

July 9, 2003

Mr. Robert H. Leyse  
P.O. Box 2850  
Sun Valley, ID 83353

SUBJECT: PETITIONS FOR RULEMAKING PRM-50-73 AND PRM-50-73A: IMPACT OF  
CRUD BUILDUP ON ECCS CAPABILITY

Dear Mr. Leyse:

I am responding to your letters of September 4, 2001, and November 5, 2001, which submitted petitions for rulemaking that asked for amendments to 10 CFR 50.46 and Appendix K of Part 50. Your letters contend that these regulations, and associated guidance, are inadequate because they do not address the effects of crud buildup during normal operations and the effects of crud detachment and resuspension during a loss-of-coolant accident (LOCA) on the capability of the emergency core cooling system (ECCS). You further state that these inadequacies could result in overheating of the core, leading to meltdown both during a large break LOCA and during normal operations.

The NRC published notices of receipt of PRM-50-73 on October 12, 2001, and PRM-50-73A on January 29, 2002. Five letters of public comment were received on PRM-50-73, and seven letters on PRM-50-73A. All of the letters of public comment, except two that you provided on PRM-50-73A, opposed the proposed actions. The commenters stated that existing rules require the ECCS to meet stringent performance criteria by, among other procedures, controlling buildup of crud; that only one cycle in one plant ever had a significant crud buildup, which was quickly observed and remediated; that concern for controlling dose rates from crud buildup and a desire to operate a plant at full power provide strong industry incentives to control crud; and that all safety analyses have shown that crud has not had any impact on required thermal safety margins.

The Commission is denying your two petitions for the following reasons. There is no apparent safety problem. The NRC found no reports or data indicating that heavy crud buildup had ever threatened the capability of the ECCS to manage a LOCA or that heavy crud buildup could significantly interfere with coolant flow during normal operations. The NRC believes that the ECCS performance criteria, along with three specific references to crud control in the Standard Review Plan, assure that licensees will continue to address crud buildup in their analyses of ECCS performance. The NRC believes that specifying that crud buildup be addressed specifically in the rules would provide little benefit and would not contribute to performance based regulation.

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Expending resources on rulemaking on a non-safety significant issue would not contribute to enhanced public confidence in the agency. Further details are discussed in the enclosed notice of Denial of Petition for Rulemaking, which will be published in the Federal Register.

Sincerely,

***/RA/***

Annette Vietti-Cook  
Secretary of the Commission

Enclosure: Federal Register Notice of Denial of  
Petition for Rulemaking