

MIT NUCLEAR REACTOR LABORATORY

AN MIT INTERDEPARTMENTAL CENTER

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26 August 2015

Attn: Document Control Desk
Director, Spent Fuel Project Office
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Subject: Report Pursuant to 10 CFR 71.95(a) (2) for NRC Docket 71-9341

The Massachusetts Institute of Technology Nuclear Reactor (MITR) Laboratory submits this letter to report a condition pursuant to 10 CFR 71.95(a) (2) regarding the use of the BEA Research Reactor (BRR) Package, NRC Docket 71-9341.

The following is a description of the event, reported in accordance with 10 CFR 71.95(c):

(1) Brief abstract of the event

During a routine loading of the BRR package there was noted damage in excess of the required 125 RMS as outlined in the Drawing No. 1910-01-01-SAR, Revision 4, Sheet 3 of 4, Zone D5. MIT has informed the certificate holder, AREVA Federal Services LLC (AREVA), and a plan has been developed to repair the damage. The cask will be taken out of service until the repair is complete and a leakage test performed.

(2) Narrative description of the event

The NRC Certificate of Compliance No. 9341 states in Section 5.(a) (3), in part, that the packaging must be constructed in accordance with Drawing No. 1910-01-01-SAR, Revision 4. That drawing specifies a surface finish of 125 RMS over the annular region between the inner diameter of the cask opening and outward to a radial distance of 1.8 inches. The specification is shown in a section view located in Zone D5 of sheet 3. The inner containment gasket and outer test gasket require this surface finish in order to provide a proper sealing surface for the closure lid (Item 26, sheet 2 of 4 of the same drawing).

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On Monday 17 August 2015 at ~0930, MIT Reactor staff visually inspected all sealing surfaces on the BRR cask closure lid and the mating surfaces of the cask body. A gouge/dent was discovered on the stainless steel mating surface where the outer O-ring seal (the test seal) rests. The damaged area is about 0.25 inches long with a depth of approximately 0.04 inches and located within the 1.8 inch radial zone mentioned above. MIT notified AREVA of the damaged surface. The decision was made to suspend the shipment until repairs were completed by AREVA contractors and an AREVA Quality Engineer on-site at MIT. AREVA will supervise all repairs.

The cause of the damage is currently unknown, including the date, time, and facility at which it occurred. AREVA is following up to evaluate potential scenarios that could have caused the damage.

(3) Assessment of safety consequences of the event

There were no safety consequences of this event in that the damage was identified prior to using the BRR package for shipment.

(4) Description of corrective actions

AREVA will send a qualified contractor to MIT to make the necessary repairs on-site. These repairs entail adding appropriate filler material to the damaged surface by welding/grinding/polishing the affected area. Measurements will be made to ensure the surface finish specification of 125 RMS is achieved following the repair. Thereafter a leakage rate test will be performed to confirm if the repair is satisfactory.

AREVA is following up to evaluate potential scenarios that could have caused the damage. The outcome is likely to result in modification of handling procedures and perhaps modification of equipment that comes in contact with the sealing surfaces, to reduce the probability of similar events occurring in the future.

(5) Reference to similar events

There were no similar events in which MIT was involved.

(6) Licensee contact

John P. Foster

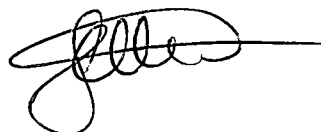
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(7) Extent of exposure of individuals

There was no exposure to individuals as a result of this event.

Sincerely,

A handwritten signature in black ink, appearing to read 'John P. Foster', with a long horizontal line extending to the right.

John P. Foster
Interim Director of Reactor Operations
MIT Nuclear Reactor Laboratory

Cc: AREVA Federal Services, LLC

USNRC Mr. Patrick Boyle
Senior Project Manager
Research and Test Reactors
Division of Policy and Rulemaking
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