

11-6581



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FRAMATOME ANP, Inc.

June 18, 2003
JKD:03:034

Ms. Adelaide S. Giantelli
Project Manager
Spent Fuel Project Office – NMSS
U.S. Nuclear Regulatory Commission
One White Flint North
1155 Rockville Pike
Rockville, MD 20852-2738

Dear Ms. Giantelli:

Subject: Certificate of Compliance No. 6581 Amendment Request for the Model 51032-1 Package (Revision 7B of EMF-52)

Ref.: 1. Letter, James K. Davis to John D. Monninger, same subject, dated January 20, 2003.

Ref.: 2. Letter, Adelaide S. Giantelli to James K. Davis, Certificate of Compliance No. 6581 for the Model No. 51032-1 Package - Request for Additional Information, dated April 17, 2003.

Ref.: 3. Letter, James K. Davis to Adelaide S. Giantelli, same subject, dated May 8, 2003.

Per our telephone conversation on June 17, 2003, the appropriate pages of EMF-52 have been revised as Revision 7B to address the additional information requests. Included with this letter are six copies of the pages that comprise revision 7B. The following pages should be replaced in or added to Revision 7A of EMF-52: the cover page and spine, the title page, signature page, (add) Nature of Changes for Revision 7B, pages 3-1 to 3-4, page 12-1, and the Distribution page.

The changes and additions are described and justified in the Nature of Changes page for Revision 7B and are summarized as follows. In Section 3.1 added steps 16 and 17 to add the operating steps from the supplement dated July 1, 1997. In Section 3.2 the footnote and reference was renumbered from 2 to 1. On page 12-1 a note was added to indicate that actual copies of References 1-3 can be found in EMF-52 Revision 5.

If you need further information, please call me at (509) 375-8464.

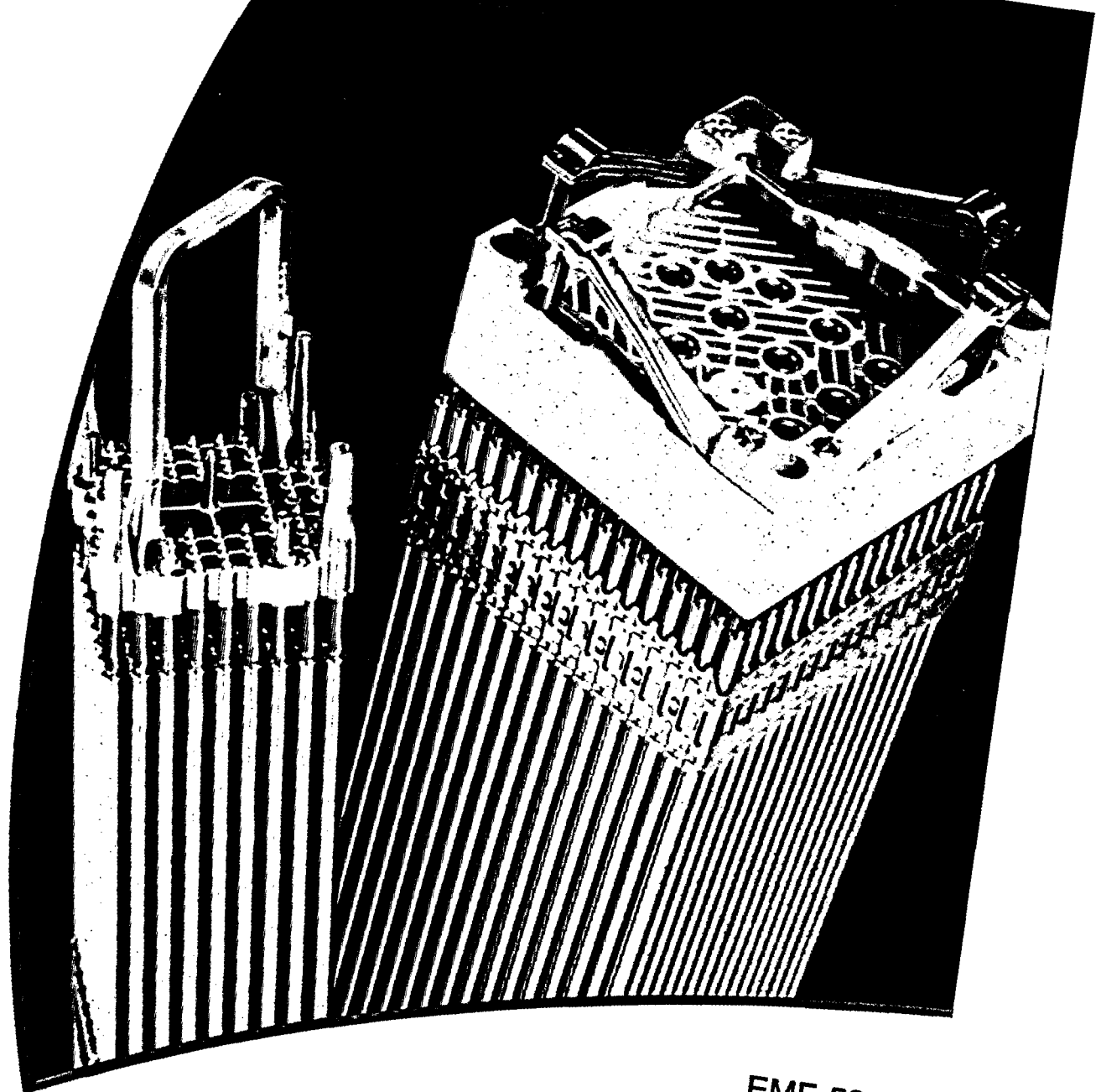
Very truly yours,

James K. Davis
James K. Davis
Principal Engineer
Licensing and Compliance

Enclosures (EMF-52 Revision 7B)

NMSSO/

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EMF-52
Revision 7B
Consolidated License Application for
Framatome ANP, Inc. Model 51032-1
Shipping Container

June 2003

A
FRAMATOME ANP

**CONSOLIDATED LICENSE APPLICATION
FOR
FRAMATOME ANP, INC.
MODEL 51032-1 SHIPPING CONTAINER**

**Certificate of Compliance No. 6581
Docket No. 71-6581**

**Prepared by
J. K. Davis**

Framatome ANP, Inc.

**Consolidated License Application for Framatome ANP, Inc.
Model 51032-1 Shipping Container
Certificate of Compliance No. 6581
Docket No. 71-6581**

Prepared: J. K. Davis 6/18/03
J. K. Davis, Principal Engineer
Licensing & Compliance Date

Approved: D. W. Parker 6-18-03
D. W. Parker, Manager
Environmental, Health, Safety & Licensing Date

Nature of Changes

<u>Item</u>	<u>Paragraph or Page(s)</u>	<u>Description and Justification</u>
1.	3.1	Added steps 16 and 17. <u>Justification:</u> Steps incorporated from COC supplement dated July 1, 1997.
2.	3.2	Corrected footnote reference from 2 to 1. <u>Justification:</u> There was no footnote 1.
3.	12	Added note to reference that actual copies of References 1-3 can be found in EMF-52 Revision 5. <u>Justification:</u> Note added to clarify where References 1-3 can be found.

3 Package Handling

Controls and precautions to be exercised during transport, loading, unloading, and handling of the shipment, and in the event of an accident or a delay, are described herein.

Nuclear safety hazards to personnel (radiation, contamination, criticality) are minimal during these operations. The hazards more likely to result in injury to personnel are those associated with the physical handling of the heavy fuel elements and container components. Appropriate material handling equipment must be used; and caution is imperative to avoid pinch points or being struck, and to avoid damage to the fuel elements.

3.1 Package Loading

The procedure to be used to load fuel elements into the Model 51032-1 shipping container calls for lifting the strongback to the vertical position by pivoting the strongback lower end, placing the fuel elements into the strongback, and clamping the fuel elements at the upper and lower tie plates with half clamps while in the vertical position, and then lowering the strongback with fuel elements in the container and securing for shipment. A typical procedure follows:

1. Unbolt all closure bolts on the container and remove cover assembly.
2. Install the trunnion pivot pin and spacers.
3. Remove the upper thrust plate.
4. Remove the full clamps and restraint bars.
5. Remove the half clamps.
6. Inspect strongback for proper separator block spacing and thickness of support pads as required by the container arrangement drawing.
7. Free the strongback from the container by removing the hex nut and washer that secure the strongback to the shock mounts bolts.
8. Attach a crane hook to the U-bolt on the upper end of the strongback. Elevate the strongback until it is in the vertical position.
9. Install the two telescopic, strut-type stabilizer braces to the strongback, making sure these braces are adequately secured, ball lock pins in place.
10. Install lower fuel element support plates on the thrust plate (if required).
11. Introduce the first fuel element (hanging vertically) into the strongback.
12. Install the half clamps at the top and bottom of the fuel element.
13. Introduce the second fuel element into the strongback and secure in place with half clamps, along with the first element. If four elements are to be shipped, install the center thrust plate in the strongback, bolt securely in place. Install the third and fourth fuel elements and support them with half clamps at the top and bottom of the fuel element.
14. Support the strongback with a crane, remove the ball lock pins from stabilizer braces.
15. Remove telescopic, strut-type stabilizer braces and lower strongback with fuel elements into a horizontal position in the container.

16. Adjust the position of the upper thrust plate so the smallest amount of shimming material is required.
17. After installing the shimming material, unless the shim is mechanically held in place by some other method (e.g., by a bolt or pins), install a full clamp on each shim. The purpose of the full clamp is to ensure that the shims remain in place under normal transport conditions and drop and puncture accident conditions. (Note: Only the shim blocks require clamping. The wood pedestal shims are held in place by the fuel assembly leaf springs.)
18. Install the upper thrust plate. Install all full clamps and restraint bars. In some cases, the half clamps may be replaced by full clamps.
19. Remove the trunnion pivot pin and spacers.
20. Bolt the strongback to the shock mount supports.
21. Install accelerometers in the shipping container, as necessary.
22. Inspect the inside of the container to assure that there are no loose articles within the container.
23. Place the cover on the base assembly of the shipping container using the 10 alignment pins on the base assembly flange to guide the cover assembly.
24. Secure the base and cover assemblies by tightening all 58 closure bolts.
25. Install a Type E security seal, as described in Regulatory Guide 5.15, at each end of the container.
26. Inspect the container for proper labeling necessary to meet Federal regulations.
27. Take required radiation readings.
28. Load packages onto or into the transport vehicle using either forklifts or an overhead crane with cables or chains attached to the four lifting lugs on the cover assembly. (A loaded container may weigh up to 7500 pounds.)
29. Stack packages two high (no higher), and secure them to the transport vehicle as shown in. Do not bolt packages together.
30. Record all data on a Shipping Record Sheet.

3.2 Transport Controls

Typical instructions given to drivers are described in the following paragraphs:

1. Drivers take custody of the shipment by signing a hand-to-hand receipt.
2. The unirradiated fuel elements involved with this shipment present no radiation hazards and require no special shielding. Radiation detection instruments and film badges will not be required during the transportation of this material.
3. Weigh the trucks at the nearest State of Washington scales. If an overweight condition is found, return to Framatome ANP, Inc. (FANP) to shift to the load.
4. Posted maximum speed limits must not be exceeded. Due to the extremely high value per load, drivers are cautioned to exercise the utmost care in the transportation of this material, and to operate transport units in a manner that will provide the least amount of shock and vibration to the lading.

5. Stop at all railroad crossings and proceed with caution.
6. Check all tires and tie-downs after first 50 miles and then at least every 4-6 hours, indicate on driver's log.
7. Report to Company dispatcher at least every 6 hours during the trip.
8. Promptly notify the dispatcher on duty in the event of a breakdown. In the event of an accident or other emergency, notify the following promptly:¹

Carrier Dispatch	Telephone Number
Person's Name (Carrier)	Telephone Number
FANP Employees (2)	Telephone Number
FANP Security	Telephone Number
9. In case of a significant accident, also notify the United States Department of Energy Regional Coordinating Office in the area shown in. When notifying this agency, they should be advised that the shipment is unirradiated nuclear reactor fuel elements of not more than 5 percent enrichment. Also inform them of the extent of damage as it pertains to the shipping containers. An MSDS for UO₂ is included with driver's package.
10. Contact Carrier Dispatch or Person's Name (Carrier) if there are any questions regarding this move¹.

3.3 Unloading

The special controls and precautions to be exercised during unloading are detailed below:

1. Inspect the containers for any damage before unloading from the vehicle.
2. Notify FANP promptly of any damage and await FANP instructions for unloading.
3. If the containers are not damaged, remove them from the transport vehicle using a forklift or crane with adequate capacity. (The loaded containers may weigh up to 7500 pounds each.)
4. Place the containers in the unloading area and await approval by FANP before opening the containers.
5. After receiving approval from FANP to open the containers, remove the security seals record the numbers of the security seals on the Radioactive Material Receiving Inspection Record form.
6. Remove the 58 closure bolts securing the base and cover assemblies of the container.
7. Remove the container cover assembly.
8. Install the trunnion pivot pin and spacers.
9. Remove all clamps except half clamps.
10. Free the strongback from the container by removing the hex nut and washer that secure the strongback to the shock mount bolts.
11. Using an overhead crane, attach a crane hook to the U-bolt on the upper end of the strongback. Elevate the strongback and install the two telescopic, strut-type stabilizer

¹ The names and telephone numbers will be provided in the driver's instructions for each trip.

- braces to the strongback, making sure these braces are adequately secured with ball lock pins.
12. Elevate the strongback to the vertical position.
 13. Using an overhead crane, secure one fuel element and remove the top and bottom half clamps. Remove the fuel element from the strongback.
 14. Remove the remaining fuel element(s) by first securing each fuel element with the overhead crane, followed by removing the top and bottom half clamps, and then removing the fuel element from the strongback.
 15. Record any damage to the fuel elements, and record any tripped accelerometers on the Radioactive Material Receiving Inspection Record form.
 16. Lower strongback and reassemble containers for return shipment to original shipper.

3.4 Maintenance Program

The M51032-1 containers are maintained and repaired at FANP. The following steps are included in the maintenance and repair done at FANP.

1. Repair any holes.
2. Replace parts or work out dents greater than ½ inch deep.
3. Replace parts or do weld repair on broken welds, seams, damaged lugs, or damaged lifting handles.
4. Replace pressure relief valve which do not pass test or have been damaged.
5. Replace or repair gaskets which are damaged, brittle, or flat from overcompression.
6. Replace or repair damaged shock mounts.
7. Replace damaged or missing fasteners.
8. Repaint if needed.
9. Make sure container is clean and free of loose debris.
10. Perform annual gasket leak test (10 ± 1 " H₂O for 5 minutes).

12 References

1. CONF-710801 (Volume 2) Health and Safety (TID-4500), "Proceedings, Third International symposium, Packaging, and Transportation of Radioactive Materials," August 1971, pp. 873-885.
2. Exhibit P, "Application for Licensing of Combustion Engineering, Inc., Shipping Container Model 927A," July 3, 1969, License SNM-1067, Docket No. 70-1100.
3. Exhibit P (including Appendix P-1), "Application for Licensing of Combustion Engineering, Inc., Shipping Containers Models 927B and 927C," February 23, 1971, License SNM-1067, Docket No. 70-1100.
4. "Application for the Use of the 51032-2 Shipping Container for Transport of Radioactive Materials", August 6, 1998, Docket No. 71-9252.

Note: Actual copies of References 1-3 can be found in EMF-52, Revision 5.

Distribution

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