

U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

Region I

Report No. 50-277/81-06
50-278/81-06
Docket No. 50-277
50-278
License No. DPR-44 Priority _____ Category C
DPR-56

Licensee: Philadelphia Electric Company
2301 Market Street
Philadelphia, Pennsylvania 19101

Facility Name: Peach Bottom Nuclear Power Plant Units 2 & 3

Inspection at: Delta, Pennsylvania

Inspection conducted: February 25-26, 1981

Inspectors: J. Roth 4/14/81
J. Roth, Fuel Facility Inspector date signed

Accompanied by: D. M. McGee, Safety Investigator _____
U. S. DOT Federal Highway Administration date signed

Approved by: H. W. Crocker _____
H. W. Crocker, Chief, Fuel Facility date signed
Projects Section, DRPI

Inspection Summary:

Inspection on February 25-26, 1981 (Combined Report No. 50-277/81-06; 50-278/81-06)
Areas Inspected: Special announced inspection by a region-based inspector, at the request of the licensee, of the licensee's management control systems regarding the packaging and shipment of radioactive waste to the burial site including: procedures; audits; training records; and observations by the inspector. The inspection was initiated on the day shift and involved 18 inspector-hours onsite by one NRC inspector.
Results: No items of noncompliance were identified. The licensee committed to the preparation of a procedure to cover the examination of shipping containers loaded and prepared for shipment prior to implementation of the new procedures and quality control program on February 20, 1981 (81-06-01); paragraph 3.b.

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DETAILS

1. Persons Contacted

- *W. T. Ullrich, Station Superintendent
- *N. F. Gazda, Health Physics Supervisor
- *A. Hiismier, Engineer, Health Physics and Chemistry
- *F. H. Cross, Supervisor, Rad-Waste Shipment
- D. M. McGee, Safety Investigator, US DOT Federal Highway Administration
- *C. Cowgill, Resident Inspector, NRC

The inspector also contacted 10 other licensee employees during the course of this inspection. These included supervisors, foremen, operators, quality control, quality assurance, shipping and health and safety personnel.

* denotes those present at the exit interview.

2. Scope of Inspection

This was a special inspection to examine the licensee's low level waste packaging and transportation program. The inspection was conducted as a result of the licensee being barred from use of the U.S. Ecology, Beatty, Nevada, burial site after the identification of the existence of breached packages upon receipt of a shipment of radioactive waste at the burial site on or about November 5, 1980. In addition, the licensee's procedures relative to packaging and shipping were reviewed at the request of the licensee as required by paragraph 3 of a letter from the State of Nevada, Division of Health to the licensee dated November 10, 1980.

3. Review of Operations

The inspector examined the facility in order to observe all operations connected with the packaging and shipment of low level waste.

a. Sorting Operation

The inspector reviewed the procedure HPC/CO-71J "Sorting Radioactive Trash for Liquids and Recoverable Materials," Revision 0, dated December 19, 1980, and determined that the operation was being conducted as required. Subsequent to the inspection, this procedure was revised by the licensee (Revision 1 dated March 2, 1981) to incorporate comments made by the inspector.

In the sorting operation, liquid and/or liquid bearing solids are separated from other contaminated materials for special handling. In addition, recoverable items, i.e. respirators, protective clothing,

tools, etc., are also removed from contaminated trash. Solid trash is placed into plastic bags, sealed, handed out through a protective screen, rebagged and transferred by hand to the compacting operation. It was noted that this operation had been initiated on the date of this inspection. General air samples had been located at the sorting work station but not at the location where rebagging took place and the operator at the rebagging location did not wear a respirator. The sorting operator did wear a supplied air respirator. This was discussed with licensee representatives and a general air sampler was immediately installed in order to evaluate potential airborne exposure by the operator located at the rebagging station.

b. Packaging of Waste

The inspector reviewed the procedure HPO/CO-71K "Compacting and Storage for Shipment of Radioactive Trash in the B-25 Metal Container," Revision 1 dated January 21, 1981. Revision 2 was issued on February 23, 1981 and Revision 3 was issued on March 2, 1981 subsequent to this inspection. Revision 3 incorporated comments made by the inspector.

Subsequent to the identification of the problem with drums of low level waste at the Nevada burial site, the licensee decided to use only the B-25 containers for the packaging and transport of low level contaminated compactable trash. The B-25 container is a rectangular metal box about 4 feet deep by 7 feet wide by 4 feet high. The inspector observed that the trash in plastic bags is placed into the container after the sorting operation. Prior to compaction each plastic bag is slashed with a knife at several locations to assure that the bags collapse upon compaction. The inspector observed that remaining air bubbles in the bags at the edges of the container were also slashed with a long handled knife after compaction pressure had been applied to the waste in the container and prior to release of pressure on the compaction ram. Box B-109-81 was being filled and compacted at the time of this inspection. Container closure is accomplished through the use of 4 one way "L" shape clips which upon installation compress the rubber gasket in the lid to form a metal, strong, tight container. Once these clips are installed, they cannot be removed without destroying the integrity of the container.

The inspector noted that the licensee had, in outside storage, about 45 to 60 B-25 boxes which, according to licensee representatives, had been filled prior to implementation of the new procedures on February 20, 1981. During the exit interview, the licensee committed to the preparation and implementation of a management approved procedure which would assure that these packages had been opened, rechecked for compliance with regulatory requirements and corrected, if necessary, prior to release for shipment to the burial site. This procedure, HPO/CO-71N, "Inspection of B-25 Metal Containers Compacted Prior to Implementation of Q.C. Program on 2/20/81," Revision 0 dated March 2, 1981 was received by the inspector

for review on March 4, 1981. The procedure specifies the steps to be taken to assure that the contents of each box is Low Specific Activity (LSA) material, is free of accumulated liquid, is a strong tight container, and, has been prepared for transportation as required by federal, state, and burial site requirements. (81-06-01)

No items of noncompliance were identified.

c. Discussion with Operators

The inspector determined through discussions with two operators (contractor personnel), that they appeared to be cognizant of the procedural requirements of the tasks to which they were assigned. However, each operator indicated that they had not read the procedures prepared by the licensee. They had been verbally instructed in the specific contents of the procedures. The operators were not aware that they were following the procedures as written. The inspector discussed this with licensee representatives and the operators were given copies of the procedures to read prior to the end of this inspection.

No items of noncompliance were identified.

d. Radwaste Shipments

The inspector examined two shipments of radwaste which had been loaded into Hittman Model HN-100 Series 2 casks (C of C 9079). One cask (Serial No. 7) left the site on February 25, 1981 and the second cask (Serial No. 9) left the site on February 26, 1981. The casks were loaded as required with dewatered resins contained in DOT type 17H specification containers which had been prepared for shipment as required by applicable procedures. The inspector observed the radiation survey conducted on the February 25, 1981 shipment. No inadequacies were observed. The inspector also examined the shipping papers prepared for the February 26, 1981 shipment. No inadequacies were observed.

The DOT Safety Investigator who accompanied the inspector examined the vehicle used for the February 26 shipment and found a faulty tractor exhaust system. This tractor had to be repaired prior to the shipment leaving the site. In addition, he noted corrosion on one of the cask tiedown cables. This was verified by the inspector. Through discussions with licensee representatives and Hittman representatives by telephone, the inspector determined that there was no safety problem concerned with the partially corroded cable in that the cable installed was 7/8 inch diameter and a Hittman evaluation described to the inspector by the Hittman representative indicated that a 1/4 inch diameter cable was required to meet transportation requirements. The inspector observed that the 7/8 inch cable was made up of 8 1/4 inch diameter bundles and

only 3 of the 6 bundles appeared to be partially corroded. The Hittman representative stated that the vehicle upon leaving the licensee's site would be returned to the Hittman terminal (a distance of about 40 miles) and the corroded cable would be replaced prior to transport to the Barnwell, South Carolina burial site.

No items of noncompliance with NRC regulations were identified.

4. Audit Program

a. Quality Control

The inspector determined through discussions with licensee representatives and review of licensee procedures that the licensee has instituted a radwaste packaging and shipment quality control program. Quality control inspectors have been trained and assigned to cover each aspect of the program from collection of trash through the sorting operation to the packaging and preparation for shipment. Each procedure established includes a check list system which must be signed by the quality control inspector prior to going on to the next step in the procedure.

No items of noncompliance were identified.

b. Quality Assurance

The facility Quality Assurance organization conducts a complete review of the radwaste packaging and shipment program in an annual cycle. The inspector examined the audits conducted and completed on November 9, 1979 and December 24, 1980. All aspects of the program were reviewed during the audits and corrective actions had been taken or initiated on those items identified as needing correction.

In addition, the Quality Assurance group conducts surveillance checks on each individual area within each discipline on a 2 year cycle. These checks are in addition to overall program audits conducted.

No items of noncompliance were identified.

c. Quality Assurance Programs for Radioactive Material Packages

The inspector determined that the licensee had submitted a quality assurance program for radioactive material packages as required by 10 CFR 71.12 which satisfied the provisions of 10 CFR 71.51 to NRR - NMSS on June 23, 1978 and April 10, 1979. This quality assurance program was approved by NRC - NMSS by letter dated May 2, 1979 for implementation as of July 1, 1979.

No items of noncompliance were identified.

5. Procedure Review

The following licensee procedures relative to packaging and shipping of radwaste were reviewed by the inspector.

<u>Procedure No.</u>	<u>Revision No.</u>	<u>Date</u>	<u>Revision No.</u>	<u>Date</u>
HPO/CO-17	8	11/3/80	0	3/2/81
HPO/CO-17A	0	10/20/79		
HPO/CO-70	0	7/28/77		
HPO/CO-71A	2	1/3/80		
HPO/CO-71B	1	2/5/79		
HPO/CO-71C	4	12/18/79		
HPO/CO-71C App A	3	1/3/80		
" APP B	3	11/3/79		
" App C	0	2/1/80		
" App D	2	12/3/80		
" App E	1	12/2/80		
HPO/CO-71C COL	5	1/3/80		
HPO/CO-71D	4	1/21/81	5	3/2/81
HPO/CO-71E	1	1/3/80		
HPO/CO-71F	2	5/27/80		
HPO/CO-71F-1 COL	3	7/28/80		
HPO/CO-71F-2 COL	1	5/27/80		
HPO/CO-71G	3	1/21/81		
HPO/CO-71G COL	1	1/3/80		
HPO/CO-71H	1	5/27/80		
HPO/CO-71I	1	1/21/81		
HPO/CO-71J	0	1/19/80	1	3/2/81
HPO/CO-71K	1	1/21/81	3	3/2/81
HPO/CO-71L	0	2/4/81	1	3/2/81
HPO/CO-71M	0	2/23/81		
HPO/CO-71N			0	3/2/81
HPO/CO-74	2	11/17/78		

As indicated in the fourth and fifth columns of the above table, the licensee modified the indicated procedures to incorporate comments made by the inspector after completion of the review. Procedure HPO/CO-71N was prepared by the licensee as discussed previously in paragraph 3.b to cover preparation of previously prepared packages for shipment to the burial site.

No items of noncompliance were identified.

6. Certificate of Compliance

The inspector examined certificate of compliance No. 9079 for the Model HN 100 cask. The licensee was found to be a registered user of the cask and all of the drawings and documentation specified in the certificate of compliance were available for use by licensee representatives as required.

No items of noncompliance were identified.

7. Exit Interview

The inspector met with licensee representatives (denoted in paragraph 1) at the conclusion of the inspection on February 26, 1981. The inspector presented the scope and findings of the inspection. Remarks made by licensee representatives during the exit interview have been incorporated into the applicable paragraphs of the inspection report details.

Commitments made by the licensee at the exit interview with respect to the preparation of procedures for the examination of packages prepared prior to implementation of the quality control program on February 20, 1980 are discussed in paragraph 3.b. The new procedure was submitted to Region I on March 4, 1981. Upon review of this procedure, the inspector determined that the licensee had met all aspects of the commitments made during the exit interview.

Subsequent to the inspection, a memorandum, dated March 17, 1981, was sent from Region I to the NRC Office of State Programs for transmittal to the State of Nevada, Department of Human Resources, Division of Health, which stated that the licensee had implemented the required quality control procedures concerned with the packaging and transportation of low level radioactive waste to the burial site and no inadequacies were identified by the inspector.