State of New Jersey

Richard J. Codey
Acting Governor

'04 DEC -8 P12 :49 Department of Environmental Protection

Bradley M. Campbell
Commissioner

Radiation Protection and Release Prevention Programs
PO Box 415
Trenton, NJ 08625-0415
Phone (609) 984-5520
Fax (609) 633-2210

December 6, 2004

Samuel J. Collins, Regional Administrator
US Nuclear Regulatory Commission Region 1
King of Prussia, PA 19406-1415

Dear Mr. Collins:

I am writing to express my concern regarding the way in which the "decommissioning" of the Shieldalloy Metallurgic Corporation (SMC) site is proceeding. This time we have concerns about how meetings of the Site Specific Advisory Board (SSAB) should be conducted and what is expected of the members.

According to Nuclear Regulatory Commission (NRC) regulations at 10 CFR 20.1403, Criteria for license termination under restricted conditions, the licensee should seek advice from the members of the SSAB on various aspects of the proposed institutional controls and financial assurance. The representative of SMC stated this objective clearly, and members were encouraged to bring up any other issues they felt should be addressed.

However, it is the way in which these meetings are being conducted that concerns us. According to Volume 1 of the Consolidated NMSS Decommissioning Guidance (NUREG 1757), the SSAB should select a chairperson and adopt a charter. This was never done. Instead SMC's legal counsel conducts the meetings and drives the agenda. Members of the SSAB are encouraged to ask questions, but there has been no opportunity for members to discuss issues among themselves.

The most recent meeting of the SSAB was conducted on November 5, 2004 with several members of the public in attendance. Included in the packet of material was a form to be completed by SSAB members, which I have enclosed for your review. This form follows the letter of the NRC regulations, however we believe insufficient information was provided to SSAB members to allow them to complete it. The cover page to this form states that this will be considered the SSAB input and be included in the site wide decommissioning plan. How can these questions be answered without the decommissioning plan, the dose assessment, the ALARA analysis, or any documentation on financial assurance?

Of particular note is the question of scenarios that are being assessed. Based on an October 7, 2004 letter from David Smith of SMC to Kenneth Kalman of Headquarters, which summarized the key issues of two conference calls that were held on September 23, 2004 (to which we were

not invited), the NRC has agreed to intruder scenarios that are less than reasonably conservative (hunters, recreationalists, and casual visitors). We believe that two realistic but justifiable exposure scenarios should include a person who builds a home next to the pile upon failure of the institutional and engineering controls, and a person who builds a home where the slag is used as fill under and around the house. We believe that the latter scenario is certainly realistic, given the fact that it was done by SMC at this site, even having full knowledge of the radioactive content of the material.

Also included in this letter is the NRC's interpretation of *all controls fail.* Apparently "all controls fail" means only institutional controls fail. The NRC states that engineering controls may or may not fail once institutional controls fail, or their effectiveness may degrade over time. Since we know this material will be present in perpetuity, the Department believes it is safe to assume that eventually there will be neither institutional nor engineering controls present. We understand that sometimes a degradation of engineering controls may be considered more conservative because erosion usually occurs irregularly and may form gullies that allow contamination to be channeled and concentrated at a particular location, referred to as the "bathtub effect". According to SMC, the type of material present at the site is not readily soluble, so this type of degradation of engineering controls would not be considered conservative in our view. The Department believes that all scenarios should be assessed based on the failure of both institutional and engineering controls.

We have also learned that the NRC allowed SMC to use a draft Environmental Impact Statement from the SMC facility in Cambridge, Ohio for their ALARA analysis. While it is true the licensed material is the same, the site-specific factors such as land use are totally different.

Finally, there is no evidence currently available that will ensure the institutional or engineering controls proposed will be effective in perpetuity, or will last even 1000 years. Indeed, NRC's own regulations at 10 CFR 61.59 state that institutional controls may not be relied on for more than 100 years.

I believe that the NRC's willingness to entertain the long-term control license option sets a dangerous precedence and should be reconsidered. The NRC has allowed SMC to accumulate this waste with no regard for its disposition for years. The NRC needs to use its regulatory authority to resolve the problem now without placing a perpetual burden on the citizens of Newfield.

Sincerely,

Jill Lipoti

Jill Lipoti, Ph.D.,
Assistant Director

Enclosure

SITE SPECIFIC ADVISORY BOARD
Shieldalloy Metallurgical Corporation
Input Form

NJDEP's responses:

1. Do the institutional controls proposed by Shieldalloy Metallurgical Corporation (SMC) provide reasonable assurance that an average member of the public will not incur a radiation dose in excess of 25 millirem Total Effective Dose Equivalent (TEDE)?

The New Jersey Department of Environmental Protection (NJDEP) does not have sufficient information on which to base a response. The characterization of the slag and baghouse dust pile was not provided to the Site Specific Advisory Board (SSAB), nor was the engineering design of the cap.

2. Do you believe the institutional controls will be enforceable?

No. There has been no demonstration that the institutional controls proposed will be enforceable for the time period necessary, basically in perpetuity. The United States Nuclear Regulatory Commission's (USNRC) own regulations under 10 CFR Part 61.59 state that institutional controls may not be relied on for more than 100 years.

3. Do you believe the institutional controls will not impose undue burdens on the local community or other affected parties?

No. The institutional controls may well prevent the development of the rest of the SMC site, as well as surrounding properties. The NJDEP believes this presents an undue burden on the local and neighboring communities.

4. Do you believe SMC can provide sufficient financial assurance to enable an independent third party to assume responsibility for control and maintenance of the site?

No. SMC appears to be downsizing this operation. There is no value to the property with the slag pile present, only liability, possibly in the hundreds of millions of dollars. It appears that SMC is seeking the Long Term Control (LTC) option only to continue operating the facility for as long as SMC can profit from it. If SMC can not profit from this operation, abandonment of all radioactively contaminated materials appears likely.

Also, SMC states that it currently has posted $5 million dollars in financial assurance for addressing the USNRC regulated materials on the site. This amount was not posted in accordance with 10 CFR 20.1403(c) for license termination under restricted conditions, but rather in accordance with paragraph 16 of the March 26, 1997 Bankruptcy Settlement Agreement. This amount was posted as a "Predetermined Cost" in bankruptcy negotiations based on licensing issues relevant at that time and was not based on SMC's

and USNRC's current proposal for a LTC license. It is impossible for NJDEP to know if this amount will be sufficient for the current proposal since very few details have been made available to the SSAB.

5. In its decommissioning plan, SMC must present an assessment of the radiation dose potential associated with its planned decommissioning option for the following population groups: (1) on-site workers that do not have access to the capped area; (2) on-site workers that perform routine maintenance and inspection of the capped area; (3) trespassers; and (4) the nearest off-site resident. Are there other population groups that you think should be included in the dose assessment process?

Yes. According to the October 7, 2004 letter to Kenneth Kalman of the USNRC from SMC, the trespasser scenario means recreational, casual visitors, or hunters. While NJDEP agrees that the resident farmer scenario is not realistic because a house cannot be placed directly on top of the slag pile, we believe that a more conservative realistic scenario should be assessed, namely a future resident who uses crushed slag as fill under a house. We believe this is certainly realistic, given the fact that it was done by SMC at this site, even having full knowledge of the radioactive content of the material. NJDEP also believes that the nearest resident scenario should assume that the house is built next to the slag pile and that the engineering controls degrade and completely fail over time (see Comment No. 6 under Additional Concerns, below).

Additional Concerns:

1. NJDEP is on record with the USNRC opposing the issuance of the first Long Term Control license in the country based on both administrative and technical concerns. Please refer to the attached letter dated June 25, 2004 from NJDEP Commissioner Bradley M. Campbell, to USNRC Chairman Nils J. Diaz for details. The information that has been provided to the SSAB to date has not changed NJDEP's position regarding issuance of a Long Term Control license to SMC.

2. The statement made by SMC at the November 5, 2004 Site Specific Advisory Board meeting that one of the reasons SMC does not consider disposal of the slag pile a viable option is because of liability issues, such as the possibility that the material would have to be sent back to Newfield from Envirocare of Utah. Subsequent to the meeting, NJDEP spoke with Envirocare of Utah, who explained that this requirement is just an extension of the USNRC "cradle-to-grave" policy. Every generator of radioactive waste is responsible for the waste that it generates forever. This is a standard part of the contract that every Envirocare client must sign before they will accept the waste. NJDEP has dealt with numerous cleanups across the State with responsible parties ranging from private companies to the United States government. This issue has never been brought up as a reason to abandon disposal as an option.

3. The SSAB does not seem to be functioning as the regulatory framework suggests. Namely, NUREG 1757, Volume 1, Chapter 17 states that the SSAB should elect a

chairperson and adopt a charter and operating procedure. This was not done. The minutes of previous meetings reflect that SMC or its representatives have driven the discussion. Basic radiation protection principles were discussed at two SSAB meetings (which were necessary), but little discussion on specifics of the dose assessments or financial assurance was presented. According to NUREG 1757 the licensee is supposed to provide the SSAB with licensee studies and analyses that are pertinent to the decommissioning. The SSAB does not have the dose assessment or the 1996 Draft Environmental Impact Statement for the SMC site in Cambridge, OH that is supposed to contain the ALARA analysis that the USNRC is allowing to be used at this site. The SSAB should also have been provided with the thermoluminescent dosimeter (TLD) data from the fenceline near the slag pile. This would at least provide a point of reference when discussing regulatory dose limits. The SSAB has no documentation on financial assurance, only the total amount that SMC says is available. The work of the SSAB cannot be considered complete until these documents are distributed and a discussion is held among the members.

4. The cover page to this Input Form states that the form must be completed by November 30 in order for the SSAB input to be captured in the site-wide decommissioning plan. It then states that these concerns will be addressed in the Decommissioning Plan. Is this the final input on the question of institutional controls and financial assurance? If it is going to be included in the decommissioning plan then we assume this is the input that the USNRC is going to evaluate against their regulations. NJDEP believes that the SSAB should work to provide a consensus opinion to SMC. It is difficult for this to happen based on the way the SSAB meetings are currently being conducted.

5. When discussing institutional controls at the SSAB, SMC states that the controls will need to be relied on for 1000 years. This seems inappropriate given the half-life of the material that will be remaining at the site and the exposure rates when the engineering controls fail.

6. A copy of SMC's October 7, 2004 letter to Kenneth Kalman of the USNRC was provided to SSAB members at the November 5, 2004 meeting. NJDEP has concerns regarding item number 3 under Dose Modeling. The USNRC is allowing SMC to assume that engineering controls may or may not fail once institutional controls fail, or their effectiveness may degrade over time. Since we know this material will be present in perpetuity, NJDEP believes it is safe to assume that eventually there will be neither institutional nor engineering controls present. We understand that sometimes a degradation of engineering controls may be considered more conservative because erosion usually occurs irregularly, which may focus the flow and allow contamination to be channeled and concentrated at a particular location, referred to as the "bathtub effect." According to SMC, the type of material present at this site is not readily soluble, so this type of degradation of engineering controls would not be considered conservative in our view. NJDEP believes that all scenarios should be assessed based on the failure of both institutional and engineering controls.

State of New Jersey
Department of Environmental Protection
Bureau of Environmental Radiation
P.O. Box 415
Trenton, N.J. 08625-0415

LAT

Samuel J. Collins, Regional Adm.
US Nuclear Regulatory Commission Region 1
King of Prussia, PA 19406-1415

60f

19406/1415