



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, DC 20555-001

July 29, 2013

Charles A. England
Manager, Licensing & Safety Analysis
Babcock & Wilcox Nuclear Operations Group, Inc.
PO Box 785
Lynchburg, VA 24505

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION

Dear Mr. England,

This letter is in response to your application dated April 9, 2013, requesting a Sealed Source and Device Registration for Babcock & Wilcox Nuclear Energy BWSS1 and BWSR1 sealed sources models. In reviewing your request, we find that additional information is required to complete our review. In the enclosure of this letter, we have summarized the issues not addressed in your application.

Please submit the requested information within 30 days of the date of this letter. If we have not received complete information within 30 days, we will consider your application as having been abandoned by you. This is without prejudice to the submission of a complete application.

If you have any questions, please contact me at Maria.Arribas-Colon@nrc.gov or (301) 415-6026.

Sincerely,

/RA/

Maria Arribas-Colon, Project Manager
Licensing Branch
Division of Materials Safety and State Agreements
Office of Federal and State Materials and
Environmental Management Programs

Enclosure: As stated

Babcock & Wilcox Application dated April 9, 2013
Information Needed for
Registration of BWSS1 and BWSR1 Sources

Babcock & Wilcox application dated April 9, 2013, contained insufficient information as required by 10 CFR 32.210 and described in the relevant guidance document NUREG-1556 Vol. 3 titled "Applications for Sealed Source and Device Evaluation and Registration." Specific deficiencies include:

1. Please confirm that corrosion between different materials, such as the source active material and the inner encapsulation is unlikely.
2. Confirm that the typical working life of both sources is 2.5 years (i.e. half-life).
3. Please provide Monte Carlo calculations or the summary of calculations for both sources. Please also provide the results of your comparison to radiation levels reported in the literature as referenced in your application (Page 3 of 5).
4. Please provide information what accompanying documentation you will provide to the user for both source models (e.g. Section 9, ISO 2919 and Section 6.2, ANSI N43.6).
5. Regarding prototype testing, please confirm the following:
 - 5.1. The fabrication process use for the prototype test specimen is identical to which will be used for the final product.
 - 5.2. The prototype specimens were engraved identically to be applied to the final product.
6. Please specify the supplier of the solid nondispersible metal wire source.
7. Please provide information regarding the different roles Babcock & Wilcox Nuclear Energy and QSA Global have during the manufacturing process of both source Models BWSS1 and BWSR1.
8. In accordance with 10 CFR 32.210(c) and the guidance provided in NUREG 1556 Volume 3 Rev. 1, Section 10.1 (Page 10-4), please provide information about the leak testing intervals for source Model BWSR1 when not in use (e.g. storage). Normally, all sources are leak tested at six moth interval. In the case of the Model BWSR1, due to the installation of the source in the reactor, the source is not accessible to perform such test. Consequently, we consider the leak testing requirement for source Model BWSR1 to be waved when the source is in use. However, when the source is in storage, prior to first use, or after it has been removed from the reactor, the normal periodic leak test requirement (at six months interval) is applicable. Please provide information whether this interpretation is in accordance with the intended use of this type of sources.

Enclosure

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Environmental Management Programs

Enclosure: As stated

Distribution: SSD Case: 13-20 R. Jones, Fees

ML13199A383 *see previous concurrence

OFC	FSME/MSSA/ASPB*	E	FSME/MSSA/LB*	E	FSME/MSSA/ASPB*	E	FSME/MSSA/LB*
NAME	MArribasColon		JJankovich		SPoy		MKotzalas
DATE	07/19/2013		07/19/2013		07/19/2013		07/19/2013

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