

U. S. NUCLEAR REGULATORY COMMISSION

Region I

Report No. 50-219/82-27

Docket No. 50-219

License No. DPR-16

Safeguards Group IV

Licensee: GPU Nuclear Corporation

P. O. Box 388

Forked River, New Jersey

Facility Name: Oyster Creek Nuclear Generating Station

Inspection At: Forked River, New Jersey

Inspection Conducted: October 20-22, 1982

Date of Last Material Control and Accounting Inspection: March 25-28, 1980

Type of Inspection: Unannounced Material Control and Accounting

Inspector: for Roland Bailey  
A. Della Ratta, Auditor

11/19/82  
date signed

Approved By: for James H. Gody  
A. T. Gody, Chief, Safeguards and Fuel  
Facilities Section, Nuclear Materials and  
Safeguards Branch

11/18/82  
date signed

Inspection Summary:

Inspection on October 20-22, 1982 (Report No. 50-219/82-27)

Areas Inspected: Facility Organization and Operation, Measurement and Controls, Shipping and Receiving, Storage and Internal Control, Physical Inventory, Records and Reports, and Management of Material Control Systems. The inspection involved 22 inspector-hours onsite by one NRC inspector and was begun during the regular hours.

Results: The licensee was in compliance with NRC requirements within the areas examined.

## DETAILS

### 1. Persons Contacted

- \*P. Fiedler, Vice President and Director, Oyster Creek
- \*J. Molnar, Core Engineering Manager
- \*P. Czaya, Nuclear Licensing Engineer
- \*T. Quintenz, Acting Plant Engineering Director
- H. Sharma, Core Engineer
- K. Hutko, Core Engineer
- \*J. Thomas, NRC Resident Inspector
- \*C. Cowgill, NRC Senior Resident Inspector

\*denotes presence at exit interview.

### 2. Licensee Action on Previous Inspection Findings

(Closed) Violation (80-12-01): The licensee failed to list, by serial number and location, two PuBe sources in possession under license and listed 2 spent fuel pins by the wrong serial numbers. A review of the licensee's physical inventory records revealed that the PuBe sources and spent fuel pins were listed by correct serial numbers and location.

### 3. 30703 - Exit Interview

The inspector met with the licensee representatives (denoted in paragraph 1) at the completion of the inspection on October 22, 1982. The scope and findings of the inspection were summarized.

### 4. 92713 - Independent Inspection Effort

No violations were identified.

The inspector toured the facility to verify the licensee's possession and use of special nuclear material (SNM). The inspector also observed that visitors were being monitored with walk-through metal and explosive detectors and a package x-ray prior to entry into the protected area.

### 5. 85102 - Material Control and Accounting

#### a. Organization and Operation

No violations were identified.

The possession and use of SNM were confined to locations and purposes authorized by the license. The licensee had established and documented an organizational structure responsible for SNM control and accounting. Written SNM control and accounting procedures were established, maintained, and followed. However, these procedures did not assure effective control and accounting of SNM contained in

detectors located in the Reactor, Spent Fuel Storage Pool, and other SNM Item Control Areas.

The licensee was in the process of revising the plant operating procedures (Series 200 and 1000) to reflect current practices, and agreed to incorporate the accountability of all detectors containing SNM in the applicable sections of the procedures.

The licensee committed to revise and implement the applicable SNM accountability procedures by January 1, 1983. This is an inspector follow-up item (82-27-01).

b. Measurement and Controls

No violations were identified.

The inspector determined that the licensee had a method of computing thermal output, uranium and uranium-235 depletion, and plutonium production.

The licensee's computer tabulation summary of total uranium and uranium-235 depletion and plutonium production was the basis for the quantities reported on the Form NRC-742's submitted between October 1, 1979 and March 31, 1982.

c. Shipping and Receiving

No violations were identified.

The licensee, except as noted in section 5.a., had established and maintained procedures to assure that all SNM received was accurately accounted for.

The licensee had four receipts and one shipment of SNM since October 1, 1979. The NRC-741 Forms completed for these transactions were reviewed against criteria for preparing and completing the form, timeliness of issuance and completion, correctness of data, and authorized signature. No discrepancies were noted.

d. Storage and Internal Control

No violations were identified.

The licensee had established and was maintaining a system of written material control and accounting procedures which provided for knowledge of the quantity, identity, and location of SNM within the facility (except as noted in paragraph 5.a.).

Storage areas were established and included the reactor core, fuel pool, new fuel storage vault, and other areas that were appropriate for SNM contained in other than fuel. Transfers of material were

controlled by the Core Manager and were documented on the SNM Transfer Form.

e. Physical Inventory

No violations were identified.

The inspection results were attained through an inventory verification performed by the inspector on October 21, 1982, which consisted of a piece count of the assemblies in the spent fuel pool and new fuel storage vault and a cross-check of the fuel location history cards to the fuel schematic. The licensee's inventory at the time of the inspection consisted of 1480 fuel assemblies, 21 pins, and 2 plutonium-238 sources.

The inspector also reviewed the source inventory records to determine inventory control of various detectors containing SNM (Reference paragraph 5.a.).

The licensee had taken physical inventories, as required by 10 CFR 70.51(d).

f. Records and Reports

No violations were identified.

The inspection results were attained through a review of the licensee's records and reports and source data. Material Balance Reports (Form NRC-742) submitted for the material balance period October 1, 1979 - March 31, 1982 were reviewed for compliance with 10 CFR 70.53. No discrepancies were noted.

Exhibits I-II attached to this report summarize the licensee's material activity for the period under review.

g. Management of Material Control Systems

No violations were identified.

The licensee had established a management system which provided for the development, revision, implementation and enforcement of nuclear material control and accounting. There was an organizational structure responsive to the nuclear material control and accounting requirements pursuant to their license and applicable NRC regulations.

Audits of the site were performed annually by the Quality Assurance Department of General Public Utilities (GPU) Nuclear Corporation.

EXHIBIT I

Oyster Creek Nuclear Generating Station

Docket No. 50-219      License No. DPR-16

Material Balance or Period: October 1, 1979 - March 31, 1982

Reporting Identification Symbol: YHA

Reporting Unit: grams

	<u>Enriched Uranium</u>		<u>Normal Uranium</u>	
	<u>Element</u>	<u>Isotope</u>	<u>Element</u>	<u>Isotope</u>
Beginning Inventory: (October 1, 1979)	245,662,521	3,071,588	---0---	---0---
Additions:				
From Normal Uranium				
Account:	---0---	---0---	---0---	---0---
Receipts:	<u>18,284,119</u>	<u>464,861</u>	<u>1,653,666</u>	<u>11,844</u>
Material to Account for:	<u>263,946,640</u>	<u>3,536,449</u>	<u>1,653,666</u>	<u>11,844</u>
Removals:				
To Enriched Uranium Account:	---0---	---0---	---0---	---0---
Shipments:	49,311	458	---0---	---0---
Degradation to Other				
Materials:	---0---	---0---	---0---	---0---
Fission and Transmutation:	1,002,906	562,715	---0---	---0---
Inventory Difference				
(Rounding Error)	2	2	---0---	---0---
Total Removals:	<u>1,052,219</u>	<u>563,175</u>	<u>---0---</u>	<u>---0---</u>
Ending Inventory:				
(March 31, 1982)	<u>262,894,421</u>	<u>2,973,274</u>	<u>1,653,666</u>	<u>11,844</u>
Material Accounted For:	<u>263,946,640</u>	<u>3,536,449</u>	<u>1,653,666</u>	<u>11,844</u>

EXHIBIT II

Oyster Creek Nuclear Generating Station

Docket No. 50-219      License No. DPR-16

Material Balance for Period: October 1, 1979 - March 31, 1982

Reporting Identification Symbol: YHA

Reporting Unit: grams

	<u>Plutonium</u>		<u>Plutonium-238</u>	
	<u>Element</u>	<u>Isotope</u>	<u>Element</u>	<u>Isotope</u>
Beginning Inventory: (October 1, 1979)	1,344,623	982,771	1.2	1
Additions:				
Production:	222,837	156,440	---0---	---0---
Receipts:	---0---	---0---	---0---	---0---
Material to Account For:	<u>1,567,460</u>	<u>1,139,211</u>	<u>1.2</u>	<u>1</u>
Removals:				
Shipments:	355	253	---0---	---0---
Decay:	11,230	11,230	---0---	---0---
Inventory Difference (Rounding Error)	4	2	---0---	---0---
Total Removals:	<u>11,589</u>	<u>11,485</u>	<u>---0---</u>	<u>---0---</u>
Ending Inventory: (March 31, 1982)	<u>1,555,871</u>	<u>1,127,726</u>	(1) <u>1.2</u>	<u>1</u>
Material Accounted For:	<u>1,567,460</u>	<u>1,139,211</u>	<u>1.2</u>	<u>1</u>

(1) = 2 sources (Serial Nos. MRP08BE423, MRP08BE424).