

U.S. NUCLEAR REGULATORY COMMISSION  
REGION I

Report No. 50-219/83-02

Docket No. 50-219

License No. DPR-16 Priority -- Category C

Licensee: GPU Nuclear Corporation

P. O. Box 388

Forked River, New Jersey 08731

Facility Name: Oyster Creek Nuclear Generating Station

Inspection at: Forked River, New Jersey

Inspection conducted: January 16-20, 1983

Inspectors: David J. Collins  
D. J. Collins, Radiation Specialist, Facilities  
Radiation Protection Section, RPB

February 8, 1983  
date

Approved by: M. M. Shanbaky  
M. M. Shanbaky, Chief, Facilities Radiation  
Protection Section, Radiological Protection  
Branch, DETP

2/8/83  
date

Inspection Summary: Inspection on January 16-20, 1983 (Inspection Report No. 50-219/83-02)

Areas Inspected: Routine, unannounced safety inspection during routine and off-shifts of the radiation protection program, including: previously identified items; control of radioactive sources, leak test records, inventory and Spent Fuel Pool inventory; personnel selection, qualification, and training; external exposure control, radiation work permits, high radiation area controls; in-plant radiation protection program implementation; transportation of radioactive materials. The inspection also evaluated an allegation concerning licensed radioactive sources. The inspection consisted of 45 hours on-site by a region-based inspector.

Results: No violations were identified in the seven areas.

## DETAILS

### 1. Persons Contacted

#### 1.1 Licensee Personnel

- \*Mr. Peter B. Fiedler, Vice President and Director, Oyster Creek Nuclear Generating Station (OCNGS)
- \*Mr. C. J. Halbfoster, Manager - Plant Chemistry
  - Mr. M. Laggart, Licensing Supervisor
- \*Mr. D. W. Turner, Manager, Radiological Controls
- \*Mr. J. M. De Blasio, Plant Support Engineering - Supervisor
  - Mr. S. Fuller, Operations Quality Assurance Manager
  - Mr. E. Gowney, Safety Review Manager
- \*Mr. R. P. Jewell, Licensing Engineer
  - Mr. W. Love, Rad Waste Shipping Supervisor
  - Mr. D. Miller, Supervisor, Radiological Controls Training
  - Mr. J. Molnar, Core Manager
- \*Mr. J. R. Pelrine, Plant Engineering - Chemistry Controls
  - Mr. M. Vyenielc, Rad Con Field Operations, Deputy Manager
  - Mr. G. Young, Administrator, Rad Con Training

\*Attended the Exit Interview on January 20<sup>th</sup>, 1983

#### 1.2 NRC Personnel Attending the Exit Interview

- Mr. C. Cowgill, Senior Resident Inspector
- Mr. J. Thomas, Resident Inspector

Other licensee or contractor employees were also contacted or interviewed during this inspection.

### 2. Purpose

The purpose of this routine safety inspection was to review the licensee's radiation protection program with respect to the following elements:

- status of previously identified items (paragraph 3);
- control of radioactive sources, leak testing of radioactive sources, and Spent Fuel Pool Inventory (paragraph 4);
- personnel selection, qualification and training (paragraph 5);
- external exposure control, including radiation work permits (RWPs) and high radiation area controls (paragraph 6);
- in-plant radiation protection program implementation (paragraph 7); and
- transportation of radioactive materials (paragraph 8).

On January 4, 1983, NRC Region I became aware of an allegation of improper implementation of the licensee's Radiological Controls program. In response, a Radiation Specialist was assigned to conduct an inspection relative to this allegation. The allegation is discussed in paragraph 4.

### 3. Status of Previously Identified Items

(Closed) Unresolved (50-219/79-18-33): Licensee to locate records of radiochemistry equipment tests. NRC Inspection Report 50-219/82-24 noted instances within the licensee's chemistry program which were similar to this finding, and resulted in issuance of an inspector follow item. Licensee action on 50-219/82-24-03 will be submitted to NRC:RI and will be reviewed during a subsequent inspection.

(Closed) Inspector Followup Item (50-219/79-23-02): Review of Chemistry Department (800) Procedures overdue. NRC Inspection Report 50-219/82-24 noted that this finding had been identified in licensee internal audits. Additionally, the licensee representative stated that a comprehensive review of all the 800 Series procedures would be accomplished prior to the end of the 1983 refueling outage. The actions are acceptable for resolution of this item.

### 4. Allegation

In a telephone discussion on January 4, 1983, an anonymous individual alleged to NRC Region I personnel that about one year ago (January 1982) a neutron source kept in the Spent Fuel Pool (SFP) was missing. He said that the source had been tied to the end of a rope in the SFP. He further stated that the licensee had made radiological measurements in attempting to locate the neutron source.

#### 4.1 Findings

Within the past year, according to licensee representatives interviewed by the inspector, efforts have been made to clean up and dispose of the sludge buildup on the floor of the SFP. Radiation measurements were undertaken as part of the evaluation prior to working. Some sludge was removed, solidified, surveyed and shipped offsite for burial. Some fuel racks have been removed and new racks placed. Some activated items suspended by rope or wire in the SFP were removed for disposal. Surveys and inventories show no neutron sources to be in the SFP except fuel elements.

NRC Inspection Report 50-219/80-12 (March 1980) identified two licensed plutonium-beryllium neutron sources not to have been recorded in the Special Nuclear Material inventory by serial number or location, although the quantity of plutonium had been recorded as required. The sources were listed on the licensee's sealed source inventory by activity and the item was closed satisfactorily in Inspection Report 50-219/82-27 (October 1982).

Licensee sealed source records were examined against the criteria in:

- Technical Specification 4.11 "Sealed Source Contamination";
- Technical Specification 6.11 "Radiation Protection Program";

Procedure 901.4 "Source Leak Test Records"; and  
 Procedure 901.5 "Use and Inventory of Licensed Sealed Sources".

The inspector visually determined that all licensed neutron sources were accounted for.

No violations were identified within the scope of this review. The allegation was found not to be substantiated.

5. Personnel Selection, Qualification and Training

Personnel selection, qualification and training in regard to Radiological Controls (Rad Con) technicians were reviewed against criteria contained in ANSI 18.1-1971, "Selection and Training of Nuclear Power Plant Personnel"; and Procedure No. 915.15, "Radiological Controls Field Operations Personnel Qualification/Training Standard".

The licensee's performance relative to these criteria was determined by interviewing eight technicians of thirty-four, examining the training records of seven technicians and one supervisor, direct observation of work in progress, and discussions with the Radiological Controls Training staff.

Within the scope of this review, no violations were identified.

6. External Exposure Control

6.1 Radiation Work Permits

The licensee's external exposure control program was reviewed against criteria contained in:

- 10 CFR 20.101, "Radiation dose standards for individuals in restricted areas";
- 10 CFR 20.201, "Surveys";
- 10 CFR 20.202, "Personnel monitoring";
- 10 CFR 20.203, "Caution signs, labels, and controls";
- 10 CFR 20.204, "Same: exceptions" (to 10 CFR 20.203); and
- 10 CFR 20.401, "Records of surveys, radiation monitoring, and disposal".

The licensee's performance relative to these criteria was determined by:

- examining the records for surveys, six Radiation Work permits (RWP's);
- observations of work in progress in the Reactor Building, Refueling Floor, and the New Rad Waste Building;
- reviewing dosimetry cards and RWP attachment sheets for the active RWP's;
- radiation measurements made by the inspector for comparison with the licensee's recorded measurements; and
- interviews with individuals in and near the work sites.

Within the scope of this review, no violations were identified.

## 6.2 High Radiation Area Controls

High radiation area controls were reviewed against the criteria contained in:

10 CFR 20.203(c), "High radiation areas";  
 Technical Specification 6.11, "Radiation Protection Program";  
 Technical Specification 6.13, "High Radiation Area";  
 Procedure 915.12, "Radiation Work Permits (RWP)"; and  
 Procedure 915.14, "Locked High Radiation Area Key and Access Control".

The licensee's performance was determined by:

discussions with Radiological Controls personnel;  
 review of high radiation area surveys;  
 review of locked high radiation area key logs;  
 inventory of the high radiation area key locker, and keys under the  
 control of the Rad Waste operators; and  
 observations and measurements made by the inspector.

The inspector toured the radiologically controlled area (RCA) upon arrival at 10 P.M. on January 16, 1983, and periodically during the inspection, paying particular attention to the controls of locked high radiation areas, access controls thereto, and egress provisions.

Within the scope of this review, no violations were identified.

## 7. In-Plant Radiation Protection Program Implementation

The implementation of the in-plant radiation protection program was reviewed against criteria contained in:

10 CFR 19.11, "Posting of notices to workers";  
 10 CFR 19.12, "Instructions to workers";  
 10 CFR Part 20, "Standards for Protection Against Radiation";  
 Technical Specification 6.11, "Radiation Protection Program";  
 Technical Specification 6.13, "High Radiation Area";  
 Regulatory Guide 8.13, "Instruction Concerning Prenatal Radiation  
 Exposure";  
 Regulatory Guide 8.27, "Radiation Protection Training for Personnel";  
 Regulatory Guide 8.29, "Instruction Concerning Risks from Occupational  
 Radiation Exposure"; and  
 Plant Procedures 900 Series, "Radiological Controls".

The licensee's performance relative to these criteria was determined by discussion with the Radiological Controls Manager, members of his staff, radiation workers, direct observation of work in progress and review of all the RWP's issued for use during the period of the inspection.

Within the scope of this review, no violations were identified.

## 8. Transportation of Radioactive Materials

The inspector reviewed the records of radioactive waste shipment OC-1006-83 (January 17, 1983) against the following criteria:

- 10 CFR 20.201, "Surveys";
- 10 CFR 20.301, "General requirement" (Waste Disposal);
- 10 CFR 71.12, "General license for shipment in DOT specification containers, in packages approved for use by another person and in packages approved by a foreign National Competent Authority";
- 10 CFR 71.62, "Records";
- USNRC Certificate of Compliance 9089 for Hittman Nuclear HN-100S Cask;
- State of South Carolina License No. 097; and
- Plant Procedure 351.13 "Packaging Radioactive Waste for Shipment for Off-site Burial in Hittman HN100 Cask".

The licensee's performance relative to these criteria was determined by interviews with the Rad Waste Shipping Supervisor, members of his staff, and review of the documentation for the shipment.

Within the scope of this review, no violations were identified.

## 9. Exit Interview

The inspector met with licensee representatives (denoted in paragraph 1) at the conclusion of the inspection on January 20, 1983. The inspector summarized the purpose, scope and findings of the inspection.

Licensee representatives acknowledged the findings.