

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

REGION III

Report No. 70-1308/79-05

Docket No. 70-1308

License No. SNM-1265

Licensee: General Electric Company  
175 Curtner Avenue  
San Jose, CA 95125

Facility Name: Morris Operation

Inspection At: Morris Operation, Morris, IL

Inspection Conducted: June 26-28, 1979

Inspector: *W. L. Fisher*  
C. C. Peck

7/16/79

Approved By: *W. L. Fisher*  
W. L. Fisher, Chief  
Fuel Facility Projects and  
Radiation Support Section

7/16/79

Inspection Summary

Inspection on June 26-28, 1979 (Report No. 70-1308/79-05)

Area Inspected: Routine, unannounced health and safety inspection, including organization, safety committees, surveillance testing, fuel storage and handling, facility changes and modifications, external exposure control, internal exposure control, instrument calibrations, notifications and reports, and posting and labeling. The inspection involved 23 inspector-hours on site by one NRC inspector.

Results: No items of noncompliance were identified in the ten areas inspected.

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## DETAILS

### 1. Persons Contacted

E. E. Voiland, Plant Manager  
\*K. J. Eger, Senior Engineer, Licensing and Radiological Safety  
\*H. R. Strickler, Operations Manager  
\*J. E. McGrath, Plant Safety Supervisor  
E. S. Serdar, Maintenance Coordinator

\*Denotes those present at exit interview.

### 2. General

The inspection began at 10:15 a.m. on June 26, 1979. The inspector toured the fuel storage area and control room on the first day of the inspection. Other plant areas were inspected during the following two days of the inspection.

The inspector observed experimental measurements of the neutron field emanating from an 1F-300 spent fuel shipping cask which had been loaded with relatively high-burnup fuel for the experiment. The fuel was subsequently returned to the storage basin. Approved operating procedures were followed during the test.

### 3. Organization

The Quality Assurance Specialist recently retired and the supervisor of Analytical Services assumed his Quality Assurance function. No other changes in the Morris Operation organization have occurred.

### 4. Fuel Storage and Handling

No fuel has been received since April 1979 (Report 79-03). There were 1204 fuel assemblies containing about 310 metric tons of uranium in the basin at the time of the inspection. This quantity is approximately half the basin capacity. Shipments of spent fuel from the San Onofre reactor have been delayed because of suspension of the license for casks of the NFS-4 type. It is expected that the cask license will be reinstated when questions are resolved covering design changes that may have been made to some of the casks of this type.

Basin water quality remains well within the limits of the licensee's operating specifications for both chemical analysis and radioactivity content. Weekly radioactivity analyses of the basin water have indicated a concentration of about  $2 \text{ E-}04 \text{ } \mu\text{Ci/ml}$ . The limit requiring additional cleanup measures is  $2 \text{ E-}02 \text{ } \mu\text{Ci/ml}$ .

Recent measurements of water leakage through the stainless steel basin liner to the leak collection pump have indicated a leak rate of less than a liter per day.

No items of noncompliance were identified.

5. Surveillance Testing

The inspector reviewed records of all routine compliance and operability tests conducted by the licensee since the inspection of March and April 1979 (Report 79-03). All tests were conducted at the required frequency. Results showed that all systems were operable and/or were functioning within required limits or parameters.

Tests reviewed were:

- Basin Water Analysis (Weekly)
- Basin Leak Detection Alarm (Weekly)
- Basin Leak Detector Calibration (Monthly)
- Basin Leak Rate (Quarterly)
- Cladding Vault Leak Rate and Operability (Quarterly)
- Basin Cooler Leak Detection (Weekly)
- Dry Chemical Vault Intrusion Analysis and Operability (Monthly)
- Dry Chemical Vault Intrusion Monitor Operability (Monthly)
- Low Activity Waste (LAW) Vault Leak Rate and Operability (Monthly)
- LAW Vault Intrusion Operability (Monthly)
- Emergency Exhaust Blower (Monthly)
- Sand Filter Differential Pressure System (Monthly)
- Stack Sample Analysis (Weekly)
- Stack Sample System Calibration (Monthly)
- Emergency Generator (Weekly)
- Criticality Detectors (Quarterly)
- Criticality Sirens (Annual)
- Area Radiation Monitors (Quarterly)
- Sealed Source Inventory (Quarterly)

No items of noncompliance were identified.

6. Facility Changes and Modifications

The changes planned and in progress were examined. Several improvements are contemplated, some related to general and industrial safety, but none directly associated with radiological safety.

No items of noncompliance were identified.

7. Safety Committees

The inspector reviewed the minutes of monthly Plant Safety Committee meetings.

8. Radiation Protection

a. External Exposure Control

Monthly film badge records for the period January through May 1979 were inspected. No problems were identified.

b. Internal Exposure Control

Routine air sampling data for the various plant areas for 1979 were selectively examined. No unusually high concentrations were noted. A summary of air sample results for the first quarter of 1979 prepared by the licensee indicates that both high and average alpha and beta air concentrations were only a small fraction of MPC in all areas.

Urinalyses for March 1979 disclosed that the sample for one individual contained a cesium-137 concentration that could possibly represent a dose greater than 40 MPC-hours (Report 79-03). The individual has since received a whole body count and another urinalysis was conducted. Results of these measurements were not available at the time of the inspection.

c. Instrument Calibrations

The inspector reviewed the licensee's system for calibrating monitoring instruments. Instruments are calibrated at established frequencies by the maintenance department. Criticality monitors, area radiation monitors, and count and dose rate meters are calibrated quarterly. Air samplers are calibrated annually. Records maintained in the Safety office indicated that instruments are being calibrated in accordance with the schedule.

In addition, the inspector examined calibration records in the Maintenance office and the detailed calibration procedures for a few survey instruments.

d. Posting, Labeling, and Control

The basin filter room and basin cooler area continue to be high radiation areas. They are posted as such and access is controlled in accordance with the requirements of 10 CFR 20.203.

The storage area for low level solid waste drums was moved from the cold warehouse to a bay in the cask receiving area. The purpose of the change was to remove radioactive materials from the proximity of combustible materials stored in the warehouse (Report 79-02).

e. Notifications and Reports

IE Circular No. 79-09, concerning occurrences of split or punctured diaphragms in some types of self-contained breathing apparatus was discussed. The licensee stated that no equipment of the potentially defective type was in service.

No items of noncompliance were identified.

9. Exit Interview

The inspector met with licensee representatives indicated in Paragraph 1 at the conclusion of the inspection, described the scope of the inspection, and indicated that no items of noncompliance had been found.

Work in progress and future plans for facility modifications, facility decontamination, waste storage, and fuel storage were discussed.