[7590-01-P]

NUCLEAR REGULATORY COMMISSION

10 CFR Part 20

[Docket No. PRM-20-27]

George Barnet; Denial of Petition for Rulemaking

AGENCY: Nuclear Regulatory Commission.

ACTION: Denial of petition for rulemaking.

SUMMARY: The Nuclear Regulatory Commission (NRC) is denying a petition for rulemaking (PRM-20-27) dated July 11, 2007, submitted by George Barnet (petitioner). The petitioner requested that NRC amend its regulations that govern standards for protection against radiation to broaden the scope of the requirements pertaining to approval of proposed disposal methods to include recovery of material for recycling. The NRC is denying the petition because the issues raised by the petitioner fall within the scope of the rationale for a recent Commission decision to not conduct rulemaking in the area of setting radiological criteria for controlling the disposition of solid materials. The rationale for the Commission decision was that the current NRC approach for disposition of solid materials is fully protective of public health and safety, and that NRC is currently faced with several high priority and complex tasks.

ADDRESSES: Publicly available documents related to this petition may be viewed electronically on the public computers located at the NRC Public Document Room (PDR), O1 F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland. The PDR reproduction contractor will copy documents for a fee.

Publicly available documents created or received at the NRC after November 1, 1999, are also available electronically at the NRC's Electronic Reading Room at *http://www.nrc.gov/reading-rm/adams.html.* From this site, the public can gain entry into the NRC's Agencywide Documents Access and Management System (ADAMS), which provides text and image files of NRC's public documents. If you do not have access to ADAMS or if there are problems in accessing the documents located in ADAMS, contact the NRC PDR Reference staff at 1-800-397-4209, 301-415-4737 or by e-mail to *pdr@nrc.gov.*

FOR FURTHER INFORMATION CONTACT: Frank Cardile, Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. Telephone: 301-415-6185 or Toll-Free: 1-800-368-5642, or e-mail: fpc@nrc.gov.

SUPPLEMENTARY INFORMATION:

I. The Petition

On July 11, 2007, the NRC received a petition for rulemaking submitted by George Barnet (petitioner). The petitioner requested that NRC revise its regulations in 10 CFR Part 20, "Standards for Protection Against Radiation." Specifically, the petitioner requested that

10 CFR 20.2002, “Method for obtaining approval of proposed disposal procedures” be amended by broadening its scope to allow for the recycling of materials. The NRC determined that the petition met the threshold sufficiency requirements for a petition for rulemaking under 10 CFR 2.802. The petition was docketed by the NRC as PRM-20-27 on July 25, 2007.

The petitioner states that the current provisions at § 20.2002 are adequate for licensing waste disposal methods that can be demonstrated to be safe to the public. However, the petitioner states that § 20.2002 does not provide for a similar method to demonstrate that materials can be recycled after being decontaminated. The petitioner states that it is environmentally unsound to not allow for reasonable and safe recycling options for recoverable materials.

In support of the petition, the petitioner notes that equipment and materials are routinely decontaminated and monitored for reuse for unlicensed applications under license-specific monitoring requirements for surface decontamination. The petitioner states that because no specific regulation currently exists to permit these license-specific recycling and reuse activities, most unwanted potentially contaminated lead is buried as waste. The petitioner also notes that the most economical method for licensees to get rid of unwanted lead is to send it to a licensed mixed waste processor for macro-encapsulation, and then dispose of it at a licensed mixed waste site. The petitioner states that this is both environmentally and economically unsound because the potentially contaminated lead is a valuable resource that is not being conserved or recovered under NRC’s current regulations.

The petitioner states that the company at which he is a Radiological Safety Officer, the Toxco Materials Management Center (TMMC), has developed a more economical and environmentally sound method for the processing of potentially contaminated lead that has been in contact with radioactive materials. The petitioner explains that this method separates

contaminated materials into the lead oxide layer of slag that forms on top of the melted lead. The slag is only a very minor percentage of the total quantity of lead processed and can be macro-encapsulated and disposed of as mixed waste. The petitioner states that the remaining lead exhibits little or no detectable radioactivity.

The petitioner also explains that TMMC developed volumetric clearance criteria to show that no person who came in contact with the decontaminated lead would exceed the 1 mrem/year limit in its Agreement State license with the Tennessee Division of Radiological Health (TDRH). The petitioner states that these criteria and their bases were submitted to TDRH as part of a license amendment request to permit decontaminated lead to be recycled as cleared materials exempt from licensing requirements. The petitioner further states that TDRH requested that TMMC refer the request to the NRC based on "a lack of regulatory precedent at the [Federal] level for recycling of metals."

II. Reasons for Denial

NRC is denying this petition because the issues raised by the petitioner's request fall within the scope of the rationale for a recent Commission decision to not conduct rulemaking in the area of setting radiological criteria for controlling the disposition of solid materials. The Commission's decision was made in response to a draft proposed rule provided to the Commission by the NRC staff (SECY-05-0054 "Proposed Rule Radiological Criteria for Controlling the Disposition of Solid Materials (RIN 3150-AH18)"; March 31, 2005: ADAMS Accession No. ML041550790). In its June 1, 2005, response to that proposed rule (Staff Requirements Memorandum SRM-SECY-05-0054; ADAMS Accession No. 052010263), the Commission indicated that it was disapproving publication of the draft proposed rule and

deferring the rulemaking for the time being. The Commission's rationale for its disapproval included the fact that the NRC's current approach to review specific cases on an individual basis is fully protective of public health and safety, and that the NRC is currently faced with several high priority and complex tasks. The petitioner has not provided additional material not considered in a general manner by the Commission in reaching its decision not to pursue rulemaking in this area.

Additional background on the NRC staff rulemaking activities and the Commission decision disapproving the rulemaking, and the implication of those actions related to this petition, follows in this section. NRC's current approach to reviewing specific cases is provided in Section 2 of Appendix B of the draft Generic Environmental Impact Statement (GEIS), prepared with the rulemaking, and in Section 15.11.1.2 of Volume 1, Revision 2 of NUREG-1757. Agreement State approaches are described in Section 3 of Appendix B of the draft GEIS.

Prior to June 1, 2005, the NRC conducted a rulemaking to amend 10 CFR Part 20 to include radiological criteria for controlling the disposition of solid materials that have no, or very small amounts of, residual radioactivity resulting from licensed operations, and which originate in restricted or impacted areas of NRC licensed facilities. In conducting the rulemaking, NRC noted that its existing regulations contain a framework of radiation standards to ensure protection of public health and safety from the routine use of materials at licensed facilities. These standards include a public dose limit in Part 20 and dose criteria for certain types of media released from licensed facilities. However, the NRC also noted that Part 20 does not contain a specific dose criterion to be used to verify that solid materials being considered for release have no, or very small amounts of, residual radioactivity. Instead, NRC's current approach was (and is) to make decisions on disposition of solid materials by using a set of existing guidelines based primarily on measured radioactivity levels of material, rather than on a

dose criterion. In a report ("The Disposition Dilemma; Controlling the Release of Solid Materials from Nuclear Regulatory Commission-Licensed Facilities"; National Research Council; 2022) reviewing NRC's current approach, the National Academies indicated that this current NRC approach is "sufficiently protective of health and safety that it does not need immediate revamping." However, because the current approach does not derive from a specific regulation, NRC decisions in this area tended to be inefficient because they lacked an overall risk basis, consistency, and regulatory finality. Thus, the intent of NRC's rulemaking was to improve NRC's regulatory process by incorporating risk-informed criteria directly into the NRC's regulations.

During the rulemaking, NRC engaged in several information-gathering activities to seek stakeholder participation and input on alternate disposition approaches, and the issues involved with them. These activities included several public meetings, as well as the opportunity for the public to comment directly on two *Federal Register* notices, published on June 30, 1999 (64FR35090) and February 28, 2003 (68FR9595), containing a discussion of the alternate approaches. In addition, the NRC staff reviewed various related reports prepared by recognized national and international organizations such as the National Academies, the National Council on Radiation Protection and Measurements, the American National Standards Institute, and the International Atomic Energy Agency. In particular, the National Academies undertook an extensive review of NRC's current approach from the standpoint of whether it is protective of public health and safety, effective and efficient, and adequately able to be implemented using NRC's analysis methodology. The National Academies also looked at how the public had been involved in the rulemaking process. As a result of its review, the National Academies made nine recommendations in its final report, including an overarching finding that, although NRC's decision process for review of the disposition of solid materials has shortcomings, it was workable and sufficiently protective of public health and safety that it did not need immediate

revamping.

The NRC staff also completed several technical studies to evaluate alternatives for controlling the disposition of solid materials, including preparation of a draft of a Draft Generic Environmental Impact Statement as part of SECY-05-0054.

Based on this effort, on March 31, 2005, the NRC staff provided to the Commission a draft proposed rule contained in SECY-05-0054. The draft proposed rule would have amended 10 CFR Part 20 to include a dose criterion for disposition of solid material and provisions for allowing certain limited disposition paths for solid materials. The proposed draft rule also contained provisions for allowance of other disposition paths, if supported by a case-specific analysis and approval of proposed procedures, including case-specific requests for soil disposition and metal recycle. Solid materials originating at licensed facilities in restricted or impacted areas, and considered as part of the draft proposed rulemaking, included metals in various components and equipment, individual tools, concrete; soils, laboratory materials, process materials, trash, etc.

Following submittal of SECY-05-0054, the Commission conducted a review of the provisions of the staff's draft proposed rulemaking including potential alternate approaches, one of which would be to take no action towards issuing a proposed rule in this area. In its review, the Commission also considered the wide range of other activities which NRC is engaged in. These activities include efforts towards increasing security at all licensed facilities, i.e., at both reactors and at the wide range of materials facilities which possess radioactive materials for use in medical applications, research, industrial measurement gauges, etc. Other significant NRC actions include efforts to prepare to review planned applications for new reactors, waste disposal facility considerations, fuel cycle facility management, decommissioning of facilities, etc. In each of these areas, and especially in the area of security and new reactors, there is a need

to establish criteria in those areas where none exist now or where they may need updating. The Commission balanced those considerations against the purpose of the rulemaking on disposition of solid materials and decided, on June 1, 2005, to defer the rulemaking for the time being because NRC's current approach in that area was fully protective, and the other high priority and complex tasks were occupying its attention as well as the attention of the whole agency.

The petitioner's request essentially fits into the general considerations that the Commission already considered in deciding to defer the rulemaking on disposition of solid materials. The origin and nature of materials similar to those being considered in the petition, as well as considerations regarding their potential intended destinations, were all considered and reviewed as part of the rulemaking process leading to the draft proposed rule in SECY-05-0054 and the Commission decision to defer the rulemaking in June 2005. The petitioner has not presented information or considerations substantially different from those reviewed in the rulemaking process. Therefore, NRC is denying this petition for the same reasons that the Commission, on June 1, 2005, deferred the rulemaking on disposition of solid materials.

III. Conclusion

The NRC is denying the petition because the issues raised by the petitioner fall within the scope of the rationale for a recent Commission decision to not conduct rulemaking in the area of setting radiological criteria for controlling the disposition of solid materials. The rationale for the

Commission decision was that the current NRC approach for disposition of solid materials is fully protective of public health and safety, and that NRC is currently faced with several high priority and complex tasks.

Dated at Rockville, Maryland, this 19th day of December 2007.

For the Nuclear Regulatory Commission.

/RA/

Luis A. Reyes,
Executive Director for Operations

Commission decision was that the current NRC approach for disposition of solid materials is fully protective of public health and safety, and that NRC is currently faced with several high priority and complex tasks.

Dated at Rockville, Maryland, this 19th day of December 2007.

For the Nuclear Regulatory Commission.

/RA/

Luis A. Reyes,
Executive Director for Operations

ML073170420

OFC	DILR	DILR	DILR	DILR
NAME	FCardile	KHsueh	PBubar	DRathbun
DATE	10/14/07	10/22/07	10/22/07	11/15/07
OFC	DMSSA	DWMEP	ADM	OGC
NAME	JSchlueter	LCamper	MLesar	FCameron
DATE	10/30/07	10/30/07	11/01/07	11/07/07
OFC	Tech Editor	FSME	EDO	
NAME	CPoland	CMiller (GPangburn for)	LReyes	
DATE	11/28/07	12/06/07	12/19/07	

OFFICIAL RECORD COPY