

ORAL ARGUMENT NOT YET SCHEDULED

Case No. 21-1162

In the United States Court of Appeals For the District of Columbia Circuit

OHIO NUCLEAR-FREE NETWORK;
BEYOND NUCLEAR,

Petitioners

v.

U.S. NUCLEAR REGULATORY COMMISSION;
UNITED STATES OF AMERICA,

Respondents

AMERICAN CENTRIFUGE OPERATING, LLC,

Intervenor for Respondent

On Petition for Review of Action by the United States
Nuclear Regulatory Commission

FINAL BRIEF OF INTERVENOR AMERICAN CENTRIFUGE OPERATING, LLC

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CERTIFICATE AS TO PARTIES, RULINGS & RELATED CASES

In accordance with Circuit Rule 28(a)(1), Intervenor certifies:

(A) Parties and amici

1. Petitioners are Ohio Nuclear-Free Network and Beyond Nuclear.
2. Respondents are the U.S. Nuclear Regulatory Commission and the United States of America.
3. Intervenor is American Centrifuge Operating, LLC, a wholly owned subsidiary of Centrus Energy Corp., a publicly held company. No company owns 10% or more of the stock of Centrus Energy, Corp. Centrus Energy, Corp. supplies nuclear fuel and services to the nuclear power industry. Centrus Energy, Corp., through its subsidiary American Centrifuge Operating, LLC, subleases a portion of the Portsmouth Gaseous Diffusion Plant from the U.S. Department of Energy for its American Centrifuge Plant to enrich uranium for use in nuclear power reactors.

(B) Ruling under review

1. U.S. Nuclear Regulatory Commission's Environmental Assessment for the Proposed Amendment of U.S. Nuclear Regulatory Commission License Number SNM-2011 for the American Centrifuge in Piketon, Ohio. C.I. 81, Environmental Assessment and Finding of No

Significant Impact for the American Centrifuge Plant HALEU Demonstration Program License Amendment ("Environmental Assessment"), JA198.

2. U.S. Nuclear Regulatory Commission's Environmental Assessment and Finding of No Significant Impact for the American Centrifuge Plant HALEU Demonstration Program License Amendment, published at 86 Fed. Reg. 31,539 (June 14, 2021).

3. U.S. Nuclear Regulatory Commission's Approval of Centrus Energy Corp.'s License Amendment Request to Operate Sixteen Centrifuges to Demonstrate Production of High-Assay Low-Enriched Uranium in Piketon, Ohio Until May 31, 2022. C.I. 82, JA231, 235, 326.

(C) Related cases

American Centrifuge Operating, LLC is unaware of any related cases.

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GLOSSARY OF ABBREVIATIONS

ACO	American Centrifuge Operating, LLC
C.I.	Certified Index of the Record
DOE	Department of Energy
JA	Joint Appendix
NEPA	National Environmental Policy Act
NRC	Nuclear Regulatory Commission

INTRODUCTION

As the Federal Respondents explain, Petitioners' claims must be dismissed for lack of jurisdiction and failure to exhaust, because Petitioners did not avail themselves of mandatory agency procedures. Resp. Br. at 22-36. But, even putting aside that glaring threshold deficiency—which prejudiced American Centrifuge Operating, LLC ("ACO")—Petitioners have not demonstrated an agency action that was arbitrary, capricious, or an abuse of discretion under the applicable standards.

Petitioners challenge the environmental assessment that the Nuclear Regulatory Commission ("NRC") conducted before amending a nuclear materials license held by ACO. The license at issue is for a very large uranium enrichment facility known as the American Centrifuge Plant, located on a Department of Energy ("DOE") reservation in Piketon, Ohio. As planned and licensed by the NRC, the American Centrifuge Plant would have had around 11,500 centrifuges and enrich

uranium up to 10% Uranium-235.¹ The American Centrifuge Plant, although fully licensed, has not been constructed.

In June 2021, the NRC granted a request by ACO to amend that existing license. The amendment allows ACO to operate a dramatically smaller sixteen-centrifuge cascade in an existing building at the same Piketon, Ohio facility owned by the DOE to enrich uranium and produce high-assay-low-enriched-uranium, which is uranium enriched to over 5.0% but less than 20.0%.

Petitioners' challenge is based on the National Environmental Policy Act ("NEPA"), which they contend required the NRC to prepare either an environmental impact statement or a "Programmatic Environmental Impact Statement" before issuing the license amendment. But, under settled law, and even on the one-sided "record" in this case resulting from Petitioners' gaming of the applicable agency procedures, that is plainly not the case. The original license, which was

¹ Uranium has two naturally occurring isotopes: Uranium-238 and Uranium-235. Only Uranium-235 is fissionable, that is, will split when struck by a neutron. Because uranium ore contains just 0.7% Uranium-235, it must be "enriched" to increase the percentage of Uranium-235 for use in a nuclear reactor. As described further below, a "centrifuge" is a piece of equipment that performs enrichment.

issued after completing a full environmental impact statement and an NRC adjudicatory hearing, contemplated far more extensive operations and potential impacts at the site than those covered by the current amendment, and the NRC in its environmental assessment thoroughly assessed and properly documented all relevant potential impacts from the new proposed activities.

Petitioners also claim that the environmental assessment that the NRC prepared is deficient because it does not separately address terrorism or nuclear proliferation, the alleged environmental impacts from nationwide domestic and international uranium mining operations, or the alleged cumulative impacts from a future potentially larger commercial production campaign. Petitioners also claim (incorrectly) that high-assay-low-enriched-uranium is “actually” highly enriched uranium, and directly useable in thermonuclear weapons (it is not). None of those assertions have merit. Again, even on the truncated Petitioner-created “record” available for review here, Petitioners have failed to establish reversible error under the applicable legal standards. Accordingly, for all of these additional reasons beyond the jurisdictional flaws, the petition should be dismissed.

STATEMENT OF JURISDICTION

ACO agrees with the Federal Respondents that this Court should dismiss the petition on grounds of lack of jurisdiction and failure to exhaust mandatory agency requirements for the reasons explained at pages 22-36 of their brief. ACO will not repeat those arguments, but ACO believes it important to underscore that ACO was significantly prejudiced by the Petitioners' failures to follow the NRC's mandatory adjudicatory procedures and pleading requirements.

Petitioners intentionally avoided the NRC's long-settled, well-established pleading and contention requirements, which are designed to effectively address NEPA-based challenges like those Petitioners now try to assert for the first time in this Court. Indeed, Petitioners essentially admit as much in their brief, stating that they submitted a letter rather than comply with the NRC's pleading requirements because Petitioners believe those requirements pose "unique barriers" to "NEPA-related litigation before the agency" and excuse "the agency from having to reconsider the adequacy of the NEPA document." Pet. Br. at 14.

Private parties, however, do not get to decide that they may ignore mandatory agency procedures because they do not like them. This Court has long upheld the NRC's procedural rules as allowed by the Atomic Energy Act and "consistent with NEPA." *Blue Ridge Envtl. Def. League v. Nuclear Regul. Comm'n*, 716 F.3d 183, 196 (D.C. Cir. 2013) (quoting *Union of Concerned Scientists v. U.S. Nuclear Regul. Comm'n*, 920 F.2d 50, 57 (D.C. Cir. 1990)).

Among other requirements, the NRC's pleading rules require specific statements of fact and supporting expert opinion explaining the basis for proposed contentions. See 10 C.F.R. § 2.309(a), (f)(1)(i)-(vi). To the extent that a party believes that newly disclosed information justifies a challenge after administrative timelines have passed and while the review and approval process is still proceeding, the NRC rules expressly allow a party to do so (upon a showing of good cause). 10 C.F.R. §§ 2.309(c), 2.326. There is an adjudicatory process whereby parties' contentions can be referred for consideration to the NRC's Atomic Safety and Licensing Board, which is independent from the Commission and NRC Staff and composed of administrative judges who are lawyers, engineers, and scientists. See NRC, Atomic Safety and

Licensing Board Panel (Feb. 25, 2021), <https://www.nrc.gov/about-nrc/organization/aslbpfuncdesc.html>.

These requirements serve two important goals: (1) they focus the NRC's adjudicatory process on "real disputes" instead of "generalized grievances," and (2) they put other parties "on notice" of "specific grievances," thus giving them a good idea of the claims they will be opposing. E.g., *Duke Energy Corp. (Oconee Nuclear Station, Units 1, 2, and 3)*, CLI-99-11, 49 N.R.C. 328, 334 (1999). The purpose of the adjudicatory process is to create an "informed adjudicatory record." Policy on Conduct of Adjudicatory Proceedings, 63 Fed. Reg. 41,872, 41,873 (Aug. 5, 1998). NEPA-based challenges such as those pursued by Petitioners here are routinely channeled through the NRC adjudicatory process. E.g., *Blue Ridge*, 716 F.3d at 196.

Petitioners' letter to the NRC intentionally dodged these well-established agency requirements, and the goals of the NRC's adjudicatory process were therefore not met. That prejudiced ACO in multiple ways. First, ACO had no chance to respond to Petitioners' claims before the NRC nor to submit its own evidence or rejoinder to the one-sided, counsel-drafted advocacy letter upon which Petitioners

chiefly rely in this appeal. As described below, many of the assertions of Petitioners are inaccurate or misdirected on their face, but that would have been even more obvious from a properly developed agency record, as contemplated by the law. Or, assuming (counter-factually) that there actually was something legitimate about any of Petitioners' claims, any shortcomings could have been addressed by the agency, and/or potentially by ACO, more expeditiously and without resort to this Court. E.g., *McGee v. United States*, 402 U.S. 479, 483 (1971) (it is improper to permit a litigant to "side-step[] a corrective process which might have cured or rendered moot the very defect later complained of in court.").

Second, the vagueness of Petitioners' claims necessarily means that there continues to be uncertainty about the real nature of their complaints, even at this late date, and even in this appeal. That would all have been sorted out and focused by pleading and hearing requirements at the agency level had Petitioners not improperly "side-stepped" the required processes. For example, Petitioners' letter mentions "uranium extraction," C.I. 55, Letter from Terry Lodge dated Mar. 30, 2021 ("Lodge Ltr.") at 1, JA183, and in their brief Petitioners

speculate, without citing any evidence whatsoever, that the license amendment will directly result in an increase of “multiples of the volume of uranium ore” being mined today. Pet. Br. at 39. For the reasons described below, that is simply incorrect, and such speculation is insufficient to establish a NEPA or Administrative Procedure Act violation under the applicable standards, no matter what. But what, exactly, are Petitioners really complaining about anyway?

Environmental justice? Alleged groundwater impacts at remote uranium mines across the nation and abroad? Noise from mining? Other repercussions from a hypothesized revival of an allegedly “moribund domestic uranium mining industry”? Pet. Br. at 37.

“Controvers[y]” about a “new generation” of nuclear reactors? Id. All of that, or something else entirely? As the Federal Respondents note (Resp. Br. at 43-45), Petitioners’ “proliferation” allegations are similarly nebulous and unclear.

Because the Petitioners intentionally violated the mandatory agency adjudicatory procedures, they were never forced to particularize their complaints. They have, instead, attempted to reserve for themselves the ability to change their arguments as needed on appeal,

and to evade the proper scrutiny that compliance with the applicable legal requirements at the agency level would have ensured. That was improper, it prejudiced ACO, and it should not be countenanced by this Court.

For these reasons, as well as all of those explained by the Federal Respondents, the petition should be dismissed on jurisdictional or exhaustion grounds.

STATEMENT OF THE ISSUES

1. Whether a Petitioner may seek appellate review of an NRC licensing decision even though it did not participate as a party in the mandatory NRC adjudicatory process required for any challenges to such licensing decisions.

2. Whether it was arbitrary, capricious, or an abuse of discretion for the NRC to determine that a license amendment to allow a high-assay-low-enriched-uranium demonstration program, which would be housed in existing buildings at a DOE reservation where uranium enrichment had been performed for decades, and which would use equipment and employ processes similar to those which would be

used under an existing NRC license, would not significantly affect the quality of the human environment.

STATUTES & REGULATIONS

All applicable statutes and regulations are provided in the addendum to the Brief for Respondents.

STATEMENT OF THE CASE

I. Statutory and regulatory background

This proceeding implicates two statutes. First, the Atomic Energy Act, 42 U.S.C. § 2011 et seq., authorizes the NRC to license enrichment facilities owned by the United States Enrichment Corporation. See *id.* § 2061; see also *Nuclear Info. and Res. Serv. v. Nuclear Regul. Comm’n*, 509 F.3d 562, 565 (D.C. Cir. 2007) (discussing the privatization of uranium enrichment, the creation of the United States Enrichment Corporation, and NRC licensing of enrichment facilities). The United States Enrichment Corporation is a wholly-owned subsidiary of Centrus Energy Corp. As discussed below, following a corporate restructuring, USEC Inc. was renamed Centrus Energy Corp., and Centrus’ wholly owned subsidiary ACO is the licensee of the Piketon, Ohio enrichment facility.

Second, NEPA requires agencies, including the NRC, to document the environmental impacts and possible alternatives to proposed “major Federal actions significantly affecting the quality of the human environment.” 42 U.S.C. § 4332(C). Although NEPA requires that “the agency take a ‘hard look’ at the environmental consequences before taking a major action,” it does “not require agencies to elevate environmental concerns over other appropriate considerations.” *Balt. Gas & Elec. Co. v. Nat. Res. Def. Council, Inc.*, 462 U.S. 87, 97 (1983). As this Court has explained, “NEPA is an ‘essentially procedural’ statute intended to ensure ‘fully informed and well-considered’ decisionmaking, but not necessarily the best decision.” *New York v. Nuclear Regul. Comm’n*, 681 F.3d 471, 476 (D.C. Cir. 2012) (quoting *Vt. Yankee Nuclear Power Corp. v. Nat. Res. Def. Council, Inc.*, 435 U.S. 519, 558 (1978)).

The NRC implements NEPA and fulfills its NEPA obligations through its regulations in Part 51 of 10 C.F.R. See 10 C.F.R. § 51.10 (explaining the purpose of Part 51); *Massachusetts v. United States*, 522 F.3d 115, 119 (1st Cir. 2008) (“The NRC promulgated [Part 51], primarily to fulfill the agency’s obligations under [NEPA].”). The NRC’s

NEPA regulations take “account of” regulations from the Council on Environmental Quality (10 C.F.R. § 51.10(a)), but the “binding effect of [Council on Environmental Quality’s] regulations” on independent agencies like the NRC “is far from clear.”² TOMAC, Taxpayers of Mich. Against Casinos v. Norton, 433 F.3d 852, 861 (D.C. Cir. 2006).

The NRC’s NEPA regulations require an environmental assessment for “all licensing and regulatory actions” unless they fall into one of two categories: (1) those that the NRC determined require an environmental impact statement, and (2) actions that are categorically excluded from environmental review. 10 C.F.R. § 51.21. The NRC lists the actions that require an environmental impact statement in Section 51.20. This list includes the “issuance of a license for a uranium enrichment facility.” 10 C.F.R. § 51.20(b)(10).³ The NRC

² As Judge Randolph recently discussed, no statute gives the Council on Environmental Quality the authority to issue binding regulations, and its authority to issue regulations that bind other agencies have not been squarely addressed by the Supreme Court. Food & Water Watch v. U.S. Dep’t of Agric., 1 F.4th 1112, 1118-19 (D.C. Cir. 2021) (Randolph, J., concurring).

³ Congress defined the “issuance of a license for the construction and operation of any uranium enrichment facility” as a “major Federal action” and required the NRC to complete an environmental impact statement before issuing such a license. 42 U.S.C. § 2243(e) (emphasis added).

complied with this requirement and performed an environmental impact statement when it issued a license to ACO for the American Centrifuge Plant in 2006. C.I. 12, NUREG-1834, Environmental Impact Statement for the Proposed American Centrifuge Plant in Piketon, Ohio (Apr. 30, 2006) ("NUREG-1834"), JA59-60.

While the NRC's regulations required it to prepare an environmental impact statement before it issued a license to ACO, its regulations do not require an environmental impact statement for an amendment to an existing license. Accordingly, the NRC determined to conduct an environmental assessment in connection with the requested license amendment, as contemplated by the regulations. See 10 C.F.R. §§ 51.21, 51.30, 51.31(a), 51.32. ACO, when it submitted its license amendment request, included an Environmental Report, in the form of proposed revisions to the existing environmental impact statement. C.I. 33, Environmental Report for the American Centrifuge Plant in Piketon, Ohio ("Environmental Report"), JA150-177. The NRC posted

notice of ACO's license amendment request on its website on January 2, 2020.⁴

NRC regulations do not require it to issue a draft environmental assessment or finding of no significant impact for public comment. See 10 C.F.R. § 51.33. In that respect, the NRC's regulations track the Council on Environmental Quality's regulations on public participation. See 40 C.F.R. § 1501.6 (stating that a draft finding of no significant impact only need be released in draft for public comment under specific identified circumstances, none of which are applicable here).

II. Factual background and procedural history

A. The purpose and process of uranium enrichment

Uranium enrichment is a step in converting natural uranium to nuclear fuel. Uranium ore contains around 0.7% Uranium-235, which is less than the 3%-5% needed by the current fleet of nuclear power plants to generate electricity. C.I. 12 (NUREG-1834 at 1-2), JA82. Enrichment is performed to increase the percentage of the fissionable

⁴ The NRC posts notice of all licensing actions concerning NRC-regulated materials on a rolling, monthly basis on its website. Notice of the American Centrifuge Plant license amendment appears on page 49 of the notice posted on January 2, 2020, available at <https://www.nrc.gov/docs/ML2000/ML20007H726.pdf>.

Uranium-235 isotope, and one method of enriching uranium is by using gas centrifuges. A gas centrifuge consists of a large rotating cylinder—called a rotor—and piping to feed and extract gaseous material. The rotor spins at a high rate of speed inside a protective casing, which maintains a vacuum around the rotor and provides physical containment. *Id.* at 2-2, JA91. Uranium hexafluoride gas is fed into the centrifuge. The centrifugal force created by the spinning rotor causes the heavier Uranium-238 atoms to concentrate near the rotor wall and the lighter Uranium-235 to concentrate closer to the rotor's axis. *Id.* The slightly lighter gas containing more Uranium-235 rises and is extracted through piping at the top of the centrifuge. The heavier gas containing more Uranium-238 (known as depleted uranium) is extracted through piping at the bottom. *Id.*

The enrichment level achieved by a single centrifuge is not enough to obtain the desired concentration of Uranium-235. Thus, the stream containing slightly more Uranium-235 is fed into more centrifuges connected in a series (known as a cascade) where it is concentrated even more until it reaches the desired percentage. C.I. 12 (NUREG-1834 at 2-4), JA93.

B. Classifying uranium based on its enrichment level

The Atomic Energy Act categorizes enriched uranium based on its level of enrichment. “Low-enriched uranium” is uranium enriched to less than 20% of Uranium-235. 42 U.S.C. § 2297h(5). “Highly enriched uranium” is uranium enriched to 20% or more of Uranium-235. *Id.* § 2297h(4).

The Energy Act of 2020 defined another category of enriched uranium called “high-assay, low-enriched uranium,” frequently referred to as “HALEU.” High-assay-low-enriched-uranium is uranium enriched to more than 5%, but less than 20% of Uranium-235. 42 U.S.C. § 16281(d)(4). High-assay-low-enriched-uranium has a higher enrichment level than fuel used in the existing nuclear generation fleet (which is around 4% to 5%), but will be used in the advanced reactors currently under development by several companies. Because its enrichment level is less than 20%, high-assay-low-enriched-uranium is still a type of “low-enriched uranium.” Importantly for present purposes and given the arguments of Petitioners here, high-assay-low-enriched-uranium is not highly enriched uranium, nor is it weapons-grade material.

High-assay-low-enriched-uranium is needed for several “advanced reactor designs currently under development,” but that have not yet been commercialized. C.I. 81 (Environmental Assessment at 5), JA206. As the NRC explains, high-assay-low-enriched-uranium fuel has several advantages: (1) it is more concentrated and allows smaller reactor designs, (2) reactors using high-assay-low-enriched-uranium need to be refueled less often, and (3) the higher enrichment of high-assay-low-enriched-uranium means less fuel is needed and less waste will be produced. C.I. 81 (Environmental Assessment at 3), JA204.

C. Creation of the United States Enrichment Corporation

Before 1998, “the Federal Government produced all of the enriched uranium used to fuel America’s nuclear reactors.” Nuclear Info. & Res. Serv., 509 F.3d at 565. Congress created the United States Enrichment Corporation as a wholly owned government corporation to assume the enrichment activities of the DOE. See Energy Policy Act of 1992, Pub. L. No. 102-486 § 1301 (1992). Congress also amended the Atomic Energy Act to allow the NRC to license the construction and operation of uranium enrichment plants that would be privately owned and operated. Id. § 5 (codified at 42 U.S.C. § 2243). Pursuant to the

USEC Privatization Act, the Federal government sold the government enrichment enterprise to the private sector in 1998. See 42 U.S.C. § 2297h-1.

In 2014, the parent of the United States Enrichment Corporation, USEC Inc., emerged from a corporate restructuring as Centrus Energy Corp., which is the corporate parent of ACO. The licenses for the Lead Cascade Facility and the American Centrifuge Plant (discussed below) were transferred to ACO, which remains a wholly owned subsidiary of Centrus Energy Corp. C.I. 29, License Application for the American Centrifuge Plant ("Application") at 1-59 to 1-60, JA137-138.

D. The Lead Cascade Facility

In 2003, USEC Inc. applied for a license to construct and operate the Lead Cascade Facility at the DOE's Piketon, Ohio reservation. C.I. 8, Final Environmental Assessment of the USEC Inc. American Centrifuge Lead Cascade Facility at Piketon Ohio ("Lead Cascade Environmental Assessment") at 1-1, JA8. This was the location of the DOE's Portsmouth Gaseous Diffusion Plant, which began operations in 1954 and produced highly enriched uranium for the military. C.I. 8 (Lead Cascade Environmental Assessment at 1-2), JA9. In the 1970s,

the DOE selected its Piketon reservation as the location for its new gas centrifuge enrichment facility. Construction on this facility began in 1979 but stopped in the 1980s as demand for enrichment dropped. C.I. 8 (Lead Cascade Environmental Assessment at 1-2), JA9; C.I. 84, Safety Evaluation Report at 3, JA247. In 1991, the gaseous diffusion plant ended its production of highly enriched uranium for the military and focused on producing low-enriched uranium for civilian power reactors. The gaseous diffusion plant ended operations in 2001. C.I. 8 (Lead Cascade Environmental Assessment at 1-3), JA10.

The NRC conducted an environmental assessment before issuing a license for the Lead Cascade Facility. See generally C.I. 8 (Lead Cascade Environmental Assessment), JA2-7. As part of the environmental assessment, the NRC reviewed several prior environmental reviews prepared by the DOE for the Portsmouth Gaseous Diffusion Plant. C.I. 8 (Lead Cascade Environmental Assessment at 1-6), JA13. The NRC found that all activities would take place inside the DOE's existing "fully developed industrial area" which had been "extensively characterized for environmental impacts" from

past uranium enrichment activities. C.I. 8 (Lead Cascade Environmental Assessment at 3-1, 3-17), JA19, 20.

Based on these findings and the reviews of prior DOE NEPA documents, the NRC staff concluded that licensing the Lead Cascade Facility would result in no significant impacts to the environment and an environmental impact statement was not required. C.I. 8 (Lead Cascade Environmental Assessment at i), JA2. The NRC issued a Finding of No Significant Impact for the Lead Cascade Facility in January 2004. See Notice of Availability of Environmental Assessment and Finding of No Significant Impact for License Application for Usec Inc., Bethesda, MD, 69 Fed. Reg. 3,956 (Jan. 27, 2004).

The NRC issued License No. SNM-7003 for the Lead Cascade Facility in 2004. C.I. 9 (Redacted License), JA31-35; C.I. 81 (Environmental Assessment at 2), JA203. The Lead Cascade Facility was a demonstration project that used 240 full-scale gas centrifuges in a closed-loop cascade housed in the same facility as the DOE's mothballed gas centrifuge enrichment facility. C.I. 8 (Lead Cascade Environmental Assessment at 1-3 to 1-4), JA10-11; C.I. 81 (Environmental Assessment at 2), JA203.

In March 2016, ACO notified the NRC of its decision to stop operations at the Lead Cascade Facility. C.I. 33 (Environmental Report at 3-106), JA182. In January 2018, Centrus submitted a revised decommissioning plan and the Lead Cascade Facility was decommissioned. C.I. 81 (Environmental Assessment at 2), JA203. The license, however, has not been terminated and remains in effect. C.I. 81 (Environmental Assessment at 2), JA203.

E. The American Centrifuge Plant

In August 2004, USEC Inc. applied for an NRC license to construct and operate the American Centrifuge Plant at the DOE's Piketon reservation. See C.I. 11, Environmental Report for the American Centrifuge Plant in Piketon, Ohio, JA36. The plant would use gas centrifuges to enrich uranium using refurbished buildings, some newly constructed buildings, and adjacent grounds owned by the DOE and leased by the United States Enrichment Corporation and subleased to USEC Inc. C.I. 12 (NUREG-1834 at 1-2), JA82. The plan was for the American Centrifuge Plant to enrich uranium for domestic power reactors with final enrichment levels up to 5.5%. *Id.* As designed and licensed, the facility's capacity was 3.5 million separative

work units per year, but there was the potential to expand that to seven million separative work units.⁵

The NRC, consistent with its regulation in 10 C.F.R. § 51.20(b)(10), prepared an environmental impact statement before licensing the American Centrifuge Plant. Because the plant had the potential for a future expansion to seven million separative work units, the environmental impact statement examined the potential environmental impacts for a facility of that size. C.I. 12 (NUREG-1834 at 1-1 to 1-3), JA81-83. But the NRC determined that a full analysis of nuclear fuel cycle activities (i.e., mining and milling) was not needed.⁶ C.I. 12 (NUREG-1834 at 1-9), JA89. As to these activities, the NRC concluded that the proposed plant “would not measurably affect the mining and milling operations,” because demand for mining and milling is “dependent upon the stability of market prices for uranium.” *Id.*

⁵ A “separative work unit” is a standard unit of measurement for the amount of effort required to enrich uranium. C.I. 81 (Environmental Assessment at 3) JA204. It takes around 100,000 separative work units to produce enough fuel for a 1,000 megawatt nuclear plant. C.I. 12 (NUREG-1834 at 2-5), JA94.

⁶ Milling involves crushing the uranium ore and, through a series of chemical reactions, producing uranium oxide. Uranium oxide is then converted to uranium hexafluoride at another facility before enrichment.

Following the public scoping process, the NRC determined that four issues, raised by commenters, were outside the scope of the environmental impact statement: (1) nonproliferation, (2) safety and security, (3) credibility, and (4) terrorism. *Id.* The NRC did note, however, that it analyzed several safety and security hazards related to those four issues in its Safety Evaluation Report for the facility. *Id.* In particular, the Safety Evaluation Report considered potential hazards associated with fire, explosions, loss of containment/confinement, direct radiological and chemical exposure, nuclear criticality, external hazards, and natural phenomena like earthquakes and tornados. See C.I. 14, NUREG-1851, Safety Evaluation Report for the American Centrifuge Plant in Piketon, Ohio (Sept. 2006) (“NUREG-1851”), JA100-123. The NRC concluded that:

- The plant had established safety controls to prevent and respond to chemical spills and ensure safe operations. C.I. 14 (NUREG-1851 at 6-16), JA124.
- The plant had appropriate active fire protection systems and fire response organization. C.I. 14 (NUREG-1851 at 7-6, 7-11), JA125-126.

- The plant was properly configured to limit releases of radioactive materials if an accident occurred and a system was established to coordinate with state and local governments to protect members of the public. C.I. 14 (NUREG-1851 at 8-16), JA127.
- The plant's environmental protection measures, including effluent monitoring and controls, would maintain public doses as low as reasonably achievable. C.I. 14 (NUREG-1851 at 9-12), JA128.
- The plant's Physical Security Plan met all requirements and satisfied the NRC's performance objectives and systems capabilities for physical protection. C.I. 14 (NUREG-1851 at App. I-1), JA129.

As for environmental impacts analyzed in the environmental impact statement, the NRC found that impacts from the proposed plant were generally small. C.I. 12 (NUREG-1834 at 8-1 to 8-3), JA95-97. This finding was due, in large part, to the fact that the plant would be located on the DOE's reservation where enrichment activities had been conducted since the 1950s. The project would reuse several buildings

and new buildings would be similar to those already on the site. C.I. 12 (NUREG-1834 at 8-1), JA95. As to offsite radiation, the NRC concluded, based on maximum radiation emission rates and comprehensive site monitoring, that airborne radiation emissions would be small during construction and operations. C.I. 12 (NUREG-1834 at 8-1), JA95. The NRC also found that there would be no significant impacts to other environmental and cultural resources. C.I. 12 (NUREG-1834 at 8-1 to 8-3), JA95-97.

The NRC staff recommended issuing the license to USEC Inc. based on both its environmental review and safety review. The NRC issued a thirty-year license to USEC Inc. in April 2007 to construct, operate, and decommission the American Centrifuge Plant. C.I. 81 (Environmental Assessment at 2), JA203. The license authorized the operation of up to 11,500 centrifuges. C.I. 81 (Environmental Assessment at 2), JA203. Although the plant would produce uranium with enrichment up to 5.5%, the license actually allowed enrichment of up to 10% "to allow for anticipated process fluctuations." *Id.* The plant has not been constructed or put into operation. C.I. 33 (Environmental Report at 1-12), JA179; C.I. 81 (Environmental Assessment at 3),

JA204. In 2011, the NRC approved the transfer of the license to ACO. See NRC, Order Approving Direct Transfer of Licenses and Conforming Amendment, EA-11-013 (Feb. 10, 2011).

F. High-Assay-Low-Enriched-Uranium demonstration license amendment request for the American Centrifuge Plant

In May 2019, ACO and the DOE entered into a three-year contract to deploy a sixteen-centrifuge cascade to demonstrate the production of high-assay-low-enriched-uranium for advanced reactors. C.I. 33 (Environmental Report at 1-10), JA178; C.I. 29 (Application at 1-2), JA132. The “design capacity of the 16-centrifuge Demonstration Program facility will be 900 kilograms” of high-assay-low-enriched-uranium per year. C.I. 84 (Safety Evaluation Report at 2), JA246. Under the contract, ACO would produce and provide to DOE up to 600 kilograms of high-assay-low-enriched-uranium for use in “research and development” of advanced reactors. C.I. 81 (Environmental Assessment at 4), JA205. In April 2020, ACO submitted a license amendment request that would amend its license for the American Centrifuge Plant to allow it to produce high-assay-low-enriched-uranium with an enrichment of 19.75% for the DOE program, with the sixteen-centrifuge

cascade. C.I. 33 (Environmental Report at 1-10), JA178. Although the finished product will have an enrichment of 19.75%, the license amendment sought a limit of 25% to account for small variations in the enrichment process. C.I. 32, License Amendment Request, Encl. 1 at 1, JA144; C.I. 81 (Environmental Assessment at 5), JA206. This means that while a very small amount of uranium may be enriched beyond the 19.75% target, it would be blended with other material so that the final enriched product is no more than 19.75%.

The high-assay-low-enriched-uranium demonstration cascade will use a similar centrifuge design to that used for the Lead Cascade Facility and will use existing facilities and infrastructure at the DOE's Piketon reservation. C.I. 32 (Encl. 1 at 2-3), JA145-146; C.I. 33 (Environmental Report at 3), JA173. At the end of the ACO demonstration, ACO will either return the facilities to the DOE or the parties will amend their lease agreement. C.I. 84 (Safety Evaluation Report at 8), JA252.

In its license amendment request, ACO stated that it was reasonably foreseeable that it would seek to operate the sixteen-centrifuge cascade for another ten years after the originally scheduled

demonstration program. C.I. 29 (Application at 1-32), JA135. If it determined to expand operations and add additional cascades after that period, ACO would seek a license amendment for such activities from the NRC. C.I. 29 (Application at 1-32 to 1-33), JA135-136. ACO stated that this second phase “would only occur” if ACO and the DOE agreed to extend the lease agreement to support ongoing activities. C.I. 29 (Application at 1-32), JA135. While ACO’s long-term goal is to resume commercial enrichment production “consistent with market demand,” ACO is not, at present, taking steps to implement near-term deployment of a commercial-scale enrichment facility. C.I. 29 (Application at 1-4, 1-60), JA133, 138; C.I. 33 (Environmental Report at 1-10), JA178.

The NRC conducted an environmental assessment for the license amendment request. In the environmental assessment, the NRC considered the environmental impacts from ten years of operations because it was reasonably foreseeable that ACO may seek another license amendment for that period. C.I. 81 (Environmental Assessment at 4), JA205. But the NRC also found that ACO’s statements about expanding the program beyond the sixteen-centrifuge cascade to meet

market demand were, at present, “too speculative at this time to be included in this review.” *Id.* (emphasis added). Thus, if ACO seeks to expand the number of cascades, it would need to seek another license amendment, and the NRC would conduct an additional environmental review. *Id.*

For the environmental assessment, the NRC considered its Environmental Impact Statement prepared for the American Centrifuge Plant, the Environmental Assessment prepared for the Lead Cascade Facility, and the Safety Evaluation Reports for both. C.I. 81 (Environmental Assessment at 8-9), JA209-210. The NRC noted that it “considered the impacts of the installation, construction, and operation of both [facilities]” during their licensing. C.I. 81 (Environmental Assessment at 9), JA210. Accordingly, the NRC staff evaluated whether the proposed license amendment for the demonstration program would result in any new environmental impacts. *Id.* After reviewing the project, the NRC concluded that “the HALEU cascade to enrich uranium-235 to a higher enrichment level, would not significantly affect the quality of the human environment.” C.I. 81 (Environmental Assessment at 24), JA225. The NRC noted that the

proposed project would result in no new construction, and the proposed cascade would be “operated in existing buildings that previously housed a similar system under the [Lead Cascade Facility] license.” C.I. 81 (Environmental Assessment at 24), JA225.

The NRC issued the license amendment on June 11, 2021, along with a Finding of No Significant Impact. C.I. 89, JA326-337. As of the filing of this brief, no high-assay-low-enriched-uranium has yet been produced at the site. While the centrifuges have been assembled, the project was delayed by COVID-19–related supply-chain issues. The three-year agreement between ACO and the DOE was originally set to expire on June 1, 2022, but was recently extended by the DOE until the end of November 2022. The DOE also recently issued a pre-solicitation notice related to completion and operation of the demonstration project.⁷ The challenged license amendment, therefore, remains a critically important part of ACO’s contemplated business plans. Indeed, the license amendment is significant for ACO and (ACO believes)

⁷ See DOE Pre-Solicitation Notice ID 89243222RNE000026, High Assay Low Enriched Uranium (HALEU) Cascade Demo Completion and Extended Production (Feb. 7, 2022), available at <https://sam.gov/opp/c9400feb96f04a988d142731f60ededc/view>.

ultimately of vital importance for the industry and the efforts to provide carbon-free power generation.

SUMMARY OF ARGUMENT

In this appeal, Petitioners contend that, in approving the license amendment request, the NRC acted arbitrarily and capriciously, or abused its discretion, in three ways: (1) by allegedly failing to adequately address issues of terrorism and nuclear proliferation, Pet. Br. at 32-35; (2) by allegedly failing to adequately consider the domestic and foreign uranium mining industries, Pet. Br. at 36-39; and (3) by allegedly failing to prepare a heightened environmental impact statement or programmatic environmental impact statement on the basis of the federal government's involvement in the demonstration project, Pet. Br. at 39-48.

As an initial matter, all of Petitioners' arguments suffer from a fundamental failure to recognize, and appreciate, the substantial prior environmental and safety reviews by the NRC upon which the challenged environmental assessment built. While it is true that the product to be generated pursuant to the license amendment was a different type of low-enriched uranium, the scope of the proposed action

was otherwise dramatically less in all material respects than the nuclear activities that the facility was already licensed for. The NRC carefully assessed, and documented, any potential changes resulting from the different type of product in its environmental assessment. Nothing about the NRC's review approaches reversible error under the applicable standards.

With regard to Petitioners' conclusory and unsupported terrorism and proliferation claims, those fail for a host of reasons. The deficiencies include the fact that Petitioners' claims are based upon factually false assertions to the extent that they claim or suggest that the material allowed by the license amendment could be used for weapons purposes. In addition, Petitioners' attempted reliance upon a Ninth Circuit decision for these purposes is unavailing, particularly in light of Petitioners' failure even to cite a subsequent, contrary case from the Third Circuit (*N.J. Dep't of Env'tl. Prot. v. U.S. Nuclear Regul. Comm'n*, 561 F.3d 132, 142 (3d Cir. 2009)), which is on point, correctly applies controlling Supreme Court precedent and applicable causation principles, and expressly precludes Petitioners' claims. Indeed, Petitioners' real complaint is with how the NRC administers it

obligations on a nationwide basis, and Petitioners have not shown that the NRC's refusal to follow the first regional court to rule upon an issue (i.e., the Ninth Circuit here) is arbitrary and capricious. The NRC does not have the legal authority to address the vague purported proliferation issues invoked by Petitioners, and settled law establishes that NEPA therefore does not require the NRC to assess such matters. Finally, and importantly, the NRC has in fact thoroughly reviewed the safety impacts of things like fires, explosions, and the other sorts of catastrophic events that one might expect to result from intentional terrorist or criminal activity, and Petitioners have not demonstrated that NEPA requires anything more.

With regard to the domestic and foreign uranium mining industries, Petitioners' unsupported speculation is contrary to the facts in the record (truncated as that record is due to Petitioners' violation of the mandatory agency procedures). In connection with the original license, which contemplated much more substantial enrichment operations, the NRC did address whether it needed to review potential impacts upon fuel cycle activities, including mining, and concluded that a further full analysis was not needed. The reasons for that included

that the level of uranium mining and milling activities depend upon a myriad of market and other factors, and not just upon enrichment. The attenuated speculation by Petitioners in this case does not dictate a different result, nor establish arbitrary or capricious action or abuse of discretion on the part of the NRC.

Finally, with regard to the DOE's involvement and the allegation of a "major federal action" requiring a more extensive review, Petitioners simply fail to appreciate the scope of the initial DOE demonstration project at issue in this case and the fact that (a) Centrus and ACO have made no decision to expand the high-assay-low-enriched-uranium demonstration facility; (b) there has been no proposed action by the DOE (or any other agency) to purchase high-assay-low-enriched-uranium from any future commercial facility to be built at the site; and (c) any possible future expansion of the facilities to produce high-assay-low-enriched-uranium would require another license amendment and renewed environmental assessment based upon the actual facts then presented.

STANDARD OF REVIEW

As the Federal Respondents correctly explain at pages 36-38 of their brief, this Court's role in reviewing the NRC's compliance with NEPA is "limited" and performed "under the Administrative Procedure Act and its deferential standard of review." *Sierra Club v. Fed. Energy Regul. Comm'n*, 867 F.3d 1357, 1367 (D.C. Cir. 2017) (citation omitted). Licensing decisions such as the one challenged in this appeal are "generally entitled to the highest judicial deference," *Massachusetts v. U.S. Nuclear Regul. Comm'n*, 924 F.2d 311, 324 (D.C. Cir. 1991), and that is especially true where, as here, the agency decision is based upon its evaluation of complex scientific data within [the agency's] technical expertise. See *Baltimore Gas & Elec. Co.*, 462 U.S. at 103.

ARGUMENT

- I. The NRC's actions are supported by comprehensive prior environmental reviews of much larger projects involving similar, but more extensive, nuclear activities at the same facilities.**

All of Petitioners' arguments suffer from a common deficiency, namely the failure to recognize the extraordinarily thorough prior environmental analyses undertaken by the NRC of these same facilities and essentially the same enrichment operations. Petitioners simply

recite that the alleged impacts will be “different” (Pet. Br. at 15), but they do not address the prior assessments at all, describe their substance, explain their conclusions, challenge their data, or provide any factual or other support for the mere assertion of “difference.”

The NRC found the earlier reviews relevant because they analyzed the environmental impacts from technologically similar facilities and equipment with demonstrably similar environmental impacts. Thus, when developing the environmental assessment for this license amendment, the NRC staff took a hard look at whether the project “would result in any new or significant environmental impacts.” C.I. 81 (Environmental Assessment at 9), JA210. The NRC staff quite reasonably concluded that it would not, and Petitioners have not demonstrated that to be an abuse of discretion pursuant to the applicable standards. E.g., *Sierra Club v. U.S. Dep’t of Transp.*, 753 F.2d 120, 126 (D.C. Cir. 1985); *TOMAC*, 433 F.3d at 861.

To note just a few illustrations of how the prior analyses were effectively bounding here: (1) all three of the projects were located at the DOE’s Piketon reservation where uranium enrichment has been performed since the 1950s. C.I. 81 (Environmental Assessment at 1-3),

JA202-204; C.I. 12 (NUREG-1834 at 1-2), JA82; (2) all three used all or portions of buildings already constructed and that housed the DOE's own gas centrifuge enrichment facility C.I. 81 (Environmental Assessment at 1-3), JA202-204; C.I. 12 (NUREG-1834 at 1-2), JA82; and (3) all three used similar gas centrifuge technology to enrich uranium. C.I. 81 (Environmental Assessment at 1-3), JA202-204; C.I. 12 (NUREG-1834 at 1-2, 2-2 to 2-5), JA82, 91-94.

The high-assay-low-enriched-uranium demonstration project, however, was to be much smaller in scope than the prior two licensed projects. When operational, the demonstration project covered by the currently-challenged license amendment will use just sixteen centrifuges to enrich uranium. C.I. 81 (Environmental Assessment at 3), JA204. This is, of course, far less than the Lead Cascade Facility's 240 centrifuges, or the American Centrifuge Plant's 11,500 centrifuges. C.I. 81 (Environmental Assessment at 2), JA203. Importantly, the NRC did in fact take a hard look at whether the project "would result in any new or significant environmental impacts" and reasonably concluded that it would not. C.I. 81 (Environmental Assessment at 9), JA210. Merely saying that the impacts are materially "different" because of the

higher enrichment level does not make it so. For this elemental reason alone, the petition should be dismissed.

II. Petitioners' conclusory assertions regarding terrorism and nuclear proliferation do not establish that the NRC acted arbitrarily or capriciously, or that it abused its discretion, in granting the license amendment.

At pages 32-36 of their brief, and throughout the earlier factual discussion, Petitioners contend that the NRC erred because it was specifically required to assess a postulated threat of terrorism, or proliferation, under NEPA. For multiple reasons, including those explained by the Federal Respondents at pages 38-46 of their brief, that is not correct.

First, as a factual matter, Petitioners inaccurately contend that material produced by ACO could be used directly for thermonuclear weapons. E.g., Pet. Br. at 9, 14-15, 36. To be crystal clear, that is false. Bomb-grade nuclear material must be enriched to 90% and above, and the statutory definition of "high enriched uranium" is 20% or greater. 42 U.S.C. § 2297h(4). Indeed, Petitioners' own letter quotes a report that said, in part, "HALEU is considered impractical for direct use in a nuclear weapon." C.I. 55 (Lodge Ltr. at 2-3), JA184-185. High-assay-low-enriched-uranium is impractical for weapons purposes because of

the sheer amount it would take to form a supercritical mass. See Ian Sample, Iran's Uranium Enrichment Programme: The Science Explained, The Guardian (July 7, 2019) <https://www.theguardian.com/world/2019/jul/07/iran-uranium-enrichment-programme-the-science-explained>.

The high-assay-low-enriched-uranium demonstration project is to produce enriched product of no more than 19.75%. It is true that the NRC authorized enrichment activities up to 25%, but that is because of how enrichment works, and, specifically, to account for small variations in the physical gaseous centrifuge enrichment process. Ultimately, all enriched uranium is required to, and will, be blended down to low-enrichment levels. C.I. 81 (Environmental Assessment at 5), JA206. As ACO explained in its application, process fluctuations "can create small amounts of higher weight material," which is why ACO sought an enrichment limit of 25%. C.I. 29 (Application at 1-66); JA139 (emphasis added); see also C.I. 29 (Application at 1-18), JA134 (discussing the capability to blend material to meet customer specifications). While the product contemplated and allowed by the license amendment was a

different type of low-enriched uranium, at the end of the day it was still low-enriched uranium.

Second, Petitioners cannot rely for these purposes upon *San Louis Obispo Mothers for Peace v. Nuclear Regulatory Commission*, 449 F.3d 1016 (9th Cir. 2006) (“SLOMFP”). That decision by the Ninth Circuit has never been followed on this point, and, some three years later, the Third Circuit reached the opposite conclusion in *New Jersey Department of Environmental Protection v. United States Nuclear Regulatory Commission*, 561 F.3d 132, 142 (3d Cir. 2009) (“NJDEP”). The Third Circuit expressly disagreed with the Ninth Circuit’s rejection of the Supreme Court’s “reasonably close causal relationship test,” and unequivocally held that NEPA does not require the exact sort of terrorism assessment that Petitioners argue to be required in this case. *Id.* at 142 (internal quotation marks omitted). Those holdings were correct. Inexcusably, Petitioners fail to cite NJDEP. For the reasons explained by the Federal Respondents, *Resp. Br.* at 39-41, NJDEP is consistent with the causation and NEPA principles laid down by the Supreme Court in cases like *Department of Transportation v. Public*

Citizen, 541 U.S. 752, 767 (2004), and Metropolitan Edison Co. v. People Against Nuclear Energy, 460 U.S. 766, 774 (1983). SLOMFP is not.

Third, although Petitioners purport to invoke terrorism and proliferation issues, their real complaint is a disagreement with a policy determination by the NRC about how it manages its obligations on a nationwide basis. The Ninth Circuit made its ruling in SLOMFP in 2006. As a matter of policy, the agency declined to follow that precedent outside the Ninth Circuit, observing that it is “not obliged to adhere, in all of its proceedings, to the first court of appeals decision to address a controversial question.” Amergen Energy Co. (Oyster Creek Nuclear Generating Station), CLI-07-8, 65 N.R.C. 124, 128-29 & n.14 (2007) (citing United States v. Stauffer Chem. Co., 464 U.S. 165, 173 (1984)); United States v. Mendoza, 464 U.S. 154, 160 (1984). It was not until a few years after that that the Third Circuit ruled in NJDEP. Accordingly, the NRC policy determination that Petitioners really purport to challenge (i.e., the determination not to follow SLOMFP outside of the Ninth Circuit) predated NJDEP. Petitioners do not address the NRC’s policy in their brief, much less demonstrate that it violates the Administrative Procedure Act.

Fourth, the NRC does not have the power to address the generalized “proliferation” concerns invoked by Petitioners. The Supreme Court has held that when an agency “has no ability to prevent a certain effect due to its limited statutory authority over the relevant actions,” it need not address the environmental effects of the action under NEPA. *Pub. Citizen*, 541 U.S. at 770; see also *id.* at 767-69 (discussing purpose of NEPA and causal connection). While the NRC has a role in granting import and export licenses, the export of advanced reactors, which is Petitioners’ expressed concern (*Pet. Br.* at 14), would also require that a so-called “123 Agreement” also be in place with the importing country. The negotiation of these agreements is under the purview of the Department of State. See 42 U.S.C. § 2153. Since the NRC has a limited role in the purported proliferation issues about which Petitioners complain, it cannot be required to address them in an environmental review.

Fifth, it is important for these purposes to emphasize that the NRC did not simply ignore safety or severe accident scenarios of the sort that would be triggered by hypothesized terrorist or criminal activity. As explained above, the NRC in its prior analyses and safety

reviews thoroughly assessed potential hazards associated with fire, explosions, loss of containment/confinement, direct radiological and chemical exposure, nuclear criticality, external hazards, and natural phenomena like earthquakes and tornados. See C.I. 14 (NUREG-1851 at 6-16, 7-6, 7-11, 8-16, 9-12, App. I-1), JA124-129. It was incumbent upon Petitioners to demonstrate, at a minimum, that the triggering cause of a postulated fire, explosion, radiological exposure, or the like would somehow matter, and Petitioners have not done so. The NRC comprehensively evaluated a broad range of accidents and impacts, and Petitioners have not established an obligation under NEPA or the Administrative Procedure Act to do anything more.

III. Petitioners' unsupported speculation about the domestic and international uranium mining industries does not establish that the NRC acted arbitrarily or capriciously, or that it abused its discretion, in granting the license amendment.

Petitioners argue that the NRC must evaluate impacts caused by increased uranium mining both in the U.S. and internationally. Pet. Br. at 35-38. Petitioners' argument is that these impacts must be considered because ACO hopes that one day a market for high-assay-low-enriched-uranium develops and, if it does, it will allegedly require

considerably more uranium ore to produce it. This argument fails in light of the “rule of reason” applied by this Court to such contentions, the required deference to NRC decisions on the scope of its environmental review, and for all of the additional reasons explained by the Federal Respondents at pages 47-51 of their brief.

This Court holds that agencies “need follow only a ‘rule of reason’” when conducting an environmental review. *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 195 (D.C. Cir. 1991). Under that “rule of reason,” an agency “must consider only the reasonably foreseeable environmental effects of the action.” *Potomac All. v. U.S. Nuclear Regul. Comm’n*, 682 F.2d 1030, 1035 (D.C. Cir. 1982) (Bazelon, J. concurring). And this Court reviews an agency’s decision “deferentially,” so long as the agency’s decisions are reasonable. *Citizens Against Burlington*, 938 F.2d at 196.

In light of these standards, it is clear that the NRC did not need to consider alleged impacts from increased uranium mining on a global basis as part of its review here—such matters are just too far removed from the license amendment at issue in this case. The NRC’s decision tracked its earlier finding that the American Centrifuge Plant—a much

larger facility—“would not measurably affect the mining and milling operations” because demand for mining and milling is “dependent upon the stability of market prices for uranium.” C.I. 12 (NUREG-1834 at 1-9), JA89. In other words, the mining and enrichment markets are separate, and for many reasons are not always correlated. In addition, while it is true that commercial production is a long-term goal of ACO, it is not currently taking steps to implement near-term deployment of a commercial scale facility. C.I. 29 (Application at 1-60), JA138. In short, both ACO and the NRC recognize that there is considerable uncertainty in the market for high-assay-low-enriched-uranium enrichment services, and so impacts from mining are simply too speculative to be a required part of any NEPA analysis for the challenged license amendment.

None of Petitioners arguments even suggest the NRC’s decision was unreasonable. Pursuant to the applicable standards, and under required deference given to agency decisions of this type, Petitioners’ claim that the NRC needed to consider impacts from mining are unavailing.

IV. The fact that the demonstration project was pursuant to a contract with DOE does not transform the project into a major federal action requiring an environmental impact statement or programmatic environmental impact statement.

Petitioners argue that the NRC should be required to prepare a programmatic environmental impact statement because, in their view, the demonstration project portends the start of a much larger and foreseeable industrial campaign that may extend over many decades, with heavy DOE and NRC involvement. Pet. Br. at 38-46.

As the Supreme Court held, NEPA may require an agency to prepare a programmatic or comprehensive environmental impact statement “where several proposed actions are pending at the same time.” *Kleppe v. Sierra Club*, 427 U.S. 390, 409 (1976). But there are no other actions pending right now. While ACO’s long-term goal is to resume commercial enrichment production, ACO is not currently taking steps to implement near-term deployment of a commercial scale enrichment facility. C.I. 33 (Environmental Report at 1-10), JA178; C.I. 29 (Application at 1-4, 1-60), JA133, 138. This is not a circumstance involving multiple clearly-related federal actions, like the series of federal timber sales and related actions in Blue Mountains Biodiversity

Project v. Blackwood, 161 F.3d 1208 (9th Cir. 1998), nor obvious “cumulative impacts” like the noise levels from an existing and a new airport project in Grand Canyon Trust v. Federal Aviation Administration, 290 F.3d 339 (D.C. Cir. 2002)—there are no multiple pending actions or “cumulative impacts” implicated by the facts here.

There are at least two other readily-apparent flaws in this aspect of Petitioners’ claims. First, the development of a commercial market—by definition—would not be a market in which DOE was the sole or a dominant buyer, and so the purported “federal power” invoked by Petitioners for these purposes (Pet. Br. at 41) does not exist.⁸ Also, as the Federal Respondents explain at pages 53-54, Petitioners inaccurately invoke purported NRC involvement in connection with their claims. Second, the record is clear that, if ACO desires to expand the number of centrifuges it operates to produce, it will need a new license amendment. C.I. 81 (Environmental Assessment at 4), JA205. If and when that occurs, that will be the proper time to assess whether

⁸ DOE’s role in nuclear waste disposal, mentioned in passing by Petitioners at page 41 of their brief, does not suggest a different result, nor magically transform anything and everything that touches in any way upon domestic civilian nuclear power into a “major federal action” for these purposes.

such activities present new issues. Not now. Moreover, as described above, Petitioners' arguments about the need for an environmental impact statement or programmatic environmental impact statement are really just manifestations of its unsupported general grievances about the NRC's determinations, which fail to accurately account for the history and depth of the environmental reviews that the NRC actually performed.

"The decision whether to prepare a programmatic [environmental impact statement] is committed to the agency's discretion." *Nevada v. Dep't of Energy*, 457 F.3d 78, 92 (D.C. Cir. 2006). And the agency's decision will be reversed only if it is arbitrary and capricious. *Id.* Here, there were no proposed similar actions and thus no basis for the NRC to conduct a programmatic environmental impact statement. For all of these reasons, as well as all of those explained by the Federal Respondents at pages 51-55 of their brief, Petitioners' claims regarding segmentation and the need for a programmatic environmental impact statement should be rejected.

CONCLUSION

For all of these reasons, the Court should dismiss or deny the Petition for Review.

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Respectfully submitted,

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CERTIFICATE OF COMPLIANCE

This brief complies with the type-volume limitation of Circuit Rule 32(e)(2)(B) because it contains 8,784 words, excluding the parts of the brief exempted by Federal Rule of Appellate Procedure 32(f) and Circuit Rule 32(e)(1).

This brief also complies with the typeface requirements of Federal Rule of Appellate Procedure 32(a)(5) and the type-style requirements of Federal Rule of Appellate Procedure 32(a)(6) because it has been prepared using Microsoft Word for Office 365 in Century Schoolbook 14-point font, a proportionally spaced typeface.

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/s/ Brad Fagg

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