

# Babcock & Wilcox

a McDermott company

Naval Nuclear Fuel Division

P. O. Box 785  
Lynchburg, Virginia 24505-0785  
(804) 522-6000

October 29, 1990  
90-207

U. S. Nuclear Regulatory Commission  
ATTN: Mr. C. E. MacDonald, Chief  
Transportation Branch  
Division of Safeguards & Transportation  
NMSS  
Washington, DC 20555

Reference: Certificate of Compliance No. USA/5341/B( )F.

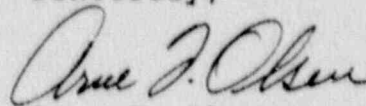
Gentlemen:

The Babcock & Wilcox Company, Naval Nuclear Fuel Division (NNFD) requests that the referenced certificate of compliance be renewed for a period of 18 months. The enclosed operating procedures and the acceptance tests and maintenance program for the NFP-55 container are provided in support of this request.

NNFD needs the additional time to complete the design and to test the new inner container. The 18-month period also allows time for the NRC to review and approve an application for licensing the new container for use and for the fabrication of new containers to replace those presently in use.

If you need additional information in this regard, please contact me.

Sincerely,

  
Arne F. Olsen  
Licensing Officer

AFO/cm

Enclosure

**UNCLASSIFIED**

9011020218 901029  
PDR ADOCK 07105341  
C PDC

1/1  
NT01

## 7.0 OPERATING PROCEDURES

### General

The NFP-55 container [Certificate of Compliance USA/5341/B( )F ] is routinely used to ship any combination of unirradiated uranium metal, alloys of uranium, oxides, and uranyl nitrate ( $\text{UO}_2(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$ ) in normal form at any enrichment of the  $^{235}\text{U}$  isotope. The detailed loading and unloading procedures are given below and are in compliance with subpart G of 10 CFR 71. All operating procedures for the NFP-55 container are approved by NNFD plant management.

### 7.1 Procedures for Loading the NFP-55

Each container must first be inspected by Quality Control in accordance with procedure, "Inspection of in use shipping container approved by Certificate of Compliance"(E45-1) or "In use of non-B&W, NNFD Owned Specification Shipping Container"(E45-6). Shipping containers not acceptable for use shall be marked in accordance with the above procedures.

1. Assure that the container is to be loaded per the Certificate of Compliance and record this on the appropriate shipment documentation.
2. Move container to loading area using a fork lift or other approved handling equipment.
3. Remove the bolt on the locking ring. Remove the locking ring from the container. Remove the lid from the container.
4. Remove the Celotex disk and the other insulation to expose the 2R container.
5. Remove the top to the 2R container by turning it counter-clockwise.
6. Conduct a radiation survey to determine compliance with DOT contamination limits and compliance with mass limits specified in Section 1.2.3, "Contents of Packaging". Record the information on the proper forms.
7. Accountability personnel shall load the material into the primary container.
8. (Optional) Place primary container in a plastic sleeve which has been sealed at the bottom. Tape the top of the sleeve together.
9. Insert the primary container into the 2R container, If the container does not fit snug, insert filler material (e.g. styrofoam peanuts) as needed.

10. Apply plumber's tape (or equivalent) around the threads of the 2R container.
11. Place top on 2R container and manually tighten by turning clockwise.
12. Insert filler material (e.g. plywood spacer disk and Celotex disk) per applicable drawing requirements. Attach container lid using bolt and locking ring.
13. Apply tamper-safe seal and record appropriate information on shipping papers and the tamper-safe seal application form (E4-44).
14. Notify Radiation Safety to conduct radiation surveys in accordance with 49 CFR 173.441 and 49 CFR 173.443. Record the survey results on the proper form.
15. Move the loaded container to the storage area or shipping vehicle loading dock.
16. Tie-down or blocking devices shall be used on the shipping vehicle. On the Safe Secure Trailer (SST) tie down devices provided by the DOE shall be used.
17. The Shipping Container Checklist (E4-97) shall be completed and filed with the shipping documentation.

## 7.2 Procedures for Unloading Package

The following procedure shall be used in situations when NNFD personnel are required to unload containers.

1. Notify Radiation Control to conduct surveys to determine contamination levels, assure contamination levels are in compliance with limits specified in 49 CFR 173.441 and 173.443 and the unloading area. If not, the area shall be roped off identifying it as a controlled area. Record results on form E4-50.
2. Container to be moved by lifting with a fork lift or other appropriate moving devices.
3. Verify the tamper-safe seal and record on receipt inspection form E4-1. Remove the tamper-safe seal.
4. Remove the bolt on the locking ring. Remove the locking ring from the container. Remove the lid from the container.
5. Remove the Celotex disk and the other insulation to expose the 2R container.

6. Remove the top to the 2R container by turning it counter-clockwise.
7. Remove the primary container/material from the inner container and place in an approved storage location within the receiving facility.
8. Clean the inner container, if necessary. Secure the inner container top and install the outer container lid. Label the NFP-55 container as "Empty" and place in storage or return to shipper.

### 7.3 Preparation of Empty Package for Transport

Each NNFD-10 shipping container shall be inspected prior to shipment to assure that the following requirements are met:

- o All labels from previous shipments shall be removed from the container.
- o Inner container is empty. Shipping container is labeled "Empty".
- o The containers shall be surveyed to ensure contamination levels are within the requirements as described in 49 CFR 173.427.
- o The empty package shall be securely closed and sealed in the presence of security personnel.

### 7.4 Appendix

None applicable.

## 8.0 ACCEPTANCE TESTS AND MAINTENANCE PROGRAM

### 8.1 Acceptance Tests

#### General

All procedures for the NFP-55 container acceptance tests and maintenance are approved by NNFD management. These procedures identify routine inspection and maintenance requirements and acceptance criteria to be applied.

#### 8.1.1 Visual Inspection

Prior to initial use of each NFP-55 container a visual inspection shall be made to assure the following requirements are met:

- o No holes in the outer drum, nor dents greater than one-half inch deep.
- o Lid lip and top drum curl are not damaged to the extent that the closure ring will not fit the outer drum.
- o Outer drum has between one and four vent holes near the top (1/4 inch dia.).
- o Filler insulation (Celotex, etc.) is loaded to the top of the outer drum.

#### 8.1.2 Components

- o Drums shall be certified by the supplier as DOT 6M or equivalent.
- o Fiberboard shall be checked to assure a minimum density of 14 pounds per cubic foot.
- o The inner container shall be measured to assure dimensions are in accordance with the license drawing, and welds shall be inspected as required by the license drawing.
- o Tape (or equivalent) applied to the threads on the 2R screw-cap top shall be certified by the supplier to withstand temperatures at 300°F (149°C).

### 8.2 Maintenance Program

The NFP-55 Shipping Container is not a pressure vessel, employs no shielding materials, and does not require a cooling system or other thermal mechanism for dissipation of heat. Materials of construction are commonplace, durable, and readily available. The container has no systems or subsystems such as valves, rupture disks, or other moving components.

The maintenance program for the NFP-55 consists of repair, refurbishment, or replacement as necessary. Containers are visually inspected prior to each use, and deficiencies noted and recorded at that time. Packages with unacceptable conditions are temporarily stored until such time the container can be redressed to conform to DOT specifications.