

# ON-SITE VISIT BRIEFING BOOK FOR COMMISSIONER JACZKO

SHIELDALLOY METALLURGICAL CORPORATION  
NEWFIELD, NEW JERSEY

November 17, 2006



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CONTENTS

TAB

AGENDA .....

KEY MESSAGE.....

**FACILITY DATA**

Facility Location Map and Directions.....

Facility Data.....

Facility Unique Features.....

**FACILITY PERFORMANCE**

Facility Oversight Info .....

Current Issues.....

Selected New Articles.....

**FACILITY MANAGEMENT DATA**

Facility Organization.....

Biographical Data of Principal Managers.....

LOCAL OFFICIALS.....

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**Agenda for Commissioner Jaczko's Visit to  
Shieldalloy Metallurgical Corporation**

Meet with local Officials at Newfield Borough Hall	10:30 AM
Meet with Press	11:00 AM
Depart for Shieldalloy	11:30 AM
Introductions	11:45 AM
Overview of Shiedalloy Metallurgical Corporation (SMC) Site History	11:55 AM
SMC Decommissioning & Remediation Experience	12:15 PM
Proposed Decommissioning Alternative	12:25 PM
Walking Tour of Facility & Discussion of Beneficial Re-uses of Slag Pile Material	12:40 PM
Conclusion and Exit Discussion	1:15 PM
Travel to Pegasus Diner for Lunch with Commissioner Lisa Jackson	1:30 PM
Depart to return to Metro area	2:15 PM
Arrive Washington Metro Area	4:30 PM

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**Key Message**

The NRC's License Termination Rule (10CFR Part 20 Subpart E) allows for restricted use decommissioning. As a followup to the staff's License Termination Rule Analysis in SECY-03-0069, the Commission approved the LTC license option as an NRC legally enforceable and durable institutional control. However, the LTC license is appropriate as a "last resort" option if a licensee has not been able to arrange other institutional control or independent third party arrangements.

The NRC staff will be conducting its detailed technical review of SMC's DP in accordance with our regulations and guidance. A number of public meetings such as the Decommissioning Information meeting on December 5, 2006 and the EIS scoping meeting on December 12, 2006 will be held to engage the stakeholders in our review process. In addition, the NRC staff will keep the stakeholders informed of its review activities through open to the public meetings with SMC, press releases, our web site and a repository of documents related to this action at the public library in Newfield, NJ.

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Facility Location Map and Directions

Location Map for Shieldalloy Metallurgical Corporation



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Directions to Facility

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Facility Data

Licensee Name: Shieldalloy Metallurgical Corporation

Site: Newfield, New Jersey

Report Coordination: Ken Kalman 301-415-6664

Licensed Activities: The SMC facility processed pyrochlore, a concentrated ore containing columbium (niobium), to produce ferrocolumbium, an additive/conditioner used in the production of speciality steel and super alloy additives. Pyrochlore contains more than 0.05 percent by weight thorium and uranium and is therefore regulated as source material. SMC was licensed by the NRC to ship, receive, possess, use and store source material under SMB-743. The maximum amount that SMC can possess at one time is 303,050 kilograms of thorium and 45, 000 kilograms of uranium.

Effluent/exposure data

In 1992 a walkover survey indicated elevated gamma exposure rates of up to 175 microR per hour at one meter above the surface at the perimeter fence.

A 1997 inspection report (97-001) indicated that the highest quarterly TLD result was 511 mrem at the licensee's boundary. The licensee performed an assessment of the potential dose to a member of the public and determined that the maximum exposure would be approximately 4.2 mrem per quarter. The licensee assumed that a member of the public would spend a maximum of one hour per month at the location of the highest exposure. The licensee based this assumption on the fact that the area is not easily accessed due to surrounding vegetation.

Decommissioning Plan Status

By letter dated October 18, 2006, NRC staff accepted the Decommissioning Plan (DP) for detailed technical review. The staff is currently working on the technical review and will be holding a Decommissioning Information Public Meeting in Newfield, New Jersey on December 5, 2006

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and an Els scoping Meeting on December 12.

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## Facility Unique Features

### Administration Facilities and Manufacturing Area

This area is located on the western side of the site and is comprised of parking lots, administrative offices and manufacturing buildings. For most part, the area is covered with asphalt or concrete pavement. Most of the Newfield site was not impacted by licensed operations. However, buildings that were impacted have been remediated as necessary, final status surveyed, and released for unrestricted use. These buildings include the A- Warehouse; G-Warehouse; AAF Baghouse (with exception of the concrete pad); and the Ferrovandium slag sorting area in the Storage Yard.

### Storage Yard

The storage yard is in the eastern portion of the site and is used to store materials generated during manufacturing operations such as slag, baghouse dust, excavated soils and other similar materials. The contaminated slag pile is a prominent feature of the site. Currently, there is approximately 18,000 m<sup>3</sup> (635,580 ft<sup>3</sup>) of slag and approximately 15,000 m<sup>3</sup> (529,650 ft<sup>3</sup>) of baghouse dust contaminated with natural uranium, thorium, and daughters stored on-site.

Should SMC find a buyer for both the slag, which could be used as a fluidizer by steel manufacturers, and for the baghouse dust, which could be substituted for lime in the production of cement, the volume of waste would be greatly reduced, and the licensee would most likely request license termination for unrestricted use.

### Undeveloped Plant Property

Undeveloped plant property is situated along the southern border of the site. In addition SMC also owns a 19.8 acre non-contiguous plot that is located south west of the site.

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Facility Oversight Process Info

NRC inspections of the site in 2003, 2004, and 2005 did not identify any violations (Inspection Report 04007102/2003001). In addition, groundwater samples taken in 2004 were analyzed for gross alpha and gross beta by the Oak Ridge Institute for Science and Education and found to be less than the U.S. Environmental Protection Agency screening limits for groundwater.

Licensee Strengths

No license violations have been identified in the past few NRC inspections.

SMC staff and contractors have been responsive to direct requests from NRC staff.

Areas Needing Improvement

Public Involvement - Pursuant to 10 CFR 20.1403, the licensee was required to seek advice from affected parties, as part of its DP development. The licensee established a site specific advisory board (SSAB) to meet this requirement and held several public meetings. However, the NRC staff received several negative comments from affected parties that SMC had excluded certain parties from participation on the SSAB, and that the licensee's public meetings had not been adequately noticed. The NRC staff conveyed these comments back to the licensee as they were received so they could be factored into future interactions.

Following Guidance - SMC submitted its first DP in August 2002. The NRC staff rejected the DP in February 2003 because it was deficient in providing information needed for the staff to conduct its detailed technical review. After rejecting the DP, the NRC staff provided SMC with specific guidance in May 2004 on the use of the possession only license for long term control to better enable SMC to submit a DP that would be acceptable for detailed technical review. NRC staff also held several interactions with SMC to ensure SMC's understanding of the guidance. Nevertheless, SMC's revised DP which was submitted in October 2005 was rejected in January 2006 because of deficiencies. SMC submitted a supplement to the revised DP in June 2006 to correct the deficiencies. In October 2006, the revised DP, as supplemented, was accepted by the NRC staff for detailed technical review.

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Current Issues

License Amendment Request for Long Term Control License

In developing its decommissioning plan (DP) SMC considered several options for decommissioning its site:

- License Continuation
- Offsite Disposal and License Termination
- Onsite Stabilization and Long Term Control (LTC)

After conducting a cost/benefit analysis, SMC proposed the use of onsite stabilization and long term control. This plan would leave the radioactive slag onsite with an engineered cover and land use restrictions under the NRC's possession-only LTC license. The LTC license would comply with the License Termination Rule requirements for using legally enforceable and durable institutional controls and an independent third party. SMC is currently waiting for a written response from the State of New Jersey regarding the States position on institutional control and independent third party role.

Public Involvement in the NRC's Decommissioning Plan Review Process

As evidenced through letters to the NRC from NJDEP, elected officials and local stakeholders, and media coverage, there is considerable interest in the SMC site. Consequently, as part of its DP review process, the NRC staff will hold a public meeting on its process in Newfield, NJ on December 5, 2006.

Because SMC proposed a restricted use decommissioning, as part of its DP review process, the NRC staff will be developing an Environmental Impact Statement (EIS) instead of an Environmental Assessment. As part of the EIS process, the NRC staff met with local officials to inform them of the EIS process and the upcoming EIS scoping meeting scheduled for December 12, 2006.

New Jersey's Intent to become an Agreement State

By letter of May 23, 2006, Governor Corzine expressed New Jersey's (NJ's) intent to become an Agreement State. Based on its September 18, 2006 meeting with the State of NJ, the NRC staff estimates that could take up to three years from the time of NJ submitting an application for NJ to become an Agreement State. At that time, the NRC would relinquish its authority over the SMC site to NJ and NJ could impose equivalent or more stringent requirements for SMC.

Congressional Interest

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Governor Corzine, Senator Menendez, Senator Lautenberg and State Senator Madden have expressed concerns with the use of NRC's LTC license for the SMC site. Their concerns are: 1) the proposed approach would create an unlicensed low-level radioactive waste disposal facility; 2) that there has not been a meaningful opportunity for community discussion; and 3) the radioactive material should be disposed of and not left for future generations. Chairman Diaz responded to these concerns, but explained that NRC would continue the decommissioning process, including the review of Shieldalloy's DP with the proposed LTC license to implement the restricted use option.

#### Financial Assurance

As a legacy site that was licensed by the Atomic Energy Commission, at the time of licensing, SMC was not required to provide financial assurance for decommissioning. The licensee estimates that offsite disposal would cost \$63 million and contends that the cost associated with offsite disposal would force the company into bankruptcy. In contrast, licensee estimates that the cost associated with its proposal to leave the material on site would be more manageable (approximately \$8 million including \$5 million held in trust to pay for long-term maintenance and control). The current financial assurance is not adequate to cover these costs but SMC plans to increase the amount to cover its cost estimate.

Local stakeholders have raised concerns that SMC's proposed alternative is based on financial convenience as opposed to the best interest of the public.

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