ORAL ARGUMENT NOT YET SCHEDULED

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA COURT CIRCUIT

No. 13-1259

SHIELDALLOY METALLURGICAL CORPORATION,
Petitioner,

v.

UNITED STATES NUCLEAR REGULATORY COMMISSION
and the UNITED STATES OF AMERICA,
Respondents,

STATE OF NEW JERSEY,
Intervenor.

ON PETITION FOR REVIEW OF AN ORDER OF THE
U.S. NUCLEAR REGULATORY COMMISSION

BRIEF FOR THE FEDERAL RESPONDENTS

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April 11, 2014

CERTIFICATE AS TO PARTIES, RULINGS, AND RELATED CASES

Counsel for the United States Nuclear Regulatory Commission agrees with Petitioner Shieldalloy Metallurgical Corporation's statement of the parties, rulings, and related cases in its opening brief.

Respectfully submitted,

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April 11, 2014

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GLOSSARY

AEA	Atomic Energy Act of 1954, as amended
ALARA	as low as is reasonably achievable
mrem	millirem
NRC	Nuclear Regulatory Commission
Shieldalloy	Shieldalloy Metallurgical Corporation

JURISDICTIONAL STATEMENT

We agree with the jurisdictional statement in the opening brief of petitioner Shieldalloy Metallurgical Corporation ("Shieldalloy").

ISSUE PRESENTED

Whether the interpretation by the Nuclear Regulatory Commission ("NRC") of its own regulation governing the eligibility of licensees to decommission a radiologically contaminated site without removing radioactive material is entitled to deference because it constitutes a reasonable interpretation of the applicable language.

STATEMENT OF THE CASE

I. Nature of the Case

In 2008, New Jersey applied to become an "agreement state" under section 274 of the Atomic Energy Act ("AEA"), 42 U.S.C. § 2021. After reviewing New Jersey's application, NRC found that the application met section 274's requirement that the state program be "compatible" with NRC's and "adequate" to protect public health and safety, and it transferred regulatory authority over certain sites previously under the auspices of NRC to New Jersey. Shieldalloy, which owns a radiologically contaminated site

in Newfield, New Jersey and had been seeking NRC's approval of its decommissioning plan, opposed the transfer and sought judicial review in this Court challenging NRC's decision to recognize New Jersey as an agreement state.

In *Shieldalloy Metallurgical Corp. v. NRC*, 624 F.3d 489 (D.C. Cir. 2010) ("*Shieldalloy I*"), this Court vacated the transfer of authority to New Jersey as to the Newfield site on the ground that NRC had not adequately explained why it could not retain authority over Shieldalloy's site under NRC's agreement-state criteria. On remand, NRC issued a formal decision reinstating transfer of regulatory authority over the Newfield site to New Jersey. *Shieldalloy Metallurgical Corp.*, CLI-11-12, 74 NRC 460 (2011) ("CLI-11-12") (JA__). In its decision, NRC addressed the issues underlying the Court's remand, as well as an additional issue regarding NRC's use of a cost-benefit test to support its regulatory preference for "unrestricted-release" decommissioning over "restricted-release" decommissioning.

As pertinent to this appeal, NRC rejected Shieldalloy's claims that NRC's license termination regulations require selection of the decommissioning alternative (as between restricted release and

unrestricted release) that yields the lowest radiological "dose" to the public, and that New Jersey's regulations, inasmuch as they omit a comparative-dose requirement and instead favor unrestricted release, are incompatible with NRC's. NRC explained that New Jersey's regulations were compatible with NRC's under NRC's agreement-state policy since both its own regulations and New Jersey's encompass a regulatory preference for unrestricted release. Shieldalloy sought judicial review of NRC's 2011 remand decision.

In *Shieldalloy Metallurgical Corp. v. NRC*, 707 F.3d 371 (D.C. Cir. 2013) ("*Shieldalloy II*"), this Court again vacated the transfer as to the Newfield site, this time on the ground that NRC had not provided a textual "exegesis" demonstrating that its asserted regulatory preference for unrestricted release is grounded in the regulatory text.

In *Shieldalloy Metallurgical Corp.*, CLI-13-06 (August 5, 2013) (Slip op.), 78 NRC 155 (2013) ("CLI-13-06") (JA__), NRC provided a textual analysis of the license termination regulation at issue, explaining how that regulation incorporates its regulatory preference for unrestricted release. NRC's textual analysis, and its discussion of other regulatory documents identified by the Court,

confirmed that its license termination regulations favor unrestricted release over restricted release and that New Jersey's like preference rendered its regulations "compatible" with NRC's within the meaning of the AEA.

On October 1, 2013, Shieldalloy filed this petition for review of NRC's August 5, 2013 decision.

II. Statutory and Regulatory Background

A. The Agreement-State Program

1. *Section 274 of the AEA*

In 1959, Congress amended the AEA to establish a program of federal-state cooperation in the regulation of nuclear materials. AEA § 274, 42 U.S.C. § 2021. The 1959 amendments were intended "generally to increase the States' role" in the regulation of nuclear materials. *English v. General Elec. Co.*, 496 U.S. 72, 81 (1990).

Under Section 274b of the AEA, 42 U.S.C. § 2021(b), NRC "is authorized to enter into agreements" with states "providing for discontinuance of the regulatory authority" of NRC with respect to nuclear materials, as defined in the AEA. Once NRC enters into such an agreement, the state shall "have authority to regulate the

materials covered by the agreement for the protection of the public health and safety from radiation hazards." AEA § 274b, 42 U.S.C. § 2021(b).

Under Section 274d, 42 U.S.C. § 2021(d), NRC "shall" enter into an agreement with a state upon a state Governor's request if NRC finds the state program "compatible with the [NRC'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."

2. *NRC Implementation of Section 274*

NRC has implemented section 274 through policy statements setting forth the framework for state regulatory programs that are both "adequate" to protect the public health and safety and "compatible" with NRC's regulatory program. *See generally* CLI-11-12, 74 NRC at 478-79 (JA___).

NRC's policy statement explains that "adequacy" "presumes" that the "level of protection of NRC's regulatory program is . . . that which is adequate to provide a reasonable assurance of protection of public health and safety." *Id.* at 479 (JA__). Thus, the policy statement indicates that, 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." *Id.*

Regarding "compatibility," the policy statement states that 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." *Id.* The policy statement establishes "compatibility categories" to be assigned to NRC's regulations for the purpose of assessing a state's program for compatibility. *Id.* These categories identify those aspects of NRC's regulatory program that a state *must* adopt, and those aspects from which a state has flexibility to depart. *Id.*

This case involves license termination, which has been designated as a "Category C" program. *Id.* at 482 (JA__) To be both adequate *and* compatible, agreement-state regulations corresponding to an NRC Category C program must afford protection to the public health and safety "equivalent to, or greater than," the level provided by NRC, as well as incorporate the "essential objective" of NRC's program. *Id.* at 479 (JA__).

Category C, therefore, contemplates state regulations more stringent than NRC's.

B. NRC's Regulations

1. *Dose Limits and ALARA*

NRC's regulations establish maximum radiological dose exposure standards—*i.e.*, dose limits—that NRC has determined will ensure an adequate level of protection to the public from radiation resulting from NRC-authorized activities, including license termination. *See* 10 C.F.R. Part 20. NRC has determined that the requisite level of protection for license termination is a maximum of 25 millirem ("mrem") per year to members of the public. *See* Radiological Criteria for License Termination, 62 Fed. Reg. 39,058, 39,080 (July 21, 1997) ("Final Rule") (JA___); 10 C.F.R. §§ 20.1402, 20.1403(b).

Dose limits required for adequate protection must be satisfied regardless of cost. However, under a regulatory concept known as "ALARA"—"as low as is reasonably achievable"—NRC also requires licensees to reduce dose levels below a specified dose limit, but only to the extent that such reductions are cost-effective.

Cost impacts for such dose reductions are analyzed through the performance of a cost-benefit analysis described in NRC staff guidance documents.[1] A reduction in radiation exposure below a specified dose level is "reasonably achievable" so long as it can be achieved cost-effectively.[2] Thus, an ALARA analysis assesses the point at which further reducing public exposure to radiation from an existing level will *not* be cost-effective.

Where NRC has established a "dose limit" for a licensed activity, it expects licensees to make a "reasonable effort" to "maintain exposures to radiation as far below the dose limits as is practical, consistent with the purpose for which the licensed activity is undertaken." *See* 10 C.F.R. § 20.1003. Use of the ALARA principle to reduce doses below a dose limit is required for all regulatory activities for which a dose limit to members of the public

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[1] *See, e.g.*, NUREG-1757, Vol. 2, "Consolidated Decommissioning Guidance," Appendix N (JA___). An ALARA cost-benefit analysis compares potential benefits of incremental reductions in radioactivity levels to potential costs of such reductions. *Id.* at N-3 (JA___). All benefits and costs are given a monetary value if possible. *Id.* NUREG-1757 recognizes that there may be situations for which a "qualitative" analysis may be appropriate because a credible monetary value cannot be developed. *Id.*

[2] *Id.*

is specified in 10 C.F.R. Part 20, including the license-termination dose limit of 25 mrem per year. *See* 10 C.F.R. § 20.1101(b).

2. *License-Termination Rule*

NRC established dose limits and other criteria for license termination in a 1997 rule. *See* Final Rule, 62 Fed. Reg. at 39,058 (JA___); 10 C.F.R. Part 20, Subpart E.[3] The essential objective of the rule was "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." Final Rule, 62 Fed. Reg. at 39,058 (JA___).

As had previously been the case, the 1997 rule permitted license termination using the unrestricted-release decommissioning method. Unrestricted release involves reduction of doses to the regulatory limit through actual physical removal (or decontamination) of radioactively contaminated material at a site.[4]

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[3] NUREG-1757 (JA___) provides detailed NRC staff guidance on implementation of the license-termination rule.

[4] Radioactively contaminated material is referred to in NRC's regulations as "residual radioactivity," which is defined as "radioactivity in structures, materials, soils, groundwater, and other

However, the 1997 license-termination rule also recognized the possibility that licensees might seek to decommission their facilities by releasing the property for restricted use only and, accordingly, recognized restricted-release decommissioning. Radiological Criteria for Decommissioning, 59 Fed. Reg. 43,200, 43,220 (proposed Aug. 22, 1994) ("Proposed Rule") ("The proposed rule would broaden the definition of decommissioning to include release for restricted use in addition to release for unrestricted use.") (JA__). In contrast to unrestricted release, restricted release relies not only upon reductions in residual radioactivity (i.e., removal or decontamination of radioactively contaminated material) to achieve the 25 mrem per year dose limit, but also upon legally enforceable institutional controls, engineered barriers, and physical barriers to control access to the contaminated site. *See* 10 C.F.R. § 20.1403.

In the license-termination rulemaking, NRC specified that its regulatory preference was for unrestricted release "because it requires no additional precautions or limitations on use of the site after licensing control ceases, in particular for those sites with long-

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media at a site resulting from activities under the licensee's control." 10 C.F.R. § 20.1003.

lived nuclides." Final Rule, 62 Fed. Reg. at 39,069 (JA___). Accordingly, in support of its preference for unrestricted release, NRC made unrestricted release the default decommissioning approach. Under 10 C.F.R. § 20.1402, a licensee that is ready to undergo decommissioning is free to pursue unrestricted release without first having to make any kind of threshold showing. A licensee undertaking unrestricted release must sufficiently reduce residual radioactivity—i.e., remove enough radioactively contaminated material—so that the resulting dose level does not exceed 25 mrem per year, and it must further reduce residual radioactivity below the 25 mrem dose limit to the extent that doing so is cost-effective, or as low as is reasonably achievable. *Id.*

For licensees desiring to pursue restricted-release decommissioning, however, NRC fashioned a threshold eligibility test that focuses on the costs and benefits of pursuing unrestricted release. Specifically, a licensee that wishes to pursue restricted release is required to make a threshold showing that it cannot cost-effectively achieve unrestricted release. This threshold restricted-

release eligibility provision is contained in 10 C.F.R. § 20.1403(a).[5] Under this provision, a licensee is given the choice of employing two alternative cost-benefit tests to demonstrate that decommissioning using unrestricted release would not be cost effective—a full-scale ALARA analysis that considers all of the costs and benefits of reducing residual radioactivity levels to regulatory limits, or an abbreviated "net public or environmental harm" analysis that weighs only the health and environment-related benefits and costs of reducing residual radioactivity to regulatory limits.[6] To demonstrate eligibility for restricted release, a licensee must demonstrate that the "further reductions in residual radioactivity" necessary to accomplish unrestricted release either (1) would result in "net public or environmental harm"; or (2) were "not being made" because the residual radioactivity levels proposed to be left in place under a restricted release plan are as low as is reasonably achievable (ALARA).

The regulatory purpose of the ALARA test in the second alternative is not to achieve dose reductions below a regulatory dose

[5] *See* NUREG-1757, Vol. 1, at 17-70 (JA___).

[6] *See* CLI-13-06 at 8 n.24, 78 NRC at 163 n.24 (JA__).

limit, but, instead, to enable a licensee seeking to pursue restricted release to demonstrate the reason why the "further reductions in residual radioactivity necessary to" accomplish unrestricted release were "not being made." Thus, in NRC's regulatory program for license termination, the ALARA cost-benefit analysis is used for two separate purposes—to ensure that doses are reduced as far below the level determined necessary for adequate protection as is cost-effective (as discussed *supra*, at 7-9), and also to determine initial eligibility for restricted use.

The proper interpretation of the restricted-release eligibility provision in § 20.1403(a) is reflected in the evolution of the license-termination rule. In the proposed rule, NRC made clear its expectation that licensees would "make every reasonable effort to reduce residual radioactivity to levels that will allow unrestricted release of the site."[7] Nevertheless, NRC also "recognize[d] that it may not be reasonable to remediate some sites to a level that permits release for unrestricted use" in light of the "costs involved," *id.* at 43,208 (JA__), and for that reason it recognized the possibility

[7] Proposed Rule, 59 Fed. Reg. at 43,229 (proposed § 20.1402(d)) (JA__).

that licensees might pursue restricted release, *id.* at 43,220 (JA__). To support its preference for unrestricted release yet simultaneously permit restricted release in those cases where removing contaminated material would be too costly, NRC initially proposed a more rigorous cost test than the ALARA test as a threshold condition of eligibility for restricted-release decommissioning. Specifically, to be permitted to pursue restricted release, licensees would have been required to show that the cost of performing the reductions in residual radioactivity necessary to achieve unrestricted release would be "prohibitively expensive," or that such reductions would result in net environmental or public harm (or otherwise be technically infeasible):

> Licensees unable to meet the requirements for unrestricted use would be allowed to request permission to release sites for restricted use with subsequent termination of the license if they can demonstrate that . . . *[f]urther reductions in residual radioactivity* are not technically achievable, the cost of achieving *further reductions* would be prohibitively expensive, or *further reductions* would directly produce environmental or public harm that is clearly excessive compared to the health or environmental benefits achieved through these reductions now or in the future.

Proposed Rule, 59 Fed. Reg. at 43,220 (emphasis added) (JA__). As NRC's explanation makes clear, the focus of the inquiry in these demonstrations was on the technical, environmental, and financial feasibility of taking steps to reduce residual radioactivity—i.e., the costs and benefits of employing *unrestricted* release.

In response to its proposed rule, NRC received comments suggesting that the "prohibitively expensive" standard was "unreasonably restrictive" and that, as a result, "few sites would be able to qualify for license termination under restricted conditions." Final Rule, 62 Fed. Reg. at 39,068 (JA__). Accordingly, with respect to cost, NRC decided to "replace[] the prohibitively expensive provision for justifying restricted use with a reasonable cost provision." *Id.* at 39,072 (JA__).[8] The "reasonable cost provision," NRC explained, "incorporate[s] an ALARA standard rather than prohibitive costs as the basis for selecting restricted use." *Id.* at 39,069 (JA__).

[8] NRC retained the proposed "net public or environmental harm" provision as an alternative cost-benefit test to demonstrate initial eligibility for restricted release. *Id.*

As a consequence of the relaxed eligibility standard that NRC adopted, "[t]o support a request for restricted use, a licensee [must] perform an ALARA analysis of the risks and benefits of all viable alternatives" of achieving unrestricted release, including "consideration of any detriments" of unrestricted release, such as "estimated fatalities from transportation accidents that might occur as the result of transport of wastes from cleanup activities," as well as consideration of "the societal and socioeconomic" benefits of unrestricted release, "such as the potential value to the community of unrestricted use of the land." *Id.*

If a licensee is unable to make the demonstration as to restricted-release eligibility required under section 20.1403(a), the licensee must decommission using unrestricted release pursuant to 10 C.F.R. § 20.1402. As described above, the activity of license termination under section 20.1402 entails removing enough residual radioactivity to satisfy the dose limit of 25 mrem per year and, given the existence of a stated dose limit for this activity, employment of the ALARA principle to ensure that doses to the public are as low as is cost-beneficially achievable under the dose limit.

By contrast, if the licensee demonstrates that it cannot further reduce residual radioactivity to unrestricted release levels in a cost-beneficial manner, the licensee will be eligible to pursue a restricted-use decommissioning plan. To receive NRC approval, the restricted release plan must then satisfy NRC's regulatory requirements for restricted release deemed necessary for adequate protection under 10 C.F.R. §§ 20.1403(b), (c), (d), and (e). The activity of license termination under restricted release includes, *inter alia*, (1) putting into place adequate institutional controls and restrictions to reduce doses to the public from residual radioactivity left on site to the 25 mrem per year dose limit, *see* § 20.1403(b), and, given the existence of a dose limit for this activity, reduction of doses as far below the dose limit as is cost-beneficially achievable[9]; and (2) reducing residual radioactivity at the site so that if institutional controls fail, the doses to the public will not exceed 100 mrem (or 500 mrem in some circumstances) and would be as low as is cost-beneficially achievable below these dose limits.[10] If a

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[9] 10 C.F.R. § 20.1101(b); Final Rule, 62 Fed. Reg. at 39,066 (JA___); NUREG-1757, Vol. 1, at 17-87 (JA___).

[10] *See* 10 C.F.R. § 20.1403(e).

licensee's restricted-release plan fails to satisfy the restricted-release requirements in sections 20.1403(b), (c), (d), and (e), the licensee must then revert to the preferred, default approach and decommission using unrestricted release. *See* 10 C.F.R. § 20.1402.

III. Statement of the Facts

A. *Facts Leading up to the 2013 Court Decision*

1. *Shieldalloy's License-Termination Proceeding*

Shieldalloy's site in Newfield, New Jersey is contaminated with source material, which consists of long-lived radionuclides (uranium and thorium isotopes). Between 2002 and 2006, NRC staff rejected two Shieldalloy plans for restricted-use decommissioning at the Newfield site. *See Shieldalloy Metallurgical Corp.*, 65 NRC 341, 343 (2007) (JA__). NRC staff accepted for review Shieldalloy's third, revised, decommissioning plan, filed in June 2006, for the purpose of initiating a full technical review of the plan. *Id.*[11] Shieldalloy submitted a fourth decommissioning plan in August 2009.

[11] NRC's licensing board granted New Jersey's hearing request on Shieldalloy's proposed license-termination plan but held the case in abeyance pending the completion of the staff's safety and environmental review of the plan.

NRC staff's review of Shieldalloy's third decommissioning plan was still pending when NRC's agreement with New Jersey became effective in September 2009. NRC staff then terminated its review of Shieldalloy's third plan, declined to review the fourth plan, and forwarded the associated files to New Jersey. *See Shieldalloy I*, 624 F.3d at 491.

2. *NRC's Recognition of New Jersey as an Agreement State and the 2010 Court Decision*

New Jersey applied to become an agreement state in 2008.[12] New Jersey's program incorporated by reference many of NRC's regulations, including 10 C.F.R. § 20.1101(b), requiring that doses be ALARA below the dose limits specified in radiation protection programs. N.J. Admin. Code § 7:28-6.1(a). In the area of license termination, New Jersey adopted its own regulations rather than incorporating by reference NRC's regulations in 10 C.F.R. §§ 20.1401-1405 (*see* N.J. Admin. Code § 7:28-6.1(c)). New Jersey adopted requirements for license termination that are more stringent than NRC's, including a 15 mrem per year dose limit. New Jersey's license termination program also makes restricted

[12] *See* CLI-11-12, 74 NRC 460, 465 (2011) (JA__).

release more difficult to obtain than unrestricted release but does not include a threshold condition for restricted release comparable to § 20.1403(a). *See* N.J. Admin. Code § 7:28-12.8(a)(1).

After reviewing New Jersey's request, NRC staff found that New Jersey's program met section 274's "adequacy" and "compatibility" requirements and sought public comments. CLI-11-12, 74 NRC at 465 (JA__). Shieldalloy filed comments opposing the agreement, including complaints regarding the stringency of New Jersey's license termination requirements for restricted release. *Id.*

NRC approved the agreement with New Jersey. *Id.* at 466 (JA__). Shieldalloy sought judicial review in this Court and obtained a remand and vacatur of the transfer decision as to Shieldalloy's site on the ground that NRC had not adequately explained why its transfer decision did not amount to undue interference with Shieldalloy's pending NRC application and why NRC could not retain authority over the Shieldalloy site. *Shieldalloy I*, 624 F.3d 489.

3. *NRC's 2011 Remand Decision*

On remand, NRC issued a decision reinstating New Jersey's authority over the Shieldalloy site and addressing the issues that

had formed the basis for the Court's remand. NRC also addressed an additional argument raised by Shieldalloy on remand—that NRC's license termination regulations incorporate the ALARA principle in a manner that requires a licensee to compare the resulting annual doses from unrestricted and restricted-release decommissioning and to select the lowest-dose option. *Id.* at 491 (JA__).

NRC rejected Shieldalloy's comparative-dose argument. In doing so, NRC explained that doses achievable through the restricted-use and unrestricted-use options cannot be compared meaningfully in light of the "significantly different methods to achieve adequate protection" and the "significantly different risks and uncertainties associated with [each option]." *Id.* at 489-90 (JA__). And it confirmed that, in view of the inherent complexities and uncertainties associated with restricted release, such as the "limitations in understanding the performance of a disposal system and its institutional and engineering controls over the course of the 1000-year compliance period," *id.* at 490 (JA__), its regulatory policy preference for license termination has always been for unrestricted release. *Id.* at 491 (JA___).

NRC attributed Shieldalloy's misapprehensions concerning ALARA and comparative dose to a misunderstanding of the threshold requirement for pursuing restricted release in 10 C.F.R. § 20.1403(a). *Id.* at 492. (JA___). In particular, NRC explained that the ALARA principle was incorporated into § 20.1403(a) not for the traditional purpose of requiring cost-effective dose reductions below a dose limit, but in order to support NRC's preference for unrestricted restricted release—"effectively, to screen out sites" for which "removing contamination to achieve unrestricted use" would be cost-effective. *Id.* NRC concluded that New Jersey's lack of an ALARA-based criterion for restricted-release eligibility is immaterial to the statutory "adequacy" and "compatibility" requirements, given that New Jersey's regulations favor unrestricted release without the need for a regulation comparable to § 20.1403(a). *Id.* at 493 (JA___). Shieldalloy challenged this conclusion in this Court.

B. *The 2013 Court Decision*

In *Shieldalloy II*, the Court deferred to NRC's conclusions with respect to the issues that were the subject of the Court's 2011 remand decision. *Shieldalloy II*, 707 F.3d at 376-77. However, the Court, with one judge dissenting, again vacated the transfer as to

Shieldalloy's site and remanded the case to NRC. The sole subject of the Court's second remand was NRC's interpretation of 10 C.F.R. § 20.1403(a). The Court held that NRC, in responding to Shieldalloy's comparative-dose and ALARA arguments, had erred in failing to explain how its interpretation of § 20.1403(a) comports with the regulatory text. *Id.* at 382.

The Court found that the text of the regulation neither "precludes" Shieldalloy's reading of the provision to compel selection of the decommissioning option that would yield the lowest dose, "nor, at least without exegesis that is completely missing here," supports NRC's position that § 20.1403(a) does not call for any comparative-dose demonstration and instead was intended to compel selection of unrestricted release if cost-beneficial. *Id.* at 379. In the Court's view, § 20.1403(a) might appear to suggest that a "licensee can qualify for restricted release without having to make any showing about unrestricted release." *Id.*

In explaining its reluctance to adopt NRC's interpretation, the Court focused specifically on the phrase "were not being made because the residual levels associated with restricted conditions are ALARA" in the text of § 20.1403(a). *Id.* The Court stated that this

language "appears to stand for the proposition that a licensee is eligible for restricted release upon showing that it has performed an ALARA analysis of *restricted* release decommissioning options, and the results of that analysis have caused it not to pursue unrestricted release." *Id.* (emphasis in original). Under this construction, the Court explained, "the availability of restricted release under § 20.1403 would appear to have nothing to do with whether unrestricted release can be attained in a cost-beneficial manner, and everything to do with some property of restricted release." *Id.* at 379-80.

The Court acknowledged that this construction of § 20.1403(a) "jars with" NRC's stated preference for unrestricted release, *id.* at 380 (JA__), and is "in tension" with the second sentence of the provision. *Id.*[13] The Court concluded, nevertheless, that the language of § 20.1403(a) on its face can be construed to require

[13] The second sentence of § 20.1403(a) provides that the "[d]etermination of the levels which are ALARA must take into account consideration of any detriments, such as traffic accidents, expected to potentially result from decontamination and waste disposal." The Court observed that, in contrast to unrestricted release, "traffic accidents related to waste disposal would seem to have little to do with restricted release, which involves on-site disposal of radioactive materials." *Shieldalloy II*, 707 F.3d at 380.

some demonstration focused on restricted release that is totally unconnected with an inquiry as to whether unrestricted release would be cost-beneficial. *Id.* at 379-80. The Court also observed that NRC's position that § 20.1403(a) does not contemplate selection of the lowest dose as between unrestricted and restricted-release appeared inconsistent with other "NRC regulations and statements," including the definition of ALARA in 10 C.F.R. § 20.1003, and certain statements referring to the concept of "comparisons" between restricted and unrestricted release in NUREG-1757 and in staff requests for additional information directed to Shieldalloy. *Id.* at 380-81.

While the Court found NRC's explanation lacking, it did not necessarily endorse Shieldalloy's comparative-dose position. Rather, it required NRC to provide a "textual basis" for its interpretation of § 20.1403(a):

> In the present case, our study of the text led to the conclusion that the Commission's response to Shieldalloy lacked an apparent textual basis; but that finding of course does not obligate the NRC to accept *Shieldalloy's* interpretation of § 20.1403(a). Rather, it requires only that the Commission explain itself in a way that rationally addresses the concerns we set out above.

Id. at 382 (emphasis in original).

C. NRC's 2013 Remand Decision

On August 5, 2013, NRC issued a second decision on remand. In its decision, NRC confirmed that, in § 20.1403(a), the regulatory purpose of an ALARA analysis is not to assess whether it would be cost-effective for a licensee to perform the additional remediation necessary to reduce doses at a site even further below a specified dose limit, but, rather, to assess whether it would be cost-effective for licensees pursuing restricted release to actually accomplish unrestricted release in the first instance. CLI-13-06 at 7, 78 NRC at 162 (JA__).

To support this conclusion, NRC provided a textual analysis of § 20.1403(a), which explained how the language of the regulation revolves around the cost-effectiveness of unrestricted release and thereby supports its preference for unrestricted release. As an initial matter, NRC pointed out that § 20.1403(a) focuses on a specific activity—making the "further reductions in residual radioactivity necessary to comply with the provisions of § 20.1402 [the requirements for unrestricted release]"—and, in relevant part, requires the licensee to demonstrate why those reductions in

residual radioactivity "were not being made." CLI-13-06 at 12, 78 NRC at 166 (JA__). NRC observed that the regulation's focus on "residual radioactivity" is critical to understanding the demonstration required of a licensee in the portion of the regulation that the Court found troubling—i.e., that the "the residual levels associated with restricted conditions are ALARA."

NRC explained that "residual radioactivity" is a defined term that refers to the "'radioactivity in structures, materials, soils, groundwater, and other media at a site resulting from activities under the licensee's control.'" *Id.* NRC pointed out that "while it is possible to use restricted-release decommissioning to reduce the *dose* to the public from 'residual radioactivity'—i.e., by creating institutional controls to restrict future land use and in some cases constructing engineered barriers to reduce exposure to radioactivity—it is not possible to *reduce* 'residual radioactivity' itself simply by taking these steps." *Id.* (emphasis in original). Instead, NRC explained, "'residual radioactivity,' as defined, can only be 'reduced' through removal of radioactive material from a site or site decontamination." *Id.* Accordingly, NRC made clear that its "use of the phrase 'reductions in residual radioactivity' in

§ 20.1403(a) refers only to dose reductions to the public that can be accomplished solely through the steps associated with unrestricted-release decommissioning—i.e., removal of contaminated material or decontamination." CLI-13-06 at 13, 78 NRC at 167 (JA__).

NRC went on to explain that "the term 'residual levels,' as used in the phrase 'were not being made because the residual levels . . . are ALARA,' refers back to, and is shorthand for, the term 'residual radioactivity.'" CLI-13-06 at 15, 78 NRC at 168 (JA__). NRC noted this is the only permissible construction of the term, given that there is no other term in the regulation that is modified by the word "residual." CLI-13-06 at 15 n.49, 78 NRC at 168 n.49 (JA__). Accordingly, NRC explained, the "determination expressly required by the text of § 20.1403(a)—whether 'further reductions in residual radioactivity . . . were not being made because the residual levels . . . are ALARA'—is an inquiry that, by definition, focuses on how far it is possible, on a cost-effective basis, to further reduce the 'residual levels'" and thereby reduce the dose to the public solely by taking the actions necessary to accomplish unrestricted release (i.e., removing or decontaminating radioactive materials). CLI-13-06 at 15, 78 NRC at 168 (JA__).

NRC then turned to the language in § 20.1403(a) that was the focus of the Court's decision—"associated with restricted conditions." NRC acknowledged that this language "might, at first glance, appear to focus on some defining property of restricted release, such as the dose that could be cost-beneficially achieved under a licensee's restricted-release plan." CLI-13-06 at 16, 78 NRC at 169 (JA__). NRC explained, however, that "the placement and use of those words within the sentence at issue (i.e., in connection with the inquiry as to why 'further reductions in residual radioactivity . . . were not being made') indicates that they necessarily refer to the residual levels of radioactivity that a licensee proposes to leave in place as part of its proposed restricted-release plan." *Id.* NRC noted that "[t]his interpretation is consistent with the agency's license termination guidance, which describes the test at issue in § 20.1403(a) as requiring a 'demonstration that the *proposed* residual radioactivity levels at the site are ALARA.'" *Id.* (citation omitted) (emphasis in original).

Examining the regulation as a whole, NRC concluded that, when "[c]onstrued in context with the entire introductory clause in § 20.1403(a), the inquiry whether 'residual levels associated with

restricted conditions are ALARA' calls for a licensee to demonstrate that 'further reductions' (that is, further removal of contaminated soil or decontamination) from *proposed* residual radioactivity levels to the level necessary to achieve unrestricted release are 'not being made' because the proposed 'residual levels' are *already* as low as is reasonably achievable, such that 'further' removal or decontamination would not be cost-beneficial." *Id.* at 16-17, 78 NRC at 169 (JA__). Thus, NRC explained, "[i]f the licensee's proposed level of residual radioactivity is as low as is cost-beneficially achievable but still exceeds the level required for unrestricted release (25 mrem per year), the licensee will have demonstrated that it is not possible to further reduce residual radioactivity to a point where unrestricted release is cost-beneficial and will be eligible to pursue restricted release." CLI-13-06 at 17, 78 NRC at 170 (JA__). NRC further noted that, "even if unrestricted release cannot be achieved cost-effectively, requiring that a licensee reduce residual radioactivity to the lowest cost-effective level under a restricted-release plan serves the beneficial regulatory purpose of optimizing protection of public health and safety in the event that restricted-release controls fail and is consistent with the NRC's

preference for unrestricted release." CLI-13-06 at 17-18, 78 NRC at 170 (JA__).

In addition to providing a textual analysis of § 20.1403(a), NRC addressed language from NUREG-1757 that the Court viewed as inconsistent with NRC's interpretation of § 20.1403(a). *Shieldalloy II*, 707 F.3d at 381 (citing NUREG-1757, Vol. 2, at 6-3, N-6 (JA)__)). The Court indicated that it could not reconcile NRC's position that § 20.1403(a) does not involve a comparison between doses achievable through unrestricted and restricted release with statements in NUREG-1757 referring to "comparisons between restricted and unrestricted release" as part of the cost-benefit analysis required by § 20.1403(a). *Shieldalloy II*, 707 F.3d at 381.

NRC explained that comparisons of the type referred to in the guidance do not involve the comparative-dose approach that Shieldalloy postulated. Rather, NRC explained, "comparisons" associated with an ALARA cost-benefit analysis are necessitated by the fact that some of the benefits that are considered as part of the cost-benefit analysis required to demonstrate eligibility for unrestricted release cannot be calculated without reference to a proposed restricted-release alternative. CLI-13-06 at 19, 78 NRC at

171-72 (JA__). In other words, as NRC elaborated, "the benefits of reducing the levels of residual radioactivity include not only those that are calculated in *absolute* terms, i.e., collective dose averted, but also benefits that can only be calculated in *relative* terms, such as regulatory costs avoided, changes in land values, and reductions in public opposition." CLI-13-06 at 20, 78 NRC at 172 (JA__).

NRC observed that "benefits associated with, for example, the regulatory costs avoided that will result from the use of unrestricted-release decommissioning can only be measured by comparing (1) what the regulatory costs would be if the site is decommissioned pursuant to an unrestricted-release plan; with (2) what the regulatory costs would be if the site is released pursuant to a restricted-release plan." *Id.* In short, "to reasonably calculate the benefits of unrestricted release, the licensee must account for the costs of restricted release that the licensee will avoid through unrestricted release. CLI-13-06 at 21, 78 NRC at 172 (JA__). NRC emphasized that "[i]t is in this sense (and in this sense only) that NRC's guidelines contemplate, as part of the ALARA analysis required by § 20.1403(a), a comparison between 'restricted release versus unrestricted release decommissioning goals.'" *Id.*

NRC also addressed a request for additional information from NRC staff to Shieldalloy that the Court suggested could support the need for a comparative-dose analysis between unrestricted and restricted release. NRC explained that the statement at issue in the information request—that overestimating the remediation necessary to accomplish unrestricted release would "bias the net harm or ALARA comparison away from the unrestricted use option" (*see Shieldalloy II*, 707 F.3d at 381)—suggests no comparative-dose analysis but only the staff's observation that Shieldalloy's calculations may have overstated the amount of work needed to accomplish unrestricted release and thereby erroneously suggested eligibility for restricted release. CLI-13-06 at 22, 78 NRC at 173 (JA__). As NRC observed, the staff's statements in its information request only "support the Commission's consistently stated position that the relevant inquiry under § 20.1403(a) is a comparison of the costs and benefits of reducing residual radioactivity to a qualifying level for unrestricted release." CLI-13-06 at 23, 78 NRC at 174 (JA__).

Finally, NRC reaffirmed that, despite the absence of a restricted release eligibility provision comparable to § 20.1403(a),

New Jersey's license termination program, like NRC's, supports a preference for unrestricted release and is adequate and compatible with NRC's within the meaning of AEA § 274. CLI-13-06 at 23-24, 78 NRC at 174 (JA__).

SUMMARY OF ARGUMENT

Shieldalloy would have the Court believe that its interpretation of § 20.1403(a) is compelled by the text of the regulation, and that NRC is abandoning its obligation to protect the public from exposure to radioactivity. Shieldalloy's concerns are ill-founded and rest upon a misapprehension of NRC's considered judgment that unrestricted-release decommissioning is preferable and should be pursued as long as the applicable dose limits can be achieved cost-effectively by reducing residual radioactivity at the site. This preference is borne out by the text of the regulation, NRC's interpretation of which is entitled to considerable deference, particularly because it concerns a highly technical matter within the unique expertise of the agency.

As NRC explained in its decision on remand, and as further set forth below, the subject of the inquiry postulated by § 20.1403(a) is why reductions in residual radioactivity are not

being made. By definition, this inquiry is solely directed at the cost-effectiveness of unrestricted-release decommissioning and constitutes an eligibility test for licensees who would prefer to employ restricted release because unrestricted release is too expensive.

This eligibility test is confirmed by the history of the license-termination rule, which Shieldalloy cites, but fails to properly explain. Restricted release represents the exception to the rule. Thus, it was originally designed to be available only in those circumstances where unrestricted release was cost-prohibitive. Although the final rule was relaxed so as to permit the use of restricted release where unrestricted release would not be cost-effective, it was never designed, as Shieldalloy suggests, to require the use of restricted release if restricted-release decommissioning would yield a lower dose to the public. The inquiry postulated by § 20.1403(a) has nothing to do with the dose that can be achieved through restricted release; it is simply about the cost-effectiveness of unrestricted-release decommissioning options.

Nor, contrary to Shieldalloy's arguments, does this interpretation constitute a perversion of the ALARA requirement.

Although all licensees must reduce dose levels below dose limits to a level that is as low as is reasonably achievable, this obligation is not a part of the inquiry mandated by § 20.1403(a). Rather, to the extent § 20.1403(a) incorporates the ALARA requirement, it is only to inquire, with respect to a licensee seeking to pursue restricted-release decommissioning, whether the *residual levels of radioactivity* sought to be left in place are as low as is reasonably achievable. Section 20.1403(a) is not, as Shieldalloy would have it, a license to inquire whether it might be reasonable to reduce the dose to the public through restricted release. Again, the dose level that might be achieved through restricted release is simply not germane to the § 20.1403(a) inquiry.

Shieldalloy's attempts to demonstrate inconsistency in NRC's interpretation of § 20.1403(a) through selective citations from NRC staff communications, which are largely based on materials that are not part of the record, are also unavailing. These communications reveal on their face that NRC staff disagreed with Shieldalloy's comparative-dose approach to § 20.1403(a). And, of course, to the extent the staff's statements are inconsistent with NRC regulations or guidance, they do not represent agency policy or render the

entirety of New Jersey's regulatory program "incompatible" with NRC's.

In the end, Shieldalloy's incompatibility argument essentially amounts to a disagreement with NRC's policy preference for unrestricted release. But NRC's policy preference is not at issue in this case; the basis of the Court's remand was that it could not square NRC's asserted interpretation with the regulatory text. NRC has supplied the textual analysis of § 20.1403(a) that the Court found lacking. That interpretation is entitled to substantial deference and is, in fact, the only interpretation of the regulation that gives full effect to its language. Thus, there is no reason to deem New Jersey's program incompatible with NRC's or to invalidate NRC's transfer of regulatory authority over the Shieldalloy site to New Jersey.

ARGUMENT

Standard of Review

As discussed above, the sole issue in this case is NRC's interpretation of one particular regulation. Final orders of the NRC are subject to judicial review under the "arbitrary and capricious" standard of the Administrative Procedure Act, 5 U.S.C. §

706(2)(A). Under the "arbitrary and capricious" scope of review, an agency's interpretation of its own regulations is entitled to "substantial deference," *Thomas Jefferson University v. Shalala*, 512 U.S. 504, 512 (1994), and is given "controlling weight unless it is plainly erroneous or inconsistent with the regulation." *Id.* (internal quotation marks omitted); *see also Auer v. Robbins*, 519 U.S. 452, 462-63 (1997); *City of Idaho Falls, Idaho v. FERC*, 629 F.3d 222, 228 (D.C. Cir. 2011). Accordingly, a reviewing Court must defer to an agency's interpretation "as long as it is 'logically consistent with the language of the regulation[s] and. . . serves a permissible regulatory function.'" *Howmet Corp. v. EPA*, 614 F.3d 544, 549 (D.C. Cir. 2010) (citation omitted). "This broad deference is all the more warranted when, as here, the regulation concerns a complex and highly technical regulatory program, in which the identification and classification of relevant criteria necessarily require significant expertise and entail the exercise of judgment grounded in policy concerns." *Thomas Jefferson University*, 512 U.S. at 512 (internal quotation marks omitted); *see also St. Luke's Hospital v. Sebelius*, 611 F.3d 900, 905 (D.C. Cir. 2010).

I. NRC's Interpretation of § 20.1403(a) as Requiring Licensees to Demonstrate that Unrestricted Release Is Not Cost-Effective as a Condition of Eligibility for Restricted Release Is Reasonable and Is The Only Interpretation That Is Consistent with the Regulation's Text

This Court's decision in *Shieldalloy II* did not take issue with the policy or technical reasons for NRC's asserted regulatory preference for unrestricted release. Instead, the stated basis for the remand was the difficulty that the Court had in reconciling NRC's policy preference with the text of § 20.1403(a) and, in particular, the language "residual levels associated with restricted conditions are ALARA." In CLI-13-06, NRC responded to the Court's concern by explaining how the text of § 20.1403(a) supports its preference for unrestricted release and imposes a threshold eligibility test that requires a licensee to demonstrate that unrestricted release cannot be achieved cost-beneficially before pursuing restricted release.

Shieldalloy argues, in a nutshell, that § 20.1403(a) requires selection of the decommissioning option that will yield the lowest reasonably achievable dose to the public as between restricted and unrestricted release. Br. 10, 22. However, in criticizing NRC's textual analysis, Shieldalloy never comes to grips with the most significant aspect of the text—§ 20.1403(a)'s focus solely on the

costs and benefits of achieving "reductions in residual radioactivity." Nor does Shieldalloy show how its own interpretation squares with the regulatory language as a whole. Instead, Shieldalloy counters NRC's interpretation with arguments that, *inter alia*, misapprehend NRC's explanation of the regulatory text, overlook the key language and structure of § 20.1403(a) (including the use of the ALARA concept in the regulation), question the policy basis for NRC's preference, misconstrue the Court's decision, and distort or ignore NRC's explanations of the license termination regulation in the regulatory history of the proposed and final rules. We address Shieldalloy's various arguments below.

A. Neither of Shieldalloy's Textual Discussions Supports a Comparative-Dose Analysis Interpretation of § 20.1403(a)

Shieldalloy asserts that a comparative-dose analysis is compelled by the text of § 20.1403(a). But it cannot seem to decide precisely what textual approach to take in order to reach this conclusion. Shieldalloy presents what appear to be two different, and contradictory, textual discussions, neither of which comports with the actual regulatory language.

In its first textual discussion, Shieldalloy identifies "two situations" in which the unrestricted-release option would "yield" to the restricted-release option: (1) if "unrestricted release [is] not viable due to net public or environmental harm"; or (2) if "unrestricted release. . . should not be chosen because 'an ALARA analysis of the risks and benefits of all viable alternatives [that include] consideration of any detriments' . . . demonstrate[] that the potential *doses* resulting from implementation of the restricted use option are ALARA." Br. 46-47 (emphasis added). Shieldalloy claims that the "second situation" is captured in the language at issue in § 20.1403(a), the so-called "second clause." *Id.*

Shieldalloy's argument suffers from a fundamental textual flaw. In order for the language of § 20.1403(a) to support Shieldalloy's reading, the term "residual levels" (which, as NRC explained, necessarily refers back to the term "residual radioactivity" earlier in the sentence[14]) would have to be replaced with the word "doses." The second clause would then read, ". . . because *doses* associated with restricted conditions are

[14] CLI-13-06 at 15 n.49, 78 NRC at 168 n.49 (JA__).

ALARA," thus encompassing dose reductions accomplished not just through reductions in residual radioactivity but also through use of restricted-release controls. It is clear from the face of the regulation, however, that the term "doses" was not used. Rather, the regulatory language in § 20.1403(a) is specific in its use of the term "residual radioactivity" and makes clear that the dose reduction activities referred to in § 20.1403(a) are limited to those necessary to achieve unrestricted release—i.e., removal or decontamination of radioactive material.

Perhaps because the text does not support its position, Shieldalloy's first textual interpretation of § 20.1403(a) relies heavily upon language in the regulatory history of the license-termination rule that refers to "an ALARA analysis of the risks and benefits of *all* viable alternatives [including] consideration of any detriments." Br. 46 (emphasis added). Shieldalloy cites this particular language not only in its first explanation of the text but multiple times throughout its brief as support for the proposition that § 20.1403(a) requires a licensee to analyze doses from both the unrestricted and restricted-release approaches and to choose the lowest cost-effective dose alternative as between these regulatory approaches.

Shieldalloy's reliance on the rule's regulatory history is sorely misplaced. To make its case, Shieldalloy has completely ignored the context surrounding the "all viable alternatives" language. It also misstates both NRC's and the Court's discussions of the analysis of "detriments" such as "traffic accidents" in assessing whether unrestricted release would be cost-beneficial.

As recounted in the Statement of the Facts, *supra*, at 15-16, NRC discussed the need to identify the "risks and benefits of all viable alternatives" in the context of determining what *cost* standard to apply to isolate those "situations where removal and disposal of large quantities of material [i.e., unrestricted release] is simply 'not reasonable' from a cost standpoint." Final Rule, 62 Fed. Reg. at 39,069 (JA__). As NRC explained, the proposed rule had originally sought to permit licensees to employ restricted release only in those circumstances where "it is 'prohibitively expensive' or there is net public harm, in achieving unrestricted release." *Id.*

In the final rule, NRC adopted the ALARA "reasonable cost" standard, rather than a cost-prohibitive standard that some commenters had deemed "excessive," "as the basis for selecting restricted use." *Id.* The "all viable alternatives" discussion came at

the conclusion of NRC's explanation for selecting the ALARA standard and, as its context demonstrates, was intended to explain that a licensee must "perform an ALARA analysis of the risks and benefits of all viable alternatives" by which decommissioning through *unrestricted* release can be obtained before restricted release will be authorized *Id.* Nowhere in this discussion, or elsewhere in the regulatory history, did NRC indicate that it was adopting an ALARA standard to, as Shieldalloy claims (Br. 46), "expand the situations for which restricted release would be appropriate" so as to include selection of the lowest cost-effective dose alternative as between unrestricted and restricted release. The "all alternatives" language is germane only to issue of the cost-effectiveness of unrestricted release, and the universe of alternatives to be considered as part of this analysis is, as reflected in the text of the regulation itself, confined to those that have the effect of reducing residual radioactivity.

Nor, contrary to Shieldalloy's position (Br. 39-40, 43), does either the NRC's or the Court's discussion of § 20.1403(a)'s requirement that licensees consider "detriments, such as traffic accidents," support Shieldalloy's comparative-dose argument. In

fact, these discussions serve to buttress NRC's case that the second clause of § 20.1403(a) calls for an ALARA analysis only of unrestricted release.

In discussing its decision to adopt an ALARA standard for assessing the cost-effectiveness of unrestricted release, NRC explained that "an ALARA analysis of the risks and benefits of all viable alternatives" must include consideration of "detriments," such as "estimated fatalities from transportation accidents that might occur as the result of transport of wastes form cleanup activities," as well as benefits, such as "the potential value to the community of unrestricted use of the land." *Id.* It is this discussion that Shieldalloy relies upon to support its position that the ALARA analysis contemplated by § 20.1403(a) "*requires* comparing benefits and detriments of leaving the materials onsite under a restricted use license versus those accruing from removing them from the site to implement an unrestricted use form of decommissioning." Br. 39-40; *see also id.* at 39 (suggesting that the ALARA analysis of "all viable alternatives" requires comparing the detriments of unrestricted release with the detriments of restricted release). But, as is evident from the discussion itself,

NRC's example of detriments—"traffic accidents"—and NRC's example of benefits—"value to the community of unrestricted use of the land"—were only intended as references to the costs and benefits of *unrestricted* release.

Shieldalloy similarly mischaracterizes the Court's discussion of the same subject. In *Shieldalloy II*, the Court acknowledged that reading of § 20.1403(a) so as to "permit restricted release irrespective of the merits of unrestricted release" "seems in tension" with the second sentence of § 20.1403(a) (requiring consideration of "detriments such as traffic accidents"), since "traffic accidents related to waste disposal would seem to have little to do with restricted release, which involves on-site disposal of radioactive materials." 707 F.3d at 380. In Shieldalloy's portrayal, however, the Court, rather than noting a potential weakness in its own construction, found instead that it was *NRC's* position—its "rejection of the need for an ALARA analysis comparing unrestricted and restricted release"—that seemed "in tension" with the consideration of traffic accidents. Br. 43. Shieldalloy's misapprehension of both NRC's explanation for the "traffic

accidents" language and the Court's discussion of this very issue only serves to highlight the lack of foundation for its position.

In its second textual explanation, Shieldalloy turns § 20.1403(a) into a two-step test that would deprive a licensee of the option to employ unrestricted release (NRC's preference) even if it wanted to. Under this explanation, a licensee "can proceed to implement decommissioning under the unrestricted-use option, unless a cost-benefit analysis shows that doing so 'would result in net public or environmental harm'[;] [i]n that case, the licensee needs to consider the restricted use option." Br. 50. As is evident from the structure of the license-termination regulations, however, restricted release is never *required*, regardless of the outcome of either the "net . . . harm"[15] or the "ALARA" cost-benefit analysis. Rather, given NRC's preference for unrestricted release, NRC's regulations make unrestricted release the default decommissioning

[15] The "net . . . harm" language in § 20.1403(a), which the Court did not appear to take issue with, is a term of art for describing the alternative cost-benefit test to determine whether unrestricted release would be cost-beneficial. *See* CLI-13-06 at 8 n.24, 78 NRC at 163 n.24 (JA__). Contrary to Shieldalloy's implication, a demonstration of "net . . . harm" does not mean *ipso facto* that reductions in residual radioactivity to accomplish unrestricted release will harm the public.

approach that a licensee is always free to choose without having to make any prior showings analogous to § 20.1403(a). *See* 10 C.F.R. § 20.1402. Because unrestricted release is NRC's preferred approach, it is only for the restricted-release option that NRC has imposed an initial eligibility requirement in § 20.1403(a). And that provision, as we have discussed, supports NRC's preference for unrestricted release by requiring licensees to justify why it would not be cost-effective for them to decommissioning a site through unrestricted release.

B. Shieldalloy's Arguments in Response to NRC's Explanation of the Text of § 20.1403(a) Are Largely Based Upon Misapprehensions of NRC's Textual Analysis

Shieldalloy's criticisms of NRC's explanation of § 20.1403(a) rest in large part upon a series of flawed characterizations of the textual analysis set forth in CLI-13-06. Chief among these mischaracterizations is Shieldalloy's assertion that NRC, in rejecting Shieldalloy's comparative-dose approach, has construed the "ALARA" portion of the regulation (i.e., the language, "residual levels associated with restricted release are ALARA") as focusing solely on cost-beneficial ways to achieve *restricted-release*

decommissioning. *See*, *e.g.*, Br. 47 (NRC's interpretation "limits the ALARA analysis to considering only alternative ways to implement the restricted use option. . . ."); 52 (describing NRC's position as a "rejection of the need to consider unrestricted use decommissioning methods in assessing restricted use options.").[16]

To be sure, Shieldalloy's focus on this issue is somewhat perplexing, given that the deficiency the Court identified in *Shieldalloy II* stemmed from its view that NRC had not explained how § 20.1403(a) required an inquiry into some property of *unrestricted* release, a deficiency the agency addressed in CLI-13-06. Nonetheless, if Shieldalloy were correct that, in NRC's view, § 20.1403(a) is limited to an ALARA cost-benefit analysis of restricted-release options, with no connection to the cost-effectiveness of unrestricted release, the provision would admittedly

[16] Shieldalloy indicates that NRC likewise focuses exclusively on the cost-effectiveness of restricted release in addressing the "net public or environmental harm" test in § 20.1403(a). Br. 48. In fact, the NRC's explanations to which Shieldalloy refers address only the language as to "ALARA" that the Court found troublesome. In light of its understanding that the Court did not appear to take issue with the "net . . . harm" language as an alternative cost-benefit test that supported NRC's preference for unrestricted release, NRC did not focus on that language in its textual analysis. CLI-13-06 at 14, 78 NRC at 167 (JA__).

not impose a preference for unrestricted release. This is not, however, what either the regulation itself or NRC's explanation of the regulation remotely suggests.

To recap, as NRC explained in detail in CLI-13-06, the entire focus of § 20.1403(a) is on the cost-effectiveness of activities that achieve the "reductions in residual radioactivity" necessary to accomplish *unrestricted* release. And what the language at issue in § 20.1403(a) requires in order for a licensee to be able to pursue restricted release is a demonstration of *the reason why* such "further reductions in residual radioactivity" were "not being made." Specifically, this language requires a licensee seeking to pursue restricted release to demonstrate that the reason why "further reductions in residual radioactivity" were "not being made"—and why it should be relieved of the burden of doing so—is because the levels of residual radioactivity it proposes to leave in place—the "residual levels associated with restricted conditions"—are as low as is reasonably achievable. Residual radioactivity is as low as is reasonably achievable when the residual radioactivity level is at the point at which further removal or decontamination of the radioactively contaminated material—"further reductions in

residual radioactivity" from the "residual levels"—would not be cost-beneficial. *See* CLI-13-06 at 15 n.50, 78 NRC at 168 n.50 (JA__) (noting that NRC guidance defines the "residual radioactivity level that is ALARA" to mean the "concentration . . . at which the benefit from removal equals the cost of removal").

Shieldalloy's claim that NRC's construction divorces the required demonstration from any showing related to whether unrestricted release is cost-beneficial completely ignores NRC's discussion of the text of the first sentence of § 20.1403(a). That text, as NRC explained, calls for a demonstration as to why "further reductions in residual radioactivity necessary to comply with the provisions of § 20.1402" are not being undertaken. Given the subject of the inquiry—an explanation of why the licensee is not minimizing the public dose simply by reducing the level of residual radioactivity—it follows that the required demonstration is *entirely* for the purpose of showing whether further remedial activities necessary to achieve *unrestricted* release would, or would not be, cost-beneficial. And, as the Court even recognized in *Shieldalloy II*, the second sentence of § 20.1403(a) (requiring a "[d]etermination of the levels which are ALARA" to "take into account consideration of

any detriments, such as traffic accidents, expected to potentially result from decontamination and waste disposal") further confirms that the inquiry in § 20.1403(a) focuses solely upon an analysis of the cost-effectiveness of *unrestricted* release.

Nothing in either the language of § 20.1403(a) or NRC's explanation of it suggests that the required demonstration as to proposed residual levels is for the purpose of showing what restricted-release activities (which would necessarily involve reducing doses through physical barriers or other regulatory restrictions) would ultimately yield the lowest cost-effective dose below regulatory compliance limits. To the contrary, the achievement of restricted-release doses at and below regulatory limits is the subject of other regulatory provisions that come into play only after a licensee has satisfied the requirements of § 20.1403(a) and becomes eligible to pursue restricted release.

In an attempt to show why unrestricted and restricted-release doses must be compared to justify choosing a restricted-release option over an unrestricted-release option, Shieldalloy posits certain "anomalous and impermissible" results that could flow from the interpretation it erroneously attributes to NRC. Br. 47.

An accurate understanding of NRC's interpretation, however, leads to thoroughly reasonable explanations with respect to these so-called anomalies.

Shieldalloy asserts that focusing solely on cost-effective alternatives for achieving restricted release would "show only why a particular restricted release method would be better than other restricted use methods from the radioactivity dose reduction standpoint" rather than "explain[ing] why a restricted use decommissioning method would be selected instead of the preferred unrestricted use method." Br. 50. It likewise asserts that NRC's "limitation of the ALARA analysis to considering only alternative ways to implement the restricted use option" would irrationally allow a licensee to choose restricted release even when restricted release would result in "radiation levels" that are much higher than an unrestricted release approach. Br. 47-48. But, again, the inquiry does not focus on cost-effective alternatives for achieving restricted release; it focuses instead on whether it is cost effective to meet the dose limit through unrestricted release.[17]

[17] We observe that higher levels of residual radioactivity for restricted release than for unrestricted release are expected if a

Shieldalloy never squarely addresses the significance of the regulation's focus on "reductions in residual radioactivity" in the introductory clause and the language at issue, or NRC's explanation of it. In its only attempt to confront this language, Shieldalloy claims that NRC's interpretation of § 20.1403(a) is "largely based" on an "unreasonably restrictive definition" of "residual radioactivity" that distinguishes radioactivity between "pre-decommissioning and post-decommissioning levels." Br. 48-49 & n.9. The point Shieldalloy is attempting to make in this regard is not at all clear. But NRC's focus on these words merely reflects the fundamental truth about the way in which "reductions in residual radioactivity" can actually be accomplished and measured—that is, by removing, rather than mitigating the effect of, radioactive material (and thus eschewing the use of restricted-release controls). In any event, in

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licensee cannot cost-effectively reduce residual levels to accomplish unrestricted release. But this is why institutional and engineering controls become necessary to adequately protect the public. Higher residual radioactivity levels for restricted release are, simply, part and parcel of NRC's willingness to recognize restricted release as an alternative decommissioning method if remediation to unrestricted release is not cost-effective. By the same token, given NRC's policy preference, a licensee must decommission to unrestricted release if cost-effective even where restricted release may result in lower cost-effectively achievable doses.

its decision, NRC explained the significance of the term "residual radioactivity" with reference only to the actual definition of the term in NRC's regulations. NRC said nothing to imply that its interpretation of § 20.1403(a) was based on anything more than a straightforward reading of this definition, much less on any artificial distinction having to do with pre-decommissioning and post-decommissioning radiation exposure.

Shieldalloy also claims that NRC's interpretation of § 20.1403(a) and rejection of the need for a comparative-dose approach ignore the fact that analyzing whether "further reductions in residual radioactivity" will be cost-beneficial "plainly requires an evaluation of doses resulting from unrestricted use decommissioning." Br. 53. But NRC did not, of course, deny that "reductions in residual radioactivity" will be measured by "dose reductions to the public." CLI-13-06 at 13, 78 NRC at 167 (JA__). What NRC made clear was that "reductions in residual radioactivity" refers only to those "dose reductions to the public" that can be accomplished "solely through the steps associated with unrestricted-release decommissioning—i.e., removal of contaminated material or decontamination." *Id.*

Ensuring a dose to the public of 25 mrem per year or less—the level NRC has deemed safe—remains a paramount concern to the agency; § 20.1403(a) provides a means of ensuring that licensees achieve this dose level by reducing residual levels of radioactivity if it is cost-effective to do so and, if it is not-cost effective, that they be afforded the opportunity to achieve this dose level through restricted-release alternatives.

Finally, Shieldalloy claims that NRC's interpretation of § 20.1403(a) is unreasonable because restricted release could be permitted in those circumstances where "attempting to reduce existing residual radioactivity levels at the site before decommissioning would still result in levels *after* decommissioning that failed to meet the required dose limits." Br. 49 (emphasis in original). This argument appears to be based on Shieldalloy's alleged distinction between pre-decommissioning and post-decommissioning residual radioactivity levels, which, as noted above, NRC simply has not drawn.[18]

[18] Of course, if a licensee is successful in demonstrating that unrestricted release would *not* be cost-beneficial, doses from residual radioactivity remaining on site would not be in compliance with the regulatory dose limits for license termination *absent* the

C. Shieldalloy Is Mistaken that NRC's ALARA Concept Mandates a Comparative-Dose Interpretation of § 20.1403(a)

Shieldalloy claims that reading § 20.1403(a) to "bar consideration of restricted use decommissioning methods, which would result in lower doses to the public than those involving unrestricted use," "would undercut the fundamental purpose of the ALARA standard." Br. 46.

Shieldalloy expends a number of pages to prove the point that preventing radiological exposures that are "beyond the minimum amount that cannot be reasonably avoided" is a "fundamental operating principle" in NRC regulatory programs. *See*, *e.g.*, Br. 31-35. But this effort was unnecessary. We completely agree that, in the decommissioning of licensed facilities, NRC has "explicitly mandated the implementation of the ALARA principle" for that traditional purpose—reducing doses to the public as far below the dose limit for adequate protection as is cost-beneficial. *See* Br. 35. Indeed, in license termination, ALARA has been implemented for

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introduction of restricted-release controls. This is entirely expected since § 20.1403(a) is, after all, only a threshold eligibility condition to allowing licensees to make use of restricted-release controls to reduce doses to regulatory limits.

this purpose in a general regulation, § 20.1101(b), which New Jersey adopted,[19] and in regulations and guidance specific to license termination under both unrestricted and restricted release.[20] The purpose of § 20.1403(a), however, is simply to determine whether restricted use should be permitted because the residual levels of radioactivity proposed to be left in place—not the dose to the public—are as low as reasonably achievable.

In the end, what Shieldalloy really appears to be arguing is that the ALARA concept itself mandates construing § 20.1403(a) to "permit" restricted release whenever it can be shown to result in lower cost-effectively achievable doses than those that could be obtained cost-effectively through unrestricted release. See Br. 46. As a fundamental matter, Shieldalloy's construct ignores the actual text of § 20.1403(a). That text, as we have seen, calls for an ALARA

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[19] *See* CLI-11-12 at 482 (JA__).

[20] *See* 10 C.F.R. § 20.1402; § 20.1403(e); NUREG-1757, Vol. 1, at 17-87 (doses for restricted release must be as low as reasonably achievable under 25 mrem per year dose limit) (JA__); Final Rule, 62 Fed. at 39,066 (noting that for restricted release "measures to restrict the use of the site such as fencing or barrier plantings may be cost-effective and should be considered as part of the ALARA process") (JA__).

analysis with respect to reductions in "residual [radioactivity] levels," rather than reductions in "doses."

Moreover, while Shieldalloy's construct gives lip service to § 20.1403(a) as a restricted-release eligibility provision, it would, in effect, eviscerate NRC's preference for unrestricted release as a licensee would virtually always be able to choose restricted release. As such, the paradigm Shieldalloy advocates would essentially turn restricted release, rather than unrestricted release, into the default decommissioning method. Given NRC's preference for unrestricted release, however, the purpose of § 20.1403(a) was to *prevent* licensees from choosing restricted release if unrestricted release were revealed by a cost-benefit analysis to be achievable on a cost-effective-basis. Indeed, NRC would not have imposed a condition requiring licensees to demonstrate that unrestricted release was by some measure "too costly" had it not anticipated that restricted release may naturally be the more attractive economic option. In light of NRC's preference, the ALARA analysis required in § 20.1403(a) was intended to be limited solely to the universe of the unrestricted-release regulatory alternative—i.e., to those remediation measures that would be necessary to "reduce residual

radioactivity" to the level of unrestricted release. That required ALARA analysis has nothing to do with doses cost-effectively achievable through restricted-release decommissioning.

In any event, nothing in NRC's definition of ALARA addresses, much less compels, *comparing* doses reasonably achievable below a dose limit as between two entirely separate and independent regulatory alternatives for achieving adequate protection to the public. With respect to license termination, as NRC explained, doses from unrestricted release and restricted release cannot even be compared meaningfully because of the "significantly different risks and uncertainties" and the "significantly different methods to achieve adequate protection" associated with each option. *See* CLI-11-12, 74 NRC at 491 (JA__). Both unrestricted release and restricted release were designed to provide adequate protection to the public health and safety. At bottom, therefore, NRC's preference for unrestricted release reflects a considered policy choice, the rationality of which the Court did not question in its remand decision.

Finally, NRC had made clear from the beginning, when it issued the license-termination rule, that it was incorporating the

ALARA concept into § 20.1403(a) as a "reasonable cost" standard for the purpose of assessing the cost-effectiveness of unrestricted release and thus determining eligibility for restricted release. Final Rule, 62 Fed. Reg. at 39,069, 39,072 (JA__); *see also* CLI-13-06 at 6-7, 78 NRC at 162 (JA__). In other words, a licensee can use this ALARA analysis to demonstrate to NRC that there is a reasonable cost-benefit case to be made for allowing the licensee to pursue restricted release. Only if the licensee passes this hurdle will NRC be willing to set aside its preference for unrestricted release.

As defined, ALARA requires cost-effective dose reductions below dose limits prescribed in 10 C.F.R. Part 20. Once doses reach a set point (i.e., the applicable "dose limit"), the applicant must determine whether doses can be reduced even further below that point in a cost-effective manner. *See* 10 C.F.R. § 20.1003. The "dose limit" starting point from which the ALARA analysis begins under § 20.1403(a) is, as the text of § 20.1403(a) indicates, the residual radioactivity level that the licensee proposes to leave in place under its restricted-release plan. One determines the level of residual radioactivity on the site without factoring in any

institutional controls that might prevent potential dose recipients from accessing the site under a restricted-release plan.

This particular dose-limit starting point is, admittedly, an abstraction—NRC regulations would never permit a licensee simply to leave radioactive material onsite at levels yielding a dose of more than 25 mrem per year without requiring the licensee to restrict access via institutional controls. Again, though, this analytical exercise is merely an eligibility test. In simple terms, the licensee needs to make a case that further digging up and removal, beyond what it would dig up and remove under its restricted-release plan, does not appear to be economical in light of the benefits to be derived. At that point, there is at least a reasonable case to be made, in NRC's view, that the licensee may explore alternative ways to limit doses from the site's radioactive material aside from the NRC-preferred alternative of further reduction of residual radioactivity down to unrestricted-release levels.

II. NRC's Interpretation of § 20.1403(a) Is Consistent with Other Regulatory Statements

A. Shieldalloy's Limited Efforts to Challenge NRC's Explanation of Regulatory Statements Identified by the Court Are Unpersuasive

Among the concerns that the Court raised in *Sheildalloy II* was its identification of a perceived inconsistency between NRC's interpretation of § 20.1403(a) and both its regulatory guidance, NUREG-1757, and certain statements NRC staff made to Shieldalloy while Shieldalloy sought regulatory approval of its decommissioning plan. In CLI-13-06, NRC addressed these perceived inconsistencies and, except to the very limited extent referred to below, Shieldalloy has not challenged our explanation of these statements. It has therefore waived the right to raise additional challenges to these explanations, and, given that the issues were discussed not only in *Shieldalloy II* but also in CLI-13-06, Shieldalloy should not be afforded an opportunity to address them in its reply brief.

As recounted in the Statement of the Facts, *supra*, at 31-32, NRC explained in CLI-13-06 that the concept of "comparisons" between unrestricted and restricted release reflected in NUREG-

1757 does not call for a comparative-dose analysis but refers instead to those benefits informing the ALARA analysis for unrestricted release that can only be calculated by reference to, or comparing, the costs *avoided* under a restricted release plan. Shieldalloy has responded to NRC's explanation of the guidance by resurrecting its mischaracterization of NRC's interpretation of § 20.1403(a)—"this explanation is inconsistent with *NRC's rejection of the need to consider unrestricted use decommissioning methods in assessing restricted use options.*" Br. 52 (emphasis added). Shieldalloy also argues, essentially, that requiring the selection of a decommissioning option that would yield lower potential doses is a better policy choice than preferring unrestricted release if it is cost-beneficially attainable—"[NRC's explanation] is inconsistent with the essential goal of ALARA and would seem to require an arbitrarily narrow focus on the costs and benefits of various tangential aspects of reducing radiation levels to 25 mrem/year, instead of the more fundamental consideration of whether unrestricted or restricted use options would yield lower potential doses to the public in specific circumstances." *Id.* Neither of these responses serves to undermine NRC's explanation that the

"comparisons" referred to in the guidance do not condone the comparative-dose approach that Shieldalloy advocates and are simply necessary for a complete and accurate analysis of the costs and benefits of reducing residual radioactivity levels to a point at which unrestricted release will be permitted.

NRC also explained in CLI-13-06 that a staff information request had not supported the existence of a comparative-dose approach but had simply suggested to Shieldalloy that overestimating the amount of work necessary to achieve unrestricted release would erroneously bias the ALARA analysis in favor of restricted release. *See* Statement of the Facts, *supra,* at 33. Shieldalloy claims that NRC's purported "gloss" on the information request failed to explain "why it is even relevant how much work is required to achieve unrestricted use decommissioning" or "how such an inquiry 'could erroneously suggest eligibility or restricted release.'" Br. 52. Despite Shieldalloy's professed inability to understand it, NRC's explanation was simple and straightforward. The amount of work necessary to achieve unrestricted release is relevant because the cost of doing additional work to reduce residual radioactivity is the single biggest driver of whether the

residual levels are already ALARA. And NRC did explain how overestimating the cost of the work for unrestricted release could erroneously suggest eligibility for restricted release, to wit: "increasing the amount of work performed to a point beyond that which is necessary to achieve a desired result [i.e., below the 25 mrem per year threshold] may result in finding that the action under consideration [i.e., unrestricted release] is not cost-beneficial," and thereby erroneously suggest eligibility for restricted release. CLI-13-06 at 22, 78 NRC at 174 (JA__). Shieldalloy has no cogent answer for this explanation.

B. None of the Extra-Record or Record Information Shieldalloy Cites Demonstrates that NRC's Interpretation of § 20.1403(a) Constitutes a Deviation from Past Practices

Shieldalloy also claims that NRC's interpretation of § 20.1403(a) "contradicts" NRC staff's "application" of the rule in the course of its regulatory review of Shieldalloy's decommissioning plans for the Newfield site. Br. 55-62. As support, Shieldalloy cites to statements by NRC staff that it claims support a comparative-dose approach. Shieldalloy, again, takes statements out of context and misconstrues the sources upon which it relies. But even

assuming, *arguendo*, that the staff statements Shieldalloy cites may somehow be construed as embracing a comparative-dose theory, isolated statements by individual members of NRC staff do not constitute official or binding agency interpretations of NRC regulations or bear on the much broader question of whether New Jersey's program is compatible with NRC's. Indeed, any statements made by NRC staff suggesting that § 20.1403(a) embodies a comparative-dose approach would be completely out of line with the language of the regulation itself and NRC's explanations of it in the regulatory history, not to mention NRC staff's own comprehensive guidance document, NUREG-1757.

Shieldalloy's main argument is that NRC staff "endorsed" a comparative-dose method of complying with § 20.1403(a) by (purportedly) "declining to steer Shieldalloy away from [a comparative dose approach]" in its regulatory review of Shieldalloy's various decommissioning proposals. Br. 56. In support of this argument, Shieldalloy improperly relies on several documents that are not among those agreed-to by undersigned counsel for NRC and Shieldalloy's counsel for inclusion in the certified index of the record. Given the reason for the Court's remand in *Shieldalloy II*—

so that NRC can present a textual exegesis of § 20.1403(a)—there is no reason why Shieldalloy should be permitted to insert additional material into the record at the eleventh hour.[21]

In any event, Shieldalloy's extra-record citations (Br. 57-58) (consisting of NRC staff's communications to Shieldalloy rejecting the 2002 plan and the 2005 revised plan and accepting the 2006 revised plan for a full technical review) do not serve to bolster its position—in effect, that NRC staff endorsed Shieldalloy's interpretation of § 20.1403(a) by failing to object to it. In fact, an express basis for the staff's rejection of the 2002 plan was that Shieldalloy had failed to conduct a proper site-specific ALARA analysis to support its proposed onsite decommissioning option in lieu of the NRC's "preferred alternative." *See* February 28, 2003 letter, Enclosure One at 2 (item 3) (SA__). In addition, the staff made clear in each of its communications to Shieldalloy that the identified deficiencies in the plan then under review did not rule out the existence of other deficiencies. With respect to the rejected plans, the staff explained that it had conducted only a limited

[21]These documents will be included in the supplemental appendix ("SA") to be prepared by Shieldalloy.

"acceptance review" that focused solely on the adequacy of the filings in those areas deemed necessary for the staff to proceed to a "full technical review." *See id.* at 1 (SA__); January 26, 2006 letter at 1 (SA__). And when it accepted Shieldalloy's 2006 plan for the purpose of initiating a full technical review, the staff expressly informed Shieldalloy "that the technical review may identify omissions in the submitted information or technical issues not identified during the administrative review that require additional information." *See* October 18, 2006 letter (SA__).

Subsequently, through its July 2007 requests for additional information ("RAI") to Shieldalloy on the 2006 plan (including the informsation request, RAI 31, discussed in CLI-13-06 and *supra*, at 65-66), the staff did in fact further communicate to Shieldalloy the deficiencies in its § 20.1403(a) eligibility analysis. *See*, *e.g.*, RAI 27 (Shieldalloy "has not clearly demonstrated either [the net…harm or the ALARA] option[], and it is unclear which option (or whether both options) is intended.") (JA__); RAI 28 (If Shieldalloy "asserts net public or environmental harm as the basis for compliance with [§ 20.1403(a)], then . . . the public or environmental benefits must be compared to detriments, without including the cost of

[remediation]") (JA__); RAI 31 ("[T]he demonstration of compliance [with § 20.1403(a)] should evaluate incremental measures that could be taken to comply with the unrestricted use criteria.") (JA__).

Shieldalloy also claims that NRC staff, in the course of its regulatory review, made statements that "actively promoted" Shieldalloy's comparative-dose approach to satisfying § 20.1403(a). Br. 59. Shieldalloy points to two staff information requests regarding the 2006 plan, including RAI 31 (once again) and RAI 32. RAI 32 states that, to comply with § 20.1403(a), Shieldalloy should "quantify benefits and costs that can reasonably be quantified, to allow better comparison between alternatives." (JA__). This statement, however, says nothing about lowest-dose comparisons as between unrestricted and restricted release. Rather, the RAI as a whole indicates that the staff's concern was that unrestricted-release benefits could not properly be assessed without a thorough quantification of the costs under the restricted-release alternative. *Id.* Moreover, as noted above, the staff made clear in its other RAIs on the 2006 plan that Shieldalloy's showing as to § 20.1403(a) was deficient.

Shieldalloy further hones in on a staff statement lifted from a document that is not among those agreed-to by counsel for inclusion in the record. *See* Br. 60 (citing a March 12, 2008 e-mail followup to Shieldalloy's RAI responses concerning the 2006 plan (SA__)). In one of the RAI followup communications, the staff reviewer referred to whether an "option might be more cost-beneficial than the disposal option . . . or the restricted use option currently described." Br. 60. But, aside from its extra-record nature, when that statement is viewed in context, it is evident that the staff reviewer's concern regarding § 20.1403(a) was that Shieldalloy had not adequately analyzed the cost-effectiveness of a potentially viable *unrestricted*-release alternative (i.e., sending the contaminated slag to a uranium mill). *See* March 12, 2008 e-mail, Attachment at 5 (RAI 33) (SA__).

NRC staff also made clear elsewhere in the same RAI followup communication that Shieldalloy's responses to the staff's RAIs concerning § 20.1403(a) were unsatisfactory. For example, the staff observed, in the context of Shieldalloy's response to RAI 27 (specifying that Shieldalloy had not made either the "net . . . harm" or the "ALARA" demonstration required under § 20.1403(a) (JA__)),

that Shieldalloy had misunderstood § 20.1403(a) to mean that the lowest-cost dose option may be selected. *See* March 12, 2008 e-mail, Attachment at 2 (RAI 27) (noting Shieldalloy's response that the restricted-release "option provides the lowest cost and the lowest risk to a member of the public") (SA__). The staff commented that Shieldalloy "may not completely understand the RAI" and had still not provided the cost-benefit analyses required by § 20.1403(a) as requested by the staff. *Id.*; *see also id.* at 3 (RAI 28) ("net . . . harm" evaluation should not include costs of remedial action) (SA__). In short, although Shieldalloy strains to construe isolated staff statements as suggesting a comparative-dose approach, it is beyond dispute that the staff, rather than "promoting" that approach, did in fact take issue with Shieldalloy's proposed method of complying with § 20.1403(a). And the staff statements certainly did not (and could not), as Shieldalloy would have it, overturn NRC's settled regulatory policy.

Finally, Shieldalloy points to NRC staff's so-called "comparative evaluation" of onsite and offsite decommissioning alternatives in a 1996 draft environmental impact statement for a different Shieldalloy site, located in Cambridge, Ohio. Br. 61. We

first note the obvious—that the license-termination rule, including § 20.1403(a), was not yet in effect at the time that document was drafted and published. In any case, the staff's comparison of "alternatives" to onsite disposal in the Cambridge, Ohio draft environmental impact statement was solely for the purpose of complying with the National Environmental Policy Act and NRC's implementing regulations,[22] and thus proves nothing about what is required for restricted-release eligibility under § 20.1403(a).[23]

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[22] *See* 42 U.S.C. §§ 4332(2)(C)(iii), (E) and 10 C.F.R. § 51.30(a)(ii) (both requiring an assessment of "alternatives" to the proposed action).

[23] Shieldalloy claims that NRC's rejection of a comparative dose approach to § 20.1403(a) also "contradicts" NRC's comparison of cost-effective dose reductions in other contexts, including comparison of doses resulting from use of different types of respirators to minimize radiological health effects to workers, and comparison of doses resulting from different *offsite* decommissioning alternatives for nuclear reactors. Br. 62-63. But, as is evident, these examples involve comparisons of remedial actions within the *same universe* of regulatory alternatives, for which comparisons are not only expected but required (as they are under § 20.1403(a) for "all viable alternatives" within the unrestricted-release regulatory universe.)

III. In Light of NRC's Interpretation of § 20.1403(a), New Jersey's Program Is Adequate and Compatible with the NRC's within the Meaning of AEA § 274

Shieldalloy argues that New Jersey's program is incompatible with NRC's because it "precludes implementation of NRC-endorsed restricted use options that . . . will best protect public health and safety." Br. 65. This is merely a restatement of Shieldalloy's familiar, and mistaken, comparative-dose position—that in § 20.1403(a), NRC has sanctioned the lowest-dose option as being the most protective option that "*should* be exercised for a particular facility." Br. 64 n.13. (emphasis added). As NRC made clear, and as we have discussed throughout our brief, nothing in § 20.1403(a) or anything else in NRC's license-termination regulations embraces Shieldalloy's comparative-dose approach or *requires* selection of restricted release under any circumstances. Both NRC and New Jersey favor unrestricted release as the preferred decommissioning alternative to protect the public health and safety.

Shieldalloy's attack on the compatibility of New Jersey's program essentially amounts to a disagreement with a policy that favors unrestricted release over restricted release. Shieldalloy's strong objection to that policy, which it likens to a "not in my

backyard" approach, is quite evident. *See* Br. 22-23, 64. But NRC's policy preference (made clear as early as its 1994 proposed rule) is not the subject of this case. Rather, the basis for the Court's remand was that NRC had not provided an explanation as to how its preference for unrestricted release was grounded in the regulatory text. The Court did not take issue with NRC's policy preference. Nor did the Court question whether New Jersey's program would be compatible with NRC's under AEA § 274 if the text of the regulation at issue—§ 20.1403(a)—were susceptible of being construed in accordance with NRC's asserted interpretation of it—that is, as embodying its stated preference for unrestricted release.

In CLI-13-06, NRC provided the textual explanation that the Court found lacking in *Shieldalloy II*, and in doing so showed that its interpretation of § 20.1403(a) is not only reasonable, but is the only interpretation that comports with the regulatory text. In light of this conclusion, and given NRC's considered conclusion that New Jersey's program governing license termination is adequate to protect the public health and safety and compatible with its own, Section 274 of the AEA requires transfer of regulatory authority

over the Newfield site (and all sites encompassed by the NRC-New Jersey agreement) to New Jersey. 42 U.S.C. § 2021; *see Shieldalloy II*, 707 F.3d at 376.

CONCLUSION

For the foregoing reasons, the petition for review should be denied.

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CERTIFICATE OF LENGTH OF BRIEF

I hereby certify that the foregoing Brief for the Federal Respondents contains 13,983 words, excluding parts exempted by Fed. R. App. P. 32(a)(7)(B)(iii), as counted by the Microsoft Word 2010 program.

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STATUTORY ADDENDUM

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42 U.S.C.A. § 2021. Cooperation with States

(a) Purpose

It is the purpose of this section--

(1) to recognize the interests of the States in the peaceful uses of atomic energy, and to clarify the respective responsibilities under this chapter of the States and the Commission with respect to the regulation of byproduct, source, and special nuclear materials;

(2) to recognize the need, and establish programs for, cooperation between the States and the Commission with respect to control of radiation hazards associated with use of such materials;

(3) 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;

(4) to establish procedures and criteria for discontinuance of certain of the Commission's regulatory responsibilities with respect to byproduct, source, and special nuclear materials, and the assumption thereof by the States;

(5) to provide for coordination of the development of radiation standards for the guidance of Federal agencies and cooperation with the States; and

(6) to recognize that, as the States improve their capabilities to regulate effectively such materials, additional legislation may be desirable.

(b) Agreements with States

Except as provided in subsection (c) of this section, the Commission is authorized to enter into agreements with the Governor of any State providing for discontinuance of the regulatory authority of the Commission under subchapters V, VI, and VII of this division, and

section 2201 of this title, with respect to any one or more of the following materials within the State:

(1) Byproduct materials (as defined in section 2014(e) of this title).

(2) Source materials.

(3) Special nuclear materials in quantities not sufficient to form a critical mass.

During the duration of such an agreement it is recognized that the State shall have authority to regulate the materials covered by the agreement for the protection of the public health and safety from radiation hazards.

(c) Commission regulation of certain activities

No agreement entered into pursuant to subsection (b) of this section shall provide for discontinuance of any authority and the Commission shall retain authority and responsibility with respect to regulation of--

(1) the construction and operation of any production or utilization facility or any uranium enrichment facility;

(2) the export from or import into the United States of byproduct, source, or special nuclear material, or of any production or utilization facility;

(3) the disposal into the ocean or sea of byproduct, source, or special nuclear waste materials as defined in regulations or orders of the Commission;

(4) the disposal of such other byproduct, source, or special nuclear material as the Commission determines by regulation or order should, because of the hazards or potential hazards thereof, not be so disposed of without a license from the Commission.

The Commission shall also retain authority under any such agreement to make a determination that all applicable standards and requirements have been met prior to termination of a license for byproduct material, as defined in section 2014(e)(2) of this title. Notwithstanding any agreement between the Commission and any State pursuant to subsection (b) of this section, the Commission is authorized by rule, regulation, or order to require that the manufacturer, processor, or producer of any equipment, device, commodity, or other product containing source, byproduct, or special nuclear material shall not transfer possession or control of such product except pursuant to a license issued by the Commission.

(d) Conditions

The Commission shall enter into an agreement under subsection (b) of this section with any State if--

(1) The [FN1] Governor of that State 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

(2) the Commission finds that the State program is in accordance with the requirements of subsection (o) of this section and in all other respects compatible with the Commission's program for the regulation of such materials, and that the State program is adequate to protect the public health and safety with respect to the materials covered by the proposed agreement.

(e) Publication in Federal Register; comment of interested persons

(1) Before any agreement under subsection (b) of this section is signed by the Commission, the terms of the proposed agreement and of proposed exemptions pursuant to subsection (f) of this section shall be published once each week for four consecutive weeks in the Federal Register; and such opportunity for comment by interested persons on the proposed agreement and exemptions

shall be allowed as the Commission determines by regulation or order to be appropriate.

(2) Each proposed agreement shall include the proposed effective date of such proposed agreement or exemptions. The agreement and exemptions shall be published in the Federal Register within thirty days after signature by the Commission and the Governor.

(f) Exemptions

The Commission is authorized and directed, by regulation or order, to grant such exemptions from the licensing requirements contained in subchapters V, VI, and VII of this division, and from its regulations applicable to licensees as the Commission finds necessary or appropriate to carry out any agreement entered into pursuant to subsection (b) of this section.

(g) Compatible radiation standards

The Commission is authorized and directed to cooperate with the States in the formulation of standards for protection against hazards of radiation to assure that State and Commission programs for protection against hazards of radiation will be coordinated and compatible.

(h) Consultative, advisory, and miscellaneous functions of Administrator of Environmental Protection Agency

The Administrator of the Environmental Protection Agency shall consult qualified scientists and experts in radiation matters, including the President of the National Academy of Sciences, the Chairman of the National Committee on Radiation Protection and Measurement, and qualified experts in the field of biology and medicine and in the field of health physics. The Special Assistant to the President for Science and Technology, or his designee, is authorized to attend meetings with, participate in the deliberations of, and to advise the Administrator. The Administrator shall advise the President with respect to radiation matters, directly or indirectly affecting health, including guidance for all Federal agencies in the

formulation of radiation standards and in the establishment and execution of programs of cooperation with States. The Administrator shall also perform such other functions as the President may assign to him by Executive order.

(i) Inspections and other functions; training and other assistance

The Commission in carrying out its licensing and regulatory responsibilities under this chapter is authorized to enter into agreements with any State, or group of States, to perform inspections or other functions on a cooperative basis as the Commission deems appropriate. The Commission is also authorized to provide training, with or without charge, to employees of, and such other assistance to, any State or political subdivision thereof or group of States as the Commission deems appropriate. Any such provision or assistance by the Commission shall take into account the additional expenses that may be incurred by a State as a consequence of the State's entering into an agreement with the Commission pursuant to subsection (b) of this section.

(j) Reserve power to terminate or suspend agreements; emergency situations; State nonaction on causes of danger; authority exercisable only during emergency and commensurate with danger

(1) The Commission, upon its own initiative after reasonable notice and opportunity for hearing to the State with which an agreement under subsection (b) of this section has become effective, or upon request of the Governor of such State, may terminate or suspend all or part of its agreement with the State and reassert the licensing and regulatory authority vested in it under this chapter, if the Commission finds that (1) such termination or suspension is required to protect the public health and safety, or (2) the State has not complied with one or more of the requirements of this section. The Commission shall periodically review such agreements and actions taken by the States under the agreements to ensure compliance with the provisions of this section.

(2) The Commission, upon its own motion or upon request of the Governor of any State, may, after notifying the Governor,

temporarily suspend all or part of its agreement with the State without notice or hearing if, in the judgment of the Commission:

(A) an emergency situation exists with respect to any material covered by such an agreement creating danger which requires immediate action to protect the health or safety of persons either within or outside the State, and

(B) the State has failed to take steps necessary to contain or eliminate the cause of the danger within a reasonable time after the situation arose.

A temporary suspension under this paragraph shall remain in effect only for such time as the emergency situation exists and shall authorize the Commission to exercise its authority only to the extent necessary to contain or eliminate the danger.

(k) State regulation of activities for certain purposes

Nothing in this section shall be construed to affect the authority of any State or local agency to regulate activities for purposes other than protection against radiation hazards.

(l) Commission regulated activities; notice of filing; hearing

With respect to each application for Commission license authorizing an activity as to which the Commission's authority is continued pursuant to subsection (c) of this section, the Commission shall give prompt notice to the State or States in which the activity will be conducted of the filing of the license application; and shall afford reasonable opportunity for State representatives to offer evidence, interrogate witnesses, and advise the Commission as to the application without requiring such representatives to take a position for or against the granting of the application.

(m) Limitation of agreements and exemptions

No agreement entered into under subsection (b) of this section, and no exemption granted pursuant to subsection (f) of this section,

shall affect the authority of the Commission under section 2201(b) or (i) of this title to issue rules, regulations, or orders to protect the common defense and security, to protect restricted data or to guard against the loss or diversion of special nuclear material. For purposes of section 2201(i) of this title, activities covered by exemptions granted pursuant to subsection (f) of this section shall be deemed to constitute activities authorized pursuant to this chapter; and special nuclear material acquired by any person pursuant to such an exemption shall be deemed to have been acquired pursuant to section 2073 of this title.

(n) "State" and "agreement" defined

As used in this section, the term "State" means any State, Territory, or possession of the United States, the Canal Zone, Puerto Rico, and the District of Columbia. As used in this section, the term "agreement" includes any amendment to any agreement.

(o) State compliance requirements: compliance with section 2113(b) of this title and health and environmental protection standards; procedures for licenses, rulemaking, and license impact analysis; amendment of agreements for transfer of State collected funds; proceedings duplication restriction; alternative requirements

In the licensing and regulation of byproduct material, as defined in section 2014(e)(2) of this title, or of any activity which results in the production of byproduct material as so defined under an agreement entered into pursuant to subsection (b) of this section, a State shall require--

(1) compliance with the requirements of subsection (b) of section 2113 of this title (respecting ownership of byproduct material and land), and

(2) compliance with standards which shall be adopted by the State for the protection of the public health, safety, and the environment from hazards associated with such material which are equivalent, to the extent practicable, or more stringent than, standards adopted and enforced by the Commission for the same purpose, including

requirements and standards promulgated by the Commission and the Administrator of the Environmental Protection Agency pursuant to sections 2113, 2114, and 2022 of this title, and

(3) procedures which--

(A) in the case of licenses, provide procedures under State law which include--

(i) an opportunity, after public notice, for written comments and a public hearing, with a transcript,

(ii) an opportunity for cross examination, and

(iii) a written determination which is based upon findings included in such determination and upon the evidence presented during the public comment period and which is subject to judicial review;

(B) in the case of rulemaking, provide an opportunity for public participation through written comments or a public hearing and provide for judicial review of the rule;

(C) require for each license which has a significant impact on the human environment a written analysis (which shall be available to the public before the commencement of any such proceedings) of the impact of such license, including any activities conducted pursuant thereto, on the environment, which analysis shall include--

(i) an assessment of the radiological and nonradiological impacts to the public health of the activities to be conducted pursuant to such license;

(ii) an assessment of any impact on any waterway and groundwater resulting from such activities;

(iii) consideration of alternatives, including alternative sites and engineering methods, to the activities to be conducted pursuant to such license; and

(iv) consideration of the long-term impacts, including decommissioning, decontamination, and reclamation impacts, associated with activities to be conducted pursuant to such license, including the management of any byproduct material, as defined by section 2014(e)(2) of this title; and

(D) prohibit any major construction activity with respect to such material prior to complying with the provisions of subparagraph (C).

If any State under such agreement imposes upon any licensee any requirement for the payment of funds to such State for the reclamation or long-term maintenance and monitoring of such material, and if transfer to the United States of such material is required in accordance with section 2113(b) of this title, such agreement shall be amended by the Commission to provide that such State shall transfer to the United States upon termination of the license issued to such licensee the total amount collected by such State from such licensee for such purpose. If such payments are required, they must be sufficient to ensure compliance with the standards established by the Commission pursuant to section 2201(x) of this title. No State shall be required under paragraph (3) to conduct proceedings concerning any license or regulation which would duplicate proceedings conducted by the Commission. In adopting requirements pursuant to paragraph (2) of this subsection with respect to sites at which ores are processed primarily for their source material content or which are used for the disposal of byproduct material as defined in section 2014(e)(2) of this title, the State may adopt alternatives (including, where appropriate, site-specific alternatives) to the requirements adopted and enforced by the Commission for the same purpose if, after notice and opportunity for public hearing, the Commission determines that such alternatives will achieve a level of stabilization and containment of the sites concerned, and a level of protection for public health, safety, and the environment from radiological and nonradiological hazards associated with such sites, which is equivalent to, to the extent practicable, or more stringent than the level which would be achieved by standards and requirements adopted and enforced by the Commission for the same purpose and

any final standards promulgated by the Administrator of the Environmental Protection Agency in accordance with section 2022 of this title. Such alternative State requirements may take into account local or regional conditions, including geology, topography, hydrology and meteorology.

CREDIT(S)

(Aug. 1, 1946, c. 724, Title I, § 274, as added Sept. 23, 1959, Pub.L. 86-373, § 1, 73 Stat. 688; amended 1970 Reorg. Plan No. 3, §§ 2(a)(7), 6(2), eff. Dec. 2, 1970, 35 F.R. 15623, 84 Stat. 2086; Nov. 8, 1978, Pub.L. 95-604, Title II, § 204(a)-(e)(1), (f), 92 Stat. 3036-3038; June 30, 1980, Pub.L. 96-295, Title II, § 205, 94 Stat. 787; Jan. 4, 1983, Pub.L. 97-415, § 19(a), 96 Stat. 2078; renumbered Title I and amended Oct. 24, 1992, Pub.L. 102-486, Title IX, § 902(a)(6), (8), 106 Stat. 2944; Aug. 8, 2005, Pub.L. 109-58, Title VI, § 651(e)(2), 119 Stat. 807.)

§ 20.1003 Definitions.

As used in this part:

ALARA (acronym for "as low as is reasonably achievable") means making every reasonable effort to maintain exposures to radiation as far below the dose limits in this part as is practical consistent with the purpose for which the licensed activity is undertaken, taking into account the state of technology, the economics of improvements in relation to state of technology, the economics of improvements in relation to benefits to the public health and safety, and other societal and socioeconomic considerations, and in relation to utilization of nuclear energy and licensed materials in the public interest.

[56 FR 23391, May 21, 1991, as amended at 57 FR 57878, Dec. 8, 1992; 58 FR 7736, Feb. 9, 1993; 60 FR 36043, July 13, 1995; 60 FR 48625, Sept. 20, 1995; 61 FR 65127, Dec. 10, 1996; 62 FR 4133, Jan. 29, 1997; 62 FR 39087, July 21, 1997; 63 FR 39481, July 23, 1998; 64 FR 54556, Oct. 7, 1999; 66 FR 55789, Nov. 2, 2001; 67 FR 16304, Apr. 5, 2002; 67 FR 20370, Apr. 24, 2002; 67 FR 62872, Oct. 9, 2002; 72 FR 55921, Oct. 1, 2007; 72 FR 68058, Dec. 4, 2007; 74 FR 62680, Dec. 1, 2009]

Subpart B--Radiation Protection Programs

Source: 56 FR 23396, May 21, 1991, unless otherwise noted.

§ 20.1101 Radiation protection programs.

(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).

[56 FR 23396, May 21, 1991, as amended at 61 FR 65127, Dec. 10, 1996; 63 FR 39482, July 23, 1998]

§ 20.1402 Radiological criteria for unrestricted use.

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

§ 20.1403 Criteria for license termination under restricted conditions.

A site will be considered acceptable for license termination under restricted conditions if:

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

(b) The licensee has made provisions for legally enforceable institutional controls that provide reasonable assurance that the TEDE from residual radioactivity distinguishable from background to the average member of the critical group will not exceed 25 mrem (0.25 mSv) per year;

(c) The licensee has provided sufficient financial assurance to enable an independent third party, including a governmental custodian of a site, to assume and carry out responsibilities for any necessary control and maintenance of the site. Acceptable financial assurance mechanisms are--

(1) Funds placed into a trust segregated from the licensee's assets and outside the licensee's administrative control, and in which the adequacy of the trust funds is to be assessed based on an assumed annual 1 percent real rate of return on investment;

(2) A statement of intent in the case of Federal, State, or local Government licensees, as described in § 30.35(f)(4) of this chapter; or

(3) When a governmental entity is assuming custody and ownership of a site, an arrangement that is deemed acceptable by such governmental entity.

(d) The licensee has submitted a decommissioning plan or License Termination Plan (LTP) to the Commission indicating the licensee's intent to decommission in accordance with §§ 30.36(d), 40.42(d), 50.82 (a) and (b), 70.38(d), or 72.54 of this chapter, and specifying that the licensee intends to decommission by restricting use of the site. The licensee shall document in the LTP or decommissioning plan how the advice of individuals and institutions in the community who may be affected by the decommissioning has been sought and incorporated, as appropriate, following analysis of that advice.

(1) Licensees proposing to decommission by restricting use of the site shall seek advice from such affected parties regarding the following matters concerning the proposed decommissioning-

(i) Whether provisions for institutional controls proposed by the licensee:

(A) Will provide reasonable assurance that the TEDE from residual radioactivity distinguishable from background to the average member of the critical group will not exceed 25 mrem (0.25 mSv) TEDE per year;

(B) Will be enforceable; and

(C) Will not impose undue burdens on the local community or other affected parties.

(ii) Whether the licensee has provided sufficient financial assurance to enable an independent third party, including a governmental custodian of a site, to assume and carry out responsibilities for any necessary control and maintenance of the site;

(2) In seeking advice on the issues identified in § 20.1403(d)(1), the licensee shall provide for:

(i) Participation by representatives of a broad cross section of community interests who may be affected by the decommissioning;

(ii) An opportunity for a comprehensive, collective discussion on the issues by the participants represented; and

(iii) A publicly available summary of the results of all such discussions, including a description of the individual viewpoints of the participants on the issues and the extent of agreement and disagreement among the participants on the issues; and

(e) Residual radioactivity at the site has been reduced so that if the institutional controls were no longer in effect, there is reasonable assurance that the TEDE from residual radioactivity distinguishable from background to the average member of the critical group is as low as reasonably achievable and would not exceed either--

(1) 100 mrem (1 mSv) per year; or

(2) 500 mrem (5 mSv) per year provided the licensee--

(i) Demonstrates that further reductions in residual radioactivity necessary to comply with the 100 mrem/y (1 mSv/y) value of paragraph (e)(1) of this section are not technically achievable, would be prohibitively expensive, or would result in net public or environmental harm;

(ii) Makes provisions for durable institutional controls;

(iii) Provides sufficient financial assurance to enable a responsible government entity or independent third party, including a governmental custodian of a site, both to carry out periodic rechecks of the site no less frequently than every 5 years to assure that the institutional controls remain in place as necessary to meet the criteria of § 20.1403(b) and to assume and carry out responsibilities for any necessary control and maintenance of those controls. Acceptable financial assurance mechanisms are those in paragraph (c) of this section.

[76 FR 35564 Jun. 17, 2011]