



## PECO NUCLEAR

A Unit of PECO Energy

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Docket Nos. 50-277  
50-278  
License Nos. DPR-44  
DPR-56

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555

Subject: Peach Bottom Atomic Power Station Units 2 & 3  
Response to Notice of Violation (NRC'S PEACH BOTTOM REPORT  
05000277/2000-002, 05000278/2000-002)

Gentlemen:

In response to your letter dated June 22, 2000, concerning the above referenced inspection report, which transmitted an apparent non-green finding in the Public Radiation Safety cornerstone, PECO Nuclear is submitting additional information for your consideration. The subject report concerned a Radioactive Material Processing and Transportation Inspection.

In addition to this letter, PECO Nuclear has requested a regulatory conference be scheduled to further discuss this issue.

If you have any questions, do not hesitate to contact us.

Regards,

John Doering, Jr.  
Vice President,  
Peach Bottom Atomic Power Station

### Attachments

JD/dmw

*Am J*

cc: H. J. Miller, US NRC, Administrator, Region I  
A. C. McMurtry, US NRC, Senior Resident Inspector

CCN: 00-14058

*IEU 6*

**PEACH BOTTOM**  
**RADWASTE MANIFEST POTENTIAL NON-GREEN FINDING INFORMATION**

**1. RESTATEMENT OF APPARENT POTENTIAL WHITE FINDING:**

PECO Nuclear identified that it under-classified a shipment of radioactive waste sent to a licensed disposal facility on June 28, 1999. The waste was initially classified and described as 99 curies of Class A waste but later determined to contain 407 curies of Class B waste. The under-classification of radioactive waste for disposal was a matter having apparent low to moderate safety significance because accurate waste characterization is necessary to ensure proper near-surface disposal of radioactive waste materials. The inspector identified an apparent violation of 10 CFR 61.55 and 10 CFR 20.2006. (Section PS2.2)

**2. ADDITIONAL INFORMATION REGARDING NON-GREEN FINDING:**

PECO Nuclear acknowledges that the under-classification of radioactive waste for disposal does represent a violation of 10 CFR 61.55, but PECO Nuclear's review has determined that this issue did not involve exceeding any radiation limits, and there were no actual public health and safety consequences associated with these matters. It can be concluded, therefore, that very low safety significance is attributed to this finding. Therefore, PECO Nuclear does not believe that the classification of this issue is consistent with the objectives of the revised regulatory oversight process and is requesting that the NRC reevaluate the Significance Determination Process (SDP) used to classify this finding, and as appropriate, change the risk classification of this issue.

To support PECO Nuclear's above assertion the following information is presented in three areas: Onsite Preparation, Transportation, Burial. A statement is made identifying the actual or potential consequences or risk associated with each area followed by a basis statement that contains facts that support this conclusion.

**ONSITE PREPARATION FOR SHIPMENT:**

**1. Occupational Exposure:**

The onsite occupational exposure associated with this radwaste shipment was appropriately managed to be ALARA.

**Basis:**

Dose rates on the shipment were correctly measured as 176 R/hr on contact and 9.5 R/hr at 3 meters and appropriate measures were taken to minimize personnel exposure.

**TRANSPORTATION:**

**1. Health and Safety of the Public:**

During transport of this radwaste shipment there was no actual or potential increased risk to the health and safety of the public.

Basis:

The risk to the health and safety of the public during shipment could arise in two ways.

First is the risk of a traffic accident during transport. There was no increase in the actual or potential risk associated with a transportation accident because the radioactive waste shipped was Reactor Water Clean-up (RWCU) resin which was and always would be shipped in a Type B shipping container, based on the dose rates of the shipment being measured correctly and verified.

It was recognized through further review of this issue that because of the improper transportation classification of this shipment as Radioactive Material, LSA, n.o.s. the emergency response instructions warned of the potential for a radwaste spill. A spill is not anticipated with a Type B container due to its design and therefore, spill instructions are not normally part of the Type B container paperwork. The spill instructions include information on diking and damming spill, first aid if spill is on skin, and protective clothing, all of which are not anticipated with a Type B container. Addition of these instructions is conservative. This represented no increased risk to the public based on the fact that the emergency response instructions were provided, although not required due to the use of a Type B container.

The second risk is public exposure. Because the dose rates for the shipment were correctly identified, verified, and met the requirements of 49CFR173.441 there was no increase in the risk of public exposure from this shipment.

2. Occupational Exposure:

During the transport of this shipment there was no increased risk or consequences.

Basis:

Because the dose rates for the shipment were correct and verified, there was no increase in the risk from occupational exposure from this shipment. The shipment was placed into the appropriate container and properly shielded to maintain dose ALARA.

BURIAL:

1. Health and Safety of the Public:

The burial of this radwaste shipment resulted in no actual or potential increased risk to the health and safety of the public.

Basis:

Barnwell Waste Management Facility had properly buried the shipment into the designated trench for Class B waste based on the shipment's radiation levels. The shipment was also packaged in a High Integrity Container, which met the burial container requirements of remaining intact for 300 years and preventing ground water contamination. Therefore, there was no potential for any future impact to the environment.

Prior to burial, Barnwell Waste Management Facility identified that the radiation levels on the documentation did not match the shipping classification of Radioactive Material, LSA, n.o.s. The shipment should have been classified as Radioactive Material, n.o.s. Barnwell Waste Management Facility contacted PECO and PECO took immediate actions to correct the shipping papers.

After notification of this issue, PECO Nuclear commenced an investigation to review all the documentation associated with this shipment. Additional discrepancies were identified by PECO Nuclear. A second sample from this shipment was identified by the resin dewatering vendor and subsequently re-analyzed. The curie content measured on the second sample was much higher than the original sample. PECO Nuclear also identified that the Transport Index listed on the manifest was incorrect and the emergency response paper work was for Radioactive Material, LSA, n.o.s.

PECO Nuclear notified Barnwell Waste Management Facility of the error in curie content for the shipment and forwarded the corrected paperwork to the disposal facility. Barnwell Waste Management Facility identified that no action was required by the disposal facility since the shipment was already disposed of properly in the Class B trench.

Although a non-representative sampling technique resulted in the misclassification of a radwaste shipment, because of other programmatic controls and conservative measures taken by PECO Nuclear, this error did not and could not have resulted in any actual or potential consequence or increased risk to the public. Therefore, PECO Nuclear is requesting that the NRC reevaluate the current Significance Determination Process (SDP) used to classify this issue and appropriately reclassify this issue.

In addition, the NRC Office of Nuclear Reactor Regulation and the NRC Office of Nuclear Material Safety and Safeguards recently met with stakeholders during one of the scheduled revised reactor oversight process public meetings to discuss proposed revisions to NRC Inspection Manual Chapter 0609 "Significance Determination Process," regarding 10 CFR Part 61 Licensing Requirements for Land Disposal of Radioactive Waste. Specifically, Appendix D of Manual Chapter 0609 is under consideration to be clarified to reference Part 61.55 "Waste classification," and to specify that the under-classification portion (Low Level Burial Ground) of the Public Radiation Safety Significance Determination Process (SDP) provide a provision that if an under-classification does conform to Part 61.56 (waste characteristics for disposal) the issue would be characterized as a GREEN finding. These proposed changes are consistent with SDP methodology since there are specific requirements for disposal that can be easily measured to ensure there is no increase in risk. Other potential transportation considerations such as public radiation safety, radiation limits, container certificate of compliance, and package breach are currently addressed in other areas of the SDP.

Finally, the classification of this issue as GREEN is consistent with NUREG 1600, Revision of the NRC Enforcement Policy effective May 1, 2000, in so much that the violation associated with the issue has very low safety significance (no actual or potential increase in risk as stated above) and conform to Section VI.A.1 of the policy: a) compliance was restored within a reasonable time; b) the issue was placed into a corrective action program; c) the violation was not repetitive as a result of inadequate corrective action, and was not identified by the NRC.

3. CORRECTIVE ACTIONS THAT HAVE BEEN TAKEN AND THE RESULTS ACHIEVED:

Once Barnwell Waste Management Facility notified the site of the shipping paper error, PECO Nuclear took immediate action to correct the shipping paperwork and initiate an investigation into the issue. During the investigation, it was found that the Transport Index also had incorrect information. Another sample of the RWCU resin was identified and analyzed, which indicated that the actual Curie content was higher than recorded previously.

PECO Nuclear corrected the subsequent paper work associated with the shipment, made procedural changes regarding how to obtain a more representative resin sample, and contacted the responsible parties involved. These issues were entered into the corrective action program in a timely manner. The computer program which did not recognize the dose rate requirements at 3 meters for proper transportation classification has been updated.

It should be recognized that corrective actions were taken prior to any NRC intervention, and that no action to rebury the shipment was required.

4. CORRECTIVE STEPS THAT WILL BE TAKEN TO PREVENT RECURRENCE

An in-depth review of the entire Radwaste shipping program is being performed to identify and resolve negative trends using the corrective action program.

5. DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED:

Full compliance has been met.