UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Stephen G. Burns, Chairman
Kristine L. Svinicki
William C. Ostendorff
Jeff Baran

In the Matter of	
DTE ELECTRIC CO. (Fermi Nuclear Power Plant, Unit 3)	Docket No. 52-033-COL
DTE ELECTRIC CO. (Fermi Nuclear Power Plant, Unit 2)	Docket No. 50-341-LR
DUKE ENERGY CAROLINAS, L.L.C. (William States Lee III Nuclear Station, Units 1 and 2)	Docket Nos. 52-018-COL & 52-019-COL
ENTERGY NUCLEAR OPERATIONS, INC. (Indian Point Nuclear Generating Units 2 and 3)	Docket Nos. 50-247-LR & 50-286-LR
FIRSTENERGY NUCLEAR OPERATING CO. (Davis-Besse Nuclear Power Station, Unit 1)	Docket No. 50-346-LR
FLORIDA POWER & LIGHT CO. (Turkey Point, Units 6 and 7)	Docket Nos. 52-040-COL & 52-041-COL
LUMINANT GENERATION CO. L.L.C. (Comanche Peak Nuclear Power Plant, Units 3 and 4)	Docket Nos. 52-034-COL & 52-035-COL
NEXTERA ENERGY SEABROOK, L.L.C. (Seabrook Station, Unit 1)	Docket No. 50-443-LR
NUCLEAR INNOVATION NORTH AMERICA, L.L.C. (South Texas Project, Units 3 and 4)	Docket Nos. 52-012-COL & 52-013-COL
PACIFIC GAS AND ELECTRIC CO. (Diablo Canyon Power Plant, Units 1 and 2)	Docket Nos. 50-275-LR & 50-323-LR

PROGRESS ENERGY FLORIDA, INC. (Levy County Nuclear Power Plant, Units 1 and 2)	Docket Nos. 52-029-COL & 52-030-COL
STP NUCLEAR OPERATING CO. (South Texas Project, Units 1 and 2)	Docket Nos. 50-498-LR & 50-499-LR
TENNESSEE VALLEY AUTHORITY (Bellefonte Nuclear Power Plant, Units 3 and 4)	Docket Nos. 52-014-COL & 52-015-COL
TENNESSEE VALLEY AUTHORITY (Sequoyah Nuclear Plant, Units 1 and 2)	Docket Nos. 50-327-LR & 50-328-LR
TENNESSEE VALLEY AUTHORITY (Watts Bar Nuclear Plant, Unit 2)	Docket No. 50-391-OL
UNION ELECTRIC CO. (Callaway Plant, Unit 1)	Docket No. 50-483-LR
VIRGINIA ELECTRIC AND POWER CO. d/b/a DOMINION VIRGINIA POWER and OLD DOMINION ELECTRIC COOPERATIVE (North Anna Power Station, Unit 3)	Docket No. 52-017-COL

CLI-15-4

MEMORANDUM AND ORDER

Several environmental organizations in the captioned matters (collectively, Petitioners) have requested that we suspend final reactor licensing decisions pending our issuance of a "waste confidence safety decision."[1] Petitioners also have submitted companion filings proposing a new or amended waste confidence safety contention, together with related

[1] *See, e.g.*, *Petition to Suspend Final Decisions in All Pending Reactor Licensing Proceedings Pending Issuance of Waste Confidence Safety Findings* (Sept. 29, 2014) (errata Oct. 1, 2014; amended and corrected petition Oct. 6, 2014) (Petition). Citations to the Petition in today's decision will reference the corrected Petition filed in the *Callaway* license renewal matter. A full list of the filings associated with this decision is set forth in the Appendix.

procedural motions to reopen the record in several of the captioned proceedings.[2] For the reasons set forth below, we deny the suspension petitions, decline to admit the related contention, and deny the motions to reopen.

Petitioners primarily assert that the Atomic Energy Act of 1954, as amended (the Act), requires the NRC, as a precondition to issuing or renewing operating licenses for nuclear power plants, to make definitive findings concerning the technical feasibility of a repository for the disposal of spent nuclear fuel. We rejected a nearly identical argument in 1977 and, though much of the regulatory framework has changed in the intervening years, our reading of the Act has not.[3]

Our conclusion that a suspension is not warranted finds support not only in our interpretation of the Act itself, but also in the regulatory authority that Congress has provided to the agency to protect public health and safety. Indeed, our confidence in the safety and

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[2] *See, e.g.*, *Missouri Coalition for the Environment's Motion for Leave to File a New Contention Concerning the Absence of Required Waste Confidence Safety Findings in the Relicensing Proceeding at Callaway 1 Nuclear Power Plant* (Sept. 29, 2014) (Motion; filed in the Callaway license renewal docket). In some proceedings, petitioners also filed motions to reopen the record. *See, e.g.*, *Motion to Reopen the Record for Callaway Nuclear Power Plant* (Sept. 29, 2014) (Motion to Reopen; filed in the Callaway license renewal docket). Intervenors in the *Levy County* combined license proceeding filed a motion to reopen, but subsequently withdrew their motion. *See Intervenors' Unopposed Motion to Withdraw Their Motion to Reopen the Record* (Oct. 2, 2014); Order (Dismissing Environmental Waste Confidence Contention) (Oct. 1, 2014) (unpublished). With the withdrawal of this motion, nine motions to reopen remain pending before us. In the *Indian Point* license renewal proceeding, Riverkeeper filed a substantively identical suspension petition together with a motion transmitting a new contention a few days after the initial suspension petitions were filed. *Petition to Suspend Final Decision in Indian Point Relicensing Proceeding Pending Issuance of Waste Confidence Safety Findings* (Oct. 3, 2014); *Riverkeeper Consolidated Motion for Leave to File a New Contention and New Contention RK-10 Concerning the Absence of Required Waste Confidence Safety Findings* (Oct. 3, 2014).

[3] *See* Natural Resources Defense Council, Denial of Petition for Rulemaking, 42 Fed. Reg. 34,391, 34,393 (July 5, 1977), *aff'd*, *Natural Res. Def. Council v. NRC*, 582 F.2d 166 (2d Cir. 1978) (NRDC PRM Denial).

technical feasibility of systems for the storage and disposal of spent fuel has only increased since the late 1970s, as demonstrated by our expanded regulatory scheme and the ongoing licensing of such systems, as well as the efforts that are under way—both in the United States and abroad—to develop repositories for the disposal of spent fuel. Thus, today we not only address Petitioners' concerns, but we also take the opportunity to confirm the continued validity of our determinations regarding the technical feasibility of safe spent fuel storage and ultimate disposal in a repository.

I. BACKGROUND

Recently, we approved a final rule and generic environmental impact statement, issued in accordance with the National Environmental Policy Act (NEPA) and the Administrative Procedure Act, to address the environmental impacts associated with the storage of spent nuclear fuel after the end of a reactor's license term (the Continued Storage Rule).[4] Following the publication of the Continued Storage Rule and supporting generic environmental impact statement (Continued Storage GEIS), Petitioners filed substantively identical petitions to suspend final licensing decisions, related motions requesting the admission of new—or, in one instance, amended—contentions in the captioned matters, and, in several proceedings, motions to reopen the proceedings to consider the proposed contentions.[5]

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[4] Final Rule, Continued Storage of Spent Nuclear Fuel, 79 Fed. Reg. 56,238 (Sept. 19, 2014) (Continued Storage Rule); NUREG-2157, Vols. 1 & 2, *Generic Environmental Impact Statement for Continued Storage of Spent Nuclear Fuel* (Sept. 2014) (ADAMS accession nos. ML14196A105 and ML14196A107) (Continued Storage GEIS).

[5] *See, e.g.*, Petition, Motion, and Motion to Reopen.

Exercising our inherent supervisory authority over agency proceedings, we took review of the petitions and motions ourselves and set a briefing schedule.[6] All answers oppose the suspension petitions and admission of the accompanying contention.[7] Petitioners filed a consolidated reply.[8]

Petitioners claim that we cannot satisfy our statutory responsibilities under the Atomic Energy Act and that we no longer have a lawful basis for issuing initial and renewed licenses for nuclear power reactors.[9] They assert that we must, therefore, suspend final licensing decisions

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[6] CLI-14-9, 80 NRC __ (Oct. 7, 2014) (slip op.).

[7] *See, e.g.*, *NRC Staff Consolidated Answer to Petitions to Suspend Final Reactor Licensing Decisions, Motions to Admit a New Contention, and Motions to Reopen the Record* (Oct. 31, 2014); *Entergy's Combined Answer to Riverkeeper's Proposed New Contention RK-10 and Petition to Suspend Final License Renewal Decision Pending Issuance of Waste Confidence "Safety" Findings* (Oct. 31, 2014); *Tennessee Valley Authority's Answer Opposing Petition to Suspend Final Decisions in All Pending Reactor Licensing Proceedings Pending Issuance of Waste Confidence Safety Findings and Motions for Leave to File New Contention* (Oct. 31, 2014); *Tennessee Valley Authority's Answer to Motion to Reopen the Record for Sequoyah Nuclear Power Plant and Motion to Reopen the Record for Bellefonte Nuclear Power Plant* (Oct. 31, 2014) (TVA Answer to Motions to Reopen).

[8] *Petitioners' and Intervenors' Consolidated Reply to Answers to Petitions to Suspend Final Reactor Licensing Decisions, Motions to Admit a New Contention, and Motions to Reopen the Record* (Nov. 7, 2014) (Reply). In addition, the Nuclear Energy Institute filed an unopposed motion for leave to file a brief *amicus curiae* opposing the Petition. *Nuclear Energy Institute, Inc.'s Motion for Leave to File Amicus Curiae Brief* (Oct. 31, 2014); *Amicus Curiae Brief of the Nuclear Energy Institute, Inc. in Response to Suspension Petitions and Waste Confidence Safety Contentions* (Oct. 31, 2014). Our rule governing *amicus curiae* participation does not contemplate a brief under the current circumstances. *See* 10 C.F.R. § 2.315(d) (providing for *amicus* filings at our discretion under 10 C.F.R. § 2.341 or *sua sponte*). We, nonetheless, have considered the Nuclear Energy Institute's views as a matter of discretion. *See, e.g.*, *Southern California Edison Co.* (San Onofre Nuclear Generating Station, Units 2 and 3), CLI-13-9, 78 NRC 551, 556 n.17 (2013).

[9] *See, e.g.*, Motion at 3.

unless and until we make a "safety finding" associated with disposal.[10] Petitioners ask us to admit the following contention:

> The NRC lacks a lawful basis under the Atomic Energy Act … for issuing or renewing an operating license in this proceeding because it has not made currently valid findings of confidence or reasonable assurance that the hundreds of tons of highly radioactive spent fuel that will be generated during any reactor's 40-year license term or 20-year license renewal term can be safely disposed of in a repository. The NRC must make these predictive safety findings in every reactor licensing decision in order to fulfill its statutory obligation under the [Act] to protect public health and safety from the risks posed by irradiated reactor fuel generated during the reactor's license term.[11]

Petitioners' contention, which comes on the heels of our issuance of the Continued Storage Rule, relies in large part on the fact that, unlike prior versions of the Rule, the Continued Storage Rule is no longer supported by specific "findings" concerning, among other things, reasonable assurance of the feasibility of a repository. To provide a more complete understanding of the context of Petitioners' argument, we provide a brief history of our "waste confidence" proceedings.[12]

In 1976, the Natural Resources Defense Council (NRDC) filed a petition requesting that we conduct rulemaking to determine whether spent fuel "can be generated in nuclear power reactors and subsequently disposed of without undue risk to the public health and safety."[13] NRDC argued that, without this determination, we should refrain from making final decisions on

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[10] *See, e.g.*, Petition at 8 (unnumbered).

[11] Motion at 3-4 (citations omitted).

[12] A complete history of the prior waste confidence proceedings can be found in Chapter 1 of the Continued Storage GEIS.

[13] NRDC PRM Denial, 42 Fed. Reg. at 34,391.

"pending or future requests for operating licenses."[14] We denied NRDC's petition and found that, as a matter of statutory interpretation, the Atomic Energy Act did not require us to make the requested finding.[15] In the denial, we noted the NRC's obligations with respect to spent fuel storage and disposal at the time of a reactor licensing decision. Specifically, we explained that, at the time a license is issued, we must "be assured that the wastes generated by licensed power reactors can be safely handled and stored as they are generated."[16] As part of the reactor licensing process, we noted, an applicant must submit information to allow the NRC to "assure that the design provides for safe methods for interim storage of spent nuclear fuel."[17] Given the focus during the licensing process on the safety of licensed operations, we determined that the text of the Atomic Energy Act (combined with Congress's understanding of the state of the development of a repository) did not require us to make, as a precondition to licensing, an express determination that spent fuel generated during operation could be disposed of safely.[18]

The denial also included a separate statement of policy.[19] In that discussion, which Petitioners reference throughout their filings, we stated that we would not continue to license

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[14] *Id.*

[15] *Id.*

[16] *Id.* Today, this assurance is demonstrated by compliance with our regulations that govern the safe storage of spent fuel. *See, e.g.*, Domestic Licensing of Production and Utilization Facilities, 10 C.F.R. pt. 50 (2014) and General License for Storage of Spent Fuel at Power Reactor Sites, 10 C.F.R. pt. 72, subpt. K (2014), which grants a general license to all Part 50 and Part 52 reactor licensees to store spent fuel in an independent spent fuel storage installation.

[17] NRDC PRM Denial, 42 Fed. Reg. at 34,391.

[18] *Id.* at 34,391-93.

[19] *Id.* at 34,393-94.

reactors if we "did not have reasonable confidence that … [spent fuel] can and will in due course be disposed of safely."[20] We explained that our "implicit" finding that methods of safe permanent storage were available could be "readily distinguished" from the type of safety findings that the agency is called upon to make during the course of reactor licensing under the Atomic Energy Act and that any finding in this regard "would not have to be a definitive conclusion that permanent disposal of high-level wastes can be accomplished safely at the present time."[21]

NRDC sought judicial review of the petition denial. The Court of Appeals for the Second Circuit affirmed the denial and endorsed our conclusion that the Atomic Energy Act does not, as a prerequisite to licensing, require a finding of reasonable assurance that "highly hazardous and long-lived radioactive materials can be disposed of safely."[22] The court concluded that, by seeking to require an express finding concerning safe disposal prior to licensing, "NRDC simply reads too much into the [Atomic Energy Act] … . We are satisfied that Congress did not intend such a condition."[23]

In addition to recognizing that the text of the Atomic Energy Act does not mandate such a specific finding, the court relied on Congress's decades-long tacit approval of nuclear power plant licensing even in the absence of a disposal site.[24] Further, the court explained, if NRDC's

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[20] *Id.* at 34,393.

[21] *Id.*

[22] *Natural Res. Def. Council v. NRC*, 582 F.2d 166, 168, 171 (2d Cir. 1978).

[23] *Id.* at 171.

[24] *Id.* at 173-74. The court found Congress's silence in the face of ongoing reactor licensing "deafening." *Id.* at 171.

view of the Atomic Energy Act were correct, it would be "incredible that AEC and its successor NRC would have been violating the [Act] for almost twenty years with no criticism or statutory amendment by Congress, which has been kept well informed of [disposal] developments."[25] Accordingly, the court quoted favorably that it was "fair to read this history as a *[d]e facto* acquiescence in and ratification of the Commission's licensing procedure by Congress."[26]

The court did not rest its decision solely on the legislative history of the Act or on tacit congressional approval of reactor licensing absent safety findings for a repository. "[I]f there were any doubt over the intent of Congress" not to require a safety finding on spent fuel disposal, explained the court, it was "persuaded that the matter was laid to rest by enactment of the Energy Reorganization Act of 1974."[27] The court noted that, in that act, "Congress expressly recognized and impliedly approved NRC's regulatory scheme and practice under which the safety of interim storage of [spent fuel] at commercial nuclear power reactor sites has been determined separately from the safety of … permanent storage facilities which have not, as yet, been established."[28] Since the passage of the Energy Reorganization Act of 1974 as well as the Second Circuit's decision in *NRDC v. NRC*, Congress has had numerous opportunities to consider our interpretation of the Atomic Energy Act with respect to a disposal safety finding at

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[25] *Id.*

[26] *Id.* at 172 (quoting *Power Reactor Dev. Co. v. Int'l Union of Elec., Radio & Mach. Workers*, 367 U.S. 396, 409 (1961)).

[27] *Id.* at 174 (citations omitted).

[28] *Id.* The court observed that, in considering passage of the 1974 legislation, Congress heard testimony from scientists and other representatives of groups "urg[ing] Congress, unsuccessfully, to halt further commercial power plant licensing pending resolution of the waste disposal issue." *Id.* at 171 n.9, 174-75 (citations omitted).

the time of reactor licensing. But in each case, Congress has left intact both this agency's and the court's interpretation.[29]

Since 1984, we have completed four rulemaking proceedings that analyzed the environmental impacts of the continued storage of spent fuel after the end of a reactor's license term (the "waste confidence" and "continued storage" proceedings).[30] The first rulemaking, the 1984 waste confidence proceeding, was prompted by a remand from the Court of Appeals for the District of Columbia Circuit in *Minnesota v. NRC*.[31] In that case, the petitioners challenged the NRC's approval of amendments to the Prairie Island and Vermont Yankee nuclear power plant operating licenses to allow for the use of higher-density spent-fuel-storage racks in the reactors' spent fuel pools.[32] The court observed that the Second Circuit had recently ruled in *NRDC v. NRC* that "Congress did not intend in enacting the Atomic Energy Act to require a demonstration that nuclear wastes could safely be disposed of before licensing of nuclear plants

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[29] *See, e.g.*, Nuclear Waste Policy Act of 1982, Pub. L. No. 97-425, 96 Stat. 2201 (1982); Energy Policy Act of 2005, Pub. L. 109-58, 119 Stat. 594 (2005).

[30] Final Waste Confidence Decision, 49 Fed. Reg. 34,658 (Aug. 31, 1984) (1984 Waste Confidence Decision); Requirements for Licensee Actions Regarding the Disposition of Spent Fuel Upon Expiration of Reactor Operating Licenses, 49 Fed. Reg. 34,688 (Aug. 31, 1984) (1984 Temporary Storage Rule); Consideration of Environmental Impacts of Temporary Storage of Spent Fuel After Cessation of Reactor Operation, 55 Fed. Reg. 38,472 (Sept. 18, 1990) (1990 Temporary Storage Rule); Waste Confidence Decision Review, 55 Fed. Reg. 38,474 (Sept. 18, 1990) (1990 Waste Confidence Decision); Consideration of Environmental Impacts of Temporary Storage of Spent Fuel After Cessation of Reactor Operation, 75 Fed. Reg. 81,032 (Dec. 23, 2010) (2010 Temporary Storage Rule); Waste Confidence Decision Update, 75 Fed. Reg. 81,037 (Dec. 23, 2010) (2010 Waste Confidence Decision); Continued Storage GEIS; and Continued Storage Rule.

[31] *Minnesota v. NRC,* 602 F.2d 412 (D.C. Cir. 1979).

[32] *Id*. at 412.

was permitted," and it did not disagree with that result.[33] Referring to the language in the policy statement accompanying the denial of the petition for rulemaking, the court directed the NRC to determine "whether there is reasonable assurance that an off-site storage solution will be available by [the end of a reactor's license term], and if not, whether there is reasonable assurance that the fuel can be stored safely at the sites beyond those dates."[34]

In 1984, we published our first Waste Confidence Decision and Temporary Storage Rule. The Waste Confidence Decision included "findings," expressed in terms of "reasonable assurance," that, among other things, a repository was technically feasible, one could be open by 2007-2009, and the spent fuel could be safely stored for 30 years after the end of a reactor's license term.[35] In 1990, we revisited the Decision and Temporary Storage Rule and updated the findings to reflect a new expected date for a repository to become available ("the first quarter of the twenty-first century") and to include a 30-year license renewal term in our safe-storage analysis.[36] In 2010, we issued another update that removed the anticipated date for repository availability (explaining instead that a repository would be available "when necessary") and

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[33] *Id.* at 417 (citing *NRDC*, 582 F.2d at 166).

[34] *Id.* at 418. In reaching this decision, the court recognized the long-term nature of the concerns associated with spent fuel storage and disposal when it declined to vacate the license amendments that were the subject of the case, noting that doing so "would effectively shut down the plants." *Id.* Moreover, its decision was predicated on the context of the particular license amendments at issue—to allow high-density spent fuel storage; in fact, the court acknowledged the Second Circuit's ruling in *NRDC v. NRC* and did not disagree with that result. *See id.* at 417.

[35] 1984 Waste Confidence Decision, 49 Fed. Reg. at 34,659-60; 1984 Temporary Storage Rule, 49 Fed. Reg. at 34,688.

[36] *See, e.g.*, 1990 Temporary Storage Rule, 55 Fed. Reg. at 38,473; 1990 Waste Confidence Decision, 55 Fed. Reg. at 38,503-04.

expanded the safe-storage analysis time frame from 30 years after the end of the reactor's license term to 60 years after the end of the reactor's license term.[37]

Several states, an Indian Tribe, and environmental organizations (some of whom are Petitioners here) filed suit before the Court of Appeals for the District of Columbia Circuit challenging the 2010 update to the Decision and Temporary Storage Rule. In 2012, in *New York v. NRC*, the court vacated and remanded the decision and rule, and found that we had not satisfied our obligations under NEPA with respect to three issues: (1) we did not consider the environmental impacts of a repository never becoming available; (2) our analysis of spent fuel pool leaks was not forward-looking; and (3) we had not sufficiently considered the consequences of spent fuel pool fires.[38] The court did not specifically address any issues arising under the Atomic Energy Act.

Following the court's decision in *New York*, we suspended all final decisions for licenses that relied on the Waste Confidence Decision and Temporary Storage Rule.[39] Shortly thereafter we directed the NRC staff to prepare a generic environmental impact statement to support an updated rule and address the deficiencies that the court identified.[40] We approved the final Continued Storage GEIS and Rule, now known as the Continued Storage Rule, in September

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[37] *See, e.g.*, 2010 Temporary Storage Rule, 75 Fed. Reg. at 81,037; 2010 Waste Confidence Decision, 75 Fed. Reg. at 81,038.

[38] *New York v. NRC*, 681 F.3d 471, 473, 481-82 (D.C. Cir. 2012).

[39] *Calvert Cliffs Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-12-16, 76 NRC 63, 66-67 (2011).

[40] Staff Requirements—COMSECY-12-0016—Approach for Addressing Policy Issues Resulting from Court Decision to Vacate Waste Confidence Decision and Rule (Sept. 6, 2012) (ML12250A032).

2014.[41] Although it did not include the discrete findings made in the waste confidence proceedings, and although it did not express our conclusions in terms of "reasonable assurance," the Continued Storage GEIS contains a comprehensive discussion supporting our unqualified conclusion that both safe storage and disposal in a repository are technically feasible.[42]

Thus, while much has changed since we last addressed the specific issue raised in Petitioners' contention, much has stayed the same. In each of our waste confidence proceedings, as well as in the recently concluded continued storage proceeding, we determined that deep geologic disposal of spent nuclear fuel is technically feasible.[43] Similarly, throughout our rulemakings conducted over the past thirty years, neither we nor the courts have questioned our initial conclusion that the Atomic Energy Act does not require the explicit "reasonable assurance" finding requested by Petitioners. And of course, our licensing has proceeded on the basis of these well-settled premises.

II. DISCUSSION

With this background in mind, we turn to the petitions at hand. Petitioners claim a deficiency in our ability to satisfy our basic licensing responsibilities under the Atomic Energy Act, which Petitioners believe results in the loss of our "lawful basis for licensing or relicensing

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[41] Staff Requirements—Affirmation Session 10:00 a.m., Tuesday, August 26, 2014, Commissioners' Conference Room, One White Flint North, Rockville, Maryland (Open to Public Attendance) (Aug. 26, 2014) (ML14237A092).

[42] *See generally* Continued Storage GEIS, app. B.

[43] *Compare* 1984 Waste Confidence Decision, 49 Fed. Reg. at 34,659, *with* 1990 Temporary Storage Rule, 55 Fed. Reg. at 38,472, *and with* Continued Storage GEIS § B.2.1.

nuclear reactors."[44] This claim is distinguishable from those raised in the suspension petitions that we have considered in recent years. Following the events of September 11, 2001, and again following the accident at Fukushima Dai-ichi, petitioners asserted that our actions were insufficient to satisfy our general obligation under the Atomic Energy Act to protect public health and safety.[45] Here, on the other hand, Petitioners claim that we have an obligation under the Atomic Energy Act to make explicit findings regarding the safety of spent fuel disposal as a prerequisite to our reactor licensing decisions.[46] As such, our usual framework for considering suspension requests is not applicable to the case at hand. Instead, exercising our inherent supervisory authority over agency proceedings, we consider Petitioners' claims regarding the scope of our obligations under the Atomic Energy Act. As discussed below, we find Petitioners' Atomic Energy Act claims to be without merit, and we therefore deny the petitions and the companion proposed contention and motions to reopen.[47]

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[44] Reply at 11.

[45] *See, e.g.*, *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-01-26, 54 NRC 376, 380 (2001); *Union Electric Co. d/b/a Ameren Missouri* (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 151 (2011).

[46] Reply at 11. As Petitioners acknowledge, "the Petition is *not* a motion for a stay of the effectiveness of a decision pursuant to 10 C.F.R. § 2.342 or any other kind of request for equitable relief." *Id.* (emphasis in original). *See generally* 10 C.F.R. § 2.342 (governing stays of the actions or decisions of a presiding officer pending filing of a petition for review).

[47] Because Petitioners' Atomic Energy Act claim fails, they have not raised an issue material to findings that the NRC must make to support final decisions in the captioned matters and they are unable to satisfy our contention admissibility standards or meet the criteria to reopen a closed record. *See* 10 C.F.R. §§ 2.309(f)(1) and 2.326. We therefore decline to admit Petitioners' proposed contention and deny their motions to reopen. Moreover, we deny as moot Blue Ridge Environmental Defense League's motions to reopen in the *Sequoyah* and *Bellefonte* proceedings because those proceedings remain open. *See* TVA Answer to Motion to Reopen at 1.

Together with the Energy Reorganization Act of 1974, the Atomic Energy Act provides the basis for our authority to regulate the use of special nuclear material in facilities like nuclear power reactors.[48] We can issue nuclear power reactor licenses to applicants only upon a finding that "the utilization … of special nuclear material will be in accord with the common defense and security and will provide adequate protection to the health and safety of the public."[49] An applicant demonstrates its ability to meet these standards, and thus its entitlement to a license, by submitting a license application that satisfies our licensing criteria.[50] If a power reactor license applicant is unable to meet our regulatory requirements or if we find that the proposed use of special nuclear material will not be in accord with the common defense and security or will not provide adequate protection of public health and safety, then we will not issue a license.[51]

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[48] Atomic Energy Act of 1954, 42 U.S.C. §§ 2011-2297h-13 (2012) and Energy Reorganization Act of 1974, 42 U.S.C. §§ 5801-5891 (2012).

[49] Atomic Energy Act § 182a, 42 U.S.C. § 2232 (2012).

> As we noted in the Continued Storage GEIS, Congress "authorized and directed the NRC to issue regulations establishing requirements for providing adequate protection to public health and safety and common defense and security (see Atomic Energy Act [§] 161b) …. [U]nder current law, the NRC will issue a nuclear power plant or materials license (including a license authorizing storage of spent fuel) when the NRC determines that a license applicant has met the NRC's regulatory standards for issuance of a license, addressing adequate protection of public health and safety and common defense and security, and the NRC has no reason to doubt that issuance of the license would provide adequate protection." Continued Storage GEIS § 1.6.2.1.

[50] *See, e.g.*, 10 C.F.R. pts. 50, 52, and 54.

[51] *See, e.g.*, *Maine Yankee Atomic Power Co.* (Maine Yankee Atomic Power Station) 6 AEC 1003, 1007 (1973) ("Unless the safety findings prescribed by the Atomic Energy Act and the (continued . . .)

Petitioners argue that part of this analysis must include a "safety" or "waste confidence" finding regarding the technical feasibility of a deep geologic repository for the disposal of spent fuel generated at nuclear power plants.[52] Petitioners contend that without such a finding we are unable to make the required finding of adequate protection under the Atomic Energy Act and must, therefore, refrain from issuing licenses until this finding is made.[53] Further, Petitioners argue, this safety finding must be supported by a separate NEPA analysis of the environmental impacts of spent fuel disposal—either in the form of an environmental impact statement or an environmental assessment.[54]

A. Petitioners' Atomic Energy Act Claims

Petitioners argue that the NRC's historic practice, the plain language of the Atomic Energy Act, and relevant case law support their claims. We disagree. At no time have we, Congress, or the courts articulated the view that the Atomic Energy Act requires a "finding" or "predictive safety findings" regarding the disposal of spent fuel in a repository as a prerequisite to issuing a nuclear reactor license. We see no reason to alter our long-standing interpretation of the Atomic Energy Act.

(. . . continued)

regulations can be made, the reactor does not obtain a license—no matter how badly it is needed.").

[52] Motion at 3-4.

[53] Petition at 2-3 (unnumbered).

[54] Motion to Reopen at 4. Among other things, Petitioners argue that this NEPA analysis must consider the costs of spent fuel storage and disposal. *Id.*

Our interpretation of the agency's obligations under the Atomic Energy Act with respect to spent fuel disposal began with our 1977 denial of NRDC's petition for rulemaking.[55] We found then that the Atomic Energy Act does not require us to make a finding regarding spent fuel disposal as part of our reactor licensing decisions.[56] And the Second Circuit endorsed our construction of the Act:

> [W]e hold that NRC is not required to conduct the rulemaking proceeding requested by NRDC or to withhold action on pending or future applications for nuclear power reactor operating licenses until it makes a determination that high-level radioactive wastes can be permanently disposed of safely.[57]

Both our denial of the petition for rulemaking and the court's affirmance of this decision were grounded in the language of Atomic Energy Act sections 103, 161, and 182—the very sections relied upon here by Petitioners. As the court expressly concluded in *NRDC*, we find that Petitioners read "too much into the [Act]."[58]

Section 103d. prohibits the agency from issuing a license if doing so "would be inimical to the common defense and security or the health and safety of the public."[59] Petitioners claim that the "plain language" of this section conflicts with the interpretation of the Atomic Energy Act that we adopted in the denial of NRDC's petition for rulemaking. Specifically, they take issue with our conclusion that "the statutory findings required by section 103 apply specifically to the 'proposed activities' and 'activities under such licenses'" but do not apply to disposal activities

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[55] NRDC PRM Denial, 42 Fed. Reg. at 34,391-92.

[56] *Id.*

[57] *NRDC*, 582 F.2d at 175.

[58] *Id.* at 171.

[59] Atomic Energy Act, Commercial Licenses § 103, 42 U.S.C. § 2133 (2012).

that might result from the operation of a licensed facility.[60] Section 103 does not contemplate consideration of spent fuel disposal in the NRC's licensing decisions, and we decline to infer from Congress's silence an affirmative obligation to the contrary.[61]

The same is true of the other Atomic Energy Act provisions upon which Petitioners rely. Section 161 establishes the general scope of the NRC's authority, yet nowhere does it discuss spent fuel disposal.[62] Similarly, section 182 specifies the information that must be provided by an applicant for a license with no reference to spent fuel disposal.[63] Thus, the text of the Atomic Energy Act does not compel the conclusion that we are required to include "findings" regarding spent fuel disposal in our reactor licensing decisions, and we decline to interpret it otherwise. And, in light of our interpretation, the related NRC regulations do not require information about the eventual disposal of the spent fuel that would be generated by the reactor.[64]

Moreover, as the Second Circuit explained in *NRDC*, the conclusion that the Atomic Energy Act does not require "safety findings" is further supported by the legislative history of the Act and subsequent Congressional action. For example, in 1959, Congress held hearings

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[60] Motion at 6-7; NRDC PRM Denial, 42 Fed. Reg. at 34,391.

[61] *See NRDC,* 582 F.2d at 170-71. Petitioners also rely on the concurring opinion of Judge Tamm from *Minnesota v. NRC*. In his concurrence, Judge Tamm noted his "belief that section 102(2)(C) of [NEPA] and section 103(d) [of the Act] … mandate the determination that the Commission identified in" the NRDC PRM Denial. *Minnesota*, 602 F.2d at 419 (Tamm, J., concurring). But the majority did not express this view, and a concurring opinion, by its nature, does not carry the force of law, except in very narrow circumstances not applicable here. *See generally United States v. Duvall*, 740 F.3d 604, 605 (D.C. Cir. 2013). Had a majority of the Court in *Minnesota* agreed with Judge Tamm's expansive view of our Atomic Energy Act obligations, these views would have been reflected in the majority opinion.

[62] Atomic Energy Act, General Provisions § 161, 42 U.S.C. § 2201 (2012).

[63] Atomic Energy Act, License Applications § 182, 42 U.S.C. § 2232 (2012).

[64] *See, e.g.*, *id.*; 10 C.F.R. pts. 50, 52, and 54 (2014).

regarding the disposal of spent nuclear fuel and, at that time, Congress "was made aware of the fact that the problem of permanent disposal of high-level waste had not been solved."[65] But Congress did not restrict or modify the NRC's licensing authority. Further, Congress later approved a continuation of the licensing approach in the Atomic Energy Act when it transferred the licensing functions of the Atomic Energy Commission to us via the Energy Reorganization Act of 1974.[66] Had Congress believed that our licensing activities required the finding sought by Petitioners, it could have enacted legislation consistent with this understanding at any time between 1954 and today.[67] That Congress has maintained this course despite our rejection of NRDC's interpretation of the Atomic Energy Act in the denial of the petition for rulemaking, the Second Circuit's endorsement of our construction of the Act in *NRDC*, and the numerous opportunities for legislative clarification provides further confirmation of the propriety of our interpretation of the Act.[68]

Petitioners rely heavily upon our statement, expressed as part of the policy discussion included in the denial of NRDC's petition for rulemaking, that we would not continue to license reactors if we "did not have reasonable confidence that … [spent fuel] can and will in due course

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[65] NRDC PRM Denial, 42 Fed. Reg. at 34,392 (citing "Industrial Radioactive Waste Disposal," Hearings Before the JCAE Special Subcommittee on Radiation, Jan. 29-30, Feb. 2-3, and July 29, 1959, 86th Cong., 1st Sess. (1959)).

[66] Energy Reorganization Act of 1974, Pub. L. 93-438, 88 Stat. 1233 (1974).

[67] *See, e.g.*, Nuclear Waste Policy Act of 1982, Pub. L. No. 97-425, 96 Stat. 2201 (1982); Energy Policy Act of 2005, Pub. L. 109-58, 119 Stat. 594 (2005).

[68] Indeed, in recent years, numerous congressional hearings over the funding of the Yucca Mountain repository have highlighted the absence of a national consensus on siting a repository.

be disposed of safely."[69] They assert that this statement should guide our interpretation of the Act and that any acquiescence by Congress in our interpretation was conditioned on its existence.[70] But in the NRDC PRM Denial we expressly distinguished findings of the kind contemplated by the Atomic Energy Act and the NRC's licensing regulations from the more generalized conclusion in the policy statement.[71] As we explained at the time:

> Even if, contrary to the Commission's view, some kind of prior finding on waste disposal safety were required under the statutory scheme, such a finding would not have to be a definitive conclusion that permanent disposal of high-level wastes can be accomplished safely at the present time. There is no question that prior to authorizing operation of a reactor the Commission must find pursuant to section 182 that hazards which become fully mature with start-up will be dealt with safely from the beginning. *But the quality of this reactor safety finding can be readily distinguished from the quality of findings regarding impacts on public health and safety which will not mature until much later, if ever*. The hazards associated with permanent disposal will become acute only at some relatively distant time when it might be no longer feasible to store radioactive wastes in facilities subject to surveillance.[72]

It was only after this discussion that we added: "The Commission would not continue to license reactors if it did not have reasonable confidence that the wastes can and will in due course be disposed of safely."[73] Moreover, we pointed out that the program for siting and developing a

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[69] NRDC PRM Denial, 42 Fed. Reg. at 34,393.

[70] *See, e.g.*, Reply at 7.

[71] NRDC PRM Denial, 42 Fed. Reg. at 34,393.

[72] *Id.* (emphasis added).

[73] *Id.*

geologic repository was not within the NRC's statutory responsibilities under the Atomic Energy Act, another reason rendering an explicit safety finding on spent fuel disposal inappropriate.[74]

When considered within the context of our denial of the petition for rulemaking, it is clear that the statement at issue was nothing more than what it purported to be: a statement of our policy regarding the licensing of nuclear power plants and our confidence in the availability of a disposal solution.[75] This policy has always existed independent of our legal conclusion that no obligation exists under the Atomic Energy Act to make predictive findings regarding spent fuel disposal as part of our reactor licensing decisions.

Petitioners also misapprehend the relevant case law. Specifically, Petitioners misread the Second Circuit's opinion in *NRDC v. NRC*, the only court decision to have directly addressed the issue. Overlooking the express holding that endorsed our interpretation of the Act,[76] Petitioners instead quote the court's characterization of our policy and practice: "[The] NRC maintains that … its long-continued regulatory practice of issuing operating licenses, with an implied finding of reasonable assurance that safe permanent disposal of [spent nuclear fuel] can be available when needed, is in accord with the intent of Congress underlying the [Atomic

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[74] In this regard, we observed that the Energy Research and Development Administration (the Department of Energy's predecessor agency) was responsible for the development of a high-level waste repository; the NRC's statutory responsibilities "to insure that permanent disposal of high-level radioactive wastes will be accomplished safely" were, and still are, limited to licensing the repository. *Id.*

[75] *Id.*

[76] *NRDC*, 582 F.2d at 175 ("[W]e hold that NRC is not required to conduct the rulemaking proceeding requested by NRDC or to withhold action on pending or future applications for nuclear power reactor operating licenses until it makes a determination that high-level radioactive wastes can be permanently disposed of safely.").

Energy Act] and [Energy Reorganization Act]."[77] But that description neither constitutes the court's holding nor reflects an admission concerning our interpretation of our statutory obligations. Rather, it reflects our view that our practice was consistent with the conclusion that a specific finding of repository feasibility was not a prerequisite under the Atomic Energy Act to reactor licensing. And the court agreed: "Congress expressly recognized and impliedly approved NRC's regulatory scheme and practice under which the safety of interim storage of high-level wastes at commercial nuclear power reactor sites has been determined separately from the safety of Government-owned permanent storage [disposal] facilities which have not, as yet, been established."[78]

Petitioners also rely on two subsequent decisions by the D.C. Circuit, *New York v. NRC* and *Minnesota v. NRC*. But in neither of these cases did the court find a statutory obligation on the part of the NRC to prepare "waste confidence" safety findings prior to or as part of our reactor licensing decisions. In *New York*, the court did not consider Atomic Energy Act issues. Instead, the remand was based solely on the court's finding that we did not satisfy our obligations under NEPA.[79]

In *Minnesota*, the court remanded for our consideration the question "whether there is reasonable assurance that an off-site storage solution will be available by … the expiration of the plants' operating licenses, and if not, whether there is reasonable assurance that the [spent] fuel can be stored safely at the sites beyond those dates."[80] Further, as distinct from the

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[77] *Id.* at 170.

[78] *Id.* at 174.

[79] *New York*, 681 F.3d at 471, 483.

[80] *Minnesota*, 602 F.2d at 418.

concurrence, the court majority refrained from identifying an obligation to make findings under the Atomic Energy Act. In that regard, the court expressly declined to "set aside or stay the challenged license amendments,"[81] thus confirming that the court did not view the amendments to be contingent upon any additional safety determination under the Atomic Energy Act.

To be sure, our "findings" in the initial waste confidence proceeding likely caused some confusion. We understand that because of how they were framed, they could have been, and likely were, interpreted by some as safety findings made under and compelled by the Atomic Energy Act. That we responded to the *Minnesota* remand as we did, however, does not mean that the particular form of our response was compelled by the Atomic Energy Act. Rather, the formal "findings" in the initial waste confidence proceeding resulted from our use of a hybrid rulemaking proceeding, which combined elements of a formal "on the record" proceeding with the more common "notice and comment" rulemaking widely used today.[82] Formal rulemakings often result in "findings," such as the ones we made in our first waste confidence proceeding.[83] Moreover, that approach made sense at the time, which was long before our framework for regulating the safe storage and disposal of spent fuel had matured into its current state, and long before we had comprehensively evaluated the environmental impacts of the storage of spent nuclear fuel for an extended time frame—a task we now have completed in the Continued Storage GEIS.

Throughout their motions, Petitioners ascribe significance to our failure to use the term "reasonable assurance" to describe the extent of our consideration of the technical feasibility of

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[81] *Id.* at 413.

[82] *See* 1984 Waste Confidence Decision, 49 Fed. Reg. at 34,658-60.

[83] *See id.*

disposal.[84] But as the technical agency entrusted by Congress to make determinations of this sort, we have concluded—without qualification—that a geologic repository is technically feasible.[85] As we acknowledged in the Continued Storage GEIS, the uncertainty in spent fuel disposal lies not with the technical feasibility of long-term storage and disposal, but with the political and societal factors that continue to delay the construction of a repository.[86] We recognized this uncertainty in the Continued Storage GEIS by analyzing the possibility that a repository will never become available.[87] Our decision today is consistent with our longstanding conclusion.

Finally, it bears repeating that our recently completed Continued Storage GEIS considers the issues raised by Petitioners. Many of the groups petitioning us now provided essentially identical comments as part of our recently completed Continued Storage proceeding.[88] We responded to Petitioners' comments in the final GEIS and nothing has changed since then that would cause us to question the technical feasibility of disposal in a repository—safe geologic disposal is achievable with currently available technology.[89] Our analysis in the Continued Storage GEIS builds on decades of experience and multiple

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[84] *See, e.g.*, Reply at 9-10.

[85] Continued Storage GEIS § B.2.1.

[86] *Id.*

[87] *See, e.g.*, *id.* § 1.8.2.

[88] *See, e.g.*, Corrected comments of "Environmental Organizations on Draft Waste Confidence Generic Environmental Impact Statement and Proposed Waste Confidence Rule and Petition to Revise and Integrate All Safety and Environmental Regulations Related to Spent Fuel Storage and Disposal," at 14, 16 (Jan. 7, 2014) (ML14024A297).

[89] We responded to the concerns raised by Petitioners in Appendix D of the Continued Storage GEIS. *See, e.g.*, Continued Storage GEIS §§ D.2.1.2, D.2.4.1, and B.2 (discussing the technical feasibility of disposal in a repository).

rulemaking proceedings.[90] Specifically, our conclusion finds support in ongoing research in the United States and abroad, along with the ability to characterize and quantitatively assess the capabilities of geologic and engineered barriers, experience gained from the Staff's review of the Department of Energy's construction authorization application for a repository at Yucca Mountain, disposal activities at the Waste Isolation Pilot Plant, and continued progress toward a repository in other countries.[91] Indeed, contrary to the situation that accompanied the issuance of the initial Waste Confidence Decision, our regulatory framework now includes specific standards and requirements for licensing the storage of spent fuel and, in the case of Yucca Mountain, standards for licensing a repository.[92]

Since we deny Petitioners' petition to suspend and related motions, we need not address the related NEPA issue raised in the motions.[93] Nevertheless, we do so to provide additional clarity regarding the scope of our NEPA responsibilities. NEPA requires us to consider the environmental impacts of major agency actions, such as the issuance of an initial or renewed nuclear power reactor license. In some cases, we have addressed environmental impacts generically.[94] The courts have consistently found generic analyses of the

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[90] *Id.* § B.2.

[91] *See generally id.* at B-2 to B-5.

[92] *See, e.g.*, 10 C.F.R. pts. 60, 63, and 72.

[93] Motion at 12-14.

[94] *See, e.g.*, NUREG-1437, Revision 1, Generic Environmental Impact Statement for License Renewal of Nuclear Power Plants—Final Report (June 2013) (ML13107A023).

environmental impacts of continued storage and disposal in the context of our reactor licensing proceedings to be acceptable.[95]

Petitioners contend that their requested "safety decision" regarding the feasibility of a repository would constitute a federal action that would require us to prepare a separate NEPA analysis to support our conclusion that spent fuel disposal is technically feasible.[96] Petitioners further assert that this separate analysis was "required by the Court of Appeals in *New York*."[97] We disagree. We find nothing in the court's decision to support Petitioners' assertion. Nonetheless, any finding we have made, whether express or implied, does not require its own environmental analysis; it is simply a confirmation of what Congress and the courts have previously understood—that we believe it is safe to proceed with reactor licensing because it is ultimately possible to dispose of spent nuclear fuel safely.[98] And of course, each reactor

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[95] *See, e.g.*, *New York*, 681 F.3d at 480 (citing *Baltimore Gas & Elec. Co. v. NRDC*, 462 U.S. 87, 100, 103 (1983)) and *Minnesota*, 602 F.2d at 416-17.

[96] Motion at 13.

[97] *Id.* at 14.

[98] In this vein, Petitioners misapprehend our statement in the Continued Storage GEIS that "in this GEIS and Rule, the NRC is not making a safety determination under the Atomic Energy Act … to allow for the continued storage of spent fuel. [The Atomic Energy ActRic] safety determinations would be made as part of individual licensing actions." *See* Motion at 14 n.54 (citing Continued Storage GEIS at D-9). This commitment does not deviate from our long-held view that the [Act] does not require findings regarding spent fuel disposal at the time of reactor or storage facility licensing. We intended only to correct the misimpression that safety findings for the purposes of making final licensing decisions were to be found in our NEPA rulemaking. We therefore noted that these safety findings would be made in future licensing actions as necessary—for example, in the licensing of spent fuel storage facilities after the end of a reactor's license term. The Atomic Energy Act "safety determinations" to which we referred in the Continued Storage GEIS and Rule were not those that Petitioners claim to be required here for spent fuel disposal—they were our well-known determinations that are made as part of final licensing decisions. Continued Storage GEIS at D-9.

licensing decision will have to be made in light of the full panoply of reasonably foreseeable environmental impacts that can fairly be attributed to the proposed action.[99]

In light of the foregoing, we find that Petitioners have not demonstrated a legal basis for their contention. It follows that Petitioners have not stated a valid contention that satisfies our contention admissibility criteria in 10 C.F.R. § 2.309, nor have they satisfied the criteria to reopen a closed record in 10 C.F.R. § 2.326.[100]

B. Additional Considerations Concerning the Issuance of Licenses

For the reasons discussed above, we do not interpret the Atomic Energy Act to require us to make safety findings regarding the technical feasibility of a repository as a prerequisite to our reactor licensing decisions. We are nonetheless aware of the public's concerns about the safety issues associated with the waste generated by the facilities that we license. For this reason, we stress that our ongoing efforts to ensure adequate protection of the public health and safety are not circumscribed by a narrow conception of what the law requires or a stagnant approach to regulation. Accordingly, we set forth below the considerations that guide our

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[99] Petitioners additionally argue that we must prepare a cost-benefit analysis that considers the "costs of spent fuel storage and disposal" as part of their requested NEPA analysis. Motion to Reopen at 4. In response to comments on the draft Continued Storage GEIS and Rule regarding the cost of continued storage, the Staff added additional information to the Continued Storage GEIS to ensure that NRC decision-makers, applicants, licensees, and the public would have sufficient information to appropriately consider the costs of continued storage in NEPA analyses for future licensing actions. *See generally* Continued Storage GEIS, ch. 2. Here, we need not expand upon the disclosure of cost information found in the GEIS. To the extent required by NEPA, the Staff will, as appropriate, consider the cost information contained in Chapter 2 of the GEIS as part of the cost-benefit analyses prepared in conjunction with NEPA reviews for individual licensing proceedings.

[100] Petitioners, Applicants, and the Staff present numerous arguments regarding the procedural propriety of the petition and motions now before us. Because we find that the suspension petition and new contention fail on the merits, and we consider—and take action on—the petition and motions in our supervisory capacity, we need not address these procedural issues. *See, e.g.*, *Callaway*, CLI-11-5, 74 NRC at 158 n.65.

analysis of these issues and our conclusion that licensing nuclear plants will not endanger the public health and safety.

As an initial matter, the disposal question is inextricably linked to the question of the technical feasibility of safe storage pending disposal. As we acknowledged in the Continued Storage GEIS, the time frames we considered, including one that contemplates indefinite storage, depend on the continued technical feasibility of safely storing spent fuel as it ages.[101] Our regulations, including those in 10 C.F.R. Parts 50, 52, and 72, establish stringent safety requirements that apply to the construction and operation of reactor spent fuel pools and independent spent fuel storage installations.[102] Even after the end of a reactor's license term, these storage facilities will continue to be subject to our regulations governing spent fuel storage, which ensure that these safety requirements remain in place for as long as the fuel is stored.[103] For example, 10 C.F.R. § 50.54(bb), which requires licensees to submit for NRC approval their plans to manage spent fuel after the permanent cessation of reactor operation; and 10 C.F.R. Part 50, Appendix A, Criterion 61, which requires that spent fuel storage systems be designed to assure adequate safety under normal and postulated accident conditions, directly relate to the safe storage of spent fuel after a reactor has stopped operating.

Spent fuel can be stored safely in spent fuel pools or independent spent fuel storage installations licensed under the Atomic Energy Act. Indeed, we recently concluded in our Continued Storage rulemaking that the indefinite storage of spent fuel in dry casks, if it becomes

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[101] Continued Storage GEIS §§ B.2 and B.3.

[102] *See, e.g.*, *id.* § D.2.4.1, at D-28 to D-32.

[103] *Id.*

necessary, is technically feasible.[104] As reflected in the Continued Storage GEIS, several characteristics of dry cask storage systems ensure that these systems can safely store spent fuel; among others, these systems are massive, passive, and inherently robust.[105]

Further, our regulatory process is dynamic: we continue to revise and refine our regulatory regime as our technical knowledge and experience grows.[106] Thus, we rely both upon our ability to ensure that licensees conform to existing regulations and upon our comprehensive regulatory scheme that takes into account the length of time during which, and the conditions under which, the storage of spent fuel will occur. For example, in our waste confidence proceedings, we assessed the technical feasibility of geologic disposal, along with the continued storage of spent fuel pending the availability of a repository. As early as 1990, however, we recognized that the length of the continued storage period could be significantly longer than the specific time periods originally reflected in the Temporary Storage Rule.[107] But we did not examine the safety or environmental consequences of storing fuel for longer time frames because we assumed that the Department of Energy would have a deep geologic

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[104] In accordance with the direction of the court of appeals, we analyzed a scenario where a repository never becomes available. *New York*, 681 F.3d at 479. As part of this analysis, we determined that it is technically feasible to store spent fuel indefinitely, should it become necessary to do so. Continued Storage GEIS § B.3.

[105] *Id.*

[106] *See, e.g.*, Final Rule, License and Certificate of Compliance Terms, 76 Fed. Reg. 8873 (Feb. 16, 2011) (extending the maximum possible length of licenses issued under 10 C.F.R. pt. 72 from 20 years to 40 years).

[107] In our 1990 Waste Confidence Decision, we noted that "[a]lthough the Commission does not dispute the statement that dry spent fuel storage is safe and environmentally acceptable for a period of 100 years, the Commission does not find it necessary to make that specific finding in this proceeding." 1990 Waste Confidence Decision, 55 Fed. Reg. at 38,473.

repository available within those time frames.[108] We revisited this assumption as a consequence of the remand in *New York v. NRC*, and we now have analyzed the impacts of spent fuel storage over much longer time frames.[109] We expect that our regulatory process will not be static and will continue to evolve in the future.

Disposal in a deep geologic repository remains the option that Congress has selected for addressing the problem of spent nuclear fuel, and we have neither a mandate nor a reason to question this determination. For the reasons stated in the Continued Storage GEIS, we believe that a geologic repository is technically feasible and that, with sufficient political and societal commitment, a repository can become available within 25–35 years.[110] But we have no crystal ball. We recognize, as we did in 1977, that the hazards associated with spent fuel could become acute at some distant time. We also recognize, as we must, that our statutory mission only confers upon us the authority to license, and not to construct, a permanent repository.[111] Thus, our statutory obligation to ensure the adequate protection of public health and safety encompasses an ongoing responsibility to regulate the continued storage of spent fuel, with or without a repository. Our long history with these issues (including our ability to adapt our regulatory processes based upon changing circumstances) continues to support our conclusion that safe, permanent disposal of spent nuclear fuel is technically feasible and that spent fuel can

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[108] *See id.* at 38,482.

[109] *See, e.g.*, Continued Storage GEIS, chs. 4 and 5.

[110] *Id.* § B.2.

[111] The Nuclear Waste Policy Act assigned the responsibility for constructing and operating a repository to the Department of Energy, not the NRC. *See, e.g.*, Nuclear Waste Policy Act of 1982 § 114, 42 U.S.C. § 10134 (2012).

be safely stored until a repository is available, or indefinitely should such storage become necessary.

Congress has entrusted this agency to ensure adequate protection of public health and safety by granting us the authority to condition licenses and to enforce our regulations. In our view, licensing production and utilization facilities now and relying upon our overall regulatory regime to address both ongoing safe storage and the construction of a repository in the future does not constitute an abdication of our statutory obligations. Rather, we understand these actions to be precisely what Congress intended when it both authorized the NRC to issue licenses for nuclear power plants and granted the agency broad regulatory and enforcement authority to protect the public health and safety and common defense and security.

III. CONCLUSION

In light of these considerations, and in light of our determination that the Atomic Energy Act does not require us to make the "waste confidence safety finding" that Petitioners propose, we decline to suspend final licensing decisions in the captioned proceedings. We therefore *deny* Petitioners' suspension requests and *deny* Petitioners' associated motions for leave to file new contentions and to reopen the record.

IT IS SO ORDERED.

For the Commission

NRC SEAL

/RA/
Annette L. Vietti-Cook
Secretary of the Commission

Dated at Rockville, Maryland,
this 26th day of February, 2015.

APPENDIX
PETITIONS AND MOTIONS

1. Served in all captioned proceedings except *Entergy Nuclear Operations, Inc.* (Indian Point Nuclear Generating, Units 2 and 3): *Petition to Suspend Final Decisions in All Pending Reactor Licensing Proceedings Pending Issuance of Waste Confidence Safety Findings* (Sept. 29, 2014); *Errata to Petition to Suspend Final Decisions in All Pending Reactor Licensing Proceedings Pending Issuance of Waste Confidence Safety Findings* (Oct. 1, 2014); and *Petition to Suspend Final Decisions in All Pending Reactor Licensing Proceedings Pending Issuance of Waste Confidence Safety Findings—Amended and Corrected* (Oct. 6, 2014).

2. *DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 3): *Intervenors' Motion for Leave to File a New Contention Concerning the Absence of Required Waste Confidence Safety Findings in the Combined Operating Licensing Proceeding for Fermi 3 Nuclear Power Plant* (Sept. 29, 2014).

3. *DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 2): *Petitioners' Motion for Leave to Amend and Supplement Contention 3 Concerning the Absence of Required Waste Confidence Safety Findings in the Relicensing Proceeding for Fermi 2 Nuclear Power Plant* (Sept. 29, 2014).

4. *Duke Energy Carolinas, L.L.C.* (William States Lee III Nuclear Station, Units 1 and 2): *Petitioner's Motion for Leave to File a New Contention Concerning the Absence of Required Waste Confidence Safety Findings in the Licensing Proceeding at William States Lee III Nuclear Power Plant* (Sept. 29, 2014).

5. *Duke Energy Carolinas, L.L.C.* (William States Lee III Nuclear Station, Units 1 and 2): *Motion to Reopen the Record for William States Lee III Nuclear Power Plant* (Sept. 29, 2014).

6. *Entergy Nuclear Operations, Inc.* (Indian Point Nuclear Generating, Units 2 and 3): *Petition to Suspend Final Decision in Indian Point Relicensing Proceeding Pending Issuance of Waste Confidence Safety Findings* (Oct. 3, 2014).

7. *Entergy Nuclear Operations, Inc.* (Indian Point Nuclear Generating, Units 2 and 3): *Riverkeeper Consolidated Motion for Leave to File a New Contention and New Contention RK-10 Concerning the Absence of Required Waste Confidence Safety Findings* (Oct. 3, 2014).

8. *FirstEnergy Nuclear Operating Co.* (Davis-Besse Nuclear Power Station, Unit 1): *Intervenors' Motion for Leave to File a New Contention Concerning the Absence of Required Waste Confidence Safety Findings in the Relicensing Proceeding for Davis-Besse Nuclear Power Station* (Sept. 29, 2014).

9. *Florida Power & Light Co.* (Turkey Point, Units 6 and 7): *Intervenors' Motion for Leave to File a New Contention Concerning the Absence of Required Waste Confidence Safety Findings in the Licensing Proceeding at Turkey Point Nuclear Power Plant* (Sept. 29, 2014).

10. *Luminant Generation Co. L.L.C.* (Comanche Peak Nuclear Power Plant, Units 3 and 4): *Motion to Reopen the Record for Comanche Peak Units 3 & 4 Nuclear Power Plant* (Sept. 29, 2014).

11. *Luminant Generation Co. L.L.C.* (Comanche Peak Nuclear Power Plant, Units 3 and 4): *Petitioners' Motion for Leave to File a New Contention Concerning the Absence of Required Waste Confidence Safety Findings in the Licensing Proceeding at Comanche Peak Units 3 & 4* (Sept. 29, 2014).

12. *Nextera Energy Seabrook, L.L.C.* (Seabrook Station, Unit 1): Shadis, Raymond, Friends of the Coast and New England Coalition, letter to Administrative Judges (Sept. 29, 2014).

13. *Nuclear Innovation North America, L.L.C.* (South Teas Project, Units 3 and 4): *Motion to Reopen the Record for South Texas Project 3 & 4 Nuclear Power Plant* (Sept. 29, 2014).

14. *Nuclear Innovation North America, L.L.C.* (South Teas Project, Units 3 and 4): *Petitioners' Motion for Leave to File a New Contention Concerning the Absence of Required Waste Confidence Safety Findings in the Licensing Proceeding at South Texas Project Units 3 & 4 Nuclear Power Plant* (Sept. 29, 2014).

15. *Pacific Gas and Electric Co.* (Diablo Canyon Power Plant, Units 1 and 2): *San Luis Obispo Mothers for Peace Motion for Leave to File a New Contention Concerning the Absence of Required Waste Confidence Safety Findings* (Sept. 29, 2014).

16. *Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2): *Ecology Party of Florida and Nuclear Information and Resource Services' Motion to Reopen the Record* (Sept. 29, 2014).
17. *Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2): *Ecology Party of Florida and Nuclear Information and Resource Services' Motion for Leave to File a New Contention Concerning the Absence of Required Waste Confidence Safety Findings* (Sept. 29, 2014).

18. *Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2): *Intervenors' Unopposed Motion to Withdraw Their Motion to Reopen the Record* (Oct. 2, 2014).

19. *STP Nuclear Operating Co.* (South Texas Project, Units 1 and 2): *Motion to Reopen the Record for South Texas Project Units 1 & 2 Nuclear Power Plant* (Sept. 29, 2014).

20. *STP Nuclear Operating Co.* (South Texas Project, Units 1 and 2): *Petitioners' Motion for Leave to File a New Contention Concerning the Absence of Required Waste Confidence Safety Findings in the Relicensing Proceeding at South Texas Project Electric Generating Statio[sic] Units 1 and 2* (Sept. 29, 2014).

21. *Tennessee Valley Authority* (Bellefonte Nuclear Power Plant, Units 3 and 4): *Motion to Reopen the Record for Bellefonte Nuclear Power Plant* (Sept. 29, 2014).

22. *Tennessee Valley Authority* (Bellefonte Nuclear Power Plant, Units 3 and 4): *Intervenor's Motion for Leave to File a New Contention Concerning the Absence of Required Waste Confidence Safety Findings in the Licensing Proceeding at Bellefonte Nuclear Power Plant* (Sept. 29, 2014).

23. *Tennessee Valley Authority* (Sequoyah Nuclear Plant, Units 1 and 2): *Motion to Reopen the Record for Sequoyah Nuclear Power Plant* (Sept. 29, 2014).

24. *Tennessee Valley Authority* (Sequoyah Nuclear Plant, Units 1 and 2): *Intervenor's Motion for Leave to File a New Contention Concerning the Absence of Required Waste Confidence Safety Findings in the Re-Licensing Proceeding at Sequoyah Nuclear Power Plant* (Sept. 29, 2014).

25. *Tennessee Valley Authority* (Watts Bar Nuclear Plant, Unit 2): *Southern Alliance for Clean Energy's Motion to Reopen the Record* (Sept. 29, 2014).

26. *Tennessee Valley Authority* (Watts Bar Nuclear Plant, Unit 2): *Southern Alliance for Clean Energy's Motion for Leave to File a New Contention Concerning the Absence of Required Waste Confidence Safety Findings* (Sept. 29, 2014).
27. *Union Electric Co.* (Callaway Plant, Unit 1): *Motion to Reopen the Record for Callaway Nuclear Power Plant* (Sept. 29, 2014).

28. *Union Electric Co.* (Callaway Plant, Unit 1): *Missouri Coalition for the Environment's Motion for Leave to File a New Contention Concerning the Absence of Required Waste Confidence Safety Findings in the Relicensing Proceeding at Callaway 1 Nuclear Power Plant* (Sept. 29, 2014).

29. *Virginia Electric and Power Co. d/b/a Dominion Virginia Power and Old Dominion Electric Cooperative* (North Anna Power Station, Unit 3): *Motion to Reopen the Record for North Anna Nuclear Power Plant* (Sept. 29, 2014).

30. *Virginia Electric and Power Co. d/b/a Dominion Virginia Power and Old Dominion Electric Cooperative* (North Anna Power Station, Unit 3): *Petitioner's Motion for Leave to File a New Contention Concerning the Absence of Required Waste Confidence Safety Findings in the Licensing Proceeding at North Anna Nuclear Power Plant* (Sept. 29, 2014).

RESPONSIVE PLEADINGS

1. Served in all captioned proceedings: *NRC Staff Consolidated Answer to Petitions to Suspend Final Reactor Licensing Decisions, Motions to Admit a New Contention, and Motions to Reopen the Record* (Oct. 31, 2014).

2. Served in all captioned proceedings*: Nuclear Energy Institute, Inc.'s Motion for Leave to File Amicus Curiae Brief; Amicus Curiae Brief of the Nuclear Energy Institute, Inc. in Response to Suspension Petitions and Waste Confidence Safety Contentions* (Oct. 31, 2014).

3. Served in all captioned proceedings: *Petitioners' and Intervenors' Consolidated Reply to Answers to Petitions to Suspend Final Reactor Licensing Decisions, Motions to Admit a New Contention, and Motions to Reopen the Record* (Nov. 7, 2014).

4. *DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 3): *Applicant's Opposition to Petition to Suspend Final Decisions and Proposed New Continued Storage Contention* (Oct. 31, 2014).

5. *DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 2): *Applicant's Opposition to Petition to Suspend Final Decisions and Proposed New Continued Storage Contention* (Oct. 31, 2014).

6. *Duke Energy Carolinas, L.L.C.* (William States Lee III Nuclear Station, Units 1 and 2): *Duke Energy's Answer Opposing Petition to Suspend Licensing Proceedings, Related Contention and Motion to Reopen* (Oct. 31, 2014).

7. *Entergy Nuclear Operations, Inc.* (Indian Point Nuclear Generating, Units 2 and 3): *Entergy's Combined Answer to Riverkeeper's Proposed New Contention RK-10 and Petition to Suspend Final License Renewal Decision Pending Issuance of Waste Confidence "Safety" Findings* (Oct. 31, 2014).

8. *FirstEnergy Nuclear Operating Co.* (Davis-Besse Nuclear Power Station, Unit 1): *FirstEnergy Nuclear Operating Company Combined Response to Proposed Contention and Petition to Suspend Related to Alleged Need for Issuance of Waste Confidence Safety Findings* (Oct. 31, 2014).

9. *Florida Power & Light Co.* (Turkey Point, Units 6 and 7): *FPL's Answer Opposing Petition to Suspend Licensing Proceedings and Related Contention* (Oct. 31, 2014).
10. *Luminant Generation Co. L.L.C.* (Comanche Peak Nuclear Power Plant, Units 3 and 4): *Luminant Combined Response to Proposed Contention and Petition to Suspend Related to Alleged Need for Issuance of Waste Confidence Safety Findings* (Oct. 31, 2014).

11. *Nextera Energy Seabrook, L.L.C.* (Seabrook Station, Unit 1): *Nextera's Answer Opposing Petition to Suspend Licensing Proceedings* (Oct. 31, 2014).

12. *Nuclear Innovation North America, L.L.C.* (South Teas Project, Units 3 and 4): *Nuclear Innovation North America LLC Combined Response to Proposed Contention and*

Petition to Suspend Related to Alleged Need for Issuance of Waste Confidence Safety Findings (Oct. 31, 2014).

13. *Pacific Gas and Electric Co.* (Diablo Canyon Power Plant, Units 1 and 2): *Applicant's Opposition to Petition to Suspend Final Decisions and Proposed New Continued Storage Contention* (Oct. 31, 2014).

14. *Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2): *Answer of Progress Energy Florida, Inc. Opposing Petition to Suspend Licensing Proceedings and Related Contention* (Oct. 31, 2014).

15. *STP Nuclear Operating Co.* (South Texas Project, Units 1 and 2): *STP Nuclear Operating Company Combined Response to Proposed Contention and Petition to Suspend Related to Alleged Need for Issuance of Waste Confidence Safety Findings* (Oct. 31, 2014).

16. *Tennessee Valley Authority* (Bellefonte Nuclear Power Plant, Units 3 and 4 and Sequoyah Nuclear Power Plant, Units 1 and 2): *Tennessee Valley Authority's Answer to Motion to Reopen the Record for Sequoyah Nuclear Power Plant and Motion to Reopen the Record for Bellefonte Nuclear Power Plant* (Oct. 31, 2014).

17. *Tennessee Valley Authority* (Watts Bar Nuclear Plant, Unit 2): *Tennessee Valley Authority's Answer Opposing Southern Alliance for Clean Energy's Motion to Reopen the Record* (Oct. 31. 2014).

18. *Tennessee Valley Authority* (Bellefonte Nuclear Power Plant, Units 3 and 4; Sequoyah Nuclear Power Plant, Units 1 and 2; and Watts Bar Nuclear Plant, Unit 2): *Tennessee Valley Authority's Answer Opposing Petition to Suspend Final Decisions in All Pending Reactor Licensing Proceedings Pending Issuance of Waste Confidence Safety Findings and Motions for Leave to File New Contention* (Oct. 31, 2014).
19. *Union Electric Co.* (Callaway Plant, Unit 1): *Ameren's Answer Opposing Petition to Suspend Licensing Proceedings, Related Contention and Motion to Reopen* (Oct. 31, 2014).

20. *Virginia Electric and Power Co. d/b/a Dominion Virginia Power and Old Dominion Electric Cooperative* (North Anna Power Station, Unit 3): *Dominion's Answer Opposing Petition to Suspend Licensing Proceedings, Related Contention and Motion to Reopen* (Oct. 31, 2014).

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	
TENNESSEE VALLEY AUTHORITY	)	Docket Nos. 50-327-LR and 50-328-LR
	)	
Sequoyah Nuclear Plant, Units 1 and 2 (License Renewal)	)	

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing **COMMISSION MEMORANDUM AND ORDER (CLI-15-4)** have been served upon the following persons by Electronic Information Exchange.

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[Original signed by Clara Sola]
Office of the Secretary of the Commission

Dated at Rockville, Maryland
this 26th of February, 2015