SENIOR REACTOR OPERATOR/CONTROL ROOM SUPERVISOR TRAINING PROGRAM

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SENIOR REACTOR OPERATOR/CONTROL ROOM SUPERVISOR TRAINING PROGRAM

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SENIOR REACTOR OPERATOR/CONTROL ROOM SUPERVISOR TRAINING PROGRAM

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SENIOR REACTOR OPERATOR/CONTROL ROOM SUPERVISOR TRAINING PROGRAM

1.0 PURPOSE

1.1 The purpose of this training program description is to:

1.1.1 Define the prerequisites required for entry into the Senior Reactor Operator/Control Room Supervisor Training Program.

1.1.2 Define the prerequisites required for submitting the candidate for the NRC Senior Reactor Operators License Examination.

1.1.3 Define those areas of training required to satisfy the Senior Reactor Operator/Control Room Supervisor Training Program.

SENIOR REACTOR OPERATOR/CONTROL ROOM SUPERVISOR
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2.0 REFERENCES

2.1 Federal Regulations

2.1.1 10CFR19, "Notice Instructions, and Reports to Workers; Inspections," Section 19.12.

2.1.2 10CFR50, "Domestic Licensing of Production and Utilization Facilities," Appendices B, E, and R.

2.1.3 10CFR55, "Operator's Licenses."

2.2 USNRC Regulatory Guides

2.2.1 Regulatory Guide 1.8, "Personnel Selection and Training," Revision 1, 1975.

2.2.2 Regulatory Guide 1.114, "Guidance on Being an Operator at the Controls of a Nuclear Power Plant."

2.3 USNRC Nuclear Reactor Regulation Guides

2.3.1 NUREG 0094, "A Guide for the Licensing of Facility Operators, Including Senior Operators," July 1976.

2.3.2 NUREG 0737, "Clarification of TMI Action Plan Requirements," Items I.A.2.1, I.A.2.3, I.A.3.1 and II.B.4, October 1980.

2.4 American National Standards

2.4.1 ANSI 18.1, "Selection and Training of Nuclear Power Plant Personnel," 1971.

2.4.2 ANS 3.4/ANSI N546, "Medical Certification and Monitoring of Personnel Requiring Operator Licenses for Nuclear Power Plants", April 12, 1976.

2.4.3. ANIS/ANS - 3.5, "Nuclear Power Plant Simulators for Use in Operator Training", April 13, 1981.

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2.0 REFERENCES (CONTINUED)

2.4 INPO Guidelines

2.4.1 INPO 82-008, "Control Room Operator, Senior Control Room Operator, and Shift Supervisor Qualification," September 1982.

2.5 SONGS Station Orders

2.5.1 SO123-A-126, "Personnel Training."

2.6 Unit 1 Technical Specifications Section 6.4 "Administrative Controls Training."

2.7 Unit(s) 1 or 2/3 Operations Qualification Guide for Control Room Supervisor

2.8 Nuclear Training Division Training Program Description

2.8.1 GEN-2 "General Employee Orientation"

2.9 SONGS Units 2/3 FSAR Section 13.2 Training.

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(Continued)

3.0 DEFINITIONS

3.1 Academic Training

Academic training is successfully completed college-level work leading to a recognized degree in a discipline related to the position in question.

3.2 Equivalent

Equivalent experience or training is that as defined by "Nuclear Power Plant Experience," 3.10. Equivalency will be determined on an individual basis by the Supervisor, Operations Training, and the Unit(s) 1 or 2/3 Operator Training Administrator and may replace all or part of individual training requirements.

Documentation should be provided any time equivalent training, operational experience or education is used to replace any portion of this training program.

3.3 Exam (Oral/Written)

An evaluation tool used to prove satisfactory progress in any program or course.

3.4 Experience

Applicable work in design, construction, preoperational and startup testing activities, operation, maintenance, onsite activities, or technical services. Observation of others performing work in the above areas is not experience.

3.5 Extra Person On Shift Training

Training conducted on-shift prior to licensing for a minimum of three (3) months (12 weeks or 480 hours). During this training period the candidate participates in the operation of a Nuclear Power Plant performing duties, under instruction of licensed operators, consistent with the licensed position for which the candidate is being trained. (NUREG 0737, I.A.2)

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(Continued)

3.0 DEFINITIONS (Continued)

3.6 Licensed Reactor Operator (RO)

Any individual who possesses an operator's license pursuant to Title 10, Code of Federal Regulations, Part 55, "Operating Licenses." An individual performing the functions of a licensed reactor operator will normally be designated as either Control Operator (CO) or Assistant Control Operator (ACO).

3.7 Licensed Senior Reactor Operator (SRO)

Any individual who possesses a Senior Operators License pursuant to Title 10 Code of Federal Regulations, Part 55, "Operators Licenses." Any individual performing the functions of a licensed senior reactor operator will normally be designated as either a Control Room Supervisor (CRS) or a Shift Superintendent (SS).

3.8 Nuclear Plant Equipment Operator (NPEO)

Any individual who carries out the duties and responsibilities identified in the Southern California Edison job specification for job code, "Operator, Nuclear Plant Equipment."

3.9 Nuclear Power Plant

A nuclear power plant is any plant using a nuclear reactor to produce electric power, process steam, or space heating.

3.10 Nuclear Power Plant Experience

Experience acquired in the preoperational and startup testing activities, or operation of nuclear power plants. Experience in design, construction, and operational training (not classroom) may be considered applicable nuclear power plant experience and should be evaluated on a case-by-case basis.

Experience acquired at military, nonstationary, propulsion, or production nuclear plants may qualify as equivalent to nuclear power plant experience on a one-for-one time basis up to a maximum of three years. One year of such experience equals one year nuclear power plant experience.

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(Continued)

3.0 DEFINITIONS (Continued)

3.10 (Continued)

Training may qualify as equivalent to nuclear power plant experience if acquired in reactor simulator training programs to a maximum of three month's credit.

On-the-job training may qualify as equivalent to nuclear power plant experience on a one-for-one time basis for up to a maximum of one year's credit.

3.11 Nuclear Reactor

Any assembly of fissionable material which is designed to achieve a controlled, self-sustaining neutron chain reaction.

3.12 NRC Examination for Operator Licenses

Reactor Operator and Senior Reactor Operator licenses may be issued by the NRC to qualified and examined personnel prior to initial core loading of the subject reactor. Examinations for these licenses are termed "Cold" examinations. Examinations administered subsequent to the initial criticality of the reactor are termed "Hot" examinations. The licenses issued based on the results of either hot or cold examinations are equivalent, and are issued for two-year periods. (ANSI N18.1-1971, Sec. 2.2.8)

3.13 On-the-Job Training

On-the-job training is participation in nuclear power plant startup, operation, maintenance, or technical services under the direction of appropriately experienced personnel.

3.14 Related Technical Training

Related technical training is formal training beyond the high school level in technical subjects associated with the position in question, acquired in training schools or programs conducted by the military, industry, utilities, universities, vocational schools, or others. Such training programs should be of a scheduled and planned length and include text material, lectures, and frequent examinations.

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3.0 DEFINITIONS (Continued)

3.15 Simulator Training

The simulator used to meet the training requirements for license candidates and requalification training. A simulator shall have simular operating characteristics to the trainee's own plant.

3.16 Shall, Should, May

The word "shall" is used to denote a requirement; the word "should" to denote a recommendation; and the word "may" to denote permission, neither a requirement nor a recommendation.

SENIOR REACTOR OPERATOR/CONTROL ROOM SUPERVISOR
TRAINING PROGRAM
(Continued)

4.0 PREREQUISITES

4.1 Program Prerequisites

Prior to being accepted into the Senior Reactor Operator/Control Room Supervisor Training Program, the applicant should have met the following program prerequisites:

4.1.1 Senior Reactor Operator - Candidates Without 4-Year Degree in Engineering or Applied Science.

.1 Education

.1.1 High school diploma or equivalency certificate (ANSI N18.1-1971, Sec. 4.5.1).

.2 Training

.2.1 Minimum of 3 months on shift as an extra person in training for a position as senior reactor operator (SRO) (Letter from H. Denton, Mar. 28, 1980, Sec. A.2a), (NUREG-0737, Sec. 1.A.2.1).

.2.2 Training in (1) heat transfer, (2) fluid flow, (3) thermodynamics, (4) use of installed plant system to control or mitigate an accident in which the core is severely damaged, and (5) reactor and plant transients (NUREG-0737, Enclosure 1, Sec. A.2.c). Successful completion of the Science and Engineering Fundamentals and Plant Specific Training identified in the Reactor Operator/Assistant Control Room Operator training program can satisfy this requirement.

.3 NRC Licensing Prerequisites

.3.1 Experience Requirements

.1 Applicants for senior operator licenses shall have 4 years of responsible power plant experience. Responsible power plant experience should be that obtained as a control room operator (fossil or nuclear) or as a power plant staff engineer involved in the day-to-day

SENIOR REACTOR OPERATOR/CONTROL ROOM SUPERVISOR
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4.0 PREREQUISITES (Continued)

activities of the facility, commencing with the final year of construction. A maximum of 2 years power plant experience may be fulfilled by academic or related technical training, on a one-for-one time basis. Two years shall be nuclear power plant experience. At least 6 months of the nuclear power plant experience shall be at the plant for which he seeks a license. (Letter from H. Denton, March 28, 1980, Encl. 1, Sec. A.1)

.2 Licensed reactor operator at the same facility for at least a year. Experience for 1 year as a licensed reactor operator or senior reactor operator at another nuclear power plant may be substituted. (NUREG-0737, Sec. 1.A.2.1). Actual operating experience for 1 year in a position that is equivalent to a licensed operator or senior reactor operator at military propulsion reactors may be substituted on a one-for-one basis (NUREG-0737, Sec. 1.A.2.1). Navy ratings that are considered equivalent are (1) Propulsion Plant Watch Officer, (2) Engineering Watch Supervisor, (3) Engine Room Supervisor, (4) Reactor Operator, (5) Chief, Reactor Watch, (6) Engineering Officer of Watch, and (7) Propulsion Plant Watch Supervisor (OLB policy).

.3 Minimum of 6 months at the site for which the license is sought (NUREG-0094, Appendix F, Sec. C.2), (Letter from H. Denton, Mar. 28, 1980, Enclosure 1, Sec. A.1).

4.1.2 Senior Reactor Operator - Candidates With 4-Year Degree

.1 Education

.1.1 Degree in Engineering or Applied Science (NUREG-0737, Sec. 1.A.2.1).

.2 Training

.2.1 Minimum of 3 months on shift as an extra person in training for an SRO position (NUREG-0737, Sec. 1.A.2.1).

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4.0 PREREQUISITES (Continued)

.2.2 Training in (1) heat transfer, (2) fluid flow, (3) thermodynamics, (4) use of installed plant systems to control or mitigate an accident in which the core is severely damaged, and (5) reactor and plant transients (Letter from H. Denton, Mar. 28, 1980, Enclosure 1, Sec. A.2.c). Successful completion of the Science and Engineering Fundamentals and Plant Specific Training identified in the Reactor Operator/Assistant Control Room Operator Training Program can satisfy this requirement.

.2.3 Total of 500 hours of lectures on subjects listed in ANSI N18.1-1971, Section 5.2.1, related subjects, and prerequisite courses (NUREG-0094, Appendix F, Sec. C). Successful completion of the Science and Engineering Fundamentals and Plant Specific Training identified in the Reactor Operator/Assistant Control Room Operator Training Program can satisfy this requirement.

.2.4 Manipulation of the controls of the facility during five significant reactivity changes as described in the operator requalification program. Every effort should be made to diversify reactivity changes (NUREG-0094, Appendix F, Sec. C.4). A simulator may be used to satisfy this requirement.

.2.5 Participation in reactor and plant operation at power levels up to at least 20% power operation (NUREG-0094, Appendix F, Sec. C.3).

.2.6 Satisfactory completion of an SRO training program equivalent to a cold-license candidate training program (NUREG-0737, Sec. 1.A.2.1).

.3 NRC Licensing Prerequisites

.3.1 Experience Requirements

.1. Minimum of 2 years of responsible nuclear power plant experience which may be as a staff engineer involved in the day-to-day operation of the plant (NUREG-0737, Sec. 1.A.2.1).

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4.0 PREREQUISITES (Continued)

.2 Minimum of 6 months at the site for which the license is sought (NUREG-0094, Appendix F, Sec. C.2), (Letter from H. Denton, Mar. 28, 1980, Enclosure 1, Sec. A.1).

4.1.3 Facility Certification

Certifications completed pursuant to sections 55.10(a)(6) and 55.33a(4) and (5) of 10CFR Part 55 shall be signed by the highest level of corporate management for plant operation within the Southern California Edison Company. (NUREG 0737, Sec. A.3)

4.1.4 Medical

Comply with the guidelines for physical condition and general health for control room operators as stated in the applicable portions of ANS 3.4/ANSI N546, "American National Standard Medical Certification and Monitoring of Personnel Requiring Operator Licenses for Nuclear Power Plants." (10CFR 55.10(7)) (NUREG 0094, Appendix D)

SENIOR REACTOR OPERATOR/CONTROL ROOM SUPERVISOR
TRAINING PROGRAM
(Continued)

5.0 PROGRAM DESCRIPTION

5.1 Program Administration

5.1.1 The Senior Reactor Operator/Control Room Supervisor Training Program should follow the program appendices provided in the SRO/CRS Program Description. Specifically, items identified as required in Section 5.1 shall be completed.

5.1.2 Classroom Training

.1 Science and Engineering Fundamentals (Appendix C) and Plant Specific Training (Appendix D) of the Reactor Operator/Assistant Control Room Operator Training Program shall be completed. These courses shall consist of a combined program length of 500 hours of lectures. (ANSI N18.1-1971, Sec. 5.2.1) (NUREG-0094, App. F, Sec. C)

.1.1 Approximately four (4) hours per day should be devoted to presentation of material and/or examination. The remaining time each day should be for structured study or review of appropriate material in either laboratory, classroom, or the plant. Instructors should be available during study periods to assist the candidate as necessary.

.1.2 A waiver of candidate participation in any of the classroom training courses may be granted provided:

.1 An oral and/or written evaluation is administered by the Nuclear Training Division that demonstrates knowledge comparable to that required for satisfactory course completion.

.2 Previous equivalent training has been successfully completed as determined by the Supervisor of Operations Training and the Unit(s) 1 or 2/3 Operator Training Administrator.

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(Continued)

5.0 PROGRAM DESCRIPTION (Continued)

5.1.3 Extra Person On Shift Training (EPOS) (Appendix D.1)

.1 An EPOS training plan should be developed and approved by the Unit(s) 1 or 2/3 Operation Superintendent or his designee and the Unit Operations Training Administrator for all candidates entering EPOS training. Specifically identified portions of the SRO/CRS (On-the-Job Training) Qualification Guide should be completed as a part of the EPOS training.

.2 Before beginning actual training, the Unit(s) 1 or 2/3 Operations Superintendent or designee and the Unit(s) 1 or 2/3 Operations Training Administrator should meet with all candidates to discuss the plan(s) for completing EPOS training and the on-shift responsibilities of the candidates.

.3 During the EPOS phase of the training program, the SRO/CRS candidate should be assigned to a shift as a Control Room Supervisor in training in the SONGS Unit(s) 1 or 2/3 Operations Department and placed under the administrative control of the Operations Department.

.3.1 While in the EPOS phase of the training program, the candidate should make satisfactory progress toward completing the approved EPOS training defined from topics contained in Appendix D.1 "Extra Person On Shift Training."

.3.2 The SRO/CRS candidate shall have a minimum of three (3) months (12 weeks or 480 hours) training in the control room as an extra person on shift.

.4 As an extra person on shift, the candidate should be considered in training for the Control Room Supervisor position on SONGS Unit(s) 1 or 2/3 and should not be assigned collateral duties.

.4.1 Signatures for completed EPOS training and evaluation should be obtained from qualified Unit(s) 1 or 2/3 Operations personnel.

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5.0 PROGRAM DESCRIPTION (Continued)

.4.2 The candidate's progress and performance, in completing his/her EPOS training plan, should be reviewed monthly by the unit on-shift trainer. The on-shift trainer should forward a copy of the documentation for the SRO/CRS Qualification Program upon completion of EPOS program to the Supervisor of Operations Training.

.5 Upon completion of the three (3) months EPOS training, the SRO/CRS candidate should be assigned to the Nuclear Training Department to complete additional licensing requirements.

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(Continued)

5.0 PROGRAM DESCRIPTION (Continued)

5.1.4 Simulator Training

.1 The simulator training course for SRO/CRS candidates shall be at least two weeks in duration.

.2 Simulator team training during plant exercises should be in groups of no more than four (4) persons.

.3 SONGS Unit(s) 1 or 2/3 procedures and technical specifications should be used whenever possible and appropriate during simulator training.

.4 Simulator training for the SRO/CRS candidate should emphasize the SRO's supervisory role during transient and casualty situations.

.5 Simulator training shall include but not be limited to the exercises listed in Appendix E.2 of the RO/ACO Program Description. Simulator and facility reactivity manipulations are considered equivalent.

.1 Manipulations of the controls during five reactivity change evolutions (NUREG-0094, App. F, Sec. C.4)

.2 Participation in reactor and plant operation at power levels up to at least 20% operation (NUREG-0094, Sec. C.3)

.6 Documentation of simulator training shall be provided by the simulator facility.

5.1.5 Pre-license Review

A review course should be conducted to ensure candidate preparedness for the site certification and subsequent NRC licensing examinations.

.1 The review course may include coverage of any or all of the items from the previously conducted science/ engineering fundamentals and plant-specific training courses in both the RO and SRO training programs.

.2 The review course should include training in recent plant system and procedure modifications impacting the duties and responsibilities of the licensed operator.

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(Continued)

5.0 PROGRAM DESCRIPTION (Continued)

.3 The review course should include simulator training as described in section 5.1.4.

5.1.6 Examinations

The following criteria should be used as a basis for determining an acceptable level of performance during all phases of training for RO and SRO Candidates.

.1 Written Examinations

.1.1 Science and Engineering Fundamentals, Systems Training and Pre-License Review.

.1.1.1 Greater than 70% in each section or retested in that section.

.1.1.2 Greater than 80% overall or a complete retest.

.1.1.3 Retest scores greater than 70% in each section and greater than 80% overall.

.1.1.4 Failure of an overall examination requires administrative review by the Unit License Coordinator and implementation of a Remedial Program approved by the Unit Training Administrator.

.1.1.5 Failure of a retake examination or section of a retake examination requires administrative review by the Unit Training Administrator, and could be grounds for removal from the current licensing program.

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(Continued)

5.0 PROGRAM DESCRIPTION (Continued)

.1.2. Pre-License Audit Examination

.2.1 An NRC type written audit examination should be administered at approximately the 12th week of the Pre-License Review Program. The examination will be written and evaluated in accordance with NUREG-1021, Guidelines for Operator Written Examinations.

.2.2 A grade of less than 70% in any section or less than 80% overall shall require an administrative review by the Unit Training Administrator and could be grounds for removal from the current licensing program.

.2 Oral Examinations

.2.1 Pre-License Review

.2.1.1 A minimum of one Oral/Plant Walk-Through Examinations shall be conducted for each license candidate during the Pre-License Review.

.2 An oral examination shall be graded as "Satisfactory", "Unsatisfactory", or "Marginal" based upon the candidates responses to questions during the oral examination or plant walk-through.

.2.1.1 "Unsatisfactory" evaluations require a retest.

.2.1.2 An "Unsatisfactory" evaluation on a retest shall require an administrative review by the Unit License Coordinator and implementation of a Remedial Program approved by the Unit Training Administrator.

.2.1.3 An Oral/Plant Walk-Through Examination shall be included as a portion of the Audit Examination process.

.2.3.1.1 An evaluation of a Pre-License Audit Oral/Plant Walk-Through marked as "Unsatisfactory" shall require an administrative review by the Unit Training Administrator and could be grounds for removal from the current licensing program.

SENIOR REACTOR OPERATOR/CONTROL ROOM SUPERVISOR
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(Continued)

5.0 PROGRAM DESCRIPTION (Continued)

.6.3 Simulator Evaluations

NOTE: Simulator Evaluations shall be conducted during simulator operations training and during the Pre-License Audit Examination as applicable.

.6.3.1 Subjective periodic evaluations by the simulator instructors shallbe completed for each candidate. The evaluations should address such areas as teamwork, communication, control board technique and dexterity, procedural knowledge, and plant system knowledge.

.6.3.1.1 Periodic evaluation by the simulator instructors shall be "Satisfactory", "Unsatisfactory", or "Marginal" in each category described above and either "Satisfactory", "Unsatisfactory", or "Marginal" overall.

.1.2 Two consecutive periodic overall "Unsatisfactory" or "Marginal" evaluations shall require an administrative review by the Unit Training Administrator, and implementation of a Remedial Program approved by the Unit Training Administrator.

.6.3.2 A simulator operational demonstration should be included as a portion of the Pre-License Audit Examination Process as applicable.

.6.3.2.1 An evaluation of a Pre-License Simulator Audit marked as "Unsatisfactory" shall require an administrative review by the Unit Training Administrator and could be grounds for removal from the current licensing program.

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5.0 PROGRAM DESCRIPTION (Continued)

.6.4 Review Board

.6.4.1 Approximately 2 weeks prior to the NRC Examination, a Review Board should be convened to determine the final acceptability of candidates to participate in the NRC Examination.

.4.1.1 The Review Board shall examine the training documentation of each candidate to determine the acceptability of each candidate to participate in the NRC Examination.

.4.1.2 The Review Board should consist of the following members:

.2.1 *Unit License Coordinator.

.2.2 *Unit Operations Training Administrator.

.2.3 *Supervisor of Operations Training.

.2.4 (1)Unit Operations Superintendent.

.2.5 (1) STA Supervisor.

* Minimum Quorum Required
(1) As applicable to the individual license candidate.

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(Continued)

5.0 PROGRAM DESCRIPTION (Continued)	REQUIREMENT SOURCES				
	10 CFR	ANSI	NUREG	DENTON LTR	OTHER
5.2 Program Outline					
5.2.1 Supervisory Skills Training (Appendix A)					
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5.2.3 Plant-Specific Training Courses					
.1 Administrative Requirements (Appendix C.1)	55		0094		SECY 81-84
.2 Accident Analysis/Assessment (Appendix C.2)					
.3 Emergency Plan (Appendix C.3)	55	1.8			REG GUIDE 1.8
.4 Facility and Industry Experiences (Appendix C.4)					
5.2.4 Operations Training					
.1 Extra Person On Shift Training (Appendix D.1)		1.8	0737		REG GUIDE 1.8 SECY 81-84

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5.0 PROGRAM DESCRIPTION (Continued)	REQUIREMENT SOURCES				
	10 CFR	ANSI	NUREG	DENTON LTR	OTHER
.2 Simulator Training (Appendix D.2)		18.1	0737		SECY 81-84
5.2.4 Control Room Communications (Appendix D.3)					
5.2.5 Pre-License Review Course					
5.2.6 Site Certification Examination					
5.2.7 Job Qualification Training (Appendix E)			0737 (EPOS)		REG GUIDE SECY 81-84

APPENDICES

A. Supervisory Skills Training

B. Radiation Science

C. Plant Specific Training Courses

C.1 Administrative Requirements

C.2 Accident Analysis/Assessment

C.3 Emergency Plan

C.4 Facility and Industry Experiences

D. Operations Training Courses

D.1 Extra Person On Shift Training

D.2 Simulator Training

E. Job Qualification Training

APPENDIX A

SUPERVISORY SKILLS TRAINING

A. Training of licensed supervisors should include training in the following areas:

1. Leadership
2. Interpersonal and team communications
3. Command responsibilities and limits
4. Motivation of personnel
5. Problem analysis
6. Decision analysis
7. Administrative requirements (Appendix C.1)

B. Additional licensed supervisor training may include training in one or more of the following areas:

1. Personnel problems
2. Morale
3. Management/Union relationship
4. Stress management
5. Time management
6. Group dynamics/team building

APPENDIX B

RADIATION SCIENCE

A. Training in radiation science for the SRO/CRS candidate may include:

1. Exposure evaluation - external scources
2. Exposure evaluation - internal sources
3. Computer applications in health physics
4. Thermoluminescent dosimetry
5. Transportation of radioactive materials
6. Environmental surveillance
7. Health physics workshop

APPENDIX C.1

PLANT SPECIFIC TRAINING

ADMINISTRATIVE TOPICS

A. Training of licensed supervisors shall include training in the following areas:

1. Shift personnel duties and responsibilities

   a. Watch Engineer's Responsibilities, Duties and Authority

   b. Operating Foreman's Responsibilities, Duties and Authority

   c. Unit Control Operator's Responsibilities and Duties

* d. Common Control Operator's Responsibilities and Duties

   e. Unit Assistant Control Operator's Responsibilities and Duties

* f. Common Assistant Control Operator's Responsibilities and Duties

* g. Radwaste Assistant Operator's Responsibilities and Duties

   h. Unit Plant Equipment Operator's Responsibilities and Duties

* i. Common Plant Equipment Operator's Responsibilities and Duties

   j. Shift Technical Advisors Responsibilities, Duties and Authority

2. Emergency Plan Implementation

3. Administrative Procedures

   a. Conditions

   b. Limitations

4. Reporting/Notification requirements

5. Procedural and design change requirements

*These positions are not applicable to Unit 1.

APPENDIX C.1 (Continued)

PLANT SPECIFIC TRAINING

ADMINISTRATIVE TOPICS

B. Additional licensed supervisor training may include training in one or more of the following areas:

1. Facility license

   a. Conditions

   b. Limitations

   c. Technical Specifications and bases

2. Procedural requirements and limitations including:

   a. Equipment tagout and clearance procedures

   b. Quality assurance/control requirements

   c. Operations Shift Turnover Procedures

   d. Unit interface controls

   e. Site security and access control

   f. REP procedures

   g. Contamination/exposure control policies/procedures

   h. Rad. effluent off-site release policies/procedures

   i. Fuel handling policies/procedures/limitations

   j. Procedures for effecting emergency maintenance

   k. Procedures for obtaining management, engineering and/or technical support

   l. Communications capabilities and usage

      1. Routine

      2. Emergency

   m. Release of information to news media

3. Review of appropriate Code of Federal Regulations

4. Appropriate Corporate policies

APPENDIX C.2

PLANT SPECIFIC TRAINING

ACCIDENT ANALYSIS/ASSESSMENT

A. Training in accident analysis and assessment for the SRO/CRS candidate may be included in the SRO/CRS training program. For each accident analyzed the following criteria should be addressed.

1. Initial conditions
2. Effects of variations in initial conditions
3. Initiating events sequence
4. Expected critical parameter response
5. Indications
6. Automatic actions
7. Manual actions
8. Long term core cooling/plant stabilization
9. Alternate lineups/power supplies

APPENDIX C.3

PLANT SPECIFIC TRAINING

EMERGENCY PLAN

Emergency Plan training for the SRO/CRS candidate shall include:

1. Emergency plan overview
2. Classification of emergencies
3. Dose projections/source term/dose assessment
4. Command and control of evacuations
5. Emergency communications

APPENDIX C.4

PLANT SPECIFIC TRAINING

FACILITY/INDUSTRY EXPERIENCES

A. Operating experiences to be included shall be determined by the Units 1 or 2/3 Operator Training Administrator.

B. Training should include a review of significant facility and/or industry operating experiences of particular interest to the SRO/CRS candidate.

C. Potential sources of items for inclusion in this training include but may not be limited to:

1. Licensee Event Reports (LER's)

   a. On-site

   b. Other plants

2. Station Incident Reports (SIR's)

3. INPO/NSAC Significant Operating Experience Reports (SOER's)

APPENDIX D.1

OPERATIONS TRAINING

EXTRA PERSON ON SHIFT TRAINING (EPOS)

A. A plan for the training, to be included in the EPOS phase of the program, should be developed by the Unit(s) 1 or 2/3 Operations Superintendent, or his designee, and the Unit(s) 1 or 2/3 Operations Training Administrator.

B. EPOS training should be selected from the following list of topics:

1. Administrative Requirements

   1.0 Station Organization
   2.0 Operations Department Organization
   3.0 Duties and Responsibilities
   4.0 Station Operations
   5.0 Operations Shift Relief
   6.0 Administrative Procedures
   7.0 Post Trip/Transient Review
   8.0 Operator Scheduling
   9.0 Special Orders
   10.0 Station Logs
   11.0 Operation Charts and Data Logs Control
   12.0 Housekeeping Implementation and Compliance
   13.0 Containment Sphere Integrity and Access
   14.0 Acknowledgment of Information

2. Compliance/Technical Specifications

   15.0 Use of Procedures
   16.0 Control of System Alignments
   17.0 Compliance Control
   18.0 Operating Surveillance Implementation
   19.0 Nonconforming Material, Parts or Components
   20.0 Notification and Reporting of Significant Events
   21.0 Equipment Control Implementation
   22.0 Equipment Deficiency Status

3. Personnel Management

   23.0 Company/Union Contract Agreement
   24.0 Performance Appraisal
   25.0 Supervisory Skills

APPENDIX D.1 (Continued)

OPERATIONS TRAINING

EXTRA PERSON ON SHIFT TRAINING (EPOS)

4. Integrated Plant Operations

26.0 Integrated Plant Operations
27.0 Emergency Plan Implementing Procedures
28.0 Fire Protection and Rescue Procedures

C. Training topics, listed above, should be maintained current with those listed in the "Table of Contents," Unit(s) 1 or 2/3 Control Room Supervisor Qualification Guide.

APPENDIX D.2

OPERATIONS TRAINING

SIMULATOR TRAINING

As described in Section 5.1.4 of this program description, reactivity manipulations and plant evolutions shall be performed at the plant or on an appropriate simulator during Senior Reactor Operator training. Items indicated with an asterisk (*) may be used to meet the requirement. (10CFR55, App. A.3.a)(NUREG 0737, Attachment 4)

*1. Reactor Startups to a point where heatup rate is established.

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

*3. Manual Rod Control for power changes greater than 10%.

4. LOCA with significant S/G leakage.

5. LOCA inside primary containment.

6. LOCA outside primary containment.

7. Large LOCA with leak-rate determination.

8. Small LOCA with leak-rate determination.

9. Saturated RCS response.

10. Loss of coolant flow/natural circulation.

11. Loss of all feedwater (normal and emergency).

*12. Plant Shutdown.

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

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

*15. Reactor trip.

16. Turbine or generator trip.

17. Main Steam line break (inside or outside containment).

18. Loss of normal feedwater.

APPENDIX D.2 (Continued)

OPERATIONS TRAINING

SIMULATOR TRAINING

19. Loss of shutdown cooling (RHR).
20. Nuclear Instrumentation System Failure.
21. Loss of Reactor Protection System Channel.
*22. Misaligned Control Rod(s) or dropped rod(s).
23. Inability to drive control rods or stuck rod.
24. Automatic Control Malfunctions which effect core reactivity.
*25. Conditions requiring emergency boration.
26. RCS or CVCS pressure control system failure.
27. Loss of Offsite Power.
28. Loss of Vital bus.
29. Loss of condenser vacuum.
30. Loss of Saltwater Cooling.
31. Loss of Component Cooling Water (system or component).
32. Loss of Instrument Air.
33. Fuel Cladding failure or high activity in reactor coolant.

APPENDIX E

JOB QUALIFICATION TRAINING

Requirements as identified in the Unit(s) 1 or 2/3 SRO/CRS Qualification Guide.