

CRCPD's Committee on Resource Recovery & Radioactivity

Conference of Radiation Control Program Directors, Inc. (CRCPD)
A Partnership Dedicated to Radiation Protection

2583

June 30, 2003

DOCKET NUMBER
PROPOSED RULE ~~PR 20~~
(68FR 09595)

DOCKETED
USNRC

July 2, 2003 (11:23AM)

Secretary
United States Nuclear Regulatory Commission
Attention: Rulemakings and Adjudications Staff
Washington, DC 20555

OFFICE OF SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

SUBJECT: Comments on the United States Nuclear Regulatory Commission Rulemaking on Controlling the Disposition of Solid Materials

Dear Sir/Ma'am:

The Conference of Radiation Control Program Director's (CRCPD's) Committee on Resource Recovery and Radioactivity (E-23) submits the following general comment on the subject and the attached specific responses to the questions posed by the Nuclear Regulatory Commission (NRC).

E-23 strongly urges NRC to complete rulemaking to establish risk-based release limits for equipment and objects previously positioned within areas where radioactive materials were used and to designate that equipment and those objects as being clean and safe for unrestricted use. By doing so, standards for safe exposures to radioactive material can take their long-overdue place alongside standards for safe exposures to other hazardous materials (e.g., chemical, biological, physical).

Sincerely,


Pete Myers

1 Attachment
as stated

Office of the Committee Chairperson
Pete Myers

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Template = SECY-067

SECY-02

Questions

1. To build on the information NRC has collected, they are inviting input on the following for each type of material described above.

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| a. | Question: If you have commented previously, are there areas where you have modified views that you expressed in earlier public comment on any of the management alternatives? |
| | Answer: NO. |
| b. | Question: Are there comments, beyond those summarized here or contained in the documents linked to this information packet, that you have on any of the alternatives? |
| | Answer: YES. NRC needs to establish a level below which recycled metals are not detectable using currently installed state-of-the-art large volume plastic scintillators. Below a certain level of radioactivity, NRC needs to consider (much the same as USDOT) that the material is no longer radioactive. |
| c. | Question: Are there areas where additional scientific information is available with regard to any of the alternatives? |
| | Answer: (1) E-23's comments on draft NUREG 1761 provided information on a study entitled "Illicit Trafficking Radiation Detection Assessment Program" conducted by IAEA, WCO and INTERPOL. The study indicated that 70% of the fix-installed gamma monitoring systems (conducting <i>in toto</i> surveys) didnot fulfill the requirements of the testing protocol. (2) YES. The melting at Ameristeel-Baldwin on July 13, 2001 provided valuable data about the partitioning of Cs137 following a melting. Ray Turner has that information. |
| d. | Question: Are there areas where additional economic information is available with regard to any of the alternatives? |
| | Answer: YES, see f. |
| e. | Question: Are there new or modified alternatives beyond those discussed in Sections D, E, or F, above, that you would suggest be considered? |
| | Answer: E-23 recommends NRC include as an alternative adopting the procedures and standards contained within ANSI/HPS N13.12-1999. |
| f. | Question: Do you have any other input that you think might be important for NRC to consider? |
| | Answer: YES. NRC needs to consider the maximum Cs137 level in Baghouse (KO-61) dust and determine what an acceptable level would be. The current level of <2pci/gm as at maximum already and was established to show the normally occurring level in the dust. If Cs contaminated recycled material is used, it could result in exceeding those levels, necessitating a clean-up for the mill. Surely there is a limit higher than 2pCi/gm that can be considered for the dust. That would make recycling more palatable to the industry. NRC should also consider the cost of decontamination to limits acceptable to the industry, and subtract that from the average selling price for those grades of scrap steel. It may very well learn the recycling would be the most expensive alternative for materials that must be decontaminated first. |

2. NRC would like our input about whether (a) conditional use or (b) landfill disposal can (1) be effective, (2) be reasonably possible to implement, and (3) increase public confidence in the process. For each type of material described above (1.a.-1.e.):

a. Conditional Use:

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| 1) | Question: Can a scrap/manufacturing/distribution process not licensed by NRC |
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| | provide assurance that the material is limited to its authorized use (and why), or should NRC maintain regulatory control by licensing all or some portion of the process (e.g., only the scrap process or the scrap and manufacturing process)? |
| | Answer: NO. Billets and slabs and coils are routinely sold to secondary consumers who have many products in their line-up. In addition, scrap is generated during those operations that goes anywhere in the industry. |
| 2) | Question: Could involvement by another Federal agency in the scrap/manufacturing/distribution process provide assurance that the material remains with its authorized use? How might such involvement be implemented and how would it function? |
| | Answer: THROUGH RESTRICTED USE ONLY. The NRC would have to provide oversight for the mills willing to recycle the materials and must assure that the materials are only used for those restricted uses. |
| 3) | Question: What are the feasibility, economic, and assurance aspects of a smelter facility being dedicated to such material, either full-time or as a portion of its process capability? |
| | Answer: VERY FEASIBLE. But the facility must be retrofitted for collection of dust and waste products, and monitored very closely. Normal steel mills do not have that ability. If part time dedication is used, it would require very close monitoring of the steels as well as by-products of the production of steels, as well as retrofitting for proper dust collection. In addition, EPA clean air permits must be addressed (they already address all carcinogens and require MSDS sheets for scraps being consumed). |
| 4) | Question: What are the feasibility, cost, and increased assurance aspects of NRC or other Federal agency involvement? |
| | Answer: UNKNOWN. |
| 5) | Question: What end use products could be manufactured under such a conditional use, e.g., bridge girders, sewer pipes, industrial coils? Would there be sufficient need for these products so that a process to manufacture them would be viable despite the relatively small magnitude of material from NRC-licensed facilities? |
| | Answer: Reinforcing bars, wire rods, small shapes and angles, grinding balls, flashings and forgings stamped from sheet or billet steels, concrete reinforcement and mine bolts, aircraft parts, oil drilling rigs, oil tubular casings. |
| 6) | Question: What typical lifetimes might the conditional (authorized) uses have, and what would likely happen to the solid material after the lifetime was over? Could the material continue to be part of a conditional use, or would it become available for unrestricted use? |
| | Answer: Lifetime would be about 40 years average. Then unrestricted recycling would be done. |
| 7) | Question: What criterion should be used before allowing release of solid material to a conditional use, e.g., should dose-based or concentration-based criterion be used and what should it be? |
| | Answer: BOTH. Dose base is needed based on the prescribed use to protect workers who handle and weld and fabricate the structures, etc. Concentration/contamination limits are needed for the same reasons. |

b. Disposal to Landfill:

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| 1) | Question: Would placing the material in a RCRA Subtitle C site accomplish the goal of isolating the material from the public? If so, what controls are in place in a RCRA Subtitle C site to provide such assurance? |
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| | Answer: YES. Short half life materials could be buried after a specified time. |
| 2) | Question: Would placing the material in a RCRA Subtitle D landfill accomplish the goal of isolating the material from the public? If so, what controls are in place in a RCRA Subtitle D site to provide such assurance? |
| | Answer: YES |
| 3) | Question: Is it necessary for NRC to maintain regulatory control to achieve the desired isolation of NRC-regulated material from the public? If so, is there a need for NRC to license a RCRA landfill either under a specific or general license, or is an exemption with specific conditions adequate to cover material that has come from NRC-licensed facilities? What cost considerations need to be considered and what possible additional assurance of isolation might be realized under these regulatory approaches? |
| | Answer: It may be possible in some cases to provide exemptions at some level and issue a general license for facilities to dispose of the materials. Costs of adequate monitoring and testing equipment need consideration, as well as testing equipment and training of employees at the landfill. |
| 4) | Question: What criterion should be used before allowing solid material to leave an NRC-licensed facility for disposal at a landfill such that the public and landfill workers are protected? In particular, should a different regulatory scheme be used depending on the radioactivity level of the material potentially to be placed in the landfill facility, i.e., lesser requirements if the potential dose is lower? |
| | Answer: |
| 5) | Question: If EPA and/or NRC rulemaking is developed in this area, would RCRA Subtitle C or Subtitle D landfill operators accept material which had been surveyed and released from an NRC-licensed facility? |
| | Answer: YES. |

c. **Conditional Use or Disposal to Landfill**

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| 1) | Question: As a back-up, should a "cap" be placed limiting the dose that would occur if the restrictions for the conditional use became no longer effective, or if the material being disposed of at a landfill was diverted or removed from the landfill, and the material wound up in an unrestricted use? If so, what should the cap value be? |
| | Answer: |

3. To assist NRC in evaluating alternatives for controlling the disposition of solid material, they are requesting information for each type of material listed in 1.a.-1.e.

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| a. | Question: The inventory of solid materials at NRC-licensed facilities, including quantities and radioactivity levels; |
| | Answer: UNKNOWN. |
| b. | Question: How control processes at NRC-licensed facilities function so that materials from different areas of a facility are kept separate to assure that those materials with no, or very small amounts of, radioactivity do not become mixed with those with higher levels; |
| | Answer: Surveys by competent personnel are conducted with calibrated survey instruments with appropriate sensitivities using Reg Guide 1.86 release criteria. |
| c. | Question: Potential exposure scenarios associated with the alternatives, in particular for conditional use and landfill disposal. |
| | Answer: |