U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report Nos.	50-220/92-21 50-410/92-24
Docket Nos.	50-220 50-410
License Nos.	DPR-63 NPF-69
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:	August 31 - September 4, 1992

Inspector: _____ 9-8-92
J. Furia, Senior Radiation Specialist, Facilities Radiation Protection Section (FRPS), Facilities Radiological Safety and Safeguards Branch (FRSSB), Division of Radiation Safety and Safeguards (DRSS) — date

Approved by: _____ 9-8-92
W. Pasciak, Chief, FRPS, FRSSB, DRSS — date

Areas Inspected: Inspection of the licensee's radiological protection programs during outages including: management organization, ALARA, radiological controls, radwaste and implementation of the above programs.

Results: Within the areas inspected, two violation were identified, in the areas of radwaste disposal (Section 6.1) and transportation (Section 6.1) at Unit 1.

DETAILS

1. Personnel Contacted

1.1 Licensee Personnel

* D. Barcomb, General Supervisor, Radiation Protection Operations, Unit 2
* J. Burton, Manager Quality Assurance, Unit 1
* J. Conway, Manager Technical Support, Unit 2
K. Dahlberg, Plant Manager, Unit 1
A. DeSanto, Supervisor, Radiation Protection Operations, Unit 1
* G. Doyle, Supervisor Quality Assurance, Unit 2
C. Gerber, Radwaste Projects
T. Hogan, Supervisor ALARA, Unit 1
* C. Leon, Supervisor Dosimetry
* R. Magnant, Site Licensing
* C. Merritt, Supervisor, Radwaste Operations
* L. Nelson, Plant Operations Clerk
* N. Rademacher, Acting Plant Manager, Unit 1
* J. Ratigan, Supervisor Radiological Engineering, Unit 2
* K. Rowe, Supervisor ALARA, Unit 2
W. Scholtens, Supervisor, Radiation Protection Operations, Unit 2
* P. Smalley, General Supervisor, Radiation Protection Operations, Unit 1
* J. Tessier, Manager Operations, Unit 1
* J. Torbitt, General Supervisor, Radwaste, Unit 1
* C. Widay, Supervisor Quality Surveillance, Unit 2
* A. Zallnick, Supervisor Site Licensing

1.2 NRC Personnel

R. Laura, Resident Inspector
W. Mattingly, Resident Inspector
W. Schmidt, Senior Resident Inspector

* Denotes those present at the exit interview on September 4, 1992.

2. Purpose

The purpose of this safety inspection was to review the licensee's programs for: radiological protection during normal operations: ALARA: assurance of quality; and transportation and radwaste.

3. Previously Identified Items

(Open) Unresolved Item (50-220/92-08-01; 50-410/92-09-01) Licensee to provide monthly status reports on the dosimetry records review project. As part of its preparations for implementation of a computerized radiation protection records

system, the licensee undertook to conduct an audit of all active radiation dosimetry records early in 1992. As a result of the findings of the first 19 reviews completed, the licensee contacted the NRC to discuss its preliminary findings. Initial deficiencies identified included failure to properly fill out and document previous exposure history on NRC Form-4, failure to provide timely dose reports to terminating employees, missing and/or incomplete dosimetry records, and improper quarterly dose extensions. The licensee had taken short-term corrective actions to reduce the number of occurrences, and had instituted an independent record review system for all new dosimetry files. Permanent corrective actions for new dosimetry records were to be implemented by the end of April, 1992, via the issuance of new dosimetry records procedures, and training of dosimetry staff to these new procedures. Following this, the licensee was to resume its audit of all current or active dosimetry files, followed by a review of all old or closed files. The total number of dosimetry files to be examined is now estimated at 19500, and the audit was expected to take at least three years to complete. Active records total approximately 2500, and through August some 250 "active" files had been reviewed, together with some 200 inactive files. At the current rate of review, this project, which was originally estimated to take three years to complete, would take 14 years to complete. The licensee indicated that following the first six months of the project, a review by Radiation Protection and plant management would be conducted to examine methods to increase the speed at which the reviews were being completed. This item remains open.

(Open) Violation (50-410/92-19-01) Improperly dressed out contract workers and performing work not authorized under a Radiation Work Permit. The license completed its proposed short term corrective actions, and no further incidents have occurred at Unit 2. Long term corrective actions, including modifications for Refueling Outage-03 will not be completed before that outage, and will be reviewed during future inspections in this area. This item remains open pending completion of long term corrective actions.

4. Radiation Protection - Unit 1

Since the last inspection in this area, the position of Supervisor - Radiological Engineering was vacated. At the time of this inspection, the position was being filled on a temporary basis by a Radiological Engineer from within the group. All other key positions within the radiation protection organization were filled.

4.1 Radiological Operations

At the time of this inspection, the licensee was operating at or near 100% of rated power. Activities normal to an operating boiling water reactor were being conducted. As part of its program to upgrade its radiation protection program, effective August 28, 1992 the licensee had initiated a program of access control to the Radiologically Controlled Area (RCA) that required all personnel entering the RCA to be signed on to a Radiation Work Permit (RWP). This change will aid the licensee in tracking doses to the work force, and also was a preliminary action to the licensee's goal of providing electronic dosimetry to all plant personnel entering the RCA.

As part of this inspection, an extensive tour of the Old Radwaste Building (ORB) was conducted. In general, the facility was determined to be adequately controlled, however, continued problems with leaking pump seals, especially on the 229' elevation, continue to make it difficult for operators to conduct rounds and conduct operations on this level. While a significant amount of contaminated material was observed in the facility, especially on the 229' elevation just outside the stairway to the 225' elevation, in general, this material was found to be bagged and clearly identified as to content and radiation level.

General tours of the RCA indicated that the facility was being well maintained radiologically, with all postings and informational maps appropriate for the level of control required. Several instances of clean protective clothing being staged on the floors near posted contaminated areas were noted, however, the licensee took prompt actions to correct these deficiencies.

4.2 ALARA

Since the start of 1992, the licensee has been in forced outages a total of 163 days, which has severely impacted its ability to meet its initial ALARA goal for 1992. As a result, the licensee established a revised goal of 290 Person-Rem for all of 1992. The licensee anticipated meeting this revised goal only if no further outages were experienced in 1992. During the Emergency Condenser outage in May - July, the licensee expended 194.5 Person-Rem while performing some 28,000 hours of work on RWPs. This included 68.1 Person-Rem expended replacing Emergency Condenser piping in the drywell. In essence this outage was a refueling outage without the addition of new fuel. The reactor was disassembled, control rod drives were removed and replaced and miscellaneous maintenance activities were performed. The most significant weakness from the ALARA perspective was in the limited planning which took place prior to the outage. Since the outage evolved from what was originally perceived to be a short-term shut down, ALARA pre-outage planning was very limited. The relatively low total dose was indicative of the sensitivity of the plant staff to ALARA, and the aggressive actions taken by the ALARA group during the outage.

5. Radiation Protection - Unit 2

Since the last inspection in this area, the position of Supervisor - Radiological Engineering was vacated. At the time of this inspection, the position was being filled on a temporary basis by a Radiological Engineer from within the group. All other key positions within the radiation protection organization were filled.

5.1 Radiological Operations

As part of this inspection, several tours of the RCA were conducted, including areas of the Radwaste Building not normally accessible during a general tour.

Postings and other pertinent radiological information were clearly displayed throughout the facilities, and were appropriate for the conditions. Several instances of protective clothing being left on the floor inside posted contaminated areas were noted, as was one instance of a Step Off Pad in place in the Radwaste Building which did not have a laundry or trash receptacle near by.

Significant progress has been made by the licensee in recovering areas from the refueling outage. This was especially notable on the refueling floor, where after the first refueling outage, the majority of the areas remained contaminated, and large quantities of contaminated outage equipment remained six months after the conclusion of the outage. Only two months after the most recent refueling outage, a majority of the refueling floor was open for general access, and the amount of contaminated outage equipment remaining in the area had been significantly reduced.

During this inspection, the Unit was shut down due to turbine and generator problems, and by the middle of the inspection, the licensee had decided to open the drywell to perform maintenance and repair activities. The Radiation Protection Department response to these changing plant conditions was generally very good, and by the end of the inspection, the Radiation Protection staff had geared up to handle an estimated several days of drywell access. Complicating the start of this drywell access were difficulties the licensee had in purging the drywell atmosphere. The inboard purge valve failed to open during purging operations, and the licensee had to undertake several alternate pathways to purge the drywell. Radiation Protection coverage during these attempts was well coordinated and the job coverage was very good.

5.2 ALARA

The license successfully completed its second refueling outage from the ALARA perspective. In general, doses were significantly lower for work performed during the second refueling outage than for similar jobs performed during the first refueling outage. The licensee's ALARA Supervisor was in the process of preparing the refueling outage ALARA summary at the time of this inspection. This report was to be issued by the end of September, 1992, however, the inspector reviewed several key sections of the draft report. The inspector will review the completed report during the next inspection of this area.

6. Transportation and Solid Radwaste

6.1 Unit 1

On July 31, 1992 the licensee shipped to the Barnwell Waste Disposal Facility a liner containing spent bead resins from the condensate system. This liner was loaded and gross dewatered in early July, with final dewatering completed

on July 11, and the liner capped on July 14. Upon arrival at Barnwell on August 1, the liner was selected for a free standing water test conducted by the licensing authority at Barnwell, the State of South Carolina. On August 11 the free standing water test was conducted by puncturing the side of the liner and collecting any water which drains out. A total of 15.416 gallons were collected, which is approximately 1.5 gallons greater than the 1% free standing liquid requirement set forth in Title 10 CFR Part 61.56 and set forth in Condition 32C of the Barnwell Waste Disposal facility license. The State of South Carolina issued a letter as a result of this event to the licensee, but no fine was levied, and the licensee was permitted to continue to ship radwaste for burial to the Barnwell facility. This is an apparent violation (50-220/92-21-01).

On August 25, 1992 the licensee shipped contaminated laundry to the Interstate Nuclear Services (INS) laundry facility at Indian Orchard, Massachusetts. The licensee had previously prepared 16 laundry containers to be included in this shipment, and the shipping papers and associated documentation prepared in support of this activity indicated that 16 packages, having a total weight of 14400 pounds were included in the shipment. Upon arrival at the INS facility, it was determined that the shipment contained only 15 packages. Upon notification by INS of the discrepancy, the licensee undertook a search to locate the 16th package, which was found in the Turbine Building. Improper manifesting of a shipment of hazardous material is an apparent violation of Title 49 CFR Part 172.202, which requires, in part, that shipping papers accurately reflect the number of items and total weight in a shipment (50-220/92-21-02).

6.2 Unit 2

On August 12, 1992 the license was transferring spent Reactor Water Clean Up (RWCU) Powdex type resins into a polyethylene liner in preparation for dewatering and ultimate disposal. Near the end of this transfer operation, while starting to flush out the transfer lines in the Radwaste Building Truck bay, the fill system valve at the fill head closed on sensing high material level in the liner. Subsequently, a pressure spike within the fill line occurred, and a 1/4" Neoprene gasket in the fill line ruptured, spraying a mixture of water and resin into the truck bay. Due to the design of the Radwaste Building, contamination of the truck bay, waste storage area, extruder/evaporator area and waste compactor area occurred. At the time of this inspection, the licensee had decontaminated all areas except that immediately adjacent to the fill system. During the event, several licensee personnel became contaminated, however, no internal uptakes were measured. Chem-Nuclear Systems, Inc., which owned the fill system, and whose personnel were operating it on behalf of the licensee, determined the root cause as being the Neoprene gasket, and at the time of this inspection were evaluating its failure mechanism.

7. Assurance of Quality

The licensee's program for assurance of quality in the radiation protection and radwaste areas continued to be exceptional. Numerous surveillances of radiation protection, radwaste and general plant activities which involved radiation protection were conducted. Observations, recommendations and findings were all addressed by the appropriate plant staff and corrective actions taken in a timely manner. For 1992, 18 surveillances in radwaste and 33 surveillances in radiation protection at Unit 1, and 6 surveillances in radwaste and 20 surveillances in radiation protection for Unit 2. The Radiation Protection Departments at each unit also conduct quarterly self-assessments in accordance with Procedure S-RAP-RPP-0108, Radiation Protection Self Assessment". These self-assessments have been conducted since 1991, and were typically performed by members of the Radiological Engineering staff.

8. Exit Interview

The inspector met with the licensee representatives denoted in Section 1 at the conclusion of the inspection on September 4, 1992. The inspector summarized the purpose, scope and findings of the inspection.