

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Gregory B. Jaczko, Chairman  
Kristine L. Svinicki  
George Apostolakis  
William D. Magwood, IV  
William C. Ostendorff

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In the Matter of	)	
	)	
SHIELDALLOY METALLURGICAL CORP.	)	Docket No. 40-7102-MLA
	)	
(License Amendment Request for	)	
Decommissioning of the Newfield,	)	
New Jersey Site)	)	

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CLI-11-12

**MEMORANDUM AND ORDER**

The controversy before us today arises under the Commission's agreement-state program. Under section 274 of the Atomic Energy Act (AEA),<sup>1</sup> the Commission is authorized to enter into agreements with the governor of any state providing for transfer of regulatory authority to the state over specified categories of nuclear material. Prior to entering into a section 274 agreement, we must find that a state's regulatory program is "adequate" to protect the public health and safety with respect to the materials the state seeks to regulate, and "compatible" with our program for regulation of such materials.

In 2009, we entered into a section 274 agreement with the State of New Jersey providing for the transfer of regulatory authority to the state over source, byproduct, and special nuclear materials (in quantities below a critical mass). Shieldalloy Metallurgical Corporation, which had been pursuing license termination under the NRC's regulations

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<sup>1</sup> Atomic Energy Act of 1954, as amended, § 274, 42 U.S.C. § 2021 (2011).

for its source material site in New Jersey, filed suit in the United States Court of Appeals for the District of Columbia Circuit contesting the lawfulness of the agreement as to its site. In *Shieldalloy Metallurgical Corp. v. NRC*, the court found NRC's explanation of its transfer of regulatory authority to New Jersey with respect to Shieldalloy's site insufficient, vacated the transfer, and remanded the case to us to conduct proceedings consistent with the court's opinion.<sup>2</sup>

Today, we revisit New Jersey's application for regulatory authority as it pertains to the Shieldalloy site in light of the court's remand decision and in light of responses filed by New Jersey and Shieldalloy to our request for their views. For the reasons set forth below, we reinstate the transfer of our regulatory authority over Shieldalloy's site to New Jersey.

## I. BACKGROUND

The background of this proceeding is set forth in detail in the court's decision in *Shieldalloy* and our prior decision denying Shieldalloy's request for a stay of the New Jersey agreement.<sup>3</sup> Here, we briefly summarize the background as relevant to our decision in response to the court's remand in *Shieldalloy*.

### A. Shieldalloy's license termination application.

Shieldalloy owns an industrial site containing radioactive waste in Newfield, New Jersey. At the time the NRC and New Jersey entered their section 274 agreement, Shieldalloy had for nearly ten years sought NRC approval of a decommissioning plan for leaving radioactive material on site under the NRC's license termination provisions for restricted release in 10 C.F.R. § 20.1403. The NRC staff had considered and rejected Shieldalloy's original two onsite decommissioning proposals, filed in 2002 and 2005,

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<sup>2</sup> 624 F.3d 489 (D.C. Cir. 2010).

<sup>3</sup> See *Shieldalloy Metallurgical Corp.* (Newfield, New Jersey Site), CLI-10-8, 71 NRC 142 (2010).

respectively. In 2006, the staff accepted and docketed a third proposed onsite disposal plan for the purpose of initiating a technical review. The Licensing Board granted a request for hearing by New Jersey opposing Shieldalloy's decommissioning plan for restricted release. The NRC staff's review of Shieldalloy's third proposal uncovered numerous deficiencies, prompting multiple staff requests for additional information in July 2007. Shieldalloy filed a revised plan in August 2009 in response to the staff's information requests. By then, the Commission was on the verge of entering into the section 274 agreement with New Jersey. When the Commission formally entered the agreement and discontinued regulatory authority, the staff terminated its review of Shieldalloy's decommissioning plan and forwarded the files associated with its safety and environmental review to New Jersey.

#### **B. New Jersey's Agreement-State Application.**

In 2008, New Jersey applied to become an agreement state under section 274 of the AEA to regulate source material, byproduct material, and special nuclear material in quantities not sufficient to form a critical mass. After reviewing New Jersey's application, including the state's regulatory program, the NRC staff found that the application met section 274's "compatibility" and "adequacy" requirements, and proposed that the Commission approve it. Prior to Commission approval, the NRC solicited public comments. Shieldalloy filed comments opposing the agreement-state application.

In its comments on the New Jersey application for an agreement, Shieldalloy largely complained that various aspects of New Jersey's decommissioning scheme were too strict compared to NRC's. The staff rejected these objections, concluding that under section 274 and our longstanding agreement-state policy more stringent state regulation of license termination is permissible. Shieldalloy also commented that New Jersey's program fails to satisfy a number of criteria set forth in a longstanding Commission policy

statement for assessing a state's program for agreement-state purposes.<sup>4</sup> The staff's responses to Shieldalloy's comments regarding one of these criteria, "Criterion 25," later proved central to the court's remand decision.

Criterion 25 states that "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." Shieldalloy invoked that criterion as support for its comment that NRC has the "power" to exclude the Newfield site from the transfer of authority to New Jersey, and retain it at NRC, even if the NRC decides to enter into the agreement with New Jersey. In response, the staff stated that "Congress did not intend to allow concurrent regulatory authority over licensees for public health and safety" and "[i]f 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."<sup>5</sup>

Shieldalloy also commented that New Jersey's program fails to satisfy Criterion 25 because New Jersey had not made "appropriate arrangements" with the NRC to ensure that there will be no interference with the processing of its proposed decommissioning plan when regulatory authority transferred to the state. The staff responded, in pertinent part, that New Jersey law provides for recognizing existing NRC licenses, and that New Jersey "will continue any licensing actions that are in progress at the time of the Agreement and make the final decision on all pending licensing actions."<sup>6</sup>

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<sup>4</sup>See Criteria for Guidance of States and NRC in Discontinuance of NRC Regulatory Authority and Assumption Thereof by States Through Agreement, 46 Fed. Reg. 7540 (Jan. 23, 1981) (1981 Policy Statement).

<sup>5</sup>"Section 274b Agreement with the State of New Jersey," Commission Paper SECY-09-0114, Memorandum from R.W. Borchardt, Executive Director for Operations to the Commissioners (Aug. 18, 2009), Enclosure 2, "Staff Analysis of Public Comments," at 10 (ADAMS accession no. ML091940200 (package)).

<sup>6</sup> *Id.* at 8.

The staff concluded that this “will ensure a smooth transition of authority from NRC to NJ so that licensees can continue to operate without interference with or interruption of licensed activities.”<sup>7</sup>

We approved the agreement with New Jersey, and Shieldalloy subsequently filed its lawsuit challenging the NRC's entry into the agreement. The *Shieldalloy* court decision vacating the New Jersey agreement as to Shieldalloy's site, and remanding the case to the NRC for further proceedings, is the outcome of that lawsuit.

## II. THE COURT'S REMAND

In its remand decision, the court held that the Commission's agreement-state decision and supporting staff analysis did not adequately explain why the NRC could not have retained jurisdiction over Shieldalloy's site under Criterion 25. The court characterized the staff's response to Shieldalloy's comment that the NRC had the authority to retain jurisdiction over the Shieldalloy site as “inapposite and woefully incomplete.”<sup>8</sup> Referencing the NRC's prior approval of the State of Oklahoma's request, in its agreement-state application, for the NRC to retain jurisdiction over a “subcategory of materials,”<sup>9</sup> the court observed that the “NRC practice leaves it far more leeway than its dismissive answer to Shieldalloy suggests.”<sup>10</sup>

The court also found “dismissive” and inadequate the NRC staff's response to Shieldalloy's other comment invoking Criterion 25 – that transfer of the Shieldalloy site to New Jersey would be inconsistent with Criterion 25 because New Jersey “had not attempted to make appropriate arrangements to guarantee a smooth transition for the

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<sup>7</sup> *Id.*

<sup>8</sup> *Shieldalloy*, 624 F.3d at 493.

<sup>9</sup> *Id.* at 493-94.

<sup>10</sup> *Id.* at 493.

pending Shieldalloy decommissioning plan.”<sup>11</sup> The court concluded that “[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 . . . partial transfer was not an appropriate alternative arrangement.”<sup>12</sup>

The court did not decide various other Shieldalloy arguments against the NRC-New Jersey Agreement, including claims that New Jersey's regulatory scheme lacks an “ALARA” provision and is not “compatible” with the NRC's program in a number of other ways. The court concluded that NRC's “insufficient explanations” in response to Shieldalloy's comments regarding the applicability of Criterion 25 and retention of NRC jurisdiction over Shieldalloy's site rendered the transfer of jurisdiction to New Jersey as to Shieldalloy “arbitrary and capricious.”<sup>13</sup> Hence, the court granted Shieldalloy's petition for review, vacated the transfer of authority as to the Shieldalloy site, and remanded for proceedings consistent with the court's opinion.<sup>14</sup>

### III. DISCUSSION

Our evaluation of the New Jersey agreement included a review of the NRC staff's analysis and comment responses. The court's remand decision as to the Newfield site centered only on the inadequacy of the staff's responses to Shieldalloy's comments regarding Criterion 25. The court did not address Shieldalloy's other concerns. To assure a full airing of the matter, however, we decided to examine anew all of the issues surrounding transfer of the Newfield site to New Jersey and afford Shieldalloy a fresh

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<sup>11</sup> *Id.* at 493-94.

<sup>12</sup> *Id.* at 495.

<sup>13</sup> *Id.* at 497.

<sup>14</sup> *Id.*

opportunity to comment on New Jersey's agreement-state application. Accordingly, we invited Shieldalloy, as well as New Jersey, to submit any views on whether we should reinstate the transfer of regulatory authority to New Jersey or retain regulatory authority over the Shieldalloy site.<sup>15</sup> Shieldalloy and New Jersey each filed initial and reply responses on February 4, 2011, and February 11, 2011, respectively.<sup>16</sup> New Jersey, unsurprisingly, argues in favor of reinstating its agreement-state authority over the Shieldalloy site. Shieldalloy, on the other hand, again asserts that considerations of health and safety, as well as fairness and efficiency, dictate that we retain authority over its site. Shieldalloy objects to New Jersey being given agreement-state authority over its site on a number of grounds, some of which were reflected in its initial comments on New Jersey's application and others that it now raises before us for the first time.

After a full review, we again find it lawful and appropriate to transfer authority to New Jersey. We consider Shieldalloy's contrary arguments below.

#### **A. Compliance with the Court's Remand Decision**

Shieldalloy claims that the Commission must retain regulatory authority over the Newfield site in order to comply with the court's remand decision and mandate.<sup>17</sup> We disagree. The court's remand did not direct the outcome of our ultimate decision whether the Newfield site may be transferred to New Jersey. To the contrary, the court made clear that the basis for its decision to vacate the transfer of authority as to the

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<sup>15</sup> See Order (Requesting Views), at 1 (Jan. 3, 2011) (unpublished) (ML110030957).

<sup>16</sup> See Letter from Paula T. Dow, Attorney General of New Jersey, to USNRC (Feb. 4, 2011); *Shieldalloy's Response to the Commission's January 3, 2011 Order* (Feb. 4, 2011) (Shieldalloy Initial Response); Letter from Paula T. Dow, Attorney General of New Jersey, to USNRC (Feb. 11, 2011) (New Jersey Reply); *Shieldalloy's Response to New Jersey's Letter Regarding the Commission's January 3, 2011 Order* (Feb. 11, 2011) (Shieldalloy Reply).

<sup>17</sup> See, e.g., Shieldalloy Initial Response at 8 ("The Court's decision and mandate signify that the Commission is to retain jurisdiction over the Newfield facility.").

Newfield site was “the NRC's insufficient explanations on the applicability of criterion 25 and the retention of jurisdiction.”<sup>18</sup> The court explicitly did not address Shieldalloy's other claims as to the adequacy or compatibility of New Jersey's regulatory program.<sup>19</sup> Where, as here, there is a judicial remand to an agency on the ground of deficient reasoning, what the agency must do is improve its reasoning, not necessarily reach a different bottom-line result.<sup>20</sup> Therefore, we could have satisfied the court's remand by simply providing a more thorough response to Shieldalloy's comments regarding Criterion 25 and then relying on the remainder of the agency record already in existence. But by re-examining all pertinent issues surrounding transfer of the Newfield site and giving Shieldalloy a fresh opportunity to present its views, not limited to Criterion 25 or matters raised during the initial comment period, we are not only acting in compliance with the court's remand but also are going beyond what, strictly speaking, the court's remand required. We reject Shieldalloy's position that the court remand decision required us to retain regulatory authority over the Newfield site.

#### **B. The Commission's Authority to Retain Jurisdiction Over a Site at the Request of a Licensee**

In the late 1990s, in response to the State of Oklahoma's request to exclude

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<sup>18</sup> *Shieldalloy*, 624 F.2d at 497. See also *id.* at 493 (finding NRC's response to Shieldalloy's request for exclusion of Newfield site under Criterion 25 to be “inapposite and woefully incomplete”); 494 (finding “equally dismissive” the NRC's response to Shieldalloy's claim that Criterion 25 would not be satisfied because New Jersey would disrupt its license termination process).

<sup>19</sup> *Id.* at 496.

<sup>20</sup> See, e.g., *Heartland Reg'l Med. Ctr. v. Leavitt*, 415 F.3d 24, 29-30 (D.C. Cir. 2005) (“[T]he usual rule is that . . . an agency that cures a problem identified by a court is free to reinstate the original result on remand.”); *Nat'l Treasury Emps. Union v. Fed. Labor Relations Auth.*, 30 F.3d 1510, 1514 (D.C. Cir. 1994) (“[W]e frequently remand matters to agencies while leaving open the possibility that the agencies can reach exactly the same result as long as they rely on the correct view of a law that they previously misinterpreted, or as long as they explain themselves better or develop better evidence for their position.”). See generally R. Levin, *A Blackletter Statement of Federal Administrative Law*, 54 Admin.L.Rev. 1, 44-45 (2003).

certain decommissioning sites from its proposed section 274 agreement, we approved an NRC staff-developed guideline for retaining NRC authority over subcategories of materials or activities within one of the three nuclear material categories (*i.e.* source, byproduct, or special nuclear material). The staff policy developed for the Oklahoma agreement provided that state requests for limited agreements would be considered by the NRC only if the state can “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.”<sup>21</sup>

In *Shieldalloy*, the court indicated that the NRC's refusal to retain regulatory authority over the Newfield site, as Shieldalloy had requested, appeared to be inconsistent with the policy for limited agreements and retention of sites that we developed in the Oklahoma agreement context. Noting that “NRC practice leaves it far more leeway [to retain individual sites within a materials category] than its dismissive answer to Shieldalloy suggests,”<sup>22</sup> the court pointed out that the NRC approved a limited agreement with Oklahoma excluding “certain subcategories of materials that in fact covered a very limited set of sites” within the state.<sup>23</sup> The court found that the Oklahoma limited agreement was “strikingly relevant to Shieldalloy's situation” in view of Shieldalloy's argument that “*its* radioactive wastes constitute the sole New Jersey example of a discrete subcategory of materials,” and that the NRC had not explained why “partial transfer was not an appropriate alternative arrangement.”<sup>24</sup>

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<sup>21</sup> See *Shieldalloy*, 624 F.3d at 494.

<sup>22</sup> *Id.* at 493.

<sup>23</sup> *Id.* at 494.

<sup>24</sup> *Id.* (emphasis in original).

The court noted, however, that at oral argument NRC's counsel offered an original interpretation of section 274's agreement-state provisions that distinguished New Jersey's agreement proposal from Oklahoma's. Citing AEA section 274d, 42 U.S.C. § 2021d, NRC's counsel argued, in effect, that “the statute did not permit a partial transfer otherwise than at the request of the would-be transferee state” if the NRC determines that the conditions of state certification, adequacy, and compatibility are satisfied.<sup>25</sup> The court acknowledged that “[t]his [interpretation] would rule out limiting transfers at the behest of regulated firms.”<sup>26</sup> But the court observed that a different AEA provision, section 274b (42 U.S.C § 2021(b)), providing that “the Commission is *authorized* to enter into agreements’ with a state ‘with respect to *any one or more of*’ a variety of classes of nuclear materials” raises an ambiguity as to the NRC's “discretion to negotiate the terms of the agreement with the state requesting authority.”<sup>27</sup> The court concluded that under applicable Supreme Court precedent – *Chevron, U.S.A. v. Natural Res. Def. Council*, 467 U.S. 837 (1984); *SEC v. Chenery Corp.*, 318 U.S. 80 (1943); and *United States v. Mead Corp.*, 533 U.S. 218 (2001) – it could not “defer to interpretive proposals offered by NRC counsel at oral argument” and “affirm on the basis of that reading” when the statute does not “plainly compel” the reading being proposed.<sup>28</sup>

Shieldalloy claims that in this portion of its decision, the court “rejected” NRC counsel's proffered interpretation of the statute and “ruled that the NRC has no obligation to accept ‘as is’ an Agreement State application tendered by the applying State, but can modify it, on its own accord or as requested by regulated entities, to exclude certain

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<sup>25</sup> *Id.* at 495.

<sup>26</sup> *Id.*

<sup>27</sup> *Id.* (emphasis in original).

<sup>28</sup> *Id.*

facilities from the transfer of authority, as long as the criteria developed by the Staff [in the Oklahoma agreement context] . . . are satisfied.”<sup>29</sup> According to Shieldalloy, therefore, “the NRC can retain jurisdiction over the Newfield facility even if it transfers other facilities to New Jersey.”<sup>30</sup>

While we previously approved a staff-developed policy in the Oklahoma-agreement context for retaining jurisdiction over subcategories of materials or activities, until now we have not had occasion to squarely address the parameters of our legal authority to enter into partial agreements, whether at the request of a licensee or at the request of a state. We discuss our authority below.

At the outset, we reject Shieldalloy's position that the court rejected the statutory interpretation proffered by NRC counsel at oral argument. Based on familiar Supreme Court doctrine concerning judicial deference to an agency's interpretation of a statute that it administers, the court held only that “[o]n the current record we *cannot decide* the interpretation of the statute.”<sup>31</sup> The court, in other words, left open the interpretive issue. Stating that it could not defer to an interpretation at issue offered at oral argument by counsel, the court said that the Commission itself “ha[d] not exercised any interpretive discretion.”<sup>32</sup> In short, we remain entirely free, unrestrained by any judicial holding, to decide for ourselves what section 274 requires.

The pertinent statutory provisions on the scope of our authority in entering section 274 agreements are contained in sections 274b and 274d of the AEA, 42 U.S.C. §§ 2021(b), 2021(d). We start with subsection b. It states, in pertinent part, that “the

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<sup>29</sup> Shieldalloy Initial Response at 12.

<sup>30</sup> *Id.*

<sup>31</sup> *Shieldalloy*, 624 F.3d at 495 (emphasis added).

<sup>32</sup> *Id.*

Commission is authorized 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 of the following materials within the State.” We give that subsection its most natural reading: it simply provides a general grant of legal authority to the Commission to turn regulatory authority over certain designated nuclear materials to the states, and gives no more specific command. We find support for our construction in the overall statutory language and legislative history underlying section 274. A stated purpose of the legislation was “to clarify the respective responsibilities under [the AEA] of the States and the Commission with respect to the regulation of byproduct, source, and special nuclear materials.”<sup>33</sup> At the time the proposed agreement-state legislation was under consideration, there was still confusion and debate as to what room, if any, the AEA left for state regulation of nuclear materials – *i.e.*, whether the AEA preempted state regulation in the nuclear field. Explicitly giving the Commission the legal authority to turn its regulatory authority over to the states ended this debate, resulting in a framework clearly delineating when the states could regulate nuclear materials and when they could not:

[T]here is a considerable view that under the [AEA] . . . , while the States may have some authority in areas of the Commission's regulatory responsibilities, there are undoubtedly some things the States do not have authority to do. The purpose of the bill is to provide a legal basis on which with legislative approval the Commission would be given the authority, as to certain designated areas which the States have a potential capability for controlling, to turn these over to the States and [the Commission's] regulatory responsibility would cease at that time if the States were prepared.<sup>34</sup>

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<sup>33</sup> AEA § 274a(1), 42 U.S.C. § 2021(a)(1).

<sup>34</sup> *Federal-State Relationships in the Atomic Energy Field: Hearings before the Joint Committee on Atomic Energy*, 86th Cong. at 301 (1959) (Joint Committee Hearings) (testimony of Robert Lowenstein, Atomic Energy Commission, Office of the General Counsel).

We turn now to a more specific provision, subsection d, which states, in pertinent part, that the Commission “*shall* enter into an agreement under subsection b of this section with any State *if*” certain conditions are met – namely, the state's governor “certifies that the State has a program for the control of radiation hazards adequate to protect the public health and safety with respect to the materials within the State covered by the proposed agreement, and that the State desires to assume regulatory responsibility for such materials,” and “the Commission finds that the State program is . . . compatible with the Commission's program for regulation of such materials, and . . . adequate to protect the public health and safety with respect to the materials covered by the proposed agreement.” (Emphasis added). We construe subsection d as providing the specific conditions under which the Commission “shall” exercise the general legal authority granted to it under subsection b.

As the court implicitly recognized in its remand decision<sup>35</sup>, the term “shall,” by its plain meaning, is mandatory in nature.<sup>36</sup> The legislative history of section 274 reveals that the use of a mandatory term was deliberate, replacing a discretionary term that had appeared in an earlier version of the agreement-state proposal.

The agreement-state provisions in AEA section 274 originated with proposed legislation submitted by the Atomic Energy Commission (AEC) to the Joint Committee on Atomic Energy, at the Joint Committee's request.<sup>37</sup> The AEC submitted a draft version of the proposed legislation in March 1959 and a final version in May 1959. In

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<sup>35</sup> *Shieldalloy*, 624 F.2d at 495.

<sup>36</sup> See *United States v. Monzel*, Nos. 11-3008, 11-3009, 2011 WL 1466365 at \*2 (D.C. Cir. Apr. 19, 2011) (“‘shall’ is a term of legal significance, in that it is mandatory or imperative, not merely precatory”).

<sup>37</sup> See *Report by the Joint Committee on Atomic Energy: Amendments to the Atomic Energy Act of 1954, as amended, with Respect to Cooperation with the States*, H.R. Rep. No. 86-1125, 86th Cong., 1st Sess. at 6 (Joint Committee Report).

both the draft and final versions, the AEC's legislative proposal contained a general authorization provision that tracks the current subsection b and a specific authorization provision that tracks the current subsection d. In the precursor to subsection d, however, the AEA's March 1959 draft did not use the word "shall." Instead, the March 1959 draft provided that the "Commission *may* enter into an agreement under subsection a of this section with any State if [the conditions of state certification and Commission finding of adequacy and compatibility are met]."<sup>38</sup> In the AEA's final May 1959 proposal, the discretionary term "may" was replaced with the mandatory term "shall."<sup>39</sup>

Given the mandatory language used in subsection d, we construe it as requiring us to enter into an agreement for state regulation of the particular categories of nuclear materials that a state certifies it both desires to regulate and has established a program for – provided that we find the state's program for regulation of such materials to be adequate and compatible.

Our construction of the statute is consistent with the central purpose and policy animating the agreement-state legislation – "to recognize the interests of the States in the peaceful uses of atomic energy. . . ."<sup>40</sup> In enacting the legislation (as amendments to the AEA in 1959), Congress acknowledged the significant interest of the states in regulating radiation hazards that are "local and limited" in nature<sup>41</sup> and do not involve

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<sup>38</sup> *Selected Materials on Federal-State Cooperation in the Atomic Energy Field*, 86th Cong., 1st Sess. at 27 (1959) (emphasis added) (Selected Materials on Federal-State Cooperation).

<sup>39</sup> See Joint Committee Hearings at 295. Companion bills, S.1987, introduced by Senator Anderson, and H.R.7214, introduced by Representative Durham, incorporated the AEA's final, May 1959 version of the proposed agreement-state legislation essentially verbatim. After a week of hearings, the Joint Committee approved minor amendments to the bills (renumbered S. 2568 and H.R. 8755), and the agreement-state legislation was enacted on September 23, 1959 as Public Law 86-376.

<sup>40</sup> AEA § 274a(1), 42 U.S.C. § 2021(a)(1) (2011).

<sup>41</sup> Joint Committee Report at 8.

“interstate, national, or international considerations.”<sup>42</sup> Thus, the 1959 amendments were intended “generally to increase the States’ role” in regulation of nuclear materials.<sup>43</sup> This legislative objective prompted Congress to resolve the complex and “difficult question of Federal-State relationship in connection with nuclear activities,” mindful of the “delicate ground [that] exists between the jurisdiction of the Federal Government and the sovereign jurisdiction of the States. . . .”<sup>44</sup>

In the enacted legislation, as reflected in subsection d, Congress struck a balance between federal and state interests and gave the NRC and the states each a carefully defined role in effectuating a section 274 agreement. As evident from the statutory language, it is the state's role to determine, first and foremost, which categories of nuclear materials – source, byproduct, or special nuclear material – it wishes to assume regulatory authority over. Once a state makes this determination and proposes an agreement to assume regulation over certain nuclear materials, it is the NRC's role to determine whether the state's program is adequate for protection of the public health and safety and compatible with the NRC's program.

In its remand order, the court indicated that the language in subsection b, despite the mandatory provision in subsection d, suggests that the Commission may have been afforded some discretion in shaping the terms of an agreement. The court observed that subsection b, by providing that the Commission is “*authorized*” to enter into agreements

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<sup>42</sup> *Id.* at 3.

<sup>43</sup> *English v. Gen. Elec. Co.*, 496 U.S. 72, 81 (1990). See also *Pacific Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm’n*, 461 U.S. 190, 209 (1983) (“The point of the 1959 Amendments was to heighten the states’ role.”).

<sup>44</sup> 105 Cong. Rec. S17510 (Sept. 11, 1959) (Remark of Sen. Hickenlooper). See also 128 Cong. Rec. S17506 (Sept. 11, 1959) (Remark of Sen. Anderson) (expressing concern that “there will be confusion and possible conflict between Federal and State regulations and uncertainty on the part of the industry and possible jeopardy to the public health and safety” if the AEA continues to remain “silent as to the regulatory role of the States”).

with respect to “*any one or more of*” a variety of classes of nuclear materials, . . . suggests that NRC is not *required* to enter into agreements” but “that it has discretion to negotiate the terms of the agreement with the state requesting authority.”<sup>45</sup>

We have closely examined the language of this subsection in light of the court's observation and in the context of the question presented here – whether subsection b gives us the discretion to retain a site under NRC jurisdiction at a licensee's request if the subsection d conditions of state certification and adequacy and compatibility are met. We conclude that subsection b does not reasonably lend itself to this interpretation. As discussed above, we construe subsection b as providing a general grant of legal authority to the NRC to enter into agreements with states to relinquish its authority, and subsection d as setting forth the specific conditions for the Commission's exercise of that authority. We agree that the particular language highlighted by the court – “one or more of the following materials within the State” – does give us some leeway in entering into agreements, but it is not the type of flexibility, or “discretion,” sought by *Shieldalloy* and alluded to by the court.

The language “one or more of the following materials within the State” refers to each *category* of nuclear materials listed in subsection b – *i.e.*, source, byproduct, or special nuclear material in quantities not sufficient to form a critical mass. We interpret this language to give the Commission the flexibility to enter into agreements that cover less than all three nuclear material categories at one time. This would allow us, for example, to enter into an initial agreement for one nuclear material category and subsequent agreements for the remaining categories. Accordingly, we read subsections b and d, together, as giving us the authority and flexibility to enter into limited agreements depending on a state's desire and readiness to assume jurisdiction but not

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<sup>45</sup> *Shieldalloy*, 624 F.3d at 495 (emphasis in original).

as giving us authority to withhold authority from a state that wants it and has a qualifying program.

Again, the legislative history supports our construction. It reflects considerable concern that there be a reasonable transition period following enactment of the legislation, so that authority not be turned over to the states hastily, before states had an opportunity to develop adequate regulatory programs. In its report on the companion bills that were enacted into law (H.R.8755 and S.2568), the Joint Committee stated that the "bill does not authorize a wholesale relinquishment or abdication by the Commission of its regulatory responsibilities but only a gradual, carefully considered turnover, on a State-by-State basis, as individual States may become qualified."<sup>46</sup> Likewise, in testimony during the hearings on the companion bills incorporating the AEA's proposed legislation (S.1987 and H.R.7214), a representative from the AEC's Office of the General Counsel explained:

Before I left these three categories, I did want to point out that under this bill the Commission as a State became ready and by agreement with the Governor, could turn over any one or more of these categories. We would not try to break them down. If a State were ready to assume its responsibilities in the way of regulation with respect to byproduct materials, the agreement would provide for a turnover of these responsibilities with respect to this entire category. However, there might be a series of agreements with a particular State adding additional categories as time goes on, and the State program develops. It would be the intention of the Commission under this bill to enter into agreements with the States covering all of these three categories as soon as the States are prepared to assume those responsibilities.<sup>47</sup>

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<sup>46</sup> Joint Committee Report at 8.

<sup>47</sup> Joint Committee Hearings at 305 (testimony of Robert Lowenstein). *See also id.* at 292 ("I think we do not want to walk away . . . and expose the public health and safety unduly in the sense of being too fast . . . . It is certainly something which you would have to do in cooperation with the States . . . if this bill were enacted right away, you could not do it immediately.") (testimony of AEC Commissioner John S. Graham); *Selected Materials on Federal-State Cooperation* at 29 (1959) (analysis of AEA's March 1959 legislative proposal).

We find nothing in this legislative history or in the statute itself to suggest that we may, over the objections of a state desiring jurisdiction and for reasons other than health and safety or compatibility, retain regulatory authority over pending applications involving a nuclear materials category otherwise transferred to a state. The language and legislative history, if anything, appear to point the other way. Another stated purpose of the statute was “to promote an orderly regulatory pattern between the Commission and State governments with respect to nuclear development and use and regulation of byproduct, source, and special nuclear materials.”<sup>48</sup> The legislative history sheds light on what Congress believed would undermine an “orderly regulatory pattern” between NRC and the states, reflecting a congressional intent to avoid any form of “concurrent” or piecemeal federal-state jurisdiction over a specified nuclear materials category. For example, in its report on the final companion bills, the Joint Committee explained:

It is not intended to leave any room for the exercise of dual or concurrent jurisdiction by States to control radiation hazards by regulation of byproduct, source, or special nuclear materials. The intent is to have the material regulated and licensed either by the Commission, or by the State and local governments, but not by both. The Bill is intended to encourage States to increase their knowledge and capacities, and to enter into agreements to assume regulatory responsibilities over such materials.<sup>49</sup>

Thus, Congress wanted to provide a framework for “centralized responsibility.”<sup>50</sup> It desired states to assume authority either over all of the sites within a particular nuclear materials category or over none of the sites within that category.

Where the requisite state certifications and NRC findings of adequacy and compatibility are met, limiting transfers over pending applications at a licensee's request, for reasons other than adequacy or compatibility, could seriously undermine

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<sup>48</sup> AEA § 274a(3).

<sup>49</sup> Joint Committee Report at 9.

<sup>50</sup> Joint Committee Hearings at 316 (testimony of Robert Lowenstein).

congressional intent to avoid a patchwork of federal-state regulation. Licensees would have an incentive to manipulate the license application process depending on which regulatory scheme they preferred for financial or other commercial interests apart from health and safety or compatibility. The statutory language and legislative history contain no suggestion that such interests were to play any part in the terms of our agreements with states or could override a state's desire and readiness to assume regulatory authority.<sup>51</sup>

Returning to the NRC-Oklahoma agreement that attracted the court's interest, the policy we approved there – approving the state's request to take authority for some but not all nuclear materials – reinforced our commitment to enforcing the statutory intent to respect the wishes of the states as to their readiness to regulate particular materials. The Oklahoma agreement came in the context of a *state* being unwilling to assume jurisdiction over certain subcategories within a particular nuclear material category. Limiting transfers over sites with pending applications, “at the behest of regulated firms”<sup>52</sup> and over a state's objection, as *Shieldalloy* would like, is quite a different

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<sup>51</sup> The legislative history, in fact, reflects that the Joint Committee took no action on a suggested approach that would have required the Commission to consider financial interests of regulated entities as a condition of approving a proposed state agreement. Specifically, materials compiled for the Joint Committee in advance of the hearings on the original agreement-state companion bills, S.1987 and H.R.7214, included a lengthy academic study by professors at the University of Michigan “prepared especially for the Joint Committee.” Selected Materials on Federal-State Cooperation at III. That study recommended two “[c]riteria for approval of [state] plans.” *Id.* at 447. One criterion was essentially the same as the “adequacy” condition included in S.1987 and H.R. 7214 – that a proposed state program “must be adequate to protect the health and safety of the public.” *Id.* But for the second criterion, the authors recommended that a proposed state plan “must not unnecessarily burden industry.” *Id.* In the final bills, S.2568 and H.R.8755, the Joint Committee retained the “compatibility” criterion contained in the original companion bills, without adding any language related to “burdening industry.”

<sup>52</sup> *Shieldalloy*, 624 F.3d at 495.

matter.<sup>53</sup> That approach would have the NRC override, on grounds not specified in the statute, the state's expression of readiness. The Oklahoma policy was never intended to apply – and has never been applied – in the context of a *licensee's* request to remain under NRC's authority.

In sum, based on our examination of the statutory language and legislative history, and based on our past policy and practice, we cannot find that Congress gave us the discretion to retain regulatory authority in circumstances like Shieldalloy's. We cannot turn down a state's request for authority for reasons apart from the sole statutory considerations: a state program's adequacy and compatibility.

### **C. Adequacy and Compatibility of New Jersey's Program as to License Termination**

In light of our conclusion regarding the scope of our legal authority, our decision whether to retain jurisdiction over the Newfield site or reinstate New Jersey's regulatory authority turns on whether New Jersey's license termination program is “adequate to protect the public health and safety with respect to the materials covered by the proposed agreement” and “compatible with the Commission's program for regulation of such materials” within the meaning of section 274d and our implementing agreement-state policies. As discussed below, we find that New Jersey's program is “adequate” and “compatible.”

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<sup>53</sup> If a state is unable or unwilling to make the required certifications under subsection d – that it has an adequate program for the protection of public health and safety and desires to assume regulatory responsibility – for the subcategories of material or activity it wishes the NRC to retain, in effect, a statutory condition for the Commission to exercise its authority to enter into an agreement for those subcategories will not have been met. On the other hand, allowing states to enter into an agreement for something less than an entire category of nuclear materials, as Oklahoma had requested, ostensibly conflicts with congressional intent regarding concurrent federal-state jurisdiction. The Oklahoma policy, therefore, grew out of a need for the NRC to reconcile the interest of a state, reflected in subsection d, to decide what areas of nuclear regulation it is ready and willing to assume, with Congress's desire to avoid piecemeal NRC-state jurisdiction within a single materials category.

## 1. Regulatory Framework

Before we turn to the specific issues regarding adequacy and compatibility raised by Shieldalloy and implicated in the court's remand decision, we review our own and New Jersey's regulatory framework as relevant to this case.

### a. The NRC's Agreement-State Policy

We have implemented section 274 through two major policy statements that set forth the framework for state regulatory programs that are both “adequate” to protect the public health and safety and “compatible” with the Commission's regulatory program, as section 274 requires. Our first policy statement, containing 36 criteria for assessing a state's program, including the criterion (Criterion 25) that was the focus of the court's remand decision, was issued in 1961 and updated in 1981, but remains virtually unchanged from its original issuance in 1961, except in respects not relevant here.<sup>54</sup> A later policy statement, issued in 1997, established a more refined approach for determining, with respect to both new and existing agreements, whether a state's program is “adequate” and “compatible.”<sup>55</sup> As a general matter, “adequacy” focuses “on the protection of public health and safety within a particular State,” to accommodate “local needs and conditions,” whereas “compatibility” focuses “on the impacts of an Agreement State's regulation of agreement material on a nationwide basis or its potential effects on other jurisdictions.”<sup>56</sup>

As we explained in our 1997 Policy Statement, “adequacy” “presumes” that the “level of protection of NRC's regulatory program is . . . that which is adequate to provide

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<sup>54</sup> See *generally* 1981 Policy Statement, 46 Fed. Reg. 7540.

<sup>55</sup> Statement of Principles and Policy for the Agreement State Program; Policy Statement on Adequacy and Compatibility of Agreement State Programs, 62 Fed. Reg. 46,517 (Sept. 3, 1997) (1997 Policy Statement).

<sup>56</sup> *Id.* at 46,520, 46,523-24.

a reasonable assurance of protection of public health and safety.”<sup>57</sup> Thus, to be “adequate,” the “overall level of protection of public health and safety provided by a State program should be equivalent to, or greater than, the level provided by the NRC program.”<sup>58</sup>

Regarding “compatibility,” a state’s program is acceptable “when its program does not create conflicts, duplications, gaps, or other conditions that would jeopardize an orderly pattern in the regulation of agreement material on a nationwide basis.”<sup>59</sup> Our 1997 Policy Statement establishes five “compatibility categories” – A, B, C, D, and E – to be assigned to NRC’s regulations for the purpose of assessing a state’s proposed or existing program for compatibility.<sup>60</sup> These categories indicate which aspects of NRC’s regulatory program a state *must* adopt, and which aspects a state has flexibility to depart from or modify. The compatibility designation for an NRC regulation is determined as part of the public rulemaking process, at the time the regulation is promulgated.

A state must adopt regulations that are “essentially identical” to NRC regulations classified as compatibility category “A” or “B.”<sup>61</sup> Category A includes NRC regulations establishing “basic radiation protection standards,” such as “dose limits, concentration and release limits related to radiation protection . . . that are generally applicable.”<sup>62</sup>

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<sup>57</sup> *Id.* at 46,524.

<sup>58</sup> *Id.*

<sup>59</sup> *Id.*

<sup>60</sup> *Id.*

<sup>61</sup> *Id.*

<sup>62</sup> *Id.*

Category B consists of regulations, such as transportation regulations, that have “significant transboundary implications.”<sup>63</sup>

Category C consists of those aspects of NRC's regulatory program (referred to as “program elements”) that an agreement-state program must incorporate “to avoid conflicts, duplications, gaps, or other conditions that would jeopardize an orderly pattern in the regulation of agreement material on a nationwide basis.”<sup>64</sup> To be “compatible” with a Category C program element, an agreement state need not adopt regulations identical to NRC's, unlike those in Categories A and B, but the state's program must “embody the essential objective” of the corresponding NRC program element. *Id.* Categories D and E are not pertinent to this case.

#### **b. ALARA**

Our regulations establish maximum dose exposure standards – *i.e.*, dose limits – for protecting the public and occupational workers from radiation resulting from NRC-authorized activities, including license termination.<sup>65</sup> For example, the basic dose limit for individual members of the public from a licensed activity is a total effective dose equivalent of 100 millirem (mrem) per year<sup>66</sup>, and the dose limit for license termination is a “constraint within the public dose limit” of 25 mrem per year to members of the public.<sup>67</sup>

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<sup>63</sup> *Id.*

<sup>64</sup> *Id.*

<sup>65</sup> See 10 C.F.R. Part 20.

<sup>66</sup> See 10 C.F.R. § 20.1301.

<sup>67</sup> See Final Rule, Radiological Criteria for License Termination, 62 Fed. Reg. 39,058, 39,080 (July 21, 1997) (License Termination Rule); 10 C.F.R. §§ 20.1402 and 20.1403(b).

Our regulations also contain a regulatory principle known as “ALARA” – “as low as is reasonably achievable.” ALARA is defined in 10 C.F.R. Part 20 as “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.”<sup>68</sup> ALARA is a general requirement for all “doses to members of the public” established in the “Radiation Protection Programs” in 10 C.F.R. Part 20, including the license termination dose criteria.<sup>69</sup>

For complex decommissioning activities, ALARA levels – that is, radiation exposures *below* regulatory dose limits – are determined through a cost-benefit analysis described in various NRC guidance documents.<sup>70</sup> An ALARA analysis calls for comparing potential benefits of incremental reductions in radioactivity levels below a specified dose limit to potential costs of such reductions.<sup>71</sup>

### **c. The NRC's License Termination Rule**

In our license termination rule, we established a 25 mrem per year public dose limit and other criteria for license termination.<sup>72</sup> A comprehensive NRC guidance document, NUREG-1757, *Consolidated Decommissioning Guidance, supra*, explains in detail how we expect to implement the license termination rule. The rule provides

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<sup>68</sup> See 10 C.F.R. § 20.1003.

<sup>69</sup> See 10 C.F.R. § 20.1101(b) (“The licensee shall use, to the extent practical, procedures and engineering controls based upon sound radiation protection principles to achieve occupational doses and doses to members of the public that are as low as is reasonably achievable (ALARA).”).

<sup>70</sup> See, e.g., “Consolidated Decommissioning Guidance: Characterization, Survey, and Determination of Radiological Criteria,” NUREG-1757, Vol. 2 (Rev. 1 Sept. 2006), Appendix N.

<sup>71</sup> *Id.* at N-3.

<sup>72</sup> See *generally* License Termination Rule, 62 Fed. Reg. at 39,058; 10 C.F.R. Part 20, Subpart E.

criteria for license termination for both “unrestricted use” and “restricted use.”

Terminating a license for unrestricted use would allow no dependence on “institutional controls,” *i.e.*, governmental monitoring of engineered barriers and land-use restrictions, to achieve a maximum dose of 25 mrem per year to a member of the public upon termination of the license.<sup>73</sup> Terminating a license for restricted use would rely on legally enforceable institutional controls to achieve the 25 mrem dose limit.<sup>74</sup>

The ALARA requirement in 10 C.F.R. § 20.1101(b) applies to the dose criteria for license termination.<sup>75</sup> Thus, for license termination under either restricted use or unrestricted use, doses to a member of the public must not only be 25 mrem per year or lower but also as low as reasonably achievable.<sup>76</sup>

The license termination rule, in section 20.1403(a), requires that an ALARA-based analysis be performed to identify whether a site is eligible or ineligible for further consideration of restricted release.<sup>77</sup> As a threshold matter a licensee must demonstrate that it is entitled, or “initially eligible,” to pursue license termination under restricted use.<sup>78</sup> The initial eligibility demonstration under section 20.1403(a) employs a cost-benefit analysis – either a conventional ALARA analysis or an analysis of “net public or

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<sup>73</sup> See 10 C.F.R. § 20.1402.

<sup>74</sup> See 10 C.F.R. § 20.1403.

<sup>75</sup> See 10 C.F.R. § 20.1101(b) (requiring that doses be ALARA for all “doses to members of the public” established in Part 20’s “Radiation Protection Programs”).

<sup>76</sup> See also 10 C.F.R. §§ 20.1402 and 20.1403; License Termination Rule, 62 Fed. Reg. at 39,065; “Consolidated Decommissioning Guidance: Decommissioning Process for Materials Licensees,” NUREG-1757, Vol. 1, (Rev. 2 Oct. 2006), § 17.7.6, at 17-87 (ML063000243) (doses for restricted release cannot exceed 25 mrem per year with institutional controls in place and must be as low as reasonably achievable).

<sup>77</sup> See 10 C.F.R. § 20.1403(a).

<sup>78</sup> See NUREG-1757, Vol. 1, § 17.7.2, at 17-70 (licensee must “demonstrat[e] that it is initially eligible to further evaluate release of the site, under the provisions of 10 C.F.R. § 20.1403”).

environmental harm,” which incorporates a subset of the factors used in a conventional ALARA analysis.<sup>79</sup>

Sites not “eligible” for restricted release must be remediated to unrestricted use in accordance with 10 C.F.R. § 20.1402. If a licensee is able to demonstrate initial eligibility for restricted release, it must then show that the restricted-release dose criteria will be met.<sup>80</sup> The licensee must establish that: the dose to a member of the public with legally enforceable institutional controls in place will not exceed 25 mrem per year, and is as low as reasonably achievable<sup>81</sup>; and if institutional controls fail and engineered barriers have degraded over a period of time,<sup>82</sup> the dose to a member of the public will not exceed 100 mrem per year (or 500 mrem per year under certain circumstances), and is as low as reasonably achievable.<sup>83</sup> If the licensee cannot satisfy those criteria, its site will not “be considered acceptable for license termination under restricted conditions,”<sup>84</sup> and the site must be remediated to unrestricted-release levels pursuant to 10 C.F.R. § 20.1402.

When the license termination rule was at the proposed-rule stage, we requested comments on a “compatibility” determination for the rule, for agreement-state purposes.

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<sup>79</sup> See NUREG-1757, Vol. 2, Rev. 1, at N-13, N-14.

<sup>80</sup> See 10 C.F.R. § 20.1403.

<sup>81</sup> 10 C.F.R. §§ 20.1101(b) and 20.1403(b); NUREG-1757, Vol. 1, § 17.7.6, at 17-87.

<sup>82</sup> NRC does not require dose calculations for the institutional controls failure scenario to assume “instantaneous and complete failure of a barrier” but permits the licensee to assume that “barriers may degrade over time.” See NUREG-1757, Vol. 2, § 3.5.2, at 3-12.

<sup>83</sup> 10 C.F.R. § 20.1403(e).

<sup>84</sup> 10 C.F.R. § 20.1403.

Consistent with the local nature of the radiological impacts of license termination, we categorized the license termination rule as the equivalent of a Category C regulation.<sup>85</sup>

#### **d. New Jersey's License Termination Program**

In its regulations, New Jersey incorporated by reference many of our regulations in 10 C.F.R. Part 20, including 10 C.F.R. § 20.1101(b), requiring that public doses for all Part 20 radiation protection programs be as low as reasonably achievable (ALARA), and 10 C.F.R. § 20.1301, establishing a basic radiation protection public dose standard of 100 mrem per year.<sup>86</sup> With respect to license termination, New Jersey promulgated its own regulations rather than incorporate by reference our regulations in 10 C.F.R. §§ 20.1401-1405.<sup>87</sup>

Under New Jersey's license termination regulations, a licensee is required to show (using specified methods – concentration tables or dose modeling) that, for “an unrestricted use remedial action, limited restricted use remedial action, or a restricted use remedial action,” the total effective dose equivalent to members of the public would not be more than *15 mrem* per year – as compared to the *25 mrem* per year limit in our regulations.<sup>88</sup> New Jersey also adopted other requirements relating to license termination that incorporate more conservative dose calculation methodologies than our requirements. New Jersey's license termination regulations require, *inter alia*, (1) that

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<sup>85</sup> At the time the license termination rule was issued, we were in the process of revising our compatibility categorization, ultimately approving the current compatibility categories reflected in the 1997 Policy Statement. The prior compatibility policy categorized rules into “Divisions.” Division 2 is the equivalent of today’s compatibility category “C.” See License Termination Rule, 62 Fed. Reg. at 39,079. Agreement states were required to address the “underlying principles” of these rules but did not have to use language identical to the NRC's rules, and could “adopt requirements more stringent than NRC's rules.” *Id.* at 39,079-80.

<sup>86</sup> See N.J. Admin. Code § 7:28-6.1(a).

<sup>87</sup> *Id.* § 7:28-6.1(c).

<sup>88</sup> See *id.* §§ 7:28-12.8(a)(1), 12.9, 12.10, and 12.11.

dose calculations be “performed out to the time of peak dose or 1000 years, whichever is longer,”<sup>89</sup> as compared to our requirement that dose calculations be limited to the first 1000 years after decommissioning;<sup>90</sup> (2) that doses to members of the public not exceed 100 mrem per year if there were a simultaneous and complete failure of both institutional controls and engineered barriers at a restricted use site,<sup>91</sup> as compared to our dose criteria of 100 mrem or 500 mrem under certain circumstances,<sup>92</sup> under the assumption that failure of institutional controls will result in engineered barriers degrading over time;<sup>93</sup> and (3) that radioactively contaminated ground and surface water must be remediated in accordance with New Jersey water quality requirements,<sup>94</sup> as compared to our “all pathways” approach without a separate release standard for water.

## **2. Analysis**

### **a. Criterion 25**

In its remand decision, the court, while acknowledging that “the NRC need not automatically consider every single pending licensing action individually” in its agreement-state decisions, observed that “in this case, the NRC had a long history of dialogue and cooperation regarding the termination of a license, the state has been consistently hostile to those termination proceedings, and the regulated entity alerted the NRC not only to the likely interference with decommissioning but also to partial transfer

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<sup>89</sup> *Id.* § 7:28-12.10(d).

<sup>90</sup> 10 C.F.R. § 20.1401(d).

<sup>91</sup> N.J. Admin. Code §§ 7:28-12.10(e), 7:28-12.11(e),

<sup>92</sup> 10 C.F.R. § 20.1403(e).

<sup>93</sup> NUREG-1757, Vol. 2, § 3.5.2, at 3-12.

<sup>94</sup> N.J. Admin. Code § 7:28-12.8(b) and (c).

as a possible solution.”<sup>95</sup> The court found that “[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.”<sup>96</sup> In its filings, Shieldalloy echoes the court's remarks and claims that the “New Jersey Program violates Criterion 25 and the NRC cannot lawfully transfer regulatory authority over the Newfield Facility to the State.”<sup>97</sup> The court, in its remand decision, as well as Shieldalloy, seemingly understand Criterion 25's terminology, “appropriate arrangements will be made by NRC and the State to ensure that there will be no interference with or interruption of . . . the processing of license applications, by reason of the transfer,” to refer to ensuring continued application of the same *substantive* standards for processing pending applications. Viewed this way, Criterion 25's “intended preclusion of ‘interference with or interruption of licensed activities or the processing of applications,’”<sup>98</sup>, would oblige NRC to make arrangements with a state to ensure that, once transferred, pending applications will continue to be processed by the state under regulatory standards that are the same as or closely similar to ours, even if we approve a different, more stringent state regime as being adequate and compatible.<sup>99</sup> But our examination of 50 years of practice in applying Criterion 25 when entering into new agreements – there are 37 such agreements in place – shows that Criterion 25 was not

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<sup>95</sup> *Shieldalloy*, 624 F.3d at 494-95.

<sup>96</sup> *Id.* at 495.

<sup>97</sup> *Shieldalloy* Initial Response at 9.

<sup>98</sup> *Shieldalloy*, 624 F.3d at 494.

<sup>99</sup> Partial transfer – *i.e.*, NRC retention of regulatory authority over a pending application – was another alternative for meeting Criterion 25 the Court suggested we consider. See *Shieldalloy*, 624 F.3d at 495. We concluded above that we do not have authority to enter into partial transfers at the request of a licensee and over the objections of a state if we find the state's program adequate and compatible.

intended to be construed in this manner. We do not construe and have never construed Criterion 25 as in any way relating to substantive standards or the regulatory outcome of a pending license application, even where as in *Shieldalloy's* case a license application has been pending at the NRC for an extended period. Criterion 25 remains unchanged in substance from the Commission's 1961 Policy Statement.<sup>100</sup> With respect to pending applications, as well as existing licenses, Criterion 25 has from the beginning consistently been understood by us and the staff as purely administrative in nature.<sup>101</sup> The purpose of that criterion, which is applicable by its own terms to both the NRC and the state, is to ensure that licensing records are transferred to and received by the new agreement state in an orderly manner that ensures that no pending licensing actions will be significantly delayed or that no records will be lost or misplaced as a result of the transition of authority. It is a housekeeping criterion, not a substantive one. We historically have addressed Criterion 25 through a staff-developed transition plan for each new agreement. The transition plan involves coordinating with the state's regulatory staff to facilitate a smooth and seamless transfer of the NRC's records for all licenses and pending license applications in a form that can be readily used by the state to continue licensing actions and inspection programs under the state's own regulatory program, without interruption or interference.

Consistent with the approach followed for every other agreement-state application over the past 50 years, the staff developed a transition plan for the New Jersey agreement in coordination with New Jersey's regulatory staff, and transferred the

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<sup>100</sup> See Criteria for Guidance of States and AEC in Discontinuance of AEC Regulatory Authority and Assumption Thereof by States Through Agreement, 26 Fed. Reg. 2536, 2539 (Mar. 24, 1961).

<sup>101</sup> We note that we viewed Criterion 25 as an administrative matter in our order rejecting *Shieldalloy's* request for stay of the New Jersey agreement. See *Shieldalloy*, CLI-10-8, 71 NRC at 162.

relevant licensing records to New Jersey on the effective date of the New Jersey agreement.<sup>102</sup> In accordance with the transition plan, the staff transferred from NRC to New Jersey the records for 490 existing NRC licenses, including the existing Shieldalloy license and five other licenses involving source material, and seventeen pending license applications, including the pending decommissioning-plan application for the Newfield site. No licensing records have been identified as being lost or misplaced as a result of the transfer, and New Jersey was able to commence its regulation over the transferred licenses and pending applications immediately after the transfer. Thus, we believe that our staff, in coordination with the state's regulatory staff, fulfilled the administrative purpose of Criterion 25, 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."

In entering into an agreement with any state, we fully anticipate and expect that the state's regulatory approaches and decisions may differ from ours. We have long recognized that agreement states "should be provided with flexibility in program implementation to accommodate individual State preferences, State legislative direction, and local needs and conditions," including the flexibility to "incorporat[e] more stringent, or similar, requirements."<sup>103</sup> Thus, we do not view New Jersey's prompt implementation of the state's license termination regulations as in any way constituting "interference with or interruption of" Shieldalloy's pursuit of license termination at the Newfield site within the meaning of Criterion 25. To the contrary, by promptly notifying Shieldalloy that its license termination plan for the Newfield site would need to be revised in accordance with New Jersey's regulations, New Jersey, upon receipt of regulatory authority, was

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<sup>102</sup> See *State of New Jersey Transition Plan – Status Update* (June 15, 2011) (ML111671959). As described by the NRC staff, the "New Jersey Transition Plan . . . was for internal use by Region I DNMS staff as a guide for activities conducted during the transition of New Jersey to an Agreement State." *Id.*

<sup>103</sup> 1997 Policy Statement, 62 Fed. Reg. at 46,520.

simply moving the process for license termination at the Newfield site forward in a timely manner as contemplated by Criterion 25. In doing so, New Jersey acted well within its authority as a new agreement state to implement a regulatory program that we had found differed from ours in permissible ways.

Finally, contrary to Shieldalloy's view, we do not construe and have never construed Criterion 25 as a vehicle to preclude the transfer of pending license applications to an agreement state on the ground that NRC and the licensee had already devoted resources to the application when it was before the NRC. Our transfer of Shieldalloy's pending application to New Jersey, along with sixteen other pending applications, was consistent with our approach for every other agreement over the course of 50 years. Upon entering into a section 274 agreement, we have routinely and repeatedly transferred *all* pending NRC license applications to a state (absent a state's request for NRC retention, as in the Oklahoma situation). And we have done so under circumstances analogous to those here, where (1) an NRC proceeding on a pending application for decommissioning through restricted release was ongoing at the time of the regulatory transfer; (2) the NRC licensee strenuously objected to the transfer of regulatory authority as to its site; and (3) the state was strongly opposed to the licensee's application.<sup>104</sup>

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<sup>104</sup> See *Kerr-McGee Chemical Corp. (West Chicago Rare Earths Facility)*, CLI-96-2, 43 NRC 13 (1996). *Kerr-McGee* involved a decommissioning application by Kerr-McGee Chemical Corporation for onsite disposal of radioactive uranium mill tailings at its defunct industrial site in West Chicago, Illinois. Both the State of Illinois and the City of West Chicago opposed Kerr-McGee's application for onsite disposal. While Kerr-McGee's application was pending, the Commission, over Kerr-McGee's objections, approved Illinois' proposal to enlarge its existing section 274 agreement authority to include uranium mill tailings. At the time we transferred regulatory authority over mill tailings and Kerr-McGee's site to Illinois, the Licensing Board, after protracted litigation, had approved a license authorizing on-site disposal at the Kerr-McGee site, but Illinois and the City of West Chicago were pursuing a challenge to the license before the Appeal Board. Thus, the NRC proceeding on Kerr-McGee's application for onsite disposal, while not over because of ongoing litigation at NRC, had actually reached the point of NRC approval of an onsite plan at the time of the transfer of authority to Illinois. See

Shieldalloy notes, as an aside, that “other States, such as Ohio, have honored and continued the ongoing NRC licensing process and have brought it to completion after due consideration, thus complying with both the letter and the intent of Criterion 25.”<sup>105</sup> In the example that Shieldalloy cites, we transferred another Shieldalloy-owned site with a pending onsite decommissioning application to Ohio upon entry of a section 274 agreement with that state. Ohio eventually approved a restricted-release decommissioning plan with a continuation of the license in the form of a possession-only long-term care license for the site. However, in approving the transfer, we had not made any “arrangements” with Ohio, under Criterion 25 or otherwise, to influence the state's final decision on the license termination application; nor at the time we entered into the agreement with Ohio could we have anticipated what Ohio would ultimately conclude. In contrast to our license termination regime, Ohio's regime disallowed termination of a license through the use of institutional controls, so Ohio theoretically might have disapproved Shieldalloy's request for onsite disposal. In the end, though, Ohio approved onsite disposal. The significant point for our decision today is not that Ohio approved Shieldalloy's onsite disposal request, but that we did not construe Criterion 25 as precluding us from transferring the pending license termination application to Ohio for the state to continue to process under its own differing regulatory regime. To recap, we have consistently applied Criterion 25 as a purely administrative criterion for effectuating an orderly transfer of regulatory authority to an agreement state. We do not construe that criterion either as a vehicle for us to retain authority over applications pending at the

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*Kerr-McGee*, CLI-96-2, 43 NRC at 15. Here, by contrast, Shieldalloy's proposed plan not only remained under litigation at the Licensing Board, but the proposal also had not yet gained any form of NRC approval – Shieldalloy was still answering NRC staff inquiries – at the time of the transfer of authority.

<sup>105</sup> Shieldalloy Initial Response at 10 n.16.

time of transfer on substantive grounds, or as a vehicle to compel a state to take a particular regulatory approach on pending applications.

**b. Protection of Public Health and Safety and ALARA**

In an argument it belatedly raised before the court but not as a comment on the New Jersey agreement, Shieldalloy claims that New Jersey's license termination program is not as protective to the public health and safety as our regulations. Shieldalloy maintains that terminating a license under restricted release “would result in doses to the decommissioning workers and the general public that are lower than those that would result from digging up the materials, loading them onto trucks or train cars, shipping them cross-country, and disposing of them in a similar fashion in another state.”<sup>106</sup> Shieldalloy also makes a related argument that New Jersey's program is inadequate because it fails to incorporate our ALARA requirement. *Id.* at 15-16. In its remand decision, the court paraphrased Shieldalloy's argument as follows:

Because of the higher stringency [of New Jersey's license termination regulations], Shieldalloy states that it is prevented from using on-site disposal and will be forced to ship the materials to a facility in Utah. The consequence is that the doses of radiation to the public resulting from removing the radioactive materials from the site and relocating them in Utah will actually be *greater* than the public health and environmental harms that accompany on-site disposal of the materials.<sup>107</sup>

The court did not reach the merits of this argument but said that it presented a “troubling prospect.”<sup>108</sup>

Shieldalloy claims that it had “repeatedly maintained, and its analyses have shown,” that license termination using onsite disposal would result in lower doses to the

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<sup>106</sup> Shieldalloy Initial Response at 13.

<sup>107</sup> *Shieldalloy*, 624 F.3d at 496 (emphasis in original).

<sup>108</sup> *Id.*

public than offsite disposal.<sup>109</sup> Shieldalloy also claims that its “position has not been controverted at any time by the Staff or by New Jersey.”<sup>110</sup> These statements are inaccurate. As the court recognized, Shieldalloy did not raise what amounts to a “comparative dose” claim in its original comment response.<sup>111</sup> Shieldalloy’s “comparative dose” position may have been reflected in its proposed 2005 decommissioning plan, as the court observed, *id.*, but that plan was rejected by the staff as not being in compliance with our license termination regulations. The NRC staff’s request for additional information (RAI) on Shieldalloy’s proposed 2006 decommissioning plan indicates rejection of Shieldalloy’s comparison approach and related technical concerns.<sup>112</sup>

Despite the open-ended opportunity we provided in this remand proceeding for Shieldalloy to fully articulate its position on this and other issues, it has presented its “comparative dose” position, and its related argument as to ALARA, in summary and conclusory fashion, leaving us largely to guess at the technical rationale and underlying foundation for its position.<sup>113</sup> This is unfortunate, given the highly complex and technical nature of our license termination regulations. While we endeavor to respond fully to Shieldalloy’s comparative dose and related ALARA argument based on our

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<sup>109</sup> Shieldalloy Initial Response at 13.

<sup>110</sup> *Id.*

<sup>111</sup> *Shieldalloy*, 624 F.3d at 496.

<sup>112</sup> *See Request for Additional Information for Safety Review of Proposed Decommissioning Plan for Shieldalloy Metallurgical Corporation, Newfield, New Jersey* (License No. SMB-743), Enclosure, RAI numbers 27, 28, 29, 30 (July 5, 2007) (ML071640265).

<sup>113</sup> This echoes an observation we made with respect to Shieldalloy’s arguments regarding ALARA (though not the comparative dose argument, which was not raised) when it requested a stay of the New Jersey agreement. *See Shieldalloy Metallurgical Corp*, CLI-10-8, 71 NRC at 154 (noting that Shieldalloy’s arguments were “diffuse and difficult to follow.”).

understanding of them, we are mindful of the admonition that “the ‘dialogue’ between administrative agencies and the public ‘is a two-way street.’”<sup>114</sup>

Shieldalloy's position, as we understand it, is as follows: New Jersey's license termination regulations, in effectively precluding Shieldalloy from pursuing restricted release in favor of unrestricted release, would result in higher doses to the public than a restricted-release plan under our license termination regulations. Therefore, according to Shieldalloy, New Jersey's program is not as protective as ours, rendering New Jersey's program “inadequate” under our agreement-state policy. Shieldalloy's position appears to rest on a misguided understanding of our regulatory philosophy on license termination and our ALARA principle. We have not previously had occasion to address these misconceptions, and we do so here.

Embedded in Shieldalloy's position is a notion that our license termination regulations recognize restricted release as a more protective decommissioning option under certain conditions than unrestricted release. Shieldalloy apparently construes our license termination regulations as calling for a licensee to compare doses of the restricted-release and unrestricted-release decommissioning options and to choose the option that affords the lowest dose. This is a fundamentally inaccurate understanding of our license termination requirements and appears to lie at the heart of Shieldalloy's claim that New Jersey's program is not as protective of the public health and safety as our program with respect to the Newfield site.<sup>115</sup>

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<sup>114</sup> See *Northside Sanitary Landfill, Inc. v. Thomas*, 849 F.2d 1516, 1520 (D.C. Cir. 1988) (citation omitted).

<sup>115</sup> As we noted above, this very misunderstanding of our license termination requirements was the subject of a number of requests for additional information by the staff on Shieldalloy's 2006 decommissioning plan. See *Request for Additional Information*, *supra* note 112, RAI numbers 27, 28, 29, 30.

To be clear, our regulations neither explicitly nor implicitly require a comparison of the levels of protection afforded by the unrestricted and restricted decommissioning options. This is because the levels of protection of unrestricted release and restricted release are simply not susceptible to being compared meaningfully. Each option uses significantly different methods to achieve adequate protection and has significantly different risks and uncertainties associated with it.

Restricted release is far more complex and involves significantly greater uncertainties than offsite disposal. Restricted release relies on the sustained effectiveness of institutional controls over a 1000-year compliance period to restrict future access and use to meet the 25 mrem per year dose requirement.<sup>116</sup> Satisfaction of the 25 mrem per year dose requirement under restricted release also relies on the predicted effectiveness of engineered controls over a 1000-year compliance period. Such engineering controls over this 1000-year period would be depended upon to perform numerous complex functions, including shielding, erosion protection, and limiting infiltration of water that could result in leaching radionuclides out of the restricted area. Monitoring and maintenance over 1000 years also would be necessary to ensure that the engineered controls remain effective. Finally, sufficient long-term funding would be required by an independent third party to further ensure that the controls sustain protection over the 1000-year period.<sup>117</sup>

Unrestricted release requires the removal of contamination onsite to the extent necessary to comply with the dose criteria of 25 mrem per year and transportation of the contaminated material to an isolated and regulated long-term disposal site. Some

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<sup>116</sup> The nuclear material at Shieldalloy's Newfield site consists of uranium and thorium isotopes, which are "long-lived" radionuclides – *i.e.*, radionuclides with long "half-lives." The predominant thorium isotope (Th-232) has a half-life of 14 billion years and the predominant uranium isotope (U-238) has a half-life of 4.46 billion years.

<sup>117</sup> See NUREG-1757, Vol. 1, Rev. 2, § 17.7.1, at 17-64; Vol. 2, Rev. 1, § 3.5.3, at 3-13.

uncertainties are inherent in these activities, but removing contaminated material from the site and transporting it to a regulated long-term disposal site generally involves well-known and quantifiable handling and associated radiological impacts on workers and the public over a short time period (one to two years). In contrast, dose estimates from contaminated slag left onsite are subject to limitations in understanding the performance of a disposal system and its institutional and engineering controls over the course of the 1000-year compliance period.<sup>118</sup> Restricted-release dose estimates, therefore, inherently involve much greater uncertainty than those from unrestricted release.

Citing its proposed 2009 revised decommissioning plan, Shieldalloy claims that “its analyses have shown . . . that terminating [its] license by [restricted release] . . . would result in doses to the decommissioning workers and the general public that are lower than those that would result from [unrestricted release].”<sup>119</sup> But Shieldalloy’s own dose estimates for the Newfield site reflect that it is meaningless to compare the level of protection between unrestricted release and restricted release. Specifically, Shieldalloy’s proposed 2009 revised plan calculates an infinitesimally small dose – 0.0000004 mrem per year – when institutional controls and engineered barriers are assumed to remain effective for 1000 years.<sup>120</sup> However, when institutional controls are assumed to fail and the engineered cover is assumed to degrade, Shieldalloy’s filing

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<sup>118</sup> For example, estimates of engineered cover degradation and slag leach rate and degradation of the slag over time were some of the key uncertainties identified in the staff’s RAI’s that questioned the basis for Shieldalloy’s long-term dose estimates for the onsite disposal option. See *Request for Additional Information*, *supra* note 112, RAI numbers 5, 17, 22, 23.

<sup>119</sup> Shieldalloy Initial Response at 13.

<sup>120</sup> See Letter from Hoy E. Frakes, Shieldalloy, to NRC Document Control Desk, “Shieldalloy Metallurgical Corporation, Source Material License No. SMB-743 Revised Decommissioning Plan for the Newfield Facility, Newfield, New Jersey” (Aug. 28, 2009) (transmitting Decommissioning Plan Revision 1b) (Aug. 28, 2009), § 5.3, at 42-43 (ML092940358) (package).

shows that the dose estimate would be far greater, up to a bounding dose of 86 mrem per year at the Newfield site.<sup>121</sup> This dose is well in excess of Shieldalloy's dose estimates for unrestricted release, which ranged from 1 to 25 mrem per year. Thus, while Shieldalloy's estimates purport to show that doses for onsite disposal (assuming fully functioning controls) are lower than those for unrestricted release, its own dose estimates for onsite disposal assuming the uncertainty and potential failure of controls over the long term in actuality show a *higher* dose.

Our license termination rule provides that unrestricted release and restricted release are both available as independent regulatory options that would provide adequate protection to the public health and safety *if* the applicable dose and other criteria are met. Contrary to another apparent Shieldalloy misunderstanding, nothing in our license termination regulations states or implies in any way that restricted-release decommissioning, under any circumstances, is a safer, more protective, or more desirable disposal option than unrestricted release. To the contrary, in view of the inherent complexities and uncertainties associated with restricted release, we explicitly expressed a preference for unrestricted release in adopting our license termination rule. We stated that we "expected licensees to make every reasonable effort to achieve unrestricted use."<sup>122</sup> And, in the context of the Shieldalloy decommissioning proceeding itself, we recently reaffirmed our position that "unrestricted release is the preferable method for terminating radioactive materials licenses."<sup>123</sup> In these circumstances, we cannot say that New Jersey's similar preference for unrestricted release inadequately protects the public health and safety.

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<sup>121</sup> *Id.*

<sup>122</sup> License Termination Rule, 62 Fed. Reg. at 39,069.

<sup>123</sup> See *Shieldalloy Metallurgical Corp.*, (License Amendment Request for Decommissioning of the Newfield, New Jersey Facility), CLI-09-1, 69 NRC 1, 5 (2009).

Although its submission is hardly clear on this point, Shieldalloy apparently believes that our ALARA principle compels us to compare decommissioning options and to allow a licensee to select the lowest-dose option. It argues that “[New Jersey’s] [f]ailure to implement the ALARA standard would allow New Jersey to reject the decommissioning option for the Newfield Facility that would result in the *lowest* doses to the public and the environment . . . [and] [i]nstead, the State would be able to order . . . a decommissioning choice that would result in *higher* radiation doses to workers, the public and the environment, and would not be ALARA.”<sup>124</sup> In other words, Shieldalloy appears to understand our ALARA principle as used in our regulations to mean “as low as achievable” as a *comparison* between *achievable* doses, rather than “as low as *reasonably* achievable” “*below* the dose limits.”<sup>125</sup> This is a fundamental misconception of our ALARA principle and appears to be the root of Shieldalloy’s misunderstanding of our approach to license termination.

As discussed above, our license termination regulations do not incorporate or call for a comparison of doses of restricted-release and unrestricted-release decommissioning options; nor do they imply that the restricted-release option would under any circumstances result in lower doses or be more protective than unrestricted release. Thus, the very premise of Shieldalloy’s position on ALARA – that our license termination rule requires a *choice* to be made between a *higher* or *lower* dose option – is erroneous.

Nor does our ALARA principle itself, either as a general regulatory principle or as used in our license termination rule, incorporate or call for any comparative analysis of doses from restricted and unrestricted release. Under our license termination

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<sup>124</sup> See Shieldalloy Initial Response at 15-16 (emphasis added).

<sup>125</sup> See 10 C.F.R. § 20.1003.

regulations, the ALARA principle has been implemented for two purposes. The first purpose is traditional – to reduce doses from license termination below the applicable dose criteria to the extent reasonably achievable. This stems from our policy that small doses of radiation below dose limits, while safe and acceptable, may have some associated risk and should be reduced below limits when reasonable. The ALARA principle has also been incorporated into the restricted-use portion of the license termination rule for the purpose of providing a criterion to limit the use of restricted release – effectively, to screen out sites that should be removing contamination to achieve unrestricted use. This purpose is achieved in section 20.1403(a) through the use of a cost-benefit analysis as a regulatory tool to determine initial “eligibility” for restricted release. The eligibility criterion in section 20.1403(a) was intended to support our preference for the unrestricted-release decommissioning option.

While Shieldalloy has not set forth or explained the basis for its apparent position – that our ALARA principle as used in license termination calls for a comparison and choice between achievable doses – perhaps it is alluding to our ALARA-based eligibility criterion for restricted release, a requirement New Jersey did not incorporate in its license termination regulations. But, consistent with our general approach to license termination, no comparison of restricted-release and unrestricted-release doses is involved in our section 20.1403(a) eligibility criterion. The ALARA analysis for restricted-release eligibility purposes does not and was never intended to demonstrate whether one decommissioning option affords greater protection than another. In fact, because an ALARA analysis focuses on dose reductions *below* what we have determined to be necessary for adequate protection of the public health and safety, that analysis does not go to adequate protection at all. A licensee's demonstration of adequate protection is accomplished, instead, through satisfaction of the dose criteria and other conditions for its chosen decommissioning option.

Finally, as used in our license termination rule, the ALARA test does not compare or explicitly analyze any of the uncertainties that affect the level of protection afforded by a particular disposal option. As we discussed above, in the case of restricted release, the uncertainties are numerous and complex.

Having addressed Shieldalloy's various misunderstandings regarding our regulatory approach to license termination and ALARA principle, we may now consider in the proper context Shieldalloy's position that New Jersey's license termination regulations are not as protective as ours. First, and contrary to Shieldalloy's claim<sup>126</sup> New Jersey, by incorporating by reference our section 20.1101(b) into its regulations, did adopt the ALARA regulatory principle – the principle that doses must be reduced below regulatory limits if reasonably achievable – for its entire regulatory program, including license termination.<sup>127</sup> As noted above, New Jersey did not incorporate an ALARA-based criterion for restricted-release eligibility, as we did in section 20.1403(a), but that omission is immaterial to adequacy or compatibility. Again, our use of an ALARA test for restricted-release eligibility was intended to *limit* the use of restricted release in license termination. New Jersey's approach accomplishes this same objective by adopting more stringent criteria for license termination under restricted-release than for unrestricted

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<sup>126</sup> See Shieldalloy Initial Response at 15-16.

<sup>127</sup> In a footnote, Shieldalloy points to a New Jersey comment response on the state's proposed decommissioning rules as purportedly acknowledging that the state did not adopt the ALARA principle as a general regulatory policy. Shieldalloy Initial Response at 15 n.24. In the New Jersey comment response referred to by Shieldalloy, New Jersey references a state environmental statute as not allowing the New Jersey regulator to “include the provision of ALARA in meeting dose criteria.” See *id.* We understand that the referenced legislation does not allow the consideration of costs when *setting* remediation standards. See Brief for State of New Jersey as Amicus Curiae Supporting Respondents at 16, *Shieldalloy Metallurgical Corp. v. NRC*, 624 F.3d 489 (D.C. Cir. 2010) (No. 09-1268) (ML11258A160). In view of the state's wholesale incorporation of our ALARA requirement in 10 C.F.R. Part 20, we do not construe New Jersey's comment response to mean, as Shieldalloy does, that the state will preclude the use of the ALARA principle to achieve a level of protection *below* the dose criteria, once such criteria have been established.

release, as well as more conservative criteria than ours for restricted release as permitted. Our decision, after notice-and-comment rulemaking, to assign license termination a “Category C” level of compatibility, allows New Jersey to choose more conservative criteria than ours.<sup>128</sup>

Moreover, since the ALARA test – either for its traditional purpose or as a tool for determining restricted-release eligibility – does not call for comparing doses of the unrestricted and restricted-release options or compel the selection of one decommissioning option over another, the ALARA requirement is irrelevant to whether Shieldalloy may pursue restricted release over unrestricted release in New Jersey. Nor are New Jersey’s license termination regulations less protective than or incompatible with ours in making the terms of restricted release considerably more difficult than those for unrestricted release. Our regulations likewise heavily favor unrestricted over restricted release. If Shieldalloy has a more difficult time pursuing restricted release in New Jersey than under our regulations, then that is the function of New Jersey’s permissibly more stringent regulatory scheme.

Finally and fundamentally, there is simply no evidence in the record suggesting that New Jersey is less committed to safety than the NRC. Indeed, New Jersey seems willing to entertain any safety-based arguments Shieldalloy can offer. New Jersey points out that Shieldalloy has been granted a hearing on its request for an exemption from New Jersey’s license termination regulations.<sup>129</sup> New Jersey then asserts that “if

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<sup>128</sup> As we noted above, under NRC’s agreement-state program, the “overall level of protection of public health and safety provided by a State program should be equivalent to, or greater than, the level provided by the NRC program.” 1997 Policy Statement, 62 Fed. Reg. at 46,524. An agreement state, in other words, is free to deal with local conditions by establishing standards and procedures going beyond the NRC’s. But the NRC’s own program, of course, establishes national dose limits and other regulatory procedures that ensure adequate protection of the public health and safety.

<sup>129</sup> See New Jersey Reply at 7.

Shieldalloy can eventually demonstrate that onsite disposal is the safer option, that may be a basis for seeking the exemption to the New Jersey regulations it is currently pursuing.”<sup>130</sup>

In sum, we reject Shieldalloy’s position that New Jersey’s license termination program is less protective than or incompatible with our program.

### **c. Restricted Release**

Shieldalloy claims that New Jersey’s program is incompatible with ours because it does not allow termination of materials licenses under restricted release. Shieldalloy asserts that “[n]one of the New Jersey regulations establish license termination subject to restricted conditions as a permissible decommissioning option.”<sup>131</sup> It is clear from the face of New Jersey’s regulations, however, that New Jersey does permit license termination under restricted use. New Jersey has two restricted-release options that permit license termination under specified soil concentration levels.<sup>132</sup> One option is for “limited restricted use” for sites where only institutional controls are used, and the second option is for “restricted use” for sites where both institutional controls and engineered controls are used.<sup>133</sup> New Jersey’s regulations also allow licensees to petition for restricted release using “alternative remediation standards,” under which license termination is based on dose modeling instead of soil concentration levels.<sup>134</sup> It simply is not true that New Jersey’s rules do not provide for restricted release.

Contradicting its own claim that New Jersey does not allow restricted-release

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<sup>130</sup> *Id.*

<sup>131</sup> Shieldalloy Initial Response at 16.

<sup>132</sup> See N.J. Admin. Code § 7:28-12.8; 12.9, 12.10.

<sup>133</sup> See *id.* § 7:28-12.3.

<sup>134</sup> See *id.* § 7:28-12.11.

decommissioning, Shieldalloy acknowledges that New Jersey allows licensees to petition to use “alternative remediation standards” for restricted release. In its initial filing, Shieldalloy asserts, without further analysis or explanation, that the availability of license termination subject to restricted release under this provision is “illusory” because it is provided “without specification of the criteria for the granting of such petitions.”<sup>135</sup> In its later filing, Shieldalloy admits that New Jersey does specify standards for license termination under its “alternative remediation standards” option but argues that those standards “would effectively prohibit on-site remediation of Shieldalloy’s source material” because of New Jersey’s “all controls failed” methodology for calculating the dose limit in the event of a failure of institutional and engineered controls.<sup>136</sup>

New Jersey’s regulatory program for restricted-release decommissioning requires that doses to members of the public resulting from a simultaneous and complete failure of institutional and engineering controls not exceed 100 mrem per year.<sup>137</sup> This is in contrast to our methodology, which assumes that institutional controls fail immediately and completely while engineered barriers will degrade over time rather than all at once.

Given all of this, it appears that the gravamen of Shieldalloy’s complaint is not truly that restricted release is “illusory” or impossible in New Jersey, but that New Jersey’s regulations do not permit restricted release under the *same conditions* as our regulations – *i.e.*, conditions allowing Shieldalloy to pursue the same disposal option it was pursuing under our regulations. See, *e.g.*, Feb. 11, 2011 filing at 11 (“New Jersey’s unrestricted use, limited restricted use, and restricted use standards do not allow consideration of engineered barriers *such as that proposed by Shieldalloy.*”) (emphasis

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<sup>135</sup> Shieldalloy Initial Response at 16.

<sup>136</sup> Shieldalloy Reply at 11.

<sup>137</sup> See N.J. Admin. Code § 7:28-12.11(e).

added). This boils down to a complaint, then, that New Jersey's license termination regulations, including their dose calculation methodology with respect to failure of controls, are more conservative than ours. In view of our Category C designation for our license termination rule, however, more conservative New Jersey requirements are permissible.<sup>138</sup>

#### **d. Departure from NRC's Regulations**

Shieldalloy argues that we cannot find New Jersey's license termination program compatible with ours because it "significantly departs" from our program in ways that we had previously "addressed and rejected" in our license termination rulemaking.<sup>139</sup> In addition to ALARA and restricted release, which we have already discussed, Shieldalloy cites the following so-called "departures" from our regulations: (1) New Jersey's 15 mrem per year dose limit, versus our 25 mrem per year dose limit; (2) New Jersey's calculation of doses to the longer of the time of peak dose or 1000 years, versus our calculation limited to the first 1000 years of decommissioning; (3) New Jersey's failure to allow for potential doses over 100 mrem per year, versus our allowance of 500 mrem under certain circumstances; and (4) New Jersey's requirement that radioactively contaminated ground and surface water be remediated in accordance with New Jersey water quality requirements, versus our "all pathways" approach without a separate release standard

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<sup>138</sup> Shieldalloy suggests in passing (in a footnote) that regardless of what New Jersey's regulations provide, New Jersey has "unambiguously declared that its regulations do not allow license termination based on onsite remediation." Shieldalloy Initial Response at 16 n.26. Shieldalloy points to an undocumented December 2008 New Jersey communication, and to a December 11, 2009, letter from New Jersey to Shieldalloy. The letter cited by Shieldalloy reflects that New Jersey did not accept Shieldalloy's restricted-use plan because the plan failed to satisfy New Jersey's 100 mrem dose criterion for restricted use under an "all controls failed" scenario and because a long-term control license is required, which the New Jersey regulations do not allow. Thus, New Jersey's rejection of Shieldalloy's proposed plan simply reflects its implementation of a permissibly more conservative regulation.

<sup>139</sup> Shieldalloy Initial Response at 17.

for water.<sup>140</sup> Shieldalloy asserts that these differences are such that New Jersey's program fails to give effect to the "essential objective" of our regulations and therefore is incompatible with ours.

We disagree. We decided the compatibility issue in the license termination rulemaking, when we found, through our Level C designation, that states are free to impose more stringent requirements than ours.<sup>141</sup> The New Jersey variances cited by Shieldalloy are aspects of the state's regulations that are more stringent than ours on the same technical subject areas. As we have made clear throughout today's decision, our compatibility policy contemplates state variances to account for local needs, desires, and conditions, and explicitly permits more stringent state regulations for license termination. By adopting a lower dose limit and requiring more conservative dose calculation methodologies, New Jersey's approach embodies the "essential objective" of our license termination rule – "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."<sup>142</sup>

#### **e. Criterion 23**

Shieldalloy claims that New Jersey's license termination regulations are not "fair and impartial" as required by Criterion 23 of our 1981 Policy Statement, because they are "aimed solely at the Newfield site and intended to force the removal of the material stored at the Newfield site."<sup>143</sup> Shieldalloy claims that it is "extremely improbable, if not

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<sup>140</sup> *Id.*

<sup>141</sup> If Shieldalloy was dissatisfied with the compatibility designation for the license termination rule, it could have sought a change in the designation by filing a petition for rulemaking. See 10 C.F.R. § 2.802.

<sup>142</sup> See License Termination Rule, 62 Fed. Reg. at 39,058.

<sup>143</sup> Shieldalloy Initial Response at 18.

impossible, for a new facility where source materials are used to be licensed under New Jersey's radiation control rules."<sup>144</sup>

On its face, New Jersey's program incorporates all of the regulatory components specified in Criterion 23, including procedures for public participation, formulation of rules of general applicability, approving and denying applications for licenses to possess and use radioactive material, and taking disciplinary actions against licensees. All of these requirements, in addition to the license termination regulations, will apply to New Jersey's regulation of the Newfield site.

Moreover, we do not see anything unfair or unlawful in state regulations that may apply to just one licensee in a state at any given time. An agreement state must have a regulatory program in place for *all* of the nuclear material categories and activities that a state wishes to regulate, currently and potentially. In fact, the absence of comprehensive regulations would render a state's program inadequate and incompatible under section 274. Nothing in section 274 or any of our implementing policy statements or guidance documents suggests that there must be more than one licensee or multiple licensees in a nuclear material class or activity before a state may assume regulatory jurisdiction over or adopt regulations governing that class of material or material activity.

Neither do we view a state's regulations as inherently unfair because they may be designed to effectuate a state-desired regulatory outcome. It is the prerogative of a state under the section 274 agreement-state program to decide what local interests, preferences, and needs it wishes to accommodate. Our role under section 274 is to assess whether a state's program adequately protects the public health and safety and whether it is compatible with ours. In the case of New Jersey, we have found the

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<sup>144</sup> *Id.*

provisions for both restricted release and unrestricted release to be adequate and compatible under our longstanding agreement-state policies.

#### **f. Implementation of New Jersey's Program**

Today, we have determined that New Jersey's regulatory program is adequate and compatible as to the Newfield site on a programmatic level. While we assume that an agreement state will conduct its regulatory actions in good faith and consistent with its approved program, a state's application of its regulations may raise issues that can only be addressed if and when they arise. For example, in the case of a state's program that, like New Jersey's, is considerably more stringent than ours but acceptable on its face, it is conceivable that unduly strict application could prove incompatible with our regulatory program. If a regulated entity believes that a state's program, as implemented, is unlawful or contrary to public health and safety, it may raise its agreement-state performance concerns with us. NRC will address agreement-state performance concerns through our Integrated Materials Performance Evaluation Program (IMPEP) process<sup>145</sup> or through an independent agreement-state performance concern evaluation, depending on the performance concern raised. We retain power under AEA section 274j,<sup>146</sup> to revoke agreements with states and to restore NRC regulatory authority.

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<sup>145</sup> Our 1997 Policy Statement described the IMPEP as a process "to provide NRC and agreement-state management with systematic, integrated, and reliable evaluations of the strengths and weaknesses of their respective radiation control programs and identification of areas needing improvement." 1997 Policy Statement, 62 Fed. Reg. at 46,521. Our guidance for implementing this review program is contained in NRC Management Directive 5.6, *Integrated Materials Performance Evaluation Program*. See NRC Website, *Office of Federal and State Materials and Environmental Management Programs* (Feb. 26, 2004), available at <<http://nrc-stp.ornl.gov/procedures.html#directives>>. The first IMPEP review generally occurs approximately 18 months after an agreement is entered into, and every four or five years thereafter.

<sup>146</sup> 42 U.S.C. § 2021(j) (2011).

Accordingly, Shieldalloy is not without recourse if New Jersey's implementation of its license termination regulations at the Newfield site proves so inflexible or so lax as to diminish public health and safety. Were that to occur, it is within NRC's authority to find New Jersey's program, as applied, inadequate or incompatible. Shieldalloy is free to raise concerns of this kind at any time.

#### IV. CONCLUSION

For the foregoing reasons, we *reinstate* New Jersey's authority to regulate Shieldalloy's Newfield site.

IT IS SO ORDERED.

For the Commission

**[NRC SEAL]**

**/RA/**

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Andrew L. Bates  
Acting Secretary of the Commission

Dated at Rockville, Maryland  
this 12<sup>th</sup> day of October, 2011