

March 24, 1997

MEMORANDUM TO: Gail H. Marcus, Director  
Project Directorate III-3  
Division of Reactor Projects III, NRR

FROM: Thomas H. Essig, Chief      Original signed by Thomas H. Essig  
Emergency Preparedness and  
Environmental Health Physics Section  
Emergency Preparedness and  
Radiation Protection Branch  
Division of Reactor Program Management  
Office of Nuclear Reactor Regulation

SUBJECT: KEWAUNEE NUCLEAR PLANT - REVIEW OF LETTER CONCERNING ON-SITE  
DISPOSAL OF CONTAMINATED SLUDGE PURSUANT TO 10 CFR 20.2002

The Emergency Preparedness and Radiation Protection Branch (PERB) has completed its review of the Wisconsin Public Service Corporation letter, dated December 10, 1996, which requested that the NRC review the applicability of a 10 CFR 20.203 (now 20.2002) application approved on June 17, 1992, for additional disposals that are of a similar nature.

The attachment to this memorandum contains the Safety Evaluation that documents our evaluation of the licensee's request.

We agree with the licensee that the 10 CFR 20.203 application for on-site disposal of sludge contaminated with licensed material which was approved on June 17, 1992, contains bounding conditions which are applicable for additional on-site disposals of a similar nature.

This completes our review under TAC No. M97411.  
Docket No. 50-305

Attachments: 1. Safety Evaluation  
2. Kewaunee site map

CONTACT: Stephen Klementowicz, NRR/PERB  
415-1084

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

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SAFETY EVALUATION BY THE EMERGENCY PREPAREDNESS  
AND RADIATION PROTECTION BRANCH  
OFFICE OF NUCLEAR REACTOR REGULATION  
WISCONSIN PUBLIC SERVICE CORPORATION  
KEWAUNEE NUCLEAR POWER PLANT  
DOCKET NO. 50-305

1.0 Introduction

By letter dated December 10, 1996, Wisconsin Public Service Corporation (the licensee) requested that the NRC concur with its determination that additional requests to the NRC pursuant to 10 CFR 20.2002 for the onsite disposal of contaminated sludges are not required provided such disposals are conducted within the limits and bounding conditions approved by the NRC in its June 17, 1992 Safety Evaluation (SE).

2.0 Background

In a letter dated September 12, 1989, the licensee requested authorization for the alternate disposal of sludges contaminated with licensed radioactive material. In a SE dated June 17, 1992, the NRC approved the licensee's request pursuant to 10 CFR 20.302 (new 10 CFR 20.2002) for the disposal of 15,000 cubic feet of contaminated waste sludge by land application at the Kewaunee Nuclear Power Plant (KNPP) location. The SE imposed the following boundary conditions:

- ~~1. The annual disposal must be less than a total activity of 0.2 mCi.~~
2. The whole body dose to the hypothetical maximally exposed individual must be less than 0.1 mrem/year.
3. The disposal must be at the same site.

The SE also stated that for any repetitive disposals, the licensee must reapply to the NRC when a particular disposal would exceed the boundary conditions.

3.0 Evaluation

The licensee has committed to comply with the limits and conditions of the SE issued on June 17, 1992 for future on-site disposals of sludge contaminated

with licensed material. The licensee has also committed to follow a sludge sampling and analysis procedure that implements the guidance contained in NRC Information Notice 88-22. Specifically, the licensee's procedure will require the analysis of sludge samples using a detection system design and operating characteristics that yield a lower limit of detection for Co-58, Co-60, Cs-134, and Cs-137 consistent with measurements of environmental samples. The licensee has provided a site map (Attachment 2) which specifies the acceptable on-site disposal areas for the contaminated sludge.

#### 4.0 Conclusion

The staff agrees with the licensee's determination that additional on-site disposals of contaminated sludges, that are conducted within the bounding limits and conditions contained in the June 17, 1992 SE and within the areas specified in the site map (Attachment 2), do not require specific NRC approval.

The licensee is requested to permanently incorporate this modification into the Offsite Dose Calculation Manual as an Appendix, and that future modification of this commitment be reported to the NRC.

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KEWAUNEE COUNTY

