



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS  
WASHINGTON, DC 20555 - 0001**

July 22, 2009

Mr. R.W. Borchardt  
Executive Director for Operations  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

**SUBJECT:** DRAFT TEMPLATE NEI-08-08, "GENERIC FSAR TEMPLATE GUIDANCE FOR LIFE CYCLE MINIMIZATION OF CONTAMINATION," AND DRAFT DC/COL-INTERIM STAFF GUIDANCE - 06

Dear Mr. Borchardt:

During the 564<sup>th</sup> meeting of the Advisory Committee on Reactor Safeguards, July 8-10, 2009, we reviewed the Nuclear Energy Institute (NEI) Draft Template NEI-08-08, "Generic FSAR Template Guidance for Life Cycle Minimization of Contamination," and the Draft Interim Staff Guidance (ISG) Design Certification / Combined Operating License (DC/COL)-ISG-06, "Evaluation and Acceptance Criteria for 10 CFR 20.1406 to Support Design Certification and Combined License Applications." Our Radiation Protection and Nuclear Materials Safety Subcommittee also reviewed these documents during a meeting on July 6, 2009. During these reviews, we had the benefit of discussions with representatives of the NRC staff and NEI. The Committee also benefited from the documents listed in the references.

### **RECOMMENDATIONS**

1. The definition of the term "radiologically significant" in NEI 08-08 should be changed by revising the "significance" threshold to address unexpected radiological conditions resulting from spills, leaks, unplanned releases or the identification of radioactive materials in unexpected locations that could have an adverse impact on license termination under Subpart E of 10 CFR Part 20.
2. NEI-08-08 should not be endorsed and ISG-06 should not be issued until a satisfactory definition of "radiologically significant" is developed.

### **BACKGROUND**

Regulatory Guide (RG) 4.21, "Minimization of Contamination and Radioactive Waste Generation: Life-Cycle Planning," provides guidance for compliance with 10 CFR 20.1406, "Minimization of Contamination." Draft NEI-08-08 provides a standard approach for new reactors to address the guidance in RG 4.21 and the requirements of 10 CFR Part 20.1406.

The staff is completing a safety evaluation of NEI 08-08 that will be the basis for its endorsement of this approach.

Draft DC/COL ISG-06 provides the methods and criteria for the staff's review of Design Certification and COL applications, and to determine whether the requirements of 10 CFR 20.1406 are met.

## **DISCUSSION**

NEI 08-08 includes the following definition of the term radiologically significant: *Radiologically Significant generally refers to the presence of radioactive materials at levels which could result in radiation exposures and doses in excess of the 10 CFR Part 20 requirements for radiation workers and members of the public, or in excess of liquid and airborne effluent concentration limits and releases to sewers under Appendix B to Part 20.*

The levels identified in this definition are regulatory limits. Exceeding these limits would constitute violations. Action to minimize contamination should be taken at levels well below these limits.

For the purposes of meeting 10 CFR 20.1406, (i.e., facilitating decommissioning and minimizing the generation of waste, particularly at the time of decommissioning), the criteria governing the evaluation and containment of a spill or leak should be related to minimizing the types, quantities, and amount of materials that must be disposed as radioactive materials during decommissioning.

Until a satisfactory definition of the term "radiologically significant" is developed, NEI-08-08 should not be endorsed and ISG-06 should not be issued.

We look forward to working with the staff on this matter.

Sincerely,

*/RA/*

Mario V. Bonaca  
Chairman

## **References:**

1. Draft NEI-08-08, "Generic FSAR Template Guidance for Life Cycle Minimization of Contamination," Revision 1, May 2009 (ML091490701)
2. Draft DC/COL-ISG-06, "Evaluation and Acceptance Criteria for 10 CFR 20.1406 to Support Design Certification and Combined License Applications," Revision 7, 03/09/2009 (ML090640183)
3. Regulatory Guide 4.21, "Minimization of Contamination and Radioactive Waste Generation: Life-Cycle Planning," June 2008 (ML080500187)

Draft DC/COL ISG-06 provides the methods and criteria for the staff's review of Design Certification and COL applications, and to determine whether the requirements of 10 CFR 20.1406 are met.

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2. Draft DC/COL-ISG-06, "Evaluation and Acceptance Criteria for 10 CFR 20.1406 to Support Design Certification and Combined License Applications," Revision 3, 03/09/2009 (ML090640183)
3. Regulatory Guide 4.21, "Minimization of Contamination and Radioactive Waste Generation: Life-Cycle Planning," June 2008 (ML080500187)

## **Distribution:**

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Letter to R.W. Borchardt, Executive Director for Operations, NRC, from Mario V. Bonaca, Chairman, ACRS, dated July 22, 2009

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