NIAGARA MOHAWK

NINE MILE POINT NUCLEAR STATION / P.O. BOX 32 LYCOMING, NEW YORK 13093 / TELEPHONE (315) 343-2110

NMP49542

August 10, 1989

Mr. William Russell
Regional Administrator
United States Nuclear
Regulatory Commission
Region I
475 Allendale Road
King of Prussia, PA 19406

Dear Mr. Russell:

Enclosed please find a copy of the following documents:

1. The Nine Mile Point Unit #2 Requalification Program Action Plan

2. The Nine Mile Point Unit #2 Requalification Exam Remediation Schedule

3. Niagara Mohawk Power Corporations' Justification for Continued Operation

Based on discussion of August 9, 1989, we will send examination materials and examination plan for retesting by September 1, 1989.

Please feel free to contact me if you need any additional information.

Sincerely,

L. Burkhardt, III
Executive Vice President
Nuclear Operations

GW/lmc
(0783V)

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NMP2 REQUALIFICATION PROGRAM ACTION PLAN

AUGUST 1989

NMP2 REQUALIFICATION PROGRAM ACTION PLAN

The Nine Mile Point Unit 2 Operations and Operations Training Department underwent an evaluation of individual performances and requalification program during the weeks of July 17 and July 24, 1989. During this evaluation, 10 of 24 licensed operators failed one or more sections of the examination. In addition, 1/2 the crews (3 of 6) exhibited sufficient deficiencies to warrant failure as teams by the Nine Mile Point Unit 2 evaluators. Based on this evaluation, Nine Mile Point Unit 2 is implementing an Action Plan to correct these deficiencies.

The specific actions contained in this document are designed to correct the program, individual, and crew performance problems noted during the evaluation period, with particular emphasis on those issues of examination content and crew failures in the simulator. The specific issues include:

1. The NMP-2 Requalification Program was judged unsatisfactory by both NMPC and NRC.
2. Evaluation of the written examination by the NMPC Instructional Technologist group raised concerns about examination structure.
3. Evaluation of the written examination by the NMP-2 Operations Instructional Group raised concerns about Operator knowledge deficiencies.
4. Weaknesses were noted in crew communications
5. STA involvement in plant assessment and event control was not consistent between crews
6. Operator actions were not always in accordance with guidance as provided in the Emergency Operating Procedures (EOP's)
7. Operator actions were not always in accordance with guidance as provided in normal operating procedures during emergency events
8. Dynamic simulator scenarios used in the evaluation were not always realistic, manageable and within the 50 minute standard as set forth in ES-601
9. Teamwork, including prioritization, of crew actions, evaluation of plant conditions and communications were weak during emergency events.

Additional specific actions may be incorporated into this plan as a result of the NRC Inspection Report and supplemental Inspection Report issued for the examinations administered July 17 - 28, 1989 and August 2 and 3, 1989.

Specific Issue #1

A. The NMP-2 Requalification Program was judged as unsatisfactory by the NMPC Training Department and the NRC, in that:

1. >25% of the licensed operators (10 of 24) failed at least one section of the examination, failing overall.
2. >25% of the licensed operators (7 of 24) failed the written examination.
3. >1/3 of the crews (3 of 6) failed the simulator team evaluation.

Specific Issue #1: (Cont'd)

		Responsibilities	Impl. Date	Comp. Date
B.	Corrective Actions			
	1. Perform an examination analysis of the written (classroom) examination.	Seifried	N/A	7/29/89
	2. Develop an exam development process description.	Dort	N/A	7/29/89
	3. Perform an examination analysis of the simulator examination.	Smith/Weimer		7/26/89
	4. Interview operators to determine: 1) Reason for high failure rate. 2) Attitude concerning examination process.	Montgomery	N/A	7/29/89
	5. Develop Plan and schedule for remediation and for evaluation of D Shift.	Kaminski/Cigler/Smith	N/A	7/29/89
	6. Conduct evaluation of D Shift.	Weimer/Smith	N/A	8/3/89
	7. Analyze for cause of exam failures and develop Action Plan to correct.	Weimer		7/29/89
	8. Conduct external interview with to all licensed operators (including staff).	Rivers	9/15/89	10/15/89
	9. Summary of lessons learned to prevent reoccurence. Develop a process to ensure that lessons learned at Unit 1 (Unit 2) are communicated to Unit 2 (Unit 1)	Rivers/Abbott/Dahlberg	N/A	9/29/89

Specific Issue #2:	Responsibility	Impl. Date	Comp. Date
A. Evaluation of the written examination by the NMPC Instructional Technologist Group resulted in several concerns, in that;			
1) Test item construction is not clear.			
2) Point values for multiple part answers were not specified.			
3) Several double jeopardy questions were noted.			
4) Questions requiring multiple responses were not separated out.			
B. Corrective Actions			
1) Train all Operations Training Instructors, involved in writing open reference examinations, on examination development techniques (i.e., test taking, test construction, and question construction).	Oxford	N/A	3/1/90
2) Review <u>all</u> examination questions associated with the requalification examination bank for format and correlation to learning objectives.	Oxford	As Developed	*Continuing
3) Review <u>all</u> future requalification examinations for format and organization <u>prior to</u> examination implementation.	Oxford	As Developed	*Continuing
4) Complete the Systematic Approach to Training Process.	Weimer/Smith	N/A	11/30/89

* This item will be an ongoing process in the requalification program.

Specific Issue #3:

A. Evaluation of the written examination for knowledge area deficiencies by the NMP-2 Operations Training Group raised the following concerns, in that;

1) SRO's experienced difficulty in;

a) Determining the actions necessary for a loss of Stator Cooling Water when less than the runback setpoint.

b) Selecting the necessary response to a short period annunciator.

c) Determining Primary Containment Isolation Setpoints for various isolation groups.

d) Understanding operations of the EHC system Load Limiter Set.

e) Determining the capacity/limitations for operation with one Reactor Feed Pump.

f) Determining Limiting Plant Conditions on a loss of 2NPS-SWG003.

g) Determining possible scram signals as a result of a Loss of Instrument Air.

h) Causes and Effects of Reactor Level Swell.

i) Calculating single Loop MAPLHGR.

j) Determing Pressure response to an MSIV isolation following a reactor scram.

Specific Issue #3 (Cont'd):

2) Both SROs and ROs experienced difficulty in;
   a) Ascertaining Operator actions on a loss of Low Pressure Feed Heater string.
   b) Determining the actions necessary for a sympathetic alert.
   c) Describing the EOP basis which allows for MSIV re-opening during an ATWS.
   d) Defining the effects of Loss of Extraction Steam on Reactor Power.
   e) Calculating total core flow when in a single loop configuration.
   f) Ascertaining the negative response time of the Turbine Control Valves and the Turbine Control Valve Setpoint.
   g) Determining the followup actions required following a Circulating Water Pump Trip.
3) ROs experienced difficulty in;
   a) Determining Operator actions on a loss of RBCLC.
   b) Ascertaining the steps necessary to override Containment Purge Valves following isolation.
   c) Ascertaining the steps required to place CSH System in a Tank to Tank Lineup following initiation.
   d) Determining immediate actions on a Loss of H_2 Seal Oil.

Specific Issue #3 (Cont'd):

e) Recognizing indications of an OFG H_2 Explosion.

f) Determining notifications required as a communications aide.

g) Recognizing EOP entry conditions for an ATWS situation.

h) Recognizing feedwater effects on Reactor Pressure.

i) Describing plant response on a Loss of Vacuum.

j) Identifying limitations placed on operation of Main Condenser Vacuum Breakers.

B. Corrective Actions	Responsibility	Impl. Date	Compl. Date
1) Review examination results with all licensed operators requiring remediation.	Kaminski	N/A	7/31/89
2) Develop a Remediation Plan for examination failures to be conducted between 8/1/89-8/15/89.	Kaminski	N/A	7/31/89
3) Perform re-examination of all examination failures between 8/16/89-8/18/89.	Weimer/Smith	8/16/89	8/18/89
4) Add <u>all</u> questions where >20% of examinee's missed the item into the next two year requalification program. EOP weaknesses and usage deficiencies will be reviewed with all Licensed Operators (See 6.B.1, 6.B.2 and 7.B.1)	Weimer	N/A	1/02/90

Specific Issue #4:

A. Weaknesses were noted in crew communications, in that:

1. Operators used inprecise language
2. Directions were non specific
3. Reports/directives were not always acknowledged
4. Repeatbacks were often not noted or weak.
5. Orders were not directed at one individual sometimes resulting in no accountability.

B. Corrective Actions	Responsibilty	Impl. Date	Comp. Date
1. Train operators, in the simulator, to ODI 1.06, Verbal Communications. Add Learning objective to all new and revised Simulator Lesson Plans (Long Term).	Cigler	7/31/89	9/29/89
2. Train instructors in the ODI and reinforce the policy to train to these standards during simulator training.	Cigler	7/31/89	8/21/89
3. Regularly schedule management personnel (e.g. General Superintendent, Station Superintendent, Operations Superintendent and other Operations Management Staff) to observe simulator training and take a more active role in identifying and correcting weaknesses in operating crew performance (minimum 3 of 6 requalification weeks per cycle.)	Weimer	8/21/89	*Continuing

* This item will be an ongoing process in the requalification program.

Specific Issue #4: (Cont'd)	Responsibilty	Impl. Date	Comp. Date
4. Regularly schedule management personnel (e.g. Manager Nuclear Services, Superintendent of Training, Assistant Superintendent of Training and other Operations Training Staff) to observe simulator training and take a more active role in identifying and correcting weaknesses in simulator instructor performance (Minimum 3 of 6 requalification weeks/cycle).	Weimer	8/21/89	*Continuing
5: Schedule the Unit 1 training groups to evaluate implementation of standards on a selected crew at least once per quarter and provide report to Operations Superintendent.	Weimer/Sanaker	10/2/89	*Continuing
6. Include video tape in post simulator exercises to more effectively critique communications teamwork and prioritization (Long term).	Kaminski	8/21/89	*Continuing
7. Schedule cross crews to evaluations of another crew at least once per calendar quarter (Long Term).	Weimer/Smith	10/2/89	*Continuing

* This item will be an ongoing process in the requalification program.

Specific Issue #5:	Responsibilty	Impl. Date	Completion Date
A. STA involvement in plant assessment and event control was not consistent between crews, in that;			
1. Some STA's provided little or no assessment of events to the SSS/SED other than updating parameters and classifying events.			
2. Some STA's did not provide the SSS with support in ensuring all EOP actions were completed.			
3. Some STA's did not correct inappropriate actions or recommend appropriate actions.			
B. Corrective Actions			
1. Formalize management expectations (beyond what is defined in EPP's and AP's) for the actions of the STA during EOP's.	Smith/Abbott	N/A	7/28/89
2. Train STA's (all SRO's) in the standard during simulator training. Add learning objectives to all <u>new</u> Simulator Lesson Plan Learning Objectives (Long Term).	Cigler	7/31/89	9/29/89
3. Train instructors in the standard and reinforce the policy to train to these standards during simulator training.	Cigler	7/31/89	8/21/89
4. Regularly schedule management personnel (e.g. General Superintendent, Station Superintendent, Operations Superintendent and other Operations Management Staff) to observe simulator training and take a more active role in identifying and correcting weaknesses in STA performance.	Weimer	8/21/89	*Continuing

* This item will be an ongoing process in the requalification program.

Specific Issue #5: (Cont'd)	Responsibilty	Impl. Date	Comp. Date
5. Regularly schedule management personnel (e.g. Manager Nuclear Services, Superintendent of Training, Assistant Superintendent of Training and other Training Staff) to observe simulator training and take a more active role in identifying and correcting weaknesses in simulator instructor performance.	Weimer	8/21/89	*Continuing
6. Schedule the Unit 1 training groups to evaluate implementation of standards on a selected crew at least once per quarter and provide a report to the Operations Superintendent.	Weimer/Sanaker	10/2/89	*Continuing
7. Schedule cross-crew evaluations of another crew at least once per calendar year.	Weimer/Smith	10/2/89	*Continuing
8. Schedule the Unit 1 Operations Superintendent to evaluate team performance on a selected crew on a regular basis.	Weimer/Randall	10/2/89	*Continuing

* This item will be an ongoing process in the requalification program.

Specific Code #6:	Responsibilty	Impl. Date	Comp. Date
A. Operator actions were not always IAW Guidance as provided in the EOP's, in that;			
1. One crew violated EOP's by securing Standby Liquid Control pumps with all rods not in following an ATWS, although the RO's knew it was <u>not</u> an appropriate action.			
2. One crew never implemented vessel flooding in accordance with EOP's, although the STA knew or suspected that conditions were met <u>and</u> the requirement existed.			
3. Five (5) crews failed to adequately control water level 159-202" by <u>overfilling</u> the vessel. Confusion existed with RO's and one (1) SRO as to what <u>normal</u> water level was in the EOP's. In three (3) events, the water level rise was slow and controlled.			
4. One (1) SRO failed to fully implement guidance for vessel flooding.			
5. Two (2) SRO's failed to recognize that a diamond decision block is <u>not</u> an action statement, in that; when asked if 3(2)SRV's could be open they opened 3(2) SRV's when procedurally 7 were to be opened.			
6. One RO suspected that an order to open 2 SRV's was incorrect, but did not question the SSS because he believed the SSS was being guided by EOP's.			
B. Corrective Actions	Williamson	8/21/89	9/29/89
1. Develop and <u>implement</u> a 2-3 day EOP refresher training session on EOP usage and basis. Include portions of MOCD not covered in EOP's and emphasizing the signif-cance of water level control and overfilling events.			

Specific I[redacted] #6: (Cont'd)	Responsibilty	Impl. Date	Com[redacted]ate
2. Review specific EOP usage deficiencies and problem areas noted during the requal examination with all licensed operators during the EOP referesher training.	Williamson/ Cigler	8/21/89	9/29/89
This will include requirement of RO's to question perceived inappropriate orders.	Kaminski	10/2/89	*Continuing
3. Implement a "closed book" EOP basis examination during each requalification cycle.	Weimer	8/21/89	*Continuing
4. Regularly schedule management personnel (e.g. General Superintendent, Station Superintendent, Operations Superintendent and other Operations Management Staff) to observe simulator training and take a more active role in identifying and correcting weaknesses in EOP usage/implementation.	Weimer	8/21/89	*Continuing
5. Regularly schedule management personnel (e.g. Manager Nuclear Services, Superintendent of Training, Assistant Superintendent of Training and other Operations Training Staff) to observe simulator training and take a more active role in identifying and correcting weaknesses in simulator instructor performance.	Smith/Abbott	N/A	7/28/89
6. Establish formal management expectations for EOP usage, including communications, command control, and STA responsibilities in carrying out EOP's.			

* This item will be an ongoing process in the requalification program.

Specific Item #7:	Responsibilty	Impl. Date	Completion Date
A. Operator actions were not always IAW Guidance as provided in normal operating procedures during emergency events, in that;			
1. Some crews had difficulty in carrying out N2-OP-97, Section H.2 per EOP-RQ.			
2. Although crews could work through OP-29 during a recirc pump trip and recovery, two crews wasted 45 minutes doing administrative tasks that were not necessary and one crew did not realize a recirc pump could not be started in the restricted zone and drove recirc flow further into the zone in an attempt to restart the pump. (NMPC Evaluation Week)			
3. Several RO's did not correctly place RHR in SP Cooling or DW/SP Spray when required in an emergency situation.			
B. Corrective Actions:			
1. Review specific deficiencies concerning EOP required actions during EOP refresher training.	Williamson/ Cigler	8/21/89	9/29/89
2. Implement "closed book" JPM's in the simulator on those emergency tasks that should be able to be performed without the use of a procedure.	Kaminski	1/2/90	*Continuing
3. Establish formal management expectations for verification of immediate actions taken during emergency conditions.	Smith/Abbott	N/A	8/21/89

* This item will be an ongoing process in the requalification program.

Specific Is[illegible] #8:	Responsibilty	Impl. Date	Com[illegible]te
A. Dynamic simulator scenarios used in the evaluation were not always realistic, manageable and within the 50 minute standard as set forth in ES-601, in that:			
1. One scenario involved an ATWS following an MSIV isolation due to failed fuel (>3XNFPB isolation). In addition, the SDV ruptured in the Reactor Building causing a direct leak from the vessel to the secondary containment. The SSS was in 14 different EOP's.			
a. This scenario was beyond the boundaries of the NMP2 FSAR.			
b. This scenario was unmanageable in that two crews took manual pressure control as directed by EOP's, then required the same operator to inject with both SLC pumps. Both crews lost control of manually overridden automatic functions resulting in vessel depressurization and subsequent overfill.			
2. All scenarios exceeded the 50 minute time guidelines.			
B. Corrective Actions:			
1. Develop a plan to implement each of the 15 existing scenarios into the requalification program for training and evaluation.	Kaminski	N/A	10/2/89
2. Revise each scenario validated during the requal cycle and revalidate with one crew.	Kaminski	As Revised	N/A
3. Develop one new 50 minute scenario each cycle with material corresponding to the material taught in the cycle.	Kaminski	As Developed	*Continuing

* This item will be an ongoing process in the requalification program.

Specific Issue #9:	Responsibilty	Impl. Date	Complete
A. Teamwork, including prioritization, evaluation and communication, were weak, in that:			
1. Several crews tended to "cluster" around problems.			
2. One crew took an action in violation of EOP's even though the Reactor Operator knew the action was incorrect.			
3. Several crews allowed alarms to continue for up to ten (10) minutes, trying to verbally communicate above the alarm noise during EOP's.			
4. Some crews SSS' were not aware of sources of water that were injecting into the vessel causing overfill.			
5. Several crew members did not effectively screen plant parameters to ensure pertinent EOP parameters were communicated to the SSS.			
6. Several STA's were more concerned with classification of events than assessment of plant conditions.			
7. SSS' did not always effectively prioritize crew actions during EOP's.			
8. Two crews did not correctly evaluate system status of recirc pumps being tripped prior to drywell spray being initiated.			
9. Some RO's did not effectively communicate their actions so that other members could react (i.e. Rod Insertion following an ATWS that directly impacted vessel depressurization).			
B. Corrective Actions:			
1. Establish formal management expectations for the roles and responsibilities of crew members during emergency conditions.	Smith/Abbott	N/A	7/28/89

Specific Issue #9: (Cont'd)	Responsibilty	Impl. Date	Completion Date
2. Train crews in the standard during simulator training and add to Simulator Lesson Plan Learning Objectives.	Cigler	7/31/89	9/29/89
3. Train instructors to the standard and reinforce the policy to train to these standards during simulator training.	Cigler	7/31/89	8/14/89
4. Peform team and individual evaluations on each crew each requalification training week.	Kaminski	10/2/89	*Continuing
5. Regularly schedule management personnel (e.g. General Superintendent, Station Superintendent, Operations Superintendent and other Operations Management Staff) to observe simulator training and take a more active role in identifying and correcting weaknesses in crew performance.	Weimer	8/21/89	*Continuing
6. Regularly schedule management personnel (e.g. Manager Nuclear Services, Superintendent of Training, Assistant Superintendent of Training and other Operations Training Staff) to observe simulator training and take a more active role in identifying and correcting weaknesses in simulator instructor performance.	Weimer	8/21/89	*Continuing
7. Schedule the Unit 1 training group to evaluate implementation of standards on a selected crew at least once per quarter and provide a report to the Operations Superintendent.	Weimer/Sanaker	10/2/89	*Continuing

* This item will be an ongoing process in the requalification program.

Specific Is[redacted]#9: (Cont'd)	Responsibilty	Impl. Date	Comp[redacted]te
8. Schedule cross-crew evaluations of another crew at least once per calendar year.	Weimer/Smith	10/2/89	*Continuing
9. Determine size of crew to be trained and evaluated in the simulator.	Weimer/Smith/Abbott	N/A	9/29/89
10. Determine Control Room makeup that ensures adequacy of Emergency Plan implementation.	Smith/Abbott	N/A	9/29/89

NINE MILE POINT NUCLEAR STATION

UNIT II OPERATIONS

LICENSED OPERATOR REQUALIFICATION TRAINING

REQUALIFICATION EXAM REMEDIATION SCHEDULE

Developed By: J. Kaminski

APPROVALS	SIGNATURES	DATE AND INITIALS REVISION 0
Operations Supervisor Unit 2 Training G. L. Weimer	G L Weimer	8/3/89
Asst. Superintendent Training-Nuclear R. T. Seifried	R. T. Seifried	8/3/89
Operations Superintendent NMPNS Unit 2 R. G. Smith	R G Smith	8/10/89

Summary of Pages

Revision: 0 (Effective Date: 8/3/89)

Number of Pages: 9

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8/10/89

NIAGARA MOHAWK POWER CORPORATION

LICENSED OPERATOR REQUALIFICATION TRAINING
REQUAL EXAM REMEDIATION - 1989

I. TRAINING DESCRIPTION

A. Title: Licensed Operator Requalification Remediation Program Schedule - 1989 (July 31, 1989 - August 18, 1989)

B. Purpose:

1. To provide NMP-2 Licensed Operators who received <80% on the written portion of the Requal Exam with a review of areas identified as weaknesses during the review of the Requalification Exam given in July 1989. These areas will be discussed during the classroom portion of the Remedial Training Program.

   a. Reactor Operational Theory and Thermal Limits - Specifically causes and effects of Reactor Level shrink and swell and the effects of single loop operation on thermal limits.
   (02-REQ-002-302-2-00-1)
   (02-REQ-002-303-2-09-1)

   b. Main Generator Auxiliaries - specifically effects on generator upon loss of stator cooling water and actions for a loss of H_2 seal oil.
   (02-REQ-001-252-2-00-4)
   (02-REQ-001-253-2-00-3)

   c. Feedwater Systems - specifically effects of malfunctions and actions upon loss of feed, feedwater heating, or extraction steam.
   (02-REQ-001-259-2-00-3)
   (02-REQ-001-260-2-00-3)

   d. Condenser Air Removal/Offgas - specifically indications of malfunctions, actions on a loss of vacuum, plant response on loss of vacuum.
   (02-REQ-001-255-2-00-4)

e. EHC System - specifically effects of malfunctions and purpose/function of Load Limiter.
(02-REQ-001-248-2-00-3)

f. Containment Isolation - specifically review all groups and their isolation setpoints and effects on plant operations due to isolation.
(02-REQ-001-223-2-02-4)

g. Electrical Distribution - specifically effects of a loss of 2NPS-SWG001 and/or 2NPS-SWG003 on plant operation.
(02-REQ-001-262-2-01-3)

h. Instrument Air - specifically actions for a loss of IAS and list/review all possible signals causing a Reactor Scram.
(02-REQ-001-279-2-00-3)

i. Reactor Recirculation - specifically methods/calculations to determine total loop/core flow in varying configurations.
(02-REQ-001-202-2-01-4)

j. Containment Purge - specifically actions required to restore system using override following isolation.
(02-REQ-001-223-2-03-0)

k. High Pressure Core Spray - specifically lineups used following initiation and actions necessary to obtain desired lineups.
(02-REQ-001-206-2-00-4)

l. RBCLC - specifically actions for a loss of RBCLC and listing of power supplies for pumps.
(02-REQ-001-208-2-00-4)

m. Circ Water System - specifically operator actions for a trip of one circ water pump and followup actions.
(02-REQ-001-275-2-00-3)

2. To provide NMP-2 Operators who failed the operating portion of the requalification exam with a review of the areas which were identified as weaknesses. These areas will be integrated into the simulator portion of the remedial program.

a. Teamwork and communications
- •Verbal Communications - ODI 1.06 "Verbal Communications"
- •Rules and Responsibilities of the crew members
  - •Clarification of individual roles
  - •ODI 1.08 "Operations Policy for EOPs"
  - •ODI 1.09 "EOP Users Guide"
  - •Responsibility of ROs to provide critical data
  - •STA function during EOP events
  - •Challenges by operators to unclear or improper orders
- •Prioritization of actions

b. Selected scenario review (including tape review)
- •ATWS EOP RQ, EOP C7
- •Vessel flooding EOP C6
- •Vessel level control EOP C1, EOP C4
- •Recirc pump trip and recovery OP-29

c. Use of Tech Spec Interpretations

d. Use of EOPs
- •Cross-reference symbols (i.e. *)
- •Meaning of the diamond block vs a rectangle (on EOPs)

3. To provide NMP-2 Operators who failed the operating portion of the requalification examination, specifically Job Performance Measures, with a review of the JPMs which were identified as weaknesses. These JPMs will be discussed during the simulator portion of the remedial training program.

C. Estimated Duration: Approximately 50 Hours Classroom
Approximately 30 Hours Simulator

D. Training Methods: Classroom Lecture
Simulator Training

E. References:

1. NMP2 Operating Procedures
2. NMP2 Technical Specifications
3. NMP2 Emergency Operating Procedures
4. NMP Administrative Procedures
5. NMP Radiation Protection Procedures
6. Site Emergency Plan Procedures
7. 10CFR Parts 0-199
8. NMP2 Operations Technology Texts
9. GE-BWR Academics Series
10. NMP2 Standing Orders
11. FSAR Chapter 14
12. Operating Department Instructions

II. REQUIREMENTS/PREREQUISITES

A. Requirements for Class

1. NTP-11, Rev. 7, Licensed Operator Retraining and Continued Training, Section 4.0, Evaluation

B. Prerequisites for Class

1. Instructor
   a. Instructors shall hold or have held a senior operators license or SRO certification for a similar unit (BWR).
   b. Demonstrate knowledge of instructional techniques and be certified by the Training Supervisor as a qualified instructor for the materials being presented.
2. Student
   a. Currently hold a valid NRC Reactor Operator or Senior Reactor Operator License and have failed the Requalification Examination.

III. TRAINING MATERIALS

A. The instructor will have the appropriate lesson plan associated with the lecture taught (See Purpose I.B.1a-m).

IV. EXAMS AND ANSWER KEYS

A. Examinations will be on permanent file in the Records Room.

V. LEARNING OBJECTIVES

A. Learning Objectives are as specified in the lesson plans noted in III.A above.

VI. LESSON OVERVIEW

(See Attachment 1)

ATTACHMENT 1

NMP-2 REMEDIATION SCHEDULE

MONDAY 7/31		Exam Review for individuals failing the written portion of exam
TUESDAY 8/1	AM	Reactor Operational Theory (shrink/swell, effects) & Thermal Limits Theory (single loop restrictions)
	AM	RBCLC - (Loss of TBCLC actions & power supplies)
	PM	Generator Auxiliaries Systems (Seal Oil/Stator H_2O Cooling)
	PM	Feedwater, Feed Heating, & Extraction Steam
WEDNESDAY 8/2	AM	OFF Gas/Condenser Air Removal (H_2 explosion indications & limitations
	AM	EHC (malfunctions & function/operations of load limiter)
	PM	Elect. Dist. Malfunctions (Loss of SWG001, SWG003)
	PM	Ct. Isolation (Groups and setpoints)
THURSDAY 8/3	AM	IAS (Loss of IAS & scram signals generated)
	AM	RCS (Calculating loop flows in all conditions)
	PM	Ct. Purge (Overriding isolation signals & flow paths used)
	PM	CSH (flow paths/lineups during initiation)
FRIDAY 8/4	AM	Bases, entry conditions, & procedural flowpaths for selected EOP's.
	PM	EPP Notification, Actions Required for Emergency Classifications
	PM	CWS - Actions and followup actions on a trip of a CWS pump

ATTACHMENT 2

MONDAY 8/7	Classroom review of concepts of teamwork, prioritization, challenging, evaluation, and communication. Review of Crew Performance Video Tapes Review of ODI 1.06, Verbal Communications Review of ODI 1.08, Operations Policy for EOPs Review of ODI-1.09, EOP Users Guide Review of how orders are to be given, received, acknowledged, and challenged. Review STA's Role/Function a. What the STA should/should not do. b. How to assess plant status and provide guidance to the SSS.
TUESDAY 8/8	Simulator Upgrade Selected Simulator Scenarios - specifically when/when not to secure SLC. ATWS situations and RO usage of N2-OP-97, Section H.2. Use of Tech Spec Interpretations. Special emphasis will be placed on crew communication practices, crew and individual roles and responsibilities, evaluation , challenging, and prioritization of actions during off normal events, and effective teamwork.
WEDNESDAY 8/9	Simulator Upgrade Selected Simulator Scenarios - specifically in EOP C-6 when to flood the vessel and procedural actions, decision blocks, and their meaning. Special emphasis will be placed on crew communication practices, crew and individual roles and responsibilities, evaluation, challenging, and prioritization of actions during off normal events, and effective teamwork.

THURSDAY 8/10	Simulator Upgrade Selected Simulator Scenarios - Normal Level Control - specifically what is normal level control what is the band and how is normal level maintained. Special emphasis will be placed on crew communication practices, crew and individual roles and responsibilities, evaluation, challenging, and prioritization of actions during off normal events, and effective teamwork.
FRIDAY 8/11	Simulator Upgrade Selected Simulator Scenarios - Recirc Pump Trip - specifically work through the N2-OP-29 flowchart for operations in the restricted zone. Special emphasis will be placed on crew communication practices, crew and individual roles and responsibilities, evaluation, challenging, and prioritization of actions during off normal events, and effective teamwork.

ATTACHMENT 3

MONDAY 8/14	Simulator Upgrade Selected Simulator Scenarios - Crew Operational Review/Critique Special emphasis will be placed on crew communication practices, crew and individual roles and responsibilities, evaluation, challenging, and prioritization of actions during off normal events, and effective teamwork.
TUESDAY 8/15	Simulator Upgrade Selected Simulator Scenarios - Crew Operational Review/Critique Special emphasis will be placed on crew communication practices, crew and individual roles and responsibilities, evaluation, challenging, and prioritization of actions during off normal events, and effective teamwork.
WEDNESDAY 8/16 to FRIDAY 8/18	Exams: To Be Scheduled

August 9, 1989

Don,

Rick Abbott requested I telecopy the remediation examination schedule for Nine Mile Point Unit #2. If you have any questions, call me at (315) 349-2706.

Gary Weimer
Training Supervisor

WEDNESDAY, AUGUST 16

Dynamic Simulators

0730 - 1000 Scenario #1	SSS - Wambsgan ASSS- Dragomer CSO - Davis BOP - Hilliker
1000 - 1230 Scenario #2	SSS - Dragomer ASSS- Kibbe CSO - Hilliker BOP - Davis
1230 - 1300 Lunch	
1300 - 1530 Scenario #3	SSS - Kibbe ASSS- Wambsgan CSO - Davis BOP - Hilliker

Evaluators: Team - R. Smith
SRO's - G. Weimer
RO's - K. Cigler

THURSDAY, AUGUST 17

Written

Group 1:	J. Kibbe W. Wambsgan J. Burr	Group 2:	D. Ranalli R. Carson R. Bergenstock
0730-0845:	Static #1	0800-1030:	Section B, Classroom
0915-1030:	Static #2	1030-1145:	Static #2
1030-1100:	Lunch	1145-1215:	Lunch
1100-1330:	Section B, Classroom	1215-1330:	Static #1

Proctors		Exam Graders
Simulator:	Haas/Brown	J. Kaminski
Classroom:	Hennigan	K. Cigler
		S. Dort

FRIDAY, AUGUST 18 0730-1200

Job Performance Measures

	Evaluators
W. Wambsgan -	S. Dort
J. Kibbe -	R. Brown
D. Ranalli -	J. Kaminski

JUSTIFICATION FOR CONTINUED OPERATION FOR NINE MILE POINT UNIT 2 WITH AN UNSATISFACTORY LICENSED OPERATOR REQUALIFICATION PROGRAM

Niagara Mohawk Power Corporation maintains confidence that Nine Mile Point Unit 2 can continue to operate in a safe and proficient manner. Bases for this conclusion are as follows:

1. All licensed operators performing licensed duties on shift have recently demonstrated their qualification proficiency by virtue of having either 1) passed an NMPC requalification exam in June or July, or, 2) passed a joint NRC/NMPC requalification exam in July or August, or, 3) passed a recent license qualification exam within the last year. Grading results for the recently administered operator requalification examinations are consistent between the NRC and NMPC. While overall pass rate on the examinations was unsatisfactory, the consistent grading indicates that NMPC standards are sufficiently high to assure that operators passing the NMPC or NRC administered examination are qualified. This confidence was further strengthened by the success of the operating shift tested during the week of 7-31-89.

2. There are a sufficient number of qualified licensed operators and non-licensed operators for an adequate shift rotation. Four shifts of operators on twelve hour shifts are assigned. This shift rotation schedule conforms to overtime requirements specified in plant technical specifications, and provides ample time off shift for operator rest, relaxation and personal business.

3. Operator shift staffing provides four experienced shift teams who have operated together for some time with additional augmentation by qualified personnel from the other two shifts.

4. Shift augmentation includes addition of a third SRO trained individual who is assigned duties for coordination of emergency plan requirements in the event of an emergency. Duties of this position have been defined in writing and incumbents have received instruction on these duties prior to being assigned shift duties. The Shift Emergency Plan Coordinator allows the Assistant Station Shift Supervisor to perform duties of the Shift Technical Advisor as described in NUREG 0737 and not be burdened with duties associated with implementation of the emergency plan.

5. Operations department instructions which clearly define roles and responsibilities of control room team members and standards for control room communications have been issued and training has been conducted.

6. NMPC is continuing increased management monitoring of shift operations during temporary four shift crew alignment.

7. Deficiencies in the requalification program are understood by NMPC and actions to correct them are in progress.

Details of these bases are contained in the following discussion.

Discussion

During the weeks of July 17 and 24, 1989, the NRC and NMPC co-administered licensed requalification examinations to 24 licensed personnel. The examinations consisted of simulator exams, job performance measures (JPM's) and a written examination. The simulator was assessed for team and individual performance. During the examination, licensed personnel were graded first by the NMPC training department and then by the NRC staff, thus providing the NRC with an assessment of the NMPC Unit 2 licensed operator requalification training program.

I. NMPC Examination Results

	RO Pass/Fail	SRO Pass/Fail	Total Pass/Fail
Written	9 / 3	8 / 4	17 / 7
Simulator	10 / 2	8 / 4	18 / 6
JPM	12 / 0	9 / 3	21 / 3
Overall	7 / 5	7 / 5	14 / 10

II. Program Evaluation

Overall Rating: Unsatisfactory

The facility performed an evaluation of the requalification program based on the examination results for the NRC observed exam weeks. The criteria for program evaluation is as specified in ES-601 and was used as appropriate. The sample size (24) meets the minimum requirements of ES-601.

1. Less than 75% of all operators tested passed the examination. Actual percentage was 58.3%. This does not satisfy criterion 1.b of ES-601.

2. More than 1/3 of all crews tested failed the simulator portion of examination, therefore, criterion 1.c of ES-601 is not satisfied.

3. The program meets the requirements of 10CFR 55.59 (c) [2], [3]a, and [4].

4. Multiple failures of common JPMs did not occur, however, it should be noted that 33% of the operators did not perform satisfactorily on JPM #69 in week one of testing and JPM #83 in week two of testing. A deficiency was noted in the directions for JPM #83 in that the requirements/standards did not specify that actions were also to be performed at an additional panel.

5. The criterion for >75% of all operators passing ≥80% of common JPM questions was met. The total number of common questions asked was 20 for each week. Additionally, 24 of 24 operators examined scored ≥70% on the JPM exam questions.

6. SROs are routinely trained in both the RO and the SRO positions. With the recent addition of JPMs as training and evaluation tool, all senior operators will be trained and evaluated in panel and equipment manipulation.

7. Operators were introduced to JPMs in the training setting prior to this examination. JPMs will be routinely used for training evaluation from this point forward.

III. Causes for Failure (Analysis Results)

Training and operations management conducted a preliminary cause analysis the weekend following the examination. There were several factors that appear to have contributed to the poor examination results. The following are identified as probable contributors:

1. Inadequate Test Material Validation

   The validation of prepared examination material was inadequate, in that written question average completion times were based on too small of a sample and questions were not revalidated following review and revision.

2. Insufficient Recent Training Time in Four (4) Man Crew configurations in that simulator team training had previously been conducted with six man control room teams from October 1988 through March 1989. Training in four man crews was instituted on May 8, 1989. Insufficient time was available for these reconstituted crews to train as a unit.

3. Expectations and roles/responsibilities were not clearly defined for control room personnel. This was exacerbated by the four man training crews inadequate training time as a team.

IV. Remediation

In accordance with our accredited program, any examination failure results in the immediate removal from license duties. The remediation plan applies to individual licensed personnel who failed the examination. The individuals will receive training and be re-examined on the portion of the examination that they failed. For example, in the case of a written examination failure, the person will be retrained on areas of special weaknesses, and on how to take an open reference examination, and will then be required to pass a complete written examination.

V. Shift Schedule:

In order to maintain an effective operational staff during the remediation period for those license holders who failed the requalification exam, the decision was made to change to a four shift rotation that would utilize existing shifts to the extent possible and would not exceed technical specification limitations on overtime.

VI. Shift Staffing:

Minimum shift staffing has been established as; 1 Station Shift Supervisor (SSS), 1 Assistant Station Shift Supervisor (ASSS/STA), 1 Shift Emergency Planning Coordinator (SEPC), 1 Chief Shift Operator (CSO), 3 Nuclear Auxiliary Operator 'E' (NAOE), and 2 non-licensed auxiliary operators.

Qualifications for each licensed position listed above are defined as follows:

Station Shift Supervisor (SSS)

Must have a current, active SRO license
Must have passed a recent requalification or initial NRC license exam

Assistant Station Shift Supervisor (ASSS)/Shift Technical Assistant (STA)

Must have a current, active SRO license
Must have an appropriate technical degree
Must have passed a recent requalification or initial NRC license exam

Shift Emergency Planning Coordinator (SEPC)

Must have a current, active or inactive SRO license

Chief Shift Operator (CSO)

Must have a current, active RO license
Must have passed a recent requalification or initial NRC license exam

Nuclear Auxiliary Operator 'E' (NAOE)

Must have a current, active RO license
Must have passed a recent requalification or initial NRC license exam

VII. Shift Responsibilities

Existing operations department instruction No. N2-ODI-1.08 "Operations Policy for Emergency Procedures" has been revised and training has been completed for each shift. This instruction clarifies the responsibilities of control room personnel during periods when the emergency plan is implemented.

(0766V)