

October 11, 2006

Ms. Nancy Wittenberg, Assistant Commissioner  
New Jersey Department of Environmental Protection  
Environmental Regulation  
PO Box 423  
Trenton, New Jersey 08625-0423

SUBJECT: NUCLEAR REGULATORY COMMISSION STAFF'S RESPONSE TO THE NEW  
JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION'S LETTER OF  
JULY 21, 2006, REGARDING SHIELDALLOY METALLURGICAL  
CORPORATION.

Dear Assistant Commissioner Wittenberg:

Pursuant to my August 11, 2006 letter to you (ML062060586), I am enclosing the U.S. Nuclear Regulatory Commission (NRC) staff's response to your letter of June 21, 2006, to Jack Strosnider, Director, Office of Nuclear Material Safety and Safeguards (ML062150039). In your letter, you raised questions regarding implementation of the License Termination Rule (LTR) at the Shieldalloy Metallurgical Corporation (SMC) site in Newfield, New Jersey. You also solicited information on the State of New Jersey's role in restricted use decommissioning and implementing a Long Term Control (LTC) license for the SMC site, should New Jersey become an Agreement State.

In the enclosure, the NRC staff has listed each of your questions and provided a response. The staff has also included a response to one of the New Jersey Department of Environmental Protection's comments on draft NUREG-1757, Supplement 1 that is related to New Jersey becoming an Agreement State. This allows all NRC responses related to New Jersey becoming an Agreement State to be addressed in one NRC document. We believe that our responses to the State's comments on our guidance, our responses to the questions in your June 21, 2006, letter, and our final revised guidance will be useful during the State's consideration of its potential role at the SMC site should Agreement State status be attained.

N. Wittenberg

2

If you have any questions regarding this letter, please contact Mr. Ken Kalman, the NRC Project Manager for the Shieldalloy site. He can be reached by telephone at: 301-415-6664 or email at: [klk@nrc.gov](mailto:klk@nrc.gov).

Sincerely,

**/RA/**

Keith I. McConnell, Deputy Director  
Division of Waste Management  
and Environmental Protection  
Office of Federal and State  
Materials and Environmental  
Management Programs

Docket No.: 04007102

License No.: SMB-743

Enclosure: Staff Responses to New  
Jersey State Questions

cc: David Smith, SMC  
Eric Jackson, President  
Jill Lipoti, Ph.D., New Jersey DEP  
Donna Gaffigan, New Jersey DEP  
Trevor Anderson, US EPA  
L. Williams, Newfield Resident  
T. Ragone, Newfield Resident  
R. Westergaard, Newfield Mayor

If you have any questions regarding this letter, please contact Mr. Ken Kalman, the NRC Project Manager for the Shieldalloy site. He can be reached by telephone at: 301-415-6664 or email at: [klk@nrc.gov](mailto:klk@nrc.gov).

Sincerely,

**/RA/**

Keith I. McConnell, Deputy Director  
Division of Waste Management  
and Environmental Protection  
Office of Federal and State  
Materials and Environmental  
Management Programs

Docket No.: 04007102

License No.: SMB-743

Enclosure: Staff Responses to New  
Jersey State Questions

cc: David Smith, SMC  
Eric Jackson, President  
Jill Lipoti, Ph.D., New Jersey DEP  
Donna Gaffigan, New Jersey DEP  
Trevor Anderson, US EPA  
L. Williams, Newfield Resident  
T. Ragone, Newfield Resident  
R. Westergaard, Newfield Mayor

**DISTRIBUTION:**

TFrederichs	DSchmidt	MThaggard	SWalker	CMcKenney	DCD r/f
JPeckenpough	RLJohnson	GSuber	JHull	TMcLaughlin	

**ML062540269**

OFFICE	DWMEP	DWMEP	MSSA
NAME	KKalman	RTadesse	JSchlueter
DATE	9/28/06	10/4/06	10/5/06

OFFICE	OGC	DWMEP
NAME	STreby	KMcConnell
DATE	9/14/06	10/10/06

OFFICIAL RECORD COPY

## **NRC RESPONSE TO 10 CFR PART 20 STATE OF NEW JERSEY REQUEST FOR INFORMATION ABOUT A STATE ROLE FOR LONG TERM CONTROL OF THE SHIELDALLOY SITE**

Questions about the License Termination Rule (LTR), Long Term Control (LTC) license, and potential State role

### **1. What are the differences between ownership, control, and independent third party oversight? What are the responsibilities of each?**

Response:

An owner would have direct responsibility for controlling site access, for how the land is used and monitored, and for site maintenance, as specified in the institutional control mechanism. An owner derives his/her legal authority for control from the legal rights of land ownership, and the institutional control mechanism. An owner could use a contractor to conduct any or all of the activities as noted in NRC's guidance in Section 17.7.2.3 of NUREG-1757, Vol. Rev. 1.

An entity exercising control over, but not owning the site, has legal authority under an institutional control mechanism to inspect and enforce restrictions on the site. If the controlling entity is a State or local government, legal authority might be from a State permit or conditions in a State environmental covenant (if this mechanism is available in the State), or from a restrictive covenant that specifies a role for the State or local government.

An independent third party, under the LTR, would be an entity other than the owner who has agreed to: 1) inspect and enforce the owners' restrictions; and 2) otherwise to implement restrictions and other activities, such as monitoring and maintenance, in the owner's absence. In this role, the independent third party would have access to funds from the independent trust fund in order to carry out actions on the owner's behalf.

**2. It is our understanding that in order to proceed with an Long Term Control (LTC) license, the licensee has to demonstrate that unrestricted and restricted decommissioning are not obtainable. This can only be demonstrated through an approved decommissioning plan [DP] with these options included, reviewed and approved by the NRC. Will the decommissioning plan that SMC [Shieldalloy Metallurgical Corporation] submits address these options? As it stands now, the DEP does not know if further reductions in residual radioactivity at the site to meet the unrestricted use criteria in 10 CFR 20.1402 would 1) result in net public or environmental harm, or 2) are not being undertaken because the residual radioactivity levels are as low as reasonably achievable (ALARA). The NRC has not documented that either of these conditions are met because the staff has not completed a technical review of SMC's decommissioning plan.**

Response:

The provisions of 10 CFR Part 20.1403 set forth the criteria for license termination under restricted conditions and require a licensee to demonstrate compliance with these criteria in its Decommissioning Plan (DP). If a licensee demonstrates it can terminate its license under these criteria – but has tried and failed to set up institutional control and independent third party

mechanisms – the NRC may approve an LTC license as a last resort. Before doing so, the licensee would have to demonstrate in its DP that it was not able to arrange acceptable institutional controls and/or independent third party arrangements. An example of such a demonstration would be a letter from a State government declining responsibility for enforcing institutional controls at the site.

**3. If the State were to accept ownership or control, would SMC have to comply with the requirements of the LTR?**

Response:

Yes. If the State were to agree to assume ownership and associated control of the site after SMC completes decommissioning, SMC could use this agreement to demonstrate compliance with the legally enforceable institutional control requirement in the LTR. The agreement could also be used to meet the requirement for a durable institutional control, if applicable, to the SMC site. Furthermore, SMC would need to demonstrate compliance with all other restricted use requirements of the LTR such as the dose caps and stakeholder involvement. If compliance is demonstrated, the SMC license would be terminated and ownership transferred from SMC to the State.

**4. In other words, would the LTC license be denied by the NRC, and would SMC be required to remediate the site to restricted use standards?**

Response:

If the State were to accept ownership or control after SMC completes decommissioning, there would not be a need for an NRC LTC license. The LTC license is a “last resort” option for institutional controls if other options, such as State ownership or control, cannot be implemented. In either case, the LTR restricted use requirements must be met. The LTC license is not a method for a licensee to avoid compliance with the LTR requirements.

**5. If so, would SMC be held to the requirements of 10 CFR 20.1403(e) which specifies dose criteria if institutional controls fail?**

Response:

Yes.

**6. Would there be a cap allowed under the requirements of the License Termination Rule?**

Response:

Yes. NRC’s decommissioning guidance in NUREG-1757 and the recent draft supplement to NUREG-1757 describe the use of engineered barriers, including engineered covers.

**7. If a cap is allowed, will the dose assessment assume that the cap has completely failed?**

Response:

One of NRC's goals in decommissioning is to use more realistic scenarios. We believe that analysis of engineered barrier degradation, rather than immediate and complete failure, is a realistic approach. As a result, decommissioning guidance in Draft NUREG-1757, Supplement 1 states that degradation of engineered barriers without maintenance should be analyzed and incorporated into dose assessments when institutional controls are not in effect. Therefore, timing and extent of an assumed cap degradation would depend on the design of the cap, reasonably foreseeable future natural processes at the site, and reasonably foreseeable land uses.

**8. Does the NRC envision a scenario where the 500 mrem/yr [millirem/year] would be exceeded with or without a cap?**

Response:

NRC has not conducted a technical review of the SMC dose assessments, and therefore, cannot answer this question at this time. However, this is one of the LTR requirements addressed in the SMC DP that the staff will review.

**9. If so, would the NRC allow SMC to decommission under the alternate criteria for license termination (10 CFR 20.1404)?**

Response:

The alternate criteria provision in 10 CFR Part 1404 does not apply to cases exceeding the 500 mrem/yr dose criterion without institutional controls in effect. This LTR provision only applies to doses exceeding the 25 mrem/yr dose criterion with institutional controls in effect. If modeling indicated that the 500 mrem/yr dose criterion would be exceeded if institutional controls failed, SMC could not decommission its site as proposed in the DP. SMC would need to revise its DP so that compliance could be demonstrated.

**10. Could the license be terminated without any remediation of the slag pile?**

Response:

The license could be terminated if the licensee successfully completes the decommissioning activities in the approved DP, and demonstrates that all applicable regulatory requirements have been met. Whether a license can be terminated does not depend on the way in which any particular area (such as a slag pile) on a site is handled, because the LTR is a performance-based regulation that allows flexibility in the approach used by a licensee to demonstrate compliance with the applicable dose criteria. Note that the term "remediation" is not used in 10 CFR Part 20.

**11. If the answer to any of the questions above would result in the remediation of the slag, will the State be responsible for the cost of this remediation in any way if the State assumes ownership, control, or third party oversight?**

Response:

See Response 10. Additionally, If SMC decommissioning is completed and the license is terminated with State ownership or control, the NRC finality provision under 10 CFR Part 20.1401 would apply. Under this provision, the Commission would require additional cleanup only, if based on new information, it determines that the criteria of Subpart E were not met and residual radioactivity remaining at the site could result in a significant threat to public health and safety. As a result, after completion of decommissioning and license termination, NRC would not expect that future cleanup and associated costs, would be necessary although this can not be guaranteed. Furthermore, the State would not be responsible for the monitoring and maintenance costs, because the State would use funds from the independent trust fund set up by SMC for this purpose.

**12. Can the State request further financial assurance under the required arrangement specified in 10 CFR 20.1403 (c) (4)?**

Response:

Yes, as stated in 10 CFR Part 20.1403 (c)(4).

Questions regarding the New Jersey role as an Agreement State

**13. More questions arise considering that Governor Corzine has recently issued a Letter of Intent for New Jersey to become an Agreement State. Assuming that NJ agrees to the transfer of the SMC license, will our radiological remediation standards at N.J.A.C. 7:28-12.1 *et seq*, be applicable to the SMC site once they are revised to include source and by-product material? If so, will the DEP be able to require SMC to remediate further once we become an Agreement State? As you know, our dose criterion is 15 mrem/y compared to the NRC's 25 mrem/y, and our "all controls fail" dose criterion is 100 mrem/y, whereas the NRC has an allowance for up to 500 mrem/y.**

Response:

As the opening clause of this question indicates, the first consideration will be the scope of New Jersey's Agreement State application. If, as the question assumes, New Jersey requests regulatory authority over the category or subcategory materials at the SMC site, the adequacy and compatibility of New Jersey's proposed regulatory program will be evaluated (see discussion of limited agreements provided below in response to New Jersey's comment on NUREG-1757). The compatibility of New Jersey's license termination regulations with Subpart E would be especially relevant here. According to the Office of State and Tribal Programs (STP) Procedure SA-200, all of Subpart E is designated as Compatibility Category C. This Compatibility Category requires that states adopt the essential objectives of program elements to avoid conflicts, duplications or gaps. The manner in which the essential objectives are addressed need not be the same as NRC, provided the essential objectives are met.

Under Compatibility Category C, New Jersey's regulations may be more restrictive than NRC's regulations, so long as the essential objectives of the NRC's license termination regulations were adopted. Whether New Jersey's promulgation of more stringent decommissioning dose

limits meets Compatibility Category C will be determined during the NRC staff's review of New Jersey's application.

However, assuming that New Jersey's regulations contain more restrictive dose limits than Subpart E, and these regulations are found to be adequate and compatible with NRC's regulations, those dose limits would apply to holders of licenses that transfer to New Jersey. This would include SMC if its license is transferred prior to termination. At that point, NRC would have relinquished its regulatory authority over the SMC license to New Jersey, and New Jersey would apply its regulations to SMC.

**14. If New Jersey assumes ownership or control, can we impose our cleanup criteria on SMC before becoming an Agreement State?**

Response:

No. Unless New Jersey becomes an Agreement State, the NRC would continue to exercise its regulatory authority over the materials at SMC and over the SMC license until it is terminated. This would be the case regardless of whether New Jersey assumed ownership and control of the site (and presumably became the licensee) before becoming an Agreement State.

**15. When NJ becomes an Agreement State, can it be both regulator and owner of the SMC Site? Will the ownership have to be transferred to the local government? What if the local government does not accept this responsibility?**

Response:

The State of New Jersey could be both owner and regulator of the SMC site if different State organizations are given ownership and regulator responsibilities. Therefore, ownership does not have to be transferred to the local government.

Other

**16. As you know, we had extensive comments on Draft NUREG 1757 Supplement 1, *Updates to Implement the License Termination Rule Analysis*. Before making a determination as to whether to assume ownership, control or third party oversight, we expect written responses to our comments and the opportunity to review the final document.**

Response:

The staff has prepared responses to the public comments on the Draft NUREG-1757, Supplement 1, including the State of New Jersey's comments. Our current plan is to make these responses available to the public on NRC's decommissioning web site by the end of October 2006. The staff also plans on publishing the revised NUREG-1757 and also making it available electronically on the decommissioning web site by the end of October 2006.

**17. Does SMC meet any of the criteria in 10 CFR 20.1401(b)? In other words, is SMC considered a grandfathered site?**



Response:

SMC is not a grandfathered site under the criteria in 10 CFR Part 20.1401(b).

NRC RESPONSE TO THE STATE OF NEW JERSEY AGREEMENT STATE QUESTION IN  
ITS COMMENTS ON NRC'S DRAFT GUIDANCE I NUREG-1757, SUPPLEMENT 1

**What if a State is currently not an Agreement state, does not approve of the LTC license option, but later becomes an Agreement State? Will the NRC continue to monitor and enforce the LTC license? Since the LTC license is not in the NRC regulations, it would seem that it could not be used as a compatibility issue in determining eligibility for Agreement State status.**

Response:

The answer to the first two questions will necessarily depend on the scope of the State's § 274b. Agreement ("Agreement"). Section 274b. of the Atomic Energy Act of 1954 (AEAct), as amended, authorizes the Commission "to enter into agreements with the Governor of any state, with respect to any one or more of the following materials within the state –

- (1) Byproduct materials (as defined in section 11e.).
- (2) Source materials.
- (3) Special nuclear materials in quantities not sufficient to form a critical mass."

Currently, a State may request authority to regulate all activities associated with one or more of these three categories of materials, or may limit the scope of its regulatory authority by requesting a limited agreement. Such limited Agreements involve the discontinuance by the NRC, and assumption by a State, of regulatory authority over "subcategories" of the three categories of materials listed in § 274b. For example, in the past Agreements have been limited by providing regulatory authority to an Agreement State over a subcategory of source material, and returning authority for regulation of uranium mills and sealed sources and devices to the NRC.

However, there are constraints on the NRC's ability to enter into limited Agreements. When analyzing requests for limited Agreements, the NRC will consider whether the proposed agreement would jeopardize the "orderly regulatory pattern between the Commission and the State governments." See § 274a.(3) of the AEAct. Specifically, requests for limited Agreements should identify discrete categories of material or classes of licensed activity that: (1) could be reserved to NRC authority without undue confusion to the regulated community or burden to NRC resources; and (2) can be applied logically, and consistently to existing and future licensees. Along these lines, the NRC has denied a request for a limited Agreement specifically designed to transfer authority to regulate a single licensee, as well as a limited Agreement that would have specifically excluded several licensees that were undergoing decommissioning. Potential Agreement States should note that, while limited Agreements covering discrete categories of material or classes of licensed activity may have the practical effect of including or excluding certain licensees, limited Agreements proposing to specifically include or exclude particular licensees are generally considered unacceptable.

With this background information in mind, if a State requests regulatory authority over a category or "subcategory" of materials then all existing specific licenses governing activities involving that material – including LTC licenses – would transfer to the State upon finalization of its Agreement. If a State enters into an Agreement, but does not request regulatory authority over a category of materials covered by an existing LTC license, or enters into a limited

agreement and does not request regulatory authority over a “subcategory” of materials covered by an existing LTC license, then the NRC would continue to exercise its regulatory authority over that category or “subcategory” of materials. In such a case, the NRC’s exercise of regulatory authority would include monitoring and enforcing the existing LTC license.

The answer to the third question is informed by the nature of the LTC license. Specifically, an LTC license is one way a licensee may provide legally enforceable institutional controls, as required in § 20.1403(b). Provision of legally enforceable institutional controls is one of the requirements that must be met in order to terminate a license under restricted conditions. The LTC license is merely one possible method of complying with the NRC’s license termination regulations; it is not a regulatory requirement and is not currently referenced in the NRC’s license termination regulations. Therefore, failure of a State to specifically provide for use of LTC licenses in its license termination regulations would not be a compatibility issue.

In conclusion, if a State enters into an Agreement transferring regulatory authority over a category or “subcategory” of materials covered by an existing LTC license, such license would transfer to the State. Therefore, upon finalization of the Agreement the State would be required to recognize the LTC license in the same way it would be required to recognize any other relevant specific license. However, the validity of the LTC license as a means to comply with the State’s license termination rules would be a policy matter to be resolved by the State.