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62 FR 26331
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NEI NUCLEAR ENERGY INSTITUTE

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June 27, 1997

Mr. David L. Meyer, Chief
Rules Review and Directives Branch
U.S. Nuclear Regulatory Commission
Mail Stop T-6D-69
Washington, DC 20555-0001

**SUBJECT:** Proposed Generic Communication: Potential for Degradation of the Emergency Core Cooling System and the Containment Spray System After a Loss-of-Coolant Accident Because of Construction and Protective Coating Deficiencies and Foreign Material in the Containment (62 Fed. Reg. 26331)

Dear Mr. Meyer:

Enclosed are comments submitted on behalf of the nuclear power industry by the Nuclear Energy Institute (NEI)[1]. These comments are in response to the May 13, 1997 *Federal Register* "Notice of opportunity for public comment" concerning the subject proposed generic letter.

We appreciate the opportunity to comment on this proposed generic letter. Please direct any questions on our comments to John Butler at (202) 739-8108.

Sincerely,

David J. Modeen

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Enclosure

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[1] NEI is the organization responsible for establishing unified nuclear industry policy on matters affecting the nuclear energy industry, including regulatory aspects of generic operational and technical issues. NEI members include all utilities licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect/engineering firms, fuel fabrication facilities, materials licensees, and other organizations and individuals involved in the nuclear energy industry.



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**Industry Comments on Proposed Generic Communication: Potential for Degradation of the Emergency Core Cooling System and the Containment Spray System After a Loss-of-Coolant Accident Because of Construction and Protective Coating Deficiencies and Foreign Material in the Containment (62 Fed. Reg. 26331)**

## A) Separate Generic Communications Would Provide Better Focus on Individual Issues

The proposed generic letter identifies three areas of concern:

1) foreign material in containment,

2) design deficiencies and material condition deficiencies of ECCS structures, systems and components inside containment, and

3) problems with protective coatings inside containment.

With respect to the first two areas of concern, the proposed generic letter summarizes previous generic communications and notes NRC staff expectation that licensees should have already considered possible actions to address these concerns. For the third area of concern the proposed generic letter alerts licensees to problems associated with the material condition of protective coatings inside containment and requests information to evaluate licensee programs for protective coatings.

The proposed generic letter covers a wide range of conditions which have the potential for degradation of containment recirculation capability following a Loss of Coolant Accident. In order to provide a greater focus on the requested licensee actions, we recommend the protective coating portion of the generic communication be separated from the remaining two areas of concern. Because the NRC is not requesting licensees to supply information pertaining to the first two issues, they are more appropriately addressed in an NRC Information Notice while the third issue remains the focus of the proposed generic letter.

## B) No Single Coating Program

For many licensees the control of safety-related coatings is covered in multiple plant procedures and other processes; including procurement, training, maintenance, engineering, etc. There is typically no single "coating" program. Therefore, responses to the request for summary description of the "plant-specific program" for protective coatings will involve a description of applicable portions of multiple plant processes and procedures. The proposed generic letter

should be modified to acknowledge the existence of multiple plant-specific activities addressing protective coatings and the acceptability of a response which summarizes the applicable portions of plant procedures and processes which address protective coatings.

C) **Localized Failures Do Not Indicate Complete Failure**

The proposed generic letter states that qualified coatings are capable of adhering to their substrate during a Design Basis LOCA in order to minimize the amount which can reach the emergency sump screen or suction strainers and reduce the flow by blocking the flow area. While we agree with the statement, it is important to note that instances of localized coating failures do not mean complete failure of the coating system and, in of itself, does not indicate that the containment recirculation systems were challenged. It is important that licensees have adequate processes in place to detect and remedy instances of localized failure before they progress to a point which could challenge proper operation of the containment recirculation systems.

D) **Applicability of Codes and Standards**

The application of coatings requires attention to detail. The guidance of ANSI, ASTM or other industry standards is very helpful. However, strict adherence to the existing coating application standards without judgment and interpretation is expensive and does not necessarily achieve the desired goal of tough protective coatings. In the discussion provided in the *Federal Register* notice, the NRC staff acknowledges that Regulatory Guide 1.54, "Quality Assurance Requirements for Protective Coatings Applied to Water-Cooled Nuclear Power Plants," references outdated documents. NRC staff must exercise judgment when evaluating the acceptability of any given licensee's coatings activities relative to these standards.

E) **General Comments**

The proposed generic letter uses the terms "Class I" and "Class II" coatings. These terms are not universally used by the industry to define coatings. The use of coatings terms as defined in ANSI N101.2 and ANSI N101.4 is recommended. These terms are listed below:

Service Level 1 Coating - A coating used on any exposed surface area within the primary containment facility.

Service Level 2 Coating - A coating used on any exposed surface area located outside of containment but subject to radiation and decontamination.

Service Level 3 Coating - A coating used on any exposed surface area located outside of containment whose failure could adversely effect normal plant operation, or orderly and safe plant shut-down.

Clarification is also needed as to the scope of the information requested by the proposed generic letter. Specifically, does the requested information cover coatings inside containment only or all safety-related coatings?

In the third paragraph of the Protective Coatings section, the following sentence should be added: "Once in contact with sump screens or suction strainers, coating chips may impact the net positive suction head (NPSH) available to the ECCS/CSS pump." This sentence assists in the explanation of the potential impact of coatings on pump performance.

The second paragraph of Appendix C lists latex and polyurethane as coatings used within the drywell and wetwell of BWRs and containments of PWRs. Both of these materials have not been demonstrated to meet Design Basis Accident or radiation requirements. If they have been used, they should be listed as unqualified. To avoid inadvertently encouraging their use, the NRC staff should ensure that the listing clearly denotes the lack of qualification.