

CONDUCT OF OPERATIONS

A. STATEMENT OF APPLICABILITY:

The purpose of this procedure is to provide operating personnel with specific guidance as to their expected conduct in operations. This procedure addresses additional responsibilities other than those that may be delineated in other sections of the BAP.

B. REFERENCES:

1. INPO Good Practice OP-204
2. SER 13.1.2.2 Item 1.A.1.1
3. 10 CFR 50.54
4. Dennis Galle Ltr. Re: Procedure Change Regarding Importance of Finding Root Cause of Scram Prior to Startup Dated 4-13-83.
5. Vice President's Instruction No. 1-0-17
6. ANSI N.18.7-1976
7. NSD Directive NSDD-A09
8. OPEX 83-53
9. Byron Ltr #83-918

C. MAIN BODY:

General Responsibilities

1. The responsibility of the Shift Engineer 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 Shift Engineer should not become involved in any single operation that distracts him when multiple operations are required in the control room. During plant transients or an emergency he should not become totally involved in any single operation to the extent he loses his overall perspective of plant evolutions.
3. During events that require implementation of GSEP, the Shift Engineer is the Station Director until properly relieved.
4. During accident situations the Shift Engineer is in direct charge of the control room. The Shift Foreman relieves the Station Control Room Engineer so the SCRE can perform STA functions.
5. The Shift Engineer has the authority to call out all required personnel, regardless of discipline.

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6. The Shift Engineer is responsible for appraising his assigned personnel for fitness for duty after shift turnover as soon as practicable.
7. During the shift, the Shift Engineer and the Shift Foreman/Shift Advisor shall be made aware of any significant changes in plant status in a timely manner by the Station Control Room Engineer.
8. During the shift, the Shift Engineer and Shift Foreman/Shift Advisor shall remain abreast of current plant status. In addition, the Shift Foreman and Shift Advisor shall return to the control room two or three times per shift, where practicable, to confer with the Station Control Room Engineer regarding plant status. Where not practicable to return to the control room, the Shift Foreman/Shift Advisor shall periodically check with the Station Control Room Engineer for a plant status update. In no case should the Shift Foreman be required to abandon duties important to reactor operation to return to the control room, unless specifically ordered to do so by the Shift Engineer.
9. If any surveillance/test or other condition indicates that a system is not operable as required by the Technical Specifications, the Shift Engineer is to immediately begin the action required by the Technical Specifications as stated in the applicable LCOAR procedure, log the condition and notify the Operating Engineer or Assistant Superintendent.
10. Licensed operators on duty are responsible for achieving and monitoring abnormal plant shutdown and Engineered Safety Features System actuation when required.
11. Licensed plant personnel are responsible for conducting operations within Technical Specification Safety Limits and Limiting Conditions for operations.
12. Operations personnel shall be attentive to the condition of the plant at all times. They must be alert to ensure that the plant is operating safely and take action to prevent any progress toward a condition that might be unsafe.
13. All operating personnel must believe and respond conservatively to instrument indications unless the indications are proven to be incorrect.
14. An operator may place a controller in the manual mode from the automatic mode whenever, in the operator's judgement, continued automatic operation is unsafe, or whenever it may cause any unnecessary transients. This should only be done when conditions are "stable and under control", or when it is apparent that continued operation would aggravate or worsen the plant condition.
15. Operations personnel have the authority to depart from approved procedures where necessary to prevent or reduce injury to personnel, including the public or damage to the facility. Any such departure is to be documented and reported to the Assistant Superintendent of Operations.

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16. Except for training purposes, only licensed operators are permitted to manipulate controls that affect reactor power or reactivity on the Main Control Board or Remote Shutdown panel. For training purposes a licensed operator must be in attendance and concur prior to any manipulations.
17. All Operating 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 plant.
18. Any plant evolution outside the control room that may affect reactor power must not be performed without the knowledge and consent of the unit operator (NSO).
19. Personnel shall not change any setpoints or control settings, etc. inside control panels unless authorized using BAP 400-3 or BAP 400-13 as appropriate.
20. In-plant operators should report the completion of assigned tasks promptly to the center desk operator.
21. The Operator will keep their Shift Supervisor informed of any abnormal equipment operation or major evolutions.
22. When replacing fuses caution should be taken to ensure fuses are replaced like for like.
23. Reading of unauthorized, uncontrolled material by operating personnel is prohibited.
24. A Shift Advisor will provide advice and recommendations concerning plant operations to the Shift Engineer. If the Shift Advisor does not feel that his advice has been given Adequate weight by the Shift Engineer, he may confer with the Unit/Duty Operating Engineer. If the problem has not been resolved with the Operating Engineer, he may contact the Assistant Superintendent for Operating. If the problem still cannot be resolved, the Shift Advisor may contact the Station Superintendent. The decision of the Station Superintendent is final.

#### Reactor Trip

1. When a reactor trip occurs, the Shift Engineer will take the following action:
  - a. Ensure that the plant is placed in a safe condition by directing that the necessary operations are performed in accordance with approved procedures.
  - b. Notify the Station Control Room Engineer, if necessary.
  - c. Determine the subsequent action to be taken and notify the Operating Assistant Superintendent or Station duty person on call and other appropriate personnel and agencies.

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- d. Ensure reactor trip documentation is complete (BGP 100-A13).
2. The Shift Engineer is responsible for determining the circumstances, analyzing the root cause and determining that operations can proceed safely before the reactor is returned to power after a trip or an unscheduled or unexplained power reduction. Permission must be obtained from the Station Superintendent or his designee prior to startup.

Operations during Abnormal or Emergency Conditions

1. The Operator shall believe the instruments until the indications are proven false. 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. Operators are to initiate a manual reactor trip or an Engineered Safety Features System actuation if system parameters for a reactor trip or E.S.F. actuation exceed their actuation setpoint and automatic actuation does not occur or anytime when in their judgement it is necessary.
2. If circumstances arise which may require operations outside of the technical specifications, procedures, or operating orders the operator shall notify the Shift Engineer for approval, if there is sufficient time to contact him, or the licensed Senior Reactor Operator immediately available. Always proceed in a conservative manner.
3. When a definite hazard exists or when there is uncertainty as to whether an unstable condition exists, operators shall consider the following mandatory:
  - a. The safety of personnel and equipment is a responsibility to be considered primary to system load, efficiency or other factors.
  - b. Interlocks and other safety equipment shall be properly maintained, tested at regular intervals, and kept in service at all times\*.
  - c. Equipment shall not be operated in a manner to intentionally avoid the proper functioning of this protective equipment.
  - d. Operation of equipment under unstable conditions shall not be continued, when analysis indicates that a trip is the proper course.
  - e. If an immediate trip is necessary the System Power Supply Office should be notified immediately.
4. Control Room Division of Responsibility
  - a. Normal shift supervisor manning will usually consist of 1 Shift Engineer (SE), 1 Shift Foreman (SF) with an SRO, and 1 Station Control Room Engineer (SCRE). See BAP 300-2 for minimum manning.

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- b. During normal operation the SCRE acts as both the STA and SRO in the control room.
- c. In the event of a casualty the first available SRO in the control room will direct recovery and procedure flow. Note that initially this could be the SCRE. The SCRE will be relieved as soon as possible so that he may assume the role of the Station.

\*Some emergency procedures may allow for bypassing some safety functions in order to maintain the plant in a safe condition.

- d. If the SCRE is the SRO in the control room he must be relieved within 10 minutes to act as the STA.
- e. The SF will usually relieve the SCRE of line functions and take over as the SRO.
- f. The SE will have to classify and initiate GSEP as acting Station Director. In addition he could relieve the SCRE of line functions.
- g. The STA function of independent observer will be executed by monitoring of the status trees either by computer or manually, observing the flow through the procedure, and observation of any other parameter deemed appropriate. If a non-Green path is observed in the BSTs the SCRE will notify the SRO in charge (SE, SF) of the condition. Other non-expected conditions will also be communicated to the SRO in charge.
- h. The RO will perform all immediate actions, and follow the appropriate subsequent steps of the emergency procedures, usually under direction of an SRO.

#### Switching Orders

- 1. The Shift Engineer shall be informed prior to any switching operation requested by the Load Dispatcher. If the Load Dispatcher states that it is an emergency switching operation, prior approval is not required, but the Shift Engineer will be notified as soon as possible.
- 2. A Supervisor qualified in Hi Voltage Switching shall accompany the operator when live switching operations or transfer trip testing is being conducted.
- 3. Operations personnel will make regular observation of the 34KV and 345KV transmission lines when weather and operating conditions are favorable for icing. When icing is observed, necessary action will be taken to prevent further ice buildup on the conductors and static wires.

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### Generator Load Changes

1. Load Changes requested by SPSO - Load changes requested by the System Power Supply Office (SPSO) are directed to the SE or NSO. When the NSO receives the request, he will notify the SE and receive SE approval for the load change. SPSO is notified by the NSO when the load change is completed or if the SE disapproves of the request.
2. Load Changes requested by Station - Normally load change requests by the station are made to SPSO by the OE. Notification should be made as early as possible. Communication to the shift is through the daily order book.
3. Load Changes while on EGC - When the unit is on EGC the range of Load Changes is set by the NSO and the changes are controlled by the EGC computer.

### Housekeeping

1. The control room will be maintained in a clean and orderly condition in the interest of safe and efficient operations. All dusting and cleaning of control consoles, instrument panels, and computer consoles will be performed by NSO's. It may at times be advisable not to clean or dust in some areas of the control room during plant power conditions because of risk of bumping or otherwise moving critical controls.
2. The Shift Engineer's Office shall also be maintained in a clean and orderly condition. The frequency and areas to be cleaned will be delineated by the Shift Supervisor.

### Control Room Conduct

1. All personnel shall be alert and capable of performing their assigned duties in a professional manner at all times. Of particular note are operators who are tied to a duty station (including control room operators); such personnel must be attentive to their panels in order to professionally execute their duties. Examples of actions and performance which will not be tolerated are:
  - a. Sleeping
  - b. Habitual or chronic lack of attentiveness
  - c. Card playing, games, or other distractions from prescribed duties.
  - d. Alcohol or drug use.
  - e. So-called practical jokes which could reduce the ability of persons or equipment to perform as required.

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- f. Any other acts which could adversely affect the ability of individuals or equipment to perform their intended safety functions.

ANYONE FAILING TO ADHERE TO THESE REQUIREMENTS WILL BE SUBJECT TO SEVERE DISCIPLINARY ACTION, INCLUDING THE POSSIBILITY OF DISCHARGE FROM THE COMPANY.

2. The only reading material allowed will be professional, job-related literature approved by the Station Superintendent. Examples of reading material not allowed are newspapers, novels, non-professional magazines and other non-job-related material. The SCRE has the authority to ban any material, as defined above, from the control room.
3. No radios or television capable of receiving commercial broadcasts will be permitted in the plant except as authorized by the Station Superintendent.

ANYONE FAILING TO COMPLY WITH ABOVE MENTIONED WILL BE SUBJECT TO DISCIPLINARY MEASURES COMMENSURATE WITH THE SEVERITY OF THE VIOLATION, TAKING INTO ACCOUNT THE SIGNIFICANCE OF THE INFRACTION. DISCIPLINARY ACTION COULD INVOLVE WARNINGS, DISCIPLINARY SUSPENSION, OR DISCHARGE, ANY OF WHICH STEPS COULD BE REPEATED OR BYPASSED.

4. The above elements are not all inclusive. They do, however, outline specific performance requirements for certain elements of nuclear plant operations which indicate the seriousness with which the Company views such actions. Our objective is a professional atmosphere - one in which operators and their supervisors continue to gain in knowledge of the plant and its operations while performing normal evolutions and routines.
5. Access to the control room shall follow the provisions as delineated in BAP 900-10.
6. All personnel are to request permission from the appropriate Unit NSO prior to entrance into the "at the controls" area. No one has special approval for entrance into this area, however, the NRC, QA and observers have the right of access for control board walkdowns, observations of evolutions, etc. The Shift Engineer, Shift Foreman, Station Control Room Engineer, and the NSO have the authority to restrict access to or remove personnel from the control room during routine and emergency operation.
7. All necessary plant-related technical/administrative control room business must be conducted at the center desk and in such a manner that neither Unit NSO attentiveness nor the professional atmosphere will be compromised.
8. No unauthorized or uncontrolled notes, pictures, graphs, prints, etc. will be used as operator aids in the control room or in the plant.

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9. Paragraph "k" of 10 CFR 50.54 states "An operator or senior operator licensed pursuant to part 55 of this chapter shall be present at the controls at all times during the operation of the facility." In order to comply with this paragraph, an operator will be considered to be at the reactor controls if the operator has visual contact with the unit annunciator panels. An operator is not at the controls when behind the panels or out of the control room. Therefore, before an operator can leave the controls, a licensed operator must assume control of the unit. One reactor operator cannot assume control of both units simultaneously.
10. The control room should not be used as a lunchroom or meeting room except for operators and testing coordination meetings held during plant construction.

#### Shift/Evolution Briefings

1. Briefings shall be conducted by the Shift Engineer or his designee for individuals involved in an evolution that is to be performed. The detail of the briefing is dependent on the degree of complexity, routineness, logistics, or number of people involved.
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.
3. 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 shall be coordinated by the Operating Engineer or his designee and should include:
  - a. a review of the appropriate section of the procedure by key parties
  - b. examination of each individual's specific involvement and responsibility
  - c. discussion of expected results or performance; review of limitations, hold points, emergency action to be taken if contingencies arise.
  - d. ensure that everyone understands the interface and communications required.

#### Communications

1. The page system should be used to announce emergencies and unexpected events, and to relay information regarding a change in plant status (e.g. - the starting of a large piece of equipment). It is not to be used for horseplay.

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2. Operator communications should be clear and concise. Complex orders or orders involving specific equipment numbers should be repeated back by the operator performing the task.

Records

1. Refer to BAP 300-4.

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