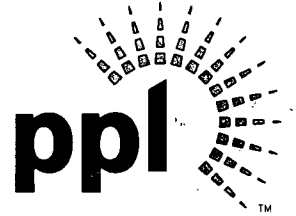


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SEP 10 2008


Attn: Document Control Desk
Director
Div. of Spent Fuel Storage and Transportation (formerly Spent Fuel Project Office)
Office of Nuclear Material Safety and Safeguards
U. S. Nuclear Regulatory Commission
Washington, DC 20555-0001

SUSQUEHANNA STEAM ELECTRIC STATION
VOLUNTARY REPORT CONSISTENT WITH 10 CFR 71.95 Docket Nos. 50-387
PLA-6425 and 50-388

On June 2, 2008, personnel at the Barnwell Waste Management facility discovered that one of the closure bolts on an Energy Solutions (Model 3-55-1) Type B shipping cask containing irradiated hardware from the Susquehanna Steam Electric Station (SSES) was not fully torqued. PPL had fully complied with the vendor cask handling procedure and the NRC Certificate of Compliance in preparing and shipping the cask. PPL Susquehanna, LLC (PPL) assessed the situation and determined that none of the reporting criteria in 10 CFR 71.95 had been met. However, due to the regulatory interest associated with the event, a voluntary report consistent with the content requirements of 10 CFR 71.95 has been developed and is attached.

There are no commitments associated with this report.

Should you have any questions regarding the information in this submittal, please contact Mr. Röger Stigers, Senior Health Physicist, at (570) 542-3020.


C. J. Gannon
Vice President – Nuclear Operations

Attachment

cc: NRC Region I
Mr. R. R. Janati, DEP/BRP
Mr. F. W. Jaxheimer, NRC Sr. Resident Inspector
Mr. R. Osborne, Allegheny Electric
Mr. B. K. Vaidya, NRC Project Manager

TE72
NM5501

Attachment to PLA-6425
10 CFR 71.95 Report

PPL Susquehanna, LLC (PPL) has determined that for the event described below, the requirements for reporting pursuant to 10 CFR 71.95 are not met. Review of the event has determined that there was not a significant reduction in the effectiveness of the NRC approved Type B packaging, no defects with safety significance were identified, and the conditions in the certificate of compliance were followed. However, since this event is of regulatory interest, this voluntary report is provided by PPL. The information provided below has been structured consistent with the information requirements of 10 CFR 71.95(c).

(1) Brief abstract

On June 2, 2008, Susquehanna Steam Electric Station (SSES) was notified by the Barnwell Waste Management facility that a radioactive material shipment contained in an Energy Solutions (Model 3-55-1) Type B shipping cask was received with a base plate bolt that was found to be less than the initial torque value. Survey results confirmed that no radioactivity leaked from the cask and thus no radiological safety concerns are associated with the bolting condition. Susquehanna Quality Control (QC) verified the bolt torque to be in accordance with the Certificate of Compliance torque requirement prior to shipment.

Previous industry operating experience identified a similar issue with this shipping cask (INPO OE24933). Subsequent to the June 2, 2008 discovery, Energy Solutions removed the cask from service and performed an evaluation. Enhancements were made to the cask bolting procedure for subsequent shipments. The cask has since been permanently removed from service.

(2) Narrative description of the event

On June 2, 2008, the Barnwell South Carolina waste disposal facility notified SSES of an issue with a shipping cask containing irradiated hardware that had been shipped from SSES. The cask was received at the Barnwell facility on May 31, 2008. The incoming radiological survey was completed. All survey parameters were in accordance with the specification values. On June 2, 2008, the cask had the impact limiter removed and was in the process of being offloaded when one of the twelve bolts that secures the cask base plate to the cask body was found to be at less than the initial torque value. Prior to leaving SSES, all bolts had been verified to be at the required torque value during an SSES QC inspection.

(2)(i) Status of Components or systems that were inoperable at the start of the event and that contributed to the event

One of twelve base plate bolts was found to be not fully torqued upon receipt at the disposal facility.

(2)(ii) Dates and approximate times of occurrence

The less than fully torqued bolt was identified on June 2, 2008 at the Barnwell facility.

(2)(iii) The cause of each component or system failure or personnel error, if known

PPL's cause analysis was limited to the PPL activities related to preparing and shipping the cask. The cask base plate bolt torque was verified to be in accordance with the Certificate of Compliance torque requirement prior to leaving SSES on May 30, 2008. There were no known causes of the loose bolt that were attributable to PPL activities.

Please contact ENERYSOLUTIONS/Duratek, the cask owner/Certificate holder, directly, for their analysis of the cause of the condition.

(2)(iv) The failure mode, mechanism, and effect of each failed component, if known

PPL has not performed an analysis of the failure mode or mechanism. Contact ENERYSOLUTIONS/Duratek, the cask owner/Certificate holder, for their analysis of the failure mode and mechanism. The effect of this condition is discussed in Item (3) below.

(2)(v) A list of systems or secondary functions that were also affected for failure of component with multiple functions

A secondary function of the cask plate is to prevent leakage of the cask contents. As discussed in Item (7) below, contamination surveys confirmed that no radioactivity leaked from the cask, and there were no radiological safety concerns associated with the bolting condition.

(2)(vi) The method of discovery of each component or system failure or procedural error;

The bolt that was found not to have retained its initial torque value was found during receipt inspection of the loaded cask at the Barnwell facility.

(2)(vii) For each human performance-related root cause, a discussion of the cause(s) and circumstances

PPL fully complied with the vendor cask handling procedure and the NRC Certificate of Compliance. The bolts were properly torqued and verified by PPL QC prior to departure from SSES. The cask was in full compliance with the Certificate of Compliance when it departed SSES. As such, there was no human performance related cause.

(2)(viii) The manufacturer and model number (or other identification) of each component that failed during the event

The cask is a model CNS 3-55, with a cask identification number of 3-55-1. This packaging is subject to NRC Certificate of Compliance No. 5805, issued to Duratek, Inc.

(2)(x) For events occurring during use of a packaging, the quantities and chemical and physical form(s) of the package contents

The cask contained radioactive irradiated metal components from SSES. These components provided an internal decay heat load of 185 watts; less than the 250 watts limit.

(3) An assessment of the safety consequences and implications of the event. This assessment must include the availability of other systems or components that could have performed the same function as the components and systems that failed during the event

There were no nuclear safety consequences due to the condition. Survey results confirmed there was no radioactivity released from the cask.

In the voluntary 10 CFR 71.95 report that was submitted on May 4, 2007 by Constellation Energy for their February 2007 event, the results of an engineering analysis were presented. The analysis assumed two loose base plate bolts and concluded that in a postulated cask drop, the allowable stress limits would not be reached. The SSES configuration, with only one loose bolt, is bounded by this analysis. As a result, there would be no actual safety consequences in an actual event.

(4) A description of any corrective actions planned as a result of the event, including the means employed to repair any defects, and actions taken to reduce the probability of similar events occurring in the future

PPL plans no corrective actions. We understand that ENERGYSOLUTIONS/Duratek, the cask owner/Certificate holder has permanently removed the cask from service.

(5) References to any previous similar events involving the same packaging that are known to the licensee or certificate holder

PPL is aware of two previous similar events related to this cask. One involved use of the cask by Nine Mile Point in February 2007; the other involved use of the cask by Fitzpatrick in February 2008.

(6) The name and telephone number of a person within the licensee's organization who is knowledgeable about the event and can provide additional information

Should you have any questions regarding the information in this submittal, please contact Mr. Roger Stigers, Senior Health Physicist, at (570) 542-3020.

(7) The extent of exposure of individuals to radiation or to radioactive materials without identification of individuals by name

Survey results confirmed that no radioactivity leaked from the cask, and there were no radiological safety concerns associated with the bolting condition.