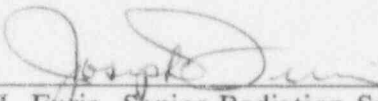
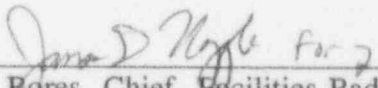


U.S. NUCLEAR REGULATORY COMMISSION
REGION 1

Report No. 50-333/94-15
Docket No. 50-333
License No. DPR-59
Licensee: New York Power Authority
Post Office Box 41
Lycoming, New York 13093
Facility Name: James A. FitzPatrick Nuclear Power Plant
Inspection At: Scriba, New York
Inspection Conducted: May 16-20, 1994

Inspector:  5/24/94
J. Furia, Senior Radiation Specialist date

Approved by:  5/25/94
R. Bores, Chief, Facilities Radiation Protection Section date

Areas Inspected: Maintaining occupational exposures ALARA, radiological work during normal operations and procedure review and upgrades.

Results: Significant improvements were identified during your recent maintenance outage in maintaining occupational exposures as low as reasonably achievable (ALARA). Continuing efforts in reducing the amount of rework during local leak rate testing is needed to reduce occupational exposures further. Activities conducted during the inspection period, especially the removal of objects from the Spent Fuel Pool (SFP), were generally conducted in a highly effective manner.

DETAILS

1.0 Personnel Contacted

1.1 Licensee Personnel

- * R. Barrett, General Manager - Operations
- * T. Bergene, ALARA Supervisor
- * M. Colomb, General Manager - Support Services
- * J. Heddy, BWR Licensing
- * D. Lindsey, General Manager - Maintenance
- * J. McCarty, Senior Quality Engineer
- * M. McMahon, Health Physics General Supervisor
 - C. Moreau, Quality Assurance Engineer
 - T. Phelps, Radiation Protection Supervisor
 - P. Policastro, Radiation Protection Supervisor
- * H. Salmon, Resident Manager
- * D. Simpson, Licensing Engineer
- * J. Sipp, Radiological and Environmental Services Manager
- * J. Solini, Radiological Engineering General Supervisor
 - J. Solowski, Radiation Protection Supervisor
- * G. Tasick, Quality Assurance Manager
 - A. Young, Decontamination and Shipping Supervisor

1.2 NRC Personnel

W. Cook, Senior Resident Inspector

* Denotes those present at the exit interview on May 20, 1994.

2.0 Previously Identified Items

(Open) Violation (50-333/94-07-01) Failure to follow radiation protection procedures. The licensee's corrective actions for the procedural non-compliance included discussions with both the technician involved and with all radiation protection technicians to stress procedural compliance, and the addition of supervisory tours of the radiation controlled area (RCA) to observe technicians working in the field. These tours are specifically geared toward looking for procedural compliance by the radiation protection technicians, and to document any procedural inadequacies, so that they can be addressed by the licensee's recently established radiological and Environmental Services (RES) Department health physics procedures review group (see Section 3.3).

On May 11, 1994, as part of an ongoing Quality Assurance Department surveillance of the licensee's RES Instrument Issue Room, the lead auditor discovered four RES instruments in the RCA that were not shown as being issued in the RES Issue Room

data base. The auditor initiated a Deviation Event report (DER), number 94-0429 to document this finding. Discussions with both the auditor, and various members of the RES staff indicated a significant difference of opinion whether this event represents another example of failure to follow procedures with regards to the issuance of RES instrumentation. Since at the time of this inspection, the RES Department had not yet officially responded to the DER, nor had their response been processed and reviewed by licensee management, the inspector was unable to determine at this time if this event was related to the earlier events that led to the issuance of a Notice of Violation (NOV). The inspector will review the completed DER when it becomes available, and determine if the licensee's proposed corrective actions for the NOV were comprehensive and properly implemented. Pending this NRC review, this item remains open.

3.0 Radiation Protection Program

Since the last inspection in this area, the licensee has made several temporary changes to its RES management structure. The most significant change has been the creation of a procedures task force, headed by a Radiation Protection Supervisor, which reports through the Health Physics General Supervisor to the RES Manager. This group consists of four RES personnel and one contractor. Its activities are discussed further in Section 3.3 below.

3.1 Maintaining Occupational Exposures ALARA

As part of this inspection a review of the exposures experienced by the licensee during its mid-cycle maintenance outage in April 1994 was conducted. Originally the licensee established a goal of not more than 124 person-rem for this outage, which subsequently was lowered to 91 person-rem. This reduction coincided with the licensee's decision to reduce the scope of the maintenance outage, including eliminating the change out of control rod drives. The drives are now scheduled to be changed out during the next refueling outage, scheduled to commence on November 29, 1994. The reduction in scope was a management decision based in part on having too many activities scheduled for the outage relative to the staff provided to conduct these activities.

The licensee completed the outage with a total exposure of only 71.5 person-rem, well under the outage goal of 91 person-rem. Although overall the outage was successful from the ALARA perspective, several activities were concluded over budget, and will require additional management attention in order to better conduct these activities during future outages. In general, problems were encountered throughout the outage during local leak rate testing (LLRT). These problems were generally caused by LLRT failures that led to additional work being performed in radiological areas. Although in establishing its outage ALARA exposure goal the licensee had budgeted for a certain percentage of LLRT failures, this rate was greatly

exceeded. The outage goal for repair of LLRT failures was established at 5.5 person-rem, while the actual exposure was 13.9 person-rem. For LLRT in the Reactor Building and drywell, a goal of 1.4 person-rem was established, while the total exposure was 5.1 person-rem. The licensee established a task force to address LLRT failures after the outage, with a goal of significantly reducing the percentage of LLRT failures in the upcoming refueling outage.

In addition to the LLRT problems, emergent work in the area of motor operated valve (MOV) test and repair, and in repair of a recirculating pump also led to additional exposure. MOV test failures led to a total exposure for this work to be 4.5 person-rem, while the original goal for this work was 2.6 person-rem. In the case of the recirc pump, the original scope of work was to replace the oil seal. Once opened, however, it was observed that the pump bearings needed to be replaced. This emergent work, in conjunction with higher than anticipated general work area dose rates, led to a total exposure of 8.3 person-rem, while the pre-outage exposure goal was 2.7 person-rem.

Although not a great dose savings, of considerable note for the licensee was the successful replacement of the channel "A" intermediate range monitor (IRM). The original estimate was that this IRM would have exposure rates in the 150 Rad per hour range (150 Rad/hr). In the ALARA review prepared for this work, a hold was established should the exposure rate be above 200 Rad/hr. Upon partial withdrawal, exposure rates in excess of 200 Rad/hr were determined, and the work was halted. A revision of both the ALARA review and Radiation Work Permit for this task was undertaken, and all personnel involved were given new pre-job briefings. Ultimately the IRM was successfully removed and transported to a safe storage area for approximately 0.12 person-rem less than the goal established.

For the winter refueling outage, the licensee had recently added the change out of the control rod drives to the outage scope. The licensee's goal for the outage was to identify all plant modifications by May 31, 1994, and to freeze the outage scope by October 14, 1994. Although the outage scope freeze is only six weeks before the commencement of the outage, it does represent a significant improvement in outage planning for the licensee. Of particular concern for ALARA during the outage is the core shroud inspection, and more importantly the potential for having to perform repairs based on the results of this testing. At the time of the inspection, the licensee was negotiating with a contractor for the potential need of shroud repairs, and had established an ALARA performance goal for this work. Included in the establishment of this goal was the inclusion in the contract of bonuses/penalties based on ALARA performance.

3.2 Radiation Protection During Normal Operations

At the time of this inspection, the licensee was operating at or near full power.

Significant radiological activities conducted during the inspection included a waste sludge transfer and the continuation of the spent fuel pool (SFP) cleanup. On May 17, 1994, in the late afternoon, the licensee conducted a transfer of sludge from the reactor water cleanup phase separators to the radwaste facility for eventual treatment and packaging for disposal. These powder resins have the highest exposure rates of any resin wastes being transported by the licensee. In addition, due to the design of the licensee's plant, transient high radiation fields are created in the reactor building, east steam tunnel and radwaste facility during these transfers. Health physics control of all effected areas was evident, and the transfer was completed without any unnecessary exposures to plant personnel.

In the SFP, prior to the start of the maintenance outage, the licensee completed the last of its high activity liner shipments, which included two shipments loaded in the SFP using the TN-RAM shipping cask. All three shipments were successfully completed and the materials accepted for burial at the Barnwell Low-Level Radioactive Waste Management Facility in Barnwell, South Carolina.

At the time of this inspection, the licensee transferred three additional objects stored in the SFP to a trash liner. These objects consisted of two underwater vacuum units and a piece of plastic tubing. The tubing had a contact exposure rate of 30 Rad/hr, while one of the vacuum units had an exposure rate of 13 Rad/hr. The tubing was removed first, and after being wrapped in plastic sheeting, was placed in a laundry cart lined with lead blankets. This was then transported to the trash liner via the Reactor Building elevator, and control was maintained throughout the transfer. Exposure to personnel was well controlled, with the ALARA technician accompanying the shielded container in the elevator receiving only one millirem, as measured by his direct reading dosimeter. The vacuum units were first brought near the SFP surface and visually inspected, and dose rates verified. When one of the units was examined, two pieces of an unknown metal were found in one of the unit's chambers. The Health Physics technician in charge immediately directed that the vacuum be lowered back down, and that the unit remain in the SFP until the nature of the metal pieces could be determined. All personnel involved in the SFP work appeared to be highly sensitive to potential changing radiological conditions during this work, and all exhibited an appropriate questioning attitude. Ultimately the pieces of metal were identified, dose rates determined, and the vacuum units were also placed in the trash liner.

Tours of various parts of the radiologically controlled area (RCA) were conducted by the inspector. In general all postings, barricades and boundaries were adequately maintained, and only a few radiological housekeeping deficiencies were noted. All identified concerns were promptly reviewed by the licensee, and corrective actions, as appropriate were undertaken.

3.3 RES Procedures

In part as a result of the Notice of Violation issued in NRC Inspection Report 50-333/94-07, and also as a result of numerous examples of procedural non-compliance identified by the license's Quality Assurance Department during surveillances of RES activities, especially in the area of radiation protection, the RES Manager determined that part of the root cause for the failure to follow procedures was that many procedures no longer appropriately reflected plant practices, and/or were too burdensome to be properly utilized. As noted in Section 3.0 above, this group consists of three experienced radiation protection technicians, a contractor with extensive experience in writing radiation protection procedures, and a Radiation Protection Supervisor. This group is chartered to review 117 of the approximately 150 radiation protection procedures currently in use by the licensee, and to revise as appropriate, including deletion of unnecessary procedures. The goal established for this group is to have all of the 117 procedures reviewed and revised as necessary by January 1, 1995. The inspector will continue to follow the results of this effort during future inspections in this area.

4.0 Exit Interview

The inspector met with the licensee representatives denoted in Section 1 at the conclusion of the inspection on May 20, 1994. The inspector summarized the purpose, scope and findings of the inspection. The licensee acknowledged the findings of the inspection.