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W3F1-2009-0069

December 3, 2009

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Director, Spent Fuel Project Office  
Office of Nuclear Material Safety and Safeguards  
Washington, DC 20555-0001

Subject: 10 CFR 71.95 Report for Packaging and Transporting Shipping Cask  
(Model CNS 10-160B) Without Meeting a Required Condition in the  
Certificate of Compliance  
Waterford Steam Electric Station, Unit 3  
Docket No. 50-382  
License No. NPF-38

Reference: 1. USNRC Certificate of Compliance for Radioactive Material Packages,  
Certificate Number 9204, Revision 12, Docket Number 71-9204,  
Package Identification Number USA/9204/B(U)-85

Dear Sir or Madam:

Within this letter, Waterford 3 SES is submitting a written report pursuant to 10 CFR 71.95(a)(3) for packaging and transporting radioactive waste in a model CNS 10-160B shipping cask without observing a condition of approval in the cask's associated Certificate of Compliance (COC).

The content of this letter includes the reporting information required by 10 CFR 71.95(c), and is presented in the relative order as discussed in the regulation. The reporting information is as follows:

Brief Abstract

Waterford 3 SES (hereafter referred to as Waterford 3) packaged and transported shipping cask (model number 10-160B) containing a High Integrity Container (HIC) of spent plant resins on June 9, 2009 without having a shipping cask leak test performed on the STAT-O-SEAL as required by COC 9204. The cause of non-compliance with the COC is attributed to human error in determining the shipping package requirements.

The recipient of the cask (Studsvik Processing Facility) acknowledged the arrival of the shipment on June 11, 2009 without incident. Inspection and survey of the cask revealed that

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no resins had escaped the HIC inside of the shipping cask. There was no additional exposure to radiation as a result of this event. Corrective actions included ensuring the involved individuals with this event have internalized this as a learning opportunity; additionally, the remaining Radiation Protection Staff has been briefed on the event for lessons learned.

### Narrative

While researching shipping documents for an unrelated issue on October 13, 2009 at approximately 11:00 hours, a review of shipping package 09-1005 determined that transport cask number 10-160B did not have the cask leak test performed on the STAT-O-SEAL vent plug. The NRC Certificate of Compliance (9204) for the model CNS 10-160B cask (reference 1) requires that this test be performed prior to the shipment leaving the site. All other required leak tests were performed on the cask's primary and secondary lids prior to shipment.

The cask shipment departed Waterford 3 SES on June 9, 2009 at 1230 PM (CDT) via authorized transporter Hittman Transport Services. The cask shipment arrived at the Studsvik Processing Facility on June 11, 2009 at approximately 0800 AM (EDT) without incident. The shipping cask contained a secondary High Integrity Container which housed 44.9 Curies of dewatered bead resin that was designated for thermal processing to allow disposition off-site. The processing facility completed a visual inspection and a radiological survey of the cask and internal container upon arrival. The inspection and survey revealed that no resins had escaped into or out of the shipping cask and there were no radiological conditions above Federal (NRC or DOT) limits.

During preparation of the shipment, the Waterford 3 Qualified Shipper made an error in determining that the cask qualified as a general design package. Waste shipments with less than  $A_2$  quantity of Low Specific Activity (LSA) material can be shipped in a general design package that allows some exemptions. In this case, the contents were greater than  $A_2$  quantity of Low Specific Activity (LSA) and required the use of the cask as a specification package vs. a general design package. To be a specification package, it is required to meet the conditions of the COC. Waterford 3 uses a second individual to review shipments and the associated documentation prior to the shipment's departure from the site. The reviewer of the shipment did not recognize that the shipment documentation did not meet the requirements of the COC leak testing. These human errors allowed the shipping cask to leave Waterford 3 without meeting all leak test requirements of the COC for a specification package; in this case, the stat-o-seal vent plug was not tested. It is notable that the stat-o-seal vent plug was not manipulated at Waterford 3 and that the seal was successfully tested prior to arrival at Waterford 3; from this, it is reasonable to assume that the seal was physically intact during the shipment.

The failure mode was identified as Human Performance - Overconfidence. The procedure being used to prepare this shipment was EN-RW-102, Radioactive Shipping Procedure. The Waterford 3 Qualified Shipper involved has performed this task many times over the past twenty-one years and was recollecting previous knowledge of the procedure and interpretation of an exemption in the Certificate of Compliance stating that less than  $A_2$  quantity of Low Specific Activity (LSA) material was excepted from these tests. With this mindset, the fact that this shipment was more than  $A_2$  quantity of Low Specific Activity (LSA) material was not recognized.

Assessment of the Safety Consequences and Implications of the Event

The inspection and survey performed by Studsvik Processing Facility revealed that no resins had escaped into or out of the shipping cask and there were no radiological conditions above Federal (NRC or DOT) limits. There was no additional exposure to radiation as a result of this event.

Corrective Actions Planned/Taken

The site issued a "Yellow Memo" to the Radiation Protection organization for this condition to inform the Radiation Protection Staff of the occurrence. To prevent recurrence, this memo conveyed the expectation that all packages will be treated as containing greater than A<sub>2</sub> quantity of Low Specific Activity (LSA), no matter the contents. This will assure that COC requirements are met. The memo also reiterated that personnel performing shipping of specification packages will ensure all applicable requirements of Certificates of Compliance and package certifications are met. A planned corrective action has been issued in the Corrective Action Program to evaluate the applicable shipping procedure for additional guidance that may be needed to address this occurrence.

Previous Similar Events

There have been no previous similar events at Waterford 3.

Contact Name and Telephone Number

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Extent of Exposure of Individuals to Radiation or to Radioactive Materials

The shipment was made on June 9, 2009 and Studsvik Processing Facility acknowledged the arrival of this shipment on June 11, 2009 without incident. Inspection and survey of the cask revealed that no resins had escaped the HIC inside of the shipping cask and all dose rates were within Federal Limits.

This concludes the reporting information. The COC certificate holder is Energy Solutions, located at 140 Stoneridge Drive, Columbia, SC 29210. Input during the preparation of this report was requested and received from the certificate holder. A copy of this report is being forwarded to the certificate holder as required by 10 CFR 71.95(c).

This correspondence contains no new commitments.

If you have any questions or require additional information, please contact me at 504-739-6715.

Sincerely,

 For R. Murillo

RJM/RJP

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