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71-9290

August 25, 2003

Ms. Jessica M. Umana
Physical Scientist
Licensing Section
Spent Fuel Project Office
Office of Nuclear Material Safety and Safeguards
Mail Stop: 13 D13
United States Nuclear Regulatory Commission
One White Flint North
11555 Rockville Pike
Rockville, MD
20852-2738

RE: Certificate of Compliance No. 9290 for the Model No. F-430/GC-40, Request for Additional Information

Dear Ms. Umana:

This letter is in response to the U.S. Nuclear Regulatory Commission's (NRC) Request for Additional Information (RAI) dated June 13, 2003.

The Safety Analysis Report for the F-430/GC40 Transport Package, MDS Nordion Report number IN/TR 1608 F430 has been revised. Together with the Response to the Request for Additional Information attached to this letter, the Safety Analysis Report (SAR) revision 2C provides a complete response to the RAI.

Attached are seven proprietary copies of the revised sections of IN/TR 1608 F430 and one non-proprietary copy for the Public Document Room. In addition, I have attached an affidavit to support MDS Nordion's request to withhold parts of the sections listed below from the Safety analysis report IN/TR 1608 F430 (2C) from public disclosure. Parts of the following sections have been deleted from the SAR, as they are specific to the design and fabrication of the F-430/GC40 and would enable a third party to manufacture a similar transport package.

The following sections have been updated to revision 2C and are enclosed.

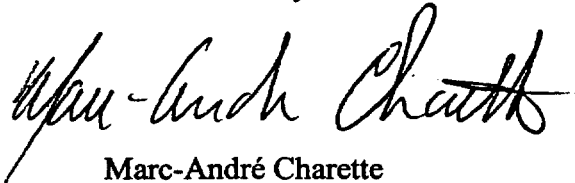
- Page 1 (Cover Page)
- Chapter 1
- Appendix 1.3.2
- Chapter 2
- Appendix 2.10.3

Nmss01

Please note that the Safety Analysis Report was updated to revision 2B in response to questions from the CNSC. The affected pages are pages 1, 12, 19, 20 and 22. These pages are also enclosed.

If you have any questions or require further information please feel free to contact me by telephone at (613) 592-3400 extension 2421 or by email at mcharette@mds.nordion.com.

Yours sincerely

A handwritten signature in black ink, reading "Marc-André Charette". The signature is fluid and cursive, with the first name "Marc-André" and the last name "Charette" clearly distinguishable.

Marc-André Charette
Regulatory Affairs Senior Associate
MDS Nordion

Attached: IN/TR 1608 F-430/GC-40 (2C), Affidavit

Copy to: Mike Krzaniak, Blair Menna, MDS Nordion

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

MDS NORDION F-430/GC40 TRANSPORTATION PACKAGE

DOCKET NO. 71-9290

CHAPTER 1 – GENERAL INFORMATION

- 1-1 The first sentence has been changed and now refers to the requirements of 10 CFR Part 71 as well as the requirements for type B(U)-96 packages as defined in IAEA TS-R-1.
- 1-2 The discrepancy between the weights listed in Table 1.1 and Drawing No. F643001-001 has been corrected. The weights for the inner braces indicated on the drawing were reversed.
- 1-3 The total nominal weights listed in Table 1.1 have been recalculated and the totals listed now agree with the sum of the components.
- 1-4 The reference to Note 11 has been corrected on Drawing No. F643001-001.
- 1-5 The reference to item 7 on Drawing No. F643001-001 has been corrected. Since there is only one tie-down collar, the quantity listed on the drawing is one.

CHAPTER 2 STRUCTURAL EVALUATION


- 2.1 The statement that the tie-down collar is not a structural part of the package has been withdrawn. The material for the tie-down collar has been changed to a high-strength low-alloy steel per ASTM A514. This material has a minimum yield strength of 100,000 psi. The analysis in Appendix 2.10.3 has been revised accordingly, and none of the stresses exceed the yield strength for the materials.
- 2.2 The stress analysis of the tie-down collar bolts has been added to Appendix 2.10.3. It is demonstrated that the stress in the bolts does not exceed yield.
- 2.3 Yield strength is the design stress criteria for the revised tie-down analysis. The tie-down analysis has been revised and additional details have been added, including the stress distribution through the cross-section of the most highly stressed area of the tie-down collar.
- 2.4 The Finite Element Model has been revised. The original model was constructed using shell elements for the 12 gauge stainless steel skin. In order to demonstrate that the singularity stresses resulted from the interface between the solid and shell elements, the skin was partially modelled using solid elements. Figure 2.10.3-10 shows the stresses in the container body at the interface with the tie-down collar and in the local area above and below the collar. It is shown that the stresses in the overpack remain below yield.
- 2.5 The revised skid design will perform equally well as did the prototype skid, which is the version analysed in Appendix 2.10.4. The analysis in Section 2.5.1 is unaffected by the skid modifications.
The requirement of 10CFR71.71(c)(9) is a test for the Normal Conditions of Transport. During the 1.2 m Free Drop Test in the upright orientation, the measured acceleration of the F-430 was approximately 35 G's. Therefore the F430 and its skid withstood seven times the force required by the Compression Test. As a result of the 1.2 m Free Drop test, none of the skid attachment bolts failed. Therefore the bolts would not be expected to fail as a result of the significantly less severe Compression Test.

AFFIDAVIT

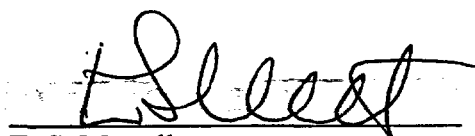
I, E. S. Martell, in my capacity as Vice President, Quality & Regulatory Affairs, having been duly authorized to apply for withholding from disclosure of proprietary information by and on behalf of MDS Nordion, a division of MDS (Canada) Inc., ("MDS Nordion"), do depose and say:

1. I, E.S. Martell, am the Vice President, Quality & Regulatory Affairs, of MDS Nordion.
2. The information contained in the MDS Nordion's document No. IN/TR 1608 F-430 (2C), "Safety Analysis Report for the F-430/GC-40 Transport Package," is the property of MDS Nordion. This document contains proprietary information related to the design of the F-430/GC-40 transport package.
3. MDS Nordion, has expended extensive funds and manpower in developing the aforementioned document and any release for disclosure of such information to third parties would enable and assist third parties to use the information to fabricate and register a similar transport package without incurring any development costs. This could compromise MDS Nordion's, ability to compete in the marketplace. Therefore, MDS Nordion, submits that the following parts of the MDS Nordion document No. IN/TR 1608 F-430 (2C), "Safety Analysis Report for the F-430/GC-40 Transport Package," should be withheld from public disclosure.
 - Sections 1.2.1, 1.2.2, 1.2.3, and 1.3
 - Figures 1.2 and 1.3
 - Appendix 1.3.2
 - Sections 2.1.1, 2.1.2, 2.3, 2.4.1, 2.4.2, 2.6.3, 2.6.4, 2.6.6, 2.7.1, 2.7.3, 2.7.4, 2.7.5 and 2.10
 - Figure 2.1, 2.4, 2.9 and 2.10
 - Table 2.1
 - Appendix 2.10.3
4. The information has been held in confidence by MDS Nordion, and any disclosure thereof for developmental purposes, has been accompanied by a confidentiality agreement protecting the trade secrets contained herein.
5. The information has been transmitted to and received by the Nuclear Regulatory Commission in the United States in confidence.
6. This information is not available in public sources.
7. The information contained in this affidavit is to the best of my knowledge true and correct.

Sworn before me this 25th day of August, 2003 in the City of Ottawa, Ontario, Canada.


Neil J. Goffin
Notary Public in and
for the Province of Ontario, Canada

per:


E. S. Martell
V.P., Quality and Regulatory Affairs
MDS Nordion, a division of MDS (Canada) Inc.