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U.S. Nuclear Regulatory Commission

Washington, DC 20555-0001

Subject: Industry Comments on Draft Interim Staff Guidance on Gas Turbine-Driven Standby Emergency Alternating Current Power Systems (ISG-21), Docket ID NRC-2010-0033

**Project Number: 689** 

March 8, 2010

The Nuclear Energy Institute (NEI)<sup>1</sup> is pleased to provide the attached industry comments on the subject draft Interim Staff Guidance (ISG-21).

In general, draft ISG-21 provides useful, well-written guidance. There are just a few places where the guidance seems to be more restrictive than necessary. For example, Article 2 specifies that "push to test" indicator lights should be used to ease verification of system status. We note that if touch screens are used for controls and indication, "push to test" indicator lights will not be used. Rather than specifying "push to test" indicator lights, it would be more appropriate to state that the control and indication system should include measures to enable simple verification of system status and allow the individual applicant to recommend the method of verification.

Similarly, rather that dictating installation of an automatic de-icing system, the ISG could specify that the design should address the potential for ice accumulation on the inlet air structures and provide mitigating measures, if necessary.

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<sup>&</sup>lt;sup>1</sup> The Nuclear Energy Institute (NEI) is the organization responsible for establishing unified industry policy on matters affecting the nuclear energy industry, including the regulatory aspects of generic operational and technical issues. NEI's members include all entities licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect/engineering firms, fuel fabrication facilities, nuclear materials licensees, and other organizations ピーペエロS= みりルーのろ

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If you have any questions about the industry comments, please contact me or Kimberly Keithline (202-739-8121; kak@nei.org).

Sincerely,

Russell J. Bell

Attachment

c: Mr. William Burton, U.S. Nuclear Regulatory Commission NRC Document Control Desk

## **Industry Comments on ISG-21**, Using a Gas Turbine-Driven Standby Emergency Alternating Current Power System

ISG Section/ Paragraph/Sentence	Comment	Proposed Resolution
Article 2, Section B. Third paragraph on page 7.	In the fifth sentence, the statement is made that "The state inside the <b>piston</b> is cyclic" This reference should be to each cylinder and not to the piston. The piston is a component with no capability for internal monitoring.	Change the sentence to read, "The state inside each cylinder is cyclic"
Article 2, Section C. 1.5	Section 1.5 seems to preclude the use of additional power available to the EGTG as a result of evaporative inlet air coolers or water injection simply because these devices add complexity to the system. If these devices are properly designed, qualified, and maintained, there is no reason to preclude their contribution to the load capability of the system.	Delete section 1.5 as it does not appear to be based on any technical justification. Allow the use of properly designed, qualified, and maintained evaporative inlet air coolers and water injection units for load capability on EGTGs.
Article 2, Section C, 1.9.3	The draft ISG specified installation of an automatic de-icing system on the air inlet if low ambient temperatures are expected. The individual design of the system and plant site should dictate what, if any, measures should be implemented to resolve potential ice accumulation on the air inlets during low ambient conditions.	Remove the specific recommendation to install an automatic de-icing system and allow for the individual applicant to address what mitigating measures are appropriate. Change the last sentence to read, "When there is a potential for low ambient temperatures, the design should address the potential for ice accumulation on the inlet air structures and include appropriate mitigating measures."
Article 2, Section C, 1.10.1	The draft ISG recommends use of "push to test" indicator lights. If touch screens are used for controls and indication, "push to test" indicator lights will not be used.	If ease of verification of system status is important, then the ISG should specify that the control and indication system include measures that provide simple verification of system status and allow the individual application to provide the method of verification.

## **Industry Comments on ISG-21**, Using a Gas Turbine-Driven Standby Emergency Alternating Current Power System

ISG Section/ Paragraph/Sentence	Comment	Proposed Resolution
Article 2, Section C, 2.1, Exceptions, third bullet	The fourth bullet on page 16 states, "Unintentional termination of the test because of alarmed or observed abnormal conditions (e.g., small water or oil leaks) that would not have ultimately resulted in significant damage or	Delete "unintentional" so the sentence will read, "Termination of the test"
Article 3, Page 29, Paragraph 2	failure of the EGTG." Such a termination could be intentional even if it is unnecessary.  The last sentence of paragraph number 2 states "However, it must be protected from missiles generated from other nearby EDGs." This sentence should refer to EGTGs rather than EDGs.	Change the sentence to read, "However, it must be protected from missiles generated from other nearby EGTGs."
Article 7, Page 101, Paragraph 3.G	This sentence begins, "The EGTGLS is alarmed both locally and in the MRC" "MRC" appears to be a typo that should be corrected to be "MCR".	Change this sentence to read, "The EGTGLS is alarmed both locally and in the MCR"