

**WNP-2**

**LICENSED OPERATOR REQUAL PROGRAM**

**CORRECTIVE ACTION PLAN**

**Resolution Documentation**

**April 1, 1992**

## SUMMARY OF OPEN CORRECTIVE ACTION PLAN ITEMS

### Short Term Actions:

All short term corrective action items have been closed.

### Intermediate Term Actions:

All intermediate term action items have been closed.

### Long Term Actions:

All long term term action items have been completed with the exception of the following:

- Item Y1-1 To be completed by the end of July, 1992
- Item Y2-1 To be completed by the end of July, 1992
- Item Y3-2 To be completed by the end of July, 1992
- Item Y6-1 To be completed by the end of, various dates in 1992
- Item Y9-1 To be completed by the end of July, 1992
- Item Y16 To be completed by the end of September, 1992
- Item Y19 To be completed by the end of July, 1992
- Item Y21 To be completed by the end of May, 1992
- Item Y25 To be completed by the end of August, 1992

#### Note:

- Short term action items designated with the "S" prefix were completed prior to restart from R-6.
- Intermediate term action items are designated with the "C" prefix.
- Long term action items are designated with the "Y" prefix.
- Short term action items designated with the "R" prefix were completed prior to the June 5 & 6, 1991 NRC Re-examination.



S1. Conduct a Root Cause Investigation including an examination analysis to determine the causes for the failures of the NRC re-examinations and recommend corrective actions.

Current Status: Closed

Resolution/justification/documentation:

- The second root cause report was sent to the NRC 8/20/91 (GO2-91-156). A copy of CAP rev 7 was sent under the same cover letter as the root cause report.
- A copy of the root cause report is available in H. McGiltons or R. Barmettlors office.
- Original CAP responsibility: Schumann, Topley

S2. Reconstitute an additional crew and conduct team building training in preparation for an operational evaluation.

Current Status: Closed

Resolution/justification/documentation:

- Crew B configuration: Estes (SRO), Gallagher (SRO), Green (RO), Villarruel (RO) and kleven (RO)
- Crew B training took place in the June, July and August 1991 time frame. Training records are located in Central Training Services. Training evaluation results are also available in the R/Q data base.
- Crew B re-examination was conducted in September 9, 1991 (crew passed).
- Refer to LTI 4.1 for outline of team building and communications training scope.
- Refer to GO2-91-133 and 140 (WPPSS letter to NRC).
- Original CAP responsibility: McKay

S3. Review all known EOP discrepancies (human factor related or technical). Correct those which could have an impact on crew performance and safety.

Current Status: Closed

Resolution/justification/documentation:

- Minor EOP changes were made before the June 5 & 6 exam (prior to phase one EOPs). After the examination the decision was made to perform an extensive EOP revision using assistance from CIEL corp. Phase one EOPs were implemented in 8/16/91 and have been used in all subsequent exams. Phase one EOPs are the current approved volume 5 PPMs.
- Verification documents are located in the procedure writers group. Contact Don Merhar for review of specific information. Data consists of Control Room verification, Technical verification and Checklist verification
- Phase two EOPs are a separate CAP item (Y21).
- The goal was to have usable EOPs prior to plant startup. This goal was met.
- Original CAP responsibility: Powers



S4-4. Train the operators on changes to the EOPs that were identified in action item S3.

Current Status: Closed

Resolution/justification/documentation:

- Training on minor EOPs changes prior to the June 5 & 6 exam was conducted with the operators in the simulator using a tabletop methodology during the conduct of dynamic scenarios. Training records are located in Central Training Services.
- Extensive phase one EOP training was conducted in formal classroom and simulator training for all operators in the five crews required prior to plant startup. Training records are located in Central Training Services.
- Curriculum content is available for review in D. Topley's office.
- Outside experts in the instruction of rev-4 EOPs were brought in to assist the staff in conducting the training.
- Original CAP responsibility: Topley

S5-4. Train the operating crews on the lessons learned from the deficiencies encountered in the Operational Evaluation and NRC re-examination.

Current Status: Closed

Resolution/justification/documentation:

- Prior to the June 5 & 6 examination all required operators were trained on the lessons learned from the OPE and annual exam failures in February and March. A combination of classroom and simulator training was used. Training records are located in Central Training Services.
- Sources for identifying the lessons learned included the original root cause report, exam analysis of the original exams and an exam analysis of the re-placement operator exam conducted in March. The exam analysis is available for review in D. Topley's office.
- Curriculum content (remediation program description) is available for review in D. Topley's office. Note, this information has already been provided to the NRC through written correspondence.
- Original CAP responsibility: Topley

S6. Complete the 1991 licensed operator annual examinations for the remaining operators.

Current Status: Closed

Resolution/justification/documentation:

- All annual exams for the five operating crews used for plant startup completed their annual exams prior to plant startup. Exam records are located in Central Training Services.
- To date, all annual exams have been completed with the exception of Herb Rockey who's exam is scheduled to be completed by the end of February 1992 (refer to CAP item C4 and C10).
- Original CAP responsibility: Topley

S7-4. Conduct additional EOP training (including bases) with the remaining crews.

Current Status: Closed

Resolution/justification/documentation:

- This additional bases training was given during EOP phase one training, refer to the justification for CAP item S4-4. To date, all licensed operators have received EOP phase one training with the exception of Mike Herring, Mac Conserriere, John Rueckert and Ed Neasham (note, Mac, John and Ed have had the classroom portion). Training records are located in Central Training Services.
- The training curriculum is available for review in D. Topleys office.
- Original CAP responsibility: Topley

S8-4. Train the remaining crews on management expectations for EOP usage, including; communications, command and control, entry and exit conditions, STA responsibilities, interpretations and deviation process.

Current Status: Closed

Resolution/justification/documentation:

- Management expectations training was conducted by Operations Management. Management expectations have been constantly reinforced during subsequent simulator training. Refer to CAP item S4-4.
- Independent observation addressing these issues was conducted by the L & A organization throughout the training process.
- Various IOMs and other related documents are available which further address this subject. These documents are located in D. Topleys office.
- Original CAP responsibility: McKay, Topley

S9. Respond to the requalification program assessment conducted by the utility peer evaluators.

Current Status: Closed

Resolution/justification/documentation:

- Refer to IOM dated 6/21/91 "Response to Operations Requal Training Program Evaluation Industry Task Force Report". This IOM is located in Dave Topley's office.
- Original CAP responsibility: Barmettlor, Topley

S10. Conduct additional EOP training (including bases) for the simulator training staff.

Current Status: Closed

Resolution/justification/documentation:

- Refer to item S7-4. Instructor EOP training was conducted at the same time as that of the operating crews. Training records are located in Central Training Services.

- Additional EOP classroom training was presented to the instructors on 10/1/91 prior to the assumption of normal requal training. Training records are located in Central Training Services.
- Original CAP responsibility: Barmettlor

S11-4. Incorporate additional emphasis on "Transient Management" training.

Current Status: Closed

Resolution/justification/documentation:

- A significant number of new and revised scenarios were developed to address the operators ability to handle more complex and challenging events. Approximately 16 transient management scenarios were initially developed in April and May 1991. Since that time the simulator scenario exam bank has grown significantly. Refer to the scenario exam bank to review scenario complexity. Training records are located in Central Training Services to show how extensively the transient management type scenarios have been utilized in training and evaluation.
- Also refer to CAP item S5-4. The inability of the operators to handle complex scenarios was identified as a major weakness after the March OPE.
- Original CAP responsibility: Topley

S12. Prepare a letter to Region 5 detailing the additional pre-startup activities.

Current Status: Closed

Resolution/justification/documentation:

- A letter was not actually sent to the NRC, instead a formal presentation was made by the Supply System staff to the NRC addressing these issues. Refer to NRC Region 5 presentation package. A copy of this presentation is available in Dave Topley's office for review.
- WPPSS to NRC letter G02-91-164 (9/9/91) responds to restart actions identified in CAL (NRC to Oxsen, 6/14/91). G02-91-174 (9/25/91) provides additional information as a result of the 9/9/91 failure of crew D.
- Original CAP responsibility: Baker

S13-4. Conduct additional classroom and simulator training for CROs on the EOPs (including bases).

Current Status: Closed

Resolution/justification/documentation:

- Refer to CAP item justification S7-4.
- Original CAP responsibility: Topley



S14-3. Review the "Observation Evaluation" program simulator evaluation goals to ensure they are adequate for Plant Management to regularly observe simulator requalification training and evaluation sessions.

Current Status: Closed

Resolution/justification/documentation:

- To address this action item refer to Jack Baker or Dave Kobus.
- The Observation Evaluation Program was revised and a copy of the revised program was sent to the NRC 5/13/91.
- Original CAP responsibility: Baker

S15. Ensure the operators are exposed to a variety of AC and DC electrical malfunctions during simulator training.

Current Status: Closed

Resolution/justification/documentation:

- Classroom training was conducted as part of the lessons learned addressing AC and DC electrical distribution. Refer to training records in CTS.
- There are a wide variety of simulator scenarios in the exam bank which cover many different types of electrical failures. Each crew has been exposed to a major cross section of the exam bank. Refer to training records in CTS.
- Original CAP responsibility: Topley

S16. Ensure the operators are exposed to a variety of simulator scenarios which will allow them to maintain proficiency in the use of ARPs and Tech. Specs.

Current Status: Closed

Resolution/justification/documentation

- There are a wide variety of simulator scenarios in the exam bank which cover many different types of plant condition which require the use of ARPs and Tech Specs. Each crew has been exposed to a major cross section of the exam bank. Periodically less complex scenarios were run on the crews which focus more on ARPs and Tech Specs to ensure their proficiency in this arena was maintained at a high level.
- Refer to simulator training records in CTS.
- Original CAP responsibility: Topley

S17. Develop a document that identifies standards of performance for the use of EOPs.

Current Status: Closed

Resolution/justification/documentation:

- Operations management policies has been captured in an IOM which has been used by Operations and Training to establish consistent standards of performance in addition to the phase one revision of the EOPs. A complete file of the IOMs is available with the Operations Training Liaison.
- The latest IOM guidance is dated 12/17/91.
- An IOM addressing CRO performance during emergencies dated 10/24/91 was issued addressing this subject.
- Original CAP responsibility: McKay

S18. Establish a set of evaluation criteria that will be used by management to determine whether the operating crews are consistently and effectively meeting managements expectations in the conduct of plant and simulator operations.

Current Status: Closed

Resolution/justification/documentation:

- A set of criteria has been identified and used to determine whether a crew and/or individual is ready for a NRC examination. A copy of the IOM which describes the standards used is available in Dave Topley's office. The IOM was dated 7/25/91 from D. Topley to S. McKay.
- Original CAP responsibility: McKay

C1-3. Develop a more systematic approach to requalification program scheduling to effectively maintain operating skills and provide adequate examination preparation for the operating crews.

Current Status: Closed

Resolution/justification/documentation

- License Training Instruction 4.8 "Licensed Operator Requalification Training Cycle Content" has been written and implemented to ensure future Requal training curriculum is determined on a systematic basis and to ensure the quality is maintained at a consistently high level..
- Original CAP responsibility: Topley

C2. Develop the 24 month requalification program schedule including; major systems topics; simulator scenario schedule; static exam practice schedule; JPM practice schedule; update lecture schedule; annual exams; etc.

Current Status: Closed

Resolution/justification/documentation:

- A 24 month training schedule has been developed. Dave Topley has the schedule located in his office. The schedule will be revised as appropriate base on the Operations Management Task Force actions.
- Original CAP responsibility: Topley

C3-2. Evaluate the identified physical differences between the simulator and the plant to determine if short term changes are necessary, such as; location of fuse pullers, labeling keys, and identify the location of selected simulator back panels

Current Status: Closed

Resolution/justification/documentation:

- Fuse pullers have been verified to be in their proper location in the simulator. G. Richmond verified.
- The back panels have been labeled in the simulator to assist the operator. G. Richmond verified.
- The key labels were modified to the the extent possible to reflect actual plant configuration. G. Richmond verified.
- Original CAP responsibility: Barmettlor

C4. Develop and implement a crew training program for Crew "A". Crew performance must be evaluated by the NRC prior to allowing them to operate above Mode-4.

Current Status: Closed

Resolution/justification/documentation:

- Training of crew "A" was formally completed February 24, 1992. The OPE will be conducted on 2/27/92.
- The OPE scenarios will be used as part of H. Rockeys annual exam.
- Original CAP responsibility: Topley

C5. Conduct a team inspection of the nuclear license training programs to assess corrective action effectiveness and overall program adequacy.

Current Status: Closed

Resolution/justification/documentation:

- A team inspection was conducted. A series of reports were written that describes the results of the observations. A copy of the reports are available from Herb McGilton or Bob Barmettlor.
- A number of outside consultants were used to assist in the conduct of the inspections.
- Original CAP responsibility: Bouchey

C6. Deleted. Refer to action item Y22.

C7. Revise LTI 4.1 'Simulator Scenario Development'

Current Status: Closed

Resolution/justification/documentation:

- The scenario format has been revised. Currently all existing scenarios are being reformatted. All new scenarios are developed in the new format. The scenario format is described in LTI 4.1.
- A new LTI (5.5) has been issued which describes the conduct of Requal simulator training expected to be implemented at WNP-2.
- Original CAP responsibility: Topley

C8. Conduct a formal evaluation of the performance of each simulator instructor.

Current Status: Closed

Resolution/justification/documentation:

- A complete set instructor evaluations conducted in 1991 are available from Ron Anfinson.
- Original CAP responsibility: Anfinson.

C9. Develop a formal set of criteria which identify acceptable STA job performances in support of the operating crews during abnormal and emergency conditions. Additionally, develop and implement a set of supporting evaluation criteria which will be used to evaluate STA performance in the simulator

Current Status: Closed

Resolution/justification/documentation:

- The Plant Manager has written an IOM dated 9/23/91 that identifies the role of the STA during emergency conditions. The guidance in the IOM is being used by the STAs and training during simulator training. A copy of the IOM is available from Dave Topley.
- Original CAP responsibility: Talbert, Barmettlor

C10. Make arrangements for individual license holders who are not part of an identified crew to complete their 1991 annual exam. Provide the necessary simulator team training for each individual prior to the conduct of their annual exam.

Current Status: Closed

Resolution/justification/documentation:

- A formal training program was provided to all affected personnel (N. Hancock, W. Shaeffer and H. Rockey). All records are located in CTS. Also refer to CAP item S6 justification.
- Original CAP responsibility: Topley

C11. Review and revise as necessary the licensed operator job task lists to incorporate the changes in the revised EOPs. Revise the training to task cross-reference matrices in order to identify the training materials which support the EOP tasks.

Current Status: Closed

Resolution/justification/documentation:

- The EOP task list was revised (10/9/91) following the phase one EOP revision. Refer to the TUS files for information concerning the task list revision. Mark Westergren is the point of contact for information concerning the TUS.
- Original CAP responsibility: Barmettlor, Westergren

Y1-1. Revise the JPMs to eliminate unnecessary critical steps and include negative response steps.

Current Status: Open

Comments: The bank has been significantly expanded. Currently there are approximately 90 JPS at WNP-2. 62% bank has been updated and revised to ensure the JPMs no longer contain negative response questions and all unnecessary critical steps have been eliminated. This specific action item is scheduled to be completed by the end of July, 1992.

Resolution/justification/documentation:

- (later)
- Original CAP responsibility: Topley

Y2-1. Revise the written examination bank to reduce the number of negative response questions.

Current Status: Open

Comments: This action is being completed as part of the on-going exam bank review and revision process. This specific action item is scheduled to be completed by the end of July, 1992.

Resolution/justification/documentation:

- (later)
- Original CAP responsibility: Topley

Y3-2. Increase the use of video taping in order to evaluate operating crew performance during simulator sessions.

Current Status: Re-opened

Comments: This CAP item has been reopened as a result of the Operation Management Task Force. This CAP item is scheduled to be re-closed at the end of July, 1992.

Resolution/justification/documentation:

- The use of video has taping has significantly increased during the past year. The tapes are currently used to conduct detailed reviews of crew and individual performance. The tapes are occasionally used by the instructors and operators to review specific details in a tape as part of training and evaluation critiques.
- Original CAP responsibility: Barmettlor

Y4-2. Conduct static simulator examination practice as part of the on-going requalification program.

Current Status: Closed

Resolution/justification/documentation:

- As part of the on-going requal training practice time has been made in the schedule for the operators to practice taking static examinations in order to maintain their proficiency.
- Original CAP responsibility: Topley

Y5-3. Attempt to achieve more timely agreement on the content of future NRC examinations (i.e. at least 30 days prior to the examination).

Current Status: Closed

Resolution/justification/documentation:

- Prior to all future R/Q NRC examinations the utility staff will attempt to arrange NRC review of the proposed examination materials at least 30 days prior to the examination. The staff will travel to the NRC and formally present the exam package. Further, the utility training staff will maintain regular contact with the appropriate NRC points of contact (Region 5 and NRR) to keep cognizant of any changes the Regual that could affect the examination process.
- Original CAP responsibility: Barmettlor

Y6-1. Incorporate appropriate lessons learned into the Licensed Operator initial training curriculum.

Current Status: Open

Comments: The following lessons learned have been designated for incorporation into the initial training curriculum. Each lesson learned will be incorporated into the affected training materials prior to their use for instruction.

- Response to, and understanding of, level instrumentation failures. This action has been incorporated into the components portion of the fundamentals training curriculum. This action item is scheduled to be implemented in the current training class by the end of December, 1991.
- Operational knowledge of the CNTMT H2/O2 analyzer. This action will be incorporated into the systems training curriculum. This action item is scheduled to be implemented in the current training class by the end of April, 1992.
- Proper communications/crew interactions, command and control, and leadership. This action item is scheduled to be implemented in the current training class by the end of August, 1992.
- Use of, and understanding of, WNP-2 phase two EOPs. This action will be incorporated into the simulator training curriculum. This action item is scheduled to be implemented in the current training class by the end of August, 1992.

Resolution/justification/documentation:

- (later)
- Original CAP responsibility: Powell

Y7-1. Conduct a reverification and revalidation of the static portion of the exam to assure the scope of the exam is proper relative to the number of participants and availability of reference materials.

Current Status: Closed

Resolution/justification/documentation:

- The exam validation process has been revised to ensure there are appropriate resources and time available to ensure the operators will have a fair examination.
- A review of the Fitzpatrick annual exam failure (May 1991 NUMARC meeting in St. Louis) has also been conducted and lesson learned were taken from that experience. Also follow-up phone conversation with Mr. Fred Catella at Fitzpatrick.
- Original CAP responsibility: Topley, Topley

Y8-4. Conduct a Human Factors evaluation of WNP-2 EOPs.

Current Status: Closed

Resolution/justification/documentation:

- (later)
- Original CAP responsibility: McKay, Messersmith

Y9-1. Upgrade the static examination process by linking the associated exam bank to specific learning objectives.

Current Status: Open

Comments: As part of the on-going revision and development process action is being taken to ensure a strong correlation between static test items, the appropriate learning objectives and the exam bank. This action item is scheduled to be completed by the end of July, 1992.

Resolution/justification/documentation:

- (later)
- Original CAP responsibility: Topley

Y10-2. Review the update lecture material selection process to eliminate duplicate training received through the required reading process.

Current Status: Closed

Resolution/justification/documentation:

- (later)
- Original CAP responsibility: Topley, OPS Liaison

Y11-3. Obtain a copy of the NRC National Examination Schedule and assign responsibility to contact the utility after the examination for any lessons learned.

Current Status: Closed

Resolution/justification/documentation:

- (later)
- Original CAP responsibility: Barmettlor



Y12-3. Evaluate continuing operator requalification training through future refueling outages.

Current Status: Closed

Comments: Licensed operator Requal will be presented on an on-going basis including the refueling outages.

Resolution/justification/documentation:

- (later)
- Original CAP responsibility: Baker

Y13-4. Staff all crews with 3 Licensed Reactor Operators.

Current Status: Closed

Resolution/justification/documentation:

- (later)
- Original CAP responsibility: McKay

Y14. Evaluate possible improvements in the solicitation and utilization of student feedback in the requalification training program.

Current Status: Closed

Resolution/justification/documentation:

- (later)
- Original CAP responsibility: Topley, OPS Liaison

Y15. Resolve remaining EOP issues by continuing to work through the BWR0G to resolve EOP concerns such as the ATWS instability phenomenon.

Current Status: Closed

Resolution/justification/documentation:

- (later)
- Original CAP responsibility: McKay

Y16. Evaluate the current measurement tools including the ES604 crew competency form for non-technical skills and implement improvements to enhance the training evaluator and management staff effectiveness in this area.

Current Status: Open

Comments: Revised competency forms which are plant specific are being developed. The revised forms will be used in place of the forms currently in ES604. This action item is scheduled to be completed by the end of September, 1992.

Resolution/justification/documentation:

- (later)
- Original CAP responsibility: Topley

Y17. Implement a program to periodically send the WNP-2 instructional staff to other utilities. Within the scope of the program ensure a process is also in place to periodically bring in peer evaluators from other utilities to observe training at WNP-2.

Current Status: Closed

Resolution/justification/documentation:

- (later)
- Original CAP responsibility: Kobus

Y18. Develop, and consistently apply, a comprehensive simulator evaluation grading and critique system to include adequate reconstruction of events and critical discussion of less than adequate performance.

Current Status: Closed

Resolution/justification/documentation:

- (later)
- Original CAP responsibility: Barmettlor, Topley

Y19. Revise the Requal dynamic simulator scenario exam bank to ensure all scenarios are technically correct, consistently formatted, reflect the revised EOPs and to ensure all requirements of LTI 4.1 are met.

Current Status: Open

Comments: This action item is scheduled to be completed by the end of July, 1992.

Resolution/justification/documentation:

- (later)
- Original CAP responsibility: Topley

Y20. Respond to the requalification program assessment by outside peer evaluators that observed simulator training after the June 5 and 6 NRC re-take exam.

Current Status: Closed

Resolution/justification/documentation:

- A formal response to the final peer evaluator report has been made and all issues have been closed out. Refer to IOM R. Barmettlor to D. Kobus "Response to Utility Peer Recommendations". A copy of the IOM is available in R. Barmettlors letter book.
- Original CAP responsibility: Barmettlor, Topley

Y21. Complete long term (phase two) EOP revision.

Current Status: Open

Comments: The phase two revision of the EOPs is scheduled to be completed by the end of May, 1992. Training on the phase 2 EOPs will begin in June and will run until November 1992. Each crew would get three equal cycles of training.

Resolution/justification/documentation:

- (later)
- Original CAP responsibility: Powers, McKay

Y22. Establish a program to monitor effectiveness of operator training by allowing shift management to feedback training issues and concerns to appropriate management levels.

Current Status: Closed

Resolution/justification/documentation:

- A weekly meeting between the Requal Supervisor, Operations Liaison and the Shift Manager are held to discuss Requal training issues. Comments and recommendations are included in a weekly report to Operations, Training and Plant management. Copies of the weekly reports are maintained in D. Topleys office for review.
- The weekly process is conducted in accordance with a LTI which describes the process to be used to conduct the weekly reviews.
- Original CAP responsibility: McKay, Topley

Y23. Develop and implement a formal process to document feedback from the operations and training staff during simulator training, resolve the comments and provide feedback to the originator.

Current Status: Closed

Resolution/justification/documentation:

- A written program has been written LTI 5.5 that captures the process to be utilized.
- Original CAP responsibility: OPS Liaison, Barmettlor

Y24. Complete all six training related corrective action plan (CAP) items as described in NRC letter GO2-91-171 "WNP-2 Management Evaluation of the September 9, 1991 crew D Exam Failure". The six corrective action items identified address the following issues:

- Ensure all critical EOP transition points are designed into the simulator training program.
- Ensure the training program emphasizes the hazards of event based analysis of plant conditions during simulator training (i.e. emphasize symptom based approach).
- Ensure the simulator training program incorporates the principles of effective teamwork and clear role identification of each member of the control room team.

- Ensure that effective coaching techniques are always practiced by the simulator instructors. When appropriate, ensure immediate feedback and remediation is provided by the instructors during simulator training.
- Setup a data base that tracks individual competencies on an on-going basis. Use the results as part of a program to evaluate individual operator performance.
- Ensure the simulator instructors always employ effective follow-up questioning techniques.

Current Status: Closed

Resolution/justification/documentation:

- (later)
- Original CAP responsibility: Topley

Y25. Conduct a task analysis of all licensed operator EOP tasks. Use the results of the analysis to revise where appropriate the EOP training materials.

Current Status: Open

Comments: This action item is scheduled to be completed by the end of August, 1992. The task analysis will not be completed until the phase 2 EOPs have been developed. The results of the analysis will be used to revise EOP training materials as necessary.

Resolution/justification/documentation:

- (later)
- Original CAP responsibility: Topley

R1-1. Develop and implement a remedial training program for the identified operators.

Current Status: Closed

Resolution/justification/documentation:

- A three phase program was developed focusing on; plant systems review, EOP training and transient management. Written examinations and skill performance evaluations were used throughout to assess training effectiveness. A copy of the training curriculum is available in D. Topleys office.
- Additional remediation training was conducted as short term CAP item S5-4.
- Original CAP responsibility: Barmettlor, McKay

R2-1. Revise the current simulator scenario bank and develop new scenarios as necessary to meet the current management expectations.

Current Status: Closed

Resolution/justification/documentation:

- Approximately 16 new simulator scenarios were developed as part of the remedial training program. They were used to ensure operators able to evaluate, prioritize and handle complex emergency situations. The new scenarios are of the complexity as expected by the NRC to meet ES-604 requirements. The revised scenarios have been incorporated into the exam bank and are available for review there.
- Original CAP responsibility: Barmettlor

R3-1. Revise simulator ISCTs to meet the current management requirements.

Current Status: Closed

Resolution/justification/documentation:

- The ISCTs have been revised and they have been incorporated in a department instruction (LTI 4.2). The revised ISCT's are based upon the guidance provided in the examiners standards,
- Original CAP responsibility: Barmettlor

R4-2. Develop and implement dynamic simulator training that will heighten the level of intensity for crew training sessions to prepare the operators for the current management examination philosophy.

Current Status: Closed

Resolution/justification/documentation:

- Transient management scenarios were developed that reflect managements expectations concerning the level of challenge expected of the operating crews. Refer to CAP action items R-R2-1 & S11-4.

- This action has become an on-going function of the simulator portion of the Licensed Operator Requal program. Refer to the dynamic simulator scenario exam bank for a representation of simulator scenarios used on an on-going basis in Requal.
- Original CAP responsibility: Barmettlor

R5-2. Periodically revise the scenario structure to ensure variety so the scenarios do not become predictable to the operators.

Current Status: Closed

Resolution/justification/documentation:

- Many new scenarios were added to the exam bank. In March 1991 the bank had 20 scenarios. As of February the exam bank held 60 scenarios.
- Addition of new scenarios and revision of existing scenarios has become an on-going function of the simulator portion of the Licensed Operator Requal program. Refer to the dynamic simulator scenario exam bank for a representation of simulator scenarios used on an on-going basis in Requal.
- Original CAP responsibility: Barmettlor

R6-4. Review examination results with the licensed operators requiring remedial training.

Current Status: Closed

Resolution/justification/documentation:

- This recommendation has been completed as part of the formal remedial training program. Refer to the attendance records in Central Training Services. A training curriculum outline is available in D. Topleys office.
- Original CAP responsibility: Barmettlor

R7-4. Re-examine all affected operator candidates prior to NRC re-evaluation.

Current Status: Closed

Resolution/justification/documentation:

- This recommendation was completed as a part of the formal remedial training program. Refer to the attendance records in Central Training Services. A training curriculum outline is available in D. Topleys office.
- Original CAP responsibility: Barmettlor

R8-2. Conduct refresher training for the simulator training staff focusing on the identified needs from the examination process. Examples are; operator monitoring and data collection, questioning techniques, conduct of scenario critiques, and use of root cause techniques

Current Status: Closed

Resolution/justification/documentation:

- A formal training session was developed and presented to the simulator instructors. This training included the evaluation program improvements recently implemented. The possible use of root cause techniques has been evaluated and found to be impractical due to timeliness requirements. A training lesson outline is available in D. Topleys office. Attendance records are available in Central Training Services.
- Original CAP responsibility: Barmettlor

R9-2. Upgrade the simulator training techniques to emphasize operator performance as expected in the plant, spend more of the time coaching and provide for role reversals at the SRO level by; placing more emphasis on training versus evaluating, rewarding the control room staff for directing appropriate actions (i.e. through restoration of equipment) outside the control room, requiring completion of physical actions by the operators, and providing feedback to individual operators via critique sheets in both pass and fail situations.

Current Status: Closed

Resolution/justification/documentation:

- A wide variety of scenarios have incorporated into the training curriculum to ensure different types of success paths were trained on.
- The critique process for the evaluated scenarios has been revised in order to be more facilitative. The crews are expected to perform self evaluations along with instructor feedback.
- Operations management expectations have been reinforced in both simulator training and evaluations, refer to CAP items R11-4, R12-4, R13 and R27-2.
- Refresher training was provided to the simulator instructors, refer to CAP item R8-2.
- A significant amount of independent oversight provided feedback on the quality of this effort. As appropriate changes in instructional technique and strategy were made based on the feedback.
- This action has become an on-going function of the simulator portion of the Licensed Operator Requal program.
- Original CAP responsibility: Barmettlor

R10-2. Brief the operators on changes implemented by Revision 6 of the Examiner Standards.

Current Status: Closed

Resolution/justification/documentation:

- This action was taken prior to the annual exam administration. Prior to each NRC exam a briefing is given to the operators explaining how each section of the exam is conducted. The briefings are conducted in accordance with revision 6 of NUREG 1021.
- Original CAP responsibility: Barmettlor

R11-4. Issue a memorandum from plant and senior management to describe management expectations relative to procedure usage to all license holders, licensed operator trainers, shift technical advisors, applicable TSC emergency staff and licensing and assurance personnel who monitor operations and operations training activities.

Current Status: Closed

Resolution/justification/documentation:

- A formal IOM was sent out to all designated parties. Refer to IOM, from McKay, Baker and Oxsen, to Licensed Personnel, STAs, LO Training, TSC Directors/Managers, NSAG, dated May 17, 1991; "Procedure Usage" Additionally, the Operations Manager issued this IOM as required reading for all licensed operators. A copy of the IOM was sent to the NRC. A copy of the letter is available for review in R. Barmettlors office.
- Original CAP responsibility: Baker, McKay

R12-4. Conduct a meeting with all license holders, trainers and STAs at which plant and senior management will describe the challenges of the current situation, the actions being taken to correct deficiencies and improve performance, and will entertain suggestions for additional actions.

Current Status: Closed

Resolution/justification/documentation:

- The presentation was made and video taped on May 16, 1991. A copy of the tape is available for review in D. Topleys office. Instructors, operators, STAs and personnel for the Licensing Assurance organization were in attendance. The presentation was given in two session to ensure maximum attendance.
- Original CAP responsibility: Oxsen, Baker

R13. The remedial training program module on management expectations will require review to ensure there is appropriate focus on EOP performance.

Current Status: Closed

Resolution/justification/documentation:

- The Operations Manager conducted a talk to each remediation class to address this subject. An outline of the topics discussed are available in S. McKays office.
- Original CAP responsibility: McKay



R14-4. Review and revise PPM 1.3.1, "Conduct of Operations", to clarify direction to the operations personnel regarding the use of the 10 CFR 50.54(x) exemption.

Current Status: Closed

Resolution/justification/documentation:

- PPM 1.3.1 was revised to address 50.54X (PDF 91-940). Refer to revision #18 for a review of the actions taken. Sections 4.3.2 and 5.12.3.1.d were revised.
- Original CAP responsibility: McKay

R15-3. Develop an improved monitoring plan for increased QA oversight of EOP training.

Current Status: Closed

Resolution/justification/documentation:

- There was increased QA oversight. Reports SS91-003, 91-004 and 91-005 were filed as a result of the oversight. Both permanent staff and outside consultants were used to conduct the oversight. The oversight focused on operator training, operator performance and EOP issues. Copies of the reports are available for review in H. McGiltons office.
- Original CAP responsibility: Bouchey

R16. The analysis for the requalification, operational evaluation and the SRO involved in the replacement operator examinations will be assimilated and sent to Region V NRC management.

Current Status: Closed

Resolution/justification/documentation:

- Refer to CAP item R32 (NRC letter GO-91-102). The analysis by itself was originally sent to Phil Johnson of the NRC.
- Original CAP responsibility: Barnettlor

R17-3. Improve the training management structure.

Current Status: Closed

Resolution/justification/documentation:

- The Nuclear License Training Department organizational structure was revised in May 1991. Two supervisory positions were created and filled. One supervisor, Dave Topley, is responsible Licensed Operator Requal and the other supervisor, Tim Powell is responsible for all other operator training programs. Refer to current approved organization charts available in R. Barnettlors office. The NRC was formally notified of these changes in a letter in May (R32).
- Original CAP responsibility: Barnettlor

R18-3. Write a department instruction that delineates the duties and responsibilities of the Operations Liaison.

Current Status: Closed

Resolution/justification/documentation:

- LTI 7.4 was developed to more clearly delineate the duties and responsibilities of the Operations Liaison. A copy of the LTI is available in R. Barmettlors office.
- Original CAP responsibility: Barmettlor

R19-3. Write a memorandum to the training staff to encourage continued feedback on procedure enhancements.

Current Status: Closed

Resolution/justification/documentation:

- An IOM dated May 6, 1991 from D. Kobus to the Technical Training staff was written addressing the issue of PPM revisions by training personnel. A copy of the letter is available in R. Barmettlors office.
- Original CAP responsibility: Barmettlor, Kobus

R20. Evaluate the support required for the remedial training process and obtain the necessary resources. Assess the logistics for the possibility of increased training if our evaluation process indicates the need (ie. overtime, outage schedule impact, etc.).

Current Status: Closed

Resolution/justification/documentation:

- Additional contractors were brought on board to support the remediation effort. A copy of the contract records are available in R. Barmettlors office.
- Original CAP responsibility: Barmettlor, McKay

R21-3. Conduct an assessment of the remedial training process with a team of experts drawn from other utilities.

Current Status: Closed

Resolution/justification/documentation:

- The peer observation occurred the week of 5/20/91. Team members were from the following plants; Hatch, Quad Cities, Nine Mile Point, Fermi, and Clinton. A peer report was written and is available for review in R. Barmettlors office. A peer report was generated dated May 31, 1991. A copy of the report is located in R. Barmettlors office.
- Original CAP responsibility: Oxsen, Barmettlor, Little

R22-3. Increase management oversight to include the simulator remedial training process.

Current Status: Closed

Resolution/justification/documentation:

- A specific schedule for management oversight was developed and implemented. Each manager was specifically identified and assigned a specific number of simulator observations. A copy of the schedule is available for review in R. Barmettlor's office.
- Copies of completed management Simulator Observation Sheets are available in the Plant Manager office.
- Original CAP responsibility: Baker

R23-4. Clarify the hierarchy of adherence to cool down rates relative to RPV level control.

Current Status: Closed

Resolution/justification/documentation:

- Response to this recommendation has been incorporated into the remedial training as part of the lessons learned from the Operational Evaluation. Refer to CAP action item R1-1 for implementation.
- IOM, McKay to Barmettlor, May 29, 1991; "Response to Recent EOP Issues and Concerns". Also related to later short term CAP items S5-4 and S8-4.
- Original CAP responsibility: McKay

R24-4. Clarify the use of HPCS versus the Operational philosophy that use should be minimized because of thermal shock, cool down and cold water reactivity addition concerns.

Current Status: Closed

Resolution/justification/documentation:

- Response to this recommendation has been incorporated into the remedial training as part of the lessons learned from the Operational Evaluation. Refer to CAP action item R1-1 for implementation.
- Additionally, this issue was again addressed in short term corrective action items. Refer to CAP item S5-4, S4-4 and S7-4.
- Original CAP responsibility: Barmettlor

R25-4. Conduct training on the expected EOP deviation process and the expectations for implementation when deviations are required.

Current Status: Closed

Resolution/justification/documentation:

- Response to this recommendation has been incorporated into the remedial training as part of the lessons learned from the Operational Evaluation. Refer to CAP action item R1-1 for implementation.
- Additionally this issue was discussed by management as part of CAP action item R12-4.
- Other references include; McKay IOM which addresses this subject and revision to PPM1.3.1 "Conduct of Operations" to more effectively address the issue.
- Original CAP responsibility: Barmettlor

R26-3. Assign utility personnel to the simulator evaluation staff to prevent a lack of continuity due to the unforeseen departure of the current contract employees.

Current Status: Closed

Resolution/justification/documentation:

- Utility personnel are now regularly assigned to the lead evaluator role in simulator training and evaluation. When simulator training occurs actions are taken to ensure there is a mix of permanent staff and contract instructors. Refer to simulator attendance records for verification of actions taken.
- Additional EOP training has also been presented to the permanent training staff in to strengthen their instructional capabilities in order to have less reliance on contract instructors. Refer to CAP item S10.
- Original CAP responsibility: Barmettlor

R27-2. Ensure that simulator instructors always enforce proper communications, event diagnosis, command and control and procedural compliance in training and evaluation scenarios.

Current Status: Closed

Resolution/justification/documentation:

- This effectiveness of this activity was stressed as part of the management oversight and QA monitoring effort. Development and enforcement of management expectations is the role of the Operations management. Part of the duties and responsibilities assigned to the Operations Liaison was to ensure that management expectations were met. Additionally the Nuclear License Training Manager conducted periodic observations of the simulator instructors conducting training and evaluations to ensure they were consistent in their instructional techniques addressing these topics. Peer utility evaluators were also used to make assessments of the simulator instructors (CAP item 21-3). Copies of the various oversight observations are available in R. Barmettlors office.

- This action has become an on-going function of the simulator portion of the Licensed Operator Requal program. One of the primary responsibilities of the Requal Supervisor is to ensure the instructional staff training and evaluate to managements expectations.
- PPM 1.3.1 "Conduct of Operations" define a number of Operations Managements expectations associated with these topics. Also refer to CAP Items R11-4, R13 and R14-4 for identification of management expectations.
- Original CAP responsibility: Barmettlor

R28. Evaluate the effectiveness of the management expectations presentations.

Current Status: Closed

Resolution/justification/documentation:

- The managements expectation presentations were attended by the QA manager. Follow-up interviews were conducted with several of the operators who were in attendance.
- Documentation (observations & surveillances) is available in H. McGiltons office which indicated that managements expectations were effectively transmitted to the Operations staff.
- Original CAP responsibility: Bouchey

R29. Evaluate the transient management training portion of the remedial training program.

Current Status: Closed

Resolution/justification/documentation:

- Several QA simulator observations were made prior to the June 5 & 6 examination. Copies of the observations are available in R. Barmettlors office. The observation reports are dated May 14, 15, 17 and 22 (note each observation report may address a number of individual simulator observations).
- Original CAP responsibility: Bouchey

R30. Continue increased QA oversight of control room activities emphasizing adherence to procedures.

Current Status: Closed

Resolution/justification/documentation:

- Several QA control room observations were made prior to the June 5 & 6 examination. Copies of the observations are available in H. McGiltons office. The observation reports are dated 3/21/91, 4/4/91 and 5/16/91.
- Original CAP responsibility: Bouchey

R31. A management action plan will need to be generated which identifies all actions and due dates.

Current Status: Closed

Resolution/justification/documentation:



- A Corrective Action Plan (CAP) was developed to track all commitments associated with the Requal program failure. R. Barmettlor is responsible for the development and revision of the CAP. The CAP is periodically revised and updated. A copy of each revision of the CAP is available in R. Barmettlors office.
- Copies of several of the CAP revisions were sent to the NRC (Rev. 5, 6, 7 and 8).
- Original CAP responsibility: Kobus, Barmettlor

R32. Prepare a letter to the NRC which describes the additional actions taken in response to the 5/2/91 meeting and contains the management action plan.

Current Status: Closed

Resolution/justification/documentation:

- This action was taken on May 16, 1991. A copy of the letter (GO2-91-102) is available for review in R. Barmettlors office.
- The presentation took place on May 20, 1991. A copy of the presentation is available for review in R. Barmettlors office. Also refer to CAP item R33.
- Original CAP responsibility: Kobus

R33. Prepare a presentation for Region V NRC management personnel to present additional actions as a follow-up to the 5/2/91 meeting.

Current Status: Closed

Resolution/justification/documentation:

- The presentation took place on May 20, 1991. A copy of the presentation is available for review in R. Barmettlors office.
- Original CAP responsibility: Kobus

R34. Establish a process to trend evaluation results of each license holder.

Current Status: Closed

Resolution/justification/documentation:

- A computer data base was developed to track crew and individual performance on evaluated simulator scenarios. The areas tracked are ISCT and competency performance. Examples of the data runs are available in D. Topleys office. The data base is now being used on an on-going basis to track performance trends over long periods of time in normal Requal.
- Original CAP responsibility: Barmettlor