

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-333/91-06

Docket No. 50-333

License No. DPR-59

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

Facility Name: James A. FitzPatrick Nuclear Power Plant

Inspection At: Lycoming, New York

Inspection Conducted: March 11 - 15, 1991

Inspector: P. O'Connell
P. O'Connell, Radiation Specialist

4-18-91
date

Approved by: W. Pastlak
W. Pastlak, Section Chief, Facilities
Radiation Protection Section

4-23-91
date

Inspection Summary: Inspection conducted March 11 - 15, 1991
(Inspection Report No. 50-333/91-06)

Areas Inspected: The inspection was a routine unannounced inspection of the radiation protection program. Areas reviewed included: Training, Plant Tours, Review of Plant Occurrence Reports, High Radiation Area Controls, Contamination Controls, and ALARA.

Results: Within the scope of this inspection one violation and one unresolved item were identified. The violation involved a failure to lock an area where the intensity of radiation was greater than 1000 mrem/hr. The unresolved item involved the lack of in-place filter testing of the offgas HEPA filters.

Details

1.0 Individuals Contacted

1.1 New York Power Authority

- *E. Alberts, Radiological and Environmental Services Supervisor
- *T. Bergene, Radiological and Environmental Services Supervisor
- *W. Fernandez, Resident Manager
- *J. Hamblin, Technical Training Supervisor
- *R. Lisen, Superintendent of Power
- *J. McCarty, Radiological and Environmental Services Supervisor
- *M. McMahan, Radiological Engineering General Supervisor
- *J. Solini, Health Physics General Supervisor
- *J. Solowski, Radiological and Environmental Services Supervisor
- *G. Tasick, Quality Assurance Superintendent
- *G. Vargo, Radiological and Environmental Services Superintendent

1.2 NRC

- *W. Pasciak, Chief, FRPS,
- R. Plasse, NRC Resident Inspector
- *W. Schmidt, NRC Senior Resident Inspector

*Denotes those individuals attending the exit meeting on March 15, 1991.

The inspector also contacted other licensee personnel.

2.0 Purpose and Scope of Inspection

The inspection was a routine unannounced inspection of the radiation protection program. Areas reviewed included: Training, Plant Tours, Plant Occurrence Reports, High Radiation Area Controls, Contamination Controls, and ALARA.

3.0 Training

The inspector reviewed the licensee's General Employee Training (GET) program. The initial GET program consists of approximately three and one half days of classroom training. The course begins with Fitness For Duty training followed by seven hours of Site Orientation training. The next day individuals receive seven hours of radiation protection (RP) training. In the morning session a course on RP theory and fundamentals is given, followed by practical factor training. During the afternoon session Radiation Work Permit (RWP) training is given. On the fourth day respiratory protection training, fit testing and self monitoring training are given to those individuals requiring this specific training. Several examinations are given for the different functional areas covered by GET, with individuals needing at least an 80% to satisfactorily complete the course.

The GET requalification program consists of a day and one half of training which focuses on recent plant and procedure changes as well as recent plant and industry incidents.

The inspector reviewed initial GET and requalification GET lesson plans, examinations, attendance sheets, and course hand-outs. The scope of the training provided radiation workers was consistent with the requirements of 10 CFR Part 19 and the recommendations of applicable Regulatory Guides. The inspector reviewed selected personnel training reports and verified the up-to-date status of the training. The licensee ensures that only individuals with up-to-date RP training are allowed into the Radiologically Controlled Areas (RCA) of the facility by pulling the dosimetry of those individuals whose RP training has expired. In addition, individuals cannot get a security badge without completing initial GET. The inspector compared a list of personnel training completion dates with dosimetry issue logs and verified that those individuals with expired training completion dates had not been issued dosimetry. The licensee had an effective program for ensuring that all personnel receive GET.

Early in February 1991 the licensee implemented a new RWP program. The new program included several changes which were significantly different from the previous program. Prior to implementation, the licensee scheduled all radiation workers to attend a two hour training session on the new RWP program. After February 1991 the initial GET and requalification GET included training on the new RWP program.

The inspector reviewed the training on the new RWP program. The training consisted of a two hour lecture of the program requirements. During the course of the inspection, which coincided with a mini-maintenance outage, the inspector discussed the new RWP program with Radiological and Environmental Services (RES) technicians, RES supervisors, and plant and contractor workers from various departments. All individuals were knowledgeable of the requirements of the new program. The inspector also reviewed the implementation of the new RWP program throughout the inspection and noted that the licensee was effectively implementing the new program.

The inspector reviewed the licensee's program for training RES technicians. The inspector reviewed lesson plans, personnel training records, and the RES technician qualification manual. All permanent staff RES technicians must complete a two week boiling water reactor (BWR) systems training course. The technicians must also demonstrate a working knowledge of the radiological impact of operating different systems. The qualification manual contains specific sign-off areas to document that a RES technician has successfully demonstrated an acceptable level of knowledge of BWR systems. Discussions with RES technicians indicated that the technicians were given adequate systems training.

The licensee provided the inspector a list of the proposed topics for the 1991 RES technician continuing training. Topics included airborne radioactivity sampling, asbestos sampling, radioactive material control, and dosimetry. No discrepancies were noted in the licensee's initial or continuing RES technician training program.

The licensee's Technical Specifications require that RES technicians meet the two year working experience requirement of American National Standards Institute (ANSI) 18.1. This requirement is specified in procedures and the licensee's Radiation Protection Manual. The Corporate Radiological Control Program Manual requires that the licensee, at a minimum, ensure that technicians meet the Technical Specification requirements and it recommends the use of the more stringent experience requirement of ANSI 3.1. The licensee stated that, informally, they have been trying to hire contractor RES technicians who meet the ANSI 3.1 experience requirement. The inspector reviewed the qualifications of selected RES technicians. All the technicians met the experience requirement of ANSI 18.1 and several met the requirements of ANSI 3.1. The licensee's training and qualification program was consistent with Technical Specification requirements.

4.0 Plant Tours

The inspector conducted several tours of the facility to verify proper posting of areas including verifying dose rates throughout the plant. The general housekeeping and definition of contaminated areas within the plant was good.

The inspector observed several ongoing work activities within the RCAs of the facility. Proper radiological controls were specified on the governing RWP's for the work activities observed. All work activities observed were conducted in accordance with the RWP. The licensee was effectively implementing their new RWP program.

5.0 Review of Plant Occurrence Reports (POR)

The inspector reviewed POR 91-068, which involved a hydrogen detonation in the offgas system. While reducing power at approximately 5:00 p.m. on March 8, 1991, the hydrogen recombiner in the offgas system tripped offline. A short time later a detonation originating from the base of the plant stack was heard. The control room alarm for the offgas filters enunciated and the stack monitor showed a momentary upscale spike. The licensee inspected the offgas system and noted that an apparent hydrogen detonation had occurred which destroyed the offgas HEPA filters. During this inspection, the licensee was in the process of inspecting the entire offgas system to ensure that no other structural damage resulted from the detonation. The licensee was also developing corrective actions to prevent a similar detonation in the future. The inspector toured the base of the stack, reviewed applicable logs and monitor readouts and concluded that the licensee took appropriate immediate corrective actions.

While reviewing the offgas system design, the inspector noted that the licensee does not conduct in-place testing of the offgas HEPA filters. The licensee's Final Safety Analysis Report (FSAR) states, in Section 11.4.7, that "Means are provided for periodically testing the leak-tightness and/or performance of the filters when they are initially installed or replaced. Tests during operation consist of taking filter inlet and outlet samples by drawing them through a DOP Particle Detection System to determine filter performance". At the exit meeting on March 15, 1991, the licensee stated that they had not interpreted Section 11.4.7 of the FSAR as requiring DOP testing of the filters. The licensee stated that they would re-evaluate their program for offgas HEPA filter testing and determine the intent of Section 11.4.7 of the FSAR. This matter remains unresolved and will be reviewed during a future Effluents Radiation Protection inspection. (50-333/91-06-01)

6.0 Control of High Radiation Areas (HRA)

The inspector reviewed the licensee's program for posting and controlling access to HRAs throughout the facility. The licensee takes a conservative approach to controlling HRAs by administratively requiring the access to several HRAs in the facility to be kept locked. The licensee recently installed locked gates around HRAs including the drywell mezzanine and the tip room mezzanine. This is considered a good initiative.

The inspector reviewed several radiological incident reports which indicated that the licensee and the NRC Resident Inspector noted several recent examples of HRAs found unlocked which was contrary to the licensee's administrative controls. Most of the examples involved areas which are only administratively required to be locked because the general area dose rate was less than 1000 mrem/hr. However one example included a March 9, 1991 incident in which an individual taped over the lock to the personnel access gate to the drywell, thereby defeating the locking mechanism. The individual then left the area. The personnel access gate was unlocked and positive access control was not maintained into containment for approximately two hours before an operator discovered the defeated lock and secured the personnel access gate. There were areas inside the personnel access gate in which the intensity of radiation was greater than 1000 mrem/hr as noted on radiological surveys of the drywell.

The inspector noted that recently the Resident Inspectors documented a Non-cited Violation for a similar incident where the steam tunnel had been found unlocked in December 1990.

The failure to maintain the drywell personnel access gate locked is a violation of Technical Specification 6.11.A.1, which states, in part, that locked doors shall be provided to prevent unauthorized entry into such areas (i.e., each high radiation area in which the intensity of radiation is greater than 1000 mrem/hr). (50-333/91-06-02)

The inspector determined that, due to the repeat nature of the violation, the use of enforcement discretion was not warranted. The licensee stated that they intended to submit a Licensee Event Report (LER) for the March 9, 1991 incident. It was noted that the licensee had not initiated a LER for the December 1990 incident where the access to the steam tunnel was found unlocked. At that time the licensee's Plant Operations Review Committee concluded that the incident did not warrant a LER. The licensee stated that they would review the criteria for issuing LERs. This item will be reviewed during a future inspection.

7.0 Contamination Controls

The inspector reviewed the licensee's program for contamination monitoring of personnel and equipment leaving the RCAs and leaving the site. All equipment leaving the RCAs is manually frisked and all individuals must clear through a personnel contamination monitor prior to exiting the RCAs. The personnel contamination monitors are source checked daily and calibrated on a quarterly basis. The inspector reviewed calibration records and no discrepancies were noted.

All individuals leaving the site must pass through an exit portal monitor. The exit portal monitor is calibrated semi-annually and source checked quarterly. The inspector reviewed calibration and source check records and no discrepancies were noted. The exit portal monitors are located in the vicinity of the security guards at the plant exit area. The inspector discussed with several security guards the proper response to a portal monitor alarm. All the security guards were aware of the procedural requirement to notify the RES department if an individual alarmed the portal monitor on the first and second attempt to pass through the portal monitor. The licensee had an effective program for monitoring individuals for contamination prior to leaving the RCA or the site.

The inspector reviewed several radiological incident reports and noted that the licensee is making progress in reducing the number of personnel contaminations. This is considered a program improvement.

8.0 ALARA

The inspector reviewed several ALARA reviews for work conducted during the mini-outage. Prior to the start of the mini-outage the licensee established an ALARA goal of approximately 45 person-rem. At the end of the inspection period, which was near the scheduled end of the mini-outage, the licensee was well below the ALARA to-date outage goal.

The licensee anticipated that they would complete the mini-outage with cumulative exposures well below the ALARA goal of 45 person-rem. The ALARA reviews and planning were thorough and well documented.

At the time of the inspection the licensee was still finalizing the 1991 ALARA goal. The licensee anticipated that the goal would be significantly less than the 1990 cumulative man-rem of 884 person-rem. This item will be reviewed during a future inspection.

9.0 Exit Meeting

The inspector met with licensee representatives (denoted in Section 1) at the conclusion of the inspection on March 15, 1991. The inspector summarized the purpose, scope, and findings of the inspection.