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OFFICE OF SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

Secretary,
Attention: Chief, Rulemakings and Adjudications Staff
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Ladies and Gentlemen,

This petition for rulemaking is sent pursuant 10CFR2.802 requesting amendment of 10CFR20.2002, "Method for obtaining approval of proposed disposal procedures," to expand its scope to include material recycle. The subject rule currently serves as an adequate method for licensing waste disposal methods that can be demonstrated to be safe to the public, but does not allow for a similar demonstration that materials can be recovered that have been adequately decontaminated and characterized to be safe for recycle. It is environmentally unsound to not allow for reasonable and safe recycling options for recoverable materials.

Suggested Regulatory Text

20.2002 Method for obtaining approval of proposed recycling or disposal procedures.

A licensee or applicant for a license may apply to the Commission for approval of proposed procedures, not otherwise authorized in the regulations in this chapter, to recycle or dispose of licensed material generated in the licensee's activities. Each application shall include:

- (a) A description of the waste containing licensed material, including the physical and chemical properties important to risk evaluation, and the proposed manner and conditions of recovery for recycling or waste disposal; and
- (b) An analysis and evaluation of pertinent information on the nature of the environment for future use; and
- (c) The nature and location of other potentially affected licensed and unlicensed activities; and
- (d) Analyses and procedures to ensure that radiological doses are maintained ALARA and within the dose limits in this part.

Upon demonstration of meeting these requirements the subject recoverable materials or waste disposal activity is specifically exempt from licensing and regulatory controls as radioactive materials.

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Grounds and Interest

Equipment and materials are routinely decontaminated and monitored for reuse for unlicensed applications under license-specific monitoring requirements for surface contamination. There is no specific regulation allowing for these license-specific recycling and reuse activities, nor is there any well documented technical basis for the associated surface contamination limits, being primarily based upon the state of detection technology at the time that they were established.

The Toxco Material Management Center (TMMC) is currently licensed [Tennessee Radioactive Materials License R-01037-E16] by the Tennessee Division of Radiological Health (TDRH), an U.S. Nuclear Regulatory Commission (NRC) Agreement State Program, to melt elemental Lead (Pb) that has been in contact with licensed radioactive material for use in shielded radioactive waste containers. Unfortunately, the market for these containers is relatively small in comparison to the amount of potentially contaminated Lead requiring waste disposal. As a result, the majority of unwanted potentially contaminated Lead is buried as waste. Lead is a hazardous material, which, if declared a waste, is regulated by the U.S. Environmental Protection Agency (EPA) under the Resource Conservation and Recovery Act (RCRA). Therefore, the most common pathway for licensees to rid themselves of unwanted Lead is to send it to a mixed waste processor for macro-encapsulation and then dispose of it at a mixed waste disposal site. It is difficult to believe that this pathway (i.e., macro-encapsulation and disposal) was the intent of the lawmakers who set forth the RCRA regulations, but it is the most economical path currently available. This potentially contaminated Lead is a valuable resource that is neither being conserved nor recovered under the currently available regulations. Burial of lead is not an environmentally sound activity considering the reuse capabilities (away from general public direct contact) in industry.

Toxco has found a more economical and environmentally sound option for this material. During performance of its currently licensed activities, Toxco has noted that there is effectively a complete partitioning of any licensed radioactive material contaminants into the Lead-Oxide layer of slag that forms on the top of the melted Lead. This slag, which can be macro-encapsulated and disposed of as a mixed waste, constitutes a very minor percentage of the total Lead mass present. The remaining Lead is then characterized, exhibiting little or no detectable radioactivity using state-of-the-art radiation detection equipment.

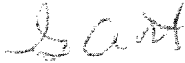
To prevent the further misuse and waste of this valuable natural resource, Toxco developed a volumetric clearance criteria that demonstrated that no member of the public who came in contact with the resultant Lead, were it to be recycled, would exceed the NCRP-91 "negligible individual risk level" of one (1) mrem per year. These criteria and their bases were then submitted to TDRH as part of a license amendment request to allow the resultant decontaminated Lead to be recycled as cleared materials that were exempt from licensing requirements. TDRH requested that TMMC refer the request to NRC/EPA based upon a lack of regulatory precedent at the national level for recycling of metals.

Conclusion

While the immediate interest involves the opportunity to recycle Lead, the requested rulemaking is broad-scoped, not allowing any specific activity, but providing for a regulatory mechanism to allow for a competent regulator to evaluate and approve technically sound licensing requests to recycle natural resources when demonstrated being safe to the public.

Toxco appreciates your consideration of this petition. Please contact Rick Low our Facility Manager or me at (865) 482-5532, if you have any questions regarding this correspondence.

Sincerely,



George Barnet
Facility Radiological Safety Officer; Toxco Material Management Center

CC: Tennessee Department of Environment and Conservation Division of Radiological Health