

July 24, 2013

Meeting Summary

**Discussion of the Westinghouse
Graded Quality Assurance Program**

DATE OF MEETING

June 10, 2013
9:00 AM to 10:30 AM

PLACE

U.S. Nuclear Regulatory Commission, Three White Flint North, 11601 Landsdown Street, North Bethesda, MD 20852

PURPOSE

The purpose of the meeting was for the licensee to clarify their understanding of the existing graded quality assurance (QA) program in Chapter 3 of the license application (Ref. 1). The licensee also wanted to communicate intentions to submit a license application revising Chapter 3, where the graded QA program is discussed.

LICENSEE

Westinghouse Electric Company (Westinghouse)
Columbia Fuel Fabrication Facility (Docket 70-1151. License SNM-1107)

ATTENDEES

<u>NRC</u>	<u>Westinghouse</u>
Robert Johnson	Nancy Parr
Mike Franovich	
Christopher Ryder	
Sabrina Atack	

BACKGROUND

A closed meeting was held with a staff member from the Columbia Fuel Fabrication Facility (CFFF) in Hopkins, South Carolina. The meeting was closed because proprietary documents were used during the discussion.

The following points were made to begin the discussion:

- The licensee stated that the description of the program in Chapter 3 of the license application (Ref. 1) has latitude for a range of views.
- The licensee stated that the program has been implementing the program for years.

- NRC Region II inspectors recently issued a violation; RII is evaluating the merits of this violation and considering whether it should be withdrawn.¹
- The licensee acknowledged the ambiguities, but stated that the renewal application, with the same information, was approved by the NRC staff. Nonetheless, even if the violation is withdrawn, Westinghouse intends to submit a revised application in the near future.

DISCUSSION

The NRC staff began the discussion by stating that regulatory decisions would not be made during the meeting. Neither would the NRC staff be consulting.

The NRC staff stated that graded QA is closely related to a broader, highly visible, issue of rulemaking in Title 10 of the *Code of Federal Regulations* (10 CFR), Part 21. The NRC staff has interest in the intentions of the licensee as it pertains to Chapter 3.

The licensee discussed the process for grading items relied on for safety (IROFS). The process is done while the Integrated Safety Analysis (ISA) is performed. The licensee agreed that ambiguities exist in the license application (Ref. 1), which was viewed as administrative changes. The licensee intends to preclude future misunderstandings with another submittal.

The NRC staff stated that in a revised license application, the licensee should identify changes that reduce commitments and changes to the current process. The licensee stated that there are no intentions to reduce commitments or to change the process of grading IROFS. The intent of a revision is to remove ambiguities and eliminate misunderstandings by clarifying language.

The use of NQA-1 (Ref. 3) as a management measure is not required by 10 CFR Part 70. Nonetheless, Westinghouse decided to commit to NQA-1 as discussed in Section 3.3 of the license application (Ref. 1). Then, IROFS were not thought of as *basic components* in the context of Part 21.

Westinghouse has had components that are designated as safety significant controls (SSCs) for many years. When Subpart H of Part 70 was implemented, some, but not all, SSCs were designated as IROFS. This resulted in terminology that differed from that commonly used by operations and maintenance staff. The acronym "IROFS" is not used; instead, the acronym SSC is used; instead of referring to "management measures", the phrase "conduct of operations" is used. Whether or not a SSC is an IROFS, if a problem develops, the Environmental Health and Safety (EH&S) manager is notified at any time of the day or night. Though a SSC that is not an IROFS is not an issue for NRC, it may be an issue for either Occupational Safety and Health Administration (OSHA) or the State regulator; therefore, it is an issue for the CFFF management. Most of the SSCs are for criticality safety. Westinghouse has a correlation between SSCs and IROFS. The ISA has about 1,000 IROFS.

The CFFF staff do not purchase safety-significant components. Instead, commercially available components are purchased, and subjected to a functional verification to ensure that the component can perform its safety function. The functional verification process used at Westinghouse is analogous to the commercial dedication process used by reactor licensees.

¹ Region II withdrew the violation. See Westinghouse Inspection Report 2013-003 dated July 24, 2013. ADAMS Accession Number ML13205A17.

During the ISA process, fault trees are used to model criticality accidents. Other types of accidents (e.g., fire, chemical), are modeled with an accident sequence diagram². Another document describes the criteria of NQA-1 that are applied to the IROFS. A procedure details the criteria of NQA-1 to apply to an IROFS. All 18 criteria of NQA-1 are applied to a SSC that would result in a high consequence event if it failed. The criteria of NQA-1 are applied in an analogous manner that is appropriate for a Category III facility, not verbatim as for a reactor licensee.

The intent of the graded QA program at Westinghouse is to apply all 18 criteria only to sole IROFS. Such IROFS are placed in "Level A" of the program. But the 2007 renewal of the license application does not mention the word "sole" when discussing Level A. Thus, there is ambiguity in whether this means that there are simply no SSCs in Level A or that there are no high consequence accident sequences. This may explain at least some of the misunderstandings. In practice, all SSCs for criticality control are in Level C. A SSC that results in a lethal radiation dose would be in Level A and would be a sole IROFS. Sole IROFS for criticality control are prohibited by regulation; even without such a regulation, Westinghouse does not rely on sole IROFS for even other hazards, such as fires and toxic chemicals. Westinghouse has a few SSCs in Level B.

CLOSING REMARKS

Westinghouse intends to submit a revised license application to describe the grading process and to clarify terminology. Westinghouse expects an inspection report towards the end of July 2013 where the violation will be withdrawn. After that report, the licensee will submit a revised application.

REFERENCES

1. Westinghouse Electric Company, "Application For Renewal Of A Special Nuclear Material License For The Columbia Fuel Fabrication Facility, Columbia, South Carolina," June 29, 2012. ADAMS Accession Number ML121850036.
2. Letter to D. Precht, Westinghouse, From M. Sykes, NRC, "Westinghouse Electric Company Nuclear Regulatory Commission Integrated Inspection Report Number 70-1151/2012-005 And Notice Of Violation," January 29, 2013. ADAMS Accession Number ML13029A529.
3. The American Society of Mechanical Engineers, "Quality Assurance Requirement for Nuclear Facility Applications," ASME NQA-1-2008. March 14, 2008.

² A diagram illustrating an initiating event, enabling conditions, consequences, and impacts. Each item is delineated and supplemented with preventive controls and mitigative controls.