

U. S. NUCLEAR REGULATORY COMMISSION
REGION I

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Report Nos. 50-410/91-26

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Docket Nos. 50-410

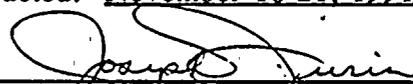
DPR-63
License Nos. NPF-54

Licensee: Niagara Mohawk Power Corporation
300 Erie Boulevard West
Syracuse, New York 13202

Facility Name: Nine Mile Point Units 1 and 2

Inspection At: Lycoming, New York

Inspection Conducted: November 18-21, 1991

Inspector:  11/25/91
date
J. Furia, Senior Radiation Specialist
Facilities Radiation Protection Section
(FRPS), Facilities Radiological Safety and
Safeguards Branch (FRSSB), Division of
Radiation Safety and Safeguards (DRSS)

Approved by:  12-1-91
date
W. Pasciak, Chief, FRPS, FRSSB, DRSS

Areas Inspected: Inspection of the transportation and radiation protection programs including: management organization, ALARA, radiological controls, and implementation of the above program.

Results: Within the areas inspected, no violations or deviations were identified. Continued good performance in the ALARA program area by Unit 1, and improved ALARA performance at Unit 2 were noted.



DETAILS

1. Personnel Contacted

1.1 Licensee Personnel

- * W. Allen, MATS Radiological Assessment Manager
- * D. Barcomb, General Supervisor-Radiation Protection, Unit 2
- * C. Beckham, Manager, Quality Assurance Operations
- * K. Dahlberg, Plant Manager, Unit 1
- * J. Erlandson, Construction Services Engineering
- * C. Gerber, Program Manager, Radwaste Storage
- E. Gordon, Supervisor, Radiation Projects, Unit 1
- T. Hogan, ALARA Supervisor, Unit 1
- E. Langille, Supervisor, Radiological Engineering, Unit 2
- * M. McCormick, Plant Manager, Unit 2
- * J. Pavel, Site Licensing
- K. Rowe, ALARA Supervisor, Unit 2
- D. Schult, Supervisor, Radiological Engineering, Unit 1
- * C. Stroup, Spent Fuel Pool Project Manager
- * P. Swafford, Radiation Protection Manager, Unit 2
- * W. Thompson, Radiation Protection Manager, Unit 1

1.2 NRC Personnel

- * W. Schmidt, Senior Resident Inspector
- * R. Temps, Resident Inspector

* Denotes those present at the exit interview on November 21, 1991.

2. Purpose

The purpose of this inspection was to review the licensee's programs for radiological controls, ALARA, preparation of radwaste for shipment in a rail cask, and calibration and control of radiation protection instrumentation.

3. Radiation Protection

Since the last inspection in this area, the licensee recently abolished the site Radiation Support Group, and had incorporated its functions into the unit radiation protection programs. Although still retaining site-wide responsibilities to provide internal and external dosimetry support, these functions were placed under the administrative control of the Unit 1 and Unit 2 Radiation Protection Managers respectively. The transportation function was transferred to each unit, with Unit 2 retaining the services of the former site transportation coordinator, while Unit 1 had designated staff



members in the Radiation Protection Operations Section to take over this function. At the time of this inspection, two members of the Unit 1 Radiation Protection Operations staff were at a vendor supplied training course for transportation and radwaste. The effectiveness of this new management structure will be further examined during future inspections.

3.1 Unit 1

With the management changes noted above, the Unit 1 Radiation Protection Department consisted of supervisors for Radiation Protection Operations, ALARA, Radiological Engineering and Respiratory Protection. Additionally, a supervisor for the Radiological Projects position was also created, with duties and responsibilities chiefly in the areas of computerization of both unit's radiation protection program including access control, and also review and implementation of changes necessary for the licensee to comply with the new 10 CFR Part 20 by the January 1, 1993 deadline. The functions of the Respiratory Protection group include internal dosimetry, and were previously under the site Radiation Support Group.

As of this inspection, Unit 1 appeared to be able to meet or exceed all of its performance indicator goals established for 1991 in the radiation protection area. In ALARA, a goal of 236 Person-Rem was established, together with a challenge goal (a goal established by the Plant Manager) of 163 Person-Rem. Year-to-date exposure was at 159 Person-Rem, and the licensee expected to better both its normal and challenge goal for 1991. The licensee appeared able to meet these goals through aggressive ALARA pre-job planning and control together with appropriate levels of support from senior plant management. For 1991, a goal of 310 Contamination Occurrence Reports (CORs) was established, with a challenge goal of 130. Year-to-date CORs were at 120, and this was attributable to reductions in the total contaminated areas in the plant, especially in the Old Radwaste Building. Total contaminated areas in the unit stood at 5.5% at the time of this inspection, which was below the established unit goal of 6.0%. The units efforts in reducing contaminated areas has also included a refurbishment project in the Turbine Building, which included general area decon efforts and the application of special coatings on the floors. The inspector discussed with the licensee the need to continue this effort, and also to ensure adequate funding and manpower support to maintain these areas as clean.

As part of this inspection, direct observations were made of the licensee loading a Type B shipping cask in the Spent fuel Pool with a liner containing irradiated hardware. This was the second of three liners which the licensee was sending for disposal. During the first liner shipment, the licensee was cited by both the NRC and the State of Washington for levels of removable



surface contamination on the shipping cask in excess of the regulatory limits. As a result of this, the licensee had significantly revised its cask handling and decontamination procedures, and this shipment represented the first to be made with these revised procedures. In general, the control of work on the refuel floor was handled well by the assigned radiation protection technicians, however several anomalies were noted. The licensee had issued Radiation Work Permit (RWP) 900276-04A to control this work on the refuel floor. This procedure set forth stay times for personnel on the refuel floor based upon the type of work and protective clothing worn by the workers. Specifically, personnel performing hands-off inspections were allowed to wear only shoe covers and gloves as protective clothing, and were limited to 30 minutes stay time. Personnel performing work were required to wear coveralls, booties, gloves and skull caps, and were permitted a 3 hour stay time.

A review of the RWP sign-in sheet for November 18-19, 1991, indicated that a number of personnel working in full PCs were allowed to stay on the refuel floor for times as long as five hours. In addition, a radiation protection supervisor was on the refuel floor observing work while utilizing shoe covers and gloves, and remained on the refuel floor for more than one hour. A discussion with the radiation protection technicians assigned to the refuel floor indicated that the stay times could be extended if the radiation protection technicians performed a whole body frisk on the individual while on the refuel floor. Review of the RWP indicated that such time extensions could be considered within the duties and responsibilities of the lead radiation protection technician for the particular task, however the Radiation Protection Manager (RPM) agreed that the RWP could have been more explicit in this area.

Additionally, the inspector noted that during the removal of the shipping cask from the spent fuel pool, two workers were assigned to flush the cask with demineralized water as it came out of the pool. One of the workers was wearing a plastic top over his cloth PCs while the second worker was wearing plastic bottoms over his PCs. A review of the RWP indicated that the utilization of plastic PCs over cloth PCs was at the discretion of the lead radiation protection technician, however, the reason why two workers performing the same task would be wearing different levels of PCs could not be readily explained.

Discussions with the RPM indicated the possible need to limit the scope of activities covered by any one RWP. In the activities discussed included cutting of LPRM strings, loading of the liner, loading of the cask, decontamination of the cask, quality assurance activities, and miscellaneous inspections. In addition, the need for workers performing similar tasks to be utilizing the same types of protective clothing was to be discussed with the



radiation protection technicians performing job coverage. The licensee's review of these concerns and any actions taken to improve this program area will be reviewed during a future inspection in this area.

Tours of the Radiation Controlled Area (RCA) indicated that the licensee had appropriate postings and controls over contaminated, radiation and high radiation areas. The inspector identified several minor concerns, dealing primarily with small piles of trash not appropriately disposed of in the plant, and some instances of water dripping onto the floor in both the Reactor and Turbine Buildings. The water problems appeared to be centered around condensation on the external surfaces of the service water piping, especially near chiller units in the overhead. Discussions with the RPM indicated that the licensee was aware of this problem and was considering various actions to reduce or eliminate this concern.

3.2 Unit 2

Unit 2 entered a scheduled mid-cycle maintenance outage immediately following the reactor trip on August 13, 1991. Major work to be performed during this outage was repairs to the High Pressure Core Spray (HPCS) Nozzle. The ALARA goal for this outage was 23 Person-Rem, and the outage was completed at 18.84 Person-Rem. The success of this outage in the ALARA area was attributed to system flushing prior to the commencement of work, effective temporary shielding in the work area, and strong work control from the planning stage through work execution.

For 1991, the licensee established an ALARA goal of 100 Person-Rem. Year-to-date exposure was 91.5 Person-Rem. The yearly goal for contamination occurrence reports had been established at 200, with a year-to-date total of 164. Total contaminated accessible areas within Unit 2 were at 1.6% at the time of this inspection, with the 1991 goal having been established at 5%.

As part of this inspection, tours of the RCA were conducted. Several examples of trash not properly disposed of were noted, including one instance of a contaminated area in the Reactor Building where no trash or laundry containers had been provided. The problem of trash and laundry containers not present at the exit points of some contaminated areas had been previously identified by the NRC, although the specific area noted here had not been previously identified. In addition, the inspector noted that an increasing number of catch containments were in the reactor building. Although these containments were preventing the spill of potentially contaminated water on the floor areas of the RCA, the number of these containments may be indicative of a greater need to repair leaking valves promptly.



3.3 Instrumentation Calibration

Calibration of survey meters, friskers, frisk-alls and area monitors utilized by the radiation protection staff was the responsibility of each unit's Radiological Engineering Section. The licensee had a calibration facility established in the Unit 1 Turbine Building, where instruments from both units were brought for radiological calibration. These calibrations were performed primarily by utilizing two cobalt-60 well sources, augmented by an Eberline 1000B calibrator, utilizing a cesium-137 source. Traceability of these sources to the National Institute of Standards and Technology (NIST) was maintained through the use of condenser R-meters.

At the time of this inspection, calibration of portable survey instruments was being conducted on a quarterly basis. In addition, daily source checks of survey instruments and friskers were performed by members of the Radiation Protection operations staff. Electronic repair of defective instrumentation was performed by the licensee's I&C Department, or by sending the defective equipment off to a vendor facility for repairs. The use of a vendor facility to perform instrument repair has significantly reduced the backlog of defective radiation detection instrumentation maintained at the licensee's facilities.

Staffing in this area consisted of a chief and four technicians from Unit 1 and one chief and five technicians from Unit 2. Due to space limitations in the existing calibration facility, together with the continued licensee unitization process, Unit 2 was considering the purchase of its own calibrators and the establishment of a Unit 2 calibration facility.

4. Exit Interview

The inspector met with the licensee representatives denoted in Section 1 at the conclusion of the inspection on November 21, 1991. The inspector summarized the purpose, scope and findings of the inspection.

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