

PA Department of Environmental Resources
Bureau of Radiation Protection
Division of Nuclear Safety

REPORT NOS. 50-277/PA-94-01
50-288/PA-94-01

DOCKET NOS. 50-277
50-288

LICENSE NO. DPR-44
DPR-56

LICENSEE: PECO Energy Co.
Correspondence Control Desk
Route 1, Box 208
Delta, PA 17314

FACILITY NAME: Peach Bottom Atomic Power Station

INSPECTION AT: Peach Bottom Township, York County

INSPECTION DATE: June 7, 1994

INSPECTORS:	<u>R. C. Maiers</u>	<u>6/30/94</u>
	R.C. Maiers, Nuclear Engineer	Date
	<u>D. E. Ney</u>	<u>6/30/94</u>
	D.E. Ney, Nuclear Engineer	Date
Approved by:	<u>R. R. Janati</u>	<u>6/30/94</u>
	R.R. Janati, Chief Division of Nuclear Safety	Date

Areas Inspected: Announced inspection of the licensee's low level radioactive waste shipment to the burial site including: shipping documentation, package inspection, labeling, marking, placarding, vehicle inspection, radiation and contamination surveys.

Results: No violations or deviations were identified.

DETAILS

1.0 PERSONNEL CONTACTED

1.1 LICENSEE PERSONNEL

- * R. Smith, Regulatory/Exp. Assessment
- * M. Moore, Manager Radiation Protection
- * F. Cross, Manager Radwaste Services
- * S. Kohlbus, HP Supervisor
- * G. Dworsak, Physicist
- * G. Gellrich, Sr. Manager Operations
- * S. Baker, Manager Radwaste
- * B. Wargo, NQA Lead Assessor
- L. Hildebrand, H.P. Technician
- J. Nelson, H.P. Technician

1.2 NRC PERSONNEL

- * P. Bonnet, Resident Inspector

* Denotes those present at the exit interview on June 7, 1994

2.0 Scope of the Inspection

This inspection was conducted in accordance with the Memorandum of Understanding (MOU) between the Commonwealth of Pennsylvania and the U.S. Nuclear Regulatory Commission. The State inspectors reviewed the licensee's low level radioactive waste shipment No. 037-94 to the Barnwell Waste Management Facility according to the attached inspection checklist.

The waste prepared for shipment contained dewatered resin and was determined to be LSA, Class B. It was stabilized in a Polyethelene High Integrity Container (HIC). The HIC was placed inside a Pacific Nuclear, NRC certified, Type A cask.

The inspectors witnessed loading of the HIC into the cask, placement of security seals, and bolt down of the cover. The inspectors reviewed the certificate of compliance (COC) for the cask and the cask loading and closing procedure. The inspectors also examined the cask and determined it to be in satisfactory material condition.

The inspectors performed an independent radiological survey of the shipping cask and the HIC inside. The highest reading was 10.1 mR/hr on the cask surface and 1.9 mR/hr at 2 meters. The highest removable contamination detected from smear samples taken at representative locations around the outer surface of

the cask was 2 counts per minute (cpm) above background or approximately 0.067 dpm/cm².

The inspectors witnessed the licensee performing incoming and outgoing radiological surveys and contamination smears of the HIC and the cask. A visual inspection of the vehicle was performed to ensure that the vehicle was in an acceptable condition for transport.

After all surveys were completed, the appropriate papers were transferred to the driver. The shipment then left the site for the Barnwell disposal facility in South Carolina.

The inspectors performed an independent verification of the licensee's calculations for waste classification, Low Specific Activity (LSA), Reportable Quantity (RQ) and A2 Quantity determination. The shipping papers were reviewed for completeness and accuracy. No discrepancies were noted.

3.0 Exit Meeting

The inspectors met with the licensee representatives denoted in Section 1.0 at the conclusion of the inspection. The inspector summarized the scope and findings of the inspection.

PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF RADIATION PROTECTION
DIVISION OF NUCLEAR SAFETY
LOW LEVEL RADIOACTIVE WASTE SHIPMENT
INSPECTION REPORT

Peach Bottom
LLRW Shipment

REVISION 1

Report No. 50-277/PA-94-01
50-288/PA-94-01

A. General Information

1. Date of Inspection June 7, 1994
2. Name of Shipper PECO Energy Co.
3. Name of Carrier Pacific States
4. Destination Barnwell, SC
5. Verify Advanced Notification to the Consignee NA

[Fissile materials, and Type B or highway route controlled quantities - 49 CFR 173.22(c)]

6. Verify Advanced Notification to the State(s) NA

[(Type B packages only - 10 CFR 71.97)]

7. Package(s) Used

Cask
 HIC
 Liner
 Drums
 Boxes
 Other (Specify)

8. Number of Packages One

9. Method of Shipment

A. Exclusive Use
B. Non-Exclusive Use

10. Transport Vehicle

Open
 Closed

B. Shipping Documentation Checklist

1. Shipping papers present [49 CFR 172.200, 201, 202, 203]
2. Proper shipping name and hazard class [172.202(a)]
3. Proper I.D. number [172.202(a)]
4. Waste Description dewatered resin and total quantity by weight (lbs) [172.202(a)] 6330, volume (cu. ft.) [172.202(a)] 202.1, activity (Ci) [172.203(d)] 12.36

5. Radionuclides identified [10 CFR 20.311(b) & 49 CFR 172.203(d)]
6. Total quantity of radionuclides H-3, C-14, Tc-99 and I-129 shown [10 CFR 20.311(b)]
7. Waste classified and characterized properly [61.55, 61.56 and BTP]
(Perform a review of documentation for classification and characterization to determine if classification is correct and reasonable)
8. Description of chemical/physical form [172.203(d)]
9. Category of label applied to each package [172.203(d)]
10. T.I. assigned to each package bearing Y-II or Y-III [172.203(d)]
11. Shipper's certification [172.204(a)]
12. Instructions to carrier provided [173.441(c), 173.425(b)] (exclusive use only)

C. Packaging/Package Inspection

a. Packaging Compliance

Are authorized packages used? [173.415, 173.416]

Package types used:

LSA-strong tight [173.425(b)]

DOT-7A, Type A

Performance test records on file? [173.415(a)]

NRC Certified

Current NRC COC's on file? [10 CFR 71.12(c)]

Registered with NRC NMSS as user? [71.12(c)]

(Prior to the licensee's first use of the package)

b. Security Seals and Package Integrity

Security seals [173.412(b)] (LSA-Exclusive use, closed vehicle exempt)

Lids secure [173.475(c)]

No visible damage or leakage [173.425(b)]

Packages surveyed for radiation [173.441] and contamination [173.443]

D. Labeling, Marking and Placarding Checklist

a. Labeling

- NA Packages labeled W-I, Y-II, Y-III [172.403(b), (c)]
(LSA - Exclusive use exempt)
- NA "Contents" and "Activity" entered [172.403(g)]
- NA Transport Index affixed on Y-II, Y-III labels [172.403(g)]

b. Marking

- X Packages marked properly, i.e., proper shipping name, identification number, DOT Spec. number, NRC COC number, consignee or consignor's name and address, etc. [172.301, 304, 306]
- X Type A/type B package marked "Type A" or "Type B" [172.310(a)]
- X Gross weight marked if package exceeds 110 pounds [172.310(a)]
- X Waste class marked A-B-C stable/unstable [10 CFR 20.311(d)(2)]
- X LSA - Exclusive use package marked "RADIOACTIVE-LSA" [173.425(b)]

c. Placarding

- X Placards on each end and sides of vehicle for Y-III, LSA exclusive use and highway route controlled quantity [172.504(a), 506, 507, 173.425(b)]

E. Vehicle Inspection Checklist

- X Verify that vehicle was monitored and inspected by the licensee upon arrival.
- X Shipment blocked, braced, tied down in vehicle [173.425(b)]
- X Ensure that the licensee surveys the shipment adequately using proper instruments. Review the licensee's survey map(s) to verify that all the required readings are performed and they are in reasonable agreement with inspector's.

F. Radiation/Contamination Survey [49 CFR 173.441, 173.443]

a. Exclusive Use Vehicles

- .15 Not exceed 2 mR/hr in any occupied position in the vehicle
- 1.9 Not exceed 10 mR/hr at 2 meters (6.6 ft) from the vehicle
- 4.32 Not exceed 200 mR/hr on outer surface (including upper or lower) of the vehicle
- NA Not exceed 1,000 mR/hr on the external surface of the package (closed transport vehicle)
- 10.1 Not exceed 200 mR/hr on the external surface of the package (open transport vehicle)

b. Non-Exclusive Use Vehicles

- NA Not exceed 10 mR/hr at 1 meter (3.3 ft) from package
- NA Not exceed 200 mR/hr on the external surface of the package

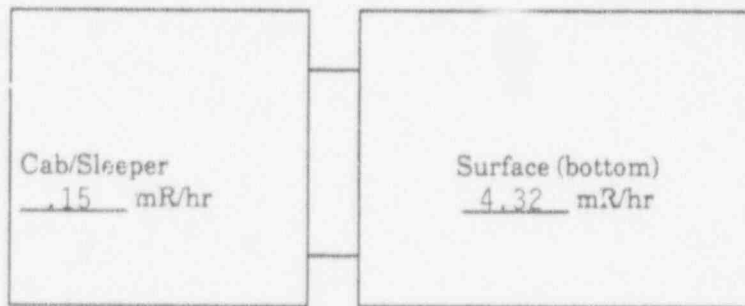
c. Highest Contamination Detected

Not exceed 22 dpm/cm² (beta & gamma)
 (Wipe sample for 300 cm²)

Highest Contamination Detected	<u>21</u>	CPM
Background Reading	<u>19</u>	CPM
Difference/Above Background	<u>2</u>	CPM
Divide by Instrument Efficiency (0.10)	<u>20</u>	
Divide by (300 cm ²)	<u>0.067</u>	DPM/CM ²

RADIATION/CONTAMINATION SURVEY (transport vehicle)

Surface 9.56 mR/hr
 2 meters 1.9 mR/hr



Surface 9.35 mR/hr
 2 meters 1.33 mR/hr

G. Results of Inspection

I. Violations/Non-Compliance

None

II. Comments

None

Instruments Used

	<u>Instrument(s)</u> <u>Type</u>	<u>Serial</u> <u>No.</u>	<u>Calibration Expiration</u> <u>Date</u>
Dose Rate Instrument	ESP-2 EBERLINE HP-270 Probe	00310	April 8, 1995

Contamination Instrument	ESP-2 EBERLINE HP-210 Probe	00310	April 8, 1995
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Inspector's Name Robert C. Maiers
 David E. Ney