

## Gallardy, Vivian

---

**From:** Edward Lau <eslau@mit.edu>  
**Sent:** Wednesday, March 01, 2017 8:20 PM  
**To:** Garcia Santos, Norma  
**Cc:** phil.noss@areva.com; Douglas K Morrell (Douglas.Morrell@inl.gov); Al Queirolo; John A Bernard; John P Foster; Sarah M. Don; Susan S. D. Tucker; Thomas I Bork; Paul D Same; William B McCarthy; Mary E Young; Edward Lau  
**Subject:** [External\_Sender] Re: Request--Information - Model No. BRR 71.95 Report dated 8/26/15

Dear Norma:

Many thanks for your patience. Appended are our responses to NRC questions regarding repair of the BRR cask in September 2015:

**Question #1.** The identification No. of this action in the certificate holder's corrective action program and associated closing actions (e.g., repair report, etc.).

**Answer #1:** The certificate (CoC) holder is AREVA Federal Services LLC ("AFS"). AFS determined that the event was the result of misuse (or non-use) of the sealing surface protector, not of the design or licensing of the cask. Furthermore, this event took place not within the premises of AFS, and not under the control of AFS, and occurred to hardware not owned by AFS. Therefore AFS determined the event did not fall within their Corrective Action Program, and so there was no need to generate a Corrective Action Report. However, as a closing action, there is an extensive repair report from the AFS contractor who successfully performed the work under AFS Purchase Order #15C3013389. (See Answer #2.)

**Question #2.** Repair report from the CoC holder, including the date of the repair, contractor qualification to perform the repair, who supervised the repair on-site, etc. – The report only mentions that the package would be repaired by a qualified contractor, but does not provide information about how and when the package was brought back into compliance.

**Answer #2:** The CoC holder is AFS. The AFS contractor who performed the repair at MIT was Premier Technologies, Inc., and the date of the repair work was September 1, 2015. An extensive repair report was prepared by Premier Technologies, who performed the work under AFS Purchase Order #15C3013389. – See attached file "BRR Cask Repair Report & Certificate of Compliance (Sept. 2015)". The report includes contractor qualifications and on-site repair supervision. After an AFS Quality Engineer had inspected the repaired sealing surface on September 1, 2015, as being in compliance with Drawing No. 1910-01-01-SAR, Revision 4, Sheet 3 of 4, DOE-certified Leak Examiners performed a successful post-repair leak test on September 2, 2015, with the cask empty. (See Answer #3.) The inspection and leak test confirmed that the package was brought back into compliance.

**Question #3.** Leak test date and results after repair – The report mentioned that a leak test would be performed after finalizing the repair, but no further information is provided in this regard.

**Answer #3:** On September 2, 2015, DOE-certified Leak Examiners performed post-repair leak testing on the BRR cask at MIT. It passed satisfactorily. Attached is a copy of the test procedure and results, signed by the Leak Examiners.

**Question #4.** Modifications performed to the handling procedures, if any – The report mentions the possibility of modifying the package handling procedures, but no additional details are provided in the August 2015 letter.

Answer #4: The BRR cask SAR Section 7.1.2.1, Step #4, for example, already dictates the use of a sealing surface protector. Therefore, AFS did not revise the handling procedure. AFS recommends that all BRR cask users examine their site operating procedures to ensure that they properly invoke the cask protection provisions of the SAR procedure. MIT handling procedure PM 3.3.4.2 "Loading of BRR Cask" already included this step verbatim. MIT therefore had no need to revise its handling procedure, which had been independently inspected by NRC. MIT noted that the event likely took place at one of the prior user sites, and that MIT identified the damage while following its handling procedure for inspecting the sealing surface prior to lid closure.

Question #5. Information related to the root cause (or root causes) of the damage – The report mentions that the CoC holder would be following up. I will appreciate that you provide information in this regard.

Answer #5: AFS determined that the event occurred using equipment not owned by AFS, without any AFS personnel present, and using procedures not written by AFS, and thus a root cause analysis by AFS was not possible. Therefore AFS did not perform a root cause analysis of the event. The consensus reached by AFS, DOE, and MIT was that either the sealing surface protector was improperly used, or not properly cleaned, by one of the prior users. DOE then recommended that more detailed inspections of the sealing surface be implemented at the user facilities. MIT, in coordination with DOE, has since that time used a DOE contractor who is tasked with making independent inspection of the BRR cask, including all sealing surfaces, both upon arrival and after loading. The contractor has developed a written procedure for the independent inspection. See attached file "STS Cask Inspection – May 2016" as an example.

Let me know if you have any further questions. Many thanks.

Edward Lau  
Assistant Director  
Reactor Operations  
MIT Nuclear Reactor Lab  
email: [eslau@mit.edu](mailto:eslau@mit.edu)  
office: 617-253-4211  
mobile: 339-223-4006