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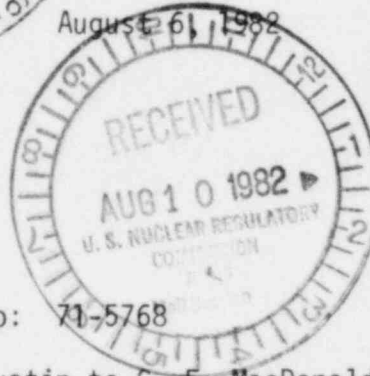
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Babcock & Wilcox

a McDermott company

Nuclear Power Generation Division

609 North Warren Avenue
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Mr. Charles E. MacDonald, Chief
Transportation Branch
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Docket No: 71-5768

- References:
- (1) Letter from M. A. Austin to C. E. MacDonald, dated January 29, 1982.
 - (2) Letter from M. A. Austin to C. E. MacDonald, dated February 28, 1982.
 - (3) Letter from C. E. MacDonald to M. A. Austin, dated May 27, 1982.
 - (4) Meeting of M. A. Austin, R. H. Odegaarden and C. E. Williams in Silver Spring, MD on July 29, 1982.

Dear Mr. MacDonald:

This letter is in response to your May 27, 1982 letter requesting additional information in connection with our consolidated renewal application. This response to the specific informational requests made in the enclosure to your above-referenced letter is presented in the form of the enclosed revised pages to our January 1982 application. To facilitate your review of this response, the following text is organized to correlate our responses to the numbered requests for information in your enclosure.

Relative to Item 1, the current revision level is now indicated for all pertinent drawings listed in Section 1.2.1.3 of the application, and Page 1-1 has been accordingly revised.

Relative to Item 2, the container configuration used in the package testing described in Section 2.5 has been identified by drawing number to describe the arrangement of the contents in more detail; and Page 2-11 has been accordingly revised.

Relative to Item 3(a), the container configuration and arrangement of the contents of the BB-250-2 packaging tested in Section 2.5.2.5 is exactly as that described in Section 2.5; and Page 2-13 has been revised to make this fact explicit.

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Mr. Charles E. MacDonald

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August 6, 1982

Relative to Item 3(b), the orientation chosen for the additional free drop described in Section 2.5.2.5.1 and the effects of this test on the inner container have been further clarified; and the page containing this same section has been accordingly revised.

Relative to Item 4, a series of photographs of the damage to both the inner and outer containers due to the 30-foot free drop described in Section 2.5.2.1 have been included as Appendix H to this application. Photographs of the results of the 1977 tests described in Section 2.6.2 are not available, but this can be considered inconsequential because that entire Section 2.6 of 1977 test results is being deleted and the request for approval to ship the packaging contents described in Section 1.2.2.3b is hereby withdrawn for reasons discussed in the following response to Item 5.

Relative to Item 5, although Section 1.2.2.3b and Section 2.6 (entitled "Babcock & Wilcox Modified BB-250-2 Package Evaluation") are being deleted as mentioned above, this section of the letter provides additional discussion of: the requirement for twelve (12) closure bolts on the inner container when shipping the contents described in Section 1.2.2.3b; and the requirement for six (6) closure bolts when shipping the other categories of packaging contents described in Section 1.2.2.

Section 2.6 describes previous evaluations done in 1977 for BB-250-2 packaging containing a payload which simulated the special configuration of the contents described in Section 1.2.2.3b, whereas Section 2.5 describes the most recent evaluations done in 1981 for BB-250-2 packaging containing a payload which simulated the typical configuration of the other categories of contents described in Section 1.2.2.

The payload used in the earlier evaluations described in Section 2.6 weighed approximately 250 pounds and was placed into the rectangular insert shown on NUMEC Drawing 10-F-676 inside the inner container to simulate the contents of Section 1.2.2.3b. In this special configuration, the mass of the contents was located toward the top end of the packaging. When oriented upside-down with this special payload configuration, results of actual vertical-drop testing showed that six (6) closure bolts on the inner container lid did not absolutely prevent the minor in-leakage of water into the rectangular insert. When the BB-250-2 was modified by the addition of six (6) more closure bolts on the inner container lid, a retest of the vertical drop showed these twelve (12) bolts effectively maintained the containment integrity of the inner container and its rectangular insert.

The payload used in the most recent evaluations described in Section 2.5 weighed approximately 350 pounds and was placed in five (5) cans inside the inner container to simulate the actual shipping contents described in Section 1.2.2, excluding Section 1.2.2.3b. In this more routine configuration, the mass of the contents is distributed uniformly throughout the volume of the inner container. For the tests performed with this payload configuration, the inner container lid was secured with six (6) closure bolts. As detailed in Section 2.5, several free drop and puncture tests were performed with this package, and the six (6) closure bolts clearly demonstrated their effectiveness at maintaining the containment integrity of the inner container.

Therefore, when shipping the contents described in Section 1.2.2.3b, twelve (12) closure bolts were required to ensure containment of the inner container was maintained. This was necessary because of the special configuration of the contents. When shipping contents described in Section 1.2.2 other than those described in Section 1.2.2.3b, six (6) closure bolts are required on the lid of the inner container.

Notwithstanding the above justification, Section 1.2.2.3b and the related Section 2.6 are hereby deleted from this application. As discussed at length in our above-referenced meeting, this deletion is necessitated at this time primarily because adequate documentation does not exist which verifies this particular container configuration was tested in accordance with all applicable requirements, nor can it be verified that the container configuration tested in Section 2.6 is the same one shown in NUMEC Drawing No. 10-F-676 of Appendix D. Accordingly, the aforementioned NUMEC drawing is also hereby deleted from Appendix D. As you can see in the enclosed revised "Table of Contents" page, the place for Appendix D in the application is being retained as "Reserved" for the future possibility that a licensee may wish to request approval of new container configuration requiring a new drawing.

Relative to Item 6, NUMEC Drawing No. 10-F-676 has been deleted as discussed above and this will naturally eliminate any cause for comparison or confusion with Babcock & Wilcox (B&W) Drawing No. 10-F-771. Detail F-F of B&W Drawing No. 10-F-771 shows a close-up of an alternate method of securing the outer cover used by some licensees, as described in Section 1.2.13 of the application. To further clarify B&W Drawing No. 10-F-771 as requested in our above-referenced meeting, a new enlarged Detail G-G has been added. With this new detail, the B&W Drawing No. 10-F-771, Revision 4, clearly shows the BB-250-2 packaging with 12-gauge closure ring on the outer cover that was constructed and tested as described in Section 2.5 of this application.

Babcock & Wilcox

Mr. Charles E. MacDonald

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August 6, 1982

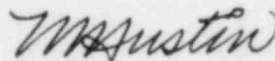
Relative to Item 7, the appropriate notes pertaining to leak testing of the inner container and torque requirements for the closure fasteners have been added to B&W Drawing No. 10-F-771.

Relative to Item 8, the KENO IV computer input sheets and the output k_{eff} sheets for each of the cases listed in Section 3.0 are provided in the new Appendix I to this application.

All of the enclosed application pages which have been revised for this response are dated July 30, 1982 to distinguish them from the previously submitted pages. Eight (8) copies of the revised pages and the revised Appendix A drawing are enclosed with this letter.

If you have any questions regarding this response or the entire renewal application, please contact me at extension 111.

Sincerely,



Michael A. Austin
Manager, Technical Control

MAA/mhb

Enclosures (8)

cc: The Babcock & Wilcox Company
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