


U. S. NUCLEAR REGULATORY COMMISSION

REGION I

DOCKET/REPORT NO: 50-410/94-26
LICENSEE: Niagara Mohawk Power Corporation (Niagara Mohawk)
FACILITY: Nine Mile Point Unit 2 (NMP 2)
Oswego, New York
DATES: November 28 - December 2, 1994
INSPECTORS: J. Caruso, Operations Engineer
M. Mitchell, Contractor, PNL

LEAD INSPECTOR:



John Caruso, Operations Engineer
BWR and PWR Sections
Division of Reactor Safety

12/22/94
Date

APPROVED BY:



Glenn W. Meyer, Chief
BWR and PWR Sections
Division of Reactor Safety

12/23/94
Date



INSPECTION SUMMARY

Report No. 50-219/94-26

Two inspectors evaluated the acceptability of the Nine Mile Point Unit 2 licensed operator requalification training (LORT) program during the week of November 28, 1994. The administration of the annual operating and the biennial written requalification examinations to two operating crews was observed and assessed.

Operations

The inspectors judged the Nine Mile Point Unit 2 (NMP 2) LORT program to be good overall. Training class attendance was good. Management expectations were provided to the operators during simulator training evaluations. Niagara Mohawk has effectively revised and improved the LORT program based on needs of the operators and operator feedback; however, the formal solicitation, tracking, disposition, and documentation of feedback comments was an area for program enhancement. The post event debrief training packages were considered an excellent training initiative. The remediation of identified training weaknesses was found to be a strength of the LORT program.

The inspectors concluded that the simulator scenario portions of the annual operating examinations and the written examinations administered the week of the inspection were challenging and met the guidelines established in the examiner standards. The JPM portion of the observed exams met the examiner standard guidelines for quality.

Administration of the annual operating examination was effective. The Niagara Mohawk evaluators were objective in identifying weaknesses and used good techniques in administering the examinations. Niagara Mohawk was effective in identifying and documenting operator deficiencies and areas for program improvement. Performance on the simulator scenarios was generally very good. Written exam performance, with only one failure for the two crews examined, was good. Although, only one operator failed a single JPM, operator performance on the JPM portion of the examination demonstrated some weaknesses in failure to follow procedures, which in part was due to procedure weaknesses. The examination security measures were found to be satisfactory, and there was no indication of examination compromise. QA audits were found to be independent and effective. Management involvement and oversight in the LORT program were significant and effective.

The Niagara Mohawk actions taken on two previous inspection findings were acceptable. Unresolved item (50-410/94-10-01) concerning ability to recognize entry conditions into the secondary containment emergency operating procedure if annunciators become unavailable and definition of areas in secondary containment was closed. Unresolved Item (50-410/94-12-01) concerning SRV tailpipe temperature alarm setpoint was also closed.



DETAILS

1.0 BACKGROUND AND SCOPE (IP 71001)

During the week of November 28, 1994, the NRC conducted a performance-based inspection of the Nine Mile Point Unit 2 LORT program using NRC Inspection Procedure 71001, "Licensed Operator Requalification Program Evaluation." The purpose of this inspection was to evaluate the acceptability of the licensed requalification training program with respect to 10 CFR 55 regulations and to assess the effectiveness of the training. Also, the inspectors focused on the training evaluation process and requalification program revisions made as a result of this evaluation process.

The inspection included a review of the annual operating and biennial written examinations, and observation of individual and crew performance for two operating crews. In addition, interviews with licensed operators, training instructors, and supervisory personnel were conducted. The procedures for maintenance and activation of operator licenses were reviewed. The inspectors verified that the requirements were met to reactivate inactive licenses. Administrative procedures and documents associated with the training program and its implementation were also reviewed.

The inspectors used NUREG-1021, "Operator Licensing Examiner Standards," Revision 7, as a basis for determining the adequacy of the Nine Mile Point unit 2 operator examination process.

2.0 TRAINING ADMINISTRATION

2.1 Training Program Evaluation

The inspectors concluded that the LORT program was effectively revised to stay current with the needs of the operators. Training class attendance was good. Management expectations were effectively provided to the operators during simulator training evaluations.

The inspectors reviewed initiatives taken by Niagara Mohawk to update and enhance the requalification program. The inspectors reviewed Niagara Mohawk training procedure, NTP-TQS-102, "License Operator Requalification Training". This procedure provided a detailed listing of lecture topics to be presented throughout the two-year requalification program as well as a listing of topics to be included in continuing training. The list of topics for continuing training included procedure changes, plant modifications, industry events, lessons learned, INPO significant operating experience reports, NRC bulletins and information notices. The inspectors reviewed a listing of topics covered throughout the past year during each LORT training cycle and the most recent lesson plan used to conduct LORT training on procedure changes and industry events. The listing of topics reviewed this past year was comprehensive and the lesson plan was organized and thorough.

Several completed post event debrief training packages were reviewed for plant events that occurred over the past two years. The training packages provided detailed event summaries, and debrief comments from the operators. The training packages also assigned actions for operation's training to develop further training as appropriate and included actions for training to use the



actual charts and printouts from the event to verify simulator fidelity and to initiate simulator enhancements as necessary. The inspectors concluded this was an excellent training initiative.

The inspectors reviewed several documents such as end-of-cycle and annual training reports that implemented training improvement initiatives that emphasized management's expectations (discussed in greater detail in section 2.4 of this report).

The inspectors reviewed licensed operator attendance for the nine training cycles conducted in 1994. Class attendance was good. Classes that were missed were made up within the next training cycle (i.e., within 6 weeks from the end of the missed cycle of training or removed from license duties if not completed within 12 weeks from the end of the missed cycle of training) as specified in the facility procedures. No problems were identified.

A number of operators commented that the simulator training received was very good. The training department provided between 2 and 3 days of simulator training per week of training. In addition, weekly simulator examinations were conducted during each LORT training segment. The operations manager or his designate evaluated operator performance during weekly simulator examinations as well as during the annual operating examinations. The operators were evaluated in the same categories used to evaluate the crews during the annual operating examination. These evaluations provided timely and useful feedback to the operators that reflected management expectations.

2.2 Operator Feedback

Niagara Mohawk has revised and improved the operator requalification program based on operator feedback; however, the solicitation, tracking, disposition and documentation of feedback comments was somewhat informal and an area for program enhancement. The inspectors reviewed the feedback records for the current two year training cycle. Student feedback forms were not typically completed and filed. Although the forms were still available for use and were discussed in the program administrative guidelines, these forms were not typically used to document operator feedback. The feedback documented at the end of each training cycle and throughout the year was collected through informal verbal feedback from the individual crews and operation's management but was not formally solicited by training. Much of the feedback was provided on an as needed basis and documented in the form of training review request (TRR) forms. The TRRs were tracked to completion on an in-house training department data base. The inspectors reviewed a sampling of the TRRs generated the past year and found many completed training activities in response to operation's department requests. Interviews with the operators indicated that for the past year, feedback had been provided verbally by the senior crew members to the LORT coordinator or to training advisors assigned to each operating crew. Interviews with the operators also supported the inspectors' conclusion that the training department was receptive and timely in resolving major concerns.



Niagara Mohawk training procedure, NTP-TQS-503, "Training System Development" specified that the instructor should collect completed trainee course evaluations and summarize trainee comments and assess for documentation and resolution using training change orders (TCOs). The procedure further required that the General Supervisor of Training review trainee evaluations, review and sign the instructors evaluation summary and ensure TCOs are written as needed. The inspectors found that formal documentation and summarization of trainee comments by instructors after each training session is typically not done. However, the inspectors' review concluded that the training department was receptive and timely in resolving major concerns using the informal processes described above.

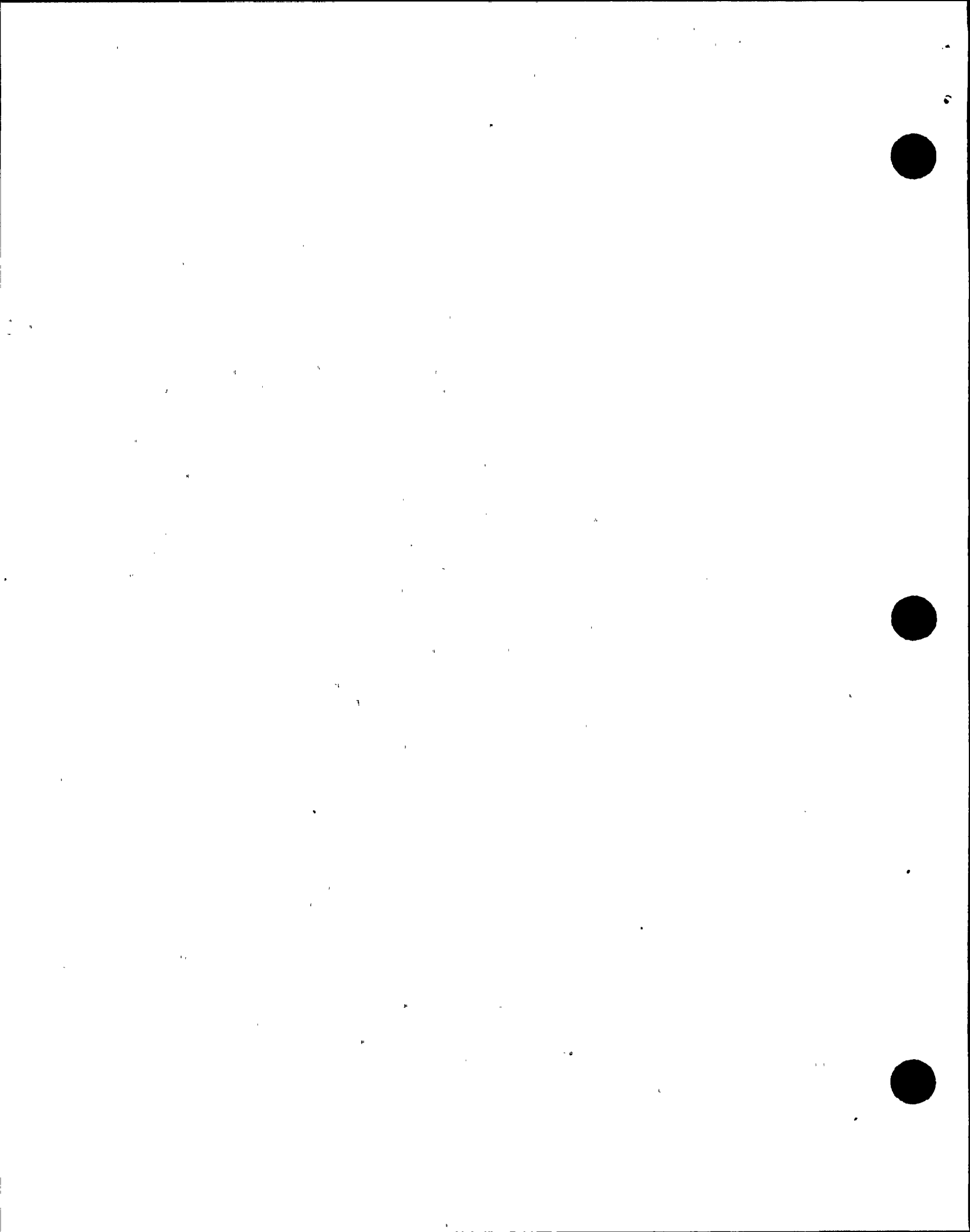
The inspectors determined that the training staff and management had been responsive to the major issues and questions raised by operators, as evidenced by various training initiatives that were subsequently implemented. The inspectors concluded that Niagara Mohawk has effectively revised and improved the operator requalification program based on operator feedback; however, the formal solicitation, tracking, disposition and documentation of feedback comments was an area for program enhancement.

2.3 Remedial Training

The inspectors reviewed a sample of remediation records for individuals and crews who had failed cyclic, annual operating and biennial written exams and determined this area to be a program strength.

The performance standards and guidelines for remediation are established in the Licensed Operator Requalification Training procedure, NTP-TQS-102. The inspectors reviewed the completed training remediation packages for the following: the one individual who failed the 1993 operating exam; one of the four individuals who failed the 1993 annual written exam; cycle 2 (March 1994) operating exam that was failed by 4 out of 5 of the operating crews and the root cause analysis that was subsequently performed; Cycle 5 (June 1994) and 8 (September 1994) also had multiple failures on the operating exams and had a root cause analysis performed as a result of each; a sample of 13 end-of-cycle written exam failures that occurred throughout 1994; and finally the proposed remediation package for the one written exam failure that occurred the week of the inspection.

In most cases reviewed by the inspectors, the grades obtained on retake examinations were substantially higher. The remediation packages reviewed were thorough and appropriate for the weaknesses demonstrated. When an annual or biennial test was failed, the remediation program included a record review of all previously identified weaknesses for that operator or the crew, and the generation of a comprehensive training and testing remedial program. The remediation packages addressed all weaknesses identified for the entire two year training cycle not just the weaknesses identified on the failed examination. This was judged to be an excellent training initiative. Based upon these results, the inspectors concluded that the remedial training was a program strength.



2.4 Management Oversight and Controls

The inspectors reviewed various documentation that indicated management involvement in the LORT program was significant and effective. Operations and Training management appear to work closely and well together in managing the Operator Requalification Program. The inspectors noted that operations reviews and approves all training materials used in the LORT program including schedules, lesson plans and cyclic, annual and biennial examinations. Many examples were reviewed that demonstrated managements commitment to continually review and enhance the program in response to operator needs. Management oversight and receptiveness to operator feedback was also confirmed during operator interviews.

The operations manager, general supervisor of operations or a designate has performed evaluations along with the training staff during weekly requalification program simulator training examinations and during annual operating examinations. The inspectors reviewed a sampling of the simulator evaluation feedback documentation provided to the operators during weekly simulator training examinations and determined these evaluations provided timely and useful feedback on management expectations.

The inspectors reviewed various management reports issued over the past 2 years that demonstrated management's involvement and oversight. Meeting minutes were reviewed for all of the quarterly operations and training interface meetings held in 1994. The meeting minutes documented management discussions on many long term LORT training program initiatives. Action items were assigned and statused, at each meeting. In addition, all of the available end-of-cycle training reports issued for 1994 were reviewed. These reports are issued at the end of each LORT training cycle by the general supervisor of unit 2 operations training. The reports listed any training missed by the operators, any areas for individual or crew improvement, the status of open and closed items resulting from training, and NRC or license renewals due in the next 3 months. These end-of-cycle reports provided a good management overview/assessment of the training conducted each training cycle. Finally, the inspectors reviewed the annual 1993 NMP 2 Operations Training report, which summarized performance for the entire year and included such items as LORT program changes initiated during the year, operator performance including strengths and areas for improvements identified, management observations of training, and a summary of 1994 actions to be taken as a result of the 1993 annual report. The inspectors review concluded that management involvement in the LORT program was significant and effective.

3.0 EXAMINATION DEVELOPMENT

The inspectors concluded that the simulator scenarios were challenging and met the guidelines established in the examiner standards. The inspectors reviewed the 4 simulator scenarios written by the facility and administered during the week of the inspection. In addition, a sample of the scenarios found in the simulator exam bank were also reviewed. The attributes described in the Examiner Standards and in Inspection Procedure 71001, Appendix A for a good scenario were present in the scenarios reviewed. The four scenarios that were observed ran well. Scenario objectives were clearly defined. Crew critical



tasks were well developed and met the criteria described in the Examiner Standards. Various EOPs and technical specifications were used during the exam scenarios.

The NMP 2 LORT program requires a comprehensive biennial exam be administered annually. The inspectors reviewed the two written biennial examinations prepared by the facility and administered the week of the inspection and concluded the exams were challenging and met the guidelines established in the examiner standards.

The JPM portion of the examination met the examiner standard guidelines for quality. The inspectors noted, that no SRO-specific JPMs were included in the examination bank. While SRO-specific JPMs are not required, the examiner standard expresses an implied expectation that they be present. Facility training personnel agree that SRO-specific JPMs, such as determining emergency plan actions and making Protective Action Recommendations (PARs) are desirable and expressed willingness to include them in future revisions of the exam bank. At the exit meeting the general supervisor of unit 2 operations training stated April 1, 1995 was the date established as a goal to develop SRO-specific JPM's.

The inspectors reviewed the two sample plans developed for each of the exams administered to the two operating crews the week of the inspection and concluded the plans were acceptable. Each sample plan included a list of all topics covered in the training program for the current two year cycle, and the corresponding amount of training time spent on each topic. The written exam questions, simulator scenarios, and JPMs administered were also reflected on the sample plans.

The inspectors concluded that the simulator scenario portions of the annual operating examinations and the written examinations administered the week of the inspection were challenging and met the guidelines established in the examiner standards. The JPM portion of the observed exams met the examiner standards guidelines for quality.

4.0 EXAMINATION ADMINISTRATION

4.1 Test Implementation

The inspectors observed the administration of the annual operating and biennial written requalification examinations at Nine Mile Point Unit 2 and determined that the exams were effectively administered overall.



The week of the inspection, operating crews "A" and "E" were each examined using two different simulator scenarios, a unique set of five different JPMs and a unique biennial written exam for each crew examined. Niagara Mohawk's administration of the annual operating examination was effective. The evaluators were thorough and objective in identifying crew and individual weaknesses and used good techniques in administering and evaluating the examinations. When encountered, procedure deficiencies were addressed by initiating procedure change requests as expected. The inspectors' observations agreed with the crew and individual strengths and weaknesses identified by the Niagara Mohawk evaluators.

4.2 Examination Security and Validity

The inspectors reviewed the exam security measures taken by the facility, which include varying the scenarios used and keeping the examination bank out of circulation and not available to operators. Niagara Mohawk's examination security measures were found to be satisfactory, and no indications of examination compromise were identified.

5.0 OPERATOR PERFORMANCE

The inspectors observed two operating crews being examined during the week of the inspection and concluded in general the operators performed well on the examination.

Performance on the simulator scenarios was generally very good. The operator's performance demonstrated generally very good communications, teamwork, control board operations, and event recognition. The Station Shift Supervisors (SSSs) and Assistant Station Shift Supervisors (ASSSs) generally demonstrated good command and control as well as good use of the Shift Technical Assistant position.

Written exam performance, with only one failure for the two crews examined, was good.

Although, only one operator failed a single JPM, operator performance on the JPM portion of the examination demonstrated some weaknesses in failure to follow procedures, which in part was due to procedure weaknesses (i.e., three procedure change requests were initiated as a result of operator performance on the JPMs). Poor self-check was also a weakness for some operators. For example, one operator when initiating the Standby Gas Treatment System performed all critical tasks correctly but failed to verify the proper system response of 5 motor-operated valves and the system fan on initiation as required by procedure, N2-OP-61A.

The unit 2 operations manager indicated at the exit meeting that Niagara Mohawk had also identified some instances that demonstrated operator weaknesses in the areas of failure to follow procedures and self-check and they were continuing efforts to improve operator performance in this area.



6.0 MAINTENANCE AND ACTIVATION OF OPERATOR LICENSES

The inspectors reviewed Niagara Mohawks's programmatic controls for maintaining an active license and for reactivating an inactive license to active status while meeting the requirements of 10 CFR 55.53. Facility procedures, NTP-TQS-102, "License Operator Requalification Training," Section 3.14, and N2-ODP-TQS-0101 describe the program. These procedures provided clear guidance and good programmatic controls for meeting the requirements of 10 CFR 55.53.

Various training attendance records, operations records including logs, and medical records were reviewed, in addition, records were reviewed for three individuals who reactivated their licenses in the past year, no weaknesses were identified. The inspectors concluded Niagara Mohawk's controls for maintenance and reactivation of operator licenses were good.

7.0 MEDICAL RECORDS

The inspectors reviewed a sample of twelve licensed operator medical files to ensure that medical examinations were being conducted biennially. The inspectors determined that physical examinations were performed biennially as required by 10 CFR 55.21 with no identified weaknesses.

8.0 QUALITY ASSURANCE AUDITS

The inspectors reviewed a sample of five Quality Assurance audits completed in the past 2 years assessing the NMP 2 operator training program and operation's department activities, and concluded that the audits were both independent and effective. All of the audits reviewed appeared to be performance based using a combination of direct observation and record reviews. Several findings identified in the audits were also independently observed and assessed by the NRC inspectors; specifically, the NMP-2 simulator training program was effective in identifying performance weaknesses, the plant was in good physical condition, operator performance was generally good and NMP-2 operating procedures required further improvements.

9.0 LICENSEE ACTION ON PREVIOUS INSPECTION FINDINGS

9.1 Ability to Recognize Entry Conditions into the Secondary Containment Emergency Operating Procedure

(CLOSED) Unresolved Item (50-410/94-10-01) This unresolved item concerned ability to recognize entry conditions into the secondary containment emergency operating procedure (SC EOP) if annunciators become unavailable, definition of areas in secondary containment, and ability of the simulator to adequately verify implementation of the SC EOP. The inspectors reviewed actions taken to address these inspection report concerns discussed in Niagara Mohawk deviation/event (DER) report 2-94-1478 and concluded that the issuance of N2-SOP-91 (Loss of Control Room Annunciators) and N2-EOP-6 Attachment 28 (Determining Rx Bldg. Temperatures) adequately address the concerns identified. Niagara Mohawk stated in DER 2-4-1478 that the simulator as it is currently modeled does allow for implementation of the SC EOP, although further



simulator enhancements of the SC model were being evaluated. The resolution of Niagara Mohawk deviation/event report 2-94-1628 (Loss of ability to monitor EOP entry conditions due to loss of DRMS computer) should further ensure adequate backup exists for responding to EOP secondary containment parameters when actions are completed. The inspectors determined that all corrective actions had been completed. This item is closed.

9.2 SRV Tailpipe Temperature Alarm Setpoint

(CLOSED) Unresolved Item (50-410/94-12-01) This unresolved item noted that the SRV tailpipe temperature alarm setpoint could be too high to alarm when an SRV is leaking or actuating. The inspectors reviewed actions taken to address these inspection report concerns discussed in Niagara Mohawk deviation/event (DER) report 2-94-1428 and concluded that the issuance of N2-TTP-MSS-M001 (Main Steam System Safety Relief Valve Performance Monitoring) and Engineering Design Change No. 2M10809 (i.e., permanently fixed the setpoint of annunciator window #001537 at 334F) adequately addressed the concerns identified. The design change stated that the tailpipe temperatures were typically higher than would normally be expected due to the installation of insulation on the SRV tailpipes during plant construction and also due to possible valve weepage. Niagara Mohawk replaces half of the SRVs each refueling outage based on surveillance trending data. The system engineer stated NMP 2 was the only plant in the country with insulated tailpipes, and one of only four plants in the country with this valve design installed. The inspectors concluded that all corrective actions had been completed. This unresolved item is closed.

10.0 EXIT MEETING

An exit meeting was conducted on December 2, 1994, during which the NRC inspectors reviewed the scope and findings of the inspection. At the exit meeting, Niagara Mohawk personnel acknowledged the inspectors conclusions and findings. Key Niagara Mohawk personnel contacted during the inspection and attendees at the exit meeting are listed below:

* M. McCormick	Vice President Nuclear Safety Assessment and Support
* R. Bigelow	Operations Instructor
* D. Bosnic	General Supervisor of Operations
* J. Conway	Operations Manager Unit 2
* C. Croasmun	Operations Instructor
* K. Dahlberg	Plant Manager Unit 2
* B. Murtha	General Supervisor Operations Training Unit 1
* R. Slade	General Supervisor Operations Training Unit 2
* R. Tessier	Manager Training Nuclear
* J. Toothaker	Requalification Coordinator Unit 2
A. Zallnick	Licensing

*Denotes those present at the exit meeting.

