NUCLEAR TRAINING MANUAL

NTM - 3.04

MILLSTONE UNIT 2 LICENSED OPERATOR REQUALIFICATION TRAINING IMPLEMENTING PROCEDURE

Approved: _____
Director, Nuclear Training

_____
Director Station Superintendent

Revision: 0

Date: 5/16/86

Concurrence: _____
Manager, Quality Assurance

Submitted: _____

_____

_____
Training Program ControlCommittee

1.0 PURPOSE

The purpose of this procedure is to implement the Millstone Unit 2 Licensed Operator Requalification Training Program (LORT) in accordance with the Nuclear Training Manual (NTM) and as detailed in the Millstone Unit 2 LORT Program Description.

2.0 APPLICABILITY

2.1 This procedure applies to:

2.1.1 Those Unit 2 and Nuclear Training Department personnel involved in the planning, delivery, evaluation, and review of the Unit 2 LORT program.

2.1.2 Those Unit 2 and Nuclear Training Department personnel who hold an NRC operators license or equivalent certification and are required by reference 3.1 or 3.2 to participate in a LORT Program.

3.0 REFERENCES

3.1 10 CFR 55 Appendix A, Requalification Programs for Licensed Operators of Production and Utilization Facilities.

3.2 NUREG 0737, Clarification of TMI Action Plan Requirement.

3.3 GPG02-10-80, INPO Guidelines for Requalification Training and Evaluation.

3.4 ANSI 3.1-1981, Selection Qualification and Training of Personnel for Nuclear Power Plants.

3.5 SFS-85-229 (NO-85-GN-842) C. F. Sears memo of 10/8/85, NU policy for Licensed Operator Requalification Training.

3.6 NU Reg 1021, Operator Licensing Examiner Standard

3.7 Nuclear Training Manual

4.0 DEFINITIONS

4.1 Licensee

An individual who holds an NRC operators license or equivalent certification and is required by reference 3.1 or 3.2 to participate in the Unit 2 LORT program for the purpose of maintaining and demonstrating his competence, particularly to respond to abnormal and emergency conditions.

4.2 Part Task Simulator Training Session

A training session conducted at the Unit 2 Simulator used to support classroom instruction in a specific task area.

4.3 Integrated Simulator Training Session

A training session conducted at the Unit 2 Simulator which involves the coordination of multiple plant systems and procedures.

4.4 System Expert

An individual who possesses technical expertise at or above the level to be attained by the trainees in a given topical area. The expertise may have been gained through a combination of experience, training or education.

4.5 Cycle

A segment of time within a requalification year during which all licensees would be able to attend a week of scheduled training. A cycle should be consistent with the period of time required for operations department shift personnel to complete a full shift rotation. This will normally be six (6) calendar weeks.

4.6 Requalification Year

The period of time from the completion of one annual examination to the completion of the subsequent annual examination. This period of time will normally be 12 months and conform to the calendar year.

5.0 RESPONSIBILITIES

5.1 Supervisor, Operator Training, Millstone Unit 2

5.1.1 Responsible for the overall conduct of the LORT program in accordance with the Nuclear Training Manual and the Training Program Description.

5.1.2 Responsible for verifying that the licensees maintain satisfactory participation in the LORT program.

5.1.3 Responsible for scheduling Category I and V examinations administered to meet the requirements of reference 3.1.

5.1.4 Responsible for approving examinations.

5.1.5 Responsible for approving changes to the training schedule.

5.1.6 Responsible for performing Supervisors Assessment of Training.

5.1.7 Responsible for approving lesson plans for use.

5.1.8 Responsible for ensuring Nuclear Training Department licensees maintain participation in the LORT Program.

5.1.9 Responsible for selecting licensees who hold equivalent certification for participation in the LORT program.

5.2 Assistant Supervisor, Operator Training, Millstone Unit 2

5.2.1 Responsible for preparing cycle and weekly schedules.

5.2.2 Responsible for approving examinations.

5.2.3 Responsible for recommending and assigning personnel to provide instruction.

5.2.4 Responsible for performing and assigning Nuclear Training Department personnel to perform assessments of training.

5.2.5 Responsible for approving lesson plans.

5.3 Assistant Supervisor, Simulator Training, Millstone Unit 2

5.3.1 Responsible for approving examinations.

5.3.2 Responsible for assigning Nuclear Training Department personnel to provide simulator instruction.

5.3.3 Responsible for performing and assigning Nuclear Training Department personnel to perform assessments of training.

5.3.4 Responsible for approving lesson plans.

5.4 Nuclear Training Department Personnel

Responsible for conducting training activities, as assigned, in accordance with the Nuclear Training Manual and Training Program Description.

5.5 Millstone Unit 2 Superintendent

5.5.1 Responsible for ensuring Unit 2 licensees maintain participation in the LORT program.

5.5.2 Responsible for providing evaluators from the Unit 2 supervisory/management personnel for Category V examinations administered to meet the requirements of reference 3.1.

5.6 Millstone Unit 2 Operations Supervisor

5.6.1 Responsible for performing Supervisor's Assessment of Training.

5.7 Millstone Unit 2 Licensees

5.7.1 Responsible for ensuring they maintain participation in the LORT program.

6.0 INSTRUCTIONS

6.1 Program Duties

6.1.1 The Supervisor, Operator Training, Millstone Unit 2 is responsible for the Licensed Operator Requalification Program and shall:

6.1.1.1 Supervise the Millstone Unit 2 LORT program to ensure compliance with the Nuclear Training Manual and the Training Program Description.

6.1.1.2 Act as the cognizant supervisor for all Nuclear Training Manual requirements not specifically assigned to other supervisors.

6.1.1.3 Serve as the point of contact between the Nuclear Training Department and Millstone Unit 2 Superintendent and his department heads.

6.1.2 The Assistant Supervisors, Operator and Simulator Training, Millstone Unit 2 shall:

6.1.2.1 Schedule, coordinate and evaluate the effectiveness of training activities associated with the conduct of this program.

6.1.2.2 Assign Nuclear Training Department personnel to carry out the training activities of this program.

6.1.3 Nuclear Training Department personnel shall conduct training activities, as assigned, during the course of this program.

6.1.4 Millstone Unit 2 Supervisory/Management personnel shall:

6.1.4.1 Evaluate the effectiveness of this program.

6.1.4.2 Provide time for licensees under their cognizance to maintain participation in the LORT program.

6.1.4.3 Participate as evaluators in Category V examinations administered to meet the requirements of reference 3.1.

6.2 Scheduling

6.2.1 The Millstone Unit 2 LORT program is a closed mandatory enrollment program as described in the Nuclear Training Manual.

6.2.2 The Millstone Unit 2 LORT program is an ongoing program conducted for a continuous period not to exceed two calendar years. Upon conclusion it shall be promptly followed by successive programs pursuant to a continuous schedule.

6.2.3 The Assistant Supervisor, Operator Training shall prepare and submit to the Supervisor, Operator Training a cycle schedule for the subsequent requalification year prior to the commencement of training for that requalification year.

6.2.4 The cycle schedule is a planning document and should identify:

6.2.4.1 The start and stop of each cycle of training to be delivered.

6.2.4.2 The proposed content of each cycle.

6.2.5 The Assistant Supervisor, Operator Training shall prepare, prior to the start of each cycle, weekly schedules for the cycle. The weekly schedules should include all training sessions to be conducted and the date, time, location and duration of each session.

6.2.6 The Assistant Supervisor, Operator Training shall distribute the weekly schedule to the designated instructors, Unit 2 supervisory personnel who are licensees or who supervise licensees, the Assistant Supervisor, Simulator Training, and the Supervisor, Operator Training.

6.3 Instructor Requirements

The Assistant Supervisor, Operator Training and the Assistant Supervisor, Simulator Training, as applicable, shall assign instructors for this program who meet the instructional skills and knowledge requirements detailed in 6.3.1 through 6.3.3.

6.3.1 Classroom Training Sessions

6.3.1.1 Designated as a System Expert in the topic of instruction.

6.3.1.1.1 The Assistant Supervisor, Operator Training shall recommend personnel to be designated as System Experts in the classroom topics listed in the program description.

6.3.1.1.2 The Supervisor, Operator Training shall approve the recommendations for System Expert designation.

6.3.1.2 Certified as a Level 1 instructor in accordance with the Nuclear Training Manual.

6.3.2 Part Task Simulator Training Sessions

6.3.2.1 Meet the requirements of 6.3.1.

6.3.2.2 Have satisfactorily completed a simulator instructional skills training program.

6.3.3 Integrated Simulator Training

6.3.3.1 Currently licensed or certified by the NRC on Millstone Unit 2 at the SRO level or previously licensed or certified by the NRC at the SRO level and are enrolled in an NRC approved Licensed Operator Requalification Program.

6.3.3.2 Certified as a Level 2 instructor in accordance with the Nuclear Training Manual.

6.3.3.3 Have satisfactorily completed a simulator instructional skills training program.

6.4 Examinations and Lesson Plans

6.4.1 The supervisors indicated shall approve examinations as specified below:

* Category I exams - Supervisor, Operator Training

* Category II exams - Assistant Supervisor, Operator Training

* Category III exams - Assistant Supervisor, Operator Training or Assistant Supervisor, Simulator Training

* Category IV exams - Assistant Supervisor, Operator Training or Assistant Supervisor, Simulator Training

* Category V exams - Assistant Supervisor, Simulator Training

* Category V - annual exams - Supervisor, Operator Training

6.4.2 Acceptable standards of performance (pass criteria) shall be established for examinations as follows:

* Category I examinations: 70% per section, 80% overall

* Category II Progress Review Examination: 70%

* Category III examinations: none established

* Cateory IV and V examinations: Satisfactory

6.4.3 The supervisors indicated shall approve lesson plans as specified below:

6.4.3.1 Classroom Lesson Plans - Assistant Supervisor, Operator Training

6.4.3.2 Briefing Room Lesson Plans - Assistant Supervisor, Simulator Training

6.4.3.3 Simulator Lesson Plans - Assistant Supervisor, Simulator Training

6.4.3.4 "Released for Use", All Lesson Plans - Supervisor, Operator Training

6.5 Training Program Effectiveness

The training assessment forms specified in the Nuclear Training Manual shall be used at the frequency specified:

6.5.1 The Assistant Supervisor, Operator Training shall assign Nuclear Training Department personnel to perform Examination Assessments at the completion of each written examination.

6.5.2 The Assistant Supervisor, Operator Training shall assign Nuclear Training Department personnel to perform Student and Instructor Assessments at the completion of each written examination.

6.5.3 The Assistant Supervisor, Simulator Training shall assign Nuclear Training Department personnel to perform Student and Instructor Assessments at the completion of each week of a cycle in which integrated simulator training is conducted.

6.5.4 The Assistant Supervisor, Operator Training shall perform two Supervisor's Assessments per requalification year.

6.5.5 The Assistant Supervisor, Simulator Training shall perform one Supervisor's Assessment per cycle of scheduled integrated simulator training and one Supervisor's Assessment of part task simulator training per cycle of instruction where part task training is performed.

6.5.6 The Supervisor, Operator Training shall perform Supervisor's Assessments of: one part task simulator session (if applicable): two integrated simulator training sessions; and two classroom training sessions during each requalification year of the LORT program.

6.5.7 The Operations Supervisor or his designee shall perform Supervisor's Assessments: one classroom training session: one part task simulator session (if applicable): and two integrated simulator training sessions during each requalification year of the LORT program.

6.5.8 The Assistant Supervisor, Operator Training shall assign Nuclear Training Department personnel to complete the Training Effectiveness report at the completion of each requalification year.

6.6 Retraining Requirements

6.6.1 The LORT program is an ongoing program conducted for a continuous period not to exceed two calendar years. As such, licensees will be enrolled in successive programs immediately upon completion of each program, pursuant to maintaining continuous participation in the LORT program.

6.6.2 Operator accelerated retraining programs for licensees may be required to upgrade or refresh knowledges and skills related to licensed duties. The determination of a need for such retraining, and the method and content of such retraining will be in accordance with reference 3.7.

6.7 Records

6.7.1 The following records will be maintained in addition to the requirements of reference 3.7.

6.7.1.1 Required Reactivity Manipulation Records.

6.7.1.2 License Applications (NRC Form 396 and Form 398).

7.0 FIGURES

None

8.0 ATTACHMENTS

8.1 Millstone Unit 2 Licensed Operator Requalification Training Program Description

TRAINING PROGRAM DESCRIPTION COVER SHEET

Training Program: Licensed Operator Requalification Program

Training Program #: 3.04

Prepared by:

R. W. Flanagan

D. H. Wright
Nuclear Training Personnel

Student Prerequisites Verified by:

Subject Matter Expert

Reviewed by:

M. J. Wilson
Nuclear Training Supervisor

1.0 Training Program Summary

The purpose of the 1985/1986 LORT Program is to enhance nuclear plant safety and reliability by maintaining a high level of skill and knowledge in all licensees.

The target group for training in this program is comprised of those individuals who hold an NRC operator license or equivalent certification and are required by either 10 CFR55 or NUREG 0737 to participate in the Unit 2 LORT Program for the purpose of maintaining and demonstrating competency.

The duration of this program is two (2) years, columinating with the 1986 Annual Examination. Upon conclusion this program shall be promptly followed by successive programs pursuant to a continuous schedule.

2.0 Training Program Goals

The overall goal of the LORT Program is to ensure that licensees maintain competence, particularly to respond to abnormal and emergency situations. Additionally it ensures that licensees remain cognizant of changes to the facility, procedures, govermental regulations, quality assurance requirements, as well as industry operating experience, LER's and personnel errors.

The program is designed in four interrelated phases to ensure that these goals are met. Each phase has its own distinct goals:

2.1 Classroom Lecture Series

2.1.1 Maintain a sound level of knowledge of plant systems and their interrelationships.

2.1.2 Maintain academic knowledges required to support plant operation.

2.1.3 Maintain academic knowledges required to support analysis, diagnosis and accident assessment.

2.1.4 Maintain familiarity with the contents of the unit technical specifications.

2.1.5 Maintain familiarity with administrative procedures applicable to the supervisory responsibilities of the SS/SCO position.

2.1.6 Provide detailed knowledge on major changes to plant equipment and systems.

2.1.7 Provide detailed knowledge on major changes to the procedures and facility licenses which effect the operation of the unit.

2.1.8 Provide detailed knowledge on significant operating events, License Event Reports, and personnel errors that have occured at this unit and similar units.

2.1.9 Provide retraining to correct identified knowledge weaknesses and deficiencies.

2.1.10 Maintain a level of knowledge consistant with that required to pass an NRC written examination.

2.1.11 Meet regulatory requirements.

2.2 Simulator/Skills Training

2.2.1 Meet regulatory requirements with regard to required reactivity control manipulations.

2.2.2 Maintain competence in the use of plant procedures and related control room reference material.

2.2.3 Reinforce understanding of equipment and systems, and the applicable operating procedures.

2.2.4 Reinforce academic knowledge through practical application.

2.2.5 Reinforce an understanding of cause and effect relationships between plant systems.

2.2.6 Reinforce confidence through actual control manipulations.

2.2.7 Maintain competence in the use of abnormal and emergency procedures on a regularly scheduled basis.

2.2.8 Reinforce diagnostic and incident assessment skills.

2.2.9 Reinforce the concept of Safety Function hierarchy and alternate success paths in conditions for which no event originated procedure exist.

2.2.10 Meet training items identified through industry experiences and by MP-2 Operations Department.

2.2.11 Maintain shift team concept of plant operations.

2.2.12 Maintain a responsible attitude toward plant operations.

2.3 Operational Review

2.3.1 Meet regulatory requirements.

2.3.2 Provide for a regularly scheduled review of all abnormal and emergency procedures.

2.3.3 Provide detailed knowledge on all changes to facility design, equipment, systems, procedures and technical specifications.

2.3.4 Provide detailed knowledge on selected industry operating experiences, LER's, and personnel errors.

2.4 Evaluation

2.4.1 Determine areas in which retraining is needed.

2.4.2 Provide a basis for evaluating the licensees knowledge of abnormal and emergency procedures.

2.4.3 Provide for the systematic observation and evaluation of the performance and competency of licensees by supervisors and training staff.

2.4.4 Verify that the licensee can operate the controls or supervise operation of the controls in a safe and competent manner.

3.0 Student Prerequisites

3.1 Participants for this program shall be those individuals who meet one of the following criteria:

3.1.1 Holds an active NRC Reactor Operator (RO) or Senior Reactor Operator (SRO) license on Millstone Unit 2.

3.1.2 Delivers operator training in the Millstone Unit 2 Licensed Operator Training programs in areas determined to require that unit specific skills and knowledges be maintained at the SRO level. This determination shall be made by the Supervisor, Operator Training.

4.0 Topical Outline

* Topics shall be scheduled on an annual basis

** Topics shall be scheduled on a ~~bi annual~~ biennial basis mjw 7/30/86

I. Classroom Lecture Series

A. Theory and Principles of Operation

1. Basic Nuclear *
2. Reactor Operating Theory & Reactor Kinetics *
3. Heat Transfer *
4. Thermodynamics *
5. Fluid Flow *
6. Basic Electrical Theory
7. Basic Instrumentation
8. Chemistry

B. Plant Operating Characteristics

1. Core Operating Characteristics *
2. Transient Response
3. Accident Analysis & Response
4. Core Power Distribution

C. Instrumentation & Control Systems

1. Pressurizer Pressure and Level Control System **
2. Feedwater Control System **
3. Main Turbine Control System **
4. Reactor Regulation System **
5. Control Element Drive System **
6. Nuclear Instrumentation **
7. Radiation Monitoring Instrumentation **
8. Accident Monitoring System **
9. Modifications to I&C System **

D. Plant Protection Systems

1. Reactor Protective System **
2. Modifications to RPS

E. Engineered Safety Systems

1. Engineered Safeguards Actuation System **
2. Emergency Core Cooling Systems **
3. Hydrogen Control Systems **
4. Containment Systems **
5. Vital Auxiliary Support Systems **
6. Auxiliary Feedwater & Control System **
7. Containment Cooling System **
8. Modifications to ECCS

F. Operating Procedures

1. Normal
2. Abnormal
3. Emergency
4. Administrative
5. Procedure Changes
6. Emergency Plan

G. Radiation Control & Safety

1. Exposure Control
2. Radioactive Waste Control
3. Containment Entry
4. Contamination Measurement & Control

H. Technical Specifications

1. Safety **
2. NPDES
3. Changes to H.1 & H.2

I. Regulatory Guidance

1. 10 CFR
2. NUREG's
3. Notices to License Holders
4. Changes to I.1, I.2, I.3

J. Plant Systems

1. Fuel & Core Design
2. Primary Systems

3. Secondary Systems

4. Auxiliary Systems

5. Electrical Systems

6. Main Turbine & Support

7. Plant Modifications

K. Mitigation of Core Damage **

1. Incore Instrumentation

2. Excore Instrumentation

3. Vital Instrumentation

4. Primary Chemistry

5. Radiation Monitoring

6. Gas Generation

II. Simulator/Skills Training

A. Control Manipulations

1. Plant or reactor startups to include a range that reactivity feedback from nuclear heat addition is noticeable and heatup rate is established **

2. Plant Shutdown *

3. Manual control of steam generators and/or feedwater during startup and shutdown **

4. Boration and/or dilution during power operation **

5. Any significant (>10%) power changes in manual rod control **

6. Any reactor power change of 10% or greater where load change is performed with load limit control **

7. Loss of coolant including: *

   7.1 Significant steam generator leaks

   7.2 Inside and outside primary containment

   7.3 Large and small, including leak-rate determination

   7.4 Saturated reactor coolant response

8. Loss of instrument air **

9. Loss of electrical power (and/or degraded power sources) **

10. Loss of core coolant flow natural circulation *

11. Loss of condenser vacuum *

12. Loss of service water **

13. Loss of shutdown cooling **

14. Loss of RBCCW System or ** cooling to an individual component

15. Loss of main feedwater or main feedwater system failure **

16. Loss of all feedwater (main and auxiliary) *

17. Loss of reactor system channel **

18. Mispositioned control rod or rods (or rod drops) **

19. Inability to drive control rods **

20. Conditions requiring use of emergency boration **

21. Fuel cladding failure or high activity in reactor coolant **

22. Turbine or generator trip **

23. Malfunction of automatic control system(s) which effect reactivity **

24. Malfunction of reactor coolant pressure/volume control system **

25. Reactor trip **

26. Main steam line break (inside or outside containment) **

27. Nuclear instrumentation failure(s) **

B. Plant & System Operations

1. Surveillances

2. Normal System Operating Procedures (2300)

3. General Plant Operating Procedures (2200)

4. Administration

C. Abnormal & Emergency Operation

1. Abnormal Operation

a. Dropped CEA

b. Loss of Instrument Air

c. Loss or RBCCW

d. Loss of Service Water

e. Steam Generator Tube Leak

f. RCS Leak

g. Loss of Shutdown Cooling

h. Loss of Various Instrumentation

i. Loss of Condenser Vacuum

j. Natural Circulation Cooldown

k. Emergency Boration

2. Emergency Operation

a. Steam Line Break

b. LOCA

c. Reactor/Turbine Trips

d. Loss of Normal Power

e. Steam Generator Tube Rupture

f. Loss of Feedwater

D. Part Task Instruction

1. Presented in conjunction with classroom lecture topics as appropriate

III. Operational Reviews

A. Document Acknowledgement System

B. Abnormal and Emergency Procedure Review **

C. Significant Operating Event Reviews

IV. Evaluation

A. Annual Examinations *

1. Annual Written Examination

2. Annual Oral Examination

3. Annual Operational Evaluation

B. Progress Review Examinations

C. Operational Evaluations

5.0 Training Schedule

Day	Lesson Plan/ Exam Title	Lesson Plan Code/ Exam Number	Trng Envrmt/ Exam Category	Time Allotted (hrs)
Week Number 1-85				
1	Annual Requalification Exam Review	1984 Annual	Classroom	4
2	Plant Shutdown		Classroom	4
3	Fuel Handling Systems & Procedures	2304	Classroom	4
4	Significant Operating Event Review	OER	Classroom	2
	Emergency Operating Procedure Review (EOP 2571 & 2566)	EOPR	Classroom	2
Week Number 2-85				
1	Chlorine Hazards	2328	Classroom	1
2	Technical Specification Review	TSR	Classroom	4
3	ESAS Review	2384	Classroom	1
	C01X		Classroom	1
	EHC Review	2323B	Classroom	1
4	Condenser Air Removal	2329	Classroom	1
	Instrument Air	2332A/B	Classroom	1
	RBCCW		Classroom	1
	Service Water	2326A	Classroom	1
5	Progress Review Exam	PR-1-85	II	2

Lesson Plan/ Day	Lesson Plan/ Exam Title	Lesson Plan Code/ Exam Number	Trng Envrmt/ Exam Category	Time Allotted (hrs)
Week Number 3a-85				
1	Reactor Theory Review	2116	Classroom	3
2	Heat Transfer, Fluid Flow, Thermo Review	2121	Classroom	4
	Emergency Operating Procedure Review (EOP 2556 & 2558)	2556 2558	Classroom	2
3	Plant Modifications		Classroom	3
Week Number 3b-85				
1	Reactor Theory Review	2116	Classroom	4
	Plant Modifications		Classroom	2
2	Heat Transfer, Fluid Flow, Thermodynamics, Review	2121	Classroom	3
3	Chemistry	2126	Classroom	3
Week Number 4-85				
1	Emergency Procedure (EOP 2525, 2526, 2540)	2525 2526 2540	Classroom	3
2	Emergency Procedure Review (EOP 2540A/B/C D/E)	EOPR	Classroom	5
3	Progress Review Exam	PR 2-85	II	2

Lesson Plan/ Day	Exam Title	Lesson Plan Code/ Exam Number	Trng Envrmt/ Exam Category	Time Allotted (hrs)
Week Number 5-85				
1	Dropped CEA and Manual Control of S.G. Level	RQ2-85-1-1(S)	Simulator	3
	Loss of All Feedwater	RQ2-85-1-4(S)	Simulator	2 1/2
2	Loss of Shutdown Cooling	RQ2-85-1-5(S)	Simulator	1 1/2
	S.G. Tube Leak	RQ2-85-1-2(S)	Simulator	4
3	Reactor/Plant Startup with Rod Motion Problems	RQ2-85-1-7(S)	Simulator	4
	Loss of Instrument Air	RQ2-85-1-6(S)	Simulator	1 1/2
4	Steam Line Break	RQ2-85-1-9(S)	Simulator	3 1/2
	Loss of Coolant Outside Containment and Fuel Clad Failure	RQ2-85-1-3(S)	Simulator	1 1/2
5	Loss of Reactor Coolant Saturated Conditions	RQ2-85-1-8(S)	Simulator	4
	Loss of Shutdown Cooling	RQ2-85-1-5(S)	Simulator	1 1/2

Day	Lesson Plan/ Exam Title	Lesson Plan Code/ Exam Number	Trng Envrmt/ Exam Category	Time Allotted (hrs)
4	Annual Operation Evaluation	A-85-0	V	2
	RPS & NI Part Task	PT-24	Simulator	1
	ESAS Part Task	PT-26	Simulator	1
5	Annual Written Exam	A-85-W	I	6
Week Number 1-86				
1	Technical Specification Changes	TSR	Classroom	3
	Annual Requalification Exam Review	1985 Annual	Classroom	4
2	Main Steam Review	2316A	Classroom	2
3	Turbine & Support System	2323A/B/C/D	Classroom	2
	Emergency Operating Procedure Review (EOP 2536, 2537, 2573)	EOPR	Classroom	2
4	Condensate System	2319A	Classroom	2
Week Number 2-86				
1	Key Parameter & Diagnostics	RQ2-85-1-34(S)	Simulator	2
	Steam Leak Inside Containment	RQ2-86-2-3(S)	Simulator	2
	C-21		Classrom	1
2	Shutdown from outside Control Room	RQ2-86-2-1(S)	Simulator	2
	Loss of DC Bus	RQ2-86-2-6(S)	Simulator	2
	ECCS Review		Classroom	3

Day	Lesson Plan/ Exam Title	Lesson Plan Code/ Exam Number	Trng Envrmt/ Exam Category	Time Allotted (hrs)
Week Number 2-86 (Cont.)				
3	Condenser Tube Leak	RQ2-86-2-2(S)	Simulator	2
	Loss of Vital 4160	RQ2-86-2-4(S)	Simulator	2
	ECCS Review		Classroom	2
4	Steam Generator Tube Leak	RQ2-86-2-5(S)	Simulator	4
	Reactor Theory Review	2116	Classroom	2
5	EOP Change Review		Classroom	1
Week Number 3-86				
1	Reactor Theory Review	2116	Classrom	5
	Significant Operating Event Review	OER	Classroom	2
2	Heat Transfer, Fluid Flow, Thermodynamics Review	2121	Classroom	5
	Plant Modifications		Classroom	2
3	Emergency Operating Procedure Review (EOP 2532, 2534, 2568, 2569)	EOP 2534 EOP 2568 EOP 2569	Classroom	4
	Progress Review Exam #1	PRI-1-86	II	3
4	Heated Junction Thermocouple Review	2387G	Classroom	2

Day	Lesson Plan/ Exam Title	Lesson Plan Code/ Exam Number	Trng Envrmt/ Exam Category	Time Allotted (hrs)
Week Number 4-86				
1	*		Simulator	4
2	*		Simulator	8
3	*		Simulator	8
*	Exact content of sessions to be determined			
Week Number 5-86				
1	Reactor Regulating System Review		Classroom	2
	CEDS Review	2302A	Classroom	2
2	Reactor Theory Review	2116	Classroom	2
	Thermodynamics Review	2121	Classroom	2
3	Emergency Operating Procedure (EOP 2528, 2563)	2528 2563	Classroom	2
	Significant Operating Event Review	OER	Classroom	2
4	EHC System Review	2323B	Classroom	2
Week Number 6-86				
1	Plant Shutdown *		Simulator	4
	Plant Modifications		Classroom	4
2	Plant Shutdown *		Simulator	4
	Plant Modifications		Classroom	4
3	Reactor Shutdown *		Simulator	4
	Plant Modifications		Classroom	4

Day	Lesson Plan/ Exam Title	Lesson Plan Code/ Exam Number	Trng Envrmt/ Exam Category	Time Allotted (hrs)
4	Plant Cooldown *		Simulator	4
	Plant Modifications		Classroom	4
5	Shutdown Cooling *		Simulator	4
	Plant Modifications		Classroom	4
*	exact content of simulator sessions to be determined			
Week Number 7-86				
1	Plant Heatup		Simulator	7
2	Reactor Startup		Simulator	4
	Plant Modifications (SPDS)		Classroom	4
3	Plant Start Up		Simulator	4
	EOP Changes		Classroom	4
4	Annual Operation Evaluation		V	4
5	Annual Written Exam		I	6

6.0 Terminal Objectives

This program addresses, as a minimum, the following Trainee Performance Guides (TPG):

TPG 2202/5.0 (+)
TPG 2203/5.0 (+)
TPG 2204/5.0 (+)
TPG 2205/5.0 (+)
TPG 2302A/7.7, 7.9, 7.12, 7.13, 7.16
TPG 2304A/7.7, 8.0
TPG 2310/8.0
TPG 2373/8.0
TPG 2319A/8.0
TPG 2321/8.0
TPG 2323A/7.2, 7.3, 7.4
TPG 2325A/7.4, 7.5, 8.0
TPG 2343/7.1, 7.2, 7.4, 8.0
TPG 2344A/7.15
TPG 2345C/8.0
TPG 2525/A11 (+)
TPG 2528/A11
TPG 2532/A11
TPG 2534/A11
TPG 2536/A11
TPG 2537/A11
TPG 2538/A11 (+)
TPG 2619D/7.0
TPG 2620B/7.0
TPG 2620C/7.0
TPG 2651/7.1, 7.4 - 7.14, 7.18, 7.19
TPG 2300/8.0
TPG 2400/Generic
TPG 2600/Generic
TPG P 2400S
TPG P 2600S
EOP/Generic
TPG 10.01/6.0
TPG 10.05/A11
TPG 4010A
TPG 4010B/A11
TPG 4010C/A11
TPG 4112/A11
TPG 4701/A11

Notes:

1. (+) Indicates there is a TPG addendum for SRO.

2. Additional terminal objectives will be included as topics are identified and scheduled.

7.0 Notes

7.1 Schedules

7.1.1 Training shall be scheduled/conducted only during periods when Operations Department shifts are available to participate in the LORT Program.

7.1.2 The LORT Program shall consist of not less than twelve cycles, with a minimum of five (5) cycles in any one requalification year.

7.1.3 Cycles need not be contiguous.

7.1.4 Training sessions need not be conducted on a daily basis during a cycle.

7.1.5 The weekly schedule shall allot time such that all training requirements can be accomplished during the training shift week.

7.1.6 The Supervisor, Operator Training may approve changes to the order of instruction set fourth in section 5.0 of this program description if the reordering does not adversly impact on the progression of instructional objectives.

7.2 Topic Selection for Classroom and Simulator

7.2.1 Topics identified with a single asterisk shall be incorporated into each requalification year.

7.2.2 Topics identified with a double asterisk shall be incorporated into each LORT Program.

7.2.3 All topics, unless indicated otherwise, shall be considered optional. Training will be conducted on these topics as need dictates.

7.2.4 During any simulator/skills training session, if time permits, licensees may request a rerun of any evolution or may perform an evolution of their choice.

7.2.5 The depth of coverage of topics (both mandatory and optional) shall reflect the results of evaluations and feedback, thereby placing emphasis on documented general weaknesses and limiting unneeded training in areas of licensee strengths.

7.3 Operational Review

7.3.1 The Document Acknowledgement System (DAS) disseminates information on selected Licensee Event Reports; plant design changes, procedure changes, and license changes; and nuclear plant operating transients occuring at similar facilities. It is the responsibility of the Operations Supervisor and is administered under an Operations Department Instruction.

7.3.2 All EOP's and AOP's shall be reviewed on a ~~biannual~~ biennial basis by all licensees. Review may be accomplished and documented using any one of the following methods:

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7.3.2.1 Reviews conducted by the Shift Supervisor with his shift, and other licensees, of the assigned procedures. Time will normally be allotted on the cycle and weekly schedules for conduct of these reviews. Completion will be documented by an attendance sheet.

7.3.2.2 Individual Review of the assigned procedures. Completion will be documented by memo to the Assistant Supervisor, Operator Training. This memo serves as the individual attendance sheet for the review.

7.2.2.3 Completion of EOP/AOP Review Worksheets. The completed worksheet shall serve as documentation of the procedure review.

7.4 Evaluations

7.4.1 The completion of the annual examination shall be scheduled to coincide with the conclusion of each requalification year.

7.4.4.1 The time interval between the completion of any two consecutive annual examinations shall not exceed fifteen (15) months.

7.4.2 The annual examination shall be administered in three parts.

7.4.2.1 The annual written examination shall be a Category I examination.

7.4.2.2 The annual operational examination shall be a Category V examination, consisting of two scenarios.

7.4.2.2.1 One scenario will address expected plant operations, transient and abnormal operations.

7.4.2.2.2 One scenario will address emergency plant operation with degraded control capability.

7.4.2.2.3 Three evaluators shall be utilized. They should be the Supervisor of Training (or his designee), the Unit Superintendent (or his designee), and a Senior Instructor (or the equivalent).

7.4.2.3 The annual oral examination shall be a Category IV examination. It will be approximately 2 hours in duration and encompass the discussion areas identified in ES-302 of reference 3.6.

7.4.2.3.1 The examiner shall be a Senior Instructor (or equivalent) or a senior licensed member of Plant Management.

7.4.2.3.2 The annual oral examination may be administered concurrent with that portion of the Annual Operational Evaluation delineated in paragraph 7.4.2.2.1.

7.4.3 Progress Review Examinations shall be administered on a periodic basis to determine the licensee's knowledge of topics covered during the LORT Program.

7.4.3.1 During any requalification year not less than two progress review examinations shall be conducted.

7.4.3.2 The content of the progress review examination should be limited to all LORT conducted in the preceeding cycles of the requalification year since the last progress review examination.

7.4.3.3 Progress review examinations may be either Category II or V examinations.

7.4.3.4 Category V examination shall be conducted by Senior Instructors or management/supervisory personnel.

7.4.4 Licensees who prepare material are specifically exempted from participation in the examination which they prepared.

7.4.4.1 No licensee shall be allowed to prepare more than one Category of the annual examination.

7.4.4.2 No licensee shall prepare consecutive examinations of the same Category.

7.4.5 The Operations Supervisor or the Unit Superintendent may review the Annual Requalification Exam prior to its administration in order to comment on its relevancy to the duties and responsibilities of licensed personnel.

7.4.5.1 If this review is conducted, the same individual shall not review consecutive annual examinations of the same Category.

7.4.5.2 The reviewer is not exempted from participation in the examination.

7.5 The number of licensees participating in an integrated simulator training session should be limited to four if the licensees do not comprise a single shift in the normal Operations Department shift assignments.