



71-5939

GE Nuclear Energy

General Electric Company
Vallecitos Nuclear Center
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August 13, 1998

Cass R. Chappell, Chief
Package Certification Section
Spent Fuel Project Office
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

References: 1) Certificate of Compliance No. 5939, Docket No. 71-5939.
2) Letter from Cass R. Chappell to B. M. Murray dated July 17, 1998.
3) Letter from B. M. Murray, "...Investigation Report (Incident Investigation No. 98-2)...Pursuant to 10CFR71.95", dated June 2, 1998, and Correction dated June 3, 1998.

Dear Mr. Chappell:

The enclosed revised pages are in response to your request for additional information in support of the renewal of the Certificate of Compliance No. 5939 for the Model 1500 shipping container. The revised pages and the following discussion address the five items enclosed with your referenced letter (Ref. 2). The enclosed pages are:

- 1) Page 1 of Attachment I to the Model 1500 Loading Procedure (Vacuum Drying Procedure), which contains the procedural steps for conducting the vacuum drying operation.
 - 2) Page 2 of Attachment I to the Model 1500 Loading Procedure (Vacuum Drying Procedure), which is a schematic sketch of the vacuum drying equipment setup.
1. The cask vacuum drying issue was investigated extensively after submission of the applications for renewal dated November 19, 1997, and December 12, 1997. The results of that investigation were concluded in June, 1998, and submitted in the referenced Investigation Report (Ref. 3). Tests conducted in support of the investigation have shown that the cask cavity is moisture free once a continuous drop in pressure below 1.0 torr is obtained. Vacuum drying time is a function of several variables, including, water droplet size, geometry of the transport path, absolute pressure, vapor pressure of the liquid (water), and temperature. The pressure/time function observed during testing showed that an evaporation plateau occurs at a pressure greater than 1.0 torr. Then the pressure begins to

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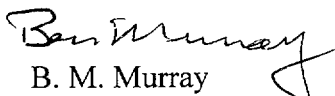
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decrease gradually as a function of the vacuum pump and transport path. The investigation concluded that it is conservative to reduce the measured pressure on the vacuum drying system to less than 1.0 torr, and maintain this vacuum for a period of no less than 30 minutes to assure complete drying. Step 11 of the drying procedure has been revised to implement this requirement.

2. Assurance that the drain line is not obstructed, that all portions of the package cavity have an unobstructed flow path, and that water has been removed from the drain line is verified during the loading procedure. The design of the internal basket and positioning hardware includes precaution against blockage of the drain line. Additional assurance is provided by a verification statement in the drying procedure. An indication of a clear drain line is evident during the draining process. A full flow of water will be observed when the drain plug is removed from a water-filled cask (provided the vent line is open or the lid is slightly raised). A restricted flow path will be indicated by a weak or interrupted stream. This observation is included as a note in the drying procedure.
3. The revised drying procedure and sketch clarify that the vacuum line is attached to the drain port of the cask.
4. The revised drying procedure contains a note to specify that the port opposite the vacuum line (the vent port) must be closed during the vacuum drying procedure.
5. The ambiguity of including two "Attachment I" pages has been corrected by the single two page Attachment I.

If additional information or clarification is needed, please contact the undersigned at (925) 862-4455.

Very truly yours,


B. M. Murray
Senior Licensing Engineer

Enclosure