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Office of Administration
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

GL08-0071

ATTN: Rulemaking, Directives, and Editing Branch

**COMMENTS ON DRAFT REGULATORY GUIDE DG-1187,
"CONCRETE RADIATION SHIELDS AND GENERIC SHIELD
TESTING FOR NUCLEAR POWER PLANTS"**

Dominion Resources Services, Inc. (Dominion) appreciates the opportunity to comment on Draft Regulatory Guide DG-1187, "Concrete Radiation Shields and Generic Shield Testing for Nuclear Power Plants."

The proposed revision to this regulatory guide describes a method acceptable to the NRC staff for complying with the regulations with regard to the design and construction of concrete radiation shields in nuclear power plants. Therefore, Dominion would like to offer the attached comments.

If you would like further information on our comments, please contact:

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Respectfully,

E. Funderburk for CLF

C. L. Funderburk, Director
Nuclear Licensing & Operations Support
Dominion Resources Services, Inc. for
Virginia Electric and Power Company,
Dominion Nuclear Connecticut, Inc. and
Dominion Energy Kewaunee, Inc.

Attachment

*SONSI Review Complete
Template = ADM-013*

*E-REDS = ADM-03
Add = J. Philip (JXP)*

**Dominion Comments on Draft Regulatory Guide DG-1187
Concrete Radiation Shields and Generic Shield Testing
for Nuclear Power Plants**

1. Page 4, Section 2, 1st Paragraph

Dominion does not agree with the NRC's exception to ACI 349-06, Section 1.2.2 (see excerpt below). The NRC's contention that "...**software itself and other related documentation should be retained...**" would appear to be an unnecessary prerequisite for the recreation of a supporting computer model analysis to a calculation. Under current 10 CFR 50, Appendix B, independent review requirements, computer model analysis input and output data are reviewed and validated for accuracy as part of the required calculation review. Providing that the calculation contains the necessary input data to enable an engineer to recreate the computer model, under an equivalent software package that is currently available, and the calculation contains the necessary output data used to support its conclusion, complete and accurate model analysis results can be recreated at any time, without having to retain and support outmoded computer software for the life of the plant. As such, Dominion would request that the NRC reconsider taking exception to this paragraph.

2. Page 4, Section 2.f

Dominion does not agree with the NRC's exception to ACI 349-06, Section 8.6.1 (see excerpt below). The NRC's exception to the use of "**consistent**" and "**reasonable assumptions...for computing relative flexural and torsional stiffness's of columns, walls, floors, and roof systems...**" would appear to be inconsistent with long-standing engineering practice that has proven successful. ACI 349-06, Chapter 8, currently maps and references ACI 318-05, Chapter 8, as the basis for providing certain assumptions and design consideration for structural analyses. This code requirement has been in both ACI 349 and ACI 318 for decades and has been previously accepted by the NRC until now. The companion discussion in the Commentary of ACI 318-05, Section R8.6.1, provides the engineer with specific guidance to assume relative flexural and torsional stiffness's of beams and columns for the particular design application and cites additional guidance via Commentary, Section R10.11.1. ACI 318-05 Commentary, Section 8.6.1, provides specific guidance on the assumption of relative beam-to-column flexural stiffness's in both braced and unbraced frames. This Commentary section also provides the engineer with guidance on the importance of when to consider or neglect torsional stiffness in structural analyses, based on the relative magnitude to flexural stiffness and when torsion is required for either equilibrium or compatibility in structures. In short, ACI 349-06, Section 8.6.1, with reference to ACI 318-05, Commentary Sections R8.6.1 and R10.11.1, provides specific design guidance to the engineer, without being too restrictive so as to limit or exclude the wide range of structures and analyses

that the engineer must perform. It may be unreasonable to expect an industry standard or design code to provide more prescriptive or comprehensive stiffness requirements that are applicable to all nuclear concrete structural analyses. The NRC does not cite other industry standards, design codes or alternate guidance in lieu of ACI 349-06, Section 8.6.1, nor does the NRC give justification for taking exception to this requirement, after so many years of acceptance. As such, Dominion would request that the NRC reconsider taking exception to ACI 349-06, Section 8.6.1.