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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 REPLY BRIEF OF PETITIONER SHIELDALLOY METALLURGICAL CORPORATION

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TABLE OF CONTENTS

TABLE OF AUTHORITIES

Cases **Page**

Authorities upon which Petitioner chiefly relies are marked with asterisks.

Statutes, Regulations & Other Documents

Applicable statutes, regulations and rules which were not reproduced in the Addendum to Shieldalloy's Opening Brief are reproduced in the Supplemental Addendum included with this Reply Brief.

GLOSSARY OF TERMS AND ABBREVIATIONS

AEA	Atomic Energy Act of 1954, as amended
ALARA	As Low As Reasonably Achievable
Commission	United States Nuclear Regulatory Commission
DP	Decommissioning Plan for the Facility
Facility	The industrial facility owned by Shieldalloy Metallurgical Corporation located in Newfield, New Jersey
LTR	License Termination Rule, Subpart E to 10 C.F.R. Part 20 (10 C.F.R. §§ 20.1401-06)
mrem	Millirem
New Jersey's Program	*See* Program
NJDEP	New Jersey Department of Environmental Protection
NRC	United States Nuclear Regulatory Commission
Program	New Jersey's Radiation Protection Program
RAI	Request for Additional Information issued by the NRC Staff

Shieldalloy	Shieldalloy Metallurgical Corporation
Staff	United States Nuclear Regulatory Commission staff
TEDE	Total Effective Dose Equivalent

I. INTRODUCTION

In this Reply, Petitioner Shieldalloy Metallurgical Corporation ("Shieldalloy") responds to the arguments raised by the U.S. Nuclear Regulatory Commission ("NRC") and the State of New Jersey ("New Jersey") in their respective responses to Shieldalloy's Opening Brief.[1] The NRC and New Jersey fail to provide any valid justification for the NRC's reinstated transfer of regulatory authority over Shieldalloy's Newfield, New Jersey facility ("Facility") to New Jersey. Therefore, the transfer should be nullified.

II. SUPPLEMENTARY STATEMENT OF FACTS

While the parties disagree on the statutory and regulatory background discussed in the NRC Brief at 3-15, there is little disagreement between the NRC and Shieldalloy regarding the relevant facts in this matter, as presented in Shieldalloy's Brief.[2] Accordingly, the factual summaries contained in this Court's opinion in *Shieldalloy Metallurgical Corp. v. NRC*, 624 F.3d 489 (D.C. Cir. 2010) ("*Shieldalloy*") and in Shieldalloy's Brief require no supplementation.

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1 Brief for the Federal Respondents (May 28, 2012) ("NRC Brief"); Brief for Intervenor (June 12, 2012) ("NJ Brief"). Shieldalloy's Opening Brief ("Shieldalloy's Brief") was filed on March 6, 2012.

2 Compare Shieldalloy's Brief at 10-16 with NRC Brief at 15-20. The "facts" alleged by New Jersey (NJ Brief at 2-14) are either incorrect, irrelevant (*id.* at 2-3, 4-9, 11-13), or repetitive of those discussed by Shieldalloy and the NRC (*id.* at 9-11, 13-14).

III. SUMMARY OF THE ARGUMENT

An agency must articulate a satisfactory explanation for its actions if they are to survive review under the "arbitrary or capricious" standard. It must also adequately address legitimate objections and explain departures from prior practices and interpretations. *Post hoc*, inconsistent justifications of agency actions should be rejected. An agency's interpretation of its governing statute or regulations is to be accorded no deference if the interpretation is unreasonable.

The NRC failed to provide a satisfactory explanation for transferring authority over the Facility to New Jersey in the face of the New Jersey Program's incompatibility with the NRC regulations. For that reason, the NRC's reinstated transfer of authority was arbitrary and capricious and should be set aside.

Compatibility Criterion 25 requires that the NRC and the applying state "ensure that there will be no interference with or interruption of licensed activities or the processing of license applications, by reason of the transfer." 46 Fed. Reg. 7,540, 7,543 (Jan. 23, 1981) (JA56). The NRC's claim that the Criterion is only a housekeeping provision is inconsistent with the text of the Criterion and the NRC's previous explanations of its meaning.

The NRC rejected Shieldalloy's request that it exclude the Facility from the transfer of authority to New Jersey, even though the NRC should have acceded to

Shieldalloy's request. The NRC's argument that it lacks authority to retain jurisdiction over a category of materials at the request of a licensee is inconsistent with the plain reading of the entirety of Section 274 of the Atomic Energy Act of 1954, 42 U.S.C. § 2011 *et seq*. ("AEA").

A critical aspect of the license termination rule ("LTR"), 10 C.F.R. §§ 20.1401-06, is that facility decommissioning processes must result in radiation exposures that are as low as reasonably achievable ("ALARA"). To "embody the essential objective" of the LTR, a state's radiation protection program needs to incorporate the ALARA principle in its license termination regulations. The NRC now claims that ALARA does not apply in determining whether decommissioning of a site under restricted release criteria is preferable to unrestricted release decommissioning. Such a claim is belied by the agency's own regulations, guidance and practices.

The NRC reinstated the transfer of regulatory authority with full knowledge that New Jersey's Program precludes license termination based on on-site disposal of radioactive materials. Now, the NRC and New Jersey argue that the Program permits such termination – a claim inconsistent with the State's regulations and New Jersey's own statements to Shieldalloy.

In promulgating the LTR, the NRC considered and rejected positions identical to those contained in New Jersey's Program. The NRC's current justification for finding these deviations permissible is that they are allowed because the LTR is a "Category C" regulation. This position ignores the fact that these deviations render the Program non-compliant with the essential objective of the LTR.

Compatibility Criterion 23 requires that practices for assuring the fair and impartial administration of regulatory law be incorporated into a state's rules of general applicability. In contravention of this Criterion, New Jersey's license termination regulations are unfairly and uniquely aimed at the Facility. The NRC disclaims any obligation to scrutinize the Program for substantive fairness and would defer considering potential unfairness until after the transfer of authority took effect. These invalid arguments would reduce Criterion 23 to a nullity.

The areas of incompatibility between New Jersey's Program and the NRC regulations, individually and collectively, compel the conclusion that the NRC's reinstatement of the transfer of regulatory authority over the Facility to New Jersey was arbitrary and capricious.

ARGUMENT

IV. STANDARD OF REVIEW

The Administrative Procedure Act 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). Under this standard, an agency has the obligation to explain any important changes of policy or legal interpretation. *Ramaprakash v. FAA*, 346 F.3d 1121, 1124 (D.C. Cir. 2003); *Shieldalloy,* 624 F.3d at 493. Such explanation must be made by a reasoned analysis which ensures that the agency's past policies are being deliberately changed and not casually ignored. *Dillmon v. NTSB*, 588 F.3d 1085, 1089-90 (D.C. Cir. 2009). *See also Nat'l Cable & Telecomms. Ass'n v. Brand X Internet Servs.*, 545 U.S. 967, 981 (2005).

To be entitled to deference by a reviewing court, an agency's interpretation of its governing statute must be reasonable and based on a "permissible construction of the statute" at issue. *Chevron v. NRDC*, 467 U.S. 837, 843 (1984); *Wagner Seed Co., Inc. v. Bush*, 946 F.2d 918, 920 (D.C. Cir. 1991) (noting that, under *Chevron*, an agency's interpretation of a statute it administers must be reasonable to merit deference). Interpretations that are patently erroneous will be given no deference. *See NARUC v. DOE*, 680 F.3d 819, 824 (D.C. Cir. 2012). Moreover, a statute must be read "as a whole," and each of its provisions must be

given due account. *DAE Corp. v. Engeleiter*, 958 F.2d 436, 439 (D.C. Cir. 1992). Therefore, "in interpreting a statute, the court will not look merely to a particular clause in which general words may be used, but will take in connection with it the whole statute…and the objects and policy of the law." *Stafford v. Briggs*, 444 U.S. 527, 548 (1980) (citation omitted). *See also Alabama Power Co. v. EPA*, 40 F.3d 450, 455 (D.C. Cir. 1994) ("Statutory text is to be interpreted to give consistent and harmonious effect to each of its provisions.").

Even when an agency's interpretation satisfies the *Chevron* criteria, its actions nonetheless may be considered arbitrary and capricious. *See Int'l Union, UMWA v. Mine Safety & Health Admin.*, 626 F.3d 84, 90 (D.C. Cir. 2010); *Eagle Broad. Group, Ltd. v. FCC,* 563 F.3d 543, 551 (D.C. Cir. 2009).

Post hoc rationalizations advanced by an agency to defend past actions against attack should not be upheld. *Christopher v. SmithKline Beecham Corp.*, 132 S. Ct. 2156, 2166 (2012). *Accord Auer v. Robbins*, 519 U.S. 452, 462 (1997), *citing Bowen v. Georgetown Univ. Hosp.*, 488 U.S. 204, 212 (1988). If agency action is to be sustained, it must be on the basis articulated by the agency at the time of its action. *LePage's 2000, Inc. v. Postal Regulatory Comm'n*, 642 F.3d 225, 231 (D.C. Cir. 2011); *TNA Merch. Projects, Inc. v. FERC,* 616 F.3d 588, 593

(D.C. Cir. 2010); *Williams Gas Processing-Gulf Coast Co., LP v. FERC*, 475 F.3d 319, 326 (D.C. Cir. 2006).

V. THE NRC MAY PERMISSIBLY RETAIN JURISDICTION OVER A CATEGORY OF MATERIALS WHILE TRANSFERRING AUTHORITY OVER OTHERS TO AN AGREEMENT STATE

The NRC argues that Section 274d of the AEA deprives it of discretion to retain authority over a category of materials if the state requests that it be transferred and its regulatory program meets the adequacy and compatibility criteria. NRC Brief at 34-35. While the NRC concedes that there is nothing in Section 274's legislative history ordaining that the NRC must transfer jurisdiction over entire categories of materials at the request of an applying state, *id.* at 41-42, it falls back on the use of the word "shall" in Section 274d as requiring the agency to transfer such authority as is sought by the state. *See id.* at 37-38.

The NRC cites, but ignores, the time-honored principle that a statute "must be read 'as a whole,' with the context of statutory language informing its meaning." NRC Brief at 37, *quoting DAE Corp.*, 958 F.2d at 439. A careful reading of Section 274, giving due consideration to every section, demonstrates that the NRC's focus on the single word "shall" in Section 274d is erroneous.

Sections 274a(2) and (3) of the AEA indicate Congress's intent to "promote an orderly regulatory pattern" between NRC and the states and to establish

"programs for cooperation" between them. 42 U.S.C. §§ 2021(a)(2) and (3). Nowhere do these expressions of intent suggest that the NRC will be powerless to deviate from the terms of a state's transfer of authority request.

Section 274b is the key section concerning transfers of NRC authority to the states. It authorizes the NRC "to enter into agreements with the Governor of any State providing for discontinuance of the regulatory authority of the Commission" "with respect to any one or more" classes of materials. 42 U.S.C. § 2021(b). The "any one or more" language clearly gives NRC the discretion to decide the scope of jurisdiction that it will transfer.[3]

Once the NRC decides *which* materials to transfer to a state's jurisdiction, Section 274d specifies, for any proposed transfer selected "under subsection (b)," *how* the NRC should evaluate whether to approve the transfer. In other words, subsection d specifies only the approval criteria, not the scope of the agreement, which is discretionary with the NRC. 42 U.S.C. § 2021(d).

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[3] That Section 274b gives the NRC discretion to decide what materials to transfer is further evidenced by the introduction to the section ("[e]xcept as provided in subsection c."), which excludes entire categories of activities involving licensed materials from being considered for transfer to the states. The NRC's claim that the legislative history supports its construction of the "any one or more" language (NRC Brief at 41) is belied by its own practice of reserving authority over discrete facilities, as illustrated in the Oklahoma example.

A discretion-less scheme, as put forward by the NRC, would also be inconsistent with the opportunity for public comment required under Section 274e, 42 U.S.C. § 2021(e). Were the Commission bound to accept a proposed agreement on whatever terms were sought by a state, this public notice and comment process would be meaningless. Further, Section 274f permits the NRC to grant such exemptions from its regulations as it "finds necessary or appropriate" to carry out agreements under subsection b. *See* 42 U.S.C. § 2021(f). Neither of these provisions is indicative of a scheme that admits no discretion by the NRC in entering into agreements consistent with the objectives of Section 274.

Contrary to the NRC's assertion, the term "shall" in Section 274d does not necessarily equate to a "statutory command" (NRC Brief at 35). *First*, even if it were a statutory command, it would not apply until the NRC had exercised its discretion as to *which* materials are involved. *Second*, "legal writers sometimes use, or misuse, 'shall' to mean 'should,' 'will,' or even 'may.'" *Gutierrez de Martinez v. Lamagno*, 515 U.S. 417, 432 n.9 (1995). It is, therefore, axiomatic that mandatory words – including "shall" – may be construed as permissive if necessary to ensure consistency with "the spirit or purpose" of the statute. *Ballou v. Kemp*, 92 F.2d 556, 558-59 (D.C. Cir. 1937). For example, this Court has held that, notwithstanding the language of Section 189a of the AEA that "the

Commission *shall* grant a hearing" to interested persons upon request,[4] the Commission nonetheless had the discretion to require prospective intervenors to satisfy certain regulatory criteria. *BPI v. AEC*, 502 F.2d 424, 428-29 (D.C. Cir. 1974). Just as *BPI* held that the NRC has discretion when to grant a hearing notwithstanding section 189a's "shall", this Court should also find that the agency has discretion to define the scope of a transfer of authority agreement, notwithstanding Section 274d's "shall."

Finally, in rejecting the Oklahoma example as inapplicable, the NRC identifies no basis for its contention that the Commission is without authority to exclude a sub-category of materials from transfer save at the request of the state. NRC Brief at 43-44. In fact, the NRC appears to agree that the agency has discretion to maintain authority over a particular sub-category of materials. *Id.* None of the statutory requirements or policy considerations is at odds with the NRC's exercising its discretion under Section 274b to withhold transfer of a certain sub-category of materials, regardless of the entity initiating the request.[5]

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[4] 42 U.S.C. § 2239(a)(1)(A) (2006) (emphasis added).

[5] The NRC argues that allowing licensees to request exclusion of facilities from the transfer of authority incentivizes "manipulation" of the licensing process based on a licensee's "commercial interests." NRC Brief at 43. New Jersey even accuses Shieldalloy of engaging in such manipulation through its "11-year delay in pursuing one failed decommissioning plan after another." NJ

VI. NEW JERSEY'S PROGRAM DISRUPTS THE EVALUATION OF SHIELDALLOY'S PROPOSED DECOMMISSIONING PLAN

The NRC's transfer of authority to New Jersey was arbitrary and capricious for contravening Criterion 25, which requires that there be no interference with, or interruption of, the processing of license applications by reason of an agreement state transfer. As this Court found, in the unique circumstances of this case, "[a]t the very least, the NRC should have explained how Shieldalloy's decommissioning process could proceed under the New Jersey regime free of the interference and interruption sought to be avoided by criterion 25 and why the partial transfer was not an appropriate alternative arrangement." *Shieldalloy*, 624 F.3d at 495. The NRC has never answered the Court's call for an explanation.

Instead, the agency now claims that Criterion 25 is just a "housekeeping" provision, designed to ensure an orderly transfer of agency records. NRC Brief at 47-48. The NRC does not try to justify this *post hoc* interpretation, and it argues that it was free on remand to provide a new explanation for transferring authority to New Jersey, despite Criterion 25's requirements. NRC Brief at 46-47. One problem with the new explanation is that it is both inconsistent with the plain language of the Criterion and how the NRC has previously interpreted it. Indeed, before this Court, the NRC described Criterion 25 as follows:

Brief at 19-20. The record, however, reflects only sustained, diligent efforts by Shieldalloy to achieve approval of its decommissioning plan.

> But as called for by Criterion 25, New Jersey's program does take account of existing NRC licenses and provides for the transfer of all active NRC licenses to the state upon the effective date of the agreement. *See Staff Analysis* at 8 (JA 478) (citing N.J. Stat. Ann. § 26:2D-9(k); NJDEP BER Procedure 3.08, *License Transition from NRC to New Jersey*).

Final Brief of Respondent NRC in 09-1268 (Aug. 17, 2010) at 67-68. That explanation nowhere mentions the transfer of records. Criterion 25 requires that arrangements be made so that there is no "interference with or interruption of . . . the processing of license applications". The NRC does not deny that it was aware that the processing of Shieldalloy's license application would be terminated once New Jersey assumed authority, and no arrangements were made to ensure that the application would continue to be properly processed. It is clear that Criterion 25 was not satisfied.

The NRC now alleges that Criterion 25 was not intended to give any substantive, binding, or enforceable rights to licensees. NRC Brief at 47-48 & 48 n.10. Just as this Court told the NRC that the Commission's response with respect to Criterion 25 was "dismissive," (*Shieldalloy,* 624 F.3d at 494), the Court should reject the NRC's newly crafted attempt to insulate its non-compliance from judicial review.

The NRC also alleges that it "*has* considered [the alternative of retaining authority over the Newfield Facility] at length, but concluded that NRC lacks

statutory authority to implement it. There is simply no merit to Shieldalloy's claim that NRC has not considered the alternative it sought." NRC Brief at 49-50 (emphasis in original). Yet, there is no evidence that the NRC considered whether it could retain jurisdiction over the Facility when it decided to approve transferring regulatory authority to New Jersey. Indeed, the first time that the NRC intimated that it lacked authority to retain jurisdiction over the Facility was at oral argument before this Court, and its argument was rejected for lack of record support. *Shieldalloy*, 624 F.3d at 495.

Finally, the NRC contends that Shieldalloy's complaint is without merit because it has "routinely transferred *all* pending NRC license applications to a state," including that for Kerr-McGee's West Chicago facility, where the NRC transferred authority to Illinois over the licensee's objections after the NRC had already approved an onsite disposal plan. NRC Brief at 50-51, *citing Kerr-McGee Chemical Corp.* (West Chicago Rare Earths Facility), CLI-96-2, 43 NRC 13 (1996) (emphasis in original). The agency's assertion that it has acted in the same manner as in *Kerr-McGee* does not defeat Shieldalloy's claim because the NRC's argument fails to answer the objection that the transfer of authority in this case is inconsistent with the commands of Criterion 25. The NRC's action in *Kerr-*

McGee may also have been erroneous,[6] and the mere fact that the agency may have acted inappropriately in that instance in no way justifies its doing so here.[7]

VII. NEW JERSEY'S PROGRAM FAILS TO APPLY THE ALARA PRINCIPLE TO FACILITY DECOMMISSIONING

Shieldalloy has consistently claimed that New Jersey's Program is incompatible with the NRC's because, in the area of decommissioning and license termination, it fails to incorporate the ALARA principle, precluding licensees from selecting the decommissioning method that minimizes radiation doses to the public and decommissioning workers. As discussed in Shieldalloy's Brief, the NRC now makes three ALARA arguments. *First*, its regulations do not require comparing the levels of public health and safety protection afforded by the unrestricted versus restricted release decommissioning options. CLI-11-12 at 37 (JA37). *Second*, making such comparisons is impossible because each option has significantly different risks and uncertainties associated with it. *Id.* *Third*, New Jersey's Program does adopt the ALARA principle. *Id.* at 42-44 (JA42-44). The NRC

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[6] The NRC's action with respect to Kerr-McGee's facility was neither reviewed nor condoned by any Federal court.

[7] In addition, the circumstances of Shieldalloy's situation are distinguishable from those presented in the *Kerr-McGee* case. There, no ongoing review by the NRC of a license application was occurring at the time that the transfer of regulatory authority occurred.

Brief focuses on, and largely reiterates, the first two arguments, which are addressed here.[8]

A. The ALARA Principle Requires Comparing the Doses from the Unrestricted and Restricted Release Options

The NRC Brief reiterates the startling pronouncement in CLI-11-12 that the ALARA compliance provision in 10 C.F.R. § 20.1403(a) does not require comparing the health and safety consequences of implementing the restricted versus unrestricted release decommissioning options. NRC Brief at 52. The NRC's attempt to defend this position relies on unsound and contradictory arguments.

The NRC acknowledges that the "comprehensive NRC guidance document, NUREG-1757" (NRC Brief at 11) calls in several places (R9 (NUREG-1757), Vol. 2 at 6-1, 6-3, N-6 (JA251, JA253, JA263)) for cost-benefit comparisons between restricted and unrestricted release decommissioning options. NRC Brief at 61-63. The NRC seeks to explain this guidance away as dealing with "ALARA restricted release eligibility." *Id.* at 61. The NRC goes on to argue that "restricted release

[8] The NRC relegates its argument that New Jersey's Program implements ALARA to a sentence in a footnote. NRC Brief at 52 n.12. This argument is patently invalid because New Jersey does not permit application of ALARA to the license termination process by excluding the license termination provisions of Subpart E of 10 C.F.R. Part 20 from its regulations. New Jersey concedes that this is the case. NJ Brief at 32-33.

eligibility" only requires a cost-benefit analysis of implementing the *unrestricted* release option and, if "reducing radioactivity to the level of adequate protection for unrestricted use (25 mrem per year) is cost-beneficial – i.e., the benefits outweigh the costs – the licensee must pursue unrestricted use under 10 C.F.R. § 20.1402 and is not eligible for restricted use." *Id.* at 14. This interpretation is incorrect. If that were the case, it would be unnecessary to perform a cost-benefit analysis of the *restricted* release option because, if the unrestricted option proved to be "cost-beneficial," that would be the end of the inquiry. The NRC's attempted explanation ignores the second half of 10 C.F.R. § 20.1403(a) after the word "or", that calls for an ALARA analysis of the restricted release option ("further reductions in residual radioactivity . . . were not being made because the residual levels associated with restricted conditions are ALARA").

In reality, the NRC regulations require that the licensee perform an analysis of the costs and benefits of *both* options and then select the restricted release option for implementation in either: "situation (1)", where the cost-benefit analysis of the unrestricted release option shows it to be unfavorable (i.e., if the unrestricted release option "would result in net public or environmental harm"), or "situation (2)", where the residual radiation doses resulting from implementation of the restricted release option "are ALARA," that is, the restricted release option

yields doses that are lower than those from implementing the unrestricted release option.[9]

That such is the required approach is demonstrated by the NRC Staff's review of all versions of Shieldalloy's DP for the Facility.[10] At no point did the NRC take exception to the ALARA approach described in Chapter 7 of the DP, which included cost-benefit analyses of both options and a determination of which one results in the lowest radiation doses, using methodologies and input parameters recommended by the NRC. Likewise, the NRC's requests for additional information ("RAIs") issued in its review of DP Rev.1a uniformly confirm that the

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[9] NUREG-1757 explains that for a decommissioning option to be ALARA, the monetized present worth of the future collective radiation doses averted must be less than the cost of implementing the decommissioning option being evaluated. NUREG-1757, Vol. 2 at 6-3 (JA253). If two alternatives meet the ALARA criterion, the option with the highest benefit from collective radiation doses averted is preferred, as required by ALARA. In the case of the Facility, the restricted release option has been demonstrated to be preferable under ALARA. *See, e.g.,* DP Rev. 1b, Section 7.4 (SA121-22).

[10] The NRC attempts to shrug off the Court's observation (*Shieldalloy*, 624 F.3d at 496 at n.9) that Rev.1 of Shieldalloy's DP (October 2005) included the very ALARA analysis that the NRC now claims is inappropriate. The NRC states that the 2005 plan "was rejected by the NRC staff as not being in compliance with NRC's license-termination regulations." NRC Brief at 67. Actually, the reasons for the rejection of Rev.1 are set forth in a January 26, 2006 NRC letter (ADAMS Accession Number ML060180551) (JA156-61). They had nothing to do with the ALARA analysis, contained in Chapter 7 of the DP (ADAMS Accession No. ML053190220) (SA27-44). The same ALARA analysis was included in Rev.1a of the DP, *see* June 30, 2006 letter from Shieldalloy to the NRC (ADAMS Accession Number ML061980092) (SA48-49) describing the changes from Rev.1 to Rev.1a, none of which involved the ALARA analysis.

DP's comparisons between the unrestricted and restricted release options were appropriate. *See* Attachment to July 7, 2007 letter from NRC to Shieldalloy, RAI Nos. 30, 31, 32, 37, 40, and 42 (JA392-99).[11]

The NRC posits that a cost-benefit analysis of the unrestricted release option will prove unfavorable at sites like the Facility because the cost of implementing that option will be higher than the monetized value of the dose reduction benefits it provides. NRC Brief at 54-56. That hypothesis is, in fact, incorrect for the Facility,[12] and in any event "situation (2)", contemplated by Section 20.1403(a), is not based on the cost-effectiveness of implementing the unrestricted release option, but on the relative dose reduction potentials of the restricted and unrestricted release options.

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[11] Later RAIs asked clarifications of details of the ALARA analysis, and the NRC held meetings and telephone conferences with Shieldalloy on the subject, but never questioned the comparisons between restricted and unrestricted release options contained in Chapter 7 of the DP. *See* December 5, 2008 NRC Memorandum and attachment (ADAMS Accession No. ML083260733) (SA70-80); February 17, 2009 letter from NRC to Shieldalloy and attachment (ADAMS Accession No. ML083450344) (SA81-110).

[12] Shiledalloy's ALARA analyses demonstrate that *both* the unrestricted and restricted release options are cost-effective for the Facility. The choice between the two is dictated by their respective dose reduction potential. *See* DP Rev.1b, Section 7.4 (SA121-22). During the years it spent reviewing the DP application, the NRC never once asserted that the unrestricted release option, being cost-beneficial, had to be implemented at the Facility.

Finally, the NRC argues that, if the comparisons that Shieldalloy calls for were valid, the NRC "would surely have made [performing the comparisons] a condition of unrestricted release as well," and has not done so. NRC Brief at 60. However, as the NRC itself points out, the unrestricted release option is preferred, and the NRC will allow the option to be selected without further inquiry. It is only when the licensee seeks to implement the restricted release option that the regulations require the comparisons called for in 10 C.F.R. § 20.1403(a).

B. Comparisons Between the Dose Reductions Afforded by Restricted and Unrestricted Release Options Are Possible and Meaningful

The NRC Brief argues that comparisons between the levels of radiation dose protection provided by the unrestricted and restricted release options are "'meaningless' due to the 'significantly different methods to achieve adequate protection' and their 'significantly different risks and uncertainties.'" NRC Brief at 64, quoting CLI-11-12 at 37. The NRC does not claim that it is impossible to quantify the dose reductions afforded by the restricted release method and compare them to those provided by decommissioning a facility to unrestricted release standards. Instead, the NRC cites to a showing required by 10 C.F.R. § 20.1403(e) that, if everything goes wrong and there is a total failure of the institutional controls and protective measures mandated by the other subparts of Section 1403, "there is reasonable assurance that the TEDE from residual radioactivity

distinguishable from background to the average member of the critical group is as low as reasonably achievable and would not exceed…100 mrem (1 mSv) per year . . . ." The NRC invokes this hypothetical demonstration to claim that comparisons between the restricted and unrestricted options are not possible. The NRC is, however, comparing apples and oranges. The method proposed by Shieldalloy is the one that should be used for comparison: a method in which durable barriers, the type and construction of which must be approved by the NRC, and permanent institutional controls, supervised by the NRC itself, are in place for 1000 years. Under that method, the restricted release option is the one most protective of public health and safety, and the one that would be approved if New Jersey applied the ALARA principle to the decommissioning options for the Facility. The NRC's finding that New Jersey's Program is compatible with the NRC's, despite the Program's failure to apply ALARA to the decommissioning of licensed facilities, was arbitrary and capricious.

VIII. NEW JERSEY'S PROGRAM FAILS TO PERMIT LICENSE TERMINATION UNDER RESTRICTED RELEASE CRITERIA

As discussed in Shieldalloy's Brief, New Jersey's Program is incompatible with the NRC's because, while allowing for site *remediation* to a restricted-release condition, it does not permit license *termination* for a site remediated to restricted-release criteria. The NRC claims that the regulations upon which Shieldalloy's

argument relies are not applicable and that the New Jersey scheme allows license termination for a site remediated to restricted release standards. NRC Brief at 69. New Jersey even argues that its regulations "*require* license termination for sites decommissioned under the restricted release standard." NJ Brief at 34 (emphasis added). These conclusions are not supported by the New Jersey regulations.

The NRC claims that the restricted use "remedial action permits" (whose use is directed by N.J. Admin. Code § 7:26C-7.10(b)), which must remain in place as long as institutional or engineered controls need to be maintained for a site, do not apply to remediation of materials sites like the Facility. NRC Brief at 70. However, the New Jersey materials site decommissioning regulations (N.J. Admin. Code § 7:28-12.1 *et seq*.) require that any "licensee conducting remediation pursuant to this subchapter shall comply with the requirements of N.J.A.C. 7:26E, Technical Requirements for Site Remediation, excluding those sections related to sampling, surveying, and background investigations." N.J. Admin. Code § 7:28-12.4(a) (2012). In turn, subchapter 7:26E requires that a licensee conducting remediation must "[o]btain and comply with a remedial action permit pursuant to N.J.A.C. 7:26C-7 for a restricted use or limited restricted use remedial action." N.J. Admin. Code § 7:26E-5.2(a)(5) (2012).[13] Therefore, under New Jersey's

[13] New Jersey cites to N.J. Admin. Code § 7:26C-1.4 (2012) for the proposition that New Jersey "does not utilize the remedial action permit for remediations

Program, a remedial action permit must be obtained and remain in place as long as any institutional or engineered controls need to be maintained at any materials site remediated to a restricted-release status.

The NRC also argues that obtaining and operating under such a permit would be no different than maintaining the institutional controls required under the NRC regulations for restricted release. NRC Brief at 70. That is not a valid comparison. The NRC regulations permit license termination if custody and long-term control of a remediated site is held by a government agency, or if a long-term care and control license is issued to a private entity. *See* 10 C.F.R. § 20.1403(c) (2012). The Program, on the other hand, does not permit license termination under either scenario.[14] In addition, New Jersey admits that it will not issue any long-

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subject to its Agreement State authority." NJ Brief at 35. Section 7:26C-1.4 identifies other persons who also must comply with the State's requirements for the remediation of contaminated sites; it does not exempt licensees subject to New Jersey's Agreement State authority from complying.

[14] New Jersey claims that it "incorporated the NRC regulations that provide for long-term control of a remediated site by a governmental entity," citing N.J. Admin. Code § 7:28-12.12(b)2, which cites to 10 C.F.R. § 20.1403(c). NJ Brief at 36. However, the New Jersey regulation only incorporates the portion of the NRC regulation that defines acceptable financial assurance mechanisms; a licensee must "provide sufficient financial assurance for the costs of implementing and maintaining the requisite active engineered or institutional controls for an appropriate period of time. *Acceptable financial assurance mechanisms are set forth at 10 C.F.R. § 20.1403(c), incorporated herein by reference*." N.J. Admin. Code § 7:28-12.12(b)2 (2012) (emphasis added). 10 C.F.R. § 20.1403, including the remainder of 10 C.F.R. § 20.1403(c), is *not*

term care and control licenses. NJ Brief at 35-36 n.7; *see also* December 11, 2009 letter to Shieldalloy from NJDEP (JA680).

The NRC next alleges that the New Jersey form that requires a licensee to certify that all radioactive materials have been disposed of and a radiation survey confirming the absence of licensed radioactive materials at the site before a license can be terminated[15] may be disregarded because the form is merely a "standard information form," a "check-list" "used for informational purposes" and "not a regulation." NRC Brief at 71 & n.16. However, filing of that certification is explicitly required by the New Jersey regulations. *See* N.J. Admin. Code § 7:28-58.1(a) & (c)), incorporating 10 C.F.R. § 40.42(j)(1) and its requirement that prior to license termination a licensee must "[c]ertify the disposition of all licensed material, including accumulated wastes, by submitting a completed [NJRAD] Form 314 or equivalent information." In addition, far from being an inconsequential "check-list," NJRAD Form 314 requires a certification by the licensee that all radioactive materials at its site have been disposed of and a survey has been performed verifying the absence of any radioactive materials remaining at

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incorporated into New Jersey's regulations. *See* N.J. Admin. Code § 7:28-6.1(c) (2012).

[15] NJRAD Form 314, available at http://www.state.nj.us/dep/rpp/rms/forms.htm (Termination) (JA446-47).

the site. The certification required by that form could never be made (and the license could not be terminated) if radioactive materials were to remain onsite.[16]

Finally, the NRC and New Jersey argue that New Jersey's Program is compatible with the NRC's because it adopts 10 C.F.R. § 40.42(k), which requires license termination for a decommissioned site (NRC Brief at 69-70; NJ Brief at 34). The argument, however, fails to take into account the requirements of 10 C.F.R. § 40.42(j)(1) (also adopted by New Jersey's Program) and NJRAD Form 314, which predicate license termination on removing all radioactive material from the site. Those requirements preclude license termination under restricted release conditions.

IX. NEW JERSEY'S PROGRAM FAILS TO IMPLEMENT NUMEROUS REQUIREMENTS OF THE NRC REGULATIONS

Shieldalloy alleges that New Jersey's Program fails to embody the essential objective of the LTR because its facility decommissioning provisions deviate from the LTR in significant respects. The NRC claims that New Jersey's Program is permissibly more stringent than the NRC's, something that is allowed by the LTR's Compatibility Category C designation, and characterizes Shieldalloy's

[16] Shieldalloy accepts the NRC's explanation (NRC Brief at 71) that 10 C.F.R. § 40.27 is inapplicable to a materials license site such as the Facility. The provision is still relevant, however, in evidencing a willingness by the NRC to allow a government agency to assume long-term custody and control of decommissioned sites in appropriate circumstances.

complaint as reflecting disagreement with the agency's compatibility policy of allowing agreement states to adopt requirements more restrictive than the NRC's. NRC Brief at 72-74.

Despite the NRC's assertions, Shieldalloy's complaint has never been with the designation of the LTR as Compatibility Category C. Instead, Shieldalloy challenges NRC's application of its compatibility approach to New Jersey's Program because the Program's deviations from the LTR fail to satisfy the essential objective of the LTR, i.e., "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." CLI-11-12 at 47, citing 62 Fed. Reg. 39,058 (July 21, 1997) (JA47). The NRC fails to demonstrate how the paramount objective of the LTR is satisfied in light of these deviations.

As explained above and in Shieldalloy's Opening Brief, the departures of the New Jersey Program from the NRC's regulations in the areas of ALARA and decommissioning and license termination under restricted-release criteria produce detrimental impacts on public health and safety by resulting in undue public exposure to radiation. These deviations from the LTR elements are not "permissibly more stringent" (NRC Brief at 72); they subvert, rather than fulfill,

the essential objective of the LTR. Other deviations may also have a detrimental impact on public health and safety, contrary to the LTR's objective. For instance, the Program's requirement that radioactively contaminated ground and surface water be remediated in accordance with its water quality requirements may well result in higher radiation doses to decommissioning workers through excessive remediation.

When the LTR was promulgated, the NRC considered how remediation should be accomplished to fulfill the essential objective of avoiding undue impacts on public health and safety and the environment and sought to strike a balance that would best further the rule's essential objective. In that process, the NRC considered and rejected each of the referenced positions incorporated in New Jersey's Program. *See* 62 Fed. Reg. at 39,059-76.

Because these positions were considered and rejected by the NRC and radically depart from those contained in the LTR, it is difficult to see how the Program can embody the essential objective of avoiding undue impacts on public health and safety and the environment. Indeed, it cannot.

X. NEW JERSEY'S PROGRAM FAILS TO ASSURE THE FAIR AND IMPARTIAL ADMINISTRATION OF REGULATORY LAW

In defending its finding that New Jersey's Program satisfies Compatibility Criterion 23, the NRC disregards the numerous indications of unfairness adduced

by Shieldalloy. Instead of acknowledging its obligation to subject the Program to meaningful scrutiny to ensure "fair and impartial administration," the NRC asserts that such scrutiny was not warranted, and that any unfairness in the Program can be remedied through post-transfer NRC oversight. These arguments, when applied to the situation in this case, reduce Criterion 23 to a nullity.

The NRC reiterates that having an Agreement State's regulations apply to a single licensee "at any given time" does not render such regulations inherently unfair. NRC Brief at 75. This argument disingenuously ignores the fact that the Facility is the only site in New Jersey to which the license termination provisions of New Jersey's Program will *ever* apply. This fact, and NRC's recognition that those provisions may have been "intended to effectuate a state-desired regulatory outcome" (*id.* at 76), should have triggered intense NRC scrutiny. The NRC disclaims any responsibility to do this; it is content to limit its review to the procedural indicia of a fair program, such as administrative and judicial review. *Id.* at 77.

Such limited levels of review are inadequate if, as is the case here, the agency's administrative scheme is not initially structured in a fair and impartial manner. New Jersey courts owe substantial deference to state administrative agency decisions. *Circus Liquors, Inc. v. Governing Body of Middletown Twp.*, 970 A.2d 347, 351 (N.J. 2009). Such judicial review of administrative decisions is

inadequate to address the requirement of Criterion 23 that the administrative scheme be structured in a "fair and impartial" manner from the outset.

In the absence of any pre-transfer scrutiny, the NRC asserts that it will exercise, post-transfer, "vigilant oversight over the ongoing effectiveness of the agreement-state programs" (NRC Brief at 77) and invites Shieldalloy "to raise any agreement-state performance concerns with the NRC at any time." *Id.* at 76. However, the NRC's repeated dismissal of Shieldalloy's objections and concerns regarding the validity of the transfer of authority reveals the futility of such a purported remedy. *See* Shieldalloy's Brief at 61 n.25.[17] The NRC has repeatedly taken actions calculated to allow New Jersey to effectuate its "state-desired regulatory outcome" (*id.* at 59) to force the removal of the materials currently at the Facility. Once New Jersey asserts its regulatory authority, no amount of "vigilant oversight" by the NRC will prevent that outcome from materializing.[18]

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[17] Despite labeling Shieldalloy's concerns as "cynicism", NRC Brief at 77, the NRC provides no basis for Shieldalloy to reasonably expect such "vigilant oversight" to be effective.

[18] New Jersey takes a different tack to defend the fairness of its Program: it seeks to contest the examples of unfairness cited by Shieldalloy. It claims that it, too, implements ALARA (but not in the relevant area of decommissioning and license termination, *see* Section VII above); that it allows site remediation to restricted release criteria (but does not allow a license to be terminated until all radioactive materials have been removed from a site, *see* Section VIII); that the NRC, like New Jersey, requires dose modeling beyond 1,000 years (an incorrect argument belied both by the LTR's Statement of Considerations and

Thus, the NRC's casting aside Criterion 23 and its approval of a New Jersey regulatory scheme aimed solely at the Facility was arbitrary and capricious.

XI. CONCLUSION

In *Shieldalloy*, this Court agreed with two of Shieldalloy's central challenges to the NRC's original transfer of regulatory authority to New Jersey: (1) that "New Jersey's program is incompatible with the federal scheme" and (2) that "the transfer of authority was arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." *Shieldalloy*, 624 F.3d at 491 (quotation and citation omitted). The NRC and New Jersey have failed to justify a different outcome this time around. The Court should therefore direct the NRC to rescind its transfer of regulatory authority over the Facility to New Jersey and reinstate its authority over the Facility.

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the LTR itself, *see* 62 Fed. Reg. at 39,070 and 10 C.F.R. § 20.1401(d)); and that, contrary to the NRC practice, *see* 62 Fed. Reg. at 39,069-70 and NUREG-1757, Vol.1, § 17.7.6 (JA77-78 and JA199-201), it need not allow the taking of credit for gradual degradation of institutional controls because it assumes that such controls disappear instantaneously. *See* NJ Brief at 40-42. Not only are these arguments erroneous, but they are immaterial to the fairness issue and should be disregarded.

Respectfully submitted,

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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 "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 table of contents; table of authorities; glossary; the addendum containing statutes, rules or regulations; and the certificates of counsel, 6,937 words of proportionally spaced, 14 point Times New Roman font text.

In making this certification, Counsel has relied on the word count function of Microsoft Word, 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 five paper copies of the foregoing Brief of Petitioner Shieldalloy Metallurgical Corporation (the "Brief") were filed with the Clerk of the Court this 26th day of July 2012. In addition, on this 26th day of July 2012, paper copies of the Brief were served on the following participants in the case by United States first class mail, postage prepaid:

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