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June 26, 2015

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

SUBJECT: BRR Package Amendment Request, Docket No. 71-9341, SAR Revision 8

AREVA Federal Services LLC (AFS) hereby submits Revision 8 of the Safety Analysis Report for the BRR Package, Docket No. 71-9341. This revision adds several additional research reactor payloads and increases the types of authorized TRIGA fuels.

The added research reactor fuels include the Rhode Island Nuclear Science Center, University of Massachusetts Lowell, Ohio State University, Missouri University of Science and Technology, University of Florida, Purdue University, and North Carolina State's PULSTAR. All of these fuels are square or nearly square rectangular in cross section and are approximately the same size. Thus, a single new basket type has been added to accommodate them. In addition to the intact fuel elements, loose plates from three of the research reactor fuels may be shipped in a loose plate box which fits into the new basket.

The TRIGA types have been expanded from five to 26. The added TRIGA types utilize the existing basket.

Structural, thermal, shielding, and criticality analyses (reflected in revisions to SAR chapters 2, 3, 5, and 6, respectively) have been updated and all margins of safety remain positive. Necessary changes to SAR chapters 1 and 7 have been made to accommodate the additional payloads. In addition, some minor errors in Revision 7 of the SAR were corrected as follows:

1. Table 2.1-1, section references for Peak and Buckling allowables have been corrected.
2. Section 2.6.1.5, a correction of a math error from Revision 0 resulted in the margin of safety for the closure bolts falling slightly from +0.75 to +0.72.
3. Section 2.7.1.2, correction of a typographical error to the limits of integration in a formula had no effect on results.
4. Section 8.2.2, the last paragraph has been deleted, since it did not apply to maintenance or periodic leakage rate testing of the containment boundary penetrations.

All changes are indicated by a revision bar in the right page margin. Due to the quantity of changed pages, the SAR is updated in its entirety, and all pages are identified as Revision 8. Note that no changes (other than to the page header) have been made to Section 2.12.1 through Section 2.12.7 and Chapter 4.

Included with this letter is one paper copy of the SAR and one CD-R containing the PDF file "BRRC SAR, Complete, Rev. 8.pdf" (32,634 kb, 641 pages). The CD is contained within an envelope labeled, "BRR Package, Docket 71-9341 SAR Revision 8, Electronic Copy of Document".

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Should you have any questions regarding this submittal, please contact me at (253) 552-1321 or via E-mail (phil.noss@areva.com).

Very Truly Yours,

AREVA Federal Services LLC

A handwritten signature in cursive script that reads 'Phil Noss'.

Phil Noss
Licensing Manager

cc: Mr. Bernard White, NRC (including one paper copy and one CD)
Mr. Douglas Morrell, DOE NEUP (including one paper copy and one CD)