

Section 6

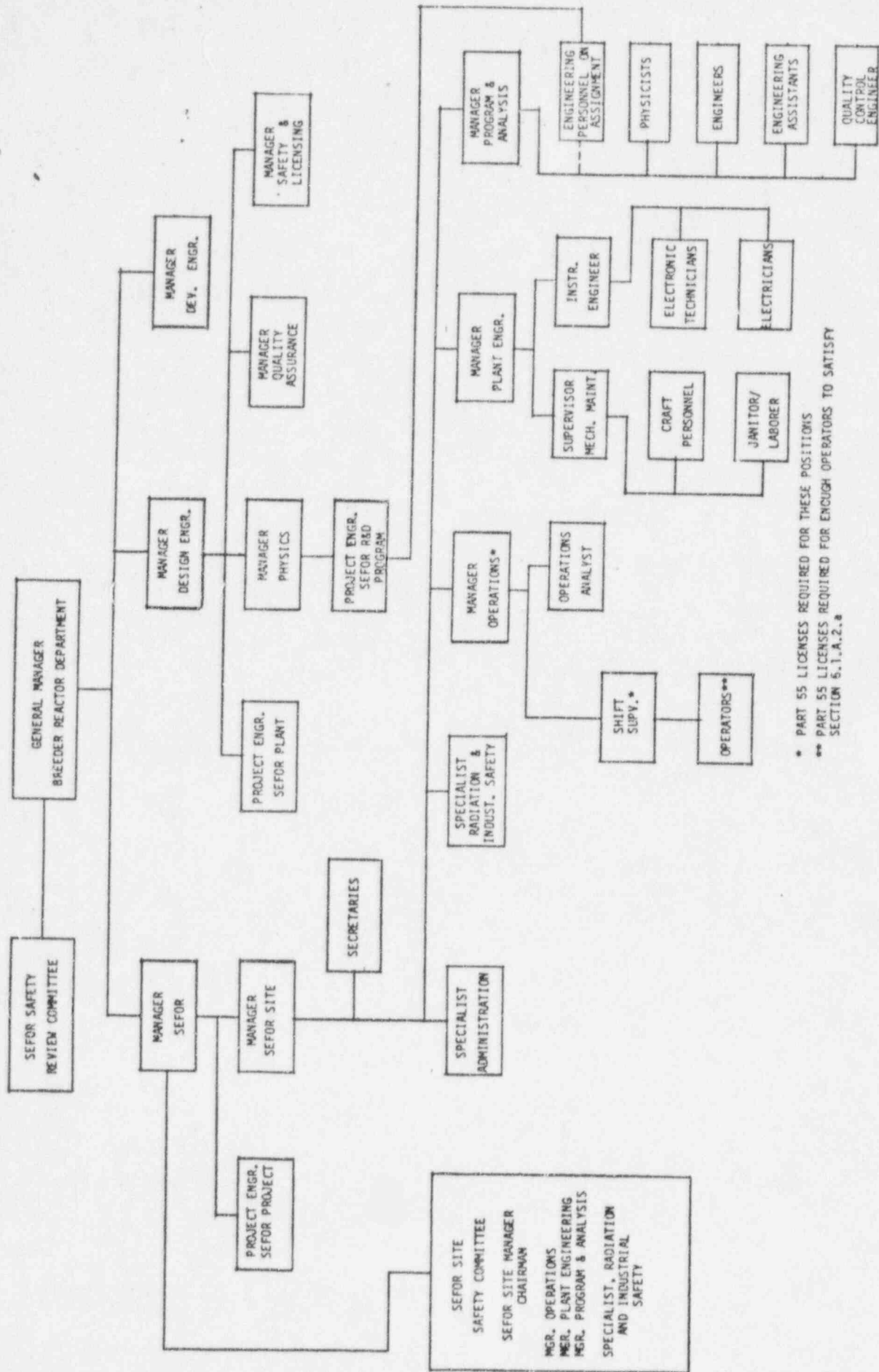
ADMINISTRATIVE CONTROLS

6.1 Organization, Review, and Audit

This specification applies to the organization for management and for review and audit of facility operations. Its objective is to delineate responsibility for management of the facility, to assure maintenance of a high level of staff competence, and to specify an independent program for review and audit of facility operation.

A. Organization

1. The organization for management, operation, and audit of SEFOR facility operations shall be as given in Figure 6-1. The overall full-time responsibility for operation of the SEFOR facility and compliance with these Technical Specifications shall reside in the SEFOR Facility Site Manager. The Site Manager reports to the Manager, SEFOR, who in turn is responsible directly to the BRDØ General Manager. The BRDØ General Manager reports to the Nuclear Energy Division General Manager. As indicated in Figure 6-1, technical engineering assistance will be provided as necessary through the BRDØ Manager of ~~Plant Engineering and Projects~~ Design Engineering.
2. The minimum functional organization required for operation of the facility shall be as follows:
 - a. An operating shift shall consist of a shift supervisor and at least three additional operators. At least one of the operators shall be licensed.
 - b. When the reactor is secured, a licensed reactor operator and two additional persons trained in carrying out emergency procedures shall be at the site.
 - c. A shift supervisor shall be in charge of startup, approach to power, normal operation, recovery from unplanned or unscheduled reductions in power, shutdown, handling or transferring of materials in the reactor vessel, and during any handling operations within the refueling cell when the reactor vessel head or ports have been removed.



* PART 55 LICENSES REQUIRED FOR THESE POSITIONS
 ** PART 55 LICENSES REQUIRED FOR ENOUGH OPERATORS TO SATISFY SECTION 5.1.A.2.a

- d. Personnel requiring Part 55 licenses shall be as indicated in Figure 6-1.
3. Qualifications with regard to education and operating experience for key supervisory personnel shall be as follows:
- a. Manager, SEFOR
- B.S. in Engineering or Science, or equivalent in experience. Five years experience in the management or supervision of the design, construction, installation, operation, development and maintenance of nuclear facilities.
- General knowledge of related technical fields, including reactor physics, radiological hazards control, instrumentation and nuclear engineering.
- Familiarity with license and Technical Specifications, AEC reporting requirements, and Quality Assurance program for SEFOR.
- b. SEFOR Facility Manager, SEFOR Site
- B.S. in Engineering or Science or equivalent in experience. Seven years experience in the design, construction, installation, operation, development, and maintenance of nuclear facilities.
- Demonstrated detailed and comprehensive knowledge in related technical fields, including reactor physics, radiological hazards control, nuclear engineering and instrument engineering.
- Five years experience, or one year experience at SEFOR plus two years experience elsewhere, in the supervision and management of the construction and operation of reactor facilities. Demonstrated ability to plan, organize, and direct reactor plant operations.
- c. Manager, Plant Engineering
- B.S. in Engineering or Science, or equivalent in experience. Five years experience or equivalent in the operation and maintenance of power-generation facilities, including a minimum of one year in responsible supervisory positions in the operation or maintenance of such facilities, and one year of nuclear plant experience. Ability to plan, program, and direct activities of engineering and craft personnel.

Demonstrated ability in the design and application of equipment and devices, with a thorough understanding of process equipment such as pumps, fans, heat exchangers and generators, heaters, etc., as applicable to nuclear facilities.

d.e. Manager, Operations

B.S. in Engineering or Science or equivalent in experience. Five years experience in the operation and maintenance of reactor or nuclear power facilities, including minimum of one year in supervisory positions in the operation and maintenance of such facilities.

Demonstrated ability to organize and coordinate plant operations. Comprehensive knowledge of problems associated with startup and initial operation of reactor facilities, including knowledge of radiological hazards, technical aspects of reactor operation of control systems, radiation shielding, contamination control, etc. Demonstrated good judgment necessary to make correct decisions under rapidly changing conditions. Licensed as a Senior Reactor Operator.

e.f. Manager, Programs and Analysis

B.S. in Engineering or Science or equivalent in experience. Five years experience in the design, operation, analysis and programming of a variety of reactor types or nuclear power facilities, including at least one year in responsible supervisory position in such organizations.

Comprehensive knowledge of reactor physics, reactor design, reactor operation, radiation shielding, fluid flow, thermodynamics, instrumentation, and related technologies.

Demonstrated capability for directing the efforts of physicists and engineers.

Ability to develop techniques and test procedures to carry out a reactor experimental program.

Demonstrated knowledge of the practical aspects of the operation of reactors, including their characteristics, limitations, and safe operating requirements.

f.e. Specialist, Radiation and Industrial Safety

B.S. in Engineering or Science or equivalent in experience.

Three years experience in analytical chemistry or radio-chemistry and health physics, including one year of experience in radiation protection.

Demonstrated ability in evaluation of radiation hazards, design and development of radiation monitoring equipment, and in conducting health-physics studies.

Thorough understanding of radiation dosimetry and a working knowledge of design of radiation facilities, shielding calculations and design of ventilation control, radioactive waste processing, calibration of radiation measuring instrumentation, maximum permissible radiation exposure levels, and good radiological safety and health protection practices. Must be cognizant of local and state industrial safety requirements. Demonstrated ability in teaching, lecturing, and implementing safe practices and procedures.

g.f. Supervisor, Mechanical Maintenance

B.S. in Engineering or Science, or equivalent in experience with a high school education and apprenticeship training.

Five years of experience with power generating equipment, including one year of nuclear experience and one year of experience as a supervisor in the maintenance of associated equipment for reactors or power generating equipment.

Familiarity with non-destructive testing, and understanding of pressure vessel and piping codes.

Knowledge of craft techniques and mechanical maintenance procedures applicable to nuclear facilities.

Cognizance of radiation and safety procedures and regulations, as applicable to nuclear facilities.

h.g. Instrumentation Engineer

B.S. in Engineering or Science, or equivalent in experience.

Three years experience in design, installation, calibration and maintenance of process instrumentation, including a

minimum of one year of nuclear instrumentation experience and an understanding of electrical codes. Cognizance of significance of control and instrumentation systems with respect to reactor operation and safety. Demonstrated ability to analyze systems for adequacy to meet system requirements and to conceive, assemble, and install necessary modifications to meet systems requirements.

i.h. Shift Supervisor

B.S. in Engineering or Science, or equivalent in experience. Three years experience in the operation of reactor or nuclear facilities.

Knowledge of reactor startup methods and procedures, including radiological hazards and their control, plant maintenance, modern physics and other technical aspects of reactor facilities. Ability to plan, coordinate, and direct the efforts of operations personnel as indicated by previous supervisory experience or satisfactory progression in job positions.

Licensed as a Senior Reactor Operator.

B. Review and Audit

Organizational units for the review and audit of plant operations shall be constituted and have the responsibilities and authorities outlined below:

1. SEFOR Site Safety Committee

a. Membership

Chairman: ~~Facility~~ Site Manager or designated alternate.
Manager, Operations or designated alternate.

Manager, Plant Engineering or designated alternate.

Manager, Program and Analysis or designated alternate.

Specialist, Radiation and Industrial Safety or designated alternate.

b. Meeting Frequency

At least every two weeks and more often as deemed necessary by the Chairman.

c. Quorum

Chairman or his designated alternate, plus two other members.

d. Responsibilities

- (1) Review all proposed normal, abnormal, emergency procedures, and procedures for maintenance which are significant to reactor safety and proposed changes to these procedures.
- (2) Review all proposed tests for the planned experimental program, and plant tests which may have significance to reactor safety.
- (3) Review proposed changes to Technical Specifications.
- (4) Review proposed changes and modifications to plant systems or equipment which would require a change in, or would be covered by procedures in d(1) above.
- (5) Review plant operation to detect potential safety hazards
- (6) Review reported violations of Technical Specifications.
- (7) Perform special reviews and investigations and make recommendations thereon as requested by the SEFOR ~~Facility~~ Site Manager.
- (8) Report to the ~~BRDG General~~ Manager SEFOR and to the Chairman of the SEFOR Safety Review Committee on all reviews and investigation conducted under items d(6) and d(7) above.
- (9) Make tentative determinations regarding whether proposals considered by the committee involve unreviewed safety questions in accordance with 10 CFR 50.59 and recommend the necessary actions or safety analyses to the ~~Facility~~ Site Manager.

e. Authority

- (1) The SEFOR Site Safety Committee shall be advisory to the ~~Facility~~ Site Manager.
- (2) The SEFOR Site Safety Committee shall review and recommend to the ~~Facility~~ Site Manager approval or disapproval of proposals under items d(1) through d(5) above.
 - a. In the event of disagreement between the recommendations of the SEFOR Site Safety Committee and actions

contemplated by the ~~Facility~~ Site Manager on safety matters, the decision and action to be taken shall be the responsibility of the ~~Facility~~ Site Manager.

f. Records

Minutes shall be kept for all meetings of the SEFOR Site Safety Committee. Copies of the minutes shall be forwarded to the ~~BRDØ General~~ Manager, SEFOR, the Chairman of the SEFOR Safety Review Committee, and to the Manager, ~~Safeguards~~ Safety and Analysis Licensing.

g. Procedures

Committee rules and regulations shall be prepared and maintained describing the function of the committee, its meeting schedule, methods for review and approval of evaluations and recommendations, or designation of meetings and such other matters as may be appropriate.

2. SEFOR Safety Review Committee

a. Membership

- (1) Chairman plus five members appointed by the BRDØ General Manager.
- (2) Manager, Nuclear Safety Appraisal Operation, Nuclear Energy Division, ex-officio member in addition to the appointees in (1) above.
- (3) Technical consultants as deemed necessary by the BRDØ General Manager.
- (4) Members of the SEFOR ~~Facility~~ Site Operation (Figure 6-1) shall not serve as members of the Safety Review Committee.
- (5) Qualifications of the Safety Review Committee with regard to the combined experience and technical specialties of the individual members shall be maintained at a high level. The Committee as a whole shall have competence in nuclear reactor technology encompassing the basic disciplines of chemistry, physics, engineering, and also safety and health physics. The minimum qualifications

for membership of this Committee shall be determined by the BRD~~Θ~~ General Manager. The membership of this Committee shall be selected by the BRD~~Θ~~ General Manager with the advice and concurrence of the Manager, Nuclear Safety Appraisal Operation, Nuclear Energy Division. . The performance of this committee shall be reviewed periodically by both the BRD~~Θ~~ General Manager and the Manager, Nuclear Safety Appraisal Operation. Deterioration in its performance shall be avoided by replacement of individuals or a reconstitution of the committee, if necessary, at the discretion of the BRD~~Θ~~ General Manager. Replacement shall be made from the manpower resources of the General Electric Company as a whole.

b. Meeting Frequency

Semi-annually and as required on call of the Chairman or the BRD~~Θ~~ General Manager. During the first year of operation, the committee shall meet at least three times.

c. Quorum

Chairman or his delegated alternate plus three members.

d. Responsibilities

- (1) Review proposed changes to the Operating License, including Technical Specifications.
- (2) Review matters including proposed changes or modifications to plant systems or equipment as referred to it by the SEFOR Site Safety Committee or by the Facility Site Manager and review decisions with regard to unre-viewed safety questions.
- (3) Audit proposed changes to procedures, tests, experiments, and review those changes which may have safety significance.
- (4) Review reports, minutes, and results of audit inspections and select for review specific items which may have safety implications.
- (5) Conduct, or have conducted by a qualified group, audits of plant operation at least semi-annually to assure that emergency procedures are up-to-date and to assure compliance with Operating Procedures and Technical Specifications.

- (6) Review reported instances of violations of Technical Specifications and recommend to the BRDØ General Manager appropriate action to prevent recurrence of the violations.
 - (7) Review instances of significant equipment malfunctions which are of an unusual or unexpected type, and perform other special reviews and investigations as requested by the BRDØ General Manager.
- e. Authority
- The function of the SEFOR Safety Review Committee shall be advisory, and it shall report directly to the BRDØ General Manager.
- f. Records
- A report on each meeting of the SEFOR Safety Review Committee shall be prepared and forwarded to the BRDØ General Manager and to such others as the Chairman or the BRDØ General Manager may designate. This report shall contain the findings and recommendations resulting from each meeting. The BRDØ General Manager shall have documented, within a reasonable period following the receipt of the report, the actions taken on the recommendations. Copies of this response shall be forwarded to the Chairman and members of the SEFOR Safety Review Committee.
- g. Procedures
- Procedures for committee operation shall be established by the Chairman of the committee and the BRDØ General Manager. The BRDØ General Manager shall review periodically the performance of the committee to assure an independent and comprehensive review of facility operation.

6.2 Plant Operating and Emergency Procedures

- A. Detailed written procedures and instructions with check-off lists, approved by the SEFOR Facility Site Manager, shall be provided and used for the following conditions:
1. Refueling and refueling cell operations, normal startup, operation, and shutdown of the complete facility and of all systems and components involving nuclear and radiological safety of the facility.
 2. All program tests and experiments.
 3. Emergency conditions involving possible or actual releases of radioactive materials.
 4. Preventive or corrective operations that could have an effect on reactor safety or affect nuclear or radiological safety.
- B. Temporary operating procedures which do not decrease plant safety margins, may be used after review by the Manager, Program and Analysis, and approval by the Manager, Operations. Use of these procedures shall be documented in the operating records.
- C. Modifications to experimental test procedures, which do not change the original intent or add to the scope of the test, and which do not reduce safety margins may be made with the approval of the Manager, Program and Analysis. Such changes shall be documented in the operating records.
- D. Provisional test procedures which are complementary to experimental test procedures or that are of a diagnostic nature, and do not reduce plant safety margins, may be used after review by the Manager, Operations and approval by the Manager, Program and Analysis. Such procedures shall be documented in the operating records.
- E. Radiation control procedures shall be established and all station personnel shall be instructed in these procedures. These procedures shall show the permissible radiation exposure levels and methods for control of radiation exposure.

The radiation protection program shall be organized to meet the requirements of 10 CFR 20 with the following exception: ⁽¹⁾

Paragraph 20.203 - caution signs, labels and signals. In lieu of the "control device" or the "conspicuous visible or audible alarm signal" specified in paragraph 20.203 (c) (2), each High Radiation Area in which the intensity of radiation is 100mREM/hr or more shall be barricaded and physically posted as a High Radiation Area. Entrance thereto shall be controlled by requiring a special work permit and any individual or group of individuals permitted to enter such an area shall be provided with a radiation monitoring device which continuously indicates the radiation dose in the area.

In addition to the above requirement, any high radiation area in which the intensity of radiation is greater than 1000 mREM/hr, shall be provided with locked doors to prevent entry into such areas by unauthorized personnel. The keys to these doors shall be kept under the administrative control of the shift supervisor and the Manager, Operations.

- F. Practice drills on Emergency Procedures shall be conducted prior to initial criticality and at least annually thereafter. Such drills shall include as a minimum, partial or complete evacuation of the site and a test of the adequacy of communications with off-site support groups.

Reference

- (1) Letter to Dr. Peter A. Morris, U.S.A.E.C., Division of Reactor Licensing from Karl Cohen, BRDO, General Electric Company dated February 28, 1969.

6.3 Action to Be Taken in the Event of an Abnormal Occurrence

A. Limiting Safety System Setting

1. If a limiting safety system setting is violated without causing a reactor scram or other safety system action, the reactor shall be shut down immediately, and the occurrence shall be reported promptly to the Manager, SEFOR ~~Facility Site~~.
2. A thorough investigation of the conditions related to the occurrence shall be made by the Site Safety Committee. The Committee shall prepare a report for each such occurrence, including an evaluation of the cause of the occurrence and recommendations for appropriate actions to prevent or reduce the probability of recurrence. Copies of this report shall be forwarded to the ~~BRDO General Manager~~ Manager, SEFOR.
3. The DRL shall be promptly notified of the occurrence.
4. Reactor operations may be resumed after corrective action has been taken to prevent recurrence of the situation, provided such operation is recommended by the Site Safety Committee.

B. Limiting Conditions for Operation

1. If during operation, the limiting conditions for operation specified in Section 3 of these Technical Specifications are not met, the reactor shall be shut down.
2. The Site Safety Committee shall review the occurrence and ascertain that corrective measures are taken to prevent or minimize the probability of recurrence of the event. The committee shall prepare a report documenting its evaluation of the event and its recommendations and forward the report to the ~~BRDO General~~ Manager Manager, SEFOR.
3. If a violation of the limiting conditions for operation causes a reactor shutdown, the DRL shall be notified by means of the quarterly operations report. This report shall include the circumstances of the abnormal occurrence and the remedial actions taken.
4. Reactor operations may be resumed when remedial actions have been taken and the limiting conditions for operation are met.

C. Component Failures and Deterioration of Fission Product Barriers

1. If component failures should occur which threaten the operability of an engineered safety system or if abnormal deterioration should be discovered which could threaten the integrity of one of the barriers to the release of fission products, the reactor shall be shut down.
2. The Site Safety Committee shall review the occurrence and ascertain that corrective measures are taken before reactor operations are resumed. The Committee shall prepare a report documenting the occurrence and the basis for any action it recommends and forward the report to the ~~BRDO General Manager~~ Manager, SEFOR.
3. The DRL shall be notified of the occurrence as required by the license and by means of the Quarterly Operations Report. This report shall identify the circumstances and the remedial action taken.

D. Administrative and Procedural Controls

1. Should inadequacies in administrative or procedural controls be disclosed during the course of facility operations which create or could lead to an unsafe condition, immediate action shall be taken to put the affected portion of the plant in the safest possible condition.
2. The Site Safety Committee shall review the deficiencies and assure that corrective measures are taken before normal operations are resumed. The Committee shall prepare a report of the circumstances and action taken and forward the report to the ~~BRDO General Manager~~ Manager, SEFOR.
3. The DRL shall be notified by means of the Quarterly Operations Report.

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6.4 Action to Be Taken if a Safety Limit is Exceeded

If a safety limit is exceeded, the reactor shall be shut down immediately. Reactor operations shall not be resumed until authorized by the DRL. An immediate report shall be made to the Manager, SEFOR ~~the General Manager of Breeder Reactor Development Operation~~ and to the DRL. A complete analysis of the circumstances leading up to and resulting from the situation, together with a recommendation to prevent a recurrence shall be prepared by the SEFOR Site Safety Committee. This report shall be submitted to the Manager, SEFOR, ~~Manager of the Breeder Reactor Development Operation~~ and the Chairman, SEFOR Safety Review Committee for review and action. Appropriate analyses and reports, verbal and written, shall be submitted to the DRL.