U. S. NUCLEAR REGULATORY COMMISSION

REGION I

REPORT NOS:	50-245/94-10 50-336/94-12 50-423/94-12
FACILITY DOCKET NOS:	50-245 50-336 50-423
FACILITY LICENSE NOS:	DPR-21 DPR-65 NPF-49
LICENSEE:	Northeast Nuclear Energy Company P.O. Box 270 Hartford, CT. 06141-0270
FACILITY:	Millstone Unit 1 Nuclear Power Station
INSPECTION AT:	Waterford, CT.
INSPECTION DATES:	February 14-18, 1994

INSPECTOR: Carl E Sisco 3/15/94

Carl E. Sisco, Operations Engineer
BWR Section, Operations Branch
Division of Reactor Safety

Date

APPROVED BY: Richard J Conte 3/16/94

Richard J. Conte, Chief
BWR Section, Operations Branch
Division of Reactor Safety

Date

INSPECTION SUMMARY: Inspection conducted February 14-18, 1994 (inspection Report 50-245/94-10,336/12,423/12)

AREAS INSPECTED: An announced safety inspection was conducted of the Millstone Unit 1 licensed operator requalification training program (LORT) by observing training. In addition, training department procedures were reviewed. Several open items were reviewed.

RESULTS: The self-critiquing process is a strength of the training program. In addition, the training materials used clear standards and expectations. The instructors were knowledgeable and well prepared to conduct the training.

The inspector observed classroom training of nonlicensed operators. The inspector determined the instructor was knowledgeable of the subject and used visual aids effectively during the presentation.

Based on discussions with Millstone Unit 2 operators following a scenario, the inspector determined the training was effective and provided challenges to the operators in a unique way.

The following items, detailed in Section 3.0, were closed.

(CLOSED) Unresolved Item No. 245/336/423/93-80-01: Corporate Policy for Conducting LORT on a Continuous Basis

(CLOSED) Deviation No. 245/93-80-03: Deviations from Commitments

(CLOSED) Inspector Follow Item (IFI) No. 245/93-28-01: Leadership Training

(CLOSED) IFI No. 326/423/93-28-02: Advanced Training Techniques

(CLOSED) IFI No. 245/93-28-03: Training Procedure Changes

(CLOSED) IFI No. 245/93-28-04: Organizational Commitments

(CLOSED) Violation No. 245/93-04-01: Failure to Audit Unit 1 Operator Training Programs

DETAILS

1.0 INTRODUCTION AND OVERVIEW

In September 1991 and again in September 1992, the NRC found the licensed operator requalification training (LORT) program at Millstone 1 to be unsatisfactory. As a result, Region I initiated additional inspections of the LORT program to assure continuing high quality training of licensed operators with respect to safe plant operations. In December 1993, the NRC staff determined the LORT program at Millstone Unit 1 to be satisfactory. This inspection was a continuation of those additional inspections to assure continuing high quality training of licensed operators and it applies to all 3 Millstone Units. The inspector used Inspector Procedure IP 41500 during the inspection.

2.0 OBSERVATIONS OF TRAINING

Scope

The scope of the inspection was to observe simulator, classroom and Job Performance Measures (JPM) training, review training materials and training department procedures. In addition, an assessment of the effectiveness of training delivery was made to assure training is conducive to safe plant operations. A listing of those training department documents reviewed are listed on Attachment 1.

Simulator and JPM Training Observations - Unit 1

The inspector observed training conducted in the Unit 1 plant referenced simulator. A plant operating crew and a crew composed of plant staff members were observed. The training consisted of three different scenarios of varying levels of challenge to the crews. Each of the scenarios was videotaped for review and comment by the crew immediately after each training evolution. Also, following each scenario, the crew conducted a self critique of their performance. The inspector reviewed the training materials used by the facility instructors and determined the materials were adequate to implement effective training and provided clear standards. In addition, the instructors were knowledgeable and well prepared to conduct the training.

The JPM training was conducted on individual systems in the control room. After the performance of the JPM by an operator, the crew commented and discussed the JPM. In addition, a critique of the operators performance that had conducted the JPM was performed. The inspector determined the JPM provided adequate standards of performance and the training methodology was adequate. In addition, the instructors were knowledgeable and well prepared to conduct the training.

Classroom Training Unit 1

The inspector observed classroom training of nonlicensed operators. The inspector determined the instructor was knowledgeable of the subject and used visual aids effectively during the presentation.

Simulator Training - Unit 2

The inspector observed simulator training conducted on Millstone Unit 2 simulator. The training was a six hour scenario that required operator actions necessary to perform a plant startup. The instructors presented plant operational problems as well as administrative problems to the operating crew during the scenario. Senior operations department management was present during the scenario to provide immediate clarification of managements expectations during the scenario. Based on discussions with the operators following the scenario, the inspector determined the training was effective and provided challenges in a unique way.

Conclusions

The operators demonstrated ability to conduct the self-critiquing process is a strength of the training program. In addition, the training materials used clear standards and expectations. The instructors were knowledgeable and well prepared to conduct the training. The inspector determined the training observed is conducive to safe plant operations.

3.0 CORRECTIVE ACTIONS

3.1 Scope

The inspector reviewed the licensee's corrective actions to previously identified items.

3.1.1 (CLOSED) Deviation No. 245/93-80-03: Deviations from Commitments

The inspector reviewed Nuclear Training Manual (NTM) 1.04, "NTD Commitments," Rev. 0. Based on the review of this procedure, the inspector noted the procedure provided requirements to track commitments and perform periodic management review of LORT training commitments. Overall, these measures, if properly implemented, should improve the quality of commitments tracking.

3.1.2 (CLOSED) Inspector Follow Item (IFI) No. 245/93-28-01: Leadership Training

Based on a review of training records, the inspector determined leadership training has been completed. Training department instructors, appropriate supervisors and managers of all 3 Units have received leadership training. This training provided leadership skills and techniques needed to influence the behavior and performance of others.

3.1.3 (CLOSED) IFI No. 326/423/93-28-02: Advanced Training Techniques

Based on discussions held with licensee training department personnel, the inspector determined that diagnostic testing has been completed for all licensed operators at Millstone Units 1, 2, and 3. Also, the advanced training class rooms have been implemented at all units.

3.1.4 (CLOSED) IFI No. 245/93-28-03: Training Procedure Changes

The NTM describes the training programs at Millstone Unit 1, 2 and 3. The inspector reviewed NTM 3.080, Rev. 1, "LORT Training Program." Based on the review of this procedure, the inspector noted that the procedure implements provisions that management, including the executive vice president, periodically observe training performance. In addition, the procedure adequately specifies appropriate requirements regarding training performance attributes to be observed.

3.1.5 (CLOSED) IFI No. 245/93-28-04: Organizational Commitments

The inspector reviewed the Nuclear Training Department organizational chart. The inspector noted the project team was replaced by an organizational structure for Units 1, 2, and 3 that is different than when the project team was in place. It adds one layer of management between the Director and Unit Supervisors. In addition, the inspector determined the supervisor of operator training for Millstone Unit 1 was properly interfaced with the project team for a time sufficient to ensure a smooth transition into the new organizational structure. The effectiveness will be routinely reviewed by NRC staff.

3.1.6 (CLOSED) Violation No. 245/93-04-01: Failure to Audit Unit 1 Operator Training Programs

The inspector reviewed the minutes of the Nuclear Review Board (NRB) of Millstone Unit 1 for April 20, 1993. Based on this review, the inspector concluded that this violation and the licensee's reply were adequately discussed by the NRB to increase their awareness of the need to direct Quality Services department resources where needed.

4.0 REGION I OFFICE MEETING

A meeting was held in the NRC Region I office in King of Prussia, Pennsylvania, on February 15, 1994, to discuss: (1) technical concerns over use of Confidence Weighted Testing (CWT) to make pass/fail decisions; (2) changes to the licensee's training organization; (3) the root cause analysis for initial examination applicant pull out; and (4)

status of open issues. Attachment 2 is a copy of the handouts used for discussion. Information on CWT will be provided at a later date by the licensee. The meeting was of mutual benefit and those in attendance are listed below.

Northeast Nuclear Energy Company

Mike Brown, Director of Nuclear Training
Bob Heidecker, Manager of Operator Training MP1/MP2
Jeff Smith, Manager of Operator Training MP3/CY
Scott Walsh, Senior Technical Trainer
Martin Ewers, Senior Instructor CY
David Lazarony, Senior Instructor MP3
Dr. Bruno, Consultant, via telephone for part of meeting

Nuclear Regulatory Commission

Jim Wiggins, Acting Director, DRS
Randy Blough, Chief, PB#4, DRP
Rich Conte, Chief, BWR Section, DRS
Glenn Meyer, Chief, PWR Section, DRS
Maryann Biamonte, Training and Assessment Specialist, NRR
George Usova, Training and Assessment Specialist, NRR
Howard Rathbun, Reactor Engineer Intern, DRP
Herb Williams, Senior Operations Engineer, DRS

5.0 EXIT MEETING

An exit meeting was conducted at the Nuclear Training Center on February 18, 1994. The inspector discussed the findings of the inspection with those individuals identified below.

Northeast Nuclear Energy Company

H. Haynes, Director Unit 1
M. Brown, Nuclear Training Manager
C. Tabone, Supervisor, Operator Training
R. Schmidtknecht, Shift Supervisor
R. Heidecker, Supervisor Operator Training
M. Jacobs, LORT Coordinator

U. S. Nuclear Regulatory Commission

C. Sisco, Operations Engineer
R. Conte, Chief, BWR Section

An **Unresolved item** is an area in which more information is needed to determine if the item is acceptable, a deviation, or a violation. Unresolved items were addressed in section 3 of this report.

An **Inspector follow item** is an area that requires further review and evaluation by the NRC staff. Inspector follow items were addressed in section 3 of this report.

Attachments:
1. Documents Reviewed
2. Meeting Handout

ATTACHMENT 1

DOCUMENTS REVIEWED

NTM-3.029, Rev 3, "Nonlicensed Operator Initial Training,"

NTM-3.030, Rev 2, "Nonlicensed Operator Continuing Training,"

NTM-3.078, Rev 0, "Licensed Operator Initial Training Program,"

NTM-3.079, Rev 0, "Licensed Operator Upgrade Training Program,"

NTM-3.080, Rev 1, "LORT," program

NTM-3.081, Rev 0, "STA Training Program,"

NTM-3.085, Rev 0, "Shift Supervisor Training,"

NTM-3.090, Rev 1, "Generic Fundamentals Training,"

NTM-3.098, Rev 1, "Simulator Instructor Skills Training,"

NTM-1.04, Rev 0, "NTD Commitments,"

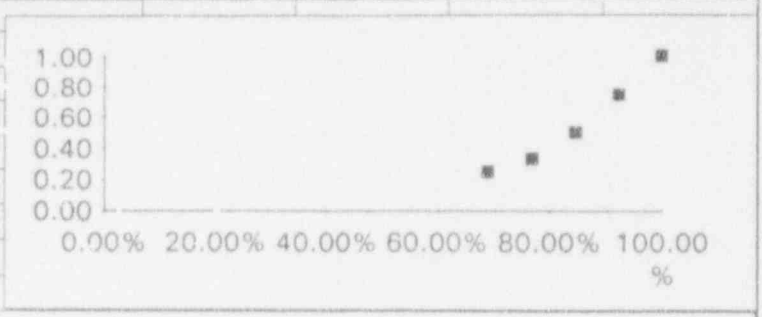
OTBI-5, Rev 0, "Maintenance of Training Records and Files."

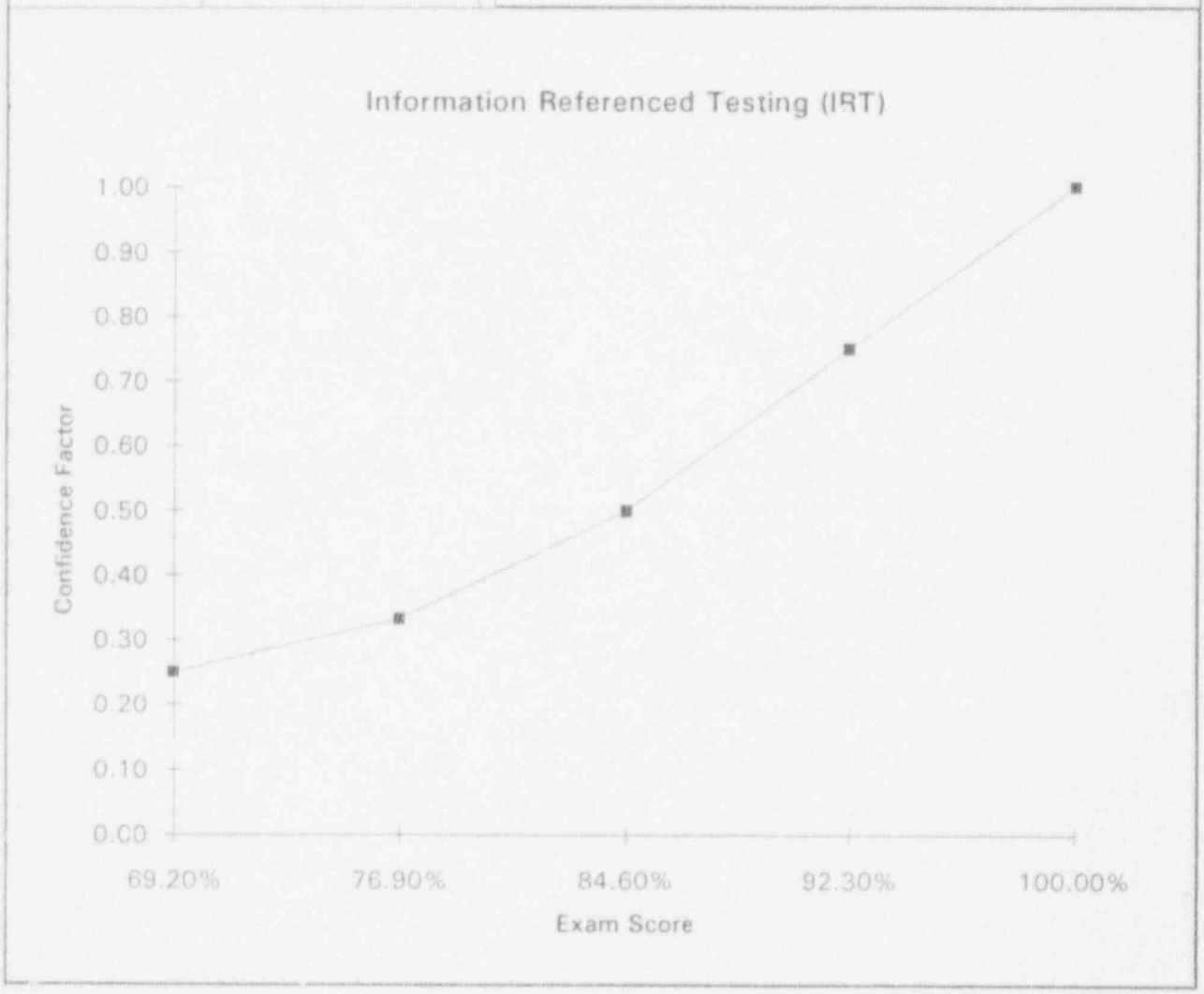
ATTACHMENT 2

MEETING HANDOUT

IRT Exam Score to Confidence Factor

Exam Score	*Confidence Factor*
69.20%	0.25
76.90%	0.33
84.60%	0.50
92.30%	0.75
100.00%	1.00





NORTHEAST UTILITIES

ROOT CAUSE INVESTIGATION

MILLSTONE ONE LOIT PROGRAM FINAL EXAM RESULTS

PREPARED BY: Roger Monast, Senior Nuclear Trainer, GNTB 1.31.94

REVIEWED BY: 2/1/94
Robert Burnham, Supervisor, GNTB

CORRECTIVE ACTIONS CONCURRED WITH: Robert Heidecker 2/1/94
Robert Heidecker, Manager, OTB

APPROVED BY:
Michael Brown, Director Nuclear Training

EXECUTIVE SUMMARY

The nine students in the Millstone One Licensed Operator Initial Training (LOIT) class satisfactorily completed the training program with an average of 93.05 %. The Millstone One Final Exam was conducted on January 6, 1994. The Millstone Final Exam class average was 87.02 %. The confidence weighted testing method was used during the LOIT Program and on the Millstone One Final Exam. Given the class average prior to the Millstone One Final Exam, the results of the exam were less than expected by NTD management. Based on a review of their test scores, five of the nine students were not scheduled to sit for the NRC exam January 11, 1994. Four students were scheduled for NRC written exam. Ultimately, five students participated in the NRC written exam and all passed.

This report identifies the cause for the Millstone One Final Exam test results being less than expected by NTD management. Specific corrective actions to prevent recurrence are included. Also, recommendations are provided which address additional conditions and factors which contributed to the low test results but did not directly cause them.

Conclusion:

The Millstone Unit One LOIT Program content and design does not provide the students with the training necessary to develop and use the analytical tools [mental problem solving model(s)] required to integrate system knowledge and varying plant conditions. Weekly exam scores indicated high levels of factual knowledge and comprehension of individual systems. Responses to questions which required the use of integrated system knowledge and higher cognitive skills showed a larger percentage of partial knowledge by the students. The majority of the weekly exam questions were lower level cognitive (system knowledge and comprehension) questions. The Millstone One Final Exam contained a majority of questions which required the use of higher levels of mental processing (application and analysis). While the physical testing conditions (late start, incorrect test question data) were not optimal during the Millstone One Final Exam, test scores indicated a continuation of the trend of poorer performance on questions which required the use of higher cognitive skills (application and analysis).

Recommendation:

Supplement the Millstone One LOIT Program with training which helps the students to develop and implement mental models for processing information. This training should be developed and implemented into the LOIT program very early in the program and practiced during the entire program using simple to progressively more complex classroom case studies, part-task simulation, and simulator scenarios.

1.0 INTRODUCTION

1.1 Event Description

Nine students in the Millstone One Licensed Operator Initial Training (LOIT) class satisfactorily completed the training program with an average of 93.05 %. The Millstone Final Exam was conducted on January 6, 1994. The Millstone Final Exam class average was 87.02 %. The confidence weighted testing method was used during the LOIT Program and on the Millstone Final Exam. Given the class average prior to the Millstone Final Exam, the results of the exam were less than expected by NTD management. Based on a review of their test scores, five of the nine students were not scheduled to sit for the NRC exam January 11, 1994. Four students were scheduled for NRC written exam. Ultimately, five students participated in the NRC written exam and all passed.

1.2 Scope

The scope of this investigation includes a review of various training materials (lesson plans, objectives, and written exams) used in the presentation of the 1993 Millstone One LOIT Program, interviews with NTD supervision responsible for the administration of the training program and interviews with students and instructors who participated in the program.

2.0 REFERENCES

NONE

3.0 PERSONS INVOLVED

* Roger Monast, Senior Nuclear Trainer (Evaluator), General Nuclear Training

Millstone One OTB personnel contacted:

* Chris Tabone, Supervisor Operator Training
* Mike Jensen, Senior Instructor
* Mark Jacobs, Operator Instructor, LORT Coordinator

* Peter Fitzgerald, Operator Instructor, LOIT Coordinator

LOIT students contacted:

Millstone One Operations personnel contacted:

4.0 COMPILATION OF FACTS

Major program milestones:

a. New MP1 Operator Job and Task listings and supporting instructional materials for the MP1 operator training programs are developed.

b. Dan Meekhoff, LOIT Coordinator develops LOIT training schedule, then becomes LORT Coordinator prior to LOIT program start.

c. Mark Jacobs replaces Dan Meekhoff as LOIT Coordinator and becomes responsible for revising and implementing a LOIT program schedule.

d. The Millstone One LOIT class began the training program in the spring of 1993. The class was comprised of 10 students, 6 from MP1 operations and 4 from MP1 OTB.

e.. LOIT classes conducted concurrently with LORT class.

f. LOIT students alternate between classroom training and on-shift rotation through October.

g. Simulator training begins late October.

h. In-plant JPMs delivered to students.

i. LOIT Program Systems exam final - class average 96.43 %.

j. Millstone Final Exam January 6, 1994 - 5 student score < 87 %.

k. NRC exam on January 11, 1994 - all 5 LOIT students pass.

l. NRC exam rescheduled for June for 4 LOIT students who did not take January 11 exam.

5.0 CONCLUSIONS

This report categorizes the conclusions in 3 specific areas:

* Training Program Design and Content (5.1)

* Training Program Supervision / Coordination (5.2)

* Training Program Implementation (5.3)

5.1 **Millstone One LOIT Program Design and Content is less than adequate.**

5.1.1 This LOIT Program does not include training that provides the students with the analytical tools necessary to organize, process and evaluate data, and implement appropriate actions. This was indicated by the disparity in test scores on the weekly exams and the final exam. The weekly exams tested the students' knowledge and comprehension of facts. The weekly class average was 93.05 %. The Millstone Final Exam tested the students' ability to organize, process, and integrate plant information. The class average for the final exam was 87.02 %.

The LOIT program design did not help the students develop mental "models" to organize, process and evaluate information. Even though the students were not trained in this area, they were intermittently tested on the weekly exams using "operational" type questions which required higher level cognitive skills (application and analysis). When given "operational" questions the students did not show a high level of confidence in their responses with resulting lower test scores.

The LOIT program content did not include simple to progressively more complex case studies, part-task simulation or simulator scenarios to help the students practice and improve their higher level cognitive skills.

5.2 **Millstone One LOIT Program Supervision / Coordination is less than adequate as indicated by the following:**

5.2.1 Instructional observations / evaluations of contract instructors did not result in plans for improvement of their instructional and technical deficiencies. Student feedback indicated a consistent lack of plant specific knowledge (not badged for the station) and less than adequate instructor skills (reading to the class from lesson plans) Since the contract instructors presented a large portion of the LOIT program, these deficiencies contributed to the emphasis on knowledge and comprehension of facts.

5.2.2 The remediation process as required by the NTAM was administered inconsistently. Appropriate use of the remediation process may have indicated the deficiency in higher level cognitive skills.

5.2.3 The MP1 LOIT exam bank is insufficient to adequately test the appropriate cognitive skill levels. The use of LORT questions (paragraph 5.1.1) to supplement the LOIT exam bank contributed to the inappropriate testing of higher level cognitive skills for which the students had not been trained.

5.2.4 MP1 OTB instructors who were students in the LOIT program were tasked with exam bank responsibilities and exam administration. While there was no indication of impropriety, these responsibilities appear to be inappropriate.

5.2.5 Student feedback was not solicited throughout the program. The '93 LOIT Self Evaluation" indicates that the students stopped completing the forms The Self Evaluation stated: "either they are satisfied with the curriculum or don't believe that the process works. This needs to be investigated further." There is no indication this was investigated further.

5.2.6 Student on-shift time was not supported by structured training activities to be performed by the students. The students were self-directed to study or participate in on-shift tasks directed by the operating crew. In-plant JPMs were not available to the students until late in the program.

5.2.7 On-shift time was not supported by a training presence. An OTB instructor was not assigned on-shift with the students due to the need to support LORT. This contributed to the ineffective use of on-shift time of the students.

5.2.8 The use of students as instructors in the LOIT program is a

questionable practice. These MP1 OTB students were certified instructors but inexperienced. Placing the burden of preparing to train and studying for exams is a disadvantage to them and the other students.

5.3 **Training Program Implementation was less than adequate as indicated by the following:**

5.3.1 The level of information contained in lesson plans, information presented and information tested was inconsistent.

5.3.2 Topics were not presented (e.g., Fire Protection) or presented incompletely (Turbine Control, Refueling, Admin) yet the students were tested on these areas.

5.3.3 Part task simulation was not used to enhance systems knowledge.

5.3.4 Advanced Training Classroom (ATC) has been identified as a training strength yet it was used intermittently during the program.

5.3.5 ATC questions were not sufficiently difficult to challenge student knowledge.

6.0 CORRECTIVE ACTIONS

6.1 **Millstone One LOIT Program Design and Content**

6.1.1 Implement training on problem solving techniques. Make this an integral part of LOIT programs. Integrate the use of these techniques into all aspects of the training, i.e., classroom, simulator and on-shift. The students must be able to process information through the use of mental, analytical models; problem solving training will help the students develop these models.

6.2 **Millstone One LOIT Program Supervision / Coordination**

6.2.1 Perform regularly scheduled instructional observations / evaluations of all instructors. Inexperienced instructors should receive particular attention and specific feedback. The performance of any instructor who receives consistent, critical student feedback should be reviewed.

General Nuclear Training (GNT) has initiated a "GNT Instructor Skills Development Proposal" which addresses the need for a

comprehensive instructor observation, feedback and training program.

6.2.2 Administer NTM-5.07, "Student Counseling and Remediation" on a consistent and complete basis. Remediation requires the instructor review deficiencies, determine the cause(s) of the deficiencies and implement an improvement plan. Simply retesting a student in deficient areas is not the corrective action for long term improved performance.

6.2.3 Write additional test questions for the exam bank. The questions should test higher level cognitive skills and be consistent with the instructional objectives and the actual material taught in the class.
Note: Testing to the higher level cognitive skills presupposes training in problem solving is part of the LOIT curriculum.

6.2.4 Eliminate the use of students as exam administrators. Ensure all instructors know how to use the exam bank.

6.2.5 Implement NTM-6.01, "Short Term Training Feedback" on regular basis throughout the program. If useful feedback (positive and/or critical) on the effectiveness of the training is not forthcoming, investigate further.

6.2.6/7 Ensure JPMs and OJT activities are available for the students on-shift. The operating crews may or may not assist the on-shift students in training or the performance of tasks. To ensure learning does not stop during on-shift schedules, the OTB should develop a list of activities the students are required to complete on-shift. An OTB instructor should be scheduled on-shift with the students to facilitate these activities with the operating crew.

6.2.8 Relieve OTB instructors of training responsibilities in the LOIT program in which they are students.

6.3 **Training Program Implementation was less than adequate.**

6.3.1 Review the instructional objectives and lesson plans to ensure congruency. The lesson plans must support the instructional objectives in content and cognitive level. Regular instructional observations will identify deficiencies.

6.3.2 Ensure all topics are presented in accordance with the lesson

plans in appropriate program sequence.

6.3.3 Schedule and conduct part-task during systems training. This aspect of LOIT is critical to reinforcing system knowledge and integrated system responses. (as is 6.1.1)

6.3.4/5 Write Advanced Training Classroom (ATC) questions to include higher cognitive level questions. ATC questions should be sequenced from challenging the students' recall of information through the use of application and analysis of information.

7.0 COMMENTS

The LOIT Program was run concurrently with the LORT Program. The Annual LORT Exam was scheduled for September, 1993. MP1 OTB resources were directed to support the LORT Program. The success of the LORT Program was acknowledged to be of paramount concern by LOIT students, OTB instructors and OTB management. Many of the deficiencies identified here are a result of that concern. Remaining deficiencies are of a programmatic nature. Whether the deficiencies are a result of management's deliberate allocation of resources or programmatic design, each must be addressed and corrected to prevent this type of event in the future.

8.0 ATTACHMENTS

8.1 1993 LOIT Schedule, Rev. 3

8.2 93 LOIT Self Evaluation

8.3 MP1 LOIT / LOUT Audit conducted by Technical Training Branch (TTB)

8.4 Student Assessment Package (Figure 7.2, Student Assessment)

8.5 Instructor Assessment Package (Figure 7.4, Instructor Assessment)

8.6 Supervisor Assessment Package (Figure 7.6, Supervisor Assessment)

8.7 "Action on student feedback - 5/93"

8.8 LOIT Weekly Exam Scores

Attachment 8.1

1993 LOIT Schedule, Rev. 3

July 13, 1993
OT1-93-353

TO: Distribution

FROM: M. A. Jacobs
1993 LOIT Coordinator

SUBJECT: 1993 LOIT Schedule, Rev. 3

The following schedule details classroom, simulator and on-the-job training for the LOIT class beginning May 3, 1993. Also included is the assigned instructor. Any questions or comments should be directed to Mark Jacobs (Ext. 2538).

MAJ/lah

Dist.:

C. Tabone	M. Jensen	J. Mack
P. Schilke	R. Payton	R. Heidecker
P. Jernigan	T. Allbritton	J. Belanger
L. Sosler	T. Roberts	T. Graziosi
M. Welker	W. Philbrick	A. Hay
T. Sullivan	K. Murphy	B. Leonard
R. Schmidtknecht	C. Samoranski	K. Underwood

File 4.1.2.2

1993 LOIT Schedule

5-3	P&ID & CWD Reading	C. Tabone
5-4	Tech Specifications 10 CFR 50 and 55	C. Tabone
5-5	Nuclear Vessel Cont.	[redacted]
5-6	Nuclear Vessel Inst	[redacted]
5-7	Examination Examination Review	M. Jacobs
5-10	Source Range Monitoring Intermediate Range Monitoring	[redacted]
5-11	Local Power Range Monitoring Average Power Range Monitoring	[redacted]
5-12	Rod Block Monitor	M. Welker
5-13	Transversing In-Core Probe	M. Welker
5-14	ACP 6.01, 6.12, ODI 1.09, ODI 6.09, RO Position Descrip.	M. Jacobs
5-17	Examination Examination Review	M. Jacobs
5-18	Control Rod Drive Head Spray	[redacted]
5-19	Reactor Manual Control	[redacted]
5-20	Rod Worth Minimizer	M. Welker
5-21	ACP 6.01A, 10.05 ODI 1.02, 1.15, 10.10	T. Allbritton
5-24	Examination Examination Review	M. Jacobs M. Jacobs
5-25	Recirculation Recirc Speed Control	[redacted]
5-26	RPS ATWS	[redacted]
5-27	Standby Liquid Control	[redacted]
5-28	ACP 2.06A,2.06B,2.06C ODI 2.21,2.20,7.01	M.Jacobs

5-31	Memorial Day	
6-1	Examination Examination Review	M.Jacobs
6-2	On-Shift	
6-3	On- Shift	
6-4	On-Shift	
6-7	On-Shift	
6-8	On-Shift	
6-9	On-Shift	
6-10	On-Shift	
6-11	On-Shift	
6-14	24KV(Including Main Generator)	J.Madore
6-16	480 Volt Distribution	J.Madore
6-17	Vital and Instrument AC	J.Madore
6-18	ACP 4.13, ODI 6.07,6.14 6.18,6.24,6.25	T. Allbritton
6-21	Examination Examination Review	M. Jacobs
6-22	Main Steam Extraction Steam Heater Drains	[redacted]
6-23	Main Turbine 2 TURBINE CHECK?	[redacted]
6-24	**Main Feed** **Condensate**	T. Allbritton M. Welker
6-25	**ACP 9.02,9.03,2.27,** **ODI 6.05,6.15,9.01,9.03**	M.Jacobs
6-28	**Examination** **Examination Review**	M. Jacobs
6-29	On-Shift	
6-30	On-Shift	
7-1	On-Shift	

7-2	On-Shift	
7-5	Independence Day	
7-6	On-Shift	
7-7	On-Shift	
7-8	On-Shift	
7-9	On-Shift	
7-12	Containment Containment Sampling	[redacted]
7-13	Drywell Compressors Standby Gas Treatment	W. Philbrick R. Payton
7-14	Post Accident Sampling	[redacted]
7-15	Process Radiation Monitoring Area Radiation Monitoring	[redacted]
7-16	ACP 7.04, 7.05A, 7.09, ACP 12.09, ODI 1.10	T. Allbritton
7-19	Examination Examination Review	M. Jacobs
7-20	Condenser Air Removal	M. Welker
7-21	Off-Gas	M. Welker
7-22	Stack Gas Monitoring	[redacted]
7-23	ACP 2.02B, 2.02C, 2.09 10.01	M. Jacobs
7-26	Examination Examination Review	M. Jacobs
7-27	On-Shift	
7-28	On-Shift	
7-29	On-Shift	
7-30	On-Shift	
8-2	On-Shift	
8-3	On-Shift	

8-4	On-Shift	
8-5	On-Shift	
8-6	On-Shift	
8-9	Feedwater Coolant Injection	M. Welker
8-10	Isolation Condenser	J. Mack
8-11	Automatic Pressure Relief	T. Cullen
8-12	Low Pressure Coolant Inj.	Murphy
8-13	Emergency Service Water	Murphy
8-16	Examination Examination Review	M. Jacobs
8-17	Core Spray	J. Mack
8-18	Diesel Generator → Tagboard Clutter	[redacted]
8-19	Gas Turbine Generator	[redacted]
8-20	Make Up JPMs	[redacted]
8-23	Examination Examination Review	[redacted]
8-24	On-Shift	
8-25	On-Shift	
8-26	On-Shift	
8-27	On-Shift	
8-30	On-Shift	
8-31	On-Shift	
9-1	On-Shift	
9-2	On-Shift	
9-3	On-Shift	
9-6	Labor Day	
9-7	Circulating Water	W. Philbrick
9-8	Service Water	[redacted]

9-9	Turbine Building Closed Cooling Water Turbine Building Secondary Closed Cooling Water	[redacted] Jernigan
9-10	Reactor Building Closed Cooling Water	[redacted] Jernigan
9-13	Examination Examination Review	M. Jacobs
9-14	On-Shift	
9-15	On-Shift	
9-16	On-Shift	
9-17	On-Shift	
9-20	On-Shift	
9-21	On-Shift	
9-22	On-Shift	
9-23	On-Shift	
9-24	On-Shift	
9-27	Reactor Water Cleanup	M. Welker
9-28	Shutdown Cooling	[redacted]
9-28	Fuel Pool Cooling	[redacted]
9-29	Plant Air	[redacted]
9-30	Fuel Handling	[redacted]
10-1	Integrated Computer System 3D Monicore Safety Parameter Display	U-1 Engineering
10-4	Examination Examination Review	M. Jacobs
10-5	Heating, Ventilation and Air Conditioning	[redacted]
10-6	Make Up Water Radwaste	[redacted] Sullivan Op's Support
10-7	Fire Protection	J. Rogers

WAS NOT TRAINED

10-8	Reactor Fuel	T. Allbritton
10-11	Columbus Day	
10-12	On-Shift	
10-13	On-Shift	
10-14	On-Shift	
10-15	On-Shift	
10-18	On-Shift	
10-19	On-Shift	
10-20	On-Shift	
10-21	On-Shift	
10-22	On-Shift	
10-25	Approach to Criticality - Sim Approach to Criticality - Classroom	
10-26	Plant Heatup - Sim Plant Heatup - Classroom	
10-27	Plant Heatup - Sim Plant Startup to Rated Power - Classroom	
10-28	Plant Startup to Rated Power - Sim Team Work Training - Classroom	
10-29	Normal/Surveillance Operations - Sim Team Work Training - Classroom	
11-1	Normal Operations - Sim Proficiency Exam - Classroom Plant Shutdown to Hot Standby - Classroom	
11-2	Normal Operations - Sim Plant Cooldown - Classroom	
11-3	Normal Operations - Sim EPIP Training - Classroom	
11-4	Plant Shutdown to Hot Standby - Sim EPIP Training - Classroom	
11-5	Plant Cooldown - Sim EPIP Training - Classroom	

11-8	On-Shift
11-9	On-Shift
11-10	On-Shift
11-11	Veterans Day
11-12	On-Shift
11-15	On-Shift
11-16	On-Shift
11-17	On-Shift
11-18	On-Shift
11-19	On-Shift
11-22	On-Shift
11-23	On-Shift
11-24	On-Shift
11-25	Thanksgiving
11-26	Day After Thanksgiving
11-29	Off Normal Operations - Sim Off Normal Operations - Classroom
11-30	Off Normal Operations - Sim Off Normal Operations - Classroom
12-1	Off Normal Operations - Sim Off Normal Operations - Classroom
12-2	EOP Training - Sim EOP Training - Classroom
12-3	EOP Training - Sim EOP Training - Classroom
12-6	EOP Training - Sim EOP Training - Classroom
12-7	EOP Training - Sim EOP Training - Classroom
12-8	EOP Training - Sim EOP Training - Classroom

12-9	EOP Training - Sim EOP Training - Classroom
12-10	EOP Training - Sim EOP Training - Classroom
12-13	EOP Training - Sim EOP Training - Classroom
12-14	EOP Training - Sim EOP Training - Classroom
12-15	EOP Training - Sim EOP Training - Classroom
12-16	EOP Training - Sim Proficiency Exam - Classroom EOP Training
12-17	EOP Training - Sim EOP Training - Classroom
12-20	On-Shift
12-21	On-Shift
12-22	On-Shift
12-23	Company Time Allowed
12-24	Christmas
12-27	EOP Training - Sim EOP Training - Classroom
12-28	EOP Training - Sim EOP Training - Classroom
12-29	EOP Training - Sim EOP Training - Classroom
12-30	EOP Training - Sim Proficiency Exam - Classroom EOP Training
12-31	EOP Training - Sim EOP Training - Classroom
1-3	EOP Training - Sim EOP Training - Classroom
1-4	EOP Training - Sim EOP Training - Classroom

1-5	EOP Training - Sim EOP Training - Classroom
1-6	EOP Training - Sim EOP Training - Classroom
1-7	EOP Training - Sim EOP Training - Classroom
1-10	EOP Training - Sim Class Room Review - Subject as Determined
1-11	EOP Training - Sim Written Final Exam
1-12	EOP Training - Sim JPM Final Exam
1-13	EOP Training - Sim
1-14	Simulator Final Exam
1-17	Exam Practice - Sim Classroom Review
1-18	Exam Practice - Sim Classroom Review
1-19	Exam Practice - Sim Classroom Review
1-20	Exam Practice - Sim Classroom Review
1-21	Exam Practice - Sim Classroom Review
1-24	Exam Practice - Sim Classroom Review
1-25	Exam Practice - Sim Classroom Review
1-26	Exam Practice - Sim Classroom Review
1-27	Exam Practice - Sim Classroom Review
1-28	Exam Practice - Sim Classroom Review
1-31	NRC Exam

2-1	NRC Exam
1-26	NRC Exam
1-27	NRC Exit
1-28	Operator Transition

Attachment 8.2

93 LOIT Self Evaluation

93 LOIT SELF EVALUATION

1. SELECTION PROCESS

A. No proceduralized selection process

B. Operators selected at SS meeting with OP's Manager in attendance. Performance as a PEO was used as criteria for selection.

C. Non-operators attending program are all training department personnel and considered qualified to attend license program prior to being offered a position.

2. LESSON PLANS/SYSTEM TEXTS

A. Definite strength

1. All materials updated prior to delivery by instructor assigned to deliver training.

1a. Minor weakness- SOER's were not incorporated into system texts and had to be delivered separately.

2. All student text in split text format with color graphics to enhance learning.

3. CLASSROOM

A. Definite strength

1. Use of large color photographs attached to the walls during all classroom lectures helped both the instructor and the student. Enabled the instructor to point out locations of controls and indications and actually explain how various controls and indications would change for a given set of conditions. Helped student by giving visual aids to go with classroom lectures.

2. ATC- Definite strength- The advanced classroom provided the instructor with a tool that enabled him to either ask questions prior to teaching to evaluate how much time should be spent on a given topic or as a review of material presented to test retention and understanding. Promotes active classroom participation from all students.

4. **IRT/CONFIDENCE WEIGHTED TESTING**

Definite Strength

1. Confidence weighted testing identifies to what extent the student is guessing or has incomplete knowledge of a particular concept or knowledge item.

2. The IRT computer program also generates extremely detailed exam reports that enable instructor to quickly identify areas that a student has knowledge deficiencies. The exam report also allow for quick identification of areas which due to a high miss rate indicates topics not covered by the instructor or confusing,poorly worded or incorrect exam questions.
3. IRT testing has been incorporated using the spacing effect to retest the student on recent and past material. Confidence weighted exams of increasing complexity have been incorporated into the training program.
3. Weakness - Program has no clearly defined remediation/pass/fail criteria for written exams. 90 is acknowledged as a passing grade but their needs t. be clearer written guidance on 89-80% scores.

5. **OJT**

1. Original program description had ROs performing PEO tasks.To this date the program description has not been updated to eliminate the PEO tasks. The tas· list has been updated to better define the correct environment for training delivery for each task. Th:. enabled more tasks to be trained on in a dynamic setting thereby maximizing the student interest and retention. Program description must be upgraded to better define the OJT portion of this program.

2. OJT has no assigned instructors to assist and teach or train the candidates on shift. Program needs to define the role of the instructor on shift to ensure that the OJT portion of the program is systematic and that the benefit derived from OJT is identical for each crew.

3. Oral exams must be incorporated into the program to measure the effectiveness of the OJT program.

6. SIMULATOR TRAINING

1. Simulator training has just begun and appears to be quite effective.

2. Schedule seems to be of adequate length to incorporate all simulator learning objectives.

3. Lesson plans are adequate but could use more cues on where to interject with instructor led discussions on the tasks being performed.

4. Each crew is always taught by the same instructors (2). Consistency is ensured by crew observations by training management and program coordinator observations of each crew.This ensures consistent philosophy on plant operations is presented to each crew.

7. SUPERVISORY ASSESSMENTS OF TRAINING

1. As of yet all supervisory assessment of training have not been completed. Due to limited amount of assessments completed little has been rolled back into the training program. Verbal feedback from both the project team supervisor and the supervisor of operator training has been incorporated into the program.

8. **STUDENT ASSESSMENTS OF TRAINING**

2. Process involves student feed back at the end of each training week. Process was initially very successful in communicating student concerns to management via the program coordinator. Students no longer complete the voluntary forms meaning either they are satisfied with the curriculum or don't believe that the process works. This needs to be investigated further.

9. **EXAMINATIONS**

1. Exam questions some times inadequately reviewed for technical accuracy and proper format. This was due to failure of program instructors to get exam materials to program coordinator in time.

2. Inconsistent cognitive level for exam questions. Student instructors and some contractors routinely handed in lower order questions. This is not a major concern however because LOIT examinations are closed book and test at the memory and application level.

10. **INSTRUCTORS**

1. Based on student feedback instructors can be viewed as both a strength and a weakness. Use of contractors and students as instructors viewed as a weakness by students in the class however exam average do not indicate that learning objectives were not met by student instructors or contractors. What remains to be seen is how using personnel that are not familiar with the plant effects students integrated plant knowledge.

11. **BREAKDOWN OF CLASSROOM AND SHIFT TIME**

1. Definite strength - The class was run by breaking up the classroom and on-shift time. Upon return from shift time diagnostic exams were given. This practice broke up the monotony and increased student retention of materials by forcing the students to constantly review previously taught material.

Attachment 8.3

MP1 LOIT / LOUT Audit

MP 1 LOIT / LOUT:

Objective 1 - Training Program Content:

- Good quality lesson plans, student texts with color graphics. (All materials randomly selected for audit were revised in 1993.)

- JPMs fully integrated into LOIT Program (however not mentioned in Program Description)

Weaknesses

- SOERs have not been incorporated into the appropriate corresponding lesson plans. They were delivered separately as one entire package.

- LOUT specific lesson plans need to be reviewed / revised as they have not been implemented since 1988.

Objective 2 - Organization and Management of Training:

- Ownership of program by MP1 Operations. Operations liaison (SS) assigned to training as candidates supervisor
  - present every day
  - ensures customer satisfaction
  - provides informal assessments / feedback of training
  - reviews all exams

- No proceduralized selection process for candidates, but personnel entering the program generally possess the required entry-level knowledge, skills, and experience.

Weaknesses

- None identified.

Objective 3 - Development and Qualification of Staff

- Qualified instructors with a thorough and accurate knowledge of the plant.

- Instructional staff supplemented with contractors and candidates

Weakness

- This present LOIT Program is the first time the candidates themselves were used as instructors. Several candidates felt that the time they spent preparing to teach had a negative impact on their progress in the program.

Objective 4 - Analysis, Design, and Development

- All materials updated prior to delivery by instructor assigned to deliver training.

Weaknesses

- Program description (OJTs) has ROs performing PEO tasks, still needs to be updated.

- ACPs being taught without task analysis / objectives. Not tested on.

- Some exam bank questions do not exhibit objective correlation / congruence.

Objective 5 - Conduct of Classroom Training and Individualized Instruction and Trainee Evaluation

- Use of ATC and Confidence Weighted Testing are both definite strengths.

- Remediation efforts appear effective.

Weaknesses

- None identified.

Objective 6 - Conduct of Laboratory and In-Plant Training and Trainee Evaluation

Weakness

- Consistency of OJT Training / Evaluation is questionable. An instructor is usually assigned on-shift with the candidates and assists with / monitors OJTs, thereby ensuring consistency. This did not take place during the present program due to lack of manpower.

Objective 7 - Conduct of Simulator Training and Trainee Evaluation

Weaknesses

- None identified.

Objective 8 - Systematic Evaluation of Trainee Effectiveness

- Initial trainee feedback very successful. Students concerns / requests resolved in a timely fashion, improved quality of training.

- Mandatory completion of new assessment form should solve problem of voluntary form not being completed as program progresses.

Weakness

- Lack of formal (documented) training assessment by both Training and Operations Supervisors. Therefore little training program modification has been incorporated via this process.

NORTHEAST NUCLEAR ENERGY COMPANY
CONNECTICUT YANKEE ATOMIC POWER COMPANY

MILLSTONE NUCLEAR POWER STATION
HADDAM NECK PLANT

OPERATOR TRAINING PROGRAMS

STATUS MEETING

FEBRUARY 15, 1994

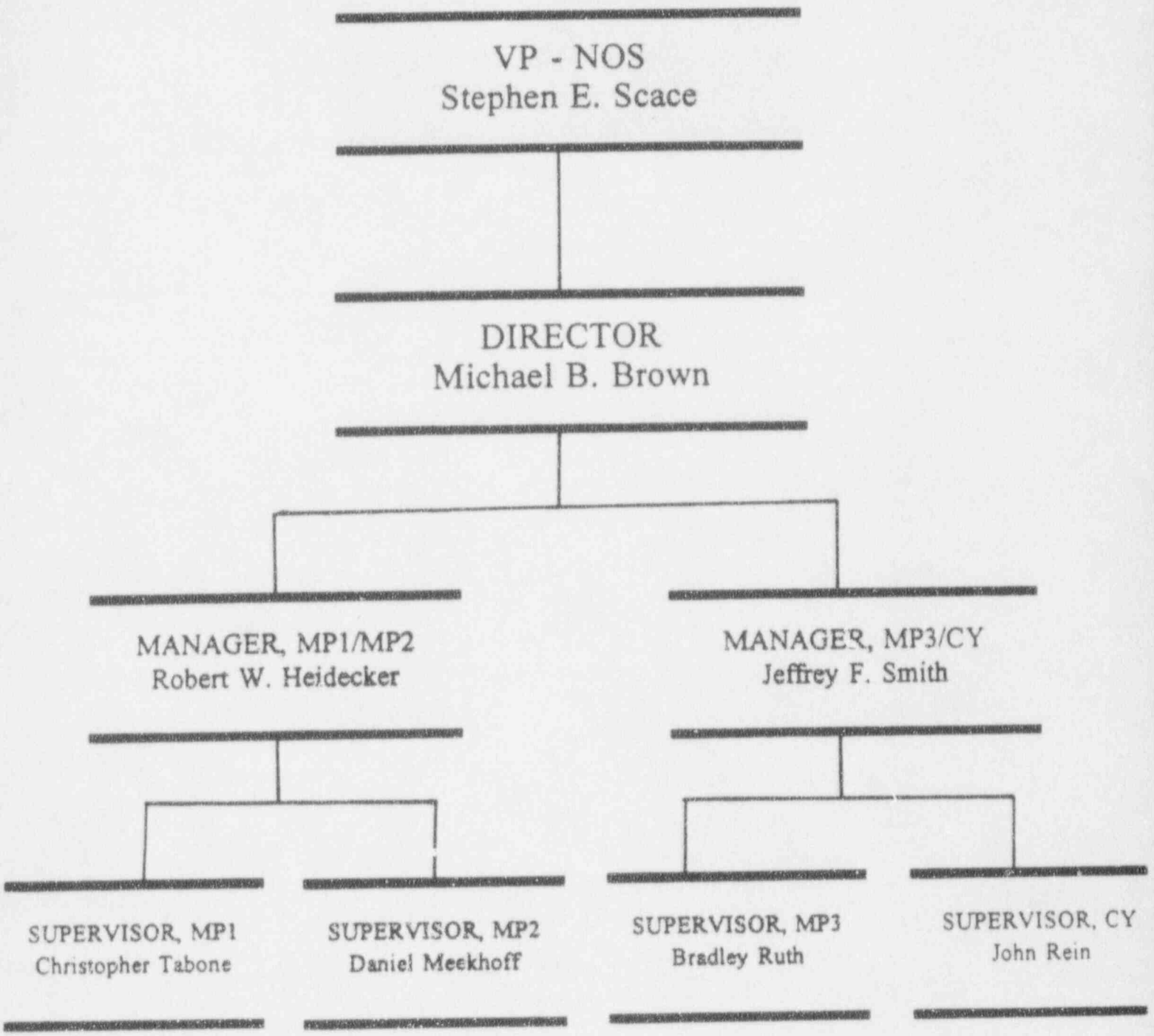
ATTENDEES

M. B. Brown	Director - Nuclear Training
J. F. Smith	Manager - Operator Training, MP3/CY
R. W. Heidecker	Manager - Operator Training, MP1/MP2
D. A. Lazarony	LORT Coordinator - MP3
M. L. Ewers	Senior Instructor - CY
S. K. Walsh	Technical Training

AGENDA

o Introduction	M. B. Brown
o Unit 1/Unit 2 Status	R. W. Heidecker
o Unit 3/CY Status	J. F. Smith
o Standardization Initiatives	R. W. Heidecker
o Programmatic Initiatives	J. F. Smith
o Unit 1/Unit 2 Enhancements	R. W. Heidecker
o Unit 3 Enhancements	D. A. Lazarony
o CY Enhancements	M. L. Ewers
o Recent Unit One LOIT Exams	R. W. Heidecker
o Management Involvement	M. B. Brown
o Status of Commitments	J. F. Smith
o Summary	M. B. Brown

REORGANIZATION OF OTB



UNIT 1 LORT INITIATIVES CARRYOVER

- Mentor Program
- Confidence-Weighted Testing
- Diagnostic Exams
- Preserving Knowledge through Exams
- Advanced Training Classroom (ATC)
- Enhanced Critiquing Model
- Operations Department Representation

UNIT 1 STATUS

STRENGTHS

- Crew Performance - Self Critiquing Process
- Clear Standards and Expectations
- Communications/Command and Control
- EOP Flow Charts
- Complexity of Scenarios
- Operations Liaison Position
- Partnership Between Operations and Training
- Mentoring - LORT/NLCT

WEAKNESSES

- Design/Implementation of OJT/OJE - NLCT, NLIT, LOIT
- Cognitive Level of LOIT Exam Bank
- Admin Training Programs - LOUT, SS, LORT
- Systematic Incorporation of SOERs into Programs
- SS/STA Training

UNIT 2 STATUS

STRENGTHS

- Technical Expertise/Experience Level of Training Staff
- Implementation of New Initiatives
- Incorporation of SOERs into Programs

WEAKNESSES

- Enforcement of Standards or Expectations for Crews/Instructors
- Crew Performance on Simulator
- Cognitive Level of Exam Banks (LOIT/LORT)
- Feedback Process
- Feedback of Admin Training Programs
- SS/STA Training

UNIT 3 STATUS

STRENGTHS

- Crew Performance on Simulator
- LOIT Program and Student Performance
- LOIT Exam Bank
- Individualized Training Program for Experienced SRO
- S.T.A.R.
- Communications within Operations Department and between OPs/NTD
- Experience Level of SOT/ASOT

WEAKNESSES

- Taskmaster Startup
- Training Materials Require Additional Upgrade
- SS/STA Training

CY STATUS

STRENGTHS

- Non-Licensed Operator Training on Simulator with LORT
- Management Involvement in Training
- Operations Liaison Position
- Exam Scenario Conversion to WOG Guidelines
- Static Simulator Exam Complexity
- Technical Expertise/Experience Level of Training Staff
- Admin Training Guide

WEAKNESSES

- LOUT Program Performance
- Initial Non-Licensed Training
- Exam Bank Conversions/Manipulation
- Training Materials Upgrade
- Crew Communciations
- Crew Performance Differences on Simulator

STANDARDIZATION INITIATIVES

- o Enhanced Nuclear Training Manual
- o Standardized Implementing Procedures
- o On-Site HRG Behavorial Specialist
- o Self Assessment/Standardization Efforts
  - 6 Man Audit Team
  - Action Plan/Goals
  - Weekly Meetings with Management
  - Punch List
- o Self Evaluation Report
  - DRAFT - April
  - Submittal - May
- o Accreditation Visit
  - July 18, 1994 - Millstone
  - July 25, 1994 - Connecticut Yankee

PROGRAMMATIC INITIATIVES

- 7-Week Cycle in LORT/NLCT
- Shift Supervisor Program Enhancements
- STA Program Revision
- NLCT Standardization
- Advanced Studies Program
- New Fire School
- DDI Training for NTD Instructional Staff

UNIT 1 OPERATIONS INITIATIVES

- Limited SRO Licenses
- Proposed Final Crew Composition
  - 3 ROs
  - 2 SROs
  - Separate STA
- Continuing Operations Liaison Position After Outage
- Upgrading Off Normal Procedures

UNIT 1 TRAINING ENHANCEMENTS

- Vermont Yankee Training - Diagnostics
- Mental Imagery for EOPs
- Severe Accident Management Training
- Redesign LOIT Program
- Upgrading NLCT, LOIT OJT Programs
- Initial STA Training Tentatively Starting Third Quarter

UNIT 2
SHIFT SUPERVISOR/SCO DEVELOPMENT

- Assessed Supervisory Skills
- Myers-Briggs Type Indicator Testing/Training
- Development Plans for each SS/SCO
- Workshop - Reasons for Change
- Team Training Exercises
- Monitoring Shift Turnover Briefs
- Shift Supervisor Continuing Training

UNIT 2 OPERATIONS ENHANCEMENT

- Better Defined Roles and Expectations
- Implementation of More Conservative Philosophy
- Performance Review Tied to Crew Performance
- Assessing EOP Implementing Methodology
- All Operators Re-trained on STAR
- More Ownership of Procedures

UNIT 2 TRAINING ENHANCEMENTS

- Curriculum Development Committee
- Initiated Unit 1 Improvements
- Operations Liaison to Be Announced
- Refresher Training program on Work Control
- Human Error Training
- Upgrading Cognitive Level of Exam Bank
- CE Owners Group Involvement
- Planned Visit to Other CE Units
- Enhanced Training on EOPs and Bases

UNIT 3 TRAINING ENHANCEMENTS

- Initiated Unit 1 Improvements
- Operations Liaison in April
- Non-Licensed Operator Qualification Changes
- Upgraded Simulator Scenarios and JPMs under PEP
- Reviewed/Revised >250 Lesson Plans/Texts Under PEP
- LORT JPM Bank Upgrade

CY TRAINING ENHANCEMENTS

- Initiated Unit 1 Improvements
- EOP Diagnostics/Basis Scenarios
- Developing Individual Training for Less Proficient SROs
- Coordinated Classroom/Frozen Simulator Training
- Standards and Expectations for Communications, Command and Control
- Video Presentation of Communications Good Practices

UNIT 1 LOIT EXAMS

6 Candidates on Simulator - January 31 - February 4

4 Students in remediation - Examination June 1994

INITIAL ASSESSMENT

- Admin training was ineffective.
- OJT was ineffective.
- Part Task Simulator time availability.
- Contractor training impacted quality.

ACTIONS

- Root Cause Analysis - January 31, 1994
- Lessons Learned incorporation into all units.

ROOT CAUSE ANALYSIS CONCLUSIONS

- LOIT Program Design and Content is Inadequate
  - Mental Model is lacking.
  - Inadequate Part Task Simulator Training.
- LOIT Program Supervision/Coordination was less than adequate.
  - LOIT Exam Bank is inadequate.
  - Contractors taught at knowledge comprehension level.
  - Student on shift time was ineffective.
  - Remediation was ineffective.
- LOIT Program Implementation was Less than Adequate.
  - Topics were not presented (Refueling, Fire Protection, Admin) but were tested.
  - ATC questions were not at higher cognitive level.

SHORT TERM

ENHANCEMENTS FOR LOIT PROGRAM

- Evaluating Program Design
  - Interleafing
  - Part Task Training
  - OJT/OJE
  - Admin Training
- Evaluating Training Strategy
  - Diagnostic Assessment
  - Mental Modeling
  - Predictive Analysis
  - Case Studies
  - Group Study
- Evaluating Testing Strategies
  - Preservative Knowledge Testing - Spacing Effec
  - Oral Exams
  - Higher Cognitive Level Exam Bank
  - College Bowl/Jeopardy

LONG TERM ENHANCEMENTS

- Systems Training incorporated as Supplemental Training in NLCT
  - Upgrade PEO Knowledge Level
  - Preservative Knowledge - Spacing Effect
  - Interleaf with OJT and Part Task Simulator
  - Increased Standards
  - Mental Model Developed as PEO
- LOIT Program Benefits
  - Shorter Program
  - More Focused LOIT Program
  - More Challenging LOIT Program

OVERALL BENEFITS

- Provides higher quality PEOs and ROs.
- More effective at lower cost.
- Better Long-term career planning for PEOs.
- Possible reduced turnover in Operations.

INCREASED MANAGEMENT INVOLVEMENT

- Vice President relocated to Training Building
- Periodic Director Meetings with NRB/SNRB
- Weekly Meetings with CY Station Management
- Standardized Reporting to Unit Directors
- Periodic Meeting with NRC Residents
- Second Manager in Operator Training
- Reduced Number of Staff Licenses on Unit 2 & 3
- SS Role in New Critiquing Process
- Operations Liaisons Will Be Named for All Units

STATUS OF COMMITMENTS

- Continuous Program - Implemented Seven Week Cycle
- Established Process to Provide Training on Immediate Needs
- Leadership Training On-going for All Instructors
- Diagnostic Testing Completed on All Units
- Advanced Training Classrooms on All Units
- Revised NTM in Effect
- Revised OTBIs in Effect
- New Management Observation Policy in Effect

STATUS OF COMMITMENTS

- o OTB Restructured
- o Project Team Phase Out
- o NRC Meeting on CWT Scores
- o Station Resolved Crew Staffing Issues
- o NTDD-26 Audits On-going
- o Root Cause Analysis on LOIT Exams - MP1

T.S. amendment proposal

THE FUTURE

- Integrated Training
- Improved Efficiencies
- Standardized Programs
- Computerized Paperless Workplace
- 2X Improvement