

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-333/88-22

Docket No. 50-333

License No. DPR-59

Category C

Licensee: New York State Power Authority
P. O. Box 41
Lycoming, New York 13093

Facility Name: James A. FitzPatrick

Inspection At: Scriba, New York

Inspection Conducted: October 31 - November 4, 1988

Inspectors:

W. V. Thomas
W. V. Thomas, Radiation Specialist

11/29/88
date

P. V. O'Connell
for P. V. O'Connell, Radiation Specialist

11/29/88
date

Approved by:

M. Shanbaky
M. Shanbaky, Chief, Facilities Radiation
Protection Section

11/29/88
date

Inspection Summary: Inspection Report No. 50-333/88-22

Areas Inspected: Routine, Unannounced, Outage Radiological Controls Inspection.

Results: Within the scope of this inspection, no violations were identified. The radiological controls were adequate to support the refueling outage.

DETAILS

1.0 Persons Contacted

1.1 Licensee Personnel

During the course of this inspection the following personnel were contacted or interviewed:

- B. Caley, H. P. Tech. Radiological and Environmental Services Department (RES)
- J. Collins, H. P. Tech. RES
- *R. Converse, Resident Manager
- D. Dull, Radiation Protection Supervisor, RES
- *W. Fernandez, Superintendent of Power
- R. Graben, H. P. Tech. RES
- D. Johnson, Operations Waste Management General Superintendent
- D. Lindsey, Operations Superintendent
- J. Lochamy, QA/QC Technical Advisor
- *J. McCarty, RES
Radiation Protection Supervisor
- *E. Mulcahey, RES, Superintendent
- R. Patch, QA/QC, Superintendent
- D. Rebarchik, H. P. Tech. RES
- *J. Solini, RES, Health Physics, General Supervisor
- *G. Tasick, QA/QC Supervisor
- *G. Vargo, RES, Radiological Engineering, General Supervisor
- K. Szeluga, RES, Radiation Protection Supervisor

1.2 NRC Personnel

- *W. Schmidt, Sr. Resident Inspector
- *P. O'Connell, Radiation Specialist, Region I
- *W. Thomas, Radiation Specialist, Region I

*Denotes attendance at the exit meeting held on November 4, 1988.

2.0 Purpose

The purpose of this inspection was to complete the inspection of the radiological controls and practices in use during the decontamination effort and the refueling outage.

3.0 External Exposure Control

The inspector reviewed the following elements of the licensee's external exposure control program.

- posting, barricading, and access control of radiation and high radiation areas.

-adequacy and implementation of radiological controls specified on Radiation Work Permits.

The review was conducted with respect to criteria contained in:

- 10 CFR 20, "Standards for Protection Against Radiation".
- Applicable Licensee Procedures.
- The licensee's radiation protection manual.
- Technical Specification 6.11, "Radiation Protection Program".

The evaluation of the licensee's performance in this area was based on:

- observation by the inspector of ongoing work during tours of the facility.
- discussions with licensee personnel.
- review of documentation.

Within the scope of this review, no violations were identified. However, the following concerns were noted and brought to the licensee's attention.

While conducting a tour of the 252 foot elevation radwaste area on November 3, 1988, the inspector observed that the spent resin storage tank room was not secured by a locked door or gate. The inspector and the licensee verified the general area dose rates to be 300-350 mrem/hour inside the room. The inspector brought to the RES Superintendent's attention that this could cause a problem in the future. The dose rates observed did not constitute a Technical Specification Part 6.11(a)(2) violation of failure to lock the area since radiation levels were less than those which constitute a locked High Radiation Area (1000 mrem/hour). The inspector pointed out that the spent resin storage tank has the potential to hold spent resin with sufficient activity to generate general area dose rates in the room well above 1000 mrem/hour. The RES superintendent stated that the shield/access wall surrounding the spent resin storage tank had just been constructed prior to the outage. He also stated that a locked gate will be installed prior to the end of the year. This item will be reviewed during a future inspection. (50-333/88-22-01)

While touring the plant, the inspector observed the licensee's posting of areas for compliance with 10 CFR 20 requirements and determined by direct observation and radiation measurements that the radiological caution postings were adequate.

The inspector reviewed the documentation of an event, which occurred October 14, 1988, where a worker performing testing on welds in the drywell had to be transported to a local hospital to remove contamination from his eye. Medical personnel were able to remove the contamination and an isotopic analysis of the contamination was used to calculate a dose to the lens of the eye. The inspector reviewed the dose assessment and determined it to be adequate, and also determined that the exposure (1.6 mrem) was within regulatory guidelines. The inspector also chose six Radiological Incident Reports (RIRs) involving hot particle contamination on the skin. The licensee's skin dose assessments for these incidents were in agreement with the inspectors skin dose assessment. Based on this review, the licensee's program for dose assessment from hot particles on the skin was adequate to ensure compliance with federal requirements.

In conjunction with this review, the inspector reviewed management oversight of the RIR system. The RIRs reviewed indicated proper management review and the corrective actions, ranging from rebriefing to suspending workers were adequate. No violations were observed in this area.

4.0 Internal Exposure Control

The licensee's program for evaluating and controlling internal exposure was reviewed against the following criteria:

- 10 CFR Part 20.103
- NUREG 0041 "Manual of Respiratory Protection Against Airborne Radioactive Materials,"
- Regulatory Guide 8.15, "Acceptable Programs for Respiratory Protection".

The evaluation of the licensee's performance in this area was based on:

- discussions with supervisory and technician level staff,
- review with supervisory and technician level staff,
- tour of the respirator issue, maintenance and whole body counting facilities.

On November 3, 1988, the inspector toured the respiratory protection equipment maintenance building. The inspector discussed several aspects of the care and maintenance program for respirators with the cognizant Senior Radiation Protection Technician. The inspector observed the cleaning and surveying of respirators. The senior technician demonstrated the inspection and tests which are performed after the respirators are cleaned or had maintenance performed. The inspector reviewed the licensee's records

which track the dates of cleaning, maintaining, inspecting and testing for each respirator. Within the scope of this inspection, the licensee's program for the cleaning, monitoring, inspecting and testing of respiratory protection equipment was adequate.

The inspector observed the fit testing of an individual and reviewed the licensee's documentation verifying that only trained personnel are performing fit tests.

During a tour of the drywell the inspector noted that a respirator had been left on top of a beam inside the drywell. The licensee provided the inspector with a list of over 100 pieces of respiratory protective equipment (mainly particulate full face respirators) which were unaccounted for when the last quarterly check of equipment in storage was completed. The inspector noted that there are no controls for the accountability of used respirators.

Licensee staff stated that respirators are sometimes mistakenly thrown in with the contaminated trash and at other times respirators are inadvertently sent off-site with the contaminated laundry. Licensee staff stated that workers had also been known to hoard a supply of respirators so that they would always have a supply of respirators to use. The inspector noted that workers could wear respirators that did not have a periodic inspection test or that had not been stored properly in accordance with part 12.6 of the Radiation Protection Manual. The RES supervisor stated that the licensee would evaluate how they could control the return and accountability of respirators. This is an unresolved item and will be reviewed during a future inspection. (50-333/88-22-02)

On November 4, 1988 the inspector toured the whole body counting facility and spoke with cognizant personnel. The licensee performs an annual calibration, a weekly efficiency check and a daily background and source check of the three detectors in the whole body center (organ counter).

Inspector review of documentation verified that the required tests are being performed adequately. No violations were observed in this area.

5. ALARA

Primary and Recirculation System Decontamination

The decontamination effort was begun on September 16, 1988 and completed on September 22, 1988. Overall the decontamination effort resulted in the removal of approximately 60 curies of cobalt-60 and the reduction of the radiation dose rates in the drywell to 5-10 mr/hr. General area dose rates in the drywell prior to the decontamination ranged between 40-50 mr/hr. The decontamination solutions were pumped to ion exchange columns

for treatment to remove radioactivity. The resins from ion exchange columns were transferred to steel liners within shipping containers for transfer after solidification to a licensed burial facility.

The licensee made three shipments of solidified decontamination process resin to the burial facility at Barnwell, SC. However, one of the containers was inspected at the burial facility and found to be unsolidified. The unsolidified liner was subsequently returned to the licensee. The state of South Carolina fined the licensee and enjoined the licensee from further shipments of LOMI process solutions to Barnwell until the licensee determined why the resin concrete mixture did not solidify. The licensee is presently attempting to determine why the resin concrete mixture did not set up and solidify. This item will be followed up in a future inspection. (50-333/88-22-03)

Although the licensee has continued an intensive ALARA program effort during the refueling outage the plant goal of 650 Man-Rem for 1988 will not be met. The goal of 650 Man-Rem for a refuel year was ambitious and could only have been met by the elimination of several unplanned work items which have contributed substantially to the Man-Rem total. Unplanned work activities have increased the outage by 14 days and present plans are to end the outage by November 15, 1988. As of November 4, 1988, the station exposure for 1988 totaled 646 Man-Rem.

The licensee intends to implement continuing efforts to further reduce exposure. Personnel are continuously aware of the ALARA goals and are actively involved in the ALARA program. The completion during this outage of the final addition of barrier fuel to the reactor core will also result in significant Man-Rem reduction in the future.

6.0 Exit Meeting

The inspector met with licensee management representatives (denoted in Section 1) at the conclusion of the inspection on November 4, 1988. The inspector summarized the purpose, scope, and findings of the inspection.