



71-5939

GE Nuclear Energy

General Electric Company
Vallecitos Nuclear Center
6705 Vallecitos Road, Sunol, CA 94586

September 27, 2001

Rebecca Karas
U.S. Nuclear Regulatory Commission
Two White Flint North
11545 Rockville Pike
Rockville, MD 20852-2738

Subject: "Dry Only" Procedure

Reference: 1) Certificate of Compliance No. 5939, Docket No. 71-5939.
2) Letter to N. Osgood from C. Hamilton, dated August 27, 2001.
3) Telephone conversation with R. Karas, September 18, 2001.

Dear Ms. Karas

The purpose of this letter is to respond to your comments during our recent telephone conversation [3]. You stated that the bubble test procedure should be removed from Section 3(c) of "Loading Procedure." Also, you wanted to know if the referenced, but not included, figures and pre-shipment summaries remain unchanged.

In response to the issues, Section 3(c) has been removed from the procedure and an updated copy of "Loading Procedure" is attached. Also, the figures and pre-shipment summaries referenced in the documents remain unchanged.

If any further information is required, please contact the undersigned at 925-862-4455.

Sincerely,

Chris Hamilton
Senior Licensing Engineer

Attachment

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NMSS01 Public

SHIPPING PACKAGE ASSEMBLY/DISASSEMBLY

Generic Model 1500 Type B Shipping Package
Loading Procedure

1. Purpose

To provide container users with the recommended procedure for loading the Model 1500 Type B shipping container and the preparation of the package assembly for shipment.

2. Scope

This procedure establishes the guidelines to be followed for the handling activities associated with the GE-VNC-supplied shipping package. **VARIANCES TO THESE GUIDELINES ARE PERMISSIBLE PROVIDED THEY ARE IN COMPLIANCE WITH THE APPLICABLE REQUIREMENTS OF THE SHIPPING PACKAGE CERTIFICATE OF COMPLIANCE, THE RECEIVING FACILITY LICENSES, AND DOT/NRC REGULATIONS.** Internal facility operating procedures should be followed for the "routine" transfers, movements, decontamination, radiation controls, etc., of the shipping package.

The procedure is applicable to the Model 1500 Type B shipping container.

3. Special Requirements

- a. A copy of this procedure should accompany or precede the first shipping package sent to a user for receiving and shipping radioactive materials.
- b. The silicone rubber lid gaskets must be replaced within the 12-month period preceding each shipment. Prior to each shipment the silicone rubber lid gaskets must be inspected. The silicone rubber gasket must be replaced if inspection shows any defects. Cavity drain line must be sealed with appropriate sealant applied to threads to pipe plug.

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4. Special Notes

- a. The protective jacket and the exterior of the shipping cask are free of smearable radioactive contamination when shipped. The package should be return shipped in the same contamination-free condition.
- b. **NO MODIFICATION, REPLACEMENT, REPAIR, OR REWORK TO THE SHIPPING PACKAGE (PROTECTIVE JACKET AND CASK) SHALL BE MADE WITHOUT WRITTEN PERMISSION FROM (GE-VNC) IRRADIATION PROCESSING OPERATION, PLEASANTON, CALIFORNIA.**
- c. All package components (except product and non-returnable product container) must be returned unless otherwise specified by GE-VNC.
- d. The cask cavity shall be leak checked per the requirements of the Certificate of Compliance.
- e. A "Model 1500 Shielded Container" diagram, VAL 72XX, is attached and should be used to locate items referenced in the text of this procedure.
- f. DO NOT attempt to lift the cask by the eye (Item 1) on the cask lid. The eye is for lifting the cask lid only. The cask lid weight is stamped in the lid.
- g. **ONLY THE TIE-DOWN EYES (ITEM 3) ON THE SIDE OF THE FIRESHIELD ARE APPROVED TO SECURE THE PACKAGE ASSEMBLY TO THE TRANSPORT VEHICLE. TWO ADDITIONAL CHAINS TO SECURE FIRESHIELD PALLET TO VEHICLE ARE RECOMMENDED. OTHER TIE-DOWN ROPING, CABLING, OR CHAINING ARRANGEMENT USING THE TIE-DOWN EYES (ITEM 3) MAY BE USED PROVIDING THE SHIPPER PERFORMS AN ENGINEERING ANALYSIS AND EVALUATION.**
- h. DO NOT lift the protective jacket and cask package assembly by the top rectangular holes (Item 2) on protective jacket. These are only for moving the protective jacket after it has been unbolted from the base (pallet).
- i. The lugs (Item 3) located on the side of the protective jacket are for tie-downs during transport and may be used to lift the entire protective jacket/cask package assembly.
- j. The lifting eyes (rectangular holes) on the protective jacket must be secured with the anti-tie-down covers (Item 4) to prevent use as a tie-down system during transport. **THE PROTECTIVE JACKET LIFTING EYES ARE NOT APPROVED TO SECURE PACKAGE ASSEMBLY TO TRANSPORT VEHICLE.**

5. Protective Jacket Disassembly

- a. Use appropriate capacity material handling equipment to place complete package assembly in an area free of radioactive contamination. Package gross weight is on the protective jacket nameplate (Item 5 on attached diagram).
- b. Monitor the exterior container surface for radioactive contamination and dose rate with appropriate radiation detection instruments. Notify the Area Supervisor, Regulatory Compliance, or other designated personnel if the container surface is contaminated or the dose rate is higher than indicated on the shipping papers.
- c. Verify security seal number with shipping documents. Remove the security seal (Item 6 on attached diagram).
- d. Unscrew and remove the bolts (Item 7 on attached diagram) from the base of the protective jacket. Use care not to damage or lose the bolts. **ALL THE BOLTS WILL BE REQUIRED FOR REASSEMBLY.**
- e. Carefully lift the protective jacket off the cask, either by using the rectangular holes (Item 2) on top of the jacket or by using the lug tie-down ears (Item 3) and appropriately rated slings. The protective jacket must be lifted straight up to prevent damage to cask.
- f. Place the protective jacket in a noncontaminated area or cover to protect from radioactive contamination.
- g. Monitor the cask dose rate with an appropriate radiation detection instrument.
- h. Smear the cask surface to check for radioactive contamination. If contamination is detected, notify Area Supervisor and follow appropriate internal procedures for contamination control and decontamination activities.
- i. Lift the cask off protective jacket base using the ears (Item 8) on each side of the cask. **DO NOT LIFT CASK USING EYE IN THE CASK LID. THE CASK LID EYE IS AUTHORIZED FOR LIFTING THE LID ONLY.** Transport the cask to the shielded work area. The cask weight is on the cask nameplate. **DO NOT** overload the material transport equipment.

6. Loading Casks - Dry Remote Operation

- a. Use appropriate material handling equipment and position the cask on stable foundation in a shielded remote handling facility. Follow appropriate internal procedures for dose rate monitoring and respiratory protection requirements.
- b. Perform required cavity leak check prior to loading cask. Leak tests shall be as designated in the cask Certificate of Compliance.
- c. If materials to be loaded into the cask are free of radioactive contamination (sealed source container, special form containment, etc.):
 - 1) Before removal of the cask lid, be sure that all remote handling tools to be used are as free of contamination as the item(s) being loaded.
 - 2) Remove the cask lid bolts (Item 9). Place the bolts in a convenient location so they are not lost, damaged, or contaminated. **ALL THE BOLTS WILL BE REQUIRED FOR REASSEMBLY.**
 - 3) Use an appropriately rated lifting device to remotely remove the cask lid. The cask lid weight is stamped on the lid.
 - 4) Smear the cask cavity for radioactive contamination. Clean to the required levels per appropriate internal procedures.
 - 5) Check the cask drain line. Remove previous thread sealant and apply Teflon tape or other thread sealant to the drain plug threads. Replace the drain plug and tighten.
 - 6) Visually check the gasket and cask and lid sealing surfaces for cuts, nicks, tears, ragged edges or other defects that could adversely affect the sealing ability of the gasket. The gasket shall be replaced if any defects are indicated.
 - 7) Visually inspect the cask lid bolts for obvious damage. **IF ANY COMPONENT OF THE SHIPPING PACKAGE REQUIRES REPAIR OR REPLACEMENT, NOTIFY GE-VNC.**
 - 8) Properly position the gasket.
 - 9) Remotely transfer the materials into the cask cavity. A lifting eye or bail should be on the container or material.
 - 10) Replace the cask lid and bolts. Tighten the lid bolts to 120 ± 10 ft-lbs torque in a criss-cross pattern.

6. Loading Casks - Dry Remote Operation (Continued)

d. If materials to be loaded into the cask are Normal Form materials:

- 1) Remove the cask lid bolts (Item 9). Place bolts in a convenient location so they are not lost, damaged, or contaminated. **ALL THE BOLTS WILL BE REQUIRED FOR REASSEMBLY.**
- 2) Use an appropriately rated lifting device to carefully remove the cask lid. The cask lid weight is stamped on the lid.
- 3) Smear the cask cavity for radioactive contamination. Decontaminate to the required levels per appropriate internal procedures.
- 4) Check the cask drain line. Remove previous thread sealant and apply Teflon tape or other thread sealant to the drain plug threads. Replace the drain plug and tighten.
- 5) Visually check the gasket and cask and lid sealing surfaces for cuts, nicks, tears, jagged edges or other defects that could adversely affect the sealing ability of the gasket. The gasket shall be replaced if any defects are indicated.
- 6) Visually inspect the cask lid bolts for obvious damage. **IF ANY COMPONENT OF THE SHIPPING PACKAGE REQUIRES REPAIR OR REPLACEMENT, NOTIFY GE-VNC.**
- 7) Properly position the gasket.
- 8) Remotely transfer materials into the cask cavity. A lifting bail or eye should be on the material or transfer container.
- 9) Replace the cask lid and bolts. Tighten the lid bolts to 120 ± 10 ft-lbs torque in a criss-cross pattern.

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- a. Decontaminate cask exterior and survey for smearable radioactive contamination. Cask exterior should be < 100 cpm beta/gamma per ft^2 and < 200 dpm alpha per ft^2 or must comply with DOT regulations.
- b. Remove any old labels from cask exterior and apply a "FULL" label. Labeling the cask is an optional step.
- c. Visually inspect the cask ears for bending, cracked welds, or other defects. **NOTIFY GE-VNC IF ANY ABNORMAL CONDITION IS DETECTED.**

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7. Reassembly and Return Shipment (Continued)

- d. Return the full cask to the protective jacket storage area.
- e. Remove any old labels from protective jacket exterior.
- f. Visually inspect protective jacket for damage. **NOTIFY GE-VNC IF ANY DAMAGE REQUIRING REPAIR IS DETECTED.**
 - 1) Check protective skirt for damage.
 - 2) Check fireshield bolts for thread damage, galling, etc.
 - 3) Check fireshield nuts for damage.
 - 4) Visually check absorber angles on separator plate for weld integrity, damage, etc.
 - 5) Visually check absorber tubes inside fireshield for damage.
- g. Align the cask on jacket base so that protective jacket will align with the cask lifting ears and mate with base bolt holes.
- h. Position protective jacket on jacket base and secure all bolts to 900 ± 100 ft-lbs torque in a criss-cross pattern.
- i. Secure the anti-tie-down covers on protective jacket lifting eyes. Assure the printing on the anti-tie-down covers is legible.
- j. Attach a security seal (Item 6) through a protective jacket bolt. Verify the seal number is recorded on the shipping paperwork.
- k. Survey the assembled package for radiation levels and smearable contamination. Release the package per applicable DOT/NRC regulations.
- l. Attach appropriate shipping labels. Place required DOT labels on the protective jacket.
- m. **ASSURE PACKAGE ASSEMBLY IS SECURED TO TRANSPORT VEHICLE USING THE APPROVED TIE-DOWN EYES (ITEM 3). TWO ADDITIONAL CHAINS TO SECURE FIRESHIELD PALLET TO VEHICLE ARE RECOMMENDED. OTHER TIE-DOWN ROPING, CABLING, OR CHAINING ARRANGEMENT USING THE TIE-DOWN EYES (ITEM 3) MAY BE USED, PROVIDING THE SHIPPER PERFORMS AN ENGINEERING ANALYSIS AND EVALUATION.**
- n. Promptly return the shipping package to:
 - General Electric Company
 - Vallecitos Nuclear Center
 - 6705 Vallecitos Road/Highway 84
 - P.O. Box 460
 - Pleasanton, California 94566