



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

April 22, 1996

Mr. John P. Stetz, Vice President-Nuclear  
Davis-Besse Nuclear Power Station  
300 Madison Avenue  
Toledo OH 43652-0001

Dear Mr. Stetz:

Thank you for the response to 60 Federal Register 36833 regarding request for comments to Draft Guide-1043 that you provided in your letter Serial No. 2327, dated September 13, 1995. Centerior Energy comments have been considered in full and were very helpful in developing Regulatory Guide 1.149, Revision 2, "Nuclear Power Plant Simulation Facilities for use in Operator License Examinations." In part, Centerior Energy comments reflected those of the industry in general and were discussed in detail with representatives from the Nuclear Energy Institute (NEI), the Utility Simulator Users Group (USUG), the ANSI/ANS 3.5 Writing Committee, and other interested parties at a public meeting at NRC Headquarters in Rockville, MD on November 15, 1995. Those discussions served as the basis for development of this important performance-based regulatory guidance that will serve the goals of both the industry and the Commission. Other Centerior Energy comments were considered to be program-specific or unique to administration of the simulation facility at the Davis-Besse Nuclear Power Station. This letter addresses program-specific Centerior Energy comments with respect to the final Regulatory Guide 1.149, Revision 2.

Centerior Energy expressed concern that endorsement of ANSI/ANS-1993 by the regulatory guide will "...add additional requirements of creating and maintaining a new testing program which would divert resources from operator training to simulator testing." The implementation section of the final revision 2 of the regulatory guide has been modified to clearly define adoption of ANSI/ANS 3.5-1993 as an option available to the facility licensee; thereby mitigating the potential for significant increased economic burden.

NRC does not have specific expectations for the extent of testing and documentation associated with validation and periodic testing. The scope of test procedures and associated test documentation is guided by the Standard and facility administrative procedures and are under the control of the facility program. Therefore, adoption of ANSI/ANS 3.5-1993 as the basis for simulator certification does not necessarily translate directly to a large and complex testing and documentation burden.

The regulatory positions are not expected to increase validation testing following completion of initial simulator construction or following modifications to the simulator that affect its fidelity relative to the

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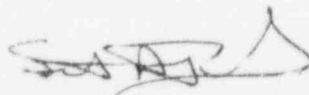
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reference unit or that affect its functional operation as a simulator. This testing is a normal part of structured, documented software design and implementation. The regulatory positions place no additional burden on software design that is compliant to industry standards. Just as industry standards require validation of software features, industry standards provide representative sampling methods to optimize testing. These methods are not being routinely invoked throughout the industry and unvalidated features are being relied upon with increasing frequency to meet training and examination needs; thus requiring the regulatory positions.

Centerior Energy comments citing concerns over test documentation reflected other industry comments that described documentation as the most burdensome part of testing. Testing and test documentation are separate problems. Validation and periodic testing requirements entail related documentation requirements. Documentation requirements need not, however, prove excessively burdensome. The scope of documentation should be a function of the purpose of the test. Validation tests during initial construction and following significant software changes necessarily involve larger quantities of data than periodic tests which are intended to demonstrate general operability. The final revision 2 of the regulatory guide distinguishes between validation testing and operability testing, thus allowing facility definition of a significant portion of the testing program.

Centerior Energy comments recommend validating simulator response "...pragmatically during the performance of "dry runs" on new scenarios prior to their use in training or for examinations." The regulatory positions define this methodology as acceptable for minimizing redundant testing. The regulatory positions do not, however, substitute "dry run" testing for required quadrennial testing. The testing frequency of "...at least once every four years, approximately 25% per year.." is specified in 10 CFR 55.45. Applicability of this testing frequency requirement is, therefore, not a function of the methodology by which the testing is performed. Substitution of a scenario based pre-run validation as part of training and examination preparation in lieu of the periodic testing frequency as a requirement can only be effected by application for an exemption from specific provisions of 10 CFR 55.45 as provided by 10 CFR 55.11. Absent specific exemption, the Centerior Energy testing program should consider the specified testing frequency to be applicable.

Sincerely,



Stuart A. Richards, Chief  
Operator Licensing Branch  
Division of Reactor Controls  
and Human Factors  
Office of Nuclear Reactor Regulation

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Original signed by:

Stuart A. Richards, Chief  
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Division of Reactor Controls  
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Office of Nuclear Reactor Regulation

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