

January 11, 2008

MEMORANDUM TO: Stacey L. Rosenberg, Chief  
Special Projects Branch  
Division of Policy and Rulemaking  
Office of Nuclear Reactor Regulation

FROM: Jon H. Thompson, Project Manager */RA/*  
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Division of Policy and Rulemaking  
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF THE DECEMBER 13, 2007, CATEGORY 2 PUBLIC  
MEETING WITH THE NUCLEAR ENERGY INSTITUTE (NEI) ON THE  
INDUSTRY INITIATIVE ON HEAVY LOAD LIFTS (TAC NO. MD3345)

On December 13, 2007, a Category 2 public meeting was held between the U. S. Nuclear Regulatory Commission (NRC) staff and representatives of NEI at the NRC Headquarters One White Flint North, 11555 Rockville Pike, Rockville, Maryland. The purpose of the meeting was to discuss the industry initiative on heavy loads. The presentation slides are available in the Agencywide Documents Access and Management System (ADAMS) as Accession No. ML080080287.

The purpose of this meeting was for the NRC staff and industry representatives to discuss the industry initiative on heavy load lifts and the development of industry guidance related to realistic load drop analyses for reactor vessel head lifts. The industry undertook this project to address industry concerns regarding a lack of consistency in plant licensing bases for heavy load lifts, which was identified in a letter dated September 14, 2007, from Anthony R. Pietrangelo, Vice President Regulatory Affairs, NEI, to James E. Dyer, Director, Office of Nuclear Reactor Regulation (ADAMS Accession No. ML072670127). The letter described that the industry has approved a formal initiative that specifies actions each plant will take to ensure that heavy load lifts continue to be conducted safely and that plant licensing bases accurately reflect plant practices. The specified actions include ensuring each facility has either a handling system equivalent to single failure proof or a load drop analysis (generic or plant-specific) that bounds planned lifts with respect to load weight, load height, and medium present under the load.

In addition, the NRC staff and industry representatives discussed the implementation of the initiative and the industry guidance under development for use in completing load drop analyses for reactor vessel head lifts. With respect to implementation of the initiative, the NEI representatives indicated that guidance for maintenance rule application to load handling had been developed, and information regarding procedures implementing common heavy load handling standards and procedures for wet lifts had been shared among the industry. The industry had developed draft guidance for load drop analyses and had begun discussions related to single-failure-proof crane equivalence. The remainder of the meeting focused on the draft guidance for load drop analyses.

The industry representatives identified two approaches to load drop analyses, one based on classical methods, considering conservation of momentum, and one based on finite element

methods. The industry representatives also described the potential for comparative analyses to leverage more detailed analyses completed at similar facilities. The NRC staff suggested that the guidance specifically identify important considerations, assumptions, and success criteria for each method and identify important considerations that should be addressed in comparative analyses applied to each method.

The meeting participants discussed specific analysis considerations and success criteria. The NRC staff commented that the use of certified material test reports to establish material properties may be non-conservative due to errors and sample variability within a heat. The NRC staff also questioned the application of strain-based success criteria for large displacements, particularly when applied to reactor coolant system nozzles and piping required for core cooling. The participants agreed to examine classical and finite element analyses submitted to the NRC pursuant to licensing actions to identify precedent in the above areas, and to provide additional justification for considerations and success criteria that go beyond the established precedent in these areas.

At the conclusion of the meeting, the NEI representatives indicated an intent to provide more detailed industry guidance for NRC staff review, potentially in support of a future meeting.

Members of the public were in attendance. Public Meeting Feedback forms were received. These have been forwarded to the NRR Senior Communications Analyst who will forward them to the Office of the Executive Director for Operations. A list of attendees is enclosed.

Project No. 689

Enclosure: List of Attendees

cc w/encl: See next page

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**Package Accession No. ML080100159**  
**Meeting Notice Accession No. ML073320469**  
**Meeting Summary Accession No. ML080100109**  
**Meeting Slides Accession No. ML080080287**

**NRC-001**

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SUMMARY OF THE DECEMBER 13, 2007, CATEGORY 2 PUBLIC MEETING WITH THE  
NUCLEAR ENERGY INSTITUTE ON THE INDUSTRY INITIATIVE ON HEAVY LOAD LIFTS  
(TAC NO. MD3345)

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**MEETING WITH THE NUCLEAR ENERGY INSTITUTE (NEI)**

**DECEMBER 13, 2007**

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Robert Keating	MPR
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David Maxham	AREVA
Walter Djordjevic	Stevenson and Associates
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Ken Petersen	USA/STARS
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ENCLOSURE

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Project No. 689

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