

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-410/88-10

Docket No. 50-410

License No. NPF-69

Licensee: Niagara Mohawk Power Corporation
301 Plainfield Road
Syracuse, New York 13212

Facility Name: Nine Mile Point Nuclear Station

Inspection At: Scriba, New York

Inspection Dates: April 4-8, 1988

Inspector:

W. Oliveira, Reactor Engineer

5/13/88
date

Approved by:

N. Blumberg, Chief, Operational Programs
Section, Operations Branch, DRS,

5/13/88
date

Inspection Summary: Routine unannounced inspection on April 4-8, 1988
(Report No. 50-410/88-10)

Areas Inspected: Nonlicensed staff training which includes observation of work activities, training progress, and QA/QC interface with training. The region-based inspector reviewed the INPO accredited Nonlicensed Training Programs for: (1) Auxiliary Operators; (2) Mechanical Maintenance; (3) Electrical Maintenance; (4) Instrument and Control Technicians; and (5) Technical Staff and Managers.

Results: No violations or deviations were identified. One concern was, however, identified in paragraph 2.4 regarding the lack of timeliness of implementing the INPO accredited Nonlicensed Training Programs reviewed during this inspection. This concern is increased because the licensee is reorganizing the site staff and the Training Department has lost some of their training instructors.



DETAILS

1. Persons Contacted

- *R. Abbott, Station Superintendent
- *S. Agarwal Lead Licensing Engineer
- *C. Beckham, Manager, Quality Assurance (QA) Operations
- *J. Beratta, Manager, Nuclear Security
- *C. Cary, Instrument and Control (I&C) Training Supervisor
- *K. Dahlberg, Site Superintendent, Maintenance
- *W. Drews, Technical Superintendent
- P. Eddy, Public Service Commission Site Representative
- *W. Hansen, Manager, Corporate QA
- *L. Lagoe, Site I&C Supervisor
- *P. MacEwan, New York State Electric and Gas Corporation Representative
- *R. Neild, Technical Assistant to the Station Superintendent
- *J. Perry, Vice President, QA
- *A. Pinter, Licensing Engineer
- R. Smith, Superintendent, Operations
- *D. Wilcox, Maintenance Training Supervisor
- *J. Willis, General Superintendent Nuclear Generation
- *K. Zollitsch, Superintendent, Training

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*W. Cook, Senior Resident Inspector,

* Denotes those who attended the exit meeting on April 8, 1988

2. Nonlicensed Training

2.1 Requirements

10CFR50, Appendix B Criterion II, requires in part that a licensee Quality Assurance (QA) program shall provide for indoctrination and training of personnel performing activities affecting quality as necessary to assure that suitable proficiency is achieved and maintained.

The Quality Assurance Topical Report for Nine Mile Point Nuclear Station Operations (QATR-1) commits the licensee to train and qualify plant personnel in accordance with ANSI/ASME NQA-1-1983, "Quality Assurance Program Requirements for Nuclear Facilities," and Technical Specification (TS) Section 6.5.3.8 requires training to be audited annually to assure the commitments are met. Additionally the FSAR Chapter 13.2 commits the licensee to Regulatory Guide 1.8, "Personnel Selection and Training," which endorses ANSI N18.1-1971.



2.2 Scope

The effectiveness of the implementation of the licensee's nonlicensed staff training program was assessed by reviewing the activities in operations, maintenance (mechanical, electrical, and instrument and control), engineering, and quality assurance (QA) areas.

To understand and assess the effectiveness of training, the inspector reviewed the:

- Implementing procedures as documented in the Station Procedures and the Training Department Lesson plans. (See Attachment I)
- Qualification, experience and training of nonlicensed personnel, supervision, and instructors.
- Quality of the on-the-job training (OJT).
- Feedback process including QA as it affects future training plans.

The inspector observed shift turnovers, a routine round and activities by auxiliary operators (AOs) and Shift Technical Advisors (STAs), routine activities by engineers, electricians, mechanics, instrument and control (I&C) technicians.

2.3 Observation of Work Activities and Findings

A Senior Shift Supervisor (SSS) reviewed with the inspector his draft of an Operations Department Instruction (ODI) regarding Mark-Ups. The ODI was part of the corrective action the licensee was taking to resolve the January 20, 1988 reactor scram due to loss of feedwater and the subsequent reactor vessel overfill. As defined in the licensee's Accident Prevention Rules, "A Mark-Up means the permission given by the Controller to the Mark-Up man to begin work after taking all necessary precautions. Therefore it continues to exist until the Mark-Up man marks clear." Later the inspector called upon an AO to explain how he processes a Mark-Up. The steps he followed agreed with the ODI being drafted and the steps were repeated the next morning by another AO processing an actual Mark-Up (No.047026) for a Work Request (WR) to Repair of Fire Door C-261-16.

An AO was observed on site, trouble shooting the continuous lifting of the nitrogen storage tank relief valves. He returned to the control room and reviewed a controlled schematic FSK-014-1A Flow diagram for the Nitrogen System. The AO then discussed the relief valve problem with one of the licensed operators and they sought approval of the Station Shift Supervisor to isolate the nitrogen storage tanks and to test the relief valves. Upon approval another



AO prepared the Mark-Up request form to isolate the tanks. The AOs were knowledgeable and thorough in their work to determine the best course of action to take. They were also aware of the administrative procedures for trouble shooting and processing the proper documentation.

A senior I&C technician was observed by the inspector performing the role of technical advisor. He was advising an I&C technician on how to conduct a surveillance of the HCU Scram Accumulator Pressure and Level Instrument Channels in accordance with procedure N2-ISP-RDS-103. The advice given was clear and was acknowledged by the I&C technician.

Another I&C technician was observed by the inspector explaining to his partner the importance of ensuring that the test plug connection to the Suppression Pool Water Temperature Indication Channel be absolutely clean to record true readings. This fact was not in the weekly surveillance procedure N2-ISP-CMS-M011. The I&C technician had performed the test a week ago and recalled the trouble he had recording true readings with the specific test equipment.

During the Unusual Event declared upon commencing a Technical Specification (TS) required shutdown, the inspector observed in part the performance of a reactor analyst who was a member of the Emergency Response Team. The analyst was providing the operations personnel with information during the descension and ascension of power. Information included insertion of rods versus reduction of flow. Also checked by the analyst was the assurance that the rod insertion was properly sequenced. As for the training and certification received and maintained by the analyst, it consists of primarily General Electric training. The analyst is also a trainer. During the same Event, an off-site engineer explained his role in assisting the Technical Superintendent in calculating the leak rate of a Type B Test of Penetration Z-74, whose missed surveillance caused the shutdown. The leak rate test calculations were within the TS requirements and the plant was returned to full power.

At the Training Center, an instructor was observed by the inspector teaching cyclical training to an Operations Department Shift. He was explaining the January 20, 1988 scenario where an AO inadvertently isolated the instrument air system and caused a reactor scram. This action is in accordance with licensee's commitment to correct and minimize if not prevent this incident from recurring. The instructor admitted that verification of valves by AOs was not in his lesson plan since the objective of this part of the session was to prepare the class for the simulator exercise scheduled the next morning. The lesson plan for nonlicensed operator training program for cycle IV Schedule, however, includes valve verification. AOs interviewed by the inspector have been made well aware of the January 20, 1988 scenario.



2.4 Training Progress

The Site Superintendent of Training reports to the General Superintendent Nuclear Generation and is responsible for nonlicensed technical training. In April 1987 the Training Department received INPO Board Accreditation for the last four of the ten training areas. These training areas are: (1) I&C Technician; (2) Electrical Maintenance; (3) Mechanical Maintenance; and (4) Technical Staff and Managers.

In the last six months the training staff has lost two I&C instructors, two operations instructors, one mechanical instructor, one chemistry and radcon instructor and three instruction analysts. The Training Department is however being supplemented with contract support and management is recruiting to fill these positions.

The inspector requested and was provided verbally the dates when each of the Nonlicensed Training Programs reviewed would be fully implemented. The information from the Training Department personnel included the following:

- The Maintenance Training Programs for mechanics and electricians is expected to be fully implemented in three years.
- Initial training for Auxiliary Operators is fully implemented. On the job training (OJT) is expected to be fully implemented in this calendar year. Continuing training will be fully implemented within two years.
- Initial training for I&C technicians is expected to be fully implemented in 18 months. Indoctrination for OJT will be completed in June 1988. Full implementation of the OJT is expected in two years. Indepth continuing training will be fully implemented in 28 months.
- Technical Staff and Managers (TS&M) Training Program will be initially implemented in June 1988 and is expected to be fully implemented in five years.

At the exit interview, the inspector commented on the above schedule for full implementation of the training programs reviewed during this inspection. Concern was raised by the inspector that in the previous inspection (50-410/86-11) conducted in April 1986, the licensee assured the inspector that they would have an implemented INPO accredited Training Program by the next annual NRC inspection. OJT manuals for mechanics, electricians and I&C technicians for example, were to be issued in April 1986 as noted in the previous inspection report. I&C technicians have not received their individual OJT manuals and will instead be completing their initial indoctrination



in the use of the OJT manual in June 1988. The previous reasons for the delays included expeditiously achieving commercial operation status. The concern is multiplied because the licensee is reorganizing the Site Staff and the Training Department staff has recently lost some of their training instructors. The General Superintendent of Nuclear Generation and other members of his staff acknowledged the inspector's concern and will develop a plan with milestones to expedite full implementation of their nonlicensed training programs.

The nonlicensed training and qualification effectiveness is measured by the licensee primarily through student and instructor evaluations, supervisory feedback, and periodic interface meetings. QA audits and surveillances and QC inspections provide a secondary means for measuring the effectiveness of personnel training and qualifications.

2.5 QA/QC Interface With The Nonlicensed Training Programs

Twelve annual QA audits addressing training were reviewed and the audits were found to be compliance oriented, i.e., dealing with documents and records. All of the identified deficiencies were corrected in a timely manner. Nine Surveillance Reports (SRs) and their accompanying checklists were reviewed and found to be comprehensive. One particular SR (87-10877) questioned the I&C management regarding an effective review of LERs during a continued training session. Twenty-one (21) items including 15 LERs were reviewed in one hour and the reviews were general in nature and not in sufficient detail to identify the exact cause and the required corrective and preventive action. The SR requests site management to resolve this problem by providing the Training Department with the information and time to present an effective review of events: During the review of training records, the inspector also noted that the recorded training sessions attended by the nonlicensed personnel contained many items of interest that were discussed in a very short time. This matter was raised by the inspector at the exit interview and he inquired about QA's intention to follow up and verify management's corrective action.

The inspector observed a QA surveillance of the Technical Specification required shutdown discussed in paragraph 2.4. The monthly surveillance was conducted in accordance with procedure N-2-OP-006. The QA engineer was using a QA checklist and was well versed with procedural and surveillance requirements. The QA Surveillance Group now includes former SRO and AO personnel and nonlicensed operator training is provided to the group.



2.6 Conclusion

Progress for full implementation of the INPO Accredited Nonlicensed Training Programs has been delayed for various reasons including expeditiously achieving commercial operation status. An example of delays is the I&C technicians not receiving their individual OJT manuals. Additional delays include a reorganization of the site staff and the Training Department losing some of their training instructors.

The personnel observed performing activities and the supervisors that were also interviewed were trained and qualified. They were well versed with the administrative procedures as well as the technical requirements. Some, especially the I&C technicians, though experiencing delays in their training programs, were optimistic that their training program would be fully implemented.

3.0 Management Meetings

Licensee management was informed of the scope and purpose of the inspection on April 4, 1988. The findings of the inspection were discussed with the licensee representatives during the course of the inspection and presented to licensee management at the April 8, 1988 exit interview (see paragraph 1 for attendees).

At no time during the inspection was written material provided to the licensee by the inspector. The licensee indicated that no proprietary information was involved within the scope of this inspection.



ATTACHMENT I

PROCEDURES

Administrative Procedure (AP) 3.3.1 Control of Equipment Mark-Ups, Rev 3.

AP-5.0, Procedure for Repair, Rev 11.

AP-8.1, Preventive Maintenance, Rev 3.

Operating Procedure (OP) 19, Instrument and Service Air System, Rev 1

OP 101C, Plant Shutdown, Rev 3.

N2-ICP-GEN-001, Safety Related Loop Calibration, Rev 2.

N2-ISD-RDS-R103, Hydraulic Control Unit (HCU) Accumulator Pressure and Level Instrument Channels, Rev 2.

N2-ISP-CMS-M011, Monthly Functional Test of Suppression Pool Water Temperature Indication Channel, Rev 0.

N2-OP-006, Conduct of Operations and Control Room Activities

N2-PM-51, Operator Rounds Guide

Loop Calibration Report (LCR)

IL2RHS-015, Reactor Head Cooling Flow, Rev 2.

LCR IL2SLS-004, Standby Liquid Control Pump PIA Discharge Pressure

Work Request

133889, Repair of Fire Door C-261-16.

135918, Replace Leaky Capacitors in DC Filter Bank (2VBB-UPS-10).

137619, Replace 2VBB-UPS-10 Fans.

137709, Vibration Monitoring for Feed Pump and Condensate Pump.

Quality Assurance (QA) Reports

Audit Reports NM-RG-IN-87001, 06, 07, NM-SP-IN-87003, SY-RG-87005, 06, 10, 87023-RG/IN, 87026-RG/IN, 87027-RG/IN, 87032-RG/IN, 87029-SP/CO

1987 Surveillance Reports (SR) 10460, 61, 62, 63, and 64, 10603, 10756 and 58, 10831, and 77.



Miscellaneous

Lesson Plan, Nonlicensed Operator Training Program, Cycle IV Schedule - 1988.

License Event Report (LER) 88-17, Reactor Scram to Level 8.

Significant Operations Experience Report (INPO) 85-1, Reactor Cavity Seal Failure.

Memorandum of April 6, 1988 regarding calculation of missed surveillance of penetration Z-74.

