

Docket No. 50-213

Attachment I

Proposed Revisions to Technical Specifications

Haddam Neck Plant

July, 1985

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## DEFINITIONS

### REPORTABLE EVENT

- 1.7 A Reportable Event shall be any of those conditions specified in Section 50.73 to 10 CFR Part 50.

### CONTAINMENT INTEGRITY

- 1.8 CONTAINMENT INTEGRITY shall exist when:

- 1.8.1 The containment automatic isolation valve system is OPERABLE.
- 1.8.2 All penetrations required to be closed during accident conditions are either:
  - a. Capable of being closed by OPERABLE containment automatic isolation valves, or
  - b. Closed by manual valves, blind flanges, or deactivated automatic valves secured and locked in their closed positions,
- 1.8.3 All equipment hatches are closed and sealed, and
- 1.8.4 Each door in each air lock is closed and sealed except when the air lock is being used for normal transit entry and exit through the containment, then at least one air lock door shall be closed and sealed.

### CHANNEL CALIBRATION

- 1.9 A CHANNEL CALIBRATION shall be the adjustment of channel output such that it responds, with acceptable range and accuracy, to known values of the parameter which the channel measures. Calibration shall encompass the entire channel, including equipment actuation, alarm, or trip.

### CHANNEL CHECK

- 1.10 A CHANNEL CHECK shall be the qualitative assessment of channel behavior during operation by observation. This determination shall include, where possible, comparison of the channel indication with other indications derived from independent instrument channels measuring the same parameter.

### 3.22 FIRE PROTECTION SYSTEMS

#### Applicability

This specification applies to the operational status of the plant fire protection and detection systems.

#### Objective

To ensure the availability of the fire protection and detection systems.

#### Specification

##### A. Fire Suppression Water Systems

- A.1 The Fire Suppression Water System shall be operable during all modes of operation with:
- a) Two high pressure fire pumps, each with a capacity of 2500 gpm, with their discharge aligned to the fire suppression header.
  - b) Automatic initiation logic for each fire pump.
- A.2 From and after the date that one fire pump is determined to be inoperable, restore the pump to operable status within 7 days or prepare and submit a Report to the Commission pursuant to Specification 6.6.1.
- A.3 From and after the time that the entire Fire Suppression Water System is determined to be inoperable with the plant in any operating mode:
- a) Within 24 hours establish a backup Fire Suppression Water System, and prepare and submit a Report pursuant to Specification 6.6.1.
  - b) The plant shall be placed in at least Hot Standby within 6 hours and in Cold Shutdown within the following 24 hours.

B. Carbon Dioxide Systems

B.1 The following CO<sub>2</sub> Systems shall be Operable with the minimum number of bottles of CO<sub>2</sub> indicated, connected and available for service and having at least 90% of full charge weight, whenever the protected equipment in the area is required to be Operable:

- a) Cable Vault (18)
- b) Primary Auxiliary Building Charcoal Filters (8)

B.2 From and after the time a CO<sub>2</sub> system listed in B.1 is determined to be inoperable, within one hour establish a continuous fire watch with backup fire suppression equipment for the unprotected equipment and/or area.

B.3 Restore the system to Operable status within 14 days or prepare and submit a Report to the Commission pursuant to Specification 6.6.1

C. Halon 1301 System

C.1 The Halon 1301 System for the switchgear room shall be operable with at least (7) Halon bottles connected and available for service and each bottle shall be at least 92% of full charge weight.

C.2 From and after the time the Halon system listed in C.1 is determined to be inoperable within one hour establish a continuous fire watch with backup fire suppression equipment for the unprotected equipment and/or area.

C.3 Restore the system to operable status within 14 days or prepare-and submit a Report to the Commission pursuant to Specification 6.6.1.

D. Fire Water Stations

D.1 The Fire Water Stations listed in Table 3.22-1 shall be Operable.

D.2 From and after the time any of the Fire Water Stations listed in Table 3.22-1 are determined to be inoperable, within one hour route an additional equivalent capacity hose to the unprotected area from an operable fire water station or establish a fire patrol to inspect the unprotected area at intervals of at least once each hour.

#### E. Fire Detection Systems

E.1 The minimum number of detectors for each fire detection zone shown in Table 3.22-2 shall be OPERABLE.

#### E.2 ACTION

Whenever the number of OPERABLE detectors is less than the minimum number OPERABLE requirement of Table 3.22-2:

- a. Within 1 hour establish a fire watch patrol to inspect the zone(s) with the inoperable instrument(s) at least once per hour, unless the instrument(s) is located inside the containment, then inspect the containment at least once per 8 hours or (monitor the containment air temperature at least once per hour at the locations referenced by Specification 4.4, Containment Testing).
- b. Restore the inoperable instrument(s) to OPERABLE status within 14 days, or, prepare and submit a Report to the Commission pursuant to Specification 6.6.1

#### F. Penetration Fire Barriers

F.1 Penetration fire barriers (including cable penetration barriers, fire doors and fire dampers) that protect safety related areas shall be functional.

F.2 From and after the time that it is determined that a penetration fire barrier is not functional; (a) the areas shall be monitored by operable fire detectors and within one (1) hour a fire watch patrol shall be established to inspect the area of at least once per hour or (b) a continuous fire watch shall be established on at least one side of the affected penetration within one (1) hour.

C.2 From and after the time any of the spray and/or sprinkler systems listed in C.1 is determined to be inoperable, within one hour, establish a continuous fire watch with backup fire suppression for those areas starred (\*) in G.1; for other areas, establish a fire patrol to inspect the applicable unprotected area at intervals of at least once each hour.

C.3 Restore the inoperable system to operable status within 14 days or prepare and submit a Report to the Commission pursuant to Specification 6.6.1.

#### Basis

##### A. Fire Detection and Suppression Systems

###### Fire Suppression Systems

The operability of the fire suppression systems ensures that adequate fire suppression capability is available to confine and extinguish fires occurring in any portion of the facility where safety related equipment is located. The fire suppression system consists of the water systems, spray and/or sprinklers, CO<sub>2</sub> Systems, Halon 1301 Systems, fire hose stations and hydrants. The capability of the fire suppression systems is adequate to minimize potential damage to safety related equipment and is a major element in the facility fire protection program.

In the event that a portion of the Fire Suppression System becomes inoperable, alternate backup fire fighting equipment or a periodic fire watch patrol is required to be established in the associated area until the inoperable equipment can be restored to service.

In the event that the fire suppression water system becomes inoperable, immediate corrective measures must be taken since this system provides the major fire suppression capability of the plant. The requirement for a twenty-four hour report to the Commission provides for prompt evaluation of the acceptability of the corrective measures to provide adequate fire suppression capability for the continued protection of the nuclear plant.



## ADMINISTRATIVE CONTROLS

### REVIEW

6.5.2.7 The NRB shall review:

- a. The safety evaluations for 1) changes to procedures, equipment or systems and 2) tests or experiments completed under the provision of Section 50.59, 10 CFR, to verify that such actions did not constitute an unreviewed safety question.
- b. Proposed changes to procedures, equipment or systems which involve an unreviewed safety question as defined in Section 50.59, 10 CFR.
- c. Proposed tests or experiments which involve an unreviewed safety question as defined in Section 50.59, 10 CFR.
- d. Proposed changes in Technical Specifications or licenses.
- e. Violations of applicable statutes, codes, regulations, orders, Technical Specifications, license requirements, or of internal procedures or instructions having nuclear safety significance.
- f. Significant operating abnormalities or deviations from normal and expected performance of plant equipment that affect nuclear safety.
- g. All Reportable Events.
- h. Indications of a significant unanticipated deficiency, affecting nuclear safety, in some aspect of design or operation of safety related structures, systems or components.
- i. Reports and meeting minutes of the PORC



## ADMINISTRATIVE CONTROLS

### 6.6 REPORTABLE EVENT ACTION

6.6.1 The following actions shall be taken for Reportable Events:

- a. The Commission shall be notified and/or a report submitted pursuant to the requirements of Section 50.73 or 10 CFR Part 50, and
- b. Each Reportable Event shall be reviewed by the PORC and the results of this review shall be submitted to the NRB and the Vice President Nuclear Operations.

### 6.7 SAFETY LIMIT VIOLATION

6.7.1 The following actions shall be taken in the event a Safety limit is violated.

- a. The unit shall be placed in at least HOT STANDBY within one hour.
- b. The NRC Operations Center shall be notified by telephone as soon as possible and in all cases within one hour. The Vice President Nuclear Operations and the NRB shall be notified within 24 hours.
- c. A Safety Limit Violation Report shall be prepared. The report shall be reviewed by the PORC. This report shall describe (1) applicable circumstances preceding the violation, (2) effects of the violation upon facility components, systems or structures, and (3) corrective action taken to prevent recurrence.
- d. The Safety Limit Violation Report shall be submitted to the Commission, the NRB and the Vice President-Nuclear Operations within 14 days of the violation.

### 6.8 PROCEDURES

6.8.1 Written procedures and administrative policies shall be established, implemented and maintained that meet or exceed the requirements and recommendations of Section 5.1 and 5.3 of ANSI N18.7-1976 and Appendix "A" of USAEC Regulatory Guide 1.33 except as provided in 6.8.2 and 6.8.3 below. Procedures shall be established and maintained for implementation of the Facility Fire Protection Program.

6.8.2 Each procedure and administrative policy of 6.8.1 above, and changes thereto, shall be reviewed by the PORC and approved by the Station Superintendent prior to implementation and periodically as set forth in each document.

## 6.9 REPORTING REQUIREMENTS

In addition to the applicable reporting requirements of Title 10, Code of Federal Regulations, the following identified reports shall be submitted to the Regional Administrator of the appropriate regional office unless otherwise noted.

### 6.9.1 Routine Reports

- a. Startup Report - A summary report of plant startup and power escalation testing shall be submitted following (1) receipt of an operating license, (2) amendment to the license involving a planned increase in power level, (3) installation of fuel that has a different design or has been manufactured by a different fuel supplier, and (4) modifications that may have significantly altered the nuclear, thermal, or hydraulic performance of the plant. The report shall address each of the tests identified in the FSAR and shall in general include a description of the measured values of the operating conditions or characteristics obtained during the test program and a comparison of these values with design predictions and specifications. Any corrective actions that were required to obtain satisfactory operation shall be described. Any additional specific details required in license conditions based on other commitments shall be included in this report.

Startup reports shall be submitted within (1) 90 days following completion of the startup test program, (2) 90 days following resumption or commencement of commercial power operation, or (3) 9 months following initial criticality, whichever is earliest. If the Startup Report does not cover all three events (i.e., initial criticality, completion of startup test program, and resumption or commencement of commercial power operation), supplementary reports shall be submitted at least every three months until all three events have been completed.

- b. Steam Generator Tube Inspection - The complete results of the steam generator tube inservice inspection shall be reported within ninety days after completion of the inspection. This report shall include:

- 1). number and extent of tubes inspected.
- 2). location and percent of wall thickness penetration for each indication of an imperfection.

3) Identification of tubes plugged.

c. Occupational Exposure Report

The annual report shall be submitted prior to March 1 of each year and shall cover the previous calendar year. The initial report shall be submitted prior to March 1 of the year following initial criticality.

This annual report shall include a tabulation on an annual basis of the number of station, utility, and other personnel (including contractors) receiving exposures greater than 100 mrem/yr. and their associated man-rem exposure according to work and job functions, 4/e.g., reactor operations and surveillance; inservice inspection, routine maintenance, special maintenance (describe maintenance), waste processing and refueling. The dose assignment to various duty functions may be estimated based on pocket dosimeter, TLD, or film badge measurements. Small exposures totalling less than 20% of the individual total dose need not be accounted for. In the aggregate, at least 80% of the total whole body dose received from external sources shall be assigned to specific major work functions.

- d. Monthly Operating Report - Routine reports of operating statistics and shutdown experience shall be submitted on a monthly basis to the Director, Office of Management Information and Program Control, U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, with a copy to the appropriate Regional Office, to be postmarked no later than the fifteenth of each month following the calendar month covered by the report.

The monthly report shall include a narrative summary of operating experience during the report period relating to safe operation of the facility, including safety-related maintenance.

- e. Reports required as per 10 CFR 50.59b.

## ADMINISTRATIVE CONTROLS

### SPECIAL REPORTS

6.9.2 Special reports shall be submitted to the Director of the Office of Inspection & Enforcement Regional Office within the time period specified for each report. These reports shall be submitted covering the activities identified below pursuant to the requirements of the applicable reference specification:

- a. Inservice Inspection results, specifications (4.10) and (4.12).
- b. Primary Containment Leak Rate Results, Specification (4.4).
- c. Reactor Vessel Material Surveillance Specimen Examination, Specification (4.10).
- d. Steam Generator Tube Report

Following each inservice inspection of steam generator tubes, the number of tubes plugged in each steam generator shall be reported to the Commission within 15 days.

### 6.10 RECORD RETENTION

6.10.1 The following records shall be retained for at least five years:

- a. Records and logs of facility operation covering time interval at each power level.
- b. Records and logs of principal maintenance activities, inspections, repair and replacement of principal items of equipment related to nuclear safety.
- c. All Reportable Events.
- d. Records of surveillance activities, inspections and calibrations required by these Technical Specifications.

## ADMINISTRATIVE CONTROLS

- e. Records of reactor tests and experiments.
  - f. Records of changes made to Operating Procedures.
  - g. Records of radioactive shipments.
  - h. Records of sealed source leak tests and results.
  - i. Records of annual physical inventory of all source material of record.
  - j. Radiation and contamination surveys.
- 6.10.2 The following records shall be retained for the duration of the Facility Operating License:
- a. Record and drawing changes reflecting facility design modifications made to systems and equipment described in the Facility Description and Safety Analysis Report.
  - b. Records of new and irradiated fuel inventory, fuel transfers and assembly burnup histories.
  - c. Records of facility radiation and contamination surveys.
  - d. Records of radiation exposure for all individuals entering radiation control areas.
  - e. Records of gaseous and liquid radioactive material released to the environs.
  - f. Records of transient or operational cycles for those facility components designed for a limited number of transients or cycles.
  - g. Records of training and qualification for current members of the plant staff.
  - h. Records of in-service inspections performed pursuant to these Technical Specifications.
  - i. Records of Quality Assurance activities required by the QA Manual.
  - j. Records of reviews performed for changes made to procedures or equipment or reviews of tests and experiments pursuant to 10 CFR 50.59.
  - k. Records of meetings of the PDRC and the NRB.
  - l. Records for Environmental Qualification which are covered under the provisions of paragraph 6.14.



## ADMINISTRATIVE CONTROLS

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### 6.11 RADIATION PROTECTION PROGRAM

Procedures for personnel radiation protection shall be prepared consistent with the requirements of 10 CFR Part 20 and shall be approved, maintained and adhered to for all operations involving personnel radiation exposure.

6.12 SUPERSEDED BY 10 CFR 20.103(c) AND (f) ON DECEMBER 28, 1977

### 6.13 HIGH RADIATION AREA

#### 6.13.1

In lieu of the "control device" or "alarm signal" required by paragraph 20.203(c)(2), each high radiation area in which the intensity of radiation is 1000 mrem/hr or less shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring issuance of a Radiation Exposure Authorization\*. An individual or group of individuals permitted to enter such areas shall be provided with one or more of the following:

- a. A radiation monitoring device which continuously indicates the radiation dose rate in the area.
- b. A radiation monitoring device which continuously integrates the radiation dose rate in the area and alarms when a preset integrated dose is received. Entry into such areas with this monitoring device may be made after the dose rate level in the area have been established and personnel have been made knowledgeable of them.
- c. A health physics qualified individual (i.e. qualified in radiation protection procedures) with a radiation dose rate monitoring device who is responsible for providing positive control over the activities within the area and who will perform periodic radiation surveillance at the frequency specified in the REA. The surveillance frequency will be established by the Health Physics Supervisor.

The above procedure shall also apply to each high radiation area in which the intensity of radiation is greater than 1000 mrem/hr. In addition, locked doors shall be provided to prevent unauthorized entry into such areas and the keys shall be maintained under the administrative control of the shift supervisor on duty.

\* Health Physics personnel shall be exempt from the REA issuance requirement during the performance of their assigned radiation protection duties, providing they are following plant radiation protection procedures for entry into high radiation areas.



## ADMINISTRATIVE CONTROLS

### 6.14 ENVIRONMENTAL QUALIFICATION

- A. By no later than June 30, 1982, all safety-related electrical equipment in the facility shall be qualified in accordance with the provisions of Division of Operating Reactors "Guidelines for Evaluating Environmental Qualification of Class IE Electrical Equipment in Operating Reactors" (DOR Guidelines); or, NUREG-0588 "Interim Staff Position on Environmental Qualification of Safety-Related Electrical Equipment", December 1979. Copies of these documents are attached to Order for Modification of License DPR-61 dated October 24, 1980.
- B. By no later than December 1, 1980, complete and auditable records must be available and maintained at a central location which describe the environmental qualification method used for all safety-related electrical equipment in sufficient detail to document the degree of compliance with the DOR Guidelines or NUREG-0588. Thereafter, such records should be updated and maintained current as equipment is replaced, further tested, or otherwise further qualified.

### 6.15 SYSTEMS INTEGRITY

The licensee shall implement a program to reduce leakage from systems outside containment that would or could contain highly radioactive fluids during a serious transient or accident to as low as practical levels. This program shall include the following:

1. Provisions establishing preventive maintenance and periodic visual inspection requirements, and
2. Integrated leak test requirements for each system at a frequency not to exceed refueling cycle intervals.

### 6.16 IODINE MONITORING

The licensee shall implement a program which will ensure the capability to accurately determine the airborne iodine concentration in vital areas under accident conditions. This program shall include the following:

1. Training of personnel,
2. Procedures for monitoring, and
3. Provisions for maintenance of sampling and analysis equipment.

Docket No. 50-245

Attachment 2

Proposed Revisions to Technical Specifications

Millstone Nuclear Power Station, Unit No. 1

July, 1985

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2. Trip System

A trip system means an arrangement of instrument channel trip signals and auxiliary equipment required to initiate action to accomplish a protective action. A trip system may require one or more instrument channel trip signals related to one or more plant parameters in order to initiate trip system function. Initiation of protective function may require the tripping of a single trip system or the coincident tripping of two trip systems.

3. Protective Action

An action initiated by the protection system when a limit is exceeded. A protective action can be at a channel or system level.

4. Protective Function

A system protective action which results from the protective action of the channels monitoring a particular plant condition.

P. Rated Neutron Flux

Rated neutron flux is the neutron flux that corresponds to a steady-state thermal power level of 2011 megawatts.

Q. Rated Thermal Power

Rated thermal power means a steady state thermal power level of 2011 megawatts.

R. (Left intentionally blank)

S. Reactor Power Operation

Reactor power operation is any operation with the mode switch in the "Startup/Hot Standby" or "Run" position with the reactor critical and above 1% rated thermal power.

1. Startup/Hot Standby Mode

In this mode the reactor protection scram trips, initiated by condenser low vacuum and main steamline isolation valve closure, are bypassed when reactor pressure is less than 600 psig; the low pressure main steamline isolation valve closure trip is bypassed, the reactor protection system is energized with IRM neutron monitoring system trips and control rod withdrawal interlocks in service.

2. Run Mode

In this mode the reactor protection system is energized with APRM protection and RBM interlocks in service.

T. Reactor Vessel Pressure

Unless otherwise indicated, reactor vessel pressures listed in the Technical Specifications are those measured by the reactor vessel steam space detector.

U. Refueling Outage

Refueling outage is the period of time between the shutdown of the unit prior to a refueling and the startup of the plant subsequent to that refueling. For the purpose of designating frequency of testing and surveillance, a refueling outage shall mean a regularly scheduled refueling outage; however, where such outages occur within 8 months of the completion of the previous refueling outage, the required surveillance and testing need not be performed until the next regularly scheduled outage.

V. Reportable Event

A Reportable Event shall be any of those conditions specified in Section 50.73 to 10 CFR Part 50.



# LIMITING CONDITION FOR OPERATION

## E. Reactivity Anomalies

The reactivity equivalent of the difference between the actual critical rod configuration and the expected configuration during power operation shall not exceed 1% ΔK. If this limit is exceeded, the reactor will be shutdown until the cause has been determined and corrective actions have been taken if such actions are appropriate.

F. If Specification 3.3 A through D above are not met, a normal orderly shutdown shall be initiated and the reactor shall be in the cold shutdown condition within 24 hours.

G. Allowable combinations of thermal power and total core flow shall be restricted to Curve 1 shown in Figure 3.3.1.

# SURVEILLANCE REQUIREMENT

## E. Reactivity Anomalies

During the startup test program and startups following refueling outages, the critical rod configurations will be compared to the expected configurations at selected operating conditions. These comparisons will be used as base data for reactivity monitoring during subsequent power operation throughout the fuel cycle. At specific power operating conditions, the critical rod configuration will be compared to the configuration expected based upon appropriately corrected past data. This comparison will be made at least every equivalent full power month.



# LIMITING CONDITION FOR OPERATION

# SURVEILLANCE REQUIREMENT

## B. Operation with Inoperable Components

From and after the date that a redundant component is made or found to be inoperable, Specification 3.4.A shall be considered fulfilled, provided that:

1. The component is returned to an operable condition within 7 days or
2. A written report shall be submitted to the Nuclear Regulatory Commission when the maintenance to restore the component to an operable condition will last longer than 7 days.

replacement charges to be installed will be selected from the same batch as those tested. Both systems shall be tested and inspected, including each explosion valve in the course of two operating cycles.

- b. Manually initiate each system, except the explosion valve and pump solution in the recirculation path back to the storage tank.\*
- c. Test that the setting of the system pressure relief valves is between 1350 and 1450 psig.

Per errata sheet dtd 10-7-70\*

3/4 4-2

Hillstone Unit No. 1

## LIMITING CONDITION FOR OPERATION

2. With one pump and/or one water supply inoperable, restore the inoperable equipment to OPERABLE status within 7 days or, in lieu of any other report required by Specification 6.6.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the plans and procedures to be used to provide for the loss of redundancy in this system.
3. With the fire suppression water system otherwise inoperable:
  - a. Establish a backup fire suppression water system within 24 hours, and
  - b. Submit a Special Report in accordance with Specification 6.9.2;
    1. By telephone within 24 hours;
    2. Confirmed by telegraph, mailgram, or facsimile transmission no later than the first working day following the event, and
    3. In writing within 14 days following the event, outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.

## SURVEILLANCE REQUIREMENTS

- d. At least once per 12 months by cycling each testable valve in the flow path through at least one complete cycle of full travel.
- e. At least once per 18 months by performing a system functional test which includes simulated automatic actuation of the system through its operating sequence, and
  1. Verifying that each pump develops at least 1800 gpm at a system head of 100 psig.
  2. Cycling each valve in the flow path that is not testable during plant (except valve 1-F-71) operation through at least one complete cycle of full travel and
  3. Verifying that each high pressure pump starts (sequentially) to maintain the fire suppression water system pressure  $\geq 75$  psig.
- f. At least once per 3 years by performing a flow test of the system in accordance with Chapter 5, Section 11 of the Fire Protection Handbook, 14th Edition, published by the National Fire Protection Association.

## LIMITING CONDITION FOR OPERATION

### II. Spray and/or Sprinkler Systems

1. The following spray and/or sprinkler systems located in the following areas shall be operable at all times when equipment in the area is required to be operable:
  - a. Diesel Generator Room - manually operated
  - b. Diesel Generator Day Tank Room
  - c. Hydrogen Seal Oil Unit
  - d. Gas Turbine Building - manually operated
  - e. Condenser Bay
  - f. Turbine Lubrication - Oil Room Deluge
  - g. Boiler Room and Machine Shop - wet pipe
  - h. Bearing Lift Pump and Seal Oil Detraining Tank - wet pipe
  - i. Reactor Building 14'-6" Elevation - wet pipe
2. With one or more of the above required spray and/or sprinkler systems inoperable, establish a continuous fire watch with backup fire suppression equipment for the unprotected area(s) within 1 hour; restore the system to OPERABLE status within 14 days or, in lieu of any other report required by Specification 6.6.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.

## SURVEILLANCE REQUIREMENTS

### B. Spray and/or Sprinkler Systems

1. Each of the spray/sprinkler systems in 3.12.B shall be demonstrated OPERABLE:
  - a. At least once per 12 months by cycling each testable valve in the flow path through at least one complete cycle of full travel.
  - b. At least once per 18 months:
    1. By performing a system functional test which includes simulated automatic actuation of the system, and:
      - (a) Verifying that the automatic valves in the flow path actuate to their correct positions on a simulated test signal, and
      - (b) Cycling each valve in the flow path that is not testable during plant operation (except valve 1-F-71) through at least one complete cycle of full travel and
    2. By inspection of the spray headers to verify their integrity, and
    3. By inspection of each nozzle to verify no blockage.

## LIMITING CONDITION FOR OPERATION

### C. Carbon Dioxide and Halon 1301 Systems

1. The following high pressure CO<sub>2</sub> systems shall be OPERABLE with the storage tanks at least 90% of full charge weight whenever equipment in the high pressure CO<sub>2</sub> protected areas is required to be OPERABLE.
  - a. Gas Turbine Enclosure
2. With one or more of the above required high pressure CO<sub>2</sub> systems inoperable, establish a continuous fire watch with backup fire suppression equipment for the unprotected area(s) within 1 hour; restore the system to OPERABLE status within 14 days or, in lieu of any other report required by Specification 6.6.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.
3. The Halon 1301 System for the fire pump house shall be operable, with the bottles connected and available for service and the bottle at 95% of full charge weight.
4. From and after the time the fire pump house Halon System is determined to be inoperable within one hour establish a continuous fire watch with backup fire suppression equipment for the unprotected equipment and/or area; restore the system to OPERABLE status within 14 days or, in lieu of any other report required by Specification 6.6.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.

## SURVEILLANCE REQUIREMENTS

### C. Carbon Dioxide and Halon 1301 Systems

1. Each of the high pressure CO<sub>2</sub> systems in 3.12.C.1 shall be demonstrated OPERABLE:
  - a. At least once per 6 months by verifying CO<sub>2</sub> storage tank weight.
  - b. At least once per 18 months by:
    1. Verifying the system, including associated ventilation dampers, actuates automatically upon receipt of a simulated test signal and manually through operator action, and
    2. Performance of a visual inspection of the discharge nozzles to assure no blockage.
2. The Halon 1301 System referenced in 3.12.C.3 shall be demonstrated OPERABLE:
  - a. At least once per 6 months the weight and pressure of the refillable container shall be checked. If the container shows a loss in net weight of more than 5% or the pressure drops to 325 psig it shall be refilled or replaced.
  - b. At least once per 18 months by:
    1. Verifying the system, including associated ventilation dampers, actuates automatically upon receipt of a simulated test signal and manually through operator action, and
    2. Performance of a visual inspection of the discharge nozzles to assure no blockage.



## LIMITING CONDITION FOR OPERATION

### C. Fire Detection Instrumentation

1. The minimum required fire detection instrumentation for each fire detection zone shown in Table 3.12.2 shall be OPERABLE whenever equipment in that fire detection zone is required to be OPERABLE.
2. With less than the minimum required number of the fire detection instrument(s) shown in Table 3.12.2 OPERABLE:
  - a. Within 1 hour establish a watch patrol to inspect the zone(s) with the inoperable instrument(s) at least once per hour, and
  - b. Restore the inoperable instrument(s) to OPERABLE status within 14 days or, in lieu of any other report required by Specification 6.6.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the instrument(s) to OPERABLE status.

## SURVEILLANCE REQUIREMENTS

### E. Fire Detection Instrumentation

1. The fire detection instruments listed in Table 3.12.2 shall be demonstrated OPERABLE at least once per 6 months be performance of an INSTRUMENT FUNCTIONAL TEST with the exception that the functional test may consist of injecting a simulated electrical signal into the measurement channel rather than the instrument. Due to the inaccessability of the fire detectors located in the condenser bay, a sample consisting of 1/3 of the detectors per channel will be tested during every refuel outage. The sample test cycle will be completed every third refueling outage.
2. The non-supervised circuits between the above required detection instruments and the control room shall be demonstrated OPERABLE at least once per 31 days, per approved procedures.

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## LIMITING CONDITION FOR OPERATION

### F. Penetration Fire Barriers

1. All penetration fire barriers (including cable penetration fire barriers, fire doors, and fire dampers) which protect safety-related areas shall be functional whenever safety-related equipment in the area is required to be operable.
2. With one or more of the above required penetration fire barriers non-functional, within 1 hour establish a temporary fire barrier of equal effectiveness or establish a continuous fire watch on at least one side of the affected penetration:  
Restore the fire barrier(s) to functional status within 30 days or, in lieu of any other report required by Specification 6.6.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the fire barrier(s) being non-functional and the plans and schedule for restoring the fire barrier(s) to functional status.

## SURVEILLANCE REQUIREMENTS

### F. Penetration Fire Barriers

1. Penetration fire barriers shall be verified to be functional:
  - a. At least once per 18 months by a visual inspection.
  - b. Prior to returning a penetration fire barrier to functional status following repairs or maintenance by performance of a visual inspection of the affected penetration fire barrier(s).



## ADMINISTRATIVE CONTROLS

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### MEETING FREQUENCY

6.5.1.4 The PORC shall meet at least once per calendar month and as convened by the PORC Chairman.

### QUORUM

6.5.1.5 A quorum of the PORC shall consist of the Chairman or Vice Chairman or Station Superintendent and four members including alternates.

### RESPONSIBILITIES

6.5.1.6 The PORC shall be responsible for:

- a. Review of 1) all procedures, except common site procedures, required by Specification 6.8 and changes thereto, 2) any other proposed procedures or changes thereto as determined by the Unit Superintendent to affect nuclear safety.
- b. Review of all proposed tests and experiments that affect nuclear safety.
- c. Review of all proposed changes to Sections 1.0 - 5.0 of those Technical Specifications.
- d. Review of all proposed changes or modifications to plant systems or equipment that affect nuclear safety.
- e. Investigation of all violations of the Technical Specifications and preparation and forwarding of a report covering evaluation and recommendations to prevent recurrent to the Vice President Nuclear Operations and to the Chairman of the Nuclear Review Board.
- f. Review of all REPORTABLE EVENTS.
- g. Review of facility operations to detect potential safety hazards.
- h. Performance of special reviews and investigations and reports thereon as requested by the Chairman of the Nuclear Review Board.
- i. Render determinations in writing with regard to whether or not each item considered under 6.5.1.6(a) through (e) above constitutes an unreviewed safety questions.

## ADMINISTRATIVE CONTROLS

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### REVIEW

#### 6.5.3.6 The NRB shall review:

- a. The safety evaluation for 1) changes to procedures, equipment or systems and 2) tests or experiments completed under the provision of Section 50.59, 10 CFR, to verify that such actions did not constitute an unreviewed safety question.
- b. Proposed changes to procedures, equipment or systems which involve an unreviewed safety questions as defined in Section 50.59, 10CFR.
- c. Proposed tests or experiments which involve an unreviewed safety question as defined in Section 50.59, 10 CFR.
- d. Proposed changes in Sections 1.0 - 5.0 of these Technical Specifications or licenses.
- e. Violations of applicable statutes, codes, regulations, orders, Technical Specifications, license requirements, or of internal procedures or instructions having nuclear safety significance.
- f. Significant operating abnormalities or deviations from normal and expected performance of plant equipment that affect nuclear safety.
- g. All REPORTABLE EVENTS.
- h. Indications of a significant unanticipated deficiency, affecting nuclear safety, in some aspect of design or operation of safety related structures, systems or components.
- i. Report and meetings minutes of the PORC.

### AUDITS

#### 6.5.3.7 Audits of Unit activities shall be performed under the cognizance of the NRB. These audits shall encompass:

- a. The conformance of Unit operation to provisions contained within the Technical Specifications and applicable license conditions at least once per 12 months.

## ADMINISTRATIVE CONTROLS

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### AUTHORITY

6.5.4.8 The SNRB reports to and advises the Senior Vice President Nuclear Engineering and Operations on those areas of responsibility specified in Sections 6.5.4.6 and 6.5.4.7. Meeting minutes may be used for this purpose.

### RECORDS

6.5.4.9 Records of SNRB activities shall be prepared, approved, and forwarded to the Senior Vice President Nuclear Engineering and Operations within 14 days following each meeting.

- a. Minutes of each SNRB meeting shall be prepared; approved, and forwarded to the Senior Vice President Nuclear Engineering and Operations within 14 days following each meeting.
- b. Reports of reviews encompassed by Section 6.5.4.6 above shall be prepared, approved, and forwarded to the Senior Vice President Nuclear Engineering and Operations within 14 days following completion of the review.
- c. Audit reports encompassed by Section 6.5.4.7 above, shall be forwarded to the Senior Vice President Nuclear Engineering and Operations and to the management positions responsible for the areas audited within 30 days after completion of the audit.

### 6.6 REPORTABLE EVENT ACTION

- 6.6.1 The following actions shall be taken for REPORTABLE EVENTS:
- a. The Commission shall be notified and a report submitted pursuant to the requirement of Section 50.73 to 10 CFR Part 50, and
  - b. Each REPORTABLE EVENT shall be reviewed by the PORC and the results of this review shall be submitted to the NRB and the Vice President Nuclear Operations.

### 6.7 SAFETY LIMIT VIOLATION

- 6.7.1 The following actions shall be taken in the event a Safety Limit is violated:
- a. The unit shall be placed in at least HOT SHUTDOWN within two hours.

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## ADMINISTRATIVE CONTROLS

6.8.3 Temporary changes to procedures of 6.8.1 above may be made provided:

- a. The intent of original procedure is not altered.
- b. The change is approved by two members of the plant management staff, at least one of whom holds a Senior Reactor Operator's License on the unit affected.
- c. The change is documented, reviewed by the PORC/SORC, as applicable, and approved by the Unit Superintendent/Station Superintendent within 14 days of implementation.

## 6.9 REPORTING REQUIREMENTS

### ROUTINE REPORTS

6.9.1 In addition to the applicable reporting requirements of Title 10, Code of Federal Regulations, the following reports shall be submitted to the Regional Administrator, Region I, U. S. Nuclear Regulatory Commission unless otherwise noted.

### STARTUP REPORT

6.9.1.1 A summary report of plant startup and power escalation testing shall be submitted following (1) receipt of an operating license, (2) amendment to the license involving a planned increase in power level, (3) installation of fuel that has a different design or has been manufactured by a different fuel supplier, and (4) modifications that may have significantly altered the nuclear, thermal or hydraulic performance of the plant.

6.9.1.2 The startup report shall address each of the tests identified in the FSAR and shall include a description of the measured values of the operating conditions or characteristics obtained during the test program and a comparison of these values with design predictions and specifications. Any corrective actions that were required to obtain satisfactory operation shall also be described. Any additional specific details required in license conditions based on other commitments shall be included in this report.

## ADMINISTRATIVE CONTROLS

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### MONTHLY OPERATING REPORT

6.9.1.6 Routine reports of operating statistics and shutdown experience shall be submitted on a monthly basis to the Director, Office of Resource Management, U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, with a copy to the Regional Administrator, Region I, U. S. Nuclear Regulatory Commission, no later than the 15th of each month following the calendar month covered by the report.

### SPECIAL REPORTS

6.9.2 Special reports shall be submitted to the Regional Administrator, Region I, U. S. Nuclear Regulatory Commission, within the time period specified for each report. These reports shall be submitted covering the activities identified below pursuant to the requirements of the applicable reference specification:

- a. In-service Inspection Results, Specification 4.6.F.
- b. Primary Containment Leak Rate Test Results, Specification 4.7.A.3.
- c. (Deleted).
- d. Materials Radiation Surveillance Specimen Examination and Results, Specification 4.6.B.5.
- e. Fire detection instrumentation, Specification (3.12.E.2).
- f. Fire suppression systems, Specifications (3.12.A.2, 3.12.B.2, 3.12.C.2 and 3.12.C.4).



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### 6.10 RECORD RETENTION

- 6.10.1 The following records shall be retained for at least five years:
- a. Records and logs of facility operation covering time interval at each power level.
  - b. Records and logs of principal maintenance activities, inspections, repair and replacement of principal items of equipment related to nuclear safety.
  - c. All REPORTABLE EVENTS.
  - d. Records of surveillance activities, inspections and calibrations required by these Technical Specifications.
  - e. Records of reactor tests and experiments.
  - f. Records of changes made to operating procedures.
  - g. Records of radioactive shipments.
  - h. Records of sealed source leak tests and results.
  - i. Records of annual physical inventory of all sealed source material of record.

6.10.2 The following records shall be retained for the duration of the facility operating license:

- a. Records and drawing changes reflecting facility design modifications made to systems and equipment described in the Final Safety Analysis Report.
- b. Records of new and irradiated fuel inventory, fuel transfers and assembly burnup histories.
- c. Records of facility radiation and contamination surveys.
- d. Records of radiation exposure for all individuals entering radiation control areas.
- e. Records of gaseous and liquid radioactive material released to the environs.
- f. Records of transient or operational cycles for those facility components designed for a limited number of transients or cycles.

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## ADMINISTRATIVE CONTROLS

- g. Records of training and qualification for current members of the plant staff.
- h. Records of inservice inspections performed pursuant to these Technical Specifications.
- i. Records of quality assurance activities required by the QA Manual.
- j. Records of reviews performed for changes made to procedures or equipment or reviews of tests and experiments pursuant to 10 CFR Part 50.59.
- k. Records of meetings of the PORC, the NRC, the SORC and the SNRB.
- l. Records of Environmental Qualification which are covered under the provisions of paragraph 6.13.

## 6.11 RADIATION PROTECTION PROGRAM

Procedures for personnel radiation protection shall be prepared consistent with the requirements of 10 CFR Part 20 and shall be approved, maintained and adhered to for all operations involving personnel radiation exposure.

## 6.12 HIGH RADIATION AREA

6.12.1 In lieu of the "control device" or "alarm signal" required by paragraph 20.203(c)(2) of 10CFR20, each high radiation area in which the intensity of radiation is greater than 100 mrem/hr but less than 1000 mrem/hr shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring issuance of a Radiation Work Permit\*. Any individual or group of individuals permitted to enter such areas shall be provided with or accompanied by one or more of the following:

- a. A radiation monitoring device which continuously indicates the radiation dose rate in the area.
- b. A radiation monitoring device which continuously integrates the radiation dose rate in the area and alarms when a preset integrated dose is received. Entry into such areas with this monitoring device may be made after the dose rate level in the area has been established and personnel have been made knowledgeable of them.

\*Health Physics personnel or personnel escorted by Health Physics personnel shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry into high radiation areas.

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- c. An individual qualified in radiation protection procedures who is equipped with a radiation dose rate monitoring device. This individual shall be responsible for providing positive control over the activities within the area and shall perform periodic radiation surveillance at the frequency specified in the Radiation Work Permit. The surveillance frequency shall be established by the Health Physics Supervisor.

6.12.2 The requirements of 6.12.1, above, shall also apply to each high radiation area in which the intensity of radiation is greater than 100 mrem/hr. In addition, locked doors shall be provided to prevent unauthorized entry into such areas and the keys shall be maintained under the administrative control of the Shift Supervisor on duty and/or the Health Physics Supervisor.

### 6.13 ENVIRONMENTAL QUALIFICATION

- A. By no later than June 30, 1982 all safety-related electrical equipment in the facility shall be qualified in accordance with the provisions of: Division of Operating Reactors "Guidelines for Evaluating Environmental Qualification of Class 1E Electrical Equipment in Operating Reactors" (DOR Guidelines); or, NUREG-0588 "Interim Staff Position on Environmental Qualification of Safety-Related Electrical Equipment", December 1979. Copies of these documents are attached to Order for Modification of License DPR-21 dated October 4, 1980.
- B. By no later than December 1, 1980, complete and auditable records must be available and maintained at a central location which describe the environmental qualification method used for all safety-related electrical equipment in sufficient detail to document the degree of compliance with the DOR Guidelines or NUREG-0588. Thereafter, such records should be updated and maintained current as equipment is replaced, further tested, or otherwise further qualified.

### 6.14 SYSTEMS INTEGRITY

The licensee shall implement a program to reduce leakage from systems outside containment that would or could contain highly radioactive fluids during a serious transient or accident to as low as practical levels. This program shall include the following:

1. Provisions establishing preventive maintenance and periodic visual inspection requirements, and
2. Integrated leak test requirements for each system at a frequency not to exceed refueling cycle intervals.

### 6.15 IODINE MONITORING

The licensee shall implement a program which will ensure the capability to accurately determine the airborne iodine concentration in vital areas under accident conditions. This program shall include the following:

1. Training of personnel,
2. Procedures for monitoring, and
3. Provisions for maintenance of sampling and analysis equipment.

MILLSTONE - UNIT 1

Docket No. 50-336

Attachment 3

Proposed Revisions to Technical Specifications

Millstone Nuclear Power Station, Unit No. 2

July, 1985



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## 1.0 DEFINITIONS

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### DEFINED TERMS

1.1 The DEFINED TERMS of this section appear in capitalized type and are applicable throughout these Technical Specifications.

### THERMAL POWER

1.2 THERMAL POWER shall be the total reactor core heat transfer rate to the reactor coolant.

### RATED THERMAL POWER

1.3 RATED THERMAL POWER shall be a total reactor core heat transfer rate to the reactor coolant of 2700 MWt.

### OPERATIONAL MODE

1.4 An OPERATIONAL MODE shall correspond to any one inclusive combination of core reactivity condition, power level, and average reactor coolant temperature specified in Table 1.1.

### ACTION

1.5 ACTION shall be those additional requirements specified as corollary statements to each principal specification and shall be part of the specifications.

### OPERABLE - OPERABILITY

1.6 A system, subsystem, train, component, or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified function(s) and when all necessary attendant instrumentation, controls, normal and emergency electrical power sources, cooling, or seal water, lubrication, or other auxiliary equipment that are required for the system, subsystem, train, component, or device to perform its function(s) are also capable of performing their related support function(s).

### REPORTABLE EVENT

1.7 A REPORTABLE EVENT shall be any of those conditions specified in Section 50.73 to 10 CFR Part 50.

## INSTRUMENTATION

### FIRE DETECTION INSTRUMENTATION

#### LIMITING CONDITION FOR OPERATION

---

3.3.3.7 As a minimum, the fire detection instrumentation for each fire detection zone shown in Table 3.3-10 shall be OPERABLE.

APPLICABILITY: Whenever equipment in that fire detection zone is required to be OPERABLE.

#### ACTION:

With the number of OPERABLE fire detection instrument(s) less than the minimum number of OPERABLE requirements of Table 3.3-10.

- a. Within 1 hour establish a fire watch patrol to inspect the zone(s) with the inoperable instrument(s) at least once per hour, and
- b. Restore the inoperable instrument(s) to OPERABLE status within 14 days or, in lieu of any other report required by Specification 6.6.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the instrument(s) to OPERABLE status.
- c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

#### SURVEILLANCE REQUIREMENTS

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4.3.3.7.1 Each of the above required fire detection instruments shall be demonstrated OPERABLE at least once per 6 months by performance of a CHANNEL FUNCTIONAL TEST.

4.3.3.7.2 The circuits between the above required detection instruments and the control room shall be demonstrated OPERABLE at least once per 31 days per approved procedures.

## REACTOR COOLANT SYSTEM

### SURVEILLANCE REQUIREMENTS (Continued)

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#### 4.4.5.1.5 Reports

- a. Following each inservice inspection of steam generator tubes, the number of tubes plugged and sleeved in each steam generator shall be reported to the Commission within 15 days.
- b. The complete results of the steam generator tube inservice inspection shall be included in the Annual Operating Report for the period in which this inspection was completed. This report shall include:
  1. Number and extent of tubes inspected.
  2. Location and percent of wall-thickness penetration for each indication of an imperfection.
  3. Identification of tubes plugged or sleeved.
- c. Results of steam generator tube inspections which fall into Category C-3 shall be reported pursuant to 10CFR50.72. In lieu of any report required pursuant to Specification 6.6.1, a Special Report pursuant to Specification 6.9.2 shall be submitted prior to resumption of plant operation and shall provide a description of investigations conducted to determine the cause of the tube degradation and corrective measures taken to prevent recurrence.



## REACTOR COOLANT SYSTEM

### SPECIFIC ACTIVITY

#### LIMITING CONDITION FOR OPERATION

---

3.4.8 The specific activity of the primary coolant shall be limited to:

- a.  $\leq 1.0$  Ci/gram DOSE EQUIVALENT I-131, and
- b.  $\leq 100/\bar{E}$  Ci/gram.

APPLICABILITY: MODES 1, 2, 3, 4 and 5.

#### ACTION:

MODES 1, 2 and 3\*:

- a. With the specific activity of the primary coolant  $> 1.0 \mu\text{Ci/gram}$  DOSE EQUIVALENT I-131 but within the allowable limit (below and to the left of the line) shown on Figure 3.4-1, operation may continue for up to 48 hours provided that operation under these circumstances shall not exceed 10 percent of the unit's total yearly operating time. The provisions of Specification 3.0.4 are not applicable.
- b. With the specific activity of the primary coolant  $> 1.0 \mu\text{Ci/gram}$  DOSE EQUIVALENT I-131 for more than 48 hours during one continuous time interval or exceeding the limit line shown on Figure 3.4-1, be in HOT STANDBY with  $T_{\text{avg}} < 515^\circ\text{F}$  within 4 hours.
- c. With the specific activity of the primary coolant  $> 100/\bar{E} \mu\text{Ci/gram}$ , be in HOT STANDBY with  $T_{\text{avg}} < 515^\circ\text{F}$  within 4 hours.

MODES 1, 2, 3, 4 and 5:

- d. With the specific activity of the primary coolant  $> 1.0 \mu\text{Ci/gram}$  DOSE EQUIVALENT I-131 or  $> 100/\bar{E} \mu\text{Ci/gram}$ , perform the sampling and analysis requirements of item 4 a) of Table 4.4-2 until the specific activity of the primary coolant is restored to within its limits. A Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.9.2. This report shall contain the results of the specific activity analyses together with the following information:

\*With  $T_{\text{avg}} \geq 515^\circ\text{F}$ .

## CONTAINMENT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

- b. Removing one wire from a dome, a vertical and a hoop tendon checked for lift off force pursuant to Specification 4.6.1.6.1.a and determining that over the entire length of the removed wire that:
  - 1. The tendon wires are free of corrosion.
  - 2. There are no changes in physical appearance of the sheathing filler grease.
  - 3. A minimum tensile strength of 11,760 pounds for at least three wire samples (one from each end and one at mid-length) cut from each removed wire. Failure of any one of the wire samples to meet the minimum tensile strength test is evidence of abnormal degradation of the containment structure.

4.6.1.6.2 End Anchorages and Adjacent Concrete Surfaces The structural integrity of the end anchorages and adjacent concrete surfaces shall be demonstrated by determining through inspection that no apparent changes have occurred in the visual appearance of the end anchorage concrete exterior surfaces or the concrete crack patterns adjacent to the end anchorages. Inspections of the concrete shall be performed during the Type A containment leakage rate tests (reference Specification 4.6.1.2) while the containment is at its maximum test pressure.

4.6.1.6.3 Liner Plate The structural integrity of the containment liner plate shall be determined during the shutdown for each Type A containment leakage rate test (reference Specification 4.6.1.2) by a visual inspection of the plate and verifying no apparent changes in appearance or other abnormal degradation.

4.6.1.6.4 Reports In lieu of any other report required by Specification 6.6.1, an initial report of any abnormal degradation of the containment structure detected during the above required tests and inspections shall be made within 10 days after completion of the surveillance requirements of this specification and the detailed report shall be submitted pursuant to Specification 6.9.2 within 90 days after completion. This report shall include a description of the condition of the concrete (especially at tendon anchorages), the inspection procedure, the tolerances on cracking, and the corrective actions taken.

## PLANT SYSTEMS

### 3/4.7.9 FIRE SUPPRESSION SYSTEMS

#### FIRE SUPPRESSION WATER SYSTEM

#### LIMITING CONDITION FOR OPERATION

---

3.7.9.1 The fire suppression water system shall be OPERABLE with:

- a. Three high pressure pumps, each with a capacity of at least 1800 gpm, with their discharge aligned to the fire suppression header,
- b. Two water supplies, each with a minimum contained volume of 200,000 gallons, and
- c. An OPERABLE flow path capable of taking suction from the fire water tanks and transferring the water through distribution piping with OPERABLE sectionalizing control or isolation valves to the yard hydrant curb valves and the first valve ahead of the water flow alarm device on each sprinkler, hose standpipe or spray system riser required to be OPERABLE per Specifications 3.7.9.2 and 3.7.9.3.

APPLICABILITY: At all times.

#### ACTION:

- a. With one pump and/or one water supply inoperable, restore the inoperable equipment to OPERABLE status within 7 days or, in lieu of any other report required by Specification 6.6.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the plans and procedures to be used to provide for the loss of redundancy in this system. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.
- b. With two pumps inoperable, establish a continuous fire watch of the turbine building with backup fire suppression equipment within 1 hour; restore the inoperable equipment to OPERABLE status within 14 days or, in lieu of any other report required by Specification 6.6.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the equipment to OPERABLE status. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

## PLANT SYSTEMS

### SPRAY AND/OR SPRINKLER SYSTEMS

#### LIMITING CONDITION FOR OPERATION

---

3.7.9.2 The following spray and/or sprinkler systems shall be OPERABLE:

- a. Diesel Generator Rooms
- b. Diesel Generator Day Tank Rooms
- c. Cable Vault (Aux. Building)
- d. Cable Vault (Turbine Building)
- e. Hydrogen Seal Oil Unit
- f. Turbine Building Northeast Corner
- g. Turbine Building 31'6"/14'6" - North
- h. Turbine Building 31'6"/14'6" - South
- i. Lube Oil Room.

APPLICABILITY: Whenever equipment in the spray/sprinkler protected areas is required to be OPERABLE.

#### ACTION:

- a. With one or more of the above required and/or systems inoperable, establish a continuous fire watch with backup fire suppression equipment for the unprotected area(s) within 1 hour; restore the system to OPERABLE status within 14 days or, in lieu of any other report required by Specification 6.6.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.
- b. The provisions of Specification 3.0.3 and 3.0.4 are not applicable.

#### SURVEILLANCE REQUIREMENTS

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4.7.9.2 Each of the above required spray and/or sprinkler systems shall be demonstrated OPERABLE:



## REACTOR COOLANT SYSTEM

### BASES

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evidence of mechanical damage or progressive degradation due to design, manufacturing errors, or inservice conditions that lead to corrosion. Inservice inspection of steam generator tubing also provides a means of characterizing the nature and cause of any tube degradation so that corrective measures can be taken.

The plant is expected to be operated in a manner such that the secondary coolant will be maintained within those chemistry limits found to result in negligible corrosion of the steam generator tubes. If the secondary coolant chemistry is not maintained within these limits, localized corrosion may likely result in stress corrosion cracking.

The extent of cracking during plant operation would be limited by the limitation of steam generator tube leakage between the primary coolant system and the secondary coolant system (primary-to-secondary leakage = 0.5 GPM, per steam generator). Cracks having a primary-to-secondary leakage less than this limit during operation will have an adequate margin of safety to withstand the loads imposed during normal operation and by postulated accidents. Operating plants have demonstrated that primary-to-secondary leakage of 0.5 gallon per minute can readily be detected by radiation monitors of steam generator blowdown. Leakage in excess of this limit will require plant shutdown and an unscheduled inspection, during which the leaking tubes will be located and plugged.

Wastage-type defects are unlikely with proper chemistry treatment of the secondary coolant. However, even if a defect should develop in service, it will be found during scheduled inservice steam generator tube examinations. Plugging or sleeving will be required for all tubes with imperfections exceeding the plugging limit of 40% of the tube nominal wall thickness. Sleeving repair will be limited to those steam generator tubes with a defect between the tube sheet and the first eggcrate support. Tubes containing sleeves with imperfections exceeding the plugging limit will be plugged. Steam generator tube inspections of operating plants have demonstrated the capability of reliably detect degradation that has penetrated 20% of the original tube wall thickness.

Whenever the results of any steam generator tubing inservice inspection fall into Category C-3, these results will be immediately reported to the Commission pursuant to 10 CFR 50.72. Such cases will be considered by the Commission on a case-by-case basis and may result in a requirement for analysis, laboratory examinations, tests, additional eddy-current inspection, and revision of the Technical Specifications, if necessary.



## ADMINISTRATIVE CONTROLS

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### MEETING FREQUENCY

6.5.1.4 The PORC shall meet at least once per calendar month and as convened by the PORC Chairman.

### QUORUM

6.5.1.5 A quorum of the PORC shall consist of the Chairman or Vice Chairman or Station Superintendent and four members including alternates.

### RESPONSIBILITIES

6.5.1.6 The PORC shall be responsible for:

- a. Review of 1) all procedures, except common site procedures, required by Specification 6.8 and changes thereto, 2) any other proposed procedures or changes thereto as determined by the Unit Superintendent to affect nuclear safety.
- b. Review of all proposed tests and experiments that affect nuclear safety.
- c. Review of all proposed changes to Sections 1.0 - 5.0 of those Technical Specifications.
- d. Review of all proposed changes or modifications to plant systems or equipment that affect nuclear safety.
- e. Investigation of all violations of the Technical Specifications and preparation and forwarding of a report covering evaluation and recommendations to prevent recurrent to the Vice President Nuclear Operations and to the Chairman of the Nuclear Review Board.
- f. Review of all REPORTABLE EVENTS.
- g. Review of facility operations to detect potential safety hazards.
- h. Performance of special reviews and investigations and reports thereon as requested by the Chairman of the Nuclear Review Board.
- i. Render determinations in writing with regard to whether or not each item considered under 6.5.1.6(a) through (e) above constitutes an unreviewed safety questions.

## ADMINISTRATIVE CONTROLS

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### REVIEW

#### 6.5.3.6 The NRB shall review:

- a. The safety evaluation for 1) changes to procedures, equipment or systems and 2) tests or experiments completed under the provision of Section 50.59, 10CFR, to verify that such actions did not constitute an unreviewed safety question.
- b. Proposed changes to procedures, equipment or systems which involve an unreviewed safety questions as defined in Section 50.59, 10CFR.
- c. Proposed tests or experiments which involve an unreviewed safety question as defined in Section 50.59, 10 CFR.
- d. Proposed changes in Sections 1.0 - 5.0 of these Technical Specifications or licenses.
- e. Violations of applicable statutes, codes, regulations, orders, Technical Specifications, license requirements, or of internal procedures or instructions having nuclear safety significance.
- f. Significant operating abnormalities or deviations from normal and expected performance of plant equipment that affect nuclear safety.
- g. All REPORTABLE EVENTS.
- h. Indications of a significant unanticipated deficiency, affecting nuclear safety, in some aspect of design or operation of safety related structures, systems or components.
- i. Report and meetings minutes of the PORC.

### AUDITS

#### 6.5.3.7 Audits of facility activities shall be performed under the cognizance of the NRB. These audits shall encompass:

- a. The conformance of facility operation to all provisions contained within the Technical Specifications and applicable license conditions at least once per year.

## ADMINISTRATIVE CONTROLS

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### AUTHORITY

6.5.4.8 The SNRB reports to and advises the Senior Vice President Nuclear Engineering and Operations on those areas of responsibility specified in Sections 6.5.4.6 and 6.5.4.7. Meeting minutes may be used for this purpose.

### RECORDS

6.5.4.9 Records of SNRB activities shall be prepared, approved, and distributed as indicated below:

- a. Minutes of each SNRB meeting shall be prepared; approved, and forwarded to the Senior Vice President Nuclear Engineering and Operations within 14 days following each meeting.
- b. Reports of reviews encompassed by Section 6.5.4.6 above shall be prepared, approved, and forwarded to the Senior Vice President Nuclear Engineering and Operations within 14 days following completion of the review.
- c. Audit reports encompassed by Section 6.5.4.7 above, shall be forwarded to the Senior Vice President Nuclear Engineering and Operations and to the management positions responsible for the areas audited within 30 days after completion of the audit.

### 6.6 REPORTABLE EVENT ACTION

- 6.6.1 The following actions shall be taken for REPORTABLE EVENTS:
- a. The Commission shall be notified and a report submitted pursuant to the requirement of Section 50.73 to 10 CFR Part 50, and
  - b. Each REPORTABLE EVENT shall be reviewed by the PORC and the results of this review shall be submitted to the NRB and the Vice President Nuclear Operations.

### 6.7 SAFETY LIMIT VIOLATION

- 6.7.1 The following actions shall be taken in the event a Safety Limit is violated:
- a. The unit shall be placed in at least HOT STANDBY within one hour.

## ADMINISTRATIVE CONTROLS

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6.8.3 Temporary changes to procedures of 6.8.1 above may be made provided:

- a. The intent of original procedure is not altered.
- b. The change is approved by two members of the plant management staff, at least one of whom holds a Senior Reactor Operator's License on the unit affected.
- c. The change is documented, reviewed by the PORC/SORC, as applicable, and approved by the Unit Superintendent/Station Superintendent within 14 days of implementation.

## 6.9 REPORTING REQUIREMENTS

### ROUTINE REPORTS

6.9.1 In addition to the applicable reporting requirements of Title 10, Code of Federal Regulations, the following reports shall be submitted to Regional Administrator, Region I, U. S. Nuclear Regulatory Commission unless otherwise noted.

### STARTUP REPORT

6.9.1.1 A summary report of plant startup and power escalation testing shall be submitted following (1) receipt of an operating license, (2) amendment to the license involving a planned increase in power level, (3) installation of fuel that has a different design or has been manufactured by a different fuel supplier, and (4) modifications that may have significantly altered the nuclear, thermal or hydraulic performance of the plant.

6.9.1.2 The startup report shall address each of the tests identified in the FSAR and shall include a description of the measured values of the operating conditions or characteristics obtained during the test program and a comparison of these values with design predictions and specifications. Any corrective actions that were required to obtain satisfactory operation shall also be described. Any additional specific details required in license conditions based on other commitments shall be included in this report.

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### MONTHLY OPERATING REPORT

6.9.1.6 Routine reports of operating statistics and shutdown experience shall be submitted on a monthly basis to the Director, Office of Management, U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, with a copy to the Regional Administrator, Region I, U. S. Nuclear Regulatory Commission, no later than the 15th of each month following the calendar month covered by the report.

### SPECIAL REPORTS

6.9.2 Special reports shall be submitted to the Regional Administrator, Region I, U. S. Nuclear Regulatory Commission, within the time period specified for each report. These reports shall be submitted covering the activities identified below pursuant to the requirements of the applicable reference specification:

- a. Inoperable Seismic Monitoring Instrumentation, Specification 3.3.3.3.
- b. Inoperable Meteorological Monitoring Instrumentation, Specification 3.3.3.4.
- c. Safety Class 1 Inservice Inspection Program Review, Specification 4.4.10.1.
- d. ECCS Actuation, Specifications 3.5.2 and 3.5.3.
- e. Fire Detection Instrumentation, Specifications 3.3.3.7.
- f. Fire Suppression Systems, Specifications 3.7.9.1 and 3.7.9.2.
- g. RCS Overpressure Mitigation, Specification 3.4.9.3
- h. Specific activity levels, Specification 3.4.8.
- i. Degradation of containment structure, Specification 4.6.1.6.4.
- j. Steam Generator Tube Inspection, Specification 4.1.5.1.5.



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### 6.10 RECORD RETENTION

6.10.1 The following records shall be retained for at least five years:

- a. Records and logs of facility operation covering time interval at each power level.
- b. Records and logs of principal maintenance activities, inspections, repair and replacement of principal items of equipment related to nuclear safety.
- c. All REPORTABLE EVENTS.
- d. Records of surveillance activities, inspections and calibrations required by these Technical Specifications.
- e. Records of reactor tests and experiments.
- f. Records of changes made to operating procedures.
- g. Records of radioactive shipments.
- h. Records of sealed source leak tests and results.
- i. Records of annual physical inventory of all sealed source material of record.

6.10.2 The following records shall be retained for the duration of the facility operating license:

- a. Records and drawing changes reflecting facility design modifications made to systems and equipment described in the Final Safety Analysis Report.
- b. Records of new and irradiated fuel inventory, fuel transfers and assembly burnup histories.
- c. Records of facility radiation and contamination surveys.
- d. Records of radiation exposure for all individuals entering radiation control areas.
- e. Records of gaseous and liquid radioactive material released to the environs.
- f. Records of transient or operational cycles for those facility components designed for a limited number of transients or cycles.

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- g. Records of training and qualification for current members of the plant staff.
- h. Records of inservice inspections performed pursuant to these Technical Specifications.
- i. Records of quality assurance activities required by the QA Manual.
- j. Records of reviews performed for changes made to procedures or equipment or reviews of tests and experiments pursuant to 10 CFR Part 50.59.
- k. Records of meetings of the PORC, the NRC, the SORC and the SNRB.
- l. Records of Environmental Qualification which are covered under the provisions of paragraph 6.13.

### 6.11 RADIATION PROTECTION PROGRAM

Procedures for personnel radiation protection shall be prepared consistent with the requirements of 10 CFR Part 20 and shall be approved, maintained and adhered to for all operations involving personnel radiation exposure.

### 6.12 HIGH RADIATION AREA

6.12.1 In lieu of the "control device" or "alarm signal" required by paragraph 20.203(c)(2) of 10CFR20, each high radiation area in which the intensity of radiation is greater than 100 mrem/hr but less than 1000 mrem/hr shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring issuance of a Radiation Work Permit\*. Any individual or group of individuals permitted to enter such areas shall be provided with or accompanied by one or more of the following:

- a. A radiation monitoring device which continuously indicates the radiation dose rate in the area.
- b. A radiation monitoring device which continuously integrates the radiation dose rate in the area and alarms when a preset integrated dose is received. Entry into such areas with this monitoring device may be made after the dose rate level in the area has been established and personnel have been made knowledgeable of them.

\*Health Physics personnel or personnel escorted by Health Physics personnel shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry into high radiation areas.

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- c. An individual qualified in radiation protection procedures who is equipped with a radiation dose rate monitoring device. This individual shall be responsible for providing positive control over the activities within the area and shall perform periodic radiation surveillance at the frequency specified in the Radiation Work Permit. The surveillance frequency shall be established by the Health Physics Supervisor.

6.12.2 The requirements of 6.12.1, above, shall also apply to each high radiation area in which the intensity of radiation is greater than 100 mrem/hr. In addition, locked doors shall be provided to prevent unauthorized entry into such areas and the keys shall be maintained under the administrative control of the Shift Supervisor on duty and/or the Health Physics Supervisor.

### 6.13 ENVIRONMENTAL QUALIFICATION

6.13.1 By no later than June 30, 1982 all safety-related electrical equipment in the facility shall be qualified in accordance with the provisions of: Division of Operating Reactors "Guidelines for Evaluating Environmental Qualification of Class 1E Electrical Equipment in Operating Reactors" (DOR Guidelines); or, NUREG-0588 "Interim Staff Position on Environmental Qualification of Safety-Related Electrical Equipment", December 1979. Copies of these documents are attached to Order for Modification of License DPR-65 dated October 24, 1980.

6.13.2 By no later than December 1, 1980, complete and auditable records must be available and maintained at a central location which describe the environmental qualification method used for all safety-related electrical equipment in sufficient detail to document the degree of compliance with the DOR Guidelines or NUREG-0588. Thereafter, such records should be updated and maintained current as equipment is replaced, further tested, or otherwise further qualified.

### 6.14 SYSTEMS INTEGRITY

The licensee shall implement a program to reduce leakage from systems outside containment that would or could contain highly radioactive fluids during a serious transient or accident to as low as practical levels. This program shall include the following:

1. Provisions establishing preventive maintenance and periodic visual inspection requirements, and
2. Integrated leak test requirements for each system at a frequency not to exceed refueling cycle intervals.

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### 6.15 IODINE MONITORING

The licensee shall implement a program which will ensure the capability to accurately determine the airborne iodine concentration in vital areas under accident conditions. This program shall include the following:

1. Training of personnel,
2. Procedures for monitoring, and
3. Provisions for maintenance of sampling and analysis equipment.