposed (1) immobilization of a portion of the surplus plutonium in glass or ceramic materials and (2) irradiation of the remaining plutonium in MOX fuel. DOE also analyzed the environmental impacts of various alternatives for the "long term" storage of plutonium and other nuclear materials for up to fifty years.[2] The following year, DOE announced its intention to pursue this dual-path strategy, including the construction and operation of a MOX fuel fabrication facility.

In November 1999, after further evaluating the alternatives for surplus plutonium disposition, DOE issued the *Surplus Plutonium Disposition Final EIS* ("SPD EIS").[3] DOE also analyzed a "No Action Alternative" that did not involve disposition of any surplus plutonium but rather addressed storage of the plutonium in accordance

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Leading to DOE's Record of Decision 2 (1997) (detailing important events and studies concerning surplus weapons-usable plutonium disposition).

2. *See* Compl. Ex. 7, NNSA, *Report to Congress: Disposition ofSurplus Defense Plutonium at Savannah River Site* 2-1 (Feb. 15, 2002) (hereinafter *Report to Congress);* Compl. Ex. 9, DOE, Record of Decision (ROD) for *Storage and Disposition of Weapons-Usable Fissile Materials Final Programmatic Environmental Impact Statement* (PEIS) (Jan. 21, 1997), 62 Fed. Reg. 3014.

3. Compl. Ex. 11, DOE, Excerpt from SPD EIS, Vol. I - Part A, at 1-3 (Nov. 1999).

with its previous analysis of the impacts of continued storage of the surplus plutonium for a period up to 50 years.[4] DOE again concluded that the "Preferred Alternative" was the hybrid approach to immobilize surplus weapons-grade plutonium in glass and ceramic materials and to irradiate the remaining plutonium in MOX fuel in existing domestic, commercial reactors.[5] DOE selected SRS as the preferred site to implement both of these approaches and upon which to construct and operate the MOX Facility.

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.[6] On or about February 28, 2001, MOX Services submitted a request to the U.S. Nuclear Regulatory Commission ("NRC") for a license to construct the MOX Facility at SRS.[7] In late 2001, 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. Congress also required the Secretary of Energy to:

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4. *Id.*

5. *Id.* at 1-10 to 1-11.

6. *See* Compl. Ex. 12, DOE, Excerpt from *SPD EIS*, Summary, at S-1 (Nov. 1999); Compl. Ex. 13, DOE, ROD for *SPD EIS* (Jan. 11, 2000), 65 Fed. Reg. 1608.

7. *See* Compl. 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).

- 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]. . . ."[8]

In 2002, DOE decided not to proceed with the immobilization portion of the hybrid strategy, leaving

8. National Defense Authorization Act for Fiscal Year 2002 (NDAA FY02), Pub. L. No. 107-107, 115 Stat. 1378, § 3155.

the construction and operation of the MOX Facility as the only strategy to dispose of surplus plutonium in the United States. In 2003, Congress enacted statutory requirements for DOE's construction and operation of the MOX Facility.[9] Specifically, Section 2566 provides the Congressional mandate for the "construction and operation of [the MOX Facility]" and requires DOE to achieve the "MOXproduction objective" by producing mixed-oxide fuel from defense plutonium and defense plutonium materials at an average rate of no less than one metric ton of mixed-oxide fuel per year.[10]

In 2005, DOE began transferring plutonium to SRS for conversion into MOX fuel.[11] This plutonium was in addition to the several tons of plutonium that already existed at SRS. On or about March 30, 2005, after its own evaluation and analysis, NRC issued a license for construction to MOX Services finding, among other things, that radiation exposure to the public is greater in a "no action" alternative than with the Project and noting that "continued storage would result in higher annual impacts" of public radiation exposure than implementation of the Project.[12] Construction began on the MOX Facility on or about August 1, 2007.

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9. NDAA FY03, Subtitle E, § 3182, *subsequently codified by* NDAA FY04 as 50 U.S.C.A. § 2566.

10. 50 U.S.C.A. § 2566(a), (h).

11. *See* Compl. Ex. 21, DOE, *Storage of Surplus Plutonium Materials at the Savannah River Site Supplemental Analysis* (Sept. 5, 2007).

12. Compl. Ex. 16, Excerpt from NRC EIS at 4-96.

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In 2014, the Federal Defendants sought to abandon the Project by trying to place the MOX Facility into "cold standby." The State filed a lawsuit before the court, and the Federal Defendants then agreed to continue construction of the Project in compliance with law. The case was resolved through a stipulation of dismissal and dismissed without prejudice.[13] Since then, DOE's budget requests have all requested funding to terminate construction of the MOX Facility. 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 the Project. Nevertheless, DOE has continuously sought termination of the MOX Project and has advocated for its proposed "Dilute and Dispose" alternative (also referred to as "downblending"), under which DOE would prepare surplus non-pit plutonium at SRS for disposal at the Waste Isolation Pilot Plant ("WIPP") near Carlsbad, New Mexico.

On December 20, 2017, the court issued an Injunction Order instructing the Federal Defendants that within two years from the entry of the Order, they "must remove from the State of South Carolina, for storage or disposal elsewhere, not less than one metric ton of defense plutonium or defense plutonium materials, as defined by 50 U.S.C. § 2566." (See *State of South Carolina v. United States et al*, C/A No.: 1:16-cv-00391-JMC (ECF No. 109.)

13. *South Carolina v. U.S. Dep't of Energy*, 1:14-cv-00975-JMC (ECF No. 19).

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On February 2, 2018, the Federal Defendants appealed the court's Injunctive Order. (*See id.* at ECF No. 113.)

Despite the Federal Defendants' new preferred alternative, Congress has continued to require DOE to pursue construction of the MOX Facility. Congress specified that the Secretary can avoid this 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 'Government Accountability Office ("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.[14]

In making the certification under Section 3121(b)(1)(B), the Secretary also must ensure that the estimates used "are of comparable accuracy." National Defense Authorization Act ("NDAA") FY18, § 3121(b)(2).[15]

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14. NDAA FY18, § 3121(b)(1).

15. The NDAA FY 2018 is an act that was signed into law by the President on December 12, 2017, which authorizes fiscal year 2018 appropriations and sets forth policies for Department of Defense ("DOD") programs and activities, including military personnel strengths. Pub. L. No. 115-91. Section 3121 of the NDAA FY 2018 provides that the Secretary of Energy *shall* use the funds

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On or about May 10, 2018, DOE notified Congress of the Federal Defendants' decision to terminate and cease construction of the MOX Facility and its intent to pursue the "Dilute and Dispose approach to plutonium disposition."[16] The Secretary further stated that the requirements of Section 3121 of NDAA FY 18 and Section 309 of the Consolidated Appropriations Act ("CAA") FY18[17] had been met and that he therefore was exercising his authority to "cease MOX construction." DOE and

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appropriated for the construction of the MOX Facility for the aforementioned uses, unless he waives the requirement pursuant to subsection (b). Subsection (b) requires that the Secretary submits to Congress "the commitment of the Secretary to remove Plutonium" from South Carolina and a certification that "an alternative option for carrying out the plutonium disposition program for the same amount of plutonium . . . exists," the remaining lifecycle cost . . . for the alternative option would be less than approximately half of the estimated remaining lifecycle cost of the [MOX] program," and the details of any statutory or regulatory changes necessary to complete the alternative. § 3121(b)(1).

16. Compl. Ex. 1, May 10, 2018 Secretary Perry Letter; Compl. Ex. 29, NNSA, *Surplus Plutonium Disposition Dilute and Dispose Option Independent Cost Estimate (ICE) Report.*

17. The Consolidated Appropriations Act, 2018 ("CAA FY18") is an act that was signed into law by the President on March 23, 2018, which requires the Secretary of Energy to use all funds allocated this year and previously for construction of the MOX Project for such use unless the Secretary waives the requirement in accordance with NDAA FY18 § 3121. Pub. L. 115-141 § 309. If the Secretary makes a waiver under the NDAA, CAA FY18 also requires that he "submit to the Committees on Appropriations of both Houses of Congress the lifecycle cost estimate used to make the certification under Section 3121(b)" and he "may not use funds provided for the Project to eliminate such Project until" 30 days later. § 309(c).

NNSA issued a Partial Stop Work Order on May 14, 2018 that halted any new contracts or new hires at SRS for the MOX Project.[18] DOE and NNSA intend to issue a full stop work order to begin the wind-down of the MOX Project and termination of employees on the MOX Project on or about Monday, June 11, 2018. (ECF No. 19-1 ¶ 10.)

The State's present Motion requests that the court, by way of a preliminary injunction, bar the Federal Defendants and those under their supervision from terminating or stopping work on the Project. *(See* ECF No. 5). On June 4, 2018, the Federal Defendants filed a response in opposition (ECF No. 19), and on June 6, 2018, the State filed a reply (ECF No. 21). A hearing on this matter occurred on June 5, 2018 (ECF No. 20).

II. JURISDICTION

A. Standing

Standing is established where (1) there is an injury in fact; (2) the injury is "fairly traceable to the challenged action," and (3) it is likely that the alleged injury "will be redressed by a favorable decision." *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560-61, 112 S. Ct. 2130, 119 L. Ed. 2d 351 (1992). Further, standing is established when a plaintiff's legal action arguably falls within the "zone of interests" Congress intended to protect. *See, e.g., Clarke v. Sec. Indus. Ass'n*, 479 U.S. 388, 399, 107 S. Ct. 750,

18. Compl. Ex. 30, May 14, 2018 NNSA Letter to CB&I AREVA MOX Services, LLC RE: Contract DE-AC02-99CH10888 (Mixed Oxide Fuel Fabrication Facility).

93 L. Ed. 2d 757 (1987) ("The "zone of interest" test is a guide for deciding whether, in view of Congress' evident intent to make agency action presumptively reviewable, a particular plaintiff should be heard to complain of a particular agency decision.").

1. Injury in Fact

The State has alleged three separate injuries. (ECF No. 21 at 3.) The State alleges an economic injury, a procedural injury, and an environmental injury. (*Id.*) The Federal Defendants challenge the sufficiency of each of these injuries to fulfil the injury in fact requirement to support standing.

The State asserts two forms of economic injury. First, the State argues that it will suffer an economic injury as a result of the decreased tax revenue stemming from the termination of the MOX Project. (ECF No. 5 at 26.) In short, the State's argument is that the employees at the MOX Project pay taxes to the State, and the termination of the MOX Project would lead to their unemployment, which would decrease the State's tax revenues. However, a state cannot bring a *parens patriae* action on behalf of its citizens to protect them from actions by the federal government. *Massachusetts v. Mellon*, 262 U.S. 447, 485-86, 43 S. Ct. 597, 67 L. Ed. 1078 (1923).

Further, the State's assertion that it is injured because individuals who are no longer employed on the construction of the MOX Facility will not pay the same amount of income taxes to the State fails to constitute

an injury in fact. If a state is allowed to sue the federal government any time any federal action causes a generalized economic harm, such suits would dramatically expand the circumstances under which state governments are able to sue the United States. The courts that have considered such theories have accordingly rejected the notion that a state government can sue the United States based on such harm. *See Pennsylvania v. Kleppe*, 533 F.2d 668, 672, 174 U.S. App. D.C. 441 (D.C. Cir. 1976) ("the unavoidable economic repercussions of virtually all federal policies suggest[s] to us that impairment of state revenues should not, in general, be recognized as sufficient injury in fact to support state standing."); *Iowa ex rel. Miller v. Block*, 771 F.2d 347, 353 (8th Cir. 1985).

Secondly, the State posits that the termination of the Project would result in an economic injury because it was supposed to be an economic benefit to the State. (ECF No. 21 at 3.) The State quotes the Bob Stump National Defense Authorization Act for Fiscal Year 2003, which states that the MOX Project "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." Pub. L. No. 107-314, 116 Stat. 2458, Subtitle E, § 3181. It is true that the MOX Project would have economic benefit for the State. However, the court does not equate a statement of purpose with the creation of a cause of action. Therefore, this theory also fails to satisfy the injury in fact requirement.

The State also argues that it suffered two procedural harms as a result of the May 10, 2018 decisions. First,

the State alleges that the Federal Defendants failed to adequately consult the Governor of South Carolina, as required by 50 U.S.C. § 2567(a), prior to making a decision "related to the disposition of surplus defense plutonium and defense plutonium materials located at the Savannah River Site, Aiken, South Carolina," § 2567(a). (ECF No. 21 at 3.) Courts have held that while it is difficult to quantify the exact effect of a failure to consult, the party is clearly injured. *See Cal. Wilderness Coalition v. U.S. Dep't of Energy*, 631 F.3d 1072, 1087 (9th Cir. 2011) ("[W]e note that although the nature of consultation makes it difficult to determine the precise consequences of its absence, the prejudice to the party excluded is obvious."). Thus, the Federal Defendants' failure to consult with the Governor prior to making a decision regarding the MOX Project creates an injury in fact.

Additionally, the State argues that it has suffered an injury in fact because of the Federal Defendants' failure to conform with the requirements of NEPA. (ECF No. 21 at 2.)"[I]ndividuals living next to [a federal project requiring NEPA analysis] possess standing to challenge a failure to comply with NEPA." *Hodges v. Abraham*, 300 F.3d 432, 444-45 (4th Cir. 2002) (citing *Lujan*, 504 U.S. at 572 n.7). Similar to Governor Hodges, the plaintiff in *Hodges*, the State has standing here to challenge the Federal Defendants' failure to comply with NEPA because the State owns extensive property adjoining, and one road traversing, the impacted area. (See ECF No. 1 at ¶ 5.)

Lastly, the State argues that it has suffered an environmental injury as a result of the May 10, 2018

decisions. "[W]hen a decision to which NEPA obligations attach is made without the informed environmental considerations that NEPA requires, the harm that NEPA intends to prevent has been suffered." *W. N.C. All. v. N.C. Dep't of Transp.*, 312 F. Supp. 2d 765, 778 (E.D.N.C. 2003). It is the State's environment that is placed at risk as a result of the Federal Defendants' failure to comply with NEPA. Therefore, the State has suffered an injury in fact.

Accordingly, the State has suffered procedural and environmental harms such that it has satisfied the injury in fact requirement.

2. Causation and Redressability

The procedural and environmental injuries discussed above are directly traceable to the Federal Defendants' decision to terminate the MOX Facility. The court is able to redress the procedural and environmental injuries. Accordingly, the State has satisfied the standing requirements to sue for violations of NEPA and NDAA FY 18.

B. Administrative Procedure Act ("APA") Jurisdiction

The APA, 5 U.S.C.A. §§ 701 *et seq.*, provides judicial review of final agency actions for which there is no other adequate remedy in a court. 5 U.S.C.A. § 704. A reviewing court shall 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. An agency decision is:

> arbitrary and capricious if the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.

Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co, 463 U.S. 29, 43, 103 S. Ct. 2856, 77 L. Ed. 2d 443 (1983); *Ohio River Valley Envtl. Coalition, Inc. v. Kempthorne*, 473 F.3d 94, 102 (4th Cir. 2006) (same) (quoting *Motor Vehicle Mfrs.)*. Accordingly, "the agency must examine the relevant data and articulate a satisfactory explanation for its action including a 'rational connection between the facts found and the choice made.'"*Motor Vehicle Mfrs.*, 463 U.S. at 43 (quoting *Burlington Truck Lines v. United States*, 371 U.S. 156, 168, 83 S. Ct. 239, 9 L. Ed. 2d 207(1962)).

The Federal Defendants contend that the May 10 decision did not constitute the final agency action to terminate the MOX Facility, but instead was only "information reporting" to Congress, and thus, the State's claims are not justiciable or subject to judicial review under the APA. (ECF No. 19 at 20-22.) This assertion is directly refuted by the Federal Defendants'

own affidavits. In support of their Response, the Federal Defendants submitted the declaration of Robert Raines, the DOE official responsible for MOX construction (and MOX termination), who testified:

> The Secretary exercised the authorities given to him by the Congress on May 10, 2018 and on May 14, 2018 a partial stop work order was issued to minimize cos[t] to the government during the 30 day period leading up to an eventual full stop work order and *the termination letter expected to be issued on June 11, 2018*.

(ECF No. 19-1 ¶ 10) (emphasis added). Mr. Raines further testified regarding the "issuance of the NNSA Contract Termination Notice [for June 11, 2018,]" (*id.* ¶ 18), the "termination notice date," (*id.* ¶ 19), and the "termination of the MOX Project," (*id.* ¶ 20). In addition, the Federal Defendants submitted the declaration of William Harris Walker, NNSA Director of Intergovernmental Affairs, who testified about "*the execution of the MOX termination waiver*'" (ECF No. 19-9 ¶ 7) (emphasis added). Accordingly, the Federal Defendants' contention that there has not been a final agency action to terminate the MOX Facility is directly refuted by the evidence submitted by the Federal Defendants and the practical reality that the full stop work order that is planned for June 11, 2018 will shut down the MOX Facility.

Moreover, because the Federal Defendants' purported commitments and certifications set forth in the May 10

termination letter have legal consequences—namely leaving plutonium at SRS indefinitely and without the required environmental analysis under NEPA to determine the environmental consequences on the State and the potential alternatives—they consequently are reviewable by the court under the APA. "For an action to be "final" under the APA, it should (1) mark the conclusion of the agency's decision-making process; and (2) be an action by which rights or obligations have been determined or from which legal consequences flow." *Bennett v. Spear*, 520 U.S. 154, 177-78, 117 S. Ct. 1154, 137 L. Ed. 2d 281 (1997). A person suffering legal wrong because of agency action, or adversely affected or aggrieved by agency action within the meaning of a relevant statute, is entitled to judicial review thereof. 5 U.S.C.A. §§ 702, 704, 706. Deciding whether the Federal Defendants' May 10 termination letter constituted final agency action therefore is based on "whether the agency has completed its decision-making process, and whether the result of that process is one that will directly affect the parties." *Franklin v. Massachusetts*, 505 U.S. 788, 792, 112 S. Ct. 2767, 120 L. Ed. 2d 636 (1992).

In *Chamblee v. Espy*, 100 F.3d 15 (4th Cir. 1996), the Fourth Circuit recognized this exact framework and that it is proper to consider the legal consequences that flow from the "practical effects" of an agency action. There, the Farmers Home Administration suspended a loan servicing request and argued that no final agency action had occurred because the suspension was "simply a pause in the decision-making process, which [would] be reactivated" at a later date. *Chamblee*, 100 F.3d at 18.

The court held, however, that "[t]his argument overlooks the effect of the agency's decisions" which was to deny the request and, thus, "amounts to final agency action [that is] subject to judicial review according to the APA." *Id.*; *see Kershaw v. Resolution Tr. Corp*, 987 F.2d 1206, 1208 (5th Cir.1993) ("In determining the finality of agency action a court should consider the "practical effect of the [agency's] determination.").

In the context of the Federal Defendants' actions, Section 3121 of the NDAA FY 2018 sets forth the general rule that the Secretary "shall carry out construction relating to the MOX facility" and can avoid this mandate *only* if he makes certain commitments and certifications. If the DOE action is allowed to stand, the contract with the MOX construction contractor will be terminated and the substantial labor force currently constructing the MOX Facility will be disbanded. At that point, the court's decision becomes irrelevant as there would be no feasible way to revive the MOX Project, there is no remedy for the NEPA violation, and no feasible alternative to plutonium removal.

In making the contention that the State's claims are not justiciable, the Federal Defendants primarily rely upon the holding in *Nat' l Res. Def. Council, Inc. v. Hodel*, 865 F.2d 288, 275 U.S. App. D.C. 69 (D.C. Cir. 1988) to argue "[t]he sufficiency of [an] agency's *response* to Congress is . . . not justiciable pursuant to the APA." (ECF No. 19 at 20) (emphasis added). In *Hodel*, the statute at issue directed the Secretary of the Interior to "indicate in detail to the President and Congress" its reasons for rejecting

lease proposals under an Outer Continental Shelf gas and oil leasing program. *Hodel*, 865 F.2d at 316 (internal quotations omitted). The plaintiffs contended that the Secretary failed to provide adequate explanations for the rejection of certain proposals. In rejecting plaintiffs' claims, the *Hodel* court determined that the report was a "commonplace requirement" where "the designated Executive Branch officer is simply reporting back to the source of its delegated power in accordance with the Article I branch's instructions." *Id.* at 317, 318. Moreover, the court found that there was no basis "for formulating judicially manageable standards by which to gauge the fidelity of the Secretary's response to the strictures of the statute. *Id.* at 318.

Despite the Federal Defendants attempt to characterize their obligations as mere "notifications," "responses," and "reports," the commitments and certifications required by NDAA FY18 are much more than a "purely informational" report that is "primarily a tool for [Congress'] own use without cognizable legal consequences." *Guerrero v. Clinton*, 157 F.3d 1190, 1195, 1197 (9th Cir. 1988). Nor do they amount to simple "federal reporting requirements" with "no standards which this court could apply" and which "do[] not involve the enforcement of . . . . any other Act of Congress." *Greenpeace USA v. Stone*, 748 F. Supp. 749, 766 (D. Haw. 1990).

Instead, the purported commitments and certifications in DOE's May 10 letter represent the completion of its decision-making process to terminate the MOX Project. In contrast to the issues presented in *Hodel, Guerrero*,

and *Greenpeace*, the Federal Defendants' termination of the MOX Facility and their deficient commitment and certification have direct legal consequences on the State and its statutory right to the removal of plutonium. Because the MOX Project is the only legally authorized disposition method for MOXable plutonium at SRS, the Federal Defendants' commitments and certifications not only terminate the MOX Project, but also leave no legally approved or funded pathway for disposition. The practical effect of these wrongful actions is that the plutonium will remain at SRS indefinitely.

Therefore, because the May 10 letter, and the purported commitments and certifications set forth therein, represent the final agency action to terminate the MOX Facility, and this action has significant legal consequences, the State's claims under the APA are justiciable.

III. LEGAL STANDARD

In order to obtain a preliminary injunction, a party must demonstrate: "(1) that [it] is likely to succeed on the merits, (2) that [it] is likely to suffer irreparable harm in the absence of preliminary relief, (3) that the balance of equities tips in [its] favor, and (4) that an injunction is in the public interest." *Winter v. Nat. Res. Def. Council, Inc.*, 555 U.S. 7, 19-20, 129 S. Ct. 365, 172 L. Ed. 2d 249 (2008). "The traditional office of a preliminary injunction is to protect the status quo and to prevent irreparable harm during the pendency of a lawsuit ultimately to preserve the court's ability to render a meaningful judgment on the merits." *In*

re Microsoft Corp. Antitrust Litig., 333 F.3d 517, 525 (4th Cir. 2003); *see Omega World Travel, Inc. v. Trans World Airlines*, 111 F.3d 14, 16 (4th Cir. 1997) ("The purpose of interim equitable relief is to protect the movant, during the pendency of the action, from being harmed or further harmed in the manner in which the movant contends it was or will be harmed through the illegality alleged in the complaint."). The Fourth Circuit has defined the status quo as the "last uncontested status between the parties which preceded the controversy." *Pashby v. Delia*, 709 F.3d 307, 320 (4th Cir. 2013).

IV. ANALYSIS

A. Success on the Merits

1. Violation of 50 U.S.C.A. § 2567 — Failure to Consult with the Governor of South Carolina

The State is not likely to succeed on the merits of its claim that 50 U.S.C.A. § 2567(a) was violated by the Secretary of Energy's failure to consult with Governor McMaster prior to reaching his May 10, 2018 decisions. An agency that has been statutorily directed to consult with a state government during the course of agency decision-making must conduct the consultation prior to reaching its decision—and consultation is more than "notice and comment" of an agency action. *Cal. Wilderness Coalition v. U.S. Dep't of Energy*, 631 F.3d 1072, 1087 (9th Cir. 2011). Further, where a federal agency is required to do an act "in consultation with" another agency, the requisite consultation must be made before the agency takes

action. *N. Cal. River Watch v. Wilcox*, 633 F.3d 766, 774 (9th Cir. 2011) (noting that the language "in consultation with" Section 7 of the Endangered Species Act requires consultation before the agency reaches a decision); *see also Natl. Wildlife Fed'n v. Coleman*, 529 F.2d 359, 371 (5th Cir. 1976) ("in consultation with" language requires meaningful consultation prior to reaching a final agency decision).

A federal agency should apply the ordinary meaning of the word consult when Congress has directed it to consult with outside parties:

> [a]n ordinary meaning of the word consult is to 'seek information or advice from (someone with expertise in a particular area)' or to 'have discussions or confer with (someone), typically *before* undertaking a course of action.' We conclude that this is the definition that Congress intended when it directed DOE to prepare the [study] 'in consultation with the affected States.' Thus, DOE was to confer with the affected States before it completed the study.

Cal. Wilderness Coalition, 631 F.3d at 1087 (quoting *The New Oxford Dictionary* 369 (2001)) (emphasis in original). An agency violates its statutory mandate to consult where it fails to conduct the consultation prior to reaching its decision. *Silver v. Babbitt*, 924 F. Supp. 976, 985 (D. Ariz. 1995).

Here, Section 2567(a), titled "Consultation required," provides that 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 defense plutonium and defense plutonium materials at SRS. 50 U.S.C.A. § 2567(a). That language is mandatory. *See Nat'l R.R. Passenger Corp. v. Morgan*, 536 U.S. 101, 109, 122 S. Ct. 2061, 153 L. Ed. 2d 106 (2002) (noting that the word "shall" provides no discretion). Both the decision to terminate the MOX Project and the decision to pursue the Dilute and Dispose approach relate to the disposition of surplus defense plutonium and defense plutonium materials at SRS.[19]

The State's claim fails because the facts of this case show that the Governor was consulted prior to the Secretary's issuance of the May 10, 2018 decisions. Governor McMaster notes that there were "several communications" in which he provided his "concerns" to the DOE about its "direction of the MOX Project and proposed Dilute and Dispose approach." (ECF No. 5-2 ¶ 6.) In August 2017, the DOE staff hosted a tour of the MOX Facility for the Governor and his senior policy advisor and provided briefings and discussions about the MOX Project. (ECF No. 19-9 ¶ 4.) On January 31, 2018, Governor McMaster, Attorney General Wilson, and other high-ranking state officials visited DOE headquarters in Washington, DC and participated in a substantive meeting with high-ranking agency officials, in which they

19. Comp. ¶¶ 116-17; Compl. Ex. 1, May 10, 2018 Secretary Perry Letter.

voiced their concerns about the possibility of the DOE using the Dilute and Dispose alternative option to remove plutonium from South Carolina instead of continuing with construction of the MOX Facility. (*Id.* at ¶ 5.) In February and March of 2018, the Federal Defendants made efforts to schedule more meetings with the Governor to discuss the MOX Facility, but those meetings were not ultimately scheduled. (*Id.* at ¶ 6.)

California Wilderness Coalition is distinguishable from the instant case. In *California Wilderness Coalition*, the agency had provided an opportunity for consultations for the states that was no different from opportunities available to the public — state representatives could attend a conference hosted by the DOE, or provide comments in response to the DOE's public invitations for comments. 631 F.3d 1072 at 1085-1086. Here, by contrast, there were direct communications among high-level personnel from both the State, including Governor McMaster himself, and the Federal Defendants, addressing the substance of the future of the DOE's efforts to remove plutonium from South Carolina. The State was not treated as another member of the public, but was in fact given direct access to visit the site itself, attending a meeting with high-level DOE officials at DOE headquarters, and having multiple communications directly with the Secretary himself. DOE has satisfied any plausible construction of the requirement to "consult:" the DOE communicated with, and listened to the views of the Governor prior to taking any formal action related to the disposition of surplus defense plutonium at SRS. The fact that the Federal Defendants ultimately disagreed with the Governor regarding the

best course of action does not negate the fact that the Federal Defendants engaged in a meaningful exchange of information and views with Governor McMaster months prior to making any decision. Therefore, the State is not likely to succeed on the merits of its claim that the Secretary of Energy failed to consult with Governor McMaster prior to reaching his May 10, 2018 decisions.

2. Violation of NEPA - Failure to Prepare a Supplemental EIS for 50+ Years of Storage of Plutonium at SRS.

i. NEPA

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. 42 U.S.C.A. § 4342; *see* 40 C.F.R. §§ 1500-1508 (implementing regulations of the Council on Environmental Quality); 10 C.F.R. §§ 1021.100 *et seq.* (DOE implementing regulations of NEPA).

NEPA requires federal agencies to prepare an 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. An EIS is a "detailed written statement" that "provide[s] full and fair discussion of significant

environmental impacts and shall inform decision-makers 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. 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. . . .").

Importantly, the governing 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. 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.

ii. NEPA and the MOX Project

DOE and NNSA must comply with NEPA when rendering decisions and taking action related to the disposition of defense plutonium at SRS. *See* 50 U.S.C.A. § 2461 (requiring the NNSA to comply with "all applicable environmental . . . requirements."); 50 U.S.C.A. § 2566 (requiring NEPA compliance for MOX-related decisions).

There are a multitude of NEPA-related documents that have been promulgated and issued regarding the selection ofthe MOX process and the plutonium disposition pathway. Most of these documents have been cited at various times between the parties in the prior and present litigation between the parties regarding the MOX Project.

iii. Plutonium at SRS

The Federal Defendants previously informed the court that decisions involving "a substance with the potential to have as much impact on the environment as plutonium" should be subject to "a very thorough, deliberate process." *South Carolina v. United States*, 1:16-cv-00391-JMC (ECF No. 100 at 16). As the Federal Defendants advised the Fourth Circuit in their appeal of the court's Order to remove plutonium in accordance with the statute:

> "Unfortunately, the same nuclear properties of plutonium that make it attractive to science also make this element hazardous to human beings." Many forms of plutonium can spontaneously ignite when exposed to air. In addition, plutonium's radioactivity requires "a comprehensive safety program[ ]" involving "planning, personnel practices and engineered controls," as well as "mass limitations, training, procedures, postings, personnel and area radiation monitoring, and emergency response."

Br. of United States at 2, No. 18-1148 (4th Cir. March 19, 2018) (internal citations omitted).

Appendix F

In its decision approving the MOX Facility construction, the NRC stated:

> 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).[20]

This pronouncement is true, in part, because radiation exposure to the public is greater in a "no action" alternative than with the MOX Project. As NRC has found, "continued storage would result in higher annual impacts" of public radiation exposure than implementation of the MOX Project.[21] In other words, the Federal Defendants acknowledge and admit that the continued storage and presence of plutonium at SRS constitutes a significant environmental impact that must be properly analyzed under NEPA.

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20. Compl. Ex. 16, NRC EIS at 2-36 (emphasis added).

21. *Id.* at 4-96.

iv. No analysis of 50+ year storage

The EIS initially designating SRS as the location for the MOX Facility and the transfer and storage of 34 metric tons of defense plutonium at SRS was issued in December 1996 ("the PEIS"). The PEIS analyzed and evaluated the storage of weapons-grade plutonium at SRS for a period of up to 50 years. *See Hodges v. Abraham*, 300 F.3d 432, 447 (4th Cir. 2002) ("By its 1996 PEIS, the DOE had examined various options for the long-term storage of surplus plutonium . . . at SRS for up to fifty years."). There have been supplements and updates since that time, but no evaluation or analysis has been undertaken that reviewed the storage at SRS of weapons-grade plutonium for a period longer than 50 years. The Federal Defendants posit that because DOE has thoroughly analyzed the potential environmental impacts of storing plutonium at SRS for up to 50 years, has not indicated it intends to exceed that storage period, and has not made any financial decision or commitment to the Dilute and Dispose approach, it is not required to produce a supplemental EIS in connection to its decision to terminate the MOX Project and pursue the Dilute and Dispose approach. (ECF No. 19 at 14.) However, as discussed below, the court finds that the May 10 decisions regarding the MOX Project are subject to NEPA and require a supplemental EIS.

v. No other disposal or removal alternative

The plutonium at SRS can be divided into two general categories-the plutonium intended for disposition through the MOX Facility and the plutonium not intended

for MOX disposition. The ongoing Dilute and Dispose approach is limited in resources and legal authority and is not applicable to the plutonium intended for disposition through the MOX Facility.

In fact, the Federal Defendants asked the National Academies of Science to "evaluate the general viability of the DOE's plans for disposing of surplus plutonium in WIPP to support U.S. commitments under the Plutonium Management and Disposition Agreement, identify gaps, and recommend actions that could be taken by DOE and others to address those gaps."[22] That study is not anticipated to be completed until 2019. Moreover, the supplemental EIS that was performed resulting in the record of decision published on April 5, 2016 assigning Dilute and Dispose as the preferred alternative to dispose of the non-MOXable plutonium pursuant to NEPA specifically disclaimed reconsidering MOX as the disposition pathway for the MOXable 34 metric tons of plutonium.[23]

When the U.S. Environmental Protection Agency ("EPA") was asked its opinion on utilizing Dilute and

22. NAS, Disposal of Surplus Plutonium in the Waste Isolation Pilot Plant, DELS-NRSB-17-03, Project Scope (emphasis added).

23. Compl. Ex. 27, DOE, *ROD for Surplus Plutonium Disposition* (April 5, 2016); Compl. Ex. 26, *Final SPD Supplemental EIS*, Foreword ("Under all alternatives, DOE would also dispos[e] 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 [the MOX Facility] for use at domestic commercial nuclear power reactors.").

Dispose for the plutonium intended for MOX disposition, it pointed out the NEPA and environmental analysis that still had to be done. Specifically, the EPA stated:

> There would be many steps and some time before the EPA formally becomes involved in exercising its regulatory responsibilities associated with the possible disposal of the 34 MT of plutonium at the WIPP. This includes the NEPA activities that the DOE would be required to do.

Compl. Ex. 28, Ltr. of EPA dated April 2, 2018. Importantly, the 2002 Report to Congress acknowledges that storage without a disposition "would likely require additional NEPA review and public meetings." (ECF No. 1-7 at 4-26.) The Report further states that storage without disposition would be a "significant departure from DOE's current decisions and commitments." (*Id.* at 4-27.)

In essence, the crux of the Federal Defendants' argument in regard to a NEPA violation is that the State should trust that by terminating the MOX Project, the Federal Defendants won't exceed the 50-year storage mark. However, the court declines to base its decision on the word of the Federal Government as its repeated actions in regard to the MOX Project have called into question the viability of such an outcome. Further, the court finds that pursuing the Dilute and Dispose approach would have a significant impact on the environment (as evidenced by the prior environmental impact statements issued by the Federal Defendants and by the NRC). Therefore, it is necessary that the Federal Defendants produce a

supplemental EIS that addresses the conceivability, both practically and legally, of such a strategy. As such, the State will likely succeed on the merits of its claim that the May 10, 2018 decisions violated NEPA.

3. Violation of NDAA FY18 and CAA FY18 — Failure to Meet Waiver Certification Requirements

The State is likely to succeed on its claim pursuant to the APA that the Secretary's May 10 commitment and certification that the requirements of Section 3121 of NDAA FY 18 and Section 309 of the CAA FY18 had been met is arbitrary and capricious because they have no basis in law or fact. Pursuant to NDAA FY18 § 3121(b)(1), in order to waive the expenditure restrictions, the Secretary must provide both a commitment to remove the plutonium from South Carolina and a certification of a less expensive alternative option. §3121(b)(1).

i. Commitment to Remove the Plutonium from South Carolina

The Federal Defendants argue that "Congress did not set forth any specific level of proof that the Secretary must meet in order to satisfy any particular commitment requirement." (ECF No. 19 23-24.) The court declines to accept an argument that allows the Secretary to make commitments and certifications not supported by facts.

In the May 10, 2018 decision, 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. The stated primary basis fr this commitment is that "[the Federal Defendants] are currently processing plutonium in South Carolina for shipment to the WIPP and intend to continue to do so." However, none of the defense plutonium that the Federal Defendants claim is currently being processed in South Carolina for shipment to WIPP was intended to be disposed of by the MOX Facility. Accordingly, this fact is irrelevant to and provides no support for the Secretary's commitment to remove plutonium from South Carolina that is intended to be disposed of in the MOX Facility, and thus, the Federal Defendants have relied on factors which Congress has not intended it to consider. *Id.*

Further, the Secretary avers that the Federal Defendants' commitment to removal is supported by the fact that they are "planning to install additional equipment for processing plutonium [pursuant to the Dilute and Dispose Approach] for removal from South Carolina and to increase the rate at which this removal can be carried out." The Secretary also states that the Federal Defendants "are exploring whether any of the plutonium currently in South Carolina can be moved elsewhere for programmatic uses." Neither of these statements presents evidence or support of a legitimate commitment to the removal of the plutonium intended to be disposed of in the MOX Facility. There has been no NEPA analysis of the Dilute and Dispose approach or the storage of an additional 34 metric tons of weapons-grade plutonium at WIPP, and

the EPA has stated that the requisite NEPA analyses and other studies for the storage of the plutonium at WIPP will take "many years."[24] Moreover, under applicable law and the Federal Defendants' permits for WIPP, the Federal Defendants are not currently permitted to store an additional 34 metric tons of weapons-grade plutonium at WIPP.

The Federal Defendants are attempting to have it both ways. The basis for their "commitment" to remove plutonium and their basis for terminating the MOX Project is that they purportedly have an alternative for disposition and removal of the MOXable plutonium from South Carolina: "Dilute and Dispose." But they also claim they did not have to conduct any NEPA analysis for the "Dilute and Dispose" approach yet because they have not made any final decision or commitment to the "Dilute and Dispose" approach (notwithstanding the May 10 decision letter). These two arguments are mutually exclusive. If, in fact, there has been no commitment to the "Dilute and Dispose" approach because it is still in the conceptual phase, then there is no basis for the Secretary's purported commitment to the removal of the plutonium from South Carolina. If, however, the Federal Defendants have made a decision to move forward with the "Dilute and Dispose" approach, then it is subject to challenge as a final agency action and would fail on the merits because no NEPA analysis has been conducted. Either way, the Secretary's commitment is invalid.

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24. Compl. Ex. 28, Ltr. of EPA dated April 2, 2018.

ii. Certification of a Less Expensive Alternative Option

The Federal Defendants' estimates used for the lifecycle costs of the MOX Project and the Dilute and Dispose approach are not of comparable accuracy pursuant to the certification requirement under Section 3121(b)(2) of the NDAA FY18. Section 3121(b)(1)(B)(ii) requires the lifecycle cost for the alternative to be conducted according to GAO best practices, and Section (b)(2) requires that the MOX estimate be of comparable accuracy. The estimated lifecycle cost completed in September 2016 for the MOX Project to which the Federal Defendants compared to the Dilute and Dispose lifecycle cost estimate was not determined in a manner comparable to GAO best practices, as GAO determined a few months ago and the Federal Defendants admit.[25] Accordingly, GAO reported:

> In our February 2014 report, we recommended that NNSA revise and update the Plutonium Disposition Program's life-cycle cost estimate using the MOX approach following our cost

25. Compl. Ex. 32, *GAO Plutonium Disposition Report* ("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."); Compl. Ex. 29, ICE Report at 48 ("The GAO notes, however, in their report 'Plutonium Disposition: Proposed Dilute and Dispose Approach Highlights Need forMore 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).*" (emphasis added)).

> estimating best practices, such as conducting an independent cost estimate. NNSA generally agreed with our recommendation, but has not yet implemented it . . . Based on the findings of our review of NNSA's revised life-cycle cost estimate, we continue to believe that our recommendation remains valid.[26]

The Federal Defendants argue that they adjusted the 2016 MOX Project lifecycle cost estimate to make it of comparable accuracy to the Dilute and Dispose approach, which was conducted according to GAO best practices. (ECF No. 19-20 at ¶ 6-7.) However, the court finds this estimate is unlikely to fulfil the comparable accuracy requirement of Section (b)(2). In short, the State is likely to demonstrate that a certification that the lifecycle cost estimates for the Dilute and Dispose approach and the MOX Project are of comparable accuracy cannot be made until a new estimate of the MOX approach following GAO best practices and using similar or comparable underlying assumptions to those used in the Dilute and Dispose approach is prepared. Therefore, the Secretary's certification that the lifecycle estimates are of comparable accuracy is unsupported by the "relevant data" and does not meet the requirements of Section 3121(b)(2) of the NDAA FY18. *Motor VehicleMfrs.*, 463 U.S. at 43.

iii. Statutory or Regulatory Changes

Section 3121(b)(1)(C) of the NDAA FY18 requires the Secretary to report to Congress "the details of any

26. *Id.* at 24-25.

statutory or regulatory changes necessary to complete the alternative option." The Secretary's letter 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 has not been meet. First, although recognizing the "capacity issues related to the receipt of the full 34 metric tons at WIPP," the Secretary states that all that is needed to proceed with the Dilute and Dispose approach is a proposed permit modification. However, DOE and NNSA have no basis in law or fact to simply assume that any permit modification will be granted. In fact, just this past Friday—June 1, 2018—the New Mexico Environment Department rejected the Federal Defendants' attempt to fast-track their permit modification request and is now requiring a more extensive review of the request because of the "significant public concern and complex nature of the proposed change." (ECF No. 21-2.) The Federal Defendants cannot use this assumption to avoid the necessary reporting to Congress. In 2014, DOE issued a report finding that "[d]isposal of the entire 34 MT of material in WIPP would require amendment of the WIPP Land Withdrawal Act. As with any location considered for this disposal mission, significant engagement with federal, state, and local representatives would be required. Implementing such an option would require Congressional action." (ECF No. 21-1.)

The second statute that would need to be modified for the Federal Defendants to proceed with the Dilute and Dispose approach and that the Federal Defendants did not disclose to Congress is Section 2566. This statute

would need to be amended because it requires removal by January 1, 2022 of all the defense plutonium moved to South Carolina as of April 15, 2002. Under the Federal Defendants' Dilute and Dispose approach, they would not, according to their own estimates, be able to remove even one metric ton of plutonium from South Carolina until at least 2025, and they would also plan to import over 26 metric tons of plutonium into the State. The Federal Defendants therefore cannot legally implement the Dilute and Dispose approach unless Section 2566 is modified.

Because the Secretary's purported commitments and certifications have no basis in law or fact, the State is likely to succeed on its claim that the Federal Defendants' decision to terminate the MOX Facility is arbitrary and capricious in violation of NDAA FY18 and CAA FY18.

C. Irreparable Harm

Without a preliminary injunction, the State will suffer irreparable harm. The Federal Defendants have already issued a Partial Stop Work Order to the construction contractor that halted any new contracts or new hires at SRS for the MOX Project.[27] The Federal Defendants intend to issue a full stop work order to begin the wind-down of the MOX Project and termination of employees at SRS related to the MOX Project on or about June 11, 2018, which is the first business day after the 30-day period following Secretary Perry's certification during

27. Compl. ¶ 111; Compl. Ex. 30, May 14, 2018 NNSA Letter to CB&I AREVA MOX Services, LLC RE: Contract DE-AC02-99CH10888 (Mixed Oxide Fuel Fabrication Facility).

which the Federal Defendants cannot use funds provided for the construction of the MOX Facility to eliminate the Project. CAA FY18, § 309(c)(2).

The Federal Defendants seem to couch the State's main argument of irreparable harm to be the injuries of the individual SRS employees and the economic loss to the State. However, the harm the State seems to claim is that the Full Stop Work Order would be the "event horizon" for the termination of the MOX Project. Once the labor force is lost, the MOX Project is likely discontinued without an alternate approved or authorized disposition strategy or any removal strategy for the weapons-grade plutonium stored at SRS that was intended to be processed at the MOX Facility.

Moreover, the implementation of the Federal Defendants' May 10 decisions without the creation of a supplemental EIC in and of itself creates irreparable harm. When a federal agency undertakes actions that would significantly affect the environment, NEPA requires the agency to take a hard look at the impact of those actions. *Nat'l Audubon Soc'y v. Dep't of Navy*, 422 F.3d 174, 181 (4th Cir. 2005). Accordingly, "irreparable harm [exists] when agencies become entrenched in a decision uninformed by the proper NEPA process because they have made commitments or taken action to implement the uninformed decision." *Conservation Law Found. Inc. v. Busey*, 79 F.3d 1250, 1271 (1st Cir. 1996). This harm "is not merely a procedural harm, but is 'the added risk to the environment that takes place when governmental decision makers make up their minds without having

before them an analysis (with prior public comment) of the likely effects of their decision upon the environment.'" *Id.* at 1271-72 (quoting *Sierra Club v. Marsh*, 872 F.2d 497 (1st Cir. 1989)).

If the Full Stop Work Order is issued, the State also will be robbed of the opportunity to obtain a meaningful judgment on the merits of its claims that the Federal Defendants' decision to terminate the MOX Facility and leave South Carolina as the permanent repository for plutonium is unlawful. *Int'l Refugee Assistance Project v. Trump*, 883 F.3d 233, 270 (4th Cir. 2018) ("[I]rreparable harm occurs when the threatened injury impairs the court's ability to grant an effective remedy."); *In re Microsoft Corp.*, 333 F.3d at 525 ("The traditional office of a preliminary injunction is to protect the status quo and to prevent irreparable harm during the pendency of a lawsuit ultimately to preserve the court's ability to render a meaningful judgment on the merits."). The Federal Defendants' argument advanced at the hearing that there is a scant possibility that the MOX Facility could be restarted or refunded at some unknown future date is unavailing. That claim is directly contradicted by the evidence submitted by the Federal Defendants as well as the practical effect of the Full Stop Work Order. In addition, given the demand for the experienced and skilled craftsman, the loss of the labor force will likely occur immediately-not the 60 days the Federal Defendants contend it would take because of the WARN Act "notice" requirements. (See ECF No. 21-3.) Therefore, the State will be the party to suffer the irreparable harm.

D. Balance of Equities

The court agrees that the financial impact resulting from a preliminary injunction weighs in favor of the Federal Defendants.[28] The Federal Defendants maintain that the continuation of MOX construction involves taxpayer expenditures of approximately $1.2 million per day.[29](ECF No. 19-1 at ¶ 22.) The court acknowledges the significance of that proposed amount. However, the balance of equities still heavily favors the State. As discussed, the injunction the State seeks will simply preserve the status quo. Congress has instructed the Federal Defendants to continue construction of the MOX Facility this fiscal year and already appropriated funds for that specific purpose. Through Section 2566, Congress also has directed the Federal Defendants to pursue construction of the MOX Facility. The requested preliminary injunction only seeks to maintain that construction (and the associated labor force) until the court can make a determination as to the legality of the Federal Defendants' decision to terminate the Project.

Importantly, Congress has not approved or authorized the Dilute and Dispose approach as a replacement for the MOX Project. Therefore, if the Federal Defendants' agency action is not enjoined, the Federal Defendants will

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28. This statement is also pertinent to the public interest discussion below.

29. The State claims this amount is not based on any actual calculation provided by the Federal Defendants and is based on invoices rather than payments. *(See* ECF No. 21 at 19.)

leave the United States with no disposition pathway for 34 metric tons of weapons-grade plutonium, reversing and rendering pointless over 20 years of studies, decisions, efforts, and substantial monetary investments to develop the MOX Facility to complete the United States' disposition mission.

In addition, the United States' foreign interests are not furthered by terminating the MOX Facility. One of the purposes of pursuing the MOX Project was to meet the United States' obligations pursuant to the Plutonium Management and Disposition Agreement ("PMDA") with Russia, whereby each country agreed to dispose of no less than 34 metric tons of weapons-grade plutonium.[30] As support of the statutory requirements set forth in Section 2566 for construction and operation of the MOX Facility, Congress specifically found:

(1) In September 2000, the United States and the Russian Federation signed PMDA 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.

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30. Compl. Ex. 14, PMDA (Sept. 1, 2000); *see* Compl. 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)*

(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.

NDAA FY03, Pub. L. No. 107-314, 116 Stat. 2458, Subtitle E, § 3181.

DOE used the PMDA, and the need to pursue the MOX Project, as one of the primary reasons for DOE's need to ship defense plutonium into the State in the first place. In response to the State's challenge to the shipment of plutonium into the State in 2002, Linton F. Brooks, then-Deputy Administrator for Defense Nuclear Nonproliferation for DOE/NNSA, testified that any delay or uncertainty in the MOX Project could "kill" the PMDA.[31] 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

31. Compl. Ex. 18, Brooks Aff, *Hodges v. Abraham*, C/A No. 1:02-cv-01426-CMC.

issues internationally."[32] Therefore, because the MOX approach is the only method approved under the PMDA for plutonium disposition, the decision to terminate the MOX Facility does not further the United States' foreign policy interests. This exact position was previously taken by DOE when it stated:

> [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.[33]

In other words, the Federal Defendants have previously recognized that the very path they now desire to take violates an international nonproliferation agreement with Russia.

The past history between South Carolina and the Federal Defendants with respect to the MOX Facility and weapons-grade plutonium located in the State also demonstrates that equity favors the State. Beginning in the late 1990s, DOE and its officials made countless commitments to the State, which the State relied on in agreeing to accept the defense plutonium that DOE insisted it urgently needed to ship to South Carolina. In particular, DOE committed to ensuring that the State not become the "dumping ground" for plutonium and, thus,

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32. *Id*

33. Compl. Ex. 7, *Report to Congress*.

committed to building the MOX Facility and expeditiously removing plutonium from the State if the MOX Facility was not timely built for any reason.[34] These commitments were then codified in federal law through Section 2566, with the additional commitment of monetary payments to the State if the defense plutonium moved to the State was not timely processed or removed from the State.

Now, DOE is reneging on its promises made over the course of the last two decades. The MOX Facility has not been timely built, no defense plutonium intended for MOX disposition has been removed from the State, and no monetary payments have been made. Further, the Federal Defendants have contested their statutory obligations to remove the plutonium and make the monetary payments. Accordingly, the balance of equities or hardships related to the MOX Facility weighs heavily for the State.

E. Public Interest

Requiring the government to act in accordance with the law is a public interest of the highest order. *See Seattle Audubon Soc'y v. Evans*, 771 F. Supp. 1081, 1096 (W.D. Wash. 1991) (citing *Olmstead v. United States*, 277 U.S. 438, 485, 48 S. Ct. 564, 72 L. Ed. 944 (1928) (Brandeis, J., dissenting)), *aff'd in relevant part*, 952 F.2d 297 (9th Cir. 1991) . Injunctive relief serves the public interest where

34. *See* Compl. Ex. 7, *Report to Congress* 5-2 ("Storage 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.").

it furthers the clearly-expressed purposes of a statute. *Johnson v. U.S. Dep't of Agriculture*, 734 F.2d 774, 788 (11th Cir. 1984) ("Congressional intent and statutory purpose can be taken as a statement of public interest."). "Good administration of [a] statute is in the public interest and that will be promoted by taking timely steps when necessary to prevent violations even when they are about to occur or prevent their continuance after they have begun." *Walling v. Brooklyn Braid Co.*, 152 F.2d 938 (2d Cir. 1945). Compliance with NEPA also furthers the public interest in having public officials, and the public itself, fully informed about the likely consequences of actions prior to those actions being taken. 40 C.F.R. § 1500.1(b) ("NEPA procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken."); 40 C.F.R. § 1502.5 (environmental analysis must be completed "early enough so that it can serve practically as an important contribution to the decision-making process and will not be used to rationalize or justify decisions already made").

NEPA required the Federal Defendants to take a "hard look" at the environmental consequences of its decision to terminate the MOX Facility and render South Carolina the permanent repository for weapons-grade plutonium. The Federal Defendants did not do so, and thus, "the public interest expressed by Congress [has been] frustrated by the [F]ederal [D]efendants not complying with NEPA." *Fund for Animals v. Clark*, 27 F. Supp. 2d 8, 15 (D.D.C. 1998). Accordingly, an injunction preventing the Federal Defendants from taking any action to terminate the MOX Facility until NEPA compliance can be assured furthers the public interest.

Appendix F

Through Section 3121 of NDAA FY 18 and Section 309 of the CAA FY18, Congress mandated that the Federal Defendants use federal funds to continue construction of the MOX Facility during the current fiscal year. The only way the Federal Defendants could avoid this mandate was by meeting the commitment and certification requirements of those respective statutes. Implicit in those statutory requirements, however, is that the Secretary's commitments and certifications are made in good faith and are supported by fact and law. By this decision, decades of the United States' plutonium disposition policy is overturned and, as discussed above, the Federal Defendants will violate one of the country's international nonproliferation agreements. Accordingly, the public interest is served by ensuring that the MOX Facility is not terminated before the legality of the Secretary's commitments and certifications can be fully vetted by the court.

V. CONCLUSION

Based on the foregoing, the court **GRANTS** the State's Motion for Preliminary Injunction (ECF No. 5). During the pendency of this lawsuit, the court enjoins the Federal Defendants' May 10 decisions to terminate and cease construction of the MOX Facility and its intent to pursue the Dilute and Dispose approach to plutonium disposition. The Partial Stop Work Order issued on May 14, 2018 is vacated and the Federal Defendants are prevented from issuing a full stop work order on or before June 11, 2018, or thereafter, unless otherwise determined by this court. Consequently, the Federal Defendants are to maintain the status quo by continuing the MOX Project. The State

is ordered to pay a bond in the amount of $100.00 to the Clerk of Court for the United States District Court for the District of South Carolina by Friday, June 8, 2018 at 4 p.m.[35]

IT IS SO ORDERED.

June 7, 2018
Columbia, South Carolina

/s/ J Michelle Childs
United States District Judge

35. Federal Rule of Civil Procedure 65(c) requires a court issuing a preliminary injunction order to do so "only if the movant gives security in an amount that the court considers proper" to provide redress to the enjoined party if the injunction is later found to be improper. Fed. R. Civ. P. 65(c). The language of Rule 65 requires the court to set a bond when issuing a preliminary injunction. *Id.* However, it gives the court discretion in deciding the proper amount. *Id.* Courts have exercised this discretion to set nominal bond amounts in public interest litigation. 11A Charles Alan Wright, Arthur R. Miller, & Edward H. Cooper, FEDERAL PRACTICE AND PROCEDURE § 2954 (3rd ed. 2018). Allowing a public interest exception prevents entities from skirting judicial oversight by requesting a high security. *Powelton Civic Home Owners Ass'n v. Dep't of Housing and Urban Dev.*, 284 F. Supp. 809, 840-41 (E.D. Pa. 1968) ("We cannot accept the proposition that Rule 65(c) was intended to raise virtually insuperable financial barriers insulating the agency's decision from effective judicial scrutiny."). Moreover, when a party is seeking to vindicate the public interest served by NEPA, a nominal bond amount is proper. *Davis v. Mineta*, 302 F.3d 1104, 1126 (10th Cir. 2002).

APPENDIX G — RELEVANT STATUATORY PROVISIONS

Atomic Energy Defense Provisions

§ 2566. Disposition of weapons-usable plutonium at Savannah River Site

(a) Plan for construction and operation of MOX facility

(1) Not later than February 1, 2003, the Secretary of Energy shall submit to Congress a plan for the construction and operation of the MOX facility at the Savannah River Site, Aiken, South Carolina.

(2) The plan under paragraph (1) shall include--

(A) a schedule for construction and operations so as to achieve, as of January 1, 2012, and thereafter, the MOX production objective, and to produce 1 metric ton of mixed-oxide fuel by December 31, 2012; and

(B) a schedule of operations of the MOX facility designed so that 34 metric tons of defense plutonium and defense plutonium materials at the Savannah River Site will be processed into mixed-oxide fuel by January 1, 2019.

(3)(A) Not later than February 15 each year, beginning in 2004 and continuing for

as long as the MOX facility is in use, the Secretary shall submit to Congress a report on the implementation of the plan required by paragraph (1).

(B) Each report under subparagraph (A) for years before 2010 shall include--

(i) an assessment of compliance with the schedules included with the plan under paragraph (2); and

(ii) a certification by the Secretary whether or not the MOX production objective can be met by January 2012.

(C) Each report under subparagraph (A) for years after 2014 shall--

(i) address whether the MOX production objective has been met; and

(ii) assess progress toward meeting the obligations of the United States under the Plutonium Management and Disposition Agreement.

(D) Each report under subparagraph (A) for years after 2019 shall also

include an assessment of compliance with the MOX production objective and, if not in compliance, the plan of the Secretary for achieving one of the following:

(i) Compliance with such objective.

(ii) Removal of all remaining defense plutonium and defense plutonium materials from the State of South Carolina.

(b) Corrective actions

(1) If a report under subsection (a)(3) indicates that construction or operation of the MOX facility is behind the applicable schedule under subsection (g) by 12 months or more, the Secretary shall submit to Congress, not later than August 15 of the year in which such report is submitted, a plan for corrective actions to be implemented by the Secretary to ensure that the MOX facility project is capable of meeting the MOX production objective.

(2) If a plan is submitted under paragraph (1) in any year after 2008, the plan shall include corrective actions to be implemented by the Secretary to ensure that the MOX production objective is met.

(3) Any plan for corrective actions under paragraph (1) or (2) shall include established milestones under such plan for achieving compliance with the MOX production objective.

(4) If, before January 1, 2012, the Secretary determines that there is a substantial and material risk that the MOX production objective will not be achieved by 2012 because of a failure to achieve milestones set forth in the most recent corrective action plan under this subsection, the Secretary shall suspend further transfers of defense plutonium and defense plutonium materials to be processed by the MOX facility until such risk is addressed and the Secretary certifies that the MOX production objective can be met by 2012.

(5) If, after January 1, 2014, the Secretary determines that the MOX production objective has not been achieved because of a failure to achieve milestones set forth in the most recent corrective action plan under this subsection, the Secretary shall suspend further transfers of defense plutonium and defense plutonium materials to be processed by the MOX facility until the Secretary certifies that the MOX production objective can be met.

(6)(A) Upon making a determination under paragraph (4) or (5), the Secretary shall 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.

(B) Each report under subparagraph (A) shall 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.

(C) Upon submittal of a report under subparagraph (A), the Secretary shall commence any analysis that may be required under the National Environmental Policy Act of 1969 in order to select among the options set forth in the report.

(c) Contingent requirement for removal of plutonium and materials from Savannah River Site

If the MOX production objective is not achieved as of January 1, 2014, the Secretary shall, consistent with the National Environmental Policy Act of 1969 and other

applicable laws, remove from the State of South Carolina, for storage or disposal elsewhere--

> **(1)** not later than January 1, 2016, not less than 1 metric ton of defense plutonium or defense plutonium materials; and
>
> **(2)** 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.

(d) Economic and impact assistance

> **(1)** If the MOX production objective is not achieved as of January 1, 2016, the Secretary shall, subject to the availability of appropriations, pay to the State of South Carolina each year beginning on or after that date through 2021 for economic and impact assistance an amount equal to $1,000,000 per day, not to exceed $100,000,000 per year, until the later of--
>
> > **(A)** the date on which the MOX production objective is achieved in such year; or
> >
> > **(B)** the date on which the Secretary has removed from the State of South

> Carolina in such year at least 1 metric ton of defense plutonium or defense plutonium materials.
>
> **(2)(A)** If, as of January 1, 2022, the MOX facility has not processed mixed-oxide fuel from defense plutonium and defense plutonium materials in the amount of not less than--
>
> > **(i)** one metric ton, in each of any two consecutive calendar years; and
> >
> > **(ii)** three metric tons total,

the Secretary shall, from funds available to the Secretary, pay to the State of South Carolina for economic and impact assistance an amount equal to $1,000,000 per day, not to exceed $100,000,000 per year, until the removal by the Secretary from the State of South Carolina of 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.

> **(B)** Nothing in this paragraph may be construed to terminate, supersede, or otherwise affect any other requirements of this section.
>
> **(3)** If the State of South Carolina obtains an injunction that prohibits the Department of

> Energy from taking any action necessary for the Department of Energy to meet any deadline specified by this subsection, that deadline shall be extended for a period of time equal to the period of time during which the injunction is in effect.

(e) Failure to complete planned disposition program

If on July 1 each year beginning in 2025 and continuing for as long as the MOX facility is in use, less than 34 metric tons of defense plutonium or defense plutonium materials have been processed by the MOX facility, the Secretary shall submit to Congress a plan for--

> **(1)** completing the processing of 34 metric tons of defense plutonium and defense plutonium material by the MOX facility; or
>
> **(2)** 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 Savannah River Site after April 15, 2002, but not processed by the MOX facility.

(f) Removal of mixed-oxide fuel upon completion of operations of MOX facility

If, one year after the date on which operation of the MOX facility permanently ceases, any mixed-oxide fuel remains

at the Savannah River Site, the Secretary shall submit to Congress--

> **(1)** a report on when such fuel will be transferred for use in commercial nuclear reactors; or
>
> **(2)** a plan for removing such fuel from the State of South Carolina.

(g) Baseline

Not later than December 31, 2006, the Secretary shall submit to Congress a report on the construction and operation of the MOX facility that includes a schedule for revising the requirements of this section during fiscal year 2007 to conform with the schedule established by the Secretary for the MOX facility, which shall be based on estimated funding levels for the fiscal year.

(h) Definitions

In this section:

> **(1) MOX production objective**
>
> The term "MOX production objective" means 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.

(2) MOX facility

The term "MOX facility" means the mixed-oxide fuel fabrication facility at the Savannah River Site, Aiken, South Carolina.

(3) Defense plutonium; defense plutonium materials

The terms "defense plutonium" and "defense plutonium materials" mean weapons-usable plutonium.

Appendix G

Bob Stump National Defense Authorization Act for Fiscal Year 2003, Pub. L. No. 107-314, 116 Stat. 2458 (2002).

Subtitle E—Disposition of Weapons-Usable Plutonium at Savannah River, South Carolina

§ 3181. Findings.

Congress makes 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.

Appendix G

National Defense Authorization Act for Fiscal Year 2018, Pub. L. No. 115-91, 131 Stat. 1283 (2017).

§ 3121. Use of funds for construction and project support activities relating to MOX facility

(a) IN GENERAL.—Except as provided by subsection (b), 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 the National Nuclear Security Administration for the MOX facility.

(b) WAIVER.—

> (1) IN GENERAL.—The Secretary may waive the requirement under subsection (a) to carry out construction and project support activities relating to the MOX facility 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.

(2) ESTIMATES.—The Secretary shall ensure that the estimates used by the Secretary for purposes of the certification under paragraph (1)(B) are of comparable accuracy.

(c) DEFINITIONS.—In this section:

(1) MOX FACILITY.—The term "MOX facility" means the mixed-oxide fuel fabrication facility at the Savannah River Site, Aiken, South Carolina.

(2) PROJECT SUPPORT ACTIVITIES.—The term "project support activities" means activities that support the design, long-lead equipment procurement, and site preparation of the MOX facility.

Appendix G

Consolidated Appropriations Act, 2018, Pub. L. No. 115-141, 132 Stat. 348 (2018).

§ 309.

(a) 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.

(b) The Secretary of Energy shall not be subject to the requirements of subsection (a) if the Secretary waives the requirements of section 3121(a) of the National Defense Authorization Act for Fiscal Year 2018 (Public Law 115–91) in accordance with subsection (b) of such section.

(c) If the Secretary waives the requirements of section 3121(a) of the National

Defense Authorization Act for Fiscal Year 2018, the Secretary—

(1) shall concurrently submit to the Committees on Appropriations of both Houses of Congress the lifecycle cost estimate used to make the certification under section 3121(b) of such Act; and

(2) may not use funds provided for the Project to eliminate such Project until the date that is 30 days after the submission of the lifecycle cost estimate required under paragraph (1).

Appendix G

The National Environmental Policy Act

42 U.S.C. § 4332. Cooperation of agencies; reports; availability of information; recommendations; international and national coordination of efforts

The Congress authorizes and directs that, to the fullest extent possible: (1) the policies, regulations, and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in this chapter, and (2) all agencies of the Federal Government shall—

…

> **(C)** include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on—
>
> > **(i)** the environmental impact of the proposed action,
> >
> > **(ii)** any adverse environmental effects which cannot be avoided should the proposal be implemented,
> >
> > **(iii)** alternatives to the proposed action,
> >
> > **(iv)** the relationship between local short-term uses of man's environment

and the maintenance and enhancement of long-term productivity, and

(v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

Prior to making any detailed statement, the responsible Federal official shall consult with and obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved. Copies of such statement and the comments and views of the appropriate Federal, State, and local agencies, which are authorized to develop and enforce environmental standards, shall be made available to the President, the Council on Environmental Quality and to the public as provided by section 552 of Title 5, and shall accompany the proposal through the existing agency review processes;

Appendix G

The National Environmental Policy Act Regulations

40 C.F.R. § 1502.1 Purpose.

The primary purpose of an environmental impact statement is to serve as an action-forcing device to insure that the policies and goals defined in the Act are infused into the ongoing programs and actions of the Federal Government. It shall provide 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. Agencies shall focus on significant environmental issues and alternatives and shall reduce paperwork and the accumulation of extraneous background data. Statements shall be concise, clear, and to the point, and shall be supported by evidence that the agency has made the necessary environmental analyses. An environmental impact statement is more than a disclosure document. It shall be used by Federal officials in conjunction with other relevant material to plan actions and make decisions.

40 C.F.R. § 1502.2 Implementation.

To achieve the purposes set forth in § 1502.1 agencies shall prepare environmental impact statements in the following manner:

…

(f) Agencies shall not commit resources prejudicing selection of alternatives before making a final decision (§ 1506.1).

40 C.F.R. § 1502.9 Draft, final, and supplemental statements.

Except for proposals for legislation as provided in § 1506.8 environmental impact statements shall be prepared in two stages and may be supplemented.

…

(c) Agencies:

(1) Shall prepare supplements to either draft or final environmental impact statements if:

(i) The agency makes substantial changes in the proposed action that are relevant to environmental concerns; or

(ii) There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.

(2) May also prepare supplements when the agency determines that the purposes of the Act will be furthered by doing so.

(3) Shall adopt procedures for introducing a supplement into its formal administrative record, if such a record exists.

(4) Shall prepare, circulate, and file a supplement to a statement in the same fashion (exclusive of scoping) as a draft and final statement unless alternative procedures are approved by the Council.

40 C.F.R. 1506.1 Limitations on actions during NEPA process.

(a) Until an agency issues a record of decision as provided in § 1505.2 (except as provided in paragraph (c) of this section), no action concerning the proposal shall be taken which would:

(1) Have an adverse environmental impact; or

(2) Limit the choice of reasonable alternatives.

Appendix G

The Administrative Procedure Act

5 U.S.C. § 702. Right of review

A person suffering legal wrong because of agency action, or adversely affected or aggrieved by agency action within the meaning of a relevant statute, is entitled to judicial review thereof. An action in a court of the United States seeking relief other than money damages and stating a claim that an agency or an officer or employee thereof acted or failed to act in an official capacity or under color of legal authority shall not be dismissed nor relief therein be denied on the ground that it is against the United States or that the United States is an indispensable party. The United States may be named as a defendant in any such action, and a judgment or decree may be entered against the United States: *Provided*, That any mandatory or injunctive decree shall specify the Federal officer or officers (by name or by title), and their successors in office, personally responsible for compliance. Nothing herein (1) affects other limitations on judicial review or the power or duty of the court to dismiss any action or deny relief on any other appropriate legal or equitable ground; or (2) confers authority to grant relief if any other statute that grants consent to suit expressly or impliedly forbids the relief which is sought.

5 U.S.C. § 704. Actions reviewable

Agency action made reviewable by statute and final agency action for which there is no other adequate remedy in a court are subject to judicial review. A preliminary,

procedural, or intermediate agency action or ruling not directly reviewable is subject to review on the review of the final agency action. Except as otherwise expressly required by statute, agency action otherwise final is final for the purposes of this section whether or not there has been presented or determined an application for a declaratory order, for any form of reconsideration, or, unless the agency otherwise requires by rule and provides that the action meanwhile is inoperative, for an appeal to superior agency authority.

5 U.S.C. § 706. Scope of review

To the extent necessary to decision and when presented, the reviewing court shall decide all relevant questions of law, interpret constitutional and statutory provisions, and determine the meaning or applicability of the terms of an agency action. The reviewing court shall—

> **(1)** compel agency action unlawfully withheld or unreasonably delayed; and
>
> **(2)** hold unlawful and set aside agency action, findings, and conclusions found to be--
>
> **(A)** arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law;
>
> **(B)** contrary to constitutional right, power, privilege, or immunity;
>
> **(C)** in excess of statutory jurisdiction, authority, or limitations, or short of statutory right;

> **(D)** without observance of procedure required by law;
>
> **(E)** unsupported by substantial evidence in a case subject to sections 556 and 557 of this title or otherwise reviewed on the record of an agency hearing provided by statute; or
>
> **(F)** unwarranted by the facts to the extent that the facts are subject to trial de novo by the reviewing court.

In making the foregoing determinations, the court shall review the whole record or those parts of it cited by a party, and due account shall be taken of the rule of prejudicial error.

APPENDIX H — LETTER FROM THE SECRETARY OF ENERGY, DATED MAY 10, 2018

THE SECRETARY OF ENERGY
WASHINGTON, DC 20585

May 10, 2018

The Honorable William "Mac" Thornberry
Chairman
Committee on Armed Services
U.S. House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

Section 3121 of the *National Defense Authorization Act for Fiscal Year 2018 (FY 2018 NDAA)* and section 309 of the *Consolidated Appropriations Act, 2018,* permits the Secretary of Energy to waive the requirement to use funds for construction and project support activities relating to the Mixed Oxide (MOX) facility. This letter constitutes my execution of that waiver authority, consistent with section 3121 of the FY 2018 NDAA and section 309 of the *Consolidated Appropriations Act, 2018.*

I confirm that the Department is committed to removing plutonium from South Carolina intended to be disposed of in the MOX facility. We are currently processing plutonium in South Carolina for shipment to the Waste Isolation Pilot Plant (WIPP) and intend to continue to do so. At the same time, we are planning to

install additional equipment for processing plutonium for removal from South Carolina and to increase the rate at which this removal can be carried out. We are also exploring whether any of the plutonium currently in South Carolina can be moved elsewhere for programmatic uses. I am also committed to ensuring a sustainable future for the Savannah River Site supporting the Department's many enduring national security missions, such as tritium production or other nuclear security efforts.

I certify that an alternative option for carrying out the plutonium disposition program for the same amount of plutonium intended to be disposed of in the MOX facility exists. The Department's alternative method for carrying out the 34 metric ton plutonium disposition program, the Dilute and Dispose approach, was evaluated using the National Nuclear Security Administration's Business Operating Procedure entitled "Analysis of Alternatives" and dated March 14, 2016 (BOP-03.07) and met its requirements. Furthermore, 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" (GAD-09-3SP), and the estimates used were of comparable accuracy.

Finally, I certify that the Department will work with the State of New Mexico to address the capacity issues related to the receipt of the full 34 metric tons at WIPP. This can be accomplished by more accurately calculating the volumes disposed of at WIPP. A proposed permit modification to implement this new approach was discussed with stakeholders prior to being submitted to the New Mexico Environment Department on January 31,2018.

I appreciate the waiver authority Congress has provided me in the FY 2018 NDAA to cease MOX construction. Consistent with that authority and the certification provided in this letter, the Department will begin pursuing the Dilute and Dispose approach to plutonium disposition.

If you have any questions, please contact Marty Dannenfelser, Deputy Assistant Secretary for House Affairs, at (202) 586-5450.

Sincerely,
/s/
Rick Perry

cc: The Honorable Adam Smith
Ranking Member