

CONTROL OPERATOR'S RESPONSIBILITIES AND DUTIES

TABLE OF CONTENTS

<u>SECTION</u>	<u>PAGE</u>
1.0 OBJECTIVE	2
2.0 REFERENCES	2
3.0 PREREQUISITES	2
4.0 PRECAUTIONS	3
5.0 CHECKLIST(S)	3
6.0 PROCEDURE	3
6.1 Responsibilities	3
6.2 Duties	5
7.0 RECORD(S)	8
<u>ATTACHMENTS</u>	
1 Units 2 and 3 Unit Control Operator Equipment Responsibilities	9
2 Common Control Operator Equipment Responsibilities	11

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CONTROL OPERATOR'S RESPONSIBILITIES AND DUTIES

1.0 OBJECTIVE

- 1.1 To delineate the responsibilities and duties of the Control Operators (CO's).

2.0 REFERENCES

2.1 Licensing Commitments

- 2.1.1 American National Standard for Selection and Training of Nuclear Power Plant Personnel N18.1 - 1971
- 2.1.2 American National Standard Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants N18.7/ANS3.2 - 1976
- 2.1.3 10 CFR 50, Appendix R, Section III.H
- 2.1.4 10 CFR 55, Operator Licenses

2.2 Procedures

- 2.2.1 S0123-VI-0.9 "Documents - Author's Guide to the Preparation of Site Orders, Procedures and Instructions"

2.3 Operating Instructions

- 2.3.1 S0123-0-1 "Shift Superintendents Authority, Responsibilities and Duties"
- 2.3.2 S0123-0-10, "Operations Shift Relief"
- 2.3.3 S0123-0-11, "Station Logs"
- 2.3.4 S0123-0-21, "Equipment Status Control"

3.0 PREREQUISITES

- 3.1 Prior to use of an user-controlled (pink) copy of this Site Document to perform work, verify that it is current by checking a controlled copy and any TCNs or by use of the method described in S0123-VI-0.9.

3.2 Qualifications

- 3.2.1 The CO shall hold and maintain an active Reactor Operator's License or Senior Reactor Operator's License (Reference 2.1.4).
- 3.2.2 Meet or exceed the requirements stated in References 2.1.1 and 2.1.2.

3.0 PREREQUISITES (Continued)

- 3.2.3 Prior to assuming licensed duties the CO shall meet any applicable NRC license restrictions.

4.0 PRECAUTIONS

- 4.1 This procedure is not a complete outline of the CO's duties, but together with applicable procedures should be used as a guide.
- 4.2 The manipulation of controls which directly affect the reactivity or power level of the reactor shall only be performed by a licensed Reactor Operator (RO) or licensed Senior Reactor Operator (SRO). the only exception to this rule is an operator in training for a license. In this instance, control manipulation shall be performed under the direction and presence of a licensed RO or SRO. (10 CFR 55)

5.0 CHECKLIST(S)

- 5.1 None

6.0 PROCEDURE

6.1 Responsibilities

NOTE: The Unit CO is the CO assigned to a specific unit. The Common CO is the CO assigned to those systems shared by Units 2 and 3.

- 6.1.1 The CO is directly responsible to the SRO Operations Supervisor.
- 6.1.2 The CO's primary responsibility is the safe and efficient operation of his assigned equipment.
- 6.1.3 The CO is responsible for operation within the requirements of the Operating License, Technical Specifications, orders of the Nuclear Regulator Commission, approved Station procedures and operating instructions.
- 6.1.4 The Unit CO is responsible and authorized to shutdown the reactor if he determines the safety of the unit is in jeopardy, or if operating parameters exceed the reactor protection setpoints and an automatic shutdown has not occurred.

6.0 PROCEDURE (Continued)

- 6.1.5 It is the responsibility of the CO not to base operational decisions solely on a single plant indication when more than one indication of the same parameter is available. Readings from non-qualified instruments exposed to post-LOCA environments should be checked against qualified instruments if possible.
- 6.1.6 It is the responsibility of the CO not to manually override any emergency safety system unless continual operation could result in unsafe plant conditions, e.g., overpressurization of the reactor coolant system.
- 6.1.7 During emergencies, the CO is responsible to identify himself and assist in clearing the Control Room of unnecessary personnel.
- 6.1.8 The CO is responsible for taking timely and appropriate action in accordance with existing procedures during abnormal or emergency conditions.
- 6.1.9 It is the CO's responsibility to notify the Shift Superintendent of any emergency condition as soon as possible.
- 6.1.10 It is the CO's responsibility to be cognizant of the Unit's Emergency Operating Instructions, shall commit to memory the immediate actions of the Emergency Operation Instructions and shall reference these Instructions after implementation.
- 6.1.11 The CO is responsible for reviewing routine operating data to assure safe operation and to maintain the capability to shutdown and cooldown the unit.
- 6.1.12 It is the responsibility of the CO to be cognizant of construction, modification, maintenance or engineering activities in the station which might jeopardize the capability of reactor shutdown and cooldown.
- 6.1.13 The Unit CO is responsible for directing the activity of licensed and nonlicensed personnel on the assigned unit under the supervision of the SRO Operations Supervisor.
- .1 For the Common CO, these activities shall only be on common systems, and shall not directly affect reactivity or power level of the reactor(s).

6.0 PROCEDURE (Continued)

- 6.1.14 The CO assumes the responsibility and authority to direct the activities of other operating personnel as required during the absence of the Shift Superintendent and Control Room Supervisor from the Control Room.
- .1 When in Mode 5 or 6, the Control Room Command Function may be passed to a licensed RO during the absence of the Shift Superintendent and the Control Room Supervisor from the Control Room area. (Refer to Reference 2.3.1 for definition of Control Room Command Function).
- 6.1.15 Each CO shall have jurisdiction of his assigned equipment.
- .1 Units 2 and 3 Unit CO's equipment responsibilities are listed on Attachment 1.
- .2 Common CO's equipment responsibilities are listed on Attachment 2.
- .3 Unit 1 CO is responsible for all Unit 1 equipment and shall review all Information Tags posted in the Control Room.
- 6.1.16 The CO, or his designee, is responsible for the issuance of all Work Authorizations in accordance with Reference 2.3.4 and shall ascertain that the workmen are aware of the hazards and safety significance of the equipment they are working on.
- 6.1.17 The Unit 1 CO or Common CO is responsible for coordination of outages on electrical distribution systems which affect the operation of the respective unit(s).
- 6.1.18 The CO is responsible for the use of safe and efficient operational work practices to keep personnel radiation exposure "As Low As Reasonable Achievable" (ALARA).

6.2 Duties

- 6.2.1 Prior to assuming the position of on-shift CO, the on-coming CO shall relieve the off-going CO in accordance with Reference 2.3.2.
- 6.2.2 The CO shall maintain a log of shift activities per Reference 2.3.3.
- 6.2.3 The CO shall monitor Control Room indications, operate Control Room controls, and direct all manual adjustments and operations as needed to maintain control of the various assigned system processes.

6.0 PROCEDURE (Continued)

- 6.2.4 The CO shall perform the following:
- .1 Ensure Control Room round sheets or shift relief status logs and surveillances are completed in the assigned time frame.
  - .2 Report to the SRO Operations Supervisor any out-of-specification conditions, and keep him informed of corrective action.
  - .3 Review completed round sheets for equipment trends.
- 6.2.5 The CO shall perform routine operations under the supervision of the SRO Operations Supervisor and direct the ACO and Plant Equipment Operator (PEO) in the performance of their duties during all phases of plant operation in accordance with applicable procedures and instructions.
- 6.2.6 The CO shall not leave the Control Room without being properly relieved.
- 6.2.7 The CO shall make periodic inspections of the Control Room instrumentation and controls. The frequency is dependent upon plant status and the conditions that prevail on individual systems or components. In cases where very frequent observations are necessary, delegation to an ACO may be advisable.
- .1 The Control Room and the relay rack area immediately behind the Control Room panel are classified as a Vital area for the purposes of the Station Security Plan. Observance of any abnormal condition related to equipment in this area that is not readily explained should be treated as a potential act of sabotage and reported immediately to the Shift Superintendent.
- 6.2.8 Inconsistent instrumentation response between radiation monitoring channels and their associated recorders shall be reported to the SRO Operations Supervisor. The on-shift Nuclear Chemical Technician shall be notified to collect appropriate samples.
- 6.2.9 Indication above expected reading on any release path radiation monitor shall be reported to the SRO Operations Supervisor and an evaluation shall be performed to identify the source.
- 6.2.10 The CO shall notify the Nuclear Chemical Technician of any operational transients (changes in status of blowdown or releases, load changes, maintenance of equipment, etc.) so that appropriate samples may be taken.

6.0 PROCEDURE (Continued)

- 6.2.11 The CO shall notify the Health Physics Technician of any operational transients which might result in changes in radiation or contamination levels in the plant.
- 6.2.12 The CO should make himself aware of plant status by discussing plant conditions with shift personnel. In turn, the CO should keep shift personnel informed of activities occurring in their areas that they may not be aware of.
- 6.2.13 The CO shall keep the Shift Superintendent and the Control Room Supervisor aware of plant status and of any unusual or abnormal conditions.
- 6.2.14 The CO shall read and understand System Operating Bulletins, Technical Specifications, Operating Instructions, Special Orders, Emergency Procedures and Abnormal Operating Instructions.
- 6.2.15 The Unit 1 or Common CO shall write switching orders on orders from the System Operating Supervisor, Mira Loma Switching Center operator or the Shift Superintendent.
- 6.2.16 The Unit 1 CO of Common CO should notify the Energy Control Center of all developments or events which pose a threat to SONGS operating capacity and make a log entry regarding the notification. TCN
- 6.2.17 The Unit CO shall load the assigned unit as directed by the System Operating Supervisor or as emergency conditions may dictate within the guidelines of the Technical Specifications.
- 6.2.18 The Common CO shall log and notify the Switching Center of any unusual arcing or noise in the switchyard or towers beyond the switchyard.
- 6.2.19 The Common CO shall normally function as the Fire Departments's Technical Advisor for Units 2 and 3. This position shall be fulfilled by a licensed individual or other operator with similar plant knowledge (Ref. 2.1.3). The Fire Department's Technical Advisor shall, per S0123-XIII-10:
- .1 Coordinate with the ESO Captain and advise or assume command authority in all matters concerning the effects of fire, smoke, heat and fire suppressants on the Plant Safe Shutdown capability. TCN
  - .2 Report the plant safety and operational impact of the fire to the Shift Superintendent and assist in accident classification.

6.0 PROCEDURE (Continued)

- 6.2.20 When notified by the operator of upcoming evolutions, which are known to cause plant vent stack alarms, the CO shall inform affected Control Room personnel and Shift Supervision.
- .1 The following evolutions have been known to cause plant vent stack alarms, however, notification should not be limited to this list.
    - .1.1 Backflushing any filter;
    - .1.2 Processing liquid waste;
    - .1.3 Pumping radwaste sump;
    - .1.4 Releasing waste gas decay tanks;
    - .1.5 Draining the leakage detector pots CR 61A;
    - .1.6 Venting ion exchangers;
    - .1.7 Transferring resin;
    - .1.8 Manipulating waste gas sample system;
    - .1.9 Draining or filling and venting charging pumps or other CVCS piping;
    - .1.10 Venting the VCT.
- 6.2.21 The CO shall assist ACO's and PEO's in preparation for advancement and assist in the development of trainees assigned to the station.
- 6.2.22 The CO shall assist in the preparation of Operating Instructions, abnormal evolutions and alignments and training material under the direction of the SRO Operations Supervisor.
- 6.2.23 The CO should follow a course of study and observation that will prepare him for advancement.
- 6.2.24 The CO shall attend all required training as scheduled.
- 6.2.25 The CO shall perform light housekeeping duties in the Control Room in order to maintain a clean, safe work area.

7.0 RECORD(S)

- 7.1 None



UNITS 2 AND 3 UNIT CONTROL OPERATOR EQUIPMENT RESPONSIBILITIES

<u>EQUIPMENT/SYSTEM</u>	<u>SYSTEM CODE</u>
1. Main Steam System	ABA, ABB
2. Main Turbine	ACA
3. Condensate and Feedwater Systems	ADA, AEA, AEB
4. Full Flow Condensate Polishing Demineralizer	AKA, AKB, AKC AKD, AKE, AKF AKG, AKH, AKI
5. Feedwater Heater Extraction	AFA
6. Auxiliary Feedwater System	ALA
7. Reactor Coolant System	BBA, BBB
8. Chemical Volume Control System	BGA
9. CVCS Boric Acid Mix and Storage	BGB
10. Safety Injection System and Refueling Water Tanks	BHA, BHB
11. Containment Spray System	BKA
12. Steam Generator Blowdown Processing System	BMA, BMB, BMD
13. Steam Seals	CAA
14. Main Turbine Lube Oil System	CBA
15. Generator Gas Control System (Hydrogen and CO <sub>2</sub> )	CCA
16. Hydrogen Seal Oil System	CDA
17. Stator Water Cooling System	CEA
18. Condenser Air Removal System	CGA, CGB
19. Main Turbine Controls	CHA
20. Circulating Water, Traveling Screens and Fish Handling	DAA, DCA
21. Amertap Condenser Tube Cleaning System	DEA
22. Turbine Plant Cooling Water System	EBA
23. Fuel Pool Cooling and Cleanup System	ECA
24. Component Cooling System	EGA
25. Saltwater Cooling System	EPA
26. Auxiliary Turbines and Lube Oil	FCA, FCB
27. Intake Structure Ventilation	GDA
28. Turbine Building HVAC	GEA
29. Fuel Handling Building HVAC	GGA
30. Charging Pump and Boric Acid Makeup Pump Room HVAC	GHB
31. Containment Building HVAC	GNA, GNB, GNC, GND, GNE, GNF, GNG, GNH, GNJ
32. Containment SIT and ILRT	GPA
33. Penetration Building HVAC	GRA
34. Containment Hydrogen Recombiner and Hydrogen Purge	GSA, GSB
35. Safety Equipment Building HVAC	GXA, GXB, GXC, GXD
36. Storage Tank Area, Safety Equipment Bldg., Fuel Handling Bldg., Penetration Bldg., Sumps and Drains, Containment Sump	HGB, HGC, HGD
37. Fuel Handling and Reactor Servicing	KEA, KEB

UNITS 2 AND 3 UNIT CONTROL OPERATOR EQUIPMENT RESPONSIBILITIES (Continued)

<u>EQUIPMENT/SYSTEM</u>	<u>SYSTEM CODE</u>
38. Isophase Bus and Main Generator	MAB, MAA, MBA
39. Boron and Containment Heat Tracing	QMA, QMC
40. Turbine Plant Sampling System	RCA
41. Plant Computer	RJA
42. Plant Annunciators	RKA
43. Flooding Sensors and Alarms	RNA
44. Engineered Safety Features Actuation System	SAA
45. Reactor Protection System	SBA
46. In-Core Reactor Instrumentation	SCA
47. Ex-Core Nuclear Instrumentation	SEA
48. CEDM Control and MG Sets	SFA, SFB
49. Reactor Regulation	SFC
50. Nuclear Sampling System	SJA
51. Loose Part Monitoring/Internal Vibrations	SQA

COMMON CONTROL OPERATOR EQUIPMENT RESPONSIBILITIES

<u>EQUIPMENT/SYSTEM</u>	<u>SYSTEM CODE</u>
1. Demineralized Water Makeup and Transfer	ANA, ANB
2. Condensate Transfer and Storage	APA
3. Condensate and Feedwater Chemical Control	AQA
4. Lube Oil Storage, Transfer and Purification	CFA
5. Chlorine Injection	DDA
6. Service Water	EAA
7. Nuclear Service Water	EFA, EFB
8. Auxiliary Boiler and Auxiliary Steam	FAA, FBA
9. Normal Chilled Water	GBA
10. Auxiliary Building/Radwaste HVAC	GHA
11. Emergency Chilled Water	GJA
12. Control Room HVAC (Emergency and Normal)	GKA, GKB
13. Control Building HVAC	GLA, GLB, GLC GLD, GLE, GLG, GLH
14. Diesel Building HVAC (Normal and Emergency)	GMA, GMB
15. Continuous Exhaust	GWA
16. Cable Tunnel and Misc. HVAC	GYA, GZA
17. Gaseous Radwaste	HAA
18. Liquid Radwaste	HBA
19. New and Spent Resin Handling	HBB
20. Filter Precoat and Crud Tank	HBC
21. Solid Radwaste	HCA
22. Primary Plant Makeup	HFA
23. Boric Acid Recycle	HEB
24. Radioactive Drains (CCW and Radwaste)	HGA
25. Coolant Radwaste	HJA
26. Auxiliary Boiler Fuel Oil	JAA
27. Diesel Fuel Oil	JEA
28. Instrument and Service Air	KAA, KBA
29. Fire Protection	KCA, KCB, KCC
30. Domestic Water	KDA
31. Service Gas (Hydrogen and Nitrogen)	KHA, KLA
32. Standby Diesel Engines	KJA, KJB
33. Gravity Collection - Diesel Building	LBF
34. Oily Waste and Gravity Collection	LEA, LFA
35. Sewage Treatment	LGA
36. Main and Unit Auxiliary Transformers	MAC, MAD, MAE
37. 220KV Switchyard	MKA, MPA
38. Reserve Aux. Transformer XR3 and 6.9 KV Buses	NAA, NAB, NAC
39. Reserve Aux. Transformers XR1 and XR2	NBA, NBB
40. Non-1E 4KV Buses	NBC, NBD, NBE, NBF
41. Non-1E 480V Load Centers	NGA, NGB, NGC, NGD, NEG, NGF, NGG, NGH, NGI, NG, NGL, NGM

COMMON CONTROL OPERATOR EQUIPMENT RESPONSIBILITIES (Continued)

<u>EQUIPMENT/SYSTEM</u>	<u>SYSTEM CODE</u>
42. Switchyard Relay House Load Center	NGO
43. Non-1E 40V MCC's	NHA, NHB, NHC, NHD, NHE, NHF, NHG, NHH, NHI, NHJ, NHK, NHL, NHN, NHO, NHP, NHQ, NHR, NHS, NHT NJA NKA NNA PBA, PBB PEA, PEB PGA, PGB PHA, PHB, PHC, PHD, PHE, PHG PHH PKA PNA QAA, QAB, QAC QGA QHA QKA QMB QMD QWA RDA RGA RGB
44. Non-1E 250V DC System	
45. Non-1E 125V DC System	
46. Non-1E 124 VAC Instrument Power	
47. 1E 4KV Buses	
48. ESF Standby Generation (DG's)	
49. 1E 480V Load Centers	
50. 1E 480V MCC's	
51. 1E 125V DC System	
52. 1E 125VAC Instrument Power	
53. Lighting Systems (Includes DC Lighting)	
54. Station Grounding System	
55. Cathodic Protection	
56. Fire Detection and Alarm System	
57. Caustic Heat Tracing	
58. Miscellaneous Waste System Heat Tracing	
59. Evacuation Warning System	
60. Meteorological Instrumentation	
61. Personnel Monitoring	
62. Fire Monitoring	
63. All Bulk Chemical Storage - Acid, Caustic, Ammonia, Sodium Hypochlorite	
64. Area Radiation Monitors	SDA
65. Seismic Monitoring	SGA
66. Process and Airborne Radiation Monitoring	SPA