RIVER BEND STATION
APPROVAL SHEET
STATION OPERATING PROCEDURES

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NOTE

This procedure is intended to provide guidance during normal operation. During the construction and pre-operational phase, those sections that are based on the legal requirements of the Station Operating License need not be implemented until the issuance of the Station Operating License.

1.0 PURPOSE

The purpose of this procedure is to provide instructions to ensure that the plant operations are conducted in an safe and effective, consistent manner in accordance with the operating license, plant procedures, and applicable regulatory requirements.

1.1 This procedure establishes the organizational and individual responsibilities of the Operations Section and provides administrative instructions necessary for the daily conduct of plant operations.

1.2 Prior to initial fuel load, the following sections of this procedure will not be applicable and need not be strictly adhered to:

1.2.1 5.3, Notification

1.2.2 5.5, Reactor Scram

1.2.3 5.6, Generator Load Changes

1.2.4 5.8, Operation During Abnormal or Emergency Conditions

1.2.5 5.19, Equipment Return to Service

1.2.6 7.3, Limiting Conditions for Operation

1.2.7 8.0, Surveillance Testing

2.0 REFERENCES

2.1 ADM-0007, Selection, Training, Qualification and Evaluation of Plant Staff Personnel.

2.2 Gulf States Utilities Operations Quality Assurance Manaual (OQAM).

2.3 Reg. Guide 1.114 (Rev. 1, 11/76) Guidance on Being Operator At-the-Controls of a Nuclear Power Plant.

2.4 NUREG-1000, Vol. 1, April 1983.

2.5 RBS FSAR Chapter 13, Conduct of Operations.

2.6 ADM-0019, Condition Reporting.

2.7 10CRF55 Operator License.

2.8 10CFR50, Section 50.54, Conditions of License.

2.9 Gulf States Utilities Accident Control Manual.

2.10 G.E. BWR Standard Technical Specifications.

2.11 INPO Good Practice OP-204 Conduct of Operations.

2.12 OSP-0009, Author's Guide/Control and Use of Emergency Operating Procedures.

2.13 RBS General Operating Procedure GOP-0007, Scram Recovery.

2.14 RBS Abnormal Operating Procedure AOP-0001, Reactor Scram.

2.15 ADM-0006, Control of Plant Records.

2.16 INPO SOER 82-04.

2.17 ADM-0031, Temporary Alterations.

2.18 ADM-0027, Protective Tagging.

2.19 ADM-0037, Equipment Identification and Labeling.

2.20 ADM-0028, Maintenance Work Requests.

2.21 ADM-0003, Development, Control and Use of Procedures.

2.22 OSP-0002, Shift Relief and Turnover.

2.23 OSP-0003, Logs and Records.

2.24 IEIN 84-51, Independent Verification.

2.25 ADM-0001, Station Staff Organization, Responsibilities and Authority.

2.26 OCR-M-85-009, Operation Response to ANI/MAELU Inspection.

2.27 Generic Letter 82-12, Nuclear Power Plant Staff Working Hours.

2.28 IEIN 83-27, Deliberate Acts Directed Against Plant Equipment.

2.29 ANSI N18.7-1976, Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants.

3.0 ORGANIZATION AND RESPONSIBILITY

3.1 The Operations Group is comprised of personnel in the following classifications:

General Operations Supervisor

Assistant Operations Supervisor

Shift Supervisor

Control Operating Foreman

Nuclear Control Operators

Nuclear Equipment Operators

Shift Clerks

The Operations Section is organized as shown in Figure 1.

3.2 Operations Section Position Responsibilities

3.2.1 General Operations Supervisor (GOS)

1. Plan the overall activities and work of the operating group in cooperation with the other section heads in order to develop an integrated plant operations program; the primary objective being to generate unit safety, reliability, and availability.

2. Provide guidance and direction to supervisors to ensure that the approved operating procedures and practices are followed.

3. Participate in development of training and retraining programs for all operating personnel in order to provide a highly qualified and efficient operating force and to ensure that qualified replacement personnel are available when vacancies occur.

4. Develop performance standards for personnel under his supervision as a means of evaluating individual performance. Keep the Assistant Plant Manager Operations informed on the qualifications and performance of employees, and make appropriate recommendations concerning employees showing outstanding or substandard performance.

5. Promote safe working conditions for employees under his supervision by proper instruction and the maintenance of tools, equipment, and work areas. Ensure that employees receive the required instructions concerning industrial safety.

6. Promote good housekeeping.

7. Ensure that personnel under his supervision receive training in appropriate radiological protection practices, procedures and ALARA principles.

8. Develop and prepare operating orders, procedures and instructions to ensure safe and reliable operation of equipment.

9. Establish and regularly review the required operating logs and records. Supervise the preparation of operating records to ensure that they are complete, accurate and timely.

10. Insist on strict adherence to the company and plant security provisions and procedures.

11. Coordinate development and implementation of programs and policies that ensure that plant operations are carried out in a safe and reliable manner.

12. Maintain familiarity with the requirements of all regulatory agencies with regard to plant operations. Prepare, supervise or assure the initiation and preparation of the necessary reports and notifications for these agencies as directed.

13. Maintain familiarity with the company-union agreements and keep current on interpretations. Ensure that they are administered properly.

14. Ensure all required operational surveillance testing is performed in a timely and proper manner.

15. Perform such other duties as may be assigned by the Plant Manager.

16. Serve as an active member of the Facility Review Committee (FRC) and Joint Test Group (JTG).

17. Implement plant goals and objectives. Establish departmental goals and objectives.

18. Ensure the plant is operated in accordance with the operating license requirements.

19. Authorize restart following post trip review.

3.2.2 Assistant Operations Supervisor (AOS)

1. Administration of operations section surveillance program.

2. Initiate changes to operating procedures (per Reference 2.21) which are required due to procedural deficiencies or plant modifications.

3. Develop shift schedules to meet manpower and license requirements of the Technical Specifications and expected operational activities.

4. Review the operations section shift records periodically, at least weekly for abnormalities and completeness (Reference 2.26).

5. Assist with coordination of fuel handling activities with other plant sections.

6. Schedule, coordinate and document on-shift operations group training as specified in TPP-0007 "Training Program Documentation".

7. Initiate reports as directed by the GOS.

8. Initiate notification to operations group and licensed personnel of plant modifications, procedure changes, and Technical Specifications revisions that have operational or safety significance.

9. Review of Operations Section Procedures.

10. Assume the responsibilities of the GOS in his absence.

NOTE

While the responsibilities of the AOS are delineated in some detail above, it should be clearly understood that the list is not exhaustive nor does it preclude delegation of functions.

3.2.3 Shift Supervisor (SS)

1. In direct charge of unit operations during startup, power operation and shutdown. Normally acts as the Plant Management representative on site during backshifts, weekends, and holidays.

2. Supervise the Control Operating Foreman to ensure proper performance of his assigned duties.

3. Ensure shift operations are conducted in accordance with plant procedures and operating licenses.

4. Coordinate the activies of Operations, Chemistry, Radiation Protection, Maintenance, Instrument and Control (I&C), Radwaste, and Security groups to accomplish the operating objectives for his shift.

5. Notify higher management authority as required by plant reporting and notification requirements.

6. Supervise the on-site operations group functions required by the Emergency Plan, Radiation Protection Plan, the Security Plan and their respective implementing procedures.

7. Act as Emergency Director until relieved by higher management authority.

8. Authorize the removal of equipment and systems from service for maintenance, testing, or operational activities.

9. Authorize the return to service of equipment and systems from service for maintenance, testing of operational activities.

10. Act as custodian of plant keys assigned to the operations group.

11. Review shift records for accuracy and completeness.

12. Ensure shift operating crews review changes to operating procedures, plant modifications, and revisions to the Technical Specifications.

13. Ensure that on-shift training of personnel is conducted as scheduled, including required reading.

14. Ensure his shift is properly manned. Request or initiate callout of personnel as required.

15. Initiate reports of reactor trips and abnormal activities and reportable events.

16. Supervise implementation of radioactive waste management program with respect to shift operations.

17. Ensure completion of all surveillance/shift routines assigned to his shift.

18. Authorize safety tagging of plant equipment and systems.

19. Authorize temporary alterations, jumpers, and lifted leads.

20. Monitor qualification, mental and physical conditions of operating shift personnel.

21. Complete Post-Trip Review and Scram Report per Enclosure 1 and 2 for any unplanned Reactor Scrams.

22. Authorizes access in accordance with Plant Security Procedures.

23. Responsible for maintaining and complying with the requirements of the NRC Senior Reactor Operator License.

24. Insuring a fully manned fire brigade is present on each shift.

3.2.4 Control Operating Foreman (COF)

1. Supervise activities assigned by the SS in accordance with the operating licenses and plant procedures.

2. Coordinate the operation of plant equipment and systems.

3. Coordinate safety tagging operations.

4. Coordinate surveillance testing.

5. Supervise the Nuclear Equipment Operators in the performance of their duties.

6. Coordinate the activities of the Nuclear Control Operators with other operations and plant personnel to achieve safe reliable and efficient unit operation.

7. Review of shift records for compliance with Reference 2.23.

8. Responsible for maintaining and complying with the requirements of the NRC Senior Reactor Operator License.

9. Perform the duties of the SS in his absence.

3.2.5 Nuclear Control Operator (NCO)

1. Responsible to the SS or COF for operation of all equipment controlled from the Main Control Area. Operation is interpreted to mean:

   a. Acutal controls manipulation.

   b. Monitoring equipment and system parameters.

   c. Documentation of evolutions and significant events related to those systems and/or components controlled from the Main Control Room.

   d. Initiation or performance of operation actions required by normal operating procedures, Emergency Operating Procedures, Abnormal Operating Procedures, and Alarm Response Procedures applicable to the Main Control Board area.

2. Recording of Control Room Log readings

3. Initiate power reductions if plant parameters indicate that such actions are required to sustain safe operation or prevent equipment damage.

4. The NCO has the authority and responsibility to shut the reactor down when he determines that reactor safety is in jeopardy or when operating parameters (scram settings) are exceeded and automatic shutdown does not occur (Reference 2.26).

5. Initiate Emergency Safety System actuation if indications exceed automatic actuation setpoints and actuation has not occurred.

6. Initiate holds during plant evolutions that are required to ensure that the evolution does not threaten the stability of the plant, result in equipment damage or violate administrative controls such as System Operating Procedures, Technical Specifications, etc.

7. Responsible for maintaining, and complying with the requirements of NRC Reactor Operators License.

8. Initiate and Complete Page 1 of Scram Report (Enclosure 2), for any unplanned Reactor Scram.

9. Act as Fire Brigade leader

NOTE

The At-The-Controls Operator shall not under any circumstances leave the "at-the-controls area" (Figure 2) for any reason without obtaining a qualified relief operator. Prior to assuming responsibility, the Relief Operator will be informed of any evolutions in progress that might affect the overall status of the plant.

3.2.6 Nuclear Equipment Operator (NEO)

1. Responsible for performance of assignments associated with shift operations and fuel handling as directed by the SS.

2. Duties are normally associated with operation of auxiliary systems and equipment outside the main control room and will include routine checks, data acquisition, and local operation of equipment.

3. Maintain satisfactory progress toward qualification as a NCO.

3.2.7 Shift Clerk

This individual will be required to work a rotating shift schedule with duties as follows:

1. Trained to be the communicator for the Emergency Plan in the control room.

2. Assist the SS in calling out personnel to maintain shift staffing.

3. Maintain the Main and Auxiliary Control Room records, prints and station manuals.

4. Maintain overtime list, vacation and sick leave logs.

5. Transmit shift records to the PPF.

6. Maintain inventory of chart paper, logs and control room supplies.

7. Process and track Maintenance Work Requests.

8. Process and track Technical Specification Surveillance Procedures.

9. Aid the SS in the maintenance and audit of the Safety Tag Log and Jumper Log.

4.0 OPERATIONS SHIFT COMPLEMENT, FUNCTIONS, AND RESPONSIBILITIES

4.1 Shift Staffing

1 Shift Supervisor (SRO)

1 Control Operating Foreman (SRO)

3 Nuclear Control Operators (RO)

4 Nuclear Equipment Operators

4.1.1 A SS with a Senior Reactor Operator license, who is also a member of the station supervisory staff, shall be on site at all times when fuel is in the reactor.

4.1.2 A COF with a Senior Reactor Operator license shall be in the control room at all times, except when the unit is in a cold shutdown condition. The SS may, from time to time, act as relief for the COF assigned to the control room.

4.1.3 A licensed reactor operator shall be in the at-the-controls area (Figure 2) of the control room at all times when fuel is in the reactor.

1. Additional licensed operators, the Unit Operator, may be used for data taking and other "back panel" work.

4.1.4 (Non-licensed) operators shall be properly qualified to support the the activities to which assigned.

4.1.5 Periods of core alterations shall include a licensed SRO to directly supervise the core alterations. This licensed SRO operator shall have no other concurrent operational duties.

4.1.6 Deviations in shift compliment may be approved by the GOS so long as the minimum manning and license requirements of Technical Specifications are met.

4.1.7 Additional Operations Section personnel may be required on shift because of unusual plant conditions or operational needs. The SS shall obtain the additional personnel as necessary. Activities requiring additional personnel will not be undertaken until the required personnel are available.

4.1.8 Personnel who are relieving the shift should review all pertinent operating data back to the time that they had previously been on watch (Reference 2.26).

1. Narrative Log Books
2. Standing Orders
3. Tagging Order Log
4. Temporary Alteration Log
5. Night Orders

4.2 Operations Group Responsibilities

4.2.1 The following responsibilities are delineated for Operations Section personnel:

1. The responsibility of the SS shall be to maintain a broad perspective of operational conditions affecting the safety of the plant as a matter of highest priority at all times.

2. The SS should not become involved in any single operation that would prevent him from being fully aware of the overall plant status. This applies to both normal and emergency conditions.

3. During events that require implementation of Emergency Plan Procedures, the SS is designated Emergency Director until properly relieved.

4. During accident situations, the COF is in charge of the control room, and shall remain in the control room unless properly relieved. His responsibilities are outlined in Reference 2.12.

5. The SS, COF, and Plant Operators on shift must be aware of and responsibile for the plant status at all times.

6. All Operations personnel must be alert and remain within their immediate areas of responsibility until properly relieved and be responsible for monitoring the instrumentation and controls located within their areas. They are responsible for taking timely and proper actions to ensure safe operation of the facility (i.e., actions or activities, including failure to take action, related to the facility that could have an adverse effect on the health and safety of the public, plant workers, or other individuals).

7. Only Licensed Operators or trainees, under the direct supervision of Licensed Operators, are permitted to manipulate the controls that directly affect the reactivity or power level of the reactor.

8. Personnel who have the classification of NCO or NEO shall be considered as qualified personnel to perform independent verification (see Reference 2.24).

9. Operations personnel are responsible for the proper exchange of important information and for manning their stations until properly relieved. Shift turnover shall be conducted in accordance with Reference 2.22.

10. Operation of mechanisms and apparatus controls that may directly or indirectly affect the power level or reactivity of the reactor shall only be accomplished with the knowledge and consent of a licensed operator or SS.

11. The use of valve persuaders will be restricted to manually operated valves only. They shall not be used to manually position motor operated valves (Reference 2.16).

4.3 Notification of Absences

4.3.1 Personnel expecting to be late or unable to report for shift duty at the scheduled time shall, at the earliest possible time, inform the COF of the situation. The COF shall make necessary arrangements for obtaining a replacement.

4.4 Personnel Recall

4.4.1 The SS has the authority to call out all required personnel, regardless of discipline.

4.5 Overtime

4.5.1 Overtime shall not be routinely scheduled to meet the shift crew staffing requirements stated in Section 4.1. In the event that overtime must be used, the following overtime restrictions apply:

1. An individual should not be permitted to work more than 16 hours straight (excluding shift turnover time).

2. There should be at least a 8-hour break between all work periods (shift turnover time is included in this break).

3. An individual should not be permitted to work more than 16 hours in any 24-hour period, nor more than 24 hours in any 48-hour period, nor more than 72 hours in any seven day period (all excluding shift turnover time).

4. Except during extended shutdown periods, the use of overtime should be considered on an individual basis and not for the entire staff on a shift.

5. When circumstances arise that require deviation from the above, such deviations may be authorized by the Plant Manager or his designee. Authorized deviations shall be recorded in the shift supervisor's log.

4.5.2 If a Reactor Operator or Senior Reactor Operator has been working more than 12 hours during periods of extended shutdown (i.e., at duties away from the main control board), he shall not be assigned licensed duties without at least a 12-hour break preceding such an assignments.

5.0 SHIFT OPERATIONS

5.1 Shift Schedule

5.1.1 The shift schedule shall be devised to provide twenty-four hour coverage of operational activities. The schedule must provide for vacation, sickness and training.

5.2 Shift Relief

5.2.1 Shift operating personnel on duty are to remain at their assigned station with full responsibility for their station, until properly relieved. Shift relief shall be a formal evolution with documentation in accordance with Reference 2.22.

5.2.2 As soon as practical after shift turnover the on coming SS will tour the plant and make contact with each watch stander. During this contact, the SS will verify that all watch standers appear to be physically and mentally able to carry out their duties.

5.3 Notification

5.3.1 Some plant conditions and operating situations are of such a nature that it is necessary or prudent to advise the GOS or designee of the circumstances. The SS must utilize his judgement and experience in assessing the need for such notification. The following situations require verbal notification:

1. Reactor Scram
2. Major equipment failure or malfunction
3. Unexplained reactivity changes
4. Loss of off-site power
5. Any circumstances requiring unit outage or which affect the ability to meet unit operations schedules.
6. Inadvertent Radioactive Liquid or Gaseous Release.
7. Major personnel injury or radiation overexposure.
8. Accidents occurring on plant property (except minor injury).
9. All reportable events.
10. Events requiring immediate (red phone) NRC notification.

11. Violations of local, state, or federal pollution (NPDES) regulations.

12. Turbine trip.

13. Load restrictions or inability to meet load dispatchers requirements.

5.3.2 The SS shall document in his log when he notifies the GOS, or person on call. If the GOS or his designee can not be contacted, the on-call Emergency Director should be notified. When notification is required by Emergency Plan Implementing Procedures, the above requirements are superseded.

5.4 Training

5.4.1 It is important that operating personnel be informed in a timely manner of plant modifications, procedure revisions, and license changes that have operational or safety significance. Training will normally be accomplished by one of three methods:

1. On-shift formal instruction by Plant Instructors or supervisory personnel.

2. Covered as part of regularly scheduled license retraining.

3. Placed in the required reading file.

5.5 Reactor Scram

5.5.1 When a reactor scram occurs, the SS or COF will take the following actions:

1. Ensure that the plant is placed in a safe condition by directing that the necessary operations are performed in accordance with Reference 2.14.

5.5.2 Post Trip Review

The following information will be utilized to determine the direct and indirect causes for the trip:

1. Computer printout of Sequence of Events (provide details of log) (Process and ERIS).

2. Computer printout of alarms (observe "first out").

3. Other NSS Computer printout such as P-1, OD-3, and OD-7.

4. Status lights and annunciator windows.

a. The operators are directed not to reset any annunciators or status lights until they are noted.

5. Recorder charts

a. The operators are directed to time and date each chart once per shift and as soon as practical after a trip event.

5.5.3 The SS is responsible for compiling all information and making the initial determination of the cause(s) for the trip.

1. Determine if trip was spurious or from an parameter deviation actual by comparing trip signals to other available instrumentation.

a. Complete Post-Trip Review Checklist (Enclosure 1).

2. If trip was from actual parameter deviation, then determine the reason for the parameter deviation.

a. Review FSAR Chapter 15 events.

b. Review/complete applicable AOP's and ARP's.

c. Consult with Reactor Engineering and maintenance personnel.

3. If trip was spurious, then determine what caused the spurious trip and if the tripped channel has been restored to a stable state.

a. Operator/Technician error

b. Power supply problems

c. Radio interferrence

d. Relay/solid state device failure

4. Initiate repairs of the failed component(s) if necessary.

5. Complete Scram Recovery prerequisites and Scram Report (Enclosure 2).

6. Report all the above to the GOS.

5.5.4 The GOS will review all compiled information (either over the phone or in person) and determine if restart is authorized.

1. For straight forward causes such as operator error or spurious trips he can make the authorization over the phone with no other consultation and be recorded in the shift supervisors log.

2. For more complex situations such as actual FSAR Chapter 15 events the GOS should consult the following:

   a. Reactor Engineering Supervisor

   b. Assistant Plant Manager-Maintenance

   c. Appropriate Technical Staff Supervisor

   and obtain concurrence from the Plant Manager and the Assistant Plant Manager-Operations.

3. For complex situations, the GOS, or designee, should come to the plant to personally review the compiled information and interview personnel before authorizing re-start.

5.5.5 For any trip that the cause cannot be determined or corrected, the FRC shall convene to review the data before recommending restart.

1. Restart shall be authorized by the Plant Manager, or designee.

2. Plant Manager should obtain concurrence from the VP-RBNG.

5.5.6 For all events, the Scram Report (Enclosure 2) and Post-Trip Review Checklist (Enclosure 1) shall be completely filled out and copies all supporting documentation shall be attached (Recorder Charts, computer printouts, logs).

1. The Scram Report shall be assigned a sequential number (83-01, etc).

2. A copy of the scram report shall be retained in the Control Room for 1 year.

3. The original package shall be retained as a permanent plant record per reference 2.15 after routing to Tech Staff.

4. Restart is performed in accordance with Reference 2.13.

5.6 Generator Load Changes

5.6.1 Generator load changes will normally be requested by the System Load Dispatcher. When requested to change load the NCO shall obtain concurrence from the SS and COF and comply with the Dispatcher's request. The NCO shall inform the SS when all load changes are complete. The Load Dispatcher shall be notified by the NCO when the requested load change is completed. Whenever plant conditions dictate a load reduction, the Load Dispatcher will be notified as soon as possible.

5.7 Instrumentation and Control

5.7.1 Personnel shall not adjust or operate any set-points, etc. inside the control panels or on meter faces unless such action is specifically called for in an approved procedure.

5.8 Operation During Abnormal or Emergency Conditions

5.8.1 When operations are not as expected, return to a known safe condition. If conditions warrant, reduce power level as required until the cause of the condition has been determined and the status of the core is known to be in a safe condition. Guidelines for equipment use during emergencies is contained in Reference 2.12.

5.9 Control Room References

5.9.1 To assist operations personnel in the conduct of their duties, reference information related to plant operation, safety and administration is permitted in the control room. Only controlled, approved documents are to be used to conduct operations. The GOS is responsible for ensuring that the controlled reference information is maintained current. To meet these needs, the controlled reference information listed below will be available in the control room area.

1. Plant Operating Procedures
2. Final Safety Analysis Report
3. Technical Specifications
4. Selected Technical Manuals
5. Selected Prints
6. Emergency Plan
7. Setpoints Document

8. Selected Tables and Curves

9. Radiation Protection Plan

5.10 Housekeeping

5.10.1 The control room will be maintained in a clean and orderly condition in the interest of safe and efficient operations. The responsibility for keeping the control room in this condition is that of all shift operating personnel. All dusting and cleaning of control consoles, instrument panels, computer consoles, kitchen area, and the orderly storage of books, drawings and records will be performed by shift operating personnel. It is sometimes advisable not to clean or dust in some areas of the control room during plant power operations because of the hazard of bumping or otherwise moving critical controls.

5.10.2 The NEOs are responsible for maintaining their watch stations in a neat and orderly fashion.

5.11 Bypass of Safety Functions and Jumper Control

5.11.1 All activities involving lifted leads and jumpers will be conducted in accordance with Reference 2.17 with the exception of jumpers, mechanical blocks or other temporary devices specified for use by the EOPs or AOPs during performance of these procedures shall be identified, maintained and controlled as follows:

1. Premade and labeled for its intended function.

2. Retained in locked storage in the control room when not in use.

3. Controlled by S/S.

4. Not used except for its intended function.

5.12 Safety Clearance and Tagging

5.12.1 All safety clearance and tagging activities will be conducted in accordance with Reference 2.18.

5.13 Control Room Conduct

5.13.1 Potentially distracting activities in the control room and other watch stations are prohibited (for example: radios, TV, alcohol or drug use, games, horseplay, hobbies and reading that is not job related).

5.13.2 Control room access must be limited to those persons on the official access list.

5.13.3 All necessary plant-related technical/administrative control room business must be conducted at a location and in such a manner that neither licensed control room operator attentiveness nor the professional atmosphere will be comprised.

5.13.4 No unauthorized, uncontrolled notes, pictures, graphs, prints, etc. shall be used as operator aids for the performance of Safety related activities.

5.13.5 The "At-The-Controls area" will be identified for restricted access, and casual access for non-work related reasons will be prohibited (see Figure 2).

5.13.6 Permission to enter the "At-The-Controls area" for personnel other than the shift complement must be obtained from the At-The-Controls Operator, Unit Operator, COF or the SS. During periods of abnormal or emergency operations, permission shall be obtained from the SS.

5.13.7 The SS and the COF have the authority to restrict access to or remove personnel from the control room during routine and emergency operation.

5.13.8 The shift personnel must react/respond to instrument indications and annunciators in accordance with approved procedures unless they have been verified incorrect by other instrumentation and data (Reference 2.26).

5.14 Shift/Evolution Briefings

5.14.1 Briefings shall be conducted for individuals involved in an evolution that is being performed. The detail of the briefing is dependent on the degree of complexity, routineness, logistics, or number of people involved.

5.14.2 The individual who is to perform the activity is responsible to adequately review the procedure, to fully understand what he is doing, and to be cognizant of all the limitations, precautions, and requirements.

5.14.3 Because some evolutions may be very complex, occur over an extended period of time, or not be covered by approved procedures, the SS may supply written instructions or checklists.

5.14.4 Evolutions involving many individuals, especially from two or more departments or disciplines, may require large formal briefings or preplanning sessions. If the evolution is complex and involves close coordination, the briefing session should include:

1. A review of the appropriate section of the procedure by key parties.

2. Examination of each individual's specific involvement and responsibility.

3. Discussion of expected results or performance; review of limitations, hold points, emergency action to be taken if contingencies arise.

4. Ensure that everyone understands the interface and communications required.

5.15 Fire Brigade

5.15.1 A brigade of at least 5 members shall be maintained on site at all times. The members of the fire brigade shall be designated each shift on the control room status board. The fire brigade shall not include those personnel required in the control room nor those personnel required for a safe shutdown of the plant.

5.16 Key Control

5.16.1 A list identifying each key-controlled item and area should be maintained in the SS's office. Keys shall be maintained in a locked cabinet, under the control of the SS. Permission to obtain a controlled key shall only be given by either the SS or COF.

5.16.2 Controlled keys are issued to certain "ON DUTY" operating classifications. Possession of such keys will be necessary to perform normal and emergency duties within an area of responsibility. The controlled keys remain on the operator's person during assigned hours of duty and are not permitted to be used by unauthorized individuals.

5.16.3 A key control log shall be maintained. Entries shall show the purpose for which a controlled key was required, personnel using it, their badge number, and time it was removed and returned to the key cabinet.

5.16.4 A physical inventory should be conducted at least semi-annually for locks and keys used for operations (Reference 2.26).

5.17 Component Labeling, and Posted Signs

5.17.1 Labeling of components or systems and posting of signs will be performed in accordance with Reference 2.19.

5.18 Radiological Controls

5.18.1 All personnel must be continuously alert to the radiological aspects of the work/evolution they are involved in and take appropriate actions to minimize man-rem exposure and to control the generation and spread of radioactive contamination.

5.18.2 Very high radiation areas shall be locked and prior to entry into these areas Radiation Protection personnel shall be contacted. This shall apply except in an emergency condition.

5.19 Equipment Removal/Return to Service

5.19.1 Prior to removal of equipment from service, the Operations Section will verify the equipment may be removed. Before authorizing the removal for maintenance, testing, or operational activities the following will be performed:

1. Verify the equipment or system can be removed from service.

2. Determine how long it may be removed from service.

3. In the case of a component or system that is required by Technical Specifications, attention shall be given to the potentially degraded degree of protection when one subsystem of a redundant safety system has been removed from service.

4. Documenting the removal from service per Reference 2.20.

5.19.2 Following maintenance on or modification to a system/component, the Operations Section is responsible for verifying the operable condition of the system/component to comply with Tech Spec's. Verification may be accomplished by either special testing or by adherence to surveillance testing. In the case of the component/system that is not covered by Technical Specifications, a special return to service inspection shall be performed. Requirements on tests performed shall be logged on the Maintenance Work Request per Reference 2.20.

1. Mechanical coupling

2. Blinding flanges installed/removed

3. Electrically connected

4. Area cleanliness

5. Valve alignment

6. Proper lubrication

7. System integrity

8. Hand torquing of remotely operated valves

9. System filled and vented

5.19.3 Components of the Reactor Trip System and other safety related components must (as a minimum) be demonstrated operable by performance of the applicable Surveillance Test Procedure(s).

5.20 Equipment Rotation

5.20.1 The SS or COF should ensure major plant equipment is rotated monthly when continued plant operation is not jeopardized to maintain equipment run times near equal. Equipment run times are maintained in the Equipment Run Time Log as described in Reference 2.23.

6.0 PLANT OPERATING PROCEDURES

6.1 Procedure Compliance

6.1.1 Plant equipment shall be operated in accordance with written approved procedures.

6.1.2 If the individual actually performing the activity cannot or believes he should not follow the procedure governing that activity as written, he shall place the system/component into a stable and safe condition and inform the responsible supervisor. The supervisor shall resolve the discrepancy in the procedure by either:

1. Determining the methods by which the activity can be performed using the procedure as written and conveying this to be the individual performing the activity, or

2. Submitting a procedure change, either temporary or permanent depending on the actual situation. (No Further procedural steps shall be accomplished until the procedure change is approved in accordance with Reference 2.21.

6.1.3 In the event of an emergency not covered by an approved procedure, operators shall take action so as to minimize personnel injury, damage to the facility, and to protect the health and safety of the public.

6.1.4 It is the policy of the Operations Group that no interlock will be bypassed or defeated from performing its function unless it is accomplished in accordance with an approved procedure or work request.

6.2 Procedure Implementation

6.2.1 Procedures that control operations where reliance on memory cannot be trusted and where operations must be performed in a specified sequence shall be followed step-by-step with the procedure in hand. Many procedures will also require signoffs, while others may need to be referred to only occasionally. Routine procedural actions that are frequently performed may not necessitate the use of a procedure. If there is any doubt as to the procedural action by the individual performing the job, the procedure must be in hand. Entry conditions of emergency procedures shall be committed to memory by licensed personnel.

6.2.2 If an evolution is suspended for an extended period of time, reverification of the initial conditions is required as determined by the SS.

6.2.3 Controlled copies of appropriate system operating procedures and temporary procedures shall be available to all Operations Section personnel for in-plant use at important local/manual stations.

6.3 Procedure Sign-Off List

6.3.1 Procedure sign-off lists are used as an aid in confirming the completion of steps in proper sequence as required. In addition, it provides formal documentation of the completion of critical steps in the procedure and thus aids in any subsequent determination of equipment or system status. Sign-off lists are executed when specified by the associated procedure or when included as an integral part of the procedure. After the completion of each item on the sign-off list, the operator completing the step initials the item. The operator completing the final item of the sign-off list signs the list to signify its completion. The sign-off list is then reviewed by the SS and placed in the control room status file. The previous sign-off list is removed from the file and forwarded to the GOS for distribution per reference 2.15.

6.4 System Check Lists

6.4.1 System check lists are used for establishing and confirming the status of equipment and systems. Systems check lists are performed as a prerequisites for system operation and periodically for equipment status verification.

6.4.2 The operator will be instructed to note the position of all components with any discrepancies to be resolved at a later time, OR he will be instructed to reposition components that are found not to be positioned in accordance with the check list.

6.4.3 When checking a manual valve's position, it must always be operated in the close direction. NEVER CHECK A VALVE BY MOVING IT IN THE OPEN DIRECTION.

6.4.4 When all check list items are completed, the operator who completes the final item signs and dates the check list signifying completion. For safety-related and other important systems an independent position verification will then be performed by a second qualified individual. Each completed check list is reviewed by the SS to verify completion and to determine exceptions or unusual conditions. The completed check list is inserted in the control room system status file. The superseded check list is forwarded to the GOS for distribution per references 2.15.

6.4.5 Selected valves will be sealed in position to prevent undetected tampering (IEIN 83-27).

6.4.6 Independent verification is intended to mean a second check of the position or status of a component or system. The independent verification will be performed separately without visual or audible contact with the first performer (Reference 2.24).

6.5 Periodic Review of Operating Procedures

6.5.1 The following procedure categories are defined as operating procedures:

1. General Operating Procedures
2. System Operating Procedures
3. Alarm Response Procedures
4. Emergency Operating Procedures
5. Fuel Handling Procedures

6. Surveillance Test Procedures (Operations Group)

7. Abnormal Operating Procedures

6.5.2 The GOS is responsible for conducting a periodic review of operating procedures per Reference 2.21 with the exception of AOPs and EOPs, which will be reviewed annually. Appropriate documentation of this review will be made. Applicable procedures will be reviewed following an unusual incident such as an accident, an unexpected transient, significant operator error, or major equipment malfunction where inadequate procedural controls contributed to the incident. Applicable procedures will be reviewed following modification to a plant system. When procedures are determined to be inadequate through review or during use, the procedure will be revised.

6.5.3 Review of Night Orders, Standing Orders and Special Orders shall be done by the GOS or designee on a periodic basis not be exceed 90 days (Reference 2.26).

7.0 SHIFT RECORDS AND LOGS

Shift records and logs will be maintained and reviewed in accordance with Reference 2.23.

7.1 Night Order Book

7.1.1 The GOS will from time to time issue night orders, and the SS will be responsible for implementing these orders. The Night Orders Book will normally be kept in the SS's office. All night orders will be signed and dated by the individual issuing them. Operators on shift will read and initial night orders on the shifts following their being written.

7.2 Standing Orders

7.2.1 A Standing Order will be used as a vehicle for disseminating information or non-procedural information, relative to the conduct of operations, of an intermediate to long-term nature. These memorandums will be serialized for a period of one year (i.e., 83-01, 83-02, etc.). Acknowledgement of receipt and understanding will be accomplished via a signature sheet for each Standing Order.

7.3 Limiting Conditions for Operation

7.3.1 The COF will initiate a LCO Status Sheet (Enclosure 3) for any LCO which becomes effective during his shift. This will be accomplished by filling out Section I of the LCO Status Sheet with the following information:

1. Date and time LCO became effective

2. Condition initiating LCO

3. Reference to applicable section of Technical Specifications for the particular LCO.

4. Required time for completion of restoration (maximum time allowed by Technical Specifications to continue operations in present mode with LCO in effect).

5. Required action if time exceeded (action required by Technical Specifications if restoration is not made by time specified in "4" above).

6. Testing or other actions required by Technical Specifications while LCO in effect (any limitations on plant operation or special surveillance testing).

7. COF's signature.

7.3.2 Section I of the status sheet will then be reviewed and signed by the SS and filed in the LCO Status Binder under the applicable Operational Condition. The pink copy will be forwarded to the designated individual of the Technical Staff for reporting purposes at the time the LCO is initiated. Subsequently, for as long as the LCO is in effect, the COF will insure that the required time for completion of restoration will not be exceeded during his shift. The COF will initial Section II indicating that any testing or actions (specified in Section I) required by Technical Specifications have been completed as applicable to his shift.

7.3.3 When the LCO is no longer in effect, the COF will complete Section III of the status sheet and forward it to the SS for review. The SS will forward the status sheet to the GOS. If cummulative inoperative restrictions apply to the LCO, the COF will have a copy made for the control room files prior to forwarding the status sheet to the GOS.

8.0 SURVEILLANCE TESTING

The GOS is responsible for overall performance control and coordination of the operations surveillance testing program.

8.1 Operations Surveillance Tests

8.1.1 The Operations Section is responsible for the performance, documentation and initial review of operations surveillance tests.

8.1.2 The SS/COF approval will be obtained prior to the commencement of any surveillance testing. The performer of the test will record the information required by the test procedure in the appropriate space and initial each step as it is completed. The performer will sign and date the procedure upon completion of the test. All items will be written in ink. If a step is not completed for any reason, the reason must be recorded on the procedure. When a test is performed and does not meet the specified acceptance criteria, the SS will be notified and corrective action initiated.

8.1.3 The SS/COF will review all surveillance tests performed on his shift for completeness and accuracy and shall so indicate by signing and dating the procedure(s) in the appropriate space. In addition, he will ensure that an entry is made on the control room surveillance test schedule to document the completion of operations section test.

8.2 Conditional or Off-Normal Surveillance Requirements

8.2.1 The SS/COF is responsible for establishing the schedule of surveillance testing to comply with Technical Specification requirements in conditional or off-normal situations.

"END"

FIGURE - 1	OPERATIONS GROUP ORGANIZATION

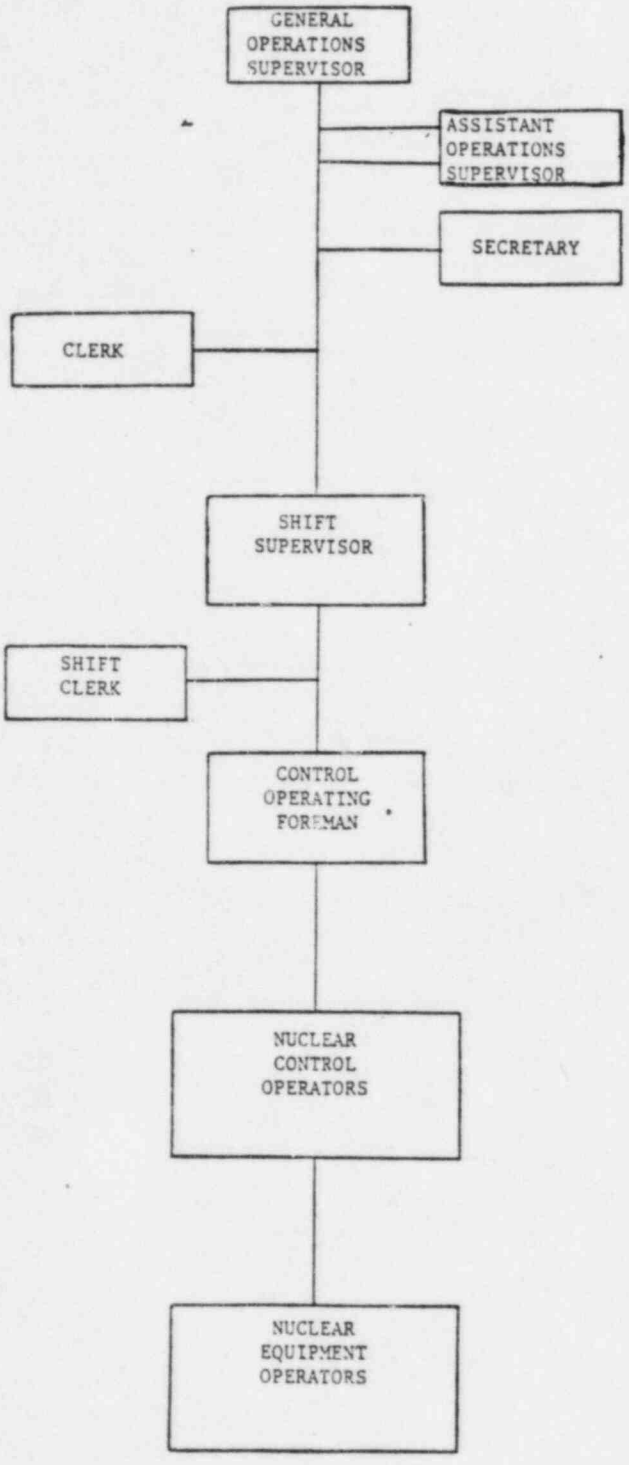
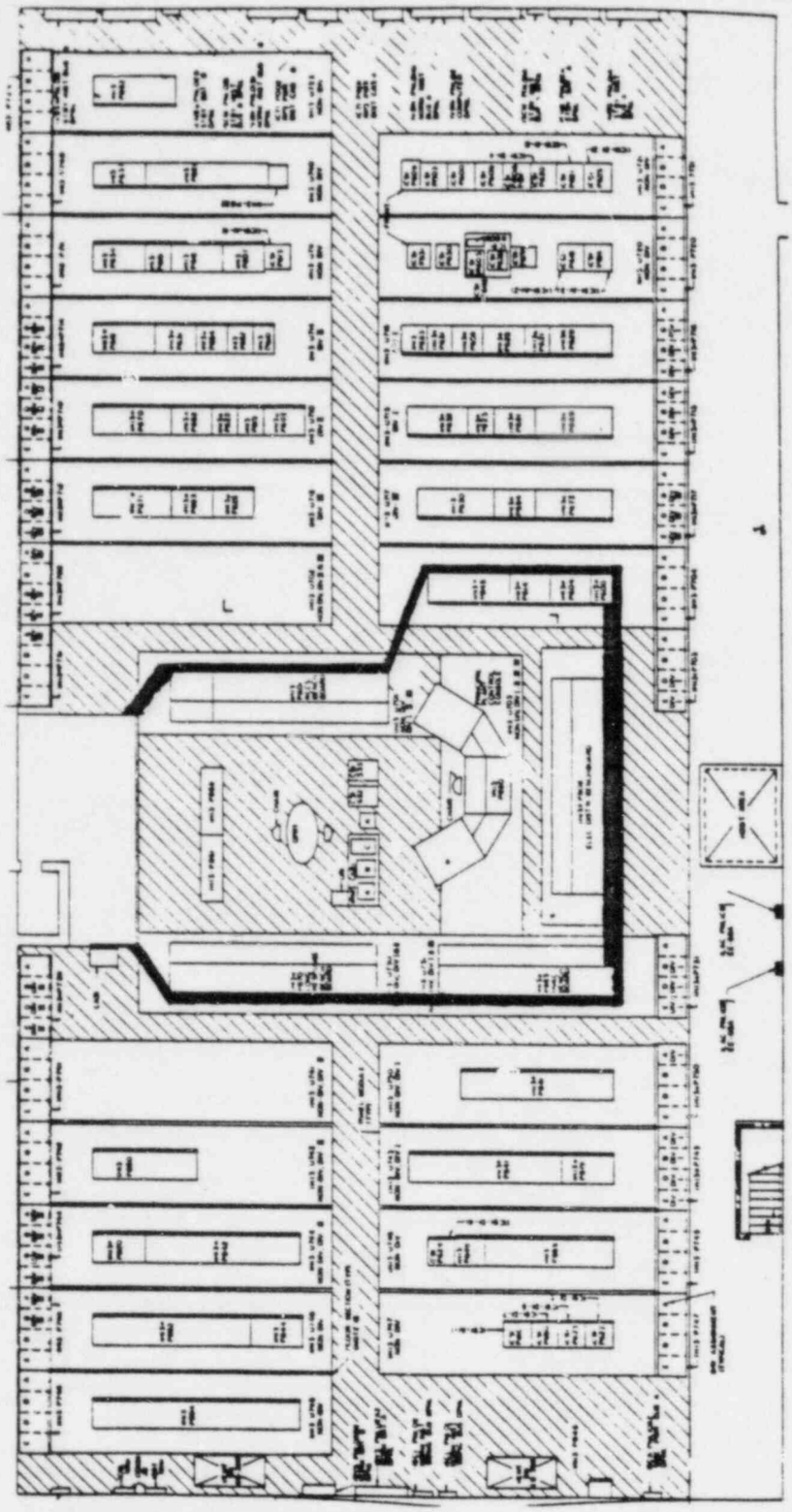


FIGURE - 2	CONTROL ROOM AND AT-THE-CONTROLS AREA (IIII)



ENCLOSURE - 1	POST TRIP REVIEW CHECKLIST

TIME/DATE/# OF SCRAM _____

___Review Computer Trip Logs and Sequence-of-Events Logs to determine "Initial Scram Signal". _____
(Initial Scram Signal)

___Review computer alarm printout and annunciator "hits" to confirm "Initial Scram Signal"

___Review Computer Trip Logs, P-1, OD-3, and OD-7 printouts to determine that all required automatic Safety-Related actions occurred.

___Review Control Room Logbook and Shift Supervisors Logbook to determine if any work was going on that could have generated the condition that generated the scram.

___Review the following recorders to determine what additional conditions have contributed to the scram and if Safety-Related Automatic Action occurred as required.

___Reactor Water Level (wide range) (P680)
___Reactor Recirc Loop A/B Flow (P680)
___APRM/IRM (P680)
___Rx Level/Press A/B (P601)
___Standby Service Water Flow (P870)
___Drywell Pressure (P808)
___Contmt Atmos Temp I/II (P808)
___Drywell Atmos Temp I/II (P808)
___Suppression Pool Temp I/II (P808)
___Contmt/Drywell Analyzer I/II (P808)
___ADS SRV Temp Monitoring (P614)
___Off-Gas System After Filter Disch Flow (P845)

___Interview Shift Operations personnel before the end of the affected shift, to determine the cause of the scram, what automatic actions occurred, and what manual actions were taken.

___Review recorders, control room logs, computer sequence-of-events printout, and computer alarm printout for the following parameters to determine if any safety systems function was supposed to actuate. Check any that exceeded a trip/actuation setpoint:

___RPV Water Level
___RPV Pressure
___Main Steam Line Pressure
___Main Steam Line Radiation
___Steam Pipe Tunnel Temp
___APRM Power Level
___Mode Switch Position
___Turbine Control Valve Position
___Reactor Protection Sys Trip Logic
___Suppression Pool Level
___Main Condenser Vacuum
___Drywell Pressure
___Main Steam Line Flow
___CRD Disch Vol Water Level
___IRM Power Level
___SRM Flux
___MSIV Position
___Turbine Stop Valve Position
___4.16KV Bus Voltage
___Drywell Sump Flow Rates

Log any safety systems functions that were supposed to actuate, but did not

_____

_____

_____

_____
Shift Supervisor

ENCLOSURE - 2

SCRAM REPORT

Date: _____ Time: _____ Number: _____

CAUSE	MODE SWITCH POSITION	REACTOR STATUS	FLOW CONTROL STATUS
___Operator Error	___Run	___Critical	___Loop Manual
___Testing Error	___Startup	___ _____MWT	___Flux Manual
___Equipment Failure	___Refuel	___Subcritical	___Master Manual
___Other _____			___Master Auto_____

STATION STATUS	SCRAM TIMES (For Monitored CRDS's)	STATION CONDITIONS
___Starting-Up	___None Avaiiable	Core Flow _____Lb/Hr
___Shutting Down	Average _____Seconds	Reactor Pressure _____Psig
___Changing Power	Fastest Rod _____	Steam Flow _____Lb/Hr
___Steady State	Time _____Seconds	Vessel Level _____Inches
___Surveillance Testing	Slowest Rod _____	Feedwater Flow _____Lb/Hr
___Other _____	Time _____Seconds	Radwaste Building Vent Activity _____Mr/Hr
		Plant Exhaust Stack Activity _____Mr/Hr
		Fuel Building Vent Activity _____Mr/Hr
		Generator Output _____MWE ___Off

Brief Description of Scram: _____

Contributing Conditions: _____

Suspected Cause of Scram: _____

_____
Operator At-The-Controls

1. Requirements of AOP-0001 "Reactor Scram" have been completed: _____

_____

2. Determination of the cause of the scram/bases*: _____

_____

_____

_____
Shift Supervisor

3. Determination that the cause of the scram has been corrected/bases*: _____

_____

_____

_____
Shift Supervisor

4. Classification of scram: ___Spurous ___Actual Parameter Deviation

_____
Shift Supervisor

5. Personnel Contacted: _____

_____ _____
General Operations Supervisor

6. FRC Review required: ___Yes ___No

7. Authorization to Restart/Concurrence:

___ _____ ___ _____ ___ _____ ___ _____

General Operations Supervisor | FRC Chairman | Plant Manager | VP-RBNG

*Attach supporting documentation (copies of records, charts, logs, etc.), use additional pages as necessary.

ENCLOSURE - 3

LCO STATUS SHEET

SECTION I

LCO EFFECTIVE		RESTORATION REQUIRED		TECH SPEC REF	MODES
DATE	TIME	DATE	TIME		

CONDITION INITIATING LCO: _____

REQUIRED ACTION IF RESTORATION TIME IS EXCEEDED: _____

REQUIRED ACTION WHILE LCO IN EFFECT: _____

COF: _____ SHIFT SUPERVISOR: _____

SECTION II

FOREMAN'S INITIALS INDICATE THAT ANY TESTING OR ACTIONS REQUIRED HAVE BEEN COMPLETED.

MONTH													
DATE													
NIGHT													
DAY													
EVENING													

MONTH													
DATE													
NIGHT													
DAY													
EVENING													

SECTION III

LCO NO LONGER IN EFFECT: DATE _____ TIME _____

TIME LCO IN EFFECT: DAYS _____ HOURS _____

CORRECTIVE ACTION REQUIRED: _____

CONTROL OPERATING FOREMAN | SHIFT SUPERVISOR | GENERAL OPERATIONS SUPERVISOR REVIEW