MEETING SUMMARY
NUCLEAR REGULATORY COMMISSION / WESTINGHOUSE
SUPPLEMENTING THE JULY 31, 2014, APPLICATION FOR A 40-YEAR LICENSE RENEWAL

DATE AND TIME
November 7, 2014
8:00 AM – 4:45 PM (eastern)

MEETING LOCATION
U.S. Nuclear Regulatory Commission
Three White Flint North
11601 Landsdown Street
Room 1 D9
North Bethesda, MD 20852

PARTICIPANTS

NRC	Westinghouse
Robert Johnson[(a)]	Douglas Weaver[(f)]
Christopher Ryder[(b)]	Nancy Parr[(g)]
Marilyn Diaz[(c)]	Camille Zozula[(h)]
James Hammelman[(c)]	Robert Theuret[(h)]
Soly Soto[(d)]	
Johari Moore[(e)]	

Notes
a. Chief, Fuel Manufacturing Branch
b. Licensing Project Manager
c. Technical Reviewer, Chemical Safety Program
d. Technical Reviewer, Conduct of Operations (Management Measure)
e. Environmental Review Project Manager
f. Vice President, Nuclear Regulatory Affairs
g. Manager, Licensing
h. Staff member, Nuclear Regulatory Affairs

BACKGROUND

The Westinghouse Electric Company, LLC, (Westinghouse) submitted an application (Ref. 1) dated July 31, 2014, to renew special nuclear materials (SNM) license SNM-1107, held at the Columbia Fuel Fabrication Facility (CFFF), for a period of 40 years. The staff at the U.S. Nuclear Regulatory Commission (NRC) conducted an acceptance review of the renewal application and informed Westinghouse, in a letter dated October 24, 2014 (Ref. 2), that the license application, and the Environmental Report submitted with the application, required supplemental information in order to begin a detailed technical review.

Westinghouse requested a meeting with the NRC to discuss the information that is expected in a supplement of the license application. The NRC scheduled a Category 1[a] meeting with

[a] A Category 1 meeting is typically held with one licensee, vendor, applicant, or potential applicant to discuss particular regulatory issues regarding its specific facility, license, or license application. The purpose is to discuss one particular facility or site, or certified system or device, regarding technical issues in an application, licensee actions, or inspection results. The public obtains factual information to assist in understanding applicable regulatory

Westinghouse and had sent the licensee a copy of the draft discussion topics as shown in Enclosure 2 to this meeting summary.

For each of the topics in Enclosure 2, NRC discussed an issue, identified the information that is expected in a supplement, and allowed Westinghouse an opportunity to respond. This meeting summary addresses the major topical areas of the meeting.

NRC did not give advice, consultation, or suggestions regarding the content of a supplemented application.

DISCUSSION

NRC began the meeting by stating that the topic of discussion is the renewal application dated July 31, 2014 (Ref. 1). NRC indicated that the need for Westinghouse to supplement the application has to do with the content of the July 31, 2014, application and that NRC was not aware of any safety matters at the CFFF.

Westinghouse expressed a concern that the Standard Review Plan (SRP) (Ref. 3), was being used as a requirement for the content of the information in the renewal application. NRC stated that the need for supplemental information was based on the applicable regulatory requirements and associated guidance in the SRP, as documented in Enclosure 2. NRC also stated that the SRP provides guidance on an acceptable approach to meeting the regulatory requirements; while Westinghouse is not required to address each of the acceptance criteria, doing so would facilitate an effective and efficient technical review.

Westinghouse also expressed concern that the "standards" that the NRC uses for determining whether or not an application should be accepted for a detailed technical review, and for the conduct of the technical review, have changed. The July 31, 2014, application (Ref. 1) is similar to the July 28, 2006, license application (Ref. 4) approved on September 30, 2007. Westinghouse also asked if the change in expectations had been communicated to the industry and suggested that it would be beneficial for the NRC to share any change in expectations with industry. NRC made the following points:

- The license renewal application is a request to operate for 40 years from the date that the renewed license is issued; as such, a complete safety review of the application will be conducted.
- Supplemental information is necessary/required to allow NRC to conduct a thorough technical review and make technically defensible findings against relevant regulations.
- Without additional information required by Title 10 of the *Code of Federal Regulations* (10 CFR) Section 70.22, NRC would be unable to make a finding on the contents of the application as required by 10 CFR 70.23, under which the NRC will approve an application.
- The NRC reviewers have been encouraged to review the Safety Evaluation Report of the 2007 renewal while reviewing the 2014 renewal application as they deem appropriate.

issues and NRC actions. The public observes the meeting and can communicate with NRC staff after the business portion of the meeting.

Environmental Report

The topics listed in Enclosure 2 were briefly discussed. Westinghouse understood the information that is needed. No further discussion was deemed necessary.

Chemical Safety

NRC found that the application lacked a discussion of processes and equipment, per 10 CFR Paragraph 70.22(a)(7), requiring a description of the equipment and facilities that will be used to protect health and minimize danger to life or property. Westinghouse stated that the description of the process and equipment are contained in the Integrated Safety Analysis (ISA). NRC stated that the purpose for including this information in the application is to allow NRC to have an overview of the facility design, equipment, and processes. Westinghouse stated that the information can be incorporated into the license application by reference[b].

NRC stated that the application lacked a clear distinction between chemical safety that is under the jurisdictions of the Occupational Safety and Health Administration (OSHA) and the NRC. Westinghouse stated that the application can be supplemented to clarify the distinction.

Paragraph 70.22(a)(8) of 10 CFR requires proposed procedures to protect health and minimize danger to life or property. NRC stated that while Chapter 7 refers to "approved procedures", the chapter does not identify key elements and attributes of these procedures, as required by 10 CFR 70.22(a)(8). Westinghouse stated that procedures are discussed in Chapter 3, Conduct of Operations, inquiring if NRC expects the key elements of the more than 50 procedures that exist at the CFFF. NRC responded that the key elements and procedures of those procedures discussed in the renewal application should be discussed in order to demonstrate compliance with 10 CFR 70.22(a)(8).

NRC stated that Chapter 7 lists 23 elements that serve as the basis of the Westinghouse chemical safety program and stated that additional discussion is needed to explain how these 23 elements address chemical safety under NRC's regulations. Westinghouse stated that the application could be clarified to discuss how chemicals regulated by the NRC are managed[c].

NRC stated that the license application lacked information about the extent to which all chemical exposure pathways are considered in determining compliance with the performance requirements of 10 CFR 70.61. Westinghouse stated that compliance with the performance requirements is discussed in Chapter 4 of the license application, not Chapter 7. Westinghouse also stated that the process hazard analysis used in the ISA is the same as that used for the identification of all chemicals at the CFFF, not just those chemicals under NRC jurisdiction[d].

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[b] 10 CFR 70.21(a)(3) states, "Information contained in previous applications, statements, or reports filed with the Commission may be incorporated by reference if the references are clear and specific.

[c] Chemicals outside the jurisdiction of NRC, are nonetheless, relevant to the NRC staff's National Environmental Policy Act (NEPA) analysis required by 10 CFR Part 51.

[d] 10 CFR 70.4. Hazardous chemicals produced from licensed materials means substances having licensed material as precursor compound(s) or substances that physically or chemically interact with licensed materials; and that are toxic, explosive, flammable, corrosive, or reactive to the extent that they can endanger life or health if not adequately controlled. These include substances commingled with licensed material, and include substances such as hydrogen fluoride that is produced by the reaction of uranium hexafluoride and water, but do not include substances prior to process addition to licensed material or after process separation from licensed material.

Westinghouse stated that in the context of the ISA, the quantitative inhalation exposure is used as approved in the existing license application. Westinghouse is not aware of published quantitative industry standards for analyzing dermal and ocular exposures. OSHA safety practices (e.g., personal protective equipment (PPE), lock-out, tag-out procedures (LOTO), showers, eye wash stations) are successfully used to assure the safety of workers in regards to dermal and ocular exposures. Westinghouse stated they would supplement the Chemical Safety Chapter with a discussion of these programs. At the site, as part of industry operating experience, Westinghouse has applied a quantitative standard used by others to evaluate dermal exposures to hydrogen fluoride. Westinghouse also stated that it is concerned for the safety of its workers and that designating OSHA chemical safety measures as items relied on for safety (IROFS) in the context of the ISA does not improve safety at the CFFF[e]; workers claim that they would be distracted by having two sets of rules, one from OSHA and the other from NRC.

Westinghouse also suggested that dermal and ocular exposures should not be an issue for the renewal application acceptance review because the NRC and the nuclear industry have been discussing this generic issue for years. NRC stated that although this topic is being discussed with industry, the renewal review will have to comply with all the requirements in 10 CFR Part 70. NRC added that the ISA definition in 10 CFR 70.4 states that the ISA should consider all relevant hazards and it is not limited by exposure pathways. NRC stated that Westinghouse needs to consider all hazards as required by the regulations; if operations involve a credible accident with a hazardous chemical where the consequences could be intermediate or high as defined in 10 CFR 70.61, and then licensees must analyze this event.

Management Measures

NRC indicated that, after reviewing the application, there was ambiguity about the applicability of the configuration control process, such as applicability to new processes, to modifications to existing processes, to minor modifications, and to major modifications. Westinghouse stated that procedures are in place to control the configuration of the CFFF. Westinghouse explained that *any* change to the CFFF is formally evaluated through the established configuration control process.

NRC asked Westinghouse to describe the characteristics of the configuration management program. In terms of the (quality assurance (QA) management measure, Westinghouse indicated that they commit to the basic requirements of NQA-1[f], and that they would update the application to describe their commitment and which of the 18 NQA-1 elements are applied to the various IROFS quality levels. NRC identified the need for the application to contain a discussion about the compensatory measures that are implemented when an IROFS is taken out of service. Westinghouse indicated that they would verify this use of compensatory measures.

[e] In proposing Subpart H requiring the ISA, "The NRC staff concluded that to increase confidence in the margin of safety at a facility possessing this type and amount of material, a licensee should perform an ISA." Source: *Federal Register*, Vol. 64, No. 146. July 30, 1999 Page 41339.

[f] NQA-1 is a standard published by the American Society of Mechanical Engineers (ASME) titled "Quality Assurance Requirements for Nuclear Facility Applications", discussing quality assurance requirements to achieve safe management and processing of radioactive materials.

NRC indicated that Westinghouse needs to clearly identify the process that is used to verify that administrative controls, identified as IROFS, are available and reliable to perform their intended safety function over extended periods of operation. Discussions clarified that "extended periods" should be taken to mean during the course of normal work hours during an extended period (e.g., weeks, months, or years) when shortcuts may be inadvertently introduced into a procedure that eventually become common practice.

NRC indicated that the application needs to contain a discussion of the use of *temporary* procedures.

Request for NRC Documents

Westinghouse had requested two documents, the Fuel Cycle Licensing Review Handbook and Backfit Guidance for the Office of Nuclear Material Safety and Safeguards (NMSS-LIC-253), be made publically available. The NRC staff replied that an excerpt of the Handbook had been provided to Westinghouse as requested (Ref. 5). The remainder of the request is being considered.

CLOSING REMARKS

Westinghouse would consider the remarks that had been made in revising both the license application and the environmental report. Further discussion can continue, such as by conference calls, as needed.

REFERENCES

1. Letter from N. Parr, Westinghouse Electric Company, "SNM -1107 License Renewal", July 31, 2014. ADAMS accession number ML14213A105.

2. Letter from R. Johnson, U.S. Nuclear Regulatory Commission, To N. Parr, Westinghouse Electric Company, "Supplemental Information Needed To Begin A Technical Review Of The 40-Year License Renewal Application", October 24, 2014. ADAMS accession number ML14295A208.

3. U.S. NRC, "Standard Review Plan for the Review of a License Application for a Fuel Cycle Facility", NUREG-1520, Rev 1, May 2010. ADAMS accession number ML101390110.

4. Letter from N. Parr, Westinghouse Electric Company, "Westinghouse License SNM-1107 Renewal Application (Docket 70-1151) TAC 31911", July 28, 2006. ADAMS accession number: ML062130047 (cover letter); ML062130049 (non-public).

5. Letter from C. Ryder, U.S. Nuclear Regulatory Commission, to N. Parr, Westinghouse, "Excerpt From The Fuel Cycle Licensing Review Handbook", October 3, 2014. ADAMS accession number ML14274A327.