

March 24, 2005

U.S. Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852-2738

Attn: Document Control Desk

Subject: Submittal of Proposed Changes to Certificate of Compliance (CoC) No. 9225 for the NAC-LWT Cask to Incorporate as Approved Contents up to 700 Intact or Damaged PULSTAR Fuel Elements and Screened Option for the PWR/BWR Transport Canister

Docket No. 71-9225

- References:**
1. Submittal of a Request for an Amendment of CoC No. 9225 for the NAC-LWT Cask to Incorporate as Approved Contents up to 700 Intact or Damaged PULSTAR Fuel Elements, NAC International (NAC), November 2, 2004
 2. Submittal of a Request for Amendment of CoC No. 9225 for the NAC-LWT Cask to Incorporate a Screened Option to Enhance the Operational Features of the PWR/BWR Transport Canister, NAC, February 17, 2005
 3. Submittal of Supplemental Information to the Request for an Amendment of CoC No. 9225 for the NAC-LWT Cask to Incorporate as Approved Contents up to 700 Intact or Damaged PULSTAR Fuel Elements, NAC, March 3, 2005
 4. Submittal of NAC Responses to the NRC Request for Additional Information for the Proposed Amendment of CoC No. 9225 for the NAC-LWT Cask to Incorporate as Approved Contents up to 700 Intact or Damaged PULSTAR Fuel Elements, NAC, March 11, 2005
 5. Model No. NAC-LWT Package, Certificate of Compliance (CoC) No. 9225, Revision 38, U.S. Nuclear Regulatory Commission (NRC), January 25, 2005
 6. Safety Analysis Report (SAR) for the NAC Legal Weight Truck Cask, Revision 35, NAC International, May 2004

NAC International (NAC) herewith submits the proposed changes to CoC No. 9225 to incorporate References 1 through 4 as approved by the U.S. Nuclear Regulatory Commission. The attached document is based on Reference 5 and addresses only the affected text changes/additions.

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This information is being provided by NAC to assist the SFPO in generating Revision 39 of CoC No. 9225.

If you have any comments or questions, please contact me on my direct line at 678-328-1274.

Sincerely,

A handwritten signature in cursive script that reads 'Anthony L. Patko'.

Anthony L. Patko
Director, Licensing
Engineering

Attachment

DRAFT

NAC-LWT

US NRC CoC #9225

Revision 39

**(markup to include PULSTAR fuel and
screened option of PWR/BWR transport canister)**

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Page No.

Description of Requested Change

- 1 Delete revision bar.
- 2 Delete all revision bars.
- 3 Drawing LWT 315-40-098 – change Rev. 2 to Rev. 3 (Sheets 1-2)
Drawing LWT 315-40-100 – change Rev. 2 (Sheets 1-2) to
Rev. 3 (Sheets 1-3)
Drawing LWT 315-40-104 – change Rev. 0 to Rev. 1 (Sheets 1-2)
Add the following drawings:
 - LWT 315-40-129, Rev. 1 Canister Body Assembly, Failed Fuel Can, PULSTAR
 - LWT 315-40-130, Rev. 1 Assembly, Failed Fuel Can, PULSTAR
 - LWT 315-40-133, Rev. 0 Transport Cask Assembly, PULSTAR Shipment, LWT Cask (Sheets 1-2)
 - LWT 315-40-134, Rev. 1 Body Weldment, Screened Fuel Can, PULSTAR Fuel
 - LWT 315-40-135, Rev. 1 Assembly, Screened Fuel Can, PULSTAR Fuel
- 4 Delete all revision bars.
- 5 Delete all revision bars.
- 10 Delete all revision bars.
- 11 Delete all revision bars.
- 13 Delete all revision bars.

Item 5.(b)(1)

Add:
 - (xiii) Intact or damaged PULSTAR fuel elements, including fuel debris, pellets, pieces and nonfuel components of PULSTAR fuel assemblies as specified below.

Description	Value
Maximum Pellet Diameter (inch)	0.423
Minimum Element (Rod) Cladding Thickness (inch)	0.0185
Minimum Element (Rod) Diameter (inch)	0.470
Maximum Active Fuel Height (inch)	24.1
Element (Rod) Length (inch)	26.2
Assembly Length (inch)	38
Maximum Assembly or Loaded Can Weight (lb) ¹	80
Maximum PULSTAR Can Content Weight (lb)	39.6
Maximum Enrichment (wt % ²³⁵ U)	6.5
Maximum ²³⁵ U Content per Element (g)	33
No. of Elements (Rods) per Assembly	25
No. of Elements (Rods) per Can	25
Maximum Depletion (% ²³⁵ U)	45
Minimum Cool Time (yrs)	1.5
Maximum Heat Load per Assembly (W)	30
Maximum Heat Load per Element (W)	1.2

¹ Listed weight is the maximum weight evaluated for the structural calculation to bound all payload configurations, including loaded cans and spacers. Nominal PULSTAR assembly weight is 45 pounds.

Item 5.(b)(2)(ii) – change “with the BWR fuel assembly basket” to “within the BWR fuel assembly basket”

14 Delete all revision bars.

15 Delete all revision bars.

Item 5.(b)(2)(vii) (c), 2nd sentence – change “Drawing Nos. 315-40-086, Rev. 0” to “Drawing Nos. 315-40-086, Rev. 1”

16 Delete all revision bars.

17 Delete all revision bars.

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Description of Requested Change

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Item 5.(b)(2), add:

(xiv) For PULSTAR fuel as described in Item 5.(b)(1)(xiii):

Up to 700 intact or damaged PULSTAR fuel elements in either assembly or element form, including fuel debris, pellets, pieces and nonfuel components of PULSTAR fuel assemblies. The contents of a PULSTAR can are restricted to the equivalent of the fuel material in 25 PULSTAR fuel elements and of the displaced volume of 25 intact PULSTAR fuel elements.

Item 5.(c)(1), change to read:

"... PWR or BWR rods, GA IFM, and intact PULSTAR fuel assemblies and elements:"

Item 5.(c), add:

(5) For damaged PULSTAR fuel elements: 33.4

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Delete all revision bars.

Item 11, change to read:

"... PWR or BWR rods, GA IFM, and PULSTAR fuel elements, the neutron shield tank"

Item 12, change to read:

"... PWR or BWR rods, TPBARs, or PULSTAR fuel elements, must use the ISO"

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Delete all revision bars.

Add new Item 16 as follows:

16. For shipment of PULSTAR:

(a) Intact fuel elements may be configured as fuel assemblies, may be placed into a fuel rod insert, i.e., a 4 × 4 rod holder, or may be loaded into PULSTAR cans. Intact PULSTAR fuel assemblies and PULSTAR fuel elements in a TRIGA fuel rod insert may be loaded in any basket module.

(b) Damaged PULSTAR fuel elements and nonfuel components of PULSTAR fuel assemblies must be loaded into PULSTAR cans. Damaged PULSTAR fuel, including fuel debris, pellets or pieces, may be placed in an encapsulating rod prior to loading in a PULSTAR can. PULSTAR fuel cans may only be loaded into the top or base module of the 28 MTR basket assembly.

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Description of Requested Change

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Change current Item 16 to Item 17, current Item 17 to Item 18, current Item 18 to Item 19.

REFERENCES – add:

“Supplements dated: November 2, 2004; February 17, 2005; and March 3 and 11, 2005.”