ORAL ARGUMENT SCHEDULED FOR OCTOBER 15, 2010

DOCKET No. 09-1268

UNITED STATES COURT OF APPEALS

FOR THE DISTRICT OF COLUMBIA CIRCUIT

SHIELDALLOY METALLURGICAL CORPORATION
Petitioner,

v.

UNITED STATES NUCLEAR REGULATORY COMMISSION AND THE UNITED STATES OF AMERICA,

Respondents.

ON PETITION FOR REVIEW OF A FINAL ORDER BY
THE UNITED STATES NUCLEAR REGULATORY COMMISSION

FINAL BRIEF OF PETITIONER SHIELDALLOY METALLURGICAL CORPORATION

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CERTIFICATE AS TO PARTIES, RULINGS, AND RELATED CASES

In accordance with Circuit Rule 28(a)(1), Petitioner Shieldalloy Metallurgical Corporation certifies as follows:

A. **Parties and Amici:** In addition to Petitioner, parties to this action are Respondents U.S. Nuclear Regulatory Commission ("NRC" or "Commission") and the United States of America. The State of New Jersey ("New Jersey") has stated that it will file an *amicus curiae* brief.

B. **Rulings Under Review:** The agency action under review is the agreement between the NRC and New Jersey (the "Agreement"), effective September 30, 2009, by which the NRC transferred to New Jersey the NRC's regulatory authority over the possession and use of certain nuclear materials held under licenses granted by the NRC. See 74 Fed. Reg. 51,882 (Oct. 8, 2009). The Agreement was published in the Federal Register on October 8, 2009. Id.

C. **Related Cases:** Counsel is not aware of any cases in this Court or any other court involving the validity of the Agreement between the NRC and New Jersey. Several actions have been instituted relating to New Jersey's exercise of regulatory authority over Petitioner's facility in Newfield, New Jersey after the Agreement went into effect. Shieldalloy

Metallurgical Corp. v. New Jersey Dept. of Envt'l Prot., No. 1:09-cv-04375-JEI-JS (D.N.J. filed Aug. 25, 2009); In re N.J.A.C. 7:28, No. A-278-09 (Sup. Ct. App. Div. filed Sept. 14, 2009); Shieldalloy Metallurgical Corp. v. New Jersey Dept. of Envt'l Prot., No. A-1481-09 (Sup. Ct. App. Div. filed Nov. 25, 2009). These cases are currently pending.

Respectfully submitted,

/Original signed by Matias F. Travieso-Diaz/

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Dated: April 22, 2010

SHIELDALLOY METALLURGICAL CORPORATION'S CORPORATE DISCLOSURE STATEMENT

Pursuant to Rule 26.1 of the Federal Rules of Appellate Procedure and Circuit Rule 26.1, Shieldalloy Metallurgical Corporation ("Shieldalloy") by and through its undersigned counsel, hereby certifies that:

Shieldalloy is a Delaware Corporation and is a direct, wholly-owned subsidiary of Metallurg, Inc., a Delaware corporation, and an indirect subsidiary of Metallurg Holdings, Inc., a Delaware Corporation. It is also an indirect subsidiary of Metallurg Delaware Holdings Corporation, a privately-owned holding company, and of AMG Advanced Metallurgical Group N.V., a publicly-owned company.

Shieldalloy is an industrial company that manufactured metal alloys from ores containing small amounts of uranium and thorium. Shieldalloy for many years held radioactive materials license No. SMB-743 issued by the NRC (and its predecessor agency, the U.S. Atomic Energy Commission) authorizing it to possess uranium and thorium at its facility in Newfield, New Jersey. Authority over that facility under its license has been transferred to New Jersey by order of the NRC.

Respectfully submitted,

/Original signed by Matias F. Travieso-Diaz/

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Authorities upon which Petitioner chiefly relies are marked with asterisks.

Statutes, Regulations & Other Documents

GLOSSARY OF TERMS AND ABBREVIATIONS

AEA	Atomic Energy Act of 1954, as amended
Agreement	An agreement between the NRC and the State of New Jersey pursuant to Section 274b of the AEA, effective as of September 30, 2009
ALARA	As Low As Reasonably Achievable
Commission	United States Nuclear Regulatory Commission
Department	New Jersey Department of Environmental Protection
DP	Decommissioning Plan
LTC	Long-Term Control
LTR	License Termination Rule
mrem	Millirem
New Jersey Program	See Program

Newfield

Facility	The industrial facility owned by Shieldalloy Metallurgical Corporation located in Newfield, New Jersey
NJDEP	New Jersey Department of Environmental Protection
NRC	United States Nuclear Regulatory Commission
Program	New Jersey's Radiation Protection Program
Shieldalloy	Shieldalloy Metallurgical Corporation
Site	Location of the Newfield Facility
Staff	United States Nuclear Regulatory Commission Staff
TEDE	Total Effective Dose Equivalent

STATEMENT REGARDING JOINT APPENDIX

Pursuant to D.C. Circuit Rule 30(c), the parties are utilizing the deferred-appendix option described in Rule 30(c) of the Federal Rules of Appellate Procedure.

JURISDICTIONAL STATEMENT

Basis for Agency's Jurisdiction – The NRC is authorized by Section 274b of the Atomic Energy Act ("AEA"), 42 U.S.C. § 2021(b) (2006), to enter into agreements that transfer regulatory authority over certain radioactive materials to the States. The NRC is permitted to enter into such an agreement with a State if the NRC "finds that the State program is . . . compatible with the Commission's program for regulation of such materials, and that the State program is adequate to protect the public health and safety with respect to the materials covered by the proposed agreement." 42 U.S.C. § 2021(d)(2) (2006). The AEA defines the categories of materials for which the NRC may transfer regulatory authority as including, inter alia, "source materials," such as those that are involved in the instant Petition. Id. The NRC exercised its powers under Section 274b of the AEA to enter into an agreement with the State of New Jersey (the "Agreement") pursuant to which it transferred regulatory authority over such materials within New Jersey to that State.

Basis for Court's Jurisdiction – The Court has jurisdiction over this matter pursuant to 28 U.S.C. § 2342(4) (2006), 42 U.S.C. § 2239(a) (2006), and 28 U.S.C. § 2344 (2006). The Administrative Orders Review Act, also known as the Hobbs Act, 28 U.S.C. §§ 2341-2351 (2006), gives federal courts of appeals "exclusive

jurisdiction to enjoin, set aside, suspend (in whole or in part), or to determine the validity of . . . all final orders of the Atomic Energy Commission [now the NRC] made reviewable by section 2239 of title 42." 28 U.S.C. § 2342(4). The provision of the AEA cited in the Hobbs Act applies to any proceeding "for the granting, suspending, revoking, or amending of any license . . . [and] for the issuance or modification of rules and regulations dealing with the activities of licensees . . . ." 42 U.S.C. § 2239(a)(1)(A)(2006). The Hobbs Act subjects to judicial review "[a]ny final order entered in any [NRC] proceeding of the kind specified in subsection (a) [of 42 U.S.C. § 2239]." N.J. v. NRC, 526 F.3d 98, 102 (3d Cir. 2008).

Upon the entry of a "final order" by the NRC reviewable under the Hobbs Act, the agency is required to give prompt notice thereof by service or publication in accordance with its rules. Any party aggrieved by the final order may, within 60 days after its entry, file a petition to review the order in the court of appeals wherein venue lies. 28 U.S.C. § 2344. The proper venue for seeking judicial review of a final NRC action relating to NRC licenses is "in the judicial circuit in which the petitioner resides or has its principal office, or in the United States Court of Appeals for the District of Columbia Circuit." 28 U.S.C. § 2343.

The Agreement was a final action by the NRC affecting Commission licenses in New Jersey because regulatory authority over the possession and use of nuclear materials held under licenses granted by the NRC was transferred to New Jersey on the effective date of the Agreement, September 30, 2009. 74 Fed. Reg. 51,882, 51,883 (Oct. 8, 2009). See also Macias v. Kerr-McGee Corp., No. 92-3389C, 1993 WL 408357 (N.D. Ill. Oct. 12,1993); Sunflower Coal. v. NRC, 534 F.Supp. 446, 448 (D. Colo. 1982) ("In effect, the NRC's supervision, acceptance, or termination of a state agreement is a licensing decision, since the NRC thereby 'exercises' its licensing authority in a particular state."). The NRC's transfer of regulatory authority over certain facilities holding NRC licenses in New Jersey to that State is a "final order" affecting those licenses.

Timeliness of Petition for Review – The transfer of NRC authority was effective as of September 30, 2009, and became subject to review upon publication in the Federal Register on October 8, 2009. This Petition for Review was filed on November 3, 2009, within the sixty-day period established by the Hobbs Act.[1]

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[1] 28 U.S.C. § 2344 states, in relevant part: "On the entry of a final order reviewable under this chapter, the agency shall promptly give notice thereof by service or publication in accordance with its rules. Any party aggrieved by the final order may, within 60 days after its entry, file a petition to review the order in the court of appeals wherein venue lies."

Finality of Agency Action – The NRC's transfer to New Jersey of regulatory authority over materials held under NRC licenses for facilities in New Jersey is a final agency action with respect to those licenses.

STATEMENT OF THE ISSUES PRESENTED FOR REVIEW

Before the NRC can enter into an agreement to transfer regulatory authority to a State, the applying State must have developed a program for the control of radiation hazards that is compatible with the Commission's program for the regulation of the materials over which the State seeks to assume authority. 42 U.S.C. § 2021(d)(2) (2006). The State program must also be adequate to protect public health and safety with respect to the categories of materials for which "Agreement State" status is sought. The following issues arise from these requirements, as they apply to the NRC's transfer of regulatory authority to New Jersey:

1. Whether the NRC erred in approving New Jersey's application to become an Agreement State despite the failure of New Jersey's program for the control of radiation hazards ("the New Jersey Program" or "the Program") to implement the provisions of the NRC's regulations that require compliance with the "as low as reasonably achievable" ("ALARA") principle.
2. Whether the NRC erred in approving New Jersey's application to become an Agreement State despite the failure of the New Jersey Program to implement the NRC regulations set forth at 10 C.F.R. §

20.1403 (2009) that authorize the termination of radioactive materials licenses under restricted release criteria.

3. Whether the NRC erred in approving New Jersey's application to become an Agreement State despite the failure of the New Jersey Program to implement several of the requirements of the NRC's License Termination Rule, 10 C.F.R. §§ 20.1401-06 (2009).

4. Whether the NRC erred in approving New Jersey's application to become an Agreement State despite the failure of the New Jersey Program to provide a meaningful opportunity for the granting of exemptions to the Program's requirements in the area of facility decommissioning where such exemptions will not jeopardize health and safety.

5. Whether the NRC erred in approving New Jersey's application to become an Agreement State despite the incorporation in the New Jersey Program of provisions which are uniquely and unfairly directed at the Site.

6. Whether the NRC erred in approving New Jersey's application to become an Agreement State when the NRC had full knowledge that adoption of the New Jersey Program would interfere with the

processing of Shieldalloy's long-pending application to approve the proposed decommissioning plan for the Site.

7. Whether these errors in NRC's approval of New Jersey's application to become an Agreement State, individually and/or collectively, render the NRC's final action of entering into the Agreement arbitrary and capricious and contrary to applicable law.

STATEMENT OF THE CASE

This Petition arises from an NRC decision to transfer regulatory authority over low level radioactive materials held at facilities in New Jersey to that State pursuant to Section 274b of the AEA. That transfer was approved by the NRC even though the program developed by New Jersey for the control of radiation hazards fails to meet the statutory requirement that a State's program for the control of radiation hazards must be "compatible" with the NRC's program for the regulation of the materials over which the State seeks to assume authority. 42 U.S.C. § 2021(d)(2).

In particular, the NRC's transfer to New Jersey of regulatory authority over the Site is arbitrary and capricious because, in several significant respects, the portion of New Jersey's Program that relates to facility decommissioning violates the compatibility criteria set by the NRC, and because the facility decommissioning provisions of New Jersey's Program are directed specifically and uniquely at the Site. Significantly, the transfer also aborts a nearly twenty-year process towards the safe decommissioning of the Site in accordance with NRC regulatory requirements and negates the considerable and costly efforts by Shieldalloy (with constant NRC involvement) to implement such decommissioning.

The unjustified departure from its own standards and from the requirements of the AEA renders the NRC's decision to enter into the Agreement with New Jersey arbitrary and capricious and warrants that the NRC's Agreement with New Jersey be declared invalid in the area of facility decommissioning. The matter should be remanded with instructions that the NRC require New Jersey to modify its Program in the area of facility decommissioning to make it compatible with the NRC regulations. In the alternative, the NRC should be directed to rescind its transfer of regulatory authority over the Site to New Jersey and regain authority over the Site.

STATEMENT OF FACTS

A. HISTORY OF THE SITE

Between 1955 and 1998, Shieldalloy manufactured a variety of metal alloys at its facility in Newfield, New Jersey (the "Newfield Facility"). Shieldalloy Metallurgical Corp. (Licensing Amendment Request for Decommissioning of the Newfield, New Jersey Facility), LBP-07-5, 65 N.R.C. 341, 344 (2007) ("LBP-07-5"). One of the ores (pyrochlore) that Shieldalloy used in its manufacturing processes contained greater than 0.05 percent by weight natural uranium and natural thorium. Id. As a result of its manufacturing operations, Shieldalloy's Newfield facility generated slightly radioactive slag and "baghouse dust" (a concrete-like substance left over from manufacturing operations). Id. At present, there are approximately 18,000 cubic meters (m^3) of slag and 15,000 m^3 of baghouse dust at the Newfield Facility site (the "Site"). Id. These materials were held under a license (Source Materials License No. SMB-743) issued by the NRC. Id. As a result of the transfer of regulatory authority under challenge herein, the materials are now under New Jersey's authority.

Shieldalloy's decommissioning efforts for the Site began as early as 1992. In that year, Shieldalloy advised the NRC Staff (the "Staff") of its intention to file a conceptual decommissioning plan for the Site based on "insitu disposal of

licensed material." SA2.[2] The Staff representatives at the meeting raised no objection to Shieldalloy's proposed approach and provided guidance as to how the on-site ("in situ") decommissioning could be accomplished. SA3.

In April 1993, Shieldalloy submitted to the NRC a Conceptual Decommissioning Plan ("DP") for the Site. SA9. The Conceptual DP was based on the expectation that releasing the Site for unrestricted use (that is, removing all radioactive materials from the Site) could not reasonably be achieved. SA19. The Conceptual DP identified "in-situ stabilization of all radioactive materials at the [Site]" as the proposed decommissioning approach. Id. The NRC registered no objection to Shieldalloy's approach.

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[2] In this Brief, the notation "[J]Axxx" refers to the applicable pages in the Joint Appendix, to be provided after briefing is completed. [The notation "SAxxx" is used to denote materials in the Supplemental Appendix authorized by the Court's April 28, 2010 Order.] "RXX" denotes the number of the document identified as number XX in the Consolidated Index of the Record, as supplemented.

The documents identified in this Brief by providing electronic links to their locations in the NRC Agencywide Documents Access and Management System ("ADAMS") are not in the Certified Index of the Record filed by the NRC. Petitioner believes that the documents so identified should be included in the record in this case, but Respondents disagree. Petitioner further believes that the documents, all of which were prepared by or submitted to the NRC, are relevant to the issues raised by this Petition. The parties have stipulated that Petitioner may cite to these documents as background information and include them in the Joint Appendix.

In 1994, the NRC issued a proposed rule setting forth the radiological criteria for the decommissioning of lands and structures. SA47. In the statement of considerations accompanying the proposed rule, the NRC found that "there may be several existing licensed sites . . . containing large quantities of materials contaminated with low level radioactivity where health and the environment may be best protected by onsite stabilization and disposal." SA64. Proper disposition of those sites "may require some type of durable institutional control, such as placing the site under the custody of a State or Federal agency. . . ." Id. The proposed rule included criteria for allowing stabilization of radioactive materials and permanent on-site disposal. SA77. This is the same approach that had been proposed in Shieldalloy's 1993 Conceptual DP.

Three years later, the NRC published its final rule regarding the decommissioning of NRC-licensed facilities. The rule, set forth at 10 C.F.R. §§ 20.1401-06, provides specific radiological criteria for the decommissioning of lands and structures, and is generally known as the license termination rule ("LTR"). JA25. The rule includes the option of terminating a license under "restricted conditions" such that radioactive materials are allowed to remain at a site, subject to specified conditions (10 C.F.R. §20.1403). The NRC found that:

> for certain facilities, achieving unrestricted use might not be appropriate because there may be net public or environmental harm in achieving unrestricted use, or

> because expected future use of the site would likely preclude unrestricted use, or because the cost of site cleanup and waste disposal to achieve unrestricted use is excessive compared to achieving the same dose criterion by restricting use of the site and eliminating exposure pathways.

JA36. For such sites, "restricted use with appropriate institutional controls (accompanied by sufficient provisions for ensuring their effectiveness) can provide protection of public health and safety" and is therefore acceptable. Id.

After ceasing manufacturing operations that involved the use of pyrochlore, Shieldalloy submitted a DP (Rev. 0) for the Site in August 2002. SA236. The NRC rejected Rev. 0 because, among other reasons, it called for termination of the license based on on-site disposal of the radioactive materials, but was unable to demonstrate, as the LTR requires (see 10 C.F.R. §§ 20.1403(b) and (c)), the capability or willingness of any local or State government entity to maintain control of the materials in perpetuity. Id.

In May 2003, the Staff submitted to the Commission SECY-03-0069 ("SECY-03-0069"). SA103. SECY-03-0069 stated that the establishment of institutional controls necessary for the viability of the restricted release provisions in 10 C.F.R. § 20.1403 had been difficult to implement, particularly at locations where long-lived radionuclides are present. SA108. The Staff recommended that the Commission provide the option of involving the NRC in the long-term

oversight of those "legacy" sites under licenses providing for long-term control ("LTC") by the agency. Id. One of a handful of locations for which such an approach was expressly recommended was the Site. SA122.[3] The Staff included with SECY-03-0069 a proposed plan for the decommissioning of existing NRC-licensed sites. The plan identified the Site as one location for which

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[3] The LTC license is described in part in Attachment 1 to SECY-03-0069 as follows:

> This option would involve *amending* the existing specific license for decommissioning to a possession-only specific license, after completing remediation and after LTR dose criteria are met. For such sites, the possession-only license acts as an institutional control to maintain the restrictions necessary to meet the LTR criteria.
>
> ...
>
> New license conditions for land use restrictions, monitoring, maintenance, reporting, and financial assurance would be specified in the possession-only license. A Long-Term Care Plan implemented under the possession-only license could provide the detailed plans for restrictions, monitoring, reporting, and maintenance similar to the Long-Term Surveillance Plans under 10 CFR Part 40, Appendix A. The possession-only license is the type of institutional control, similar to EPA's orders or permits, that provide the necessary restrictions on access or future land use. NRC would monitor, inspect, and enforce under the license authority.

SA137-38.

implementation of the LTC decommissioning option was recommended as "provid[ing] benefit." SA145.

In November 2003, the Commission issued a Staff Requirements Memorandum ("SRM") setting out the Commission's position on SECY-03-0069. SA151. In the SRM, the Commission approved the Staff recommendations for restricted release criteria and institutional controls which would thereby be applicable to facilities such as the Site under an LTC license. The new criteria were consistent with the restricted release criteria in the LTR. Thus, no change to the regulations was required to implement them.

During the period of time that SECY-03-0069 was being evaluated by the Commission, the Staff and Shieldalloy conducted meetings and phone calls and exchanged correspondence about how to carry out on-site disposal of the radioactive materials and decommission the Site by stabilizing the radioactive materials in place, including covering the materials with a robust, multi-element engineered barrier. SA148. Shieldalloy advised the NRC that implementation of the on-site disposal option would result in the lowest radiation doses of all disposal options available and thereby would satisfy the "as low as reasonably achievable" ("ALARA") principle. SA150. The NRC Staff did not express disagreement with Shieldalloy's position.

In 2004, the Staff issued Newfield Site-specific "Interim Guidance," developed expressly for use by Shieldalloy in applying for an LTC license based on the provisions of 10 C.F.R. § 20.1403 and at the recommendations in SECY-03-0069. SA153. The Interim Guidance was provided while the Staff was developing generic LTC criteria. The purpose of the Interim Guidance was to provide Shieldalloy with: (1) a discussion of key concepts of the new LTC license option; and (2) specific guidance for preparing sections of the Site's decommissioning plan related to the LTC license. SA153.

In October 2005, Shieldalloy submitted Revision 1 (Rev. 1) to its DP for the Site. LBP-07-5, 65 N.R.C. at 344. This filing culminated a lengthy dialogue between Shieldalloy and the NRC on the most efficient and cost-effective way of decommissioning the Site. SA167. It followed both the site-specific Interim Guidance that the NRC had provided to Shieldalloy and the generic guidance that had subsequently been issued by the NRC with respect to on-site disposal. SA167-68.[4]

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[4] The generic guidance was contained in a three-volume document, NUREG-1757, Consolidated Decommissioning Guidance ("NUREG-1757") (Sept. 2006) (R9). Relevant portions of NUREG-1757 are included in the Joint Appendix and cited herein.

The NRC declined to accept Rev. 1 of the DP for a detailed technical review, finding that multiple rounds of requests for additional information by the agency to Shieldalloy would have been required to resolve the technical issues identified in the NRC's acceptance review. SA198. Instead, the Staff met with Shieldalloy to identify ways to modify the DP so as to make it suitable for detailed review. SA197. Based on the advice provided by the NRC, Shieldalloy submitted a revised DP (Rev. 1a) in June 2006. Id.

On November 17, 2006, having determined that Rev. 1a of the DP was acceptable for docketing and detailed Staff review, the NRC published a Federal Register notice advising of that determination and of the opportunity for interested parties to request a public hearing on the DP. 71 Fed. Reg. 66,986 (Nov. 17, 2006) (R10). Several interested parties, including the New Jersey Department of Environmental Protection ("NJDEP"), filed petitions requesting a hearing. LBP-07-5, 65 N.R.C. at 343. In March 2007, an NRC Atomic Safety and Licensing Board reviewed the petitions and ruled that the NJDEP had met the requirements for the granting of a hearing, thus initiating an administrative licensing proceeding. Id. That proceeding remains on hold during the pendency of this Petition. SA301.

Starting in late 2006, the Staff and Shieldalloy engaged in extensive interactions which continued over the next several years, as part of the NRC's

safety and environmental reviews of Rev. 1a of the DP. As a result, Shieldalloy filed in August 2009 a further revised, nine-volume DP (Rev. 1b). SA244. Rev. 1b of the DP reflects "the results of nearly three years of technical discussions between [Shieldalloy] and the Nuclear Regulatory Commission Staff ('Staff'), significant additional research and investigations to support the assumptions made in earlier revisions of the plan, and the responses to four formal rounds of Staff requests for additional information ('RAIs') plus two sets of follow-up RAIs, encompassing a total of well over two hundred RAIs." SA244.[5] The NRC declined to review Rev. 1b. Instead, upon the transfer of regulatory authority to New Jersey the following month, it forwarded to New Jersey the DP and the files associated with its safety and environmental reviews of Shieldalloy's proposed decommissioning plan. SA311.

B. AGREEMENT STATE APPROVAL REQUIREMENTS

Section 274 of the AEA, enacted in 1959, allows for the "sharing of some of the NRC's regulatory responsibilities with the states." Kerr-McGee Chem.

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[5] During the two and a half year period following acceptance of DP Rev. 1a for NRC review (2007 through mid-2009), Shieldalloy paid $2.32 million in NRC oversight fees, reflecting the extensive nature of the interaction between Shieldalloy and the agency after docketing of Rev. 1a. JA270. There were, of course, additional NRC oversight charges prior (and subsequent) to that period, and considerable expenditures of time and resources by Shieldalloy starting in 1992.

Corp. v. NRC, 903 F.2d 1, 4 (D.C. Cir. 1990). Specifically, it permits the NRC to relinquish, and States with suitable programs "to assume, pursuant to agreements with the [NRC], a limited role in regulating source and by-product materials, and special nuclear materials in quantities not sufficient to form a critical mass." Train v. Colo. Pub. Interest Research Group, Inc., 426 U.S. 1, 16 n.12 (1976). See also Silkwood v. Kerr-McGee Corp., 464 U.S. 238, 250 (1984) ("The Commission was authorized to turn some of its regulatory authority over to any state which would adopt a suitable regulatory program"). A State's regulatory program must meet certain statutory requirements and be otherwise compatible with the NRC's regulatory program for the State to qualify to assume such responsibilities. English v. Gen. Elec. Co., 496 U.S. 72, 81 (1990) ("The 1959 amendments authorized the [NRC], by agreements with state governors, to discontinue the Federal Government's regulatory authority over certain nuclear materials under specified conditions. State regulatory programs adopted under the amendment were required to be 'coordinated and compatible' with those of the [NRC]") (citation omitted); Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n, 461 U.S. 190, 209 (1983).

The NRC has developed a three step mechanism for evaluating the compatibility of a State program for the control of radiation hazards with the program set forth in the NRC's regulations. First, the agency has developed a set

of "compatibility criteria," that is, thirty-six standards against which the elements of the State program must be examined. JA4. These criteria, first issued in their current form in 1981 and slightly modified in 1983, "are not intended to limit Commission discretion in viewing individual agreements" (JA4), yet they "indicate factors which the Commission intends to consider in approving new or amended agreements." Id. As such, they establish standards to be observed both by the States in developing their regulatory programs for the control of radiation hazards and by the NRC in determining the adequacy of State programs to meet Agreement State requirements.

Second, the NRC has evaluated its own regulations to determine whether strict adherence to each of the compatibility criteria must be required of the State program with respect to each regulation. A policy statement issued by the NRC in 1997 establishes "principles, objectives, and goals" that the Commission expects to be reflected in the programs that States must implement in order to satisfy Agreement State requirements. JA61.

The Policy Statement provides guidance on what it means for an Agreement State program to be "compatible" with that of the NRC and "adequate" to protect public health and safety. It establishes five "compatibility categories" that are assigned to the various NRC regulations. Each compatibility category requires a

different degree of compatibility for the corresponding state standard or program element under review. For NRC regulations that are designated as compatibility category "A," the corresponding state standard should be "essentially identical to those of the Commission, unless Federal statutes provide the State authority to adopt different standards." JA67. Likewise, for NRC regulations that are designated as compatibility category "B," the "State program elements should be essentially identical to those of the Commission." Id. Compatibility category "C" regulations are "other Commission program elements" considered to be "important for an Agreement State to have in order to avoid conflicts, duplications, gaps, or other conditions that would jeopardize an orderly pattern in the regulation of agreement material on a nationwide basis." Id. Unlike NRC regulations that are designated as compatibility category "A" or "B," an Agreement State program element need not be "essentially identical" to an NRC category "C" regulation but is required to "embody the essential objective of the corresponding Commission program elements." Id.

Third, the NRC evaluates each element of a State program for the control of radiation hazards, and the program as a whole, against the NRC compatibility

criteria.[6] While, as noted above, an Agreement State program element need not be "essentially identical" to the corresponding NRC category "C" regulation, the State program element for category C regulations "should embody the essential objective of the corresponding Commission program elements." Id.

The LTR has been categorized by the NRC as a compatibility C regulation. JA46-47.[7] Thus, in order for a State program for the control of radiation hazards to be compatible with the NRC's LTR, each of the State program elements "*should embody the essential objective* of the corresponding Commission program elements." JA67 (emphasis added); JA475. See also JA81 (directing that an

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6 When presented with an application by a State to become an Agreement State, the Staff undertakes an assessment of the proposed State program using the thirty-six compatibility criteria. The Staff's assessment evaluates each criterion separately to determine whether it is satisfied. The Staff concludes that a State's program meets the requirements of Section 274b of the AEA if it finds that each criterion is either satisfied or not applicable to the State's program. See, e.g., SECY 06-0012, Section 274b Agreement with the State of Minnesota (Jan. 13, 2006), Enclosure 2 (available at http://adamswebsearch.nrc.gov/idmws/ViewDocByAccession.asp?AccessionNumber=ML060060436).

7 At the time the LTR was issued, the current set of compatibility standards had not yet been promulgated. The LTR was categorized when issued as what was then referred to as a "Division 2" rule. "Division 2 rules address basic principles of radiation safety and regulatory functions. Although Agreement States must address these principles in their regulations, the use of language identical to that in NRC rules is not necessary if the underlying principles are the same." JA46.

Agreement State should adopt the essential objectives of the NRC program elements). The "essential objective" of a regulation or program element is "[t]he action that is to be achieved, modified, or prevented by implementing and following the regulation or program element. In some instances, the essential objective may be a numerical value (e.g., restriction of exposures to a maximum value) or it may be a more general goal (e.g., access control to a restricted area)." JA95.

The essential objective of the LTR is "to provide specific radiological criteria for the decommissioning of lands and structures . . . to ensure that decommissioning will be carried out *without undue impact* on public health and safety and the environment." JA25 (emphasis added).

C. SUBMITTAL AND APPROVAL OF NEW JERSEY'S AGREEMENT STATE APPLICATION

On October 16, 2008, the Governor of New Jersey submitted a formal application to the NRC for New Jersey to become an Agreement State pursuant to Section 274b of the AEA. JA226. Prior to submitting its Agreement State application, New Jersey had issued for comment, and then promulgated in final form on September 15, 2008, a set of regulations, "Radiation Protection Program Rules" (N.J. Admin. Code 7:28-1.1 et seq. (2010)), intended to support New Jersey's Agreement State application. JA283-357. Shieldalloy submitted

comments on the facility decommissioning provisions of the proposed regulations (that is, the New Jersey Program's counterpart to the LTR) on July 17, 2008, identifying a number of deficiencies in New Jersey's proposed Radiation Protection Program in the area of facility decommissioning. JA275-79 & 286-90. New Jersey rejected Shieldalloy's comments. JA286-90.

On the recommendation of the Staff, the Commission published notices of the proposed Agreement between the NRC and New Jersey in the Federal Register, requesting comments from the public. JA229. In response to the notices, Shieldalloy filed comments identifying deficiencies in New Jersey's Radiation Protection Program with respect to the decommissioning of licensed facilities which made it incompatible in a number of respects with the NRC's program for the regulation of radioactive materials. JA259. The Staff rejected Shieldalloy's comments (JA472) and, on August 18, 2009, the Staff submitted to the Commission SECY-09-0114, "Section 274b Agreement with the State of New Jersey" (JA461), which requested Commission approval of the proposed Agreement with New Jersey.

One of Shieldalloy's comments was that, even if the NRC were to approve New Jersey's Agreement State application, the NRC should retain jurisdiction over the Site and carry to completion the ongoing decommissioning process. In denying

that request, the NRC ignored the criteria it had developed more than a decade earlier for deciding whether authority over specific sites should be retained upon approval of an Agreement State application. The NRC did not refer to those criteria, even though it had been alerted by its Staff to their applicability. JA454-56.

Acting on the Staff recommendations, on September 8, 2009, the NRC Chairman signed the Agreement (JA1), and on September 23, 2009 the Governor of New Jersey signed it. Id. The Agreement became effective on September 30, 2009, and transferred to New Jersey regulatory authority over, *inter alia,* source materials such as those at the Site. Id.

D. POST-AGREEMENT DEVELOPMENTS

A week after assuming regulatory authority over the Site, New Jersey rejected Rev.1b of the DP and ordered Shieldalloy to submit a decommissioning plan that complied with the New Jersey regulations. SA 300. Long in advance of the transfer of regulatory authority to New Jersey, the NRC had become well aware that the transfer would lead to the termination of the ongoing license process to decommission the Site in accordance with NRC regulations and that the transfer of authority would lead to the issuance by New Jersey of an order directing Shieldalloy to remove the radioactive materials from the Site. See, e.g., JA457.

Shieldalloy filed in October 2009 a motion with the NRC to stay, pending judicial review, the transfer of regulatory authority over the Site to New Jersey. SA275. On January 7, 2010, the NRC denied Shieldalloy's motion to stay. SA307. By that time, the instant Petition had already been filed.

SUMMARY OF THE ARGUMENT

A government agency must articulate a satisfactory explanation for its actions if they are to survive review under the "arbitrary or capricious" standard. An agency must also adequately address legitimate objections and explain departures from its precedent. An agency's failure to respond meaningfully to objections raised by a party renders its decision arbitrary and capricious.

The NRC failed to provide a satisfactory explanation for accepting New Jersey's Radiation Protection Program despite that Program's incompatibility with NRC regulations in the area of facility decommissioning. The agency also failed to respond meaningfully to Shieldalloy's objections to the facility decommissioning elements of New Jersey's Program. For these reasons, the NRC's approval of New Jersey's Agreement State application is arbitrary and capricious and should be set aside.

In order for a State program for the control of radiation hazards to be compatible with the NRC's, the State's program elements for which the counterpart NRC regulations are classified as compatibility category C must "embody the essential objective" of the corresponding NRC program elements. In the area of decommissioning of nuclear facilities, the essential objective of the NRC's license termination rule – as specifically set forth in the statement of

considerations accompanying those regulations – is "to provide specific radiological criteria for the decommissioning of lands and structures . . . to ensure that decommissioning will be carried out without undue impact on public health and safety and the environment." JA25.

A critical aspect of the LTR (which sets forth the radiological criteria for the decommissioning of NRC licensed facilities, see 10 C.F.R. § 20.1401) is the implementation of a principle that is central to the NRC's radiation protection regulations: decommissioning must be conducted such that the radiation doses resulting from the decommissioning process are as low as reasonably achievable ("ALARA"). To "embody the essential objective" of the LTR, New Jersey's Program would need to incorporate the ALARA principle into its facility decommissioning regulations, in addition to adopting a dose limit that is consistent with that contained in the NRC regulations. The Program, however, does not adopt or incorporate the ALARA principle. To the contrary, the New Jersey Program prohibits the use of ALARA and in so doing forecloses the decommissioning option for the Site that would result in the lowest radiation exposures. New Jersey's Program, therefore, is fundamentally inconsistent with the NRC's regulatory regime in the area of facility decommissioning and, if implemented, would result in unnecessary radiation exposures to the public, cause

severe financial harm to Shieldalloy, and render no benefit to the people of New Jersey.

Another important aspect of the LTR is that it addresses the few licensed sites containing large quantities of materials contaminated with low level radioactivity where health and the environment may be best protected by on-site stabilization and disposal. To permit the safe decommissioning of those sites, the LTR includes the option (in 10 C.F.R. § 20.1403) of terminating a license under "restricted conditions" such that radioactive materials are allowed to remain at a site upon the implementation of approved stabilization methods and subject to specified controls. The NRC specifically identified the Site as a facility for which the on-site disposal option is beneficial, and it worked with Shieldalloy for nearly twenty years towards the implementation of the on-site disposal option.

Shieldalloy had repeatedly indicated to the NRC without challenge that on-site stabilization and disposal of the radioactive materials would minimize radiation doses and meet the ALARA criterion. Yet, the NRC approved New Jersey's Agreement State application with full knowledge that the New Jersey Program precludes decommissioning based on on-site stabilization and disposal of radioactive materials. The NRC does not explain how it could find New Jersey's

Program compatible with its regulations when the Program fails to achieve the "essential objective" of the LTR – minimizing public exposures to radiation.

The NRC has also acknowledged that there are a number of other respects in which the decommissioning provisions of the New Jersey Program significantly deviate from those in the LTR. Indeed, in promulgating the LTR, the NRC had given due consideration to, and rejected, positions identical to those contained in the New Jersey Program. There is no rational basis for the NRC's conclusion that the New Jersey Program is "compatible" with the NRC's when the agency had explicitly rejected those positions in its own rulemaking. All of these discrepancies in the New Jersey Program are failures to meet NRC compatibility criteria.

The NRC compatibility criteria also require that a state's radiation protection program provide for the granting of exemptions from the program's requirements where such exemptions will not jeopardize health and safety. In contravention of these criteria, in the area of licensed facility decommissioning the New Jersey Program fails to provide a meaningful opportunity for the granting of exemptions from the Program's requirements even if such exemptions will not jeopardize health and safety.

Another NRC compatibility criterion requires that State practices for assuring the fair and impartial administration of regulatory law should be incorporated into the formulation of rules of general applicability. In contravention of this criterion, the NJDEP Radiation Protection Program Rules in the area of decommissioning are "special legislation," aimed directly and uniquely at the Site. While the NRC tries to draw a distinction between "special legislation" directed at only one party and general rules that happen at the moment to apply to only one facility, this is a distinction without a difference: There are no other "legacy sites" in New Jersey containing source materials to which the NJDEP decommissioning regulations would apply and it is extremely improbable, if not impossible, that additional facilities handling source materials would ever be licensed under New Jersey's restrictive radiation control rules.

Lastly, an NRC compatibility criterion provides that the NRC and the State should "ensure that there will be no interference with or interruption of licensed activities or the processing of license applications by reason of the transfer." The NRC's approval of New Jersey's Agreement State application failed to satisfy this criterion. Despite a long history of working with Shieldalloy to implement a decommissioning plan based on radioactive material stabilization and on-site disposal, and despite the pendency of an administrative proceeding on the acceptability of Shieldalloy's plan, the NRC approved the Agreement State

application in full knowledge that New Jersey would (as it did) reject the approach proposed by Shieldalloy and derail the ongoing licensing process.

Each of the instances of incompatibility between the facility decommissioning elements of the New Jersey Program and the NRC regulations is sufficient in itself to invalidate the NRC's approval of the New Jersey Program in the area of facility decommissioning, or in the alternative to require that the NRC's transfer of regulatory authority over the Site to New Jersey be rescinded. In addition, in reviewing agency action, a court will also examine the record as a whole. Examining the totality of the NRC actions in disregard of its own regulations and compatibility criteria, as well as the requirements of the AEA, compels the conclusion that the NRC has acted in an arbitrary and capricious manner.

STANDING

Shieldalloy held NRC Source Materials License No. SMB-743 for its facility in Newfield, New Jersey. Effective September 30, 2009, the NRC transferred to New Jersey the regulatory authority over the possession and use of certain nuclear materials held under licenses granted by the NRC. 74 Fed. Reg. 51,882 (Oct. 8, 2009). Shieldalloy's NRC license for the Newfield Facility was one of those for which regulatory authority was transferred to New Jersey by the NRC action. This transfer is acknowledged by the NRC. JA463-64.

The NRC's action had a direct and detrimental impact on Shieldalloy and could potentially result in Shieldalloy's bankruptcy. See SA297-98. In this Petition, Shieldalloy is asking the Court to provide redress by reversing the transfer to New Jersey of NRC regulatory authority over the Newfield Facility.

This Court has noted: "In many if not most cases the petitioner's standing to seek review of administrative action is self-evident; no evidence outside the administrative record is necessary for the court to be sure of it. In particular, if the complainant is 'an object of the action (or forgone action) at issue' - as is the case usually in review of a rulemaking and nearly always in review of an adjudication - there should be 'little question that the action or inaction has caused him injury, and that a judgment preventing or requiring the action will redress it.'" Sierra Club

v. EPA, 292 F.3d 895, 899-900 (D.C. Cir. 2002), citing Lujan v. Defenders of Wildlife, 504 U.S. 555 , 561-62 (1992). Here, based on the above facts, it is "self-evident" that Shieldalloy has standing to challenge the NRC's action affecting its license.

ARGUMENT

I. STANDARD OF REVIEW

The Administrative Procedure Act (5 U.S.C. § 551 et seq. (2006)) requires a court to "hold unlawful and set aside agency action" if it is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law," 5 U.S.C. § 706(2)(A) (2006). An agency action is arbitrary and capricious if the agency "entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise." Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983).

To survive review under the "arbitrary or capricious" standard, "an agency must examine the relevant data and articulate a satisfactory explanation for its action including a rational connection between the facts found and the choice made." PPL Wallingford Energy LLC v. FERC, 419 F.3d 1194, 1198 (D.C. Cir. 2005) (quotations and citations omitted). At a minimum, the standard requires that an agency adequately explain its actions. "A fundamental requirement of administrative law is that an agency set forth its reasons for decision; an agency's failure to do so constitutes arbitrary and capricious agency action." Tourus

Records, Inc. v. DEA, 259 F.3d 731, 737 (D.C. Cir. 2001) (quotations and citations omitted). Accord, D&F Afonso Realty Trust v. Garvey, 216 F.3d 1191, 1195 (D.C. Cir. 2000) ("As we have often held, the requirement that agency action not be arbitrary or capricious includes a requirement that the agency adequately explain its result.... [W]e must strike down agency action if the agency failed to consider relevant factors or made a clear error of judgment") (quotations and citations omitted).

An agency must also explain departures from its precedent and adequately address legitimate objections to its proposed actions. "Reasoned decision making...necessarily requires the agency to acknowledge and provide an adequate explanation for its departure from established precedent." Dillmon v. Nat'l Transp. Safety Bd., 588 F.3d 1085, 1089-90 (D.C. Cir. 2009); see also Transmission Agency of N. Cal. v. FERC, 495 F.3d 663, 671 (D.C. Cir. 2007); Mistick PBT v. Chao, 440 F.3d 503, 512 (D.C. Cir. 2006). Also, "an agency's failure to respond meaningfully to objections raised by a party renders its decision arbitrary and capricious. We have stressed that unless the agency answers objections that on their face seem legitimate, its decision can hardly be classified as reasoned." PPL Wallingford Energy LLC, 419 F.3d at 1198 (quotations and citations omitted).

II. THE NEW JERSEY PROGRAM FAILS TO IMPLEMENT A CRUCIAL ELEMENT OF THE NRC LICENSE TERMINATION PROGRAM – THE "ALARA" PRINCIPLE – RENDERING THE NRC'S ACCEPTANCE OF THE PROGRAM ARBITRARY AND CAPRICIOUS

A crucial aspect of the license termination rule is the required compliance with the ALARA standard, whose application is repeatedly prescribed throughout the NRC radiation protection regulations.[8] In the LTR, compliance with the ALARA standard in the context of license termination under restricted conditions is specifically required:

> A site will be considered acceptable for license termination under restricted conditions if:
>
> (a) The licensee can demonstrate that further reductions in residual radioactivity necessary to comply with the provisions of § 20.1402 would result in net public or environmental harm or were not being made because the residual levels associated with restricted conditions are ALARA. Determination of the levels which are ALARA must take into account consideration of any detriments, such as traffic accidents, expected to potentially result from decontamination and waste disposal.

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[8] ALARA is defined in 10 C.F.R. § 20.1003 (2009); its application is mandated by, *inter alia*, 10 C.F.R. §§ 20.1101(b), 20.1206, 20.1301(d)(3), 20.1402, 20.1403, 20.1404, 20.1601, 20.1702, 20.1704, 20.2002(d), 20.2105, and 20.2203 (2009).

10 C.F.R. § 20.1403.[9] Compliance with the ALARA standard ensures that there will not be any undue impact on public health and safety or the environment from the operation or decommissioning of a facility. Thus, the ALARA standard must be met as part of every decommissioning program.

The Commission has stated in numerous contexts that the purpose of the ALARA standard is to ensure that there will not be radiological exposures to the public or releases to the environment beyond the minimum amount that cannot be reasonably avoided, regardless of the absolute value of the dose limit set forth in a regulation. ALARA "means making every reasonable effort to maintain exposures to radiation *as far below the dose limits* in this part as is practical consistent with the purpose for which the licensed activity is undertaken." 10 C.F.R. § 20.1003

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[9] Compliance with ALARA is also required in decommissioning a site for unrestricted use:

> A site will be considered acceptable for unrestricted use if the residual radioactivity that is distinguishable from background radiation results in a TEDE [Total Effective Dose Equivalent] to an average member of the critical group that does not exceed 25 mrem (0.25 mSv) per year, including that from groundwater sources of drinking water, and the residual radioactivity has been reduced to levels that are as low as reasonably achievable (ALARA). Determination of the levels which are ALARA must take into account consideration of any detriments, such as deaths from transportation accidents, expected to potentially result from decontamination and waste disposal.

10 C.F.R. § 20.1402.

(emphasis added). "The ALARA concept means that all doses are to be reduced below required levels to the lowest reasonably achievable level considering economic and societal factors. Determination of levels that are ALARA must consider any detriments, such as deaths from transportation accidents, that are expected to potentially result from disposal of radioactive waste." SA100.[10] ALARA requires that radiological exposures should be the minimum possible below the otherwise established dose limit.[11]

The need to implement the ALARA principle was emphasized in the Statement of Considerations that accompanied the LTR. In issuing the LTR, the Commission reaffirmed its determination that, "in any ALARA analysis conducted to support decisions about site cleanup, all reasonably expected benefits and detriments resulting from the cleanup activities should be taken into consideration in balancing costs and benefits. An example of such a detriment would be transportation deaths that might occur as contaminated waste is transported away

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[10] NUREG 0586 (Supplement 1) was issued to provide guidance in evaluating environmental impacts during the decommissioning of nuclear power reactors as residual radioactivity at reactor sites is reduced to levels that allow for termination of the NRC license. SA81.

[11] See, e.g., JA112 (ALARA "means the licensee must make every reasonable effort to reduce the dose *as far below* the specified limits as is practical, taking into account the state of technology and economics") (emphasis added); JA133; JA189. Statements to the same effect appear throughout other NRC regulatory guidance documents.

from the site." JA33. The NRC rejected comments suggesting that the ALARA requirement should not be imposed in the LTR. The NRC concluded: "For this reason and because the generic analysis of the Final GEIS tends to indicate that achieving doses *below* 0.25 mSv/y (25 mrem/y) may be ALARA for some cases, the rule continues to require an ALARA evaluation *below the unrestricted dose criterion.*" JA32 (emphasis added).

Thus, to "embody the essential objective" of the LTR, New Jersey's Program must, *in addition to* adopting a dose limit that is consistent with the dose limit contained in the NRC regulations, incorporate the ALARA standard. The Program, however, not does not adopt or incorporate the ALARA standard but, instead, prohibits its use. In response to a Shieldalloy comment on the proposed Radiation Protection Program Rules that New Jersey "should allow use of NRC remediation dose criteria when appropriate and when justified based on the As Low As Reasonably Achievable (ALARA) principle," the NJDEP stated: "The Department and the Commission did not include a provision for ALARA in meeting these dose criteria because the Brownfield and Contaminated Site Remediation Act, N.J.S.A. 58: l0B-1 et seq., does not allow such a provision." JA290.

A regulatory scheme that precludes consideration of ALARA may foreclose the decommissioning option that would result in the lowest radiation exposure and,

in so doing, fails to embody the essential objective of the LTR: to ensure that there will be no undue impact upon the public or environment from radiological exposures. Such a scheme on its face violates NRC Compatibility Criterion 9, which states in relevant part: "Waste Disposal. The standards for the disposal of radioactive materials into the air, water, and sewers, and burial in the soil shall be in accordance with Part 20." JA5 & 13. The New Jersey Program does not incorporate the ALARA standard set forth in 10 C.F.R. Part 20 and thus does not include adherence to ALARA as one of the radiological criteria for the disposal of radioactive waste in the process of license termination. The Program, therefore, does not satisfy NRC Compatibility Criterion 9.

Failure to implement the ALARA standard allows New Jersey to reject the decommissioning option for the Site that would result in the lowest doses to the public and the environment, that is, stabilization of the radioactive materials and disposal in place, as described in the DP. Instead, the State is able to order Shieldalloy to remove the materials from the Site and ship them cross-country to be buried – a process that would result in higher radiation doses to workers, the public and the environment. SA298.[12]

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[12] Consolidating the radioactive materials at the Site under an appropriately robust shielding cover (engineered barrier) results in very low levels of radioactivity being released to the environment. Such releases are lower
(Footnote continued on next page)

Shieldalloy's comments to the NRC during the agency's consideration of the New Jersey Program specifically criticized the Program's failure to incorporate the ALARA standard in its regulations on facility decommissioning. In response, the Staff did not even refer to ALARA but instead stated:

> Some of NJ's license termination regulations are more stringent than NRC regulatory requirements. Using the above criteria, NRC's assessment of NJ regulations found the State's license termination and decommissioning regulations compatible since they meet the essential objectives of the NRC program elements and provide a level of protection of public health and safety that is at least equivalent to that afforded by NRC's requirements.

JA475.

Subsequently, the NRC stated that New Jersey had lowered the permissible dose limit from the 25 mrem allowed under the NRC regulations to 15 mrem, and that such lowering "embodies the license termination rule's essential objective of ensuring that decommissioning will be carried out without undue impact on public health and safety and the environment." SA325. This statement is clearly erroneous. Lowering the permissible dose limit from 25 mrem to 15 mrem is not equivalent to meeting the ALARA standard. Determining which disposal

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than those that would result from the multi-step process of dismantling the piles of material, processing them for transportation, and shipping them offsite. See SA256.

alternative is ALARA requires an analysis of the type referred to in the LTR – balancing the reasonably expected benefits and detriments of the various alternatives. JA33.[13] Such an analysis must be performed apart from complying with the regulatory release limit. As noted by the NRC in issuing the LTR, compliance with the ALARA principle is necessary even if the applicable dose criterion is met: "For this reason and because the generic analysis of the Final GEIS tends to indicate that achieving doses *below* 0.25 mSv/y (25 mrem/y) may be ALARA for some cases, the rule continues to require an ALARA evaluation *below the unrestricted dose criterion.*" JA32 (emphases added).

The NRC's attempted justification of its acceptance of the New Jersey Program is thus inconsistent with the NRC's findings in issuing the LTR, and with the agency's acknowledged and oft-prescribed need to satisfy the ALARA standard. Indeed, the NRC has provided no meaningful response to Shieldalloy's objections concerning the omission of the ALARA standard from the New Jersey Program. The NRC's decision to enter into the Agreement with New Jersey despite the failure of the New Jersey Program to give effect to ALARA is arbitrary

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[13] The type of detailed analyses required by ALARA is illustrated in Chapter 7 of Rev.1b of the DP, SA261-74. It clearly goes well beyond satisfying a numerical dose standard.

and capricious and needs to be set aside. PPL Wallingford Energy LLC, 419 F.3d at 1198; Dillmon, 588 F.3d at 1089-90.[14]

III. THE NRC'S ACCEPTANCE OF THE NEW JERSEY PROGRAM NOTWITHSTANDING ITS FAILURE TO ALLOW THE TERMINATION OF RADIOACTIVE MATERIALS LICENSES UNDER RESTRICTIVE RELEASE CRITERIA IS ARBITRARY AND CAPRICIOUS

An important aspect of the license termination rule is that it addresses a few "existing licensed sites (no more than a few tens) containing large quantities of materials contaminated with low level radioactivity where health and the environment may be best protected by onsite stabilization and disposal." 59 Fed. Reg. at 43,217. To permit the safe decommissioning of such sites, the LTR includes the option (in 10 C.F.R. § 20.1403) of terminating a license under "restricted conditions" pursuant to which radioactive materials are allowed to remain at a site subject to specified controls. The NRC found that "for certain facilities, achieving unrestricted use might not be appropriate because there may be net public or environmental harm in achieving unrestricted use, or because expected future use of the site would likely preclude unrestricted use, or because the cost of site cleanup and waste disposal to achieve unrestricted use is excessive

[14] Ignoring the ALARA standard also has the effect of allowing New Jersey to require removal of the radioactive materials from the Site, with a potentially devastating financial impact on Shieldalloy. SA297-98.

compared to achieving the same dose criterion by restricting use of the site and eliminating exposure pathways." JA36.

To facilitate on-site disposal of nuclear materials at facilities, such as the Site, where cleanup and offsite disposal is impractical or less safe than on-site disposal, the NRC issued SECY-03-0069 in 2003 and developed, over the course of several years, detailed guidance on how the restricted release provisions in 10 C.F.R. § 20.1403 should be implemented. The NRC even developed the LTC license concept, under which the NRC itself would exercise long term monitoring and control over the decommissioned sites. There can be no doubt, therefore, that the NRC strove to make the restricted release option a viable decommissioning alternative for facilities such as the Site. Nor can it be denied that the NRC consistently encouraged Shieldalloy over the course of many years to pursue the on-site disposal option and repeatedly identified the Site as a prime candidate for application of the restricted release option. See, e.g., SA122 & SA145.

Yet, the NRC approved New Jersey's Agreement State application with full knowledge that the New Jersey Program precludes decommissioning under restricted release conditions, that the NJDEP had advised Shieldalloy a year earlier that on-site decommissioning would not be permitted, and that upon transfer of

regulatory authority New Jersey would require Shieldalloy to remove the materials from the Site. JA446-47.[15]

In recommending to the Commission approval of New Jersey's Agreement State application, the Staff did not address Shieldalloy's criticism that the New Jersey Program failed to allow license termination under restricted release conditions. Four months after approving the New Jersey Program, the Commission claimed that the New Jersey Program provides "a level of protection of public health and safety that is at least equivalent to that afforded by NRC's requirements." SA329 (footnote omitted).[16] Even then, the NRC offered no substantive support for this argument, which is clearly contrary to the facts.

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15 The NRC argues that the New Jersey Program allows license termination subject to restrictive release criteria. SA328. However, this interpretation of the New Jersey Program is inconsistent with the position taken by New Jersey, which has stated to Shieldalloy: "Because the decommissioning plan . . . requires a long term control license (something that our regulations do not allow), we have determined that the dose limits in Subchapter 6 would not be met if all controls failed ... ." SA305. In addition, New Jersey has flatly told Shieldalloy that it will not allow on-site disposal of the materials at the Site. JA446-47.

16 This belated attempt at an explanation should be given no weight. It is well established that the agency must have articulated a rational explanation for its action at the time of its decision. "Arbitrary and capricious review demands evidence of reasoned decisionmaking *at the agency level*; agency rationales developed for the first time during litigation do not serve as adequate substitutes." Williams Gas Processing-Gulf Coast Co., L.P. v.

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The NRC also argued that Shieldalloy had failed to validate its assertion that the New Jersey Program, by requiring removal of the radioactive materials from the Site, would "result[] in higher doses to workers and the public and a lower level of protection of public health and safety than that provided by the NRC regulations." SA329. However, in its motion to stay the transfer of regulatory authority to New Jersey, Shieldalloy had provided a sworn affidavit that cited analyses presented in Rev. 1b of the DP (a document that was filed with the NRC prior to the transfer of authority to New Jersey) showing that doses to radiation workers and the public resulting from the removal of the radioactive materials from the Site and their disposal elsewhere would be higher than those resulting from on-site stabilization and storage of the materials. See SA298. Shieldalloy had reached the same conclusion in earlier revisions of the DP, dating back to at least 2005, which the NRC had received and reviewed over the years. See, e.g., SA175 & 194-96.

The NRC does not explain how it could find New Jersey's Program compatible with its regulations in the area of facility decommissioning when the Program fails to implement an important aspect of the LTR – terminating a license under "restricted conditions" – pursuant to which radioactive materials are allowed

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FERC, 475 F.3d 319, 326 (D.C. Cir. 2006) (quotations and citations omitted; emphasis in original).

to remain at a site subject to specified controls. This inconsistency is particularly glaring since the NRC had devoted much effort to developing this particular licensing mechanism as a way to meet the essential objective of the LTR: minimizing public exposures to radiation. Not having provided an explanation for its finding of compatibility (which again fails to satisfy Compatibility Criterion 9 discussed above), the NRC decision to enter into the Agreement with New Jersey is arbitrary and capricious and must be set aside.[17]

IV. NRC'S APPROVAL OF THE NEW JERSEY PROGRAM, NOTWITHSTANDING THAT THE PROGRAM FAILS TO IMPLEMENT MANY ASPECTS OF THE LICENSE TERMINATION RULE, IS ARBITRARY AND CAPRICIOUS

In its comments on the New Jersey Program, Shieldalloy pointed out a number of respects in which the facility decommissioning elements of the Program

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[17] The NRC argues that it is premature to predict that decommissioning of the Site under the New Jersey Program would result in additional radiation exposures due to offsite material disposal. SA329-30. However, Shieldalloy has already demonstrated (in Rev. 1b and earlier revisions of the DP) that doses will increase if it were forced to comply with New Jersey's requirement that the radioactive materials be removed from the Site and shipped cross-country for disposal. The NRC routinely relies on engineering and technical evaluations by license applicants, such as those that Shieldalloy has performed here, as the basis for its decisions. See, e.g., NIRS v. NRC, 509 F.3d 562, 569-70 (D.C. Cir. 2007) (noting that NRC made licensing decision based on applicant's analysis presenting a cost estimate for waste disposal); San Luis Obispo Mothers for Peace v. NRC, 789 F.2d 26, 28-29 (D.C. Cir.) (noting that NRC relied upon technical analysis presented by licensee in making its licensing decision), cert. denied, 479 U.S. 923 (1986).

deviate from the provisions of the LTR and thus fail to implement 10 C.F.R. Part 20. As acknowledged by the Staff, those deviations include: "(1) the maximum allowable total dose to a member of the public of 15 mrem/year versus 25 mrem/year in NRC's regulations, (2) failure to include implementation of the 'as low as reasonably achievable' (ALARA) principle, (3) failure to include provisions for restricted release, (4) allowing calculation of peak dose over 1,000 years, (5) failure to allow for more than 100 mrem total effective dose equivalent under any circumstances, and (6) requiring that the radioactivity releases to ground and surface waters be limited to the levels set by the NJ Ground Water And Surface Water Standards." JA474.[18] The Staff asserted in a conclusory fashion that, while "[s]ome of NJ's license termination regulations are more stringent than NRC regulatory requirements . . . . [New Jersey's] license termination and decommissioning regulations [are] compatible since they meet the essential

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[18] In its comments on the proposed New Jersey Program Shieldalloy identified other areas in which the New Jersey Program impermissibly differs from the NRC's program. For example, Shieldalloy had commented that "[d]ose calculations based on realistic degradation of engineering controls over time should be allowed. The NRC approach reflects that engineered structures degrade by known physical processes. [By contrast,] N.J.A.C. 7:28-12.11(e) assumes that engineered structures instantaneously fail at the precise moment when institutional controls are presumed to end." JA289. New Jersey rejected the comment, stating: "[T]he rules require the Department to consider the public health consequences in the event that the engineered barriers completely fail at some point in the future." Id. However, in the LTR, the NRC had concluded: "The Commission believes that failure of all site restrictions at decommissioned sites is a highly unlikely event." JA37.

objectives of the NRC program elements and provide a level of protection of public health and safety that is at least equivalent to that afforded by NRC's requirements." Id. at 5.

Again, the NRC's offhand dismissal of the differences between New Jersey's Program and the LTR is inadequate justification for the acceptance of the New Jersey Program. The NRC spent three years developing "a clear and consistent regulatory basis for determining the extent to which lands and structures must be remediated before decommissioning of a site can be considered complete and the license terminated." JA25. The rule, as it emerged, took into account the comments of over 100 organizations and individuals representing a wide range of views. JA26. Each aspect of the New Jersey Program that is at odds with the LTR was proposed to the NRC in comments on the proposed LTR and, after being analyzed in depth, was specifically rejected by the NRC, as follows:

(1) The potential lowering of the dose limit to 15 mrem, as implemented by New Jersey (see JA290), was fully evaluated (JA26-31) and rejected by the NRC as "too restrictive for its intended purpose." JA31.

(2) Failing to implement the ALARA standard (as New Jersey does, see Section II above) was analyzed at length (JA31-34), and the NRC concluded that

the rule should "continue[] to require an ALARA evaluation below the unrestricted dose criterion." JA32.

(3) Whether the restricted release option for a site should be available (contrary to New Jersey's exclusion of the option, see Section III above) was examined at length (JA35-39), and the Commission reaffirmed that the option should be retained because

> for certain facilities, achieving unrestricted use might not be appropriate because there may be net public or environmental harm in achieving unrestricted use, or because expected future use of the site would likely preclude unrestricted use, or because the cost of site cleanup and waste disposal to achieve unrestricted use is excessive compared to achieving the same dose criterion by restricting use of the site and eliminating exposure pathways.

JA36.

(4) Calculating peak doses from a site beyond 1,000 years (as the New Jersey Program requires, see JA287-88), was rejected by the NRC as "virtually meaningless." JA50.[19]

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[19] The Commission determined that, "in the analysis for decommissioning, where the consequences of exposure to residual radioactivity at levels near background are small and peak doses for radionuclides of interest in decommissioning occur within 1000 years, long term modeling thousands of years into the future of doses that are near background may be virtually meaningless." Id. Consistent with that determination, in the brief it filed with the U.S. Court of Appeals for the Third Circuit in New Jersey v. NRC, 526 F.3d 98 (3d. Cir. 2008), the NRC argued that using a 1,000 year

(Footnote continued on next page)

(5) With respect to the New Jersey Program's refusal to allow for more than 100 mrem total effective dose equivalent (TEDE) under any circumstances (see JA290), the NRC considered whether, under unusual circumstances, a facility could be allowed to exceed the 100 mrem TEDE set in the LTR. JA38. The agency concluded that such an allowance should be made under appropriate circumstances. Id.

(6) A requirement, such as that in the New Jersey Program, that the radioactivity releases to ground and surface waters be subject to specified limits (in the case of New Jersey, the levels set by the NJ Ground Water and Surface Water Standards) (see JA288-89) was considered by the NRC and rejected. JA41-43. The NRC concluded: "There is no reason from the standpoint of protection of public health and safety to have a separate, lower dose criterion for one of the pathways (e.g., drinking water) as long as, when combined, the dose from all the pathways doesn't exceed the total dose standard established in the rule." JA42.

Because of these differences, the facility decommissioning elements of the New Jersey Program are totally unlike those in the carefully considered NRC regulations. No rational basis is presented for the Commission's unexplained

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standard was the consistent NRC regulatory practice and New Jersey's insistence that a longer dose computation period should be used was unwarranted. JA426-28.

conclusion that the New Jersey Program is "compatible" with the NRC's, particularly where the NRC has previously rejected incorporating into the LTR the positions contained in the New Jersey Program. The NRC's decision to enter into the Agreement despite these differences is arbitrary and capricious.[20]

V. NRC'S ACCEPTANCE OF THE NEW JERSEY PROGRAM, NOTWITHSTANDING THAT THE PROGRAM FAILS TO PROVIDE A MEANINGFUL OPPORTUNITY FOR THE GRANTING OF EXEMPTIONS FROM ITS REQUIREMENTS IN THE AREA OF FACILITY DECOMMISSIONING WHERE SUCH EXEMPTIONS WILL NOT JEOPARDIZE HEALTH AND SAFETY, IS ARBITRARY AND CAPRICIOUS

NRC Compatibility Criterion 12 states:

> Additional Requirements and Exemptions. Consistent with the overall criteria here enumerated and to accommodate special cases or circumstances, the State regulatory authority shall be authorized in individual cases . . . to grant necessary exemptions which will not jeopardize health and safety.

JA5. Contrary to this Criterion, the New Jersey Program does not provide a meaningful opportunity for granting exemptions from its requirements in the area

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20 The NRC seeks to excuse the discrepancies between the New Jersey Program and the LTR as permissible because, given that the LTR is a compatibility category C regulation, a State can impose standards that are stricter than those contained in the rule. SA325. However, as the NRC acknowledges, the State regulations must "embody the 'essential objective' of the NRC's license termination rule." SA324. As demonstrated above, the departures from the NRC requirements in the New Jersey Program (such as failure to implement the ALARA principle and allow site decommissioning under restricted conditions) do not "embody" the essential objective of the LTR. Rather, they subvert it.

of facility decommissioning. Shieldalloy identified to the Staff four specific instances of New Jersey's failure to provide for the possibility of granting necessary exceptions to the regulatory standards that do not jeopardize health and safety. JA263-65.[21] In response, the Staff cited a provision in the NJDEP regulations that ostensibly allows for exemptions from those regulations. JA476. In so doing, the Staff ignored NJDEP's stated position that NJDEP is precluded by statute from providing at least one of those exemptions: "The Department and the Commission did not include a provision for ALARA in meeting these dose criteria because the Brownfield and Contaminated Site Remediation Act, N.J.S.A. 58:10B-1 et seq., does not allow such a provision." JA290. Therefore, the Staff's reference to a regulation whose application to the particular cases cited is precluded by statute is clearly erroneous.

In denying Shieldalloy's motion for stay, the NRC repeated the argument made by its Staff that the NJDEP regulations provide a mechanism for seeking

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[21] Those areas in which exemptions are not permitted include (1) not allowing consideration of alternate remediation standards that would increase the allowed incremental dose criterion of 15 mrem/yr, even if justified through an ALARA analysis; (2) not allowing use of any alternative remediation standards if they would result in doses exceeding 100 mrem/yr for an "all controls fail" scenario; (3) requiring that the calculations of doses from radiological decommissioning use only tables of parameters based on specific exposure scenarios; and (4) not allowing credit for the existence of engineering controls, such as a fence or cover, to be taken when performing the model to determine if the 100 mrem annual dose is exceeded. JA262-65.

exemptions. SA331-33. However, although the New Jersey Program purports to allow exemptions from the pertinent regulations, such a grant of the opportunity to seek exemptions is illusory because the NJDEP regulations preclude any of the exemptions cited by Shieldalloy to the NRC. JA289-90. This was demonstrated when Shieldalloy submitted an exemption request covering the four areas cited above and New Jersey denied it, offering as sole justification that, "[b]ecause the decommissioning plan relies on engineering controls and requires a long term control license (something that our regulations do not allow), we have determined that the dose limits in Subchapter 6 would not be met if all controls failed ... ." SA305.

The NRC again seeks to justify the failure of the New Jersey Program to grant exemptions in the area of facility decommissioning on the basis that the provisions of the LTR are compatibility category C regulations and their New Jersey counterpart "are therefore permissibly more stringent than the NRC's corresponding regulations." SA332-33. However, at issue is not whether the New Jersey regulations are more stringent than the NRC standards (which they are not, since they fail to implement the ALARA standard), but whether "the State regulatory authority shall be authorized in individual cases . . . to grant necessary exemptions which will not jeopardize health and safety." JA5. The NJDEP's regulatory authority does provide a meaningful opportunity for the granting of

necessary exemptions in the area of facility decommissioning, and the NRC's entering into an Agreement with New Jersey in the absence of such authority is arbitrary and capricious.

VI. NRC'S ACCEPTANCE OF THE NEW JERSEY PROGRAM, NOTWITHSTANDING THAT THE PROGRAM FAILS TO PROVIDE FOR THE FAIR AND IMPARTIAL ADMINISTRATION OF REGULATORY LAW BUT INCLUDES REGULATIONS AIMED SPECIFICALLY AT THE SITE, IS ARBITRARY AND CAPRICIOUS

Compatibility Criterion 23 states in relevant part:

> Administration. State practices for assuring the fair and impartial administration of regulatory law, including provision for public participation where appropriate, should be incorporated in procedures for: a. Formulation of rules of general applicability.

JA7. There is no denying that, in the area of facility decommissioning, the NJDEP regulations that implement the New Jersey Program are aimed specifically and uniquely at the Site. For example, New Jersey acknowledges that the imposition of stand-alone limits on the release of radioactivity to surface waters affects only "one facility in the State." JA289. Indeed, there are numerous aspects of the New Jersey regulations that apply only to the Site, including among others: (a) the refusal to apply the ALARA standard; (b) the refusal to allow restricted release criteria for license termination; (c) the requirement of peak dose computation beyond 1,000 years; (d) the requirement to calculate dose potential using only

specific exposure scenarios and input parameters; and (e) the failure to allow credit for the rate of degradation of engineering controls over time. Their combined effect is to preclude any possibility that the Site could be decommissioned in accordance with the permissible standards in 10 C.F.R. Part 20.

The NRC tries to draw a distinction between "special legislation" directed at only one party and general rules that happen at the moment to apply to only one facility:

> The NJDEP's license termination regulations would apply to any licensee that submits a request for license termination. *See, e.g.*, 40 N.J. Reg. 5196(b), at 8 ("The fact that there may be only one facility in the State now affected by the rule does not mean that other facilities will not be affected in the future. . . . Creating an open class is not the equivalent of special legislation, which is prohibited, nor is it arbitrary or discriminatory.").

SA335. However, this argument flies in the face of the facts. There is only one facility in New Jersey to which these provisions apply: the Site. There are no other "legacy sites" in New Jersey containing source materials to which these regulations would apply at some future time. It is also extremely improbable, if not impossible, that a new facility where source materials are used will in the future be licensed under New Jersey's radiation control rules. As New Jersey acknowledges in its Agreement State application: "Presently, New Jersey has only one Source Material licensee that is undergoing decommissioning and does not

expect any applications for new source material licenses." JA224. In trying to avoid the necessary implications, the NRC fails to acknowledge New Jersey's admission. The NRC action in turning a blind eye to the provisions in the New Jersey regulations aimed directly at the Site and finding the New Jersey Program compatible with the NRC's program is arbitrary and capricious.

VII. NRC'S ACCEPTANCE OF THE NEW JERSEY PROGRAM, NOTWITHSTANDING THAT THE TRANSFER OF REGULATORY AUTHORITY TO NEW JERSEY DISRUPTS THE PROCESSING OF THE LICENSE APPLICATION FOR THE PROPOSED DECOMMISSIONING OF THE SITE, IS ARBITRARY AND CAPRICIOUS

NRC Compatibility Criterion 25 states:

> Existing NRC Licenses and Pending Applications. In effecting the discontinuance of jurisdiction, appropriate arrangements will be made by NRC and the State to ensure that there will be no interference with or interruption of licensed activities or the processing of license applications by reason of the transfer. For example, one approach might be that the State, in assuming jurisdiction, could recognize and continue in effect, for an appropriate period of time under State Law, existing NRC licenses, including licenses for which timely applications for renewal have been filed, except where good cause warrants the earlier reexamination or termination of the license.

JA7. If there ever were a situation in which this Compatibility Criterion should be given effect, it is in the decommissioning of the Site. Since 1992, Shieldalloy and the NRC have worked to develop a decommissioning plan for the Newfield facility based on the stabilization and permanent on-site disposal of the radioactive

materials.[22] The NRC even developed site-specific guidance for Shieldalloy to follow in developing a decommissioning plan for the Site based on the stabilization and on-site storage of the radioactive materials. Shieldalloy prepared, at great cost and effort,[23] four revisions of such a decommissioning plan, and filed the last and most detailed revision a month before the transfer of regulatory authority to New Jersey.[24] The adequacy of the DP is being litigated in an administrative proceeding before the NRC. It taxes credulity to argue, as the NRC does, that the transfer of regulatory authority over the Site to New Jersey resulted in "no interference with or interruption of licensed activities or the processing of license applications." SA333. This is particularly true given that New Jersey has announced since December 2008 that it would reject the decommissioning approach proposed by Shieldalloy once it assumed regulatory authority over the Site and that, immediately upon assuming such control, it proceeded to do so.[25]

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22 Counsel for the NRC has acknowledged that "since the Licensee stopped processing pyrochlore in 1998, the Staff and the Licensee have had, and continue to have, extensive interactions regarding the decommissioning of the Newfield site." SA241.

23 As noted earlier, Shieldalloy has paid millions of dollars in NRC oversight fees and has expended considerable time and additional resources seeking approval of its DP for the Site.

24 Shieldalloy's proposed approach for the decommissioning of the Site is summarized in the Executive Summary of Rev.1b of the DP, SA249-60.

25 See JA446-48.

The NRC does not deny this history. Instead, it notes that "New Jersey law provides for recognition of NRC licenses," and upon the transfer of authority "the NJDEP recognized Shieldalloy's source material license at the Newfield site." SA334 (footnote omitted). But the mere "recognition" by NJDEP of Shieldalloy's existing license for the Newfield facility is irrelevant to the fact that the Department's exercise of the authority it has gained by virtue of the NRC transfer grossly interferes with "the processing of license applications," including both the review of the DP by the Staff and the ongoing administrative litigation to validate the DP. The NRC was fully aware that the transfer of its regulatory authority over the Site to New Jersey would result in New Jersey's termination of the processing of Shieldalloy's decommissioning application and the nullification of the associated administrative licensing litigation. By transferring regulatory authority over the Site to New Jersey in contravention of Compatibility Criterion 25, the NRC ignored its long-term regulatory relationship with Shieldalloy (to say nothing of the millions of dollars in fees that it collected from Shieldalloy for its review of the application), and acted in an arbitrary and capricious manner.

In its comments to the proposed transfer of regulatory authority to New Jersey, Shieldalloy had also argued that, even if the transfer were approved generally, the NRC had the power to retain regulatory authority over the Site, and should do so "consistent with notions of fundamental fairness and efficiency."

JA270. In rejecting Shieldalloy's request, the NRC suggested that it lacked the power to retain individual licenses: "The legislative history for this Statutory provision [Section 274 of the AEA] specifically states that Congress did not intend to allow concurrent regulatory authority over licensees for public health and safety. If the NJ Agreement is approved by the Commission, upon the effective date of the Agreement, all NRC licensees within the categories of materials for which the State requested authority will transfer to the State." JA480.

This argument is inconsistent with the NRC's previous practice and its prior interpretation of the AEA. When the State of Oklahoma submitted an Agreement State application in 1997, it sought to carve out certain facilities for which it asked the NRC to retain jurisdiction. The NRC rejected Oklahoma's request, but did not indicate that it lacked the power to retain authority over individual facilities. To the contrary, the NRC developed criteria for deciding in the future whether specific facilities should be excluded from the transfer of regulatory authority to a State. These criteria are:

> Overall, the staff would consider whether the proposed Agreement would jeopardize "...an orderly regulatory pattern between the Commission and the State governments..." as indicated by Section 274a(3) of the AEA. In particular, requests for limited Agreements would have to identify discrete categories of material or classes of licensed activity that (1) can be reserved to NRC authority without undue confusion to the regulated community or burden to NRC resources, and (2) can be applied logically, and consistently to existing and future licensees over time. Under this approach, NRC

> would not reserve authority over a single license unless that licensee clearly constituted a single class of activity or category of material meeting the two criteria described above.

JA18. The NRC chose not to apply these criteria in deciding whether to retain authority over the Site, even though their applicability was pointed out specifically by members of the NRC Staff who commented on the proposed resolution of Shieldalloy's comments. JA454-56. NRC's failure to explain its departure from (or even acknowledge the existence of) its own standards mandates invalidating the NRC's action as arbitrary and capricious.

VIII. THE COMBINED EFFECT OF ALL OF THE DEPARTURES OF THE NEW JERSEY PROGRAM FROM THE NRC'S REGULATORY SCHEME RENDERS THE NRC'S APPROVAL OF THE TRANSFER OF AUTHORITY OVER THE SITE TO THE STATE ARBITRARY AND CAPRICIOUS

Each of the instances of incompatibility between the New Jersey Program and the NRC regulations is sufficient in itself to invalidate the NRC's action of transferring regulatory authority over the Site to New Jersey. In addition, it is well settled that in reviewing agency action under the "arbitrary and capricious" standard, a court will consider the record as a whole. See, e.g., Am. Wildlands v. Kempthorne, 530 F.3d 991, 1002 (D.C. Cir. 2008) (citing Citizens to Preserve Overton Park, Inc. v. Volpe, 401 U.S. 402, 420 (1971) and Walter O. Boswell Mem'l Hosp. v. Heckler, 749 F.2d 788, 792 (D.C. Cir. 1984)); Carpenters & Millwrights Local Union 2471 v. NLRB, 481 F.3d 804, 808-09 (D.C. Cir. 2007).

Examining the totality of the NRC actions in disregard of its own regulations, its Compatibility Criteria, and the requirements of the AEA compels the conclusion that the NRC acted in an arbitrary and capricious manner when it approved New Jersey's Agreement State application despite the State's incompatible license termination provisions, and in particular when it failed to retain jurisdiction of the Site.

The arbitrary and capricious actions of the NRC, individually and taken together, warrant that the Court find that the NRC's approval of the New Jersey Program, insofar as it applies to the facility decommissioning provisions in the Program, is invalid. Consequently, the matter should be remanded to the NRC with instructions that the NRC either (1) require New Jersey to modify its Program in the area of facility decommissioning to make it compatible with the NRC regulations, and have New Jersey retain authority over the Site and apply the modified Program to the Site's decommissioning; or (2) rescind its transfer of regulatory authority over the Site to New Jersey and regain authority over the Site.

CONCLUSION

The arbitrary and capricious actions of the NRC, individually and taken together, warrant that the Court remand the case with instructions that the NRC either (1) require New Jersey to modify its Program in the area of facility decommissioning to make it compatible with the NRC regulations and have New Jersey retain authority over the Site and apply the modified program to the Site's decommissioning; or (2) rescind its transfer of regulatory authority over the Site to New Jersey and regain authority over the Site.

Petitioner respectfully requests that the Court grant the above and such other relief as may be appropriate.

Respectfully submitted,

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Dated: April 22, 2010

CERTIFICATE OF COMPLIANCE WITH TYPE-VOLUME LIMITATION

Pursuant to Rule 32(a)(7)(C) of the Federal Rules of Appellate Procedure, Petitioner's Counsel hereby certifies that the foregoing "Final Brief of Petitioner Shieldalloy Metallurgical Corporation" complies with the type-volume limitation in Fed. R. App. P. 32(a)(7)(B)(i) in that it contains, exclusive of the corporate disclosure statement, table of contents, table of authorities, statement with respect to oral argument, the addendum containing statutes, rules or regulations, and the certificates of counsel, 13,624 words of proportionally spaced, 14 point Times New Roman font text.

In making this certification, Petitioner's Counsel has relied on the word count function of Microsoft Word 2003, the word-processing system used to prepare this brief.

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CERTIFICATE OF SERVICE

I hereby certify, in accordance with Circuit Rule 31, that the electronic original and eight (8) paper copies of the foregoing Final Brief of Petitioner Shieldalloy Metallurgical Corporation (the "Final Brief") were filed with the Clerk of the Court this 17th day of August 2010. In addition, on this 17th day of August 2010, paper copies of the Final Brief were served on the following participants in the case by United States first class mail, postage prepaid:

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