

POLICY ISSUE INFORMATION

April 2, 2010

SECY-10-0038

FOR: The Commissioners

FROM: Michael R. Johnson, Director
Office of New Reactors

SUBJECT: UPDATE STATUS ON THE DEVELOPMENT OF CONSTRUCTION
REACTOR OVERSIGHT PROCESS OPTIONS

PURPOSE:

This paper provides an update on the staff's progress toward the development of construction oversight process options for Commission consideration in response to the Staff Requirements Memorandum - M081022, "Staff Requirements - Periodic Briefing on New Reactor Issues, 9:30 A.M. and 1:30 P.M., Wednesday, October 22, 2008." This paper does not address any new commitments or resource implications.

BACKGROUND:

In SECY-09-0113, "Update on the Development of Construction Assessment Process Policy Options and the Construction Inspection Program Information Management System," dated August 14, 2009 (Agencywide Documents Access and Management System Accession No. ML091970152), the staff of the U.S. Nuclear Regulatory Commission (NRC) updated the Commission on the development of construction assessment process policy options.

On November 16, 2009, the staff hosted a Category 3 public meeting that featured a panel discussion during which views on construction assessment program issues were presented in a forum open to the agency's stakeholders and the public.

CONTACT: Thomas Kozak, NRO/DCIP
301-415-6892

Meeting participants included senior managers from the NRC, the Nuclear Energy Institute (NEI), industry representatives, and a representative from the State of Georgia.

During that meeting, stakeholders provided feedback to the staff that a construction reactor oversight process (cROP) analogous to the NRC's Reactor Oversight Process (ROP) should be developed and that all aspects of the operating reactor assessment program should be evaluated. It was emphasized to the staff that the cROP should be an objective, understandable, and predictable process that implements a regulatory framework under which the NRC collects information about licensee performance, assesses the information for its safety significance, provides for appropriate licensee and NRC response, and communicates the results of its assessment to licensee management, members of the public, and other Government agencies.

The staff formed a cROP team in December 2009 with representatives from each regional office, the Office of Nuclear Reactor Regulation, the Office of Nuclear Security and Incident Response, and the Office of New Reactors. Team members offer a cross section of experience including personnel with extensive experience in developing and implementing the ROP. Through public workshops and stakeholder interactions, the cROP team is developing options for a cROP with elements similar to those used in the ROP. Specifically, the team is identifying the objectives, attributes, and activities that a construction oversight process would need to adequately and objectively assess licensee performance, as well as the sources of information necessary to support the assessment. These attributes include the application of thresholds to determine the significance of findings, a viable means to ensure appropriate NRC response to degrading licensee performance, and the assessment of licensee safety culture.

NEI formed the Construction Reactor Oversight Process Task Force, which is actively engaged with the NRC staff's development of the cROP. To date, the NRC cROP team has hosted four Category 2 public meetings with the NEI task force and has solicited input from other stakeholders during two Category 3 public meetings. The cROP was also discussed during the 2010 Regulatory Information Conference, Construction Inspection Program Technical Session.

DISCUSSION:

The NRC anticipates that construction activities authorized by the limited work authorization issued to Vogtle Unit 3 and Unit 4 will warrant the implementation of the NRC's construction assessment program in the near future. Therefore, the staff has developed and issued an interim construction assessment program as described in Inspection Manual Chapter (IMC) 2505, "Periodic Assessment of Construction Inspection Program Results," to ensure that the agency can appropriately assess licensee construction activities. The staff has received feedback from interested stakeholders that the interim assessment program is acceptable for implementation in the near term.

The interim assessment program uses traditional enforcement approaches to evaluate the significance of inspection findings and a construction response table, analogous to the ROP's action matrix, to provide guidance for the appropriate NRC response to degrading licensee performance. This is similar to the approach the staff is using to assess construction activities at Watts Bar Unit 2 and fuel cycle facilities. The staff also developed a near-term approach to safety culture that closely resembles the operating reactor assessment program. This approach includes tagging findings with construction safety focus aspects (analogous to the ROP's cross-

cutting aspects), evaluating these findings against a pre-defined set of criteria to determine if a significant concern exists, and conducting appropriate follow-up actions using a graded approach. In this approach, significant concerns will be treated in a manner analogous to the ROP's substantive cross-cutting issues.

The staff has determined that internal and external stakeholders will more clearly understand the construction processes if the terminology used is more consistent with ROP terminology, using the word "construction" in the name as appropriate. Therefore, in the near term, the staff plans to revise the terms in applicable inspection manual chapters to reflect the new terminology. Examples of name changes include renaming "expanded inspections" to "construction supplemental inspections," and renaming the "construction response table" to the "construction action matrix."

Based on public interactions with stakeholders and working group discussions, the team is using the following basic guiding principles to develop the cROP:

- The objective of construction oversight is to evaluate licensee performance of construction activities and the effectiveness of licensee/contractor oversight and quality assurance efforts associated with construction in order to provide a sufficient basis to support the Commission determination in accordance Title 10 of the *Code of Federal Regulations*, Part 52, Section 52.103(g) (10 CFR 52.103(g)) that the acceptance criteria in a combined license have been met and the plant will be operated safely.
- The cROP should include a regulatory framework consisting of strategic performance areas and associated cornerstones.
- The significance of findings should be determined using a predictable and transparent process, similar to the ROP's significance determination process (SDP).
- The construction inspection program is not limited to verifying the completion and closure of inspections, tests, analyses, and acceptance criteria (ITAAC) listed in the combined license. The NRC must also consider inspection and assessment of both construction and operational programs that are required to be developed and implemented by the licensee prior to fuel load.
- Transition from construction to operating reactor oversight is expected to occur following the Commission's finding under 10 CFR 52.103(g) that all ITAAC acceptance criteria are met.
- The cROP must be robust enough to continue to be relevant and viable until the ROP is ready to assume oversight responsibilities after the 10 CFR 52.103(g) finding.
- The cROP structure should be kept as simple as possible. The agency should not attempt to create a process that can handle all possible scenarios, but should only design it to handle routine and expected situations. The cROP should define an

appropriate process to ensure that the necessary deviations resulting from unexpected situations are documented and approved in a predictable and transparent manner.

- While the ROP uses inspection to supplement performance indicators (PIs), the cROP will consider PIs to supplement inspection where relevant.
- Similar to the ROP, the cROP and construction assessment process should identify and define bands of performance requiring increased levels of NRC oversight corresponding to degraded licensee performance. The bands should include a threshold above which licensee performance is deemed unacceptable and identify the corresponding regulatory actions.
- Similar to the ROP, the cROP and construction assessment programs should identify a licensee performance band that does not require additional regulatory oversight beyond the baseline inspection level.
- Unlike the ROP, the cROP should evaluate both licensee performance deficiencies and programmatic deficiencies.
- Unlike the ROP, due to the inherently transitory phases of construction, the cROP cornerstones may not be of equal weight, and a construction assessment process may not integrate them equally.

The team used a top-down hierarchical approach to develop the concept for a new construction regulatory oversight framework that addresses the agency's regulatory principles. The team then identified those aspects of licensee performance during the construction lifecycle that are important to the mission and, therefore, merit regulatory oversight. To date, the staff's interaction with NEI and other stakeholders on construction oversight program options has resulted in substantive agreement on the cROP framework, including cornerstone objectives and attributes.

The staff plans to continue interacting with the industry and the public to further develop the cROP and corresponding construction assessment program options for Commission consideration. The staff has planned several Category 2 and 3 meetings for this purpose from now through September 2010. The staff expects to address the following aspects of the cROP:

- Develop an SDP-like process to objectively evaluate the safety significance of findings.
- Reconsider the role of PIs in construction oversight.
- Review the assessment process to ensure all expected findings can be evaluated.

The Commissioners

- 5 -

COORDINATION:

This paper has been coordinated with the Office of the General Counsel, which has no legal objection to this paper.

/RA/

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Office of New Reactors

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/RA/

Michael R. Johnson, Director
Office of New Reactors

ADAMS Accession: ML100550490

*via e-mail

SECY-012

OFFICE	DCIP/CAEB	DCIP/CAEB:BC	TECH ED	NRR:OD	NRO/PMDA
NAME	TKozak*	TFrye	KAzariah-Kribbs *	ELeeds (MCheck for)*	BGusack
DATE	02/22/10	03/12/10	03/03/10	03/04/10	03/01/10
OFFICE	NRO/DCIP	R-II	OCFO	OGC NLO	NRO:OD
NAME	GTracy	LPlisco (GGardner)*	JDyer (GPeterson)*	SBurns (MZobler for)*	MJohnson
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