



October 27, 2016
TJT:16:033

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Director, Office of Nuclear Material Safety
and Safeguards
11555 Rockville Pike
One White Flint North
Rockville, MD 20852

Gentlemen:

Subject: Reply to a Notice of Violation (70-1257/2016-006-01)

Reference: Letter, Omar R. Lopez-Santiago to Dr. Ronald J. Land; "AREVA NP, INC. (RICHLAND) – NUCLEAR REGULATORY COMMISSION INSPECTION REPORT NO. 070-01257/2016006 AND NOTICE OF VIOLATION," September 30, 2016

Attached is AREVA Inc.'s (AREVA's) response to the Severity Level IV violation conveyed via the referenced USNRC Inspection Report.

If you have questions or require further information, please contact me at 509-375-8550 or W.L. Doane of my staff at 509-375-8717.

Very truly yours,

A handwritten signature in black ink that reads "T. J. Tate".

T. J. Tate, Manager
Environmental, Health, Safety & Licensing

IED7
NMSS20
NMSS

AREVA INC.

2101 Horn Rapids Road, Richland WA 99354
Tel.: 509 375 8100 - www.aveva.com

Document Control Desk
October 27, 2016

TJT:16:033
Page 2

c:

US Nuclear Regulatory Commission, Region II
Marquis One Tower
Attn: Catherine Haney, Mail Stop 1200
245 Peachtree Center Ave. NE, Suite 1200
Atlanta, GA 30303

U.S. Nuclear Regulatory Commission, Region II
Marquis One Tower
Attn: Tom Vukovinsky, Mail Stop 1200
245 Peachtree Center Ave. NE, Suite 1200
Atlanta, GA 30303

US Nuclear Regulatory Commission
Attn: Nick Baker
Two White Flint North
11545 Rockville Pike
Rockville, MD 20852-2738

/mah

Reply to Notice of Violation
NRC Inspection Report 70-1257 / 2016-006; AREVA Inc.

Violation VIO 70-1257/2016-006-01

The violation as stated in the referenced Notice of Violation (NOV) is as follows:

10 CFR 70.61(e) states, in part, the safety program established and maintained pursuant to §70.62 of this subpart, shall ensure that each item relied on for safety (IROFS) will be available and reliable to perform its intended function when needed and in the context of the performance requirements of this section.

10 CFR Part 70.62(d) states, in part, that each licensee shall establish management measures to ensure compliance with the performance requirements of §70.61. The management measures shall ensure that engineered and administrative controls and control systems that are identified as IROFS pursuant to §70.61(e) are designed, implemented, and maintained, as necessary, to ensure they are available and reliable to perform their function when needed, to comply with performance requirements §70.61.

Section 11.0, "Management Measures," Subsection 11.1.1, "CM Policy," of License Application SNM-1227 states, in part, "The CM process provides assurance that consistency is established and maintained between facility design, operational requirements, physical configuration, and facility documentation."

Section 11.0, "Management Measures, Subsection 11.4, Procedures Development and Implementation," of License Application SNM-1227 requires, in part, "activities involving licensed Special Nuclear Material (SNM) and/or IROFS will be conducted in accordance with approved procedures."

MCP-30379, Management Control Procedure Operations Projects — Manufacturing Engineering Procedures Construction or Modification Change Control, Section 5.5, Engineering Change Notice, states, in part, "The Project Engineer shall arrange for all permits and inspections, schedule training for all contractors, and ensure that paperwork is complete and signed and that all required postings are in place."

Contrary to the above, on and before September 1, 2016, the licensee failed to establish management measures to ensure that IROFS would be available and reliable to perform their intended function when needed in order to comply with the performance requirements. Specifically, the licensee (1) failed to ensure that the seismic design for the Mount Athos Road fuel storage racks was consistent with the installed physical configuration and (2) the Project Engineer failed to arrange for anchor bolt inspections and ensure that the Engineering Change Notice paperwork was complete. This SLIV violation will be documented as VIO 70-1257/2016-006-01, Failure to Implement Adequate Management Measures for the Installation of Fresh Fuel Bundle Storage Racks.

This is a Severity Level IV violation (Section 6.2.d.1).

Reason for the Violation

In 2004, Fuel Bundle Storage Racks were designed and analyzed, by MEAD, Inc., for use at the Mount Athos Road (MAR) fuel fabrication plant in Lynchburg, VA.

Then in June 2006, a letter from MEAD, Inc. added the "bottom support and locking bracket" to the analysis done in 2004. The baseplate was widened by adding 3.5 inches to support a bottom support beam. The beam allowed the use of fixtures to support the bundles off the floor. During fabrication (at MAR) the number of floor anchor bolt locations was increased from 4 to 6 without additional analysis. The storage racks were placed in service, at MAR, to store completed fuel assemblies.

The decision was made in November 2010 to relocate the racks from MAR to HRR. The installation was performed using a Field Change to ECN 8505. As part of this work scope Meier was asked to confirm the MEAD calculations. However, when Meier reviewed the Mead calculations they did not analyze the design that included the 3.5 inch wider plate, as it had no additional bolt holes, and only verified the original design from 2004. At this time in 2010, Meier verified the 2004 analysis to make certain that the seismic analysis performed for MAR was adequate for the seismic zone at HRR. Also, anchoring instructions were updated by Meier to meet current code requirements, including a requirement for special inspections, to assure correct installation of the anchor bolts.

By the end of June 2011, all of the Fuel Bundle Storage Racks had been installed. During installation, reviews were completed to verify proper installation of the anchoring bolts. However, the reviews were not documented. Additionally, the special inspections requested by the cover letter from Meier, were not completed.

During NRC Inspection 2016-006, associated with Natural Phenomenon Hazards (NPH), inspectors noted the installed condition of the mounting base of the Fuel Bundle Storage rack differed from the configuration analyzed. The NRC audit also noted that the Fuel Bundle Storage Racks' anchor bolts did not receive the special inspections during installation specified by Meier.

Corrective Actions Taken

A number of actions were taken in direct response to this plant condition, as follows:

1. The condition was entered into AREVA's corrective action program (CR 2016-6340).
2. A careful review of the event timeline was conducted.
3. Meier completed a confirmatory analysis that demonstrates the as installed condition of the Fuel Bundle Storage Racks meets the Seismic requirements specified in the design.
4. An apparent cause analysis (ACA) was initiated.

Actions to Avoid Future Violations

In addition to the actions listed above that have already been taken, the ACA evaluation identified two areas for further investigation, and two applicable preventive actions to prevent recurrence of this problem as follows:

1. Develop a plan to inspect the installed anchor bolts. If the inspection deems the anchors are inadequate, correct the deficiency.
2. Determine what other fissile storage/equipment may need to have anchors evaluated. Develop a plan to inspect the anchor bolts. If the inspection deems the anchors are inadequate, correct the deficiency.
3. Revise MCP-30379, "Management Control Procedure Operations Projects — Manufacturing Engineering Procedures Construction or Modification Change Control", to address appropriate reviews of structural/seismic analyses, include guidance on how to handle special instructions, and to address plant changes that may have the potential to impact seismic requirements.
4. Discuss both the special inspection requirements and structural/seismic analysis issues with teams who have active projects [Scrap Uranium Recovery Facility (SURF), Ceramics Operational Excellence (COE), etc.].

The corrective and preventive actions listed above are expected to prevent a repeat of this condition.

Date of Full Compliance

Although AREVA believes that it is in full compliance with the cited license condition, the above corrective and preventive actions will be made to ensure there are no deficiencies by May 2017.