



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

THE CONNECTICUT LIGHT AND POWER COMPANY

WESTERN MASSACHUSETTS ELECTRIC COMPANY

AND

NORTHEAST NUCLEAR ENERGY COMPANY

MILLSTONE NUCLEAR POWER STATION, UNIT NO. 1

DOCKET NO. 50-245

AMENDMENT TO PROVISIONAL OPERATING LICENSE

Amendment No. 106
License No. DPR-21

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by the Connecticut Light and Power Company, Western Massachusetts Electric Company, and Northeast Nuclear Energy Company, (the licensees) dated May 29, 1985, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public; and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

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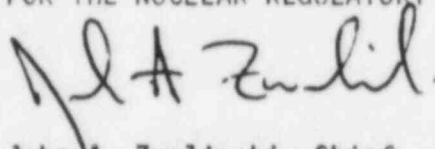
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 2.C.(2) of Provisional Operating License No. DPR-21 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 106, are hereby incorporated in the license. The Northeast Nuclear Energy Company shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective on January 1, 1986.

FOR THE NUCLEAR REGULATORY COMMISSION



John A. Zwolinski, Chief
Operating Reactors Branch #5
Division of Licensing

Attachment:
Changes to License No. DPR-21
and to the Technical
Specifications

Date of Issuance: October 1, 1985

ATTACHMENT TO LICENSE AMENDMENT NO. 106

PROVISIONAL OPERATING LICENSE NO. DPR-21

DOCKET NO. 50-245

1. Revise License DPR-21 by removing page 4 and inserting the enclosed page 4.
2. Replace the following pages of the Appendix A Technical Specifications with the enclosed pages as indicated. The revised pages are identified by the captioned amendment number and contain vertical lines indicating the area of change. Overleaf pages have been provided to maintain document completeness.

REMOVE

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3. Delete Appendix B in its entirety.

- (1) Maximum Power Level
NNECO is authorized to operate the facility at steady state reactor core power levels not in excess of 2011 megawatts thermal.
- (2) Technical Specifications
The Technical Specifications contained in Appendix A as revised through Amendment No. 106 are hereby incorporated in this amended license. NNECO shall operate the facility in accordance with the Technical Specifications.
- (3) Reports
NNECO shall make certain reports in accordance with requirements of the Technical Specifications.
- (4) Operating Records
NNECO shall keep facility operating records in accordance with the requirements of the Technical Specifications.
- (5) (Previously Paragraph 3.E, "Restriction," relating to Cycle 4, issued by License Amendment No. 26, April 2, 1976 -- DELETED)
- (6) Fire Protection
NNECO may proceed with and is required to complete the modifications identified in Paragraphs 3.1.1 through 3.1.18 of the NRC's Fire Protection Safety Evaluation (SE), dated September 26, 1978 and Supplement No. 1 to the SE dated November 19, 1980 for the facility. These modifications will be completed prior to returning to power operation following the 1980 refueling outage.

NNECO is required to implement the administrative controls identified in Section 6 of the SE. The administrative controls shall be in effect by December 31, 1978.
- (7) Physical Protection
NNECO shall fully implement and maintain in effect all provisions of the following Commission-approved documents, including amendments and changes made pursuant to the authority of 10 CFR 50.54(p). These approved documents consist of information which is required to be protected from public disclosure pursuant to 10 CFR 73.21:
 - (a) "Millstone Nuclear Power Station, Units No. 1 and 2 Physical Security Plan," dated June 16, 1978 as revised August 4, 1978 and February 20, 1979 (originally approved by License Amendment No. 59, February 23, 1979).

SurveillancePage No.

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Performance of a surveillance requirement within the specified time interval shall constitute compliance with Operability requirements for a Limiting Condition for Operation.

Surveillance Requirements shall be applicable during the OPERATIONAL MODES associated with Limiting Conditions for Operation. Surveillance need not be performed if the system or component to be tested is not required to be operational as specified by the Limiting Conditions for Operation. However, the required surveillance shall be performed prior to returning the component to an operational status as required by the limiting conditions for operation.

AA. Transition Boiling

Transition boiling means the boiling regime between nucleate and film boiling. Transition boiling is the regime in which both nucleate and film boiling occur intermittently with neither type being completely stable.

BB. Emergency Power Sources

Emergency power sources means the on-site gas turbine generator and diesel generator.

CC. Staggered Test Basis

A. Staggered Test Basis shall consist of:

- a) A test schedule for n systems, subsystems, trains or other designated components obtained by dividing the specified test interval into n equal subintervals, and
- b) The testing of one system, subsystem, train, or other designated component at the beginning of each subinterval.

DD. DOSE EQUIVALENT I-131

DOSE EQUIVALENT I-131 shall be that concentration of I-131 ($\mu\text{Ci}/\text{gram}$) which alone would produce the same thyroid dose as the quantity and isotopic mixture of I-131, I-132, I-133, I-134 and I-135 actually present. The thyroid dose conversion factors used for this calculation, shall be those listed on Table E-7 of Regulatory Guide 1.109, Revision 1.

EE. \bar{E} -AVERAGE DISINTEGRATION ENERGY

\bar{E} shall be the average sum of the beta and gamma energies per disintegration (in MEV) for isotopes, other than iodines, with half-lives greater than 15 minutes, making up at least 95% of the total non-iodine activity in the coolant.

DEFINITIONS

F.F. RADIOACTIVE WASTE TREATMENT SYSTEMS

RADIOACTIVE WASTE TREATMENT SYSTEMS are those liquid, gaseous, and solid waste systems which are required to maintain control over radioactive materials in order to meet the LCO's set forth in the Specifications.

G.G. RADIOLOGICAL EFFLUENT MONITORING AND OFFSITE DOSE CALCULATION MANUAL (REMODCM)

A RADIOLOGICAL EFFLUENT MONITORING MANUAL shall be a manual containing the site and environmental sampling and analysis programs for measurements of radiation and radioactive materials in those exposure pathways and for those radionuclides which lead to the highest potential radiation exposures to individuals from station operation. An OFFSITE DOSE CALCULATION MANUAL shall be a manual containing the methodology and parameters to be used in the calculation of offsite doses due to radioactive gaseous and liquid effluents and in the calculation of gaseous and liquid effluent monitoring instrumentation alarm/trip setpoints. Requirements of the REMODCM are provided in Specification 6.15.

H.H. PURGE - PURGING

PURGE OR PURGING is the controlled process of discharging air or gas from a confinement to maintain temperature, pressure, humidity, concentration or other operating condition, in such a manner that replacement air or gas is required to purify the confinement.

I.I. VENTING

VENTING is the controlled process of discharging air or gas from a confinement to maintain temperature, pressure, humidity, concentration or other operating condition, in such a manner that replacement air or gas is not provided or required during venting. Vent, used in system names, does not imply a VENTING process.

J.J. MEMBER(S) OF THE PUBLIC

MEMBER(S) OF THE PUBLIC shall include all persons who are not occupationally associated with the plant. This category does not include employees of the utility, its contractors or its vendors. Also excluded from this category are persons who enter the site to service equipment or to make deliveries. This category does include persons who use portions of the site for recreational, occupational or other purposes not associated with the plant.

The term "REAL MEMBER OF THE PUBLIC" means an individual who is exposed to existing dose pathways at one particular location.

DEFINITIONS**K.K. SITE BOUNDARY**

The **SITE BOUNDARY** shall be that line beyond which the land is not owned, leased or otherwise controlled by the licensee.

L.L. SOURCE CHECK

A **SOURCE CHECK** shall be the qualitative assessment of channel response when the channel sensor is exposed to radiation.

M.M. UNRESTRICTED AREA

An **UNRESTRICTED AREA** shall be any area at or beyond the site boundary to which access is not controlled by the licensee for purposes of protection of individuals from exposure to radiation and radioactive materials or any area within the site boundary used for residential quarters or industrial, commercial, institutional and/or recreational purposes.

LIMITING CONDITION FOR OPERATION

SURVEILLANCE REQUIREMENT

J. Condensate Demineralizers

1. Regeneration of a condensate demineralizing resin change shall occur before the unused capacity of the resin reaches a minimum value of 30 pounds as chloride ions.
2. Anion resins in the condensate demineralizing system shall have a minimum salt-splitting capacity of 0.75 milliequivalents per milliliter in the wet, chloride form. Anion resins which do not have a capacity of 0.75 milliequivalents per milliliter will be replaced with new resin as will the cation resin which occupies the same bed.
3. At least one condensate demineralizer . . . influent conductivity instrument shall be operable.
4. Whenever a demineralizer is on-line, the conductivity of either its effluent or the condensate-booster pump discharge shall be continuously monitored.
5. Flow rate and/or integrating flow instrumentation shall be operable and recorded for each demineralizer.

K. Mechanical Condenser Vacuum Pump

1. The mechanical condenser vacuum pump shall be capable of being isolated and secured on a signal of high radioactivity whenever the main steam line isolation valves are open.

J. Condensate Demineralizers

1. The percent of the remaining ion exchange capacity of the anion resins shall be calculated and logged:
 - a. Weekly when the influent conductivity is between 0.055 and 0.3 $\mu\text{mho/cm}$;
 - b. Daily when the influent conductivity is equal to or greater than 0.3 $\mu\text{mho/cm}$.
2. Anion resins in all condensate demineralizer charges shall be analyzed quarterly for salt-splitting capacity.

K. Mechanical Condenser Vacuum Pump

At least once during each operating cycle, verify automatic securing and isolation of the mechanical condenser vacuum pump.

LIMITING CONDITION FOR OPERATION

SURVEILLANCE REQUIREMENT

B. Standby Gas Treatment System

1. Except as specified in Specifications 3.7.8.3 and 3.7.8.4 below, both circuits of the standby gas treatment system and the emergency power sources required for operation of such circuits shall be operable at all times when secondary containment integrity is required.
2.
 - a. The results of the in-place cold DOP and halogenated hydrocarbon tests, at minimum flow rate of 500 SCFM, on HEPA filters and charcoal adsorber banks shall show $\geq 99\%$ DOP removal and $\geq 99\%$ halogenated hydrocarbon removal.
 - b. The results of laboratory carbon sample analysis shall show $\geq 90\%$ radioactive methyl iodide removal at a velocity within 20% of actual system design, 0.5 to 1.5 mg/m³ inlet methyl iodide concentration, $\geq 95\%$ R.H. and $\geq 190^\circ\text{F}$.
 - c. Fans shall be shown to operate within $\pm 10\%$ design flow.

B. Standby Gas Treatment System

1. At least once per operating cycle, the following conditions shall be demonstrated:
 - a. Pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 7 inches of water at the system design flow rate (1100 SCFM).
 - b. Inlet heater output is at least 5kW.
 - c. Air distribution is uniform with $\pm 20\%$ of the averaged flow per unit across the HEPA filters and charcoal adsorbers.
2.
 - a. The tests and sample analysis of Specification 3.7.8.2 shall be performed initially and at least once per year for standby service or after 720 hours of system operation and following painting, fire or chemical release in any ventilation zone communicating with the system that could contaminate the HEPA filters or charcoal adsorbers.
 - b. Cold DOP testing shall be performed after each complete or partial replacement of the HEPA filter bank or after any structural maintenance on the system housing.

LIMITING CONDITION FOR OPERATION

SURVEILLANCE REQUIREMENT

From and after the date that one circuit of the standby gas treatment system is made or found to be inoperable for any reason, reactor operation and fuel handling is permissible only during the succeeding seven days unless such circuit is sooner made operable, provided that during such seven days all active components of the other standby gas treatment circuit shall be operable.

4. During fuel handling both circuits of the standby gas treatment system shall be operable, except as stated in paragraph 3.7.B.3. In addition, there shall be operable either (a) two sources of offsite power (two 345KV or one 27.6KV and one 345KV) and one emergency power source, or (b) one source of offsite power (345KV or 27.6KV) and two emergency power sources to operate components required in paragraph 3.7.B.3.
5. If the above cannot be met, procedures shall be initiated immediately to establish the conditions listed in 3.7.C.1A through d and compliance shall be completed within 24 hours thereafter.
6. Primary containment shall be purged through the standby gas treatment system at all times when primary containment integrity is required.

- c. Halogenated hydrocarbon testing shall be performed after each complete or partial replacement of the charcoal adsorber bank or after any structural maintenance on the system housing.

MILLSTONE - UNIT 1

3/4 7-12b

Amendment No. 78, §1, 106

LIMITING CONDITION FOR OPERATION

3.8 RADIOACTIVE MATERIALS

3.8.A RADIOACTIVE LIQUID EFFLUENT
INSTRUMENTATION

3.8.A.1 The radioactive liquid effluent monitoring instrumentation channels shown in Table 3.8-1 shall be OPERABLE with applicable alarm/trip setpoints set to ensure that the limits of Specification 3.8.C.1 are not exceeded. The setpoints shall be determined in accordance with methods and parameters as described in the ODCM.

Applicability: As shown in Table 3.8-1.

Actions:

1. In the event a limiting condition for operation and/or associated action requirement cannot be satisfied, this shall not require unit shutdown or prevent a change in operational modes.
2. With a radioactive liquid effluent monitoring instrumentation channel alarm/trip setpoint less conservative than required by the above specification, without delay suspend the release of radioactive liquid effluents monitored by the affected channel, or declare the channel inoperable, or change the setpoint so it is acceptably conservative.
3. With the number of channels less than the minimum channels operable requirement, take the ACTION shown in Table 3.8.1. Exert best efforts to restore the inoperable monitor to OPERABLE status within 30 days and, if unsuccessful, explain in the next Semi-annual Effluent Report why the inoperability was not corrected in a timely manner. Releases need not be terminated after 30 days provided the specified actions are continued.

SURVEILLANCE REQUIREMENT

4.8.A RADIOACTIVE LIQUID EFFLUENT INSTRUMENTATION

- 4.8.A.1 Each radioactive liquid effluent monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the INSTRUMENT CHECK, INSTRUMENT CALIBRATION, and INSTRUMENT FUNCTIONAL TEST operations at the frequencies shown in Table 4.8-1.

TABLE 3.8-1
RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION

<u>Instrument</u>	<u>Minimum # Operable</u>	<u>Alarm Setpoints Required</u>	<u>Applicability</u>	<u>Action</u>
1. Gross Radioactivity Monitors Providing Automatic Termination of Release				
a. Liquid Radwaste Effluent Line	1	Yes	*	A
2. Gross Radioactivity Monitors Not Providing Automatic Termination of Release				
a. Service Water Effluent Line	1	Yes	*	B
3. Flow Rate Measurement Devices				
a. Liquid Radwaste	1	No	*	C
b. Dilution Water Flow	**	No	*	NA

* - At all times - which means that channels be OPERABLE and in service on a continuous, uninterrupted basis, except that outages are permitted, within the time frame of the specified ACTION statement, for the purpose of maintenance and performance of required tests, checks and calibrations.

** - Dilution water flow is determined by the use of condenser cooling water and service water pump status. Only those pumps actually discharging to the quarry at the time of the release are included. Pump status is only reviewed for purposes of determining flows.

NA- Not Applicable.

TABLE 3.8-1 (Continued)

ACTIONS STATEMENTS

Action A

With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases may continue provided that best efforts are made to repair the instrument and that prior to initiating a release:

1. At least two independent samples of the tank are analyzed in accordance with Specification 4.8.C.1.1 and;
2. The original release rate calculations and discharge valving are independently verified by a second individual.

Action B

With the numbers of channels OPERABLE less than required by the Minimum Channels OPERABLE requirements, effluent releases via this pathway may continue provided that best efforts are made to repair the instrumentation and that once per 12 hours grab samples are collected and analyzed for gross radioactivity (beta or gamma) at a lower limit of detection of at least 3×10^{-7} uCi/gm.

Action C

With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue provided that best efforts are made to repair the instrument and that the flow rate is estimated once per 4 hours during actual releases. Pump performance curves may be used to estimate flow.

TABLE 4.8-1

RADIOACTIVE LIQUID EFFLUENT MONITORING
INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>Instrument</u>	<u>Instrument Check</u>	<u>Instrument Calibration</u>	<u>Instrument Functional Test</u>	<u>Source Check</u>
1. Gross Radioactivity Monitors Providing Alarm and Automatic Termination of Release				
a. Liquid Radwaste Effluent Line	D (1)	R (2)	Q (3)	P
2. Gross Radioactivity Monitors Providing Alarm But Not Providing Automatic Termination of Release				
a. Service Water Effluent Line	D (1)	R (2)	Q (3)	M
3. Flow Rate Measurement Devices				
a. Liquid Radwaste Effluent Line	D (1)	R	Q (5)	NA
b. Dilution Water Flow	D (4)	NA	NA	NA

D = Daily
M = Monthly
P = Prior to each batch release
R = Once every 18 months
Q = Once every 3 months
NA = Not Applicable

TABLE 4.8-1 (Continued)

TABLE NOTATION

- (1) Instrument check shall consist of verifying indication of radiation or flow readings during periods of discharge. Instrument check need only be performed daily when discharges are made from this pathway.
- (2) Calibration shall include the use of a radioactive solid source, the activity of which can be traced to an NBS source. The radioactive source shall be in a known, reproducible geometry.
- (3) The INSTRUMENT FUNCTIONAL TEST shall also demonstrate that control room alarm annunciation occurs if any of the following conditions exist:
 1. Instrument indicates measured levels above the alarm/trip setpoint*.
 2. Instrument indicates a downscale failure or circuit failure.
 3. Instrument controls not set in operate mode.
 - * Automatic isolation shall also be demonstrated for the liquid radwaste effluent line.
- (4) Pump status shall be checked daily.
- (5) The quarterly functional test for the liquid radwaste flow monitor shall consist only of a comparison of the calculated volumes discharged by using the measured flow rate versus the tank level decrease. This surveillance is not required if no waste was discharged during the quarter.

LIMITING CONDITION FOR OPERATION

SURVEILLANCE REQUIREMENT

3.8.B Radioactive Gaseous Effluent Monitoring Instrumentation

3.8.B.1 The radioactive gaseous effluent monitoring instrumentation channels shown in Table 3.8-2 shall be OPERABLE with applicable alarm/trip setpoints set to ensure that the limits of Specification 3.8.D.1 are not exceeded. The setpoints shall be determined in accordance with methods and parameters as described in the ODCM.

Applicability: As shown in Table 3.8-2.

Action:

1. In the event of a limiting condition for operation and/or associated action requirement cannot be satisfied, this shall not require unit shutdown or prevent a change in operational modes, except for Table 3.8.2 action B statement for SJAE off-gas monitor.
- a. With a radioactive gaseous effluent monitoring instrumentation channel alarm/trip setpoint less conservative than required by the above Specification, without delay suspend the release of radioactive gaseous effluents monitored by the affected channel, or declare the channel inoperable, or change the setpoint so it is acceptably conservative.
- b. With the number of channels less than the minimum channels operable requirements, take the ACTION shown in Table 3.8-2. Exert best efforts to restore the inoperable monitor to OPERABLE status within 30 days and, if unsuccessful, explain in the next Semi-annual Effluent Report why the inoperability was not corrected in a timely manner. Release need not be terminated after 30 days provided the specified actions are continued.

4.8.B Radioactive Gaseous Effluent Instrumentation

4.8.B.1 Each radioactive gaseous effluent monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the INSTRUMENT CHECK, INSTRUMENT CALIBRATION, and INSTRUMENT FUNCTIONAL TEST operations at the frequencies shown in Table 4.8-2.

TABLE 3.8-2

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

<u>Instrument</u>	<u>Minimum # Operable</u>	<u>Alarm Setpoints</u>	<u>Applicability</u>	<u>Action</u>
1. Main Condenser Augmented Offgas Treatment System Explosive Gas Monitor (For System Designed to Withstand Effects of a Hydrogen Explosion)				
(a) Hydrogen Monitor	1	Yes	**	A
2. Condenser Air Ejector Noble Gas Activity Monitor				
(a) SJAЕ Off-Gas Monitor	2	Yes	*	B
3. MP1 Main Stack				
(a) Noble Gas Activity Monitor	1	Yes	*	C
(b) Iodine Sampler	1	No	*	D
(c) Particulate Sampler	1	No	*	D
(d) Stack Flow Rate Monitor	1	No	*	E
(e) Sampler Flow Rate Monitor	1	Yes	*	E

* - At all times which means that channels shall be OPERABLE and in service on a continuous, uninterrupted basis, except that outages are permitted, within the time-frame of the specified action statement, for the purpose of maintenance and performance of required tests, checks and calibrations.

** - During augmented off-gas treatment system (recombiner) operation.

TABLE 3.8-2 (Continued)

ACTION STATEMENTS

Action A

With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, operation of the main condenser augmented offgas treatment system may continue provided that best efforts are made to repair the instrument and that gas samples are collected once per 4 hours and analyzed for hydrogen within the ensuing 4 hours.

Action B

With one monitor inoperable, releases via this pathway may continue provided the inoperable monitor is placed in the tripped position. With both monitors inoperable, releases may continue for up to 72 hours provided the augmented gas system is not bypassed and the main stack monitor is operable, otherwise, be in at least HOT STANDBY within 12 hours.

Action C

With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue provided that best efforts are made to repair the instrument and that grab samples are taken once per 12 hours and these samples are analyzed for gross activity within 24 hours.

Action D

With the number of samplers OPERABLE less than required by the Minimum number OPERABLE requirement, effluent releases via this pathway may continue provided that best efforts are made to repair the instrument and that samples are continuously collected with auxiliary sampling equipment for periods of seven (7) days and analyzed for principal gamma emitters with half lives greater than 8 days within 48 hours after the end of the sampling period.

Action E

With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue provided that best efforts are made to repair the instrument and that the flow rate is estimated once per 4 hours.

TABLE 4.8-2

RADIOACTIVE GASEOUS EFFLUENT MONITORING
INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>Instrument</u>	<u>Instrument Check</u>	<u>Instrument Calibration</u>	<u>Instrument Functional Test</u>	<u>Source Check</u>
1. Main Condenser Augmented Off-Gas Treatment System Explosive Gas Monitor				
(a) Hydrogen Monitor	D (1)	Q (2)	M	NA
2. Condenser Air Ejector Noble Gas Activity Monitor				
(a) SJAE Off-Gas Monitor	D (3)	R (4)	Q (5)	M
3. M1 Main Stack				
(a) Noble Gas Activity Monitor	D (3)	R (6)	Q (7)	M
(b) Iodine Sampler	W	NA	NA	NA
(c) Particulate Sampler	W	NA	NA	NA
(d) Stack Flow Rate Monitor	D (3)	R	Q (7)	NA
(e) Sampler Flow Rate	D	R	NA	NA

D = Daily

Q = Once every 3 months

M = Once every month

R = Once every 18 months

W = Weekly

NA - Not Applicable

TABLE 4.8-2 (Continued)

TABLE NOTATION

- (1) Instrument check daily only when the augmented off-gas treatment system is in operation.
- (2) The INSTRUMENT CALIBRATION shall include the use of standard gas samples containing a nominal:
 1. One volume percent hydrogen, balance nitrogen; and
 2. Four volume percent hydrogen, balance nitrogen.
- (3) Instrument check daily only when there exist releases via this pathway.
- (4) Calibration shall include the use of a known source whose strength has been determined through the use of a condenser R meter traceable to the NBS. The source and detector shall be in a known reproducible geometry.
- (5) The instrument functional test shall also demonstrate the following:
 1. Automatic isolation of the off-gas line occurs within 15 minutes if any of the following conditions exist:
 - a. Both monitors indicate measured levels above the trip set-point.
 - b. One monitor indicates measured levels above the trip set-point, and the other indicates a downscale trip.
 2. Control room alarm annunciation occurs if any of the following conditions exist:
 - a. Either monitor indicates measured levels above the alarm/trip setpoint.
 - b. Either monitor indicates a downscale failure.
 - c. Instrument controls are not set in the operate mode.
- (6) Calibration shall include the use of a known source whose strength is determined by a detector which has been calibrated to an NBS source. These sources shall be in a known reproducible geometry.
- (7) The INSTRUMENT FUNCTIONAL TEST shall also demonstrate that control room alarm annunciation occurs if any of the following conditions exist:

TABLE 4.8-2 (Continued)

TABLE NOTATION

1. Instrument indicates measured levels above the alarm/trip setpoint.*
2. Instrument indicates a downscale failure.
3. Instrument controls not set in operate mode.

* - Not applicable for stack flow rate monitor.

LIMITING CONDITION FOR OPERATION

3.8.C Radioactive Liquid Effluents

3.8.C.1 Liquid Effluents Concentration

3.8.C.1.1 The concentration of radioactive material released from the site (see Figure 3.8-1) shall not exceed the concentrations specified in 10 CFR Part 20, Appendix B, Table II, Column 2 for radionuclides other than dissolved or entrained noble gases. For dissolved or entrained noble gases, the concentration shall not exceed 2×10^{-6} $\mu\text{Ci/ml}$ total activity.

APPLICABILITY: At all times.

ACTION:

With the concentration of radioactive material released from the site exceeding the above limits, restore the concentration within the above limits within 15 minutes.

SURVEILLANCE REQUIREMENTS

4.8.C Radioactive Liquid Effluents

4.8.C.1 Liquid Effluents Concentration

4.8.C.1.1 Radioactive liquid wastes shall be sampled and analyzed according to the sampling and analysis program specified in Section I of the REMODCM.

4.8.C.1.2 The results of radioactive analysis shall be used in accordance with the methods of Section II of the REMODCM to assure that the concentrations at the point of release are maintained within the limits of Specification 3.8.C.1.1.

LIMITING CONDITION FOR OPERATION

3.8.C.2 Liquid Effluents - Dose

3.8.C.2.1 The dose or dose commitment to any REAL MEMBER OF THE PUBLIC from radioactive materials in liquid effluents from Unit 1 released from the site. (See Figure 3.8-1) shall be limited:

- a. During any calendar quarter to ≤ 1.5 mrem to the total body and to ≤ 5 mrem to any organ; and,
- b. During any calendar year to ≤ 3 mrem to the total body and to ≤ 10 mrem to any organ.

APPLICABILITY: At all times.

ACTION:

- a. With the calculated dose from the release of radioactive materials in liquid effluents exceeding any of the above limits, in lieu of any other report required by Specification 6.9.1, prepare and submit to the Commission within 30 days, pursuant to Specification 6.9.2, a Special Report which identifies the cause(s) for exceeding the limit(s) and defines the corrective actions to be taken to reduce the releases of radioactive materials in liquid effluents during the remainder of the current calendar quarter and the calendar year so that the cumulative dose or dose commitment to any REAL MEMBER OF THE PUBLIC from such releases during the calendar year is within 3 mrem to the total body and 10 mrem to any organ.

SURVEILLANCE REQUIREMENTS

4.8.C.2 Liquid Effluent - Dose

4.8.C.2.1 Dose Calculations. Cumulative dose contributions from liquid effluents shall be determined in accordance with Section II of the REMODCH once per 31 days.

4.8.C.2.2 Relative accuracy or conservatism of the calculations shall be confirmed by performance of the Radiological Environmental Monitoring Program as detailed in the REMODCH.

LIMITING CONDITION FOR OPERATION

3.8.D Radioactive Gaseous Effluents**3.8.D.1** Gaseous Effluents - Dose Rate

3.8.D.1.1 The instantaneous dose rate offsite (see Figure 3.8-1) due to radioactive materials released in gaseous effluents from the site shall be limited to the following values:

- a. The dose rate limit for noble gases shall be ≤ 500 mrem/yr to the total body and ≤ 3000 mrem/yr to the skin; and,
- b. The dose rate limit for Iodine-131, Iodine-133, Tritium and for all radioactive materials in particulate form with half lives greater than 8 days shall be ≤ 1500 mrem/yr to any organ.

APPLICABILITY: At all times.

ACTION:

With the dose rate(s) exceeding the above limits, decrease the release rate to comply with the limit(s) given in Specification 3.8.D.1.1 within 15 minutes.

SURVEILLANCE REQUIREMENT

4.8.D Radioactive Gaseous Effluents**4.8.D.1** Gaseous Effluents - Dose Rate

4.8.D.1.1 The instantaneous release rate corresponding to the above dose rate shall be determined in accordance with the methodology Section II of the REMODCM.

4.8.D.1.2 The instantaneous release rate shall be monitored in accordance with the requirements of Table 3.8-2.

4.8.D.1.3 Sampling and analysis shall be performed in accordance with Section I of the REMODCM to assure that the limits of specification 3.8.D.1.1 are met.

LIMITING CONDITION FOR OPERATION

SURVEILLANCE REQUIREMENT

3.8.D.2 Gaseous Effluents Dose, Noble Gases

3.8.D.2.1 The air dose offsite (see Figure 3.8-1) due to noble gases released in gaseous effluents from Unit 1 shall be limited to the following:

- a. During any calendar quarter, to ≤ 5 mrad for gamma radiation and ≤ 10 mrad for beta radiation;
- b. During any calendar year, to ≤ 10 mrad for gamma radiation and ≤ 20 mrad for beta radiation;

APPLICABILITY: At all times.

ACTION:

With the calculated air dose from radioactive noble gases in gaseous effluents exceeding any of the above limits, in lieu of any other report required by Specification 6.9.1, prepare and submit to the Commission within 30 days, pursuant to Specification 6.9.2, a Special Report which identified the cause(s) for exceeding the limit(s) and defines the corrective actions to be taken to reduce the releases of radioactive noble gases in gaseous effluents during the remainder of the current calendar quarter and the calendar year so that the cumulative dose during the calendar year is within 10 mrad for gamma radiation and 20 mrad for beta radiation.

4.8.D.2 Gaseous Effluents - Dose, Noble Gases

4.8.D.2.1 Dose Calculations - Cumulative dose contributions for the current calendar quarter and current calendar year shall be determined in accordance with Section II of REMODCM once every 31 days.

4.8.D.2.2 Relative accuracy or conservatism of the calculations shall be confirmed by performance of the Radiological Environmental Monitoring Program as detailed in the REMODCM.

LIMITING CONDITION FOR OPERATION

3.8.D.3

Gaseous Effluents - Dose Radioiodines, Radioactive Material In Particulate Form, and Radionuclides Other Than Noble Gases

3.8.D.3.1 The dose to any REAL MEMBER OF THE PUBLIC from Iodine-131, Iodine-133, Tritium and radioactive materials in particulate form with half lives greater than eight days in gaseous effluents released offsite from Unit 1 (See Figure 3.8.1) shall be limited to the following:

- During any calendar quarter to ≤ 7.5 mrem;
- During any calendar year to ≤ 15 mrem;

APPLICABILITY: At all times.

ACTION:

- With the calculated dose from the release of radioiodines, radioactive materials in particulate form, or radionuclides other than noble gases in gaseous effluents exceeding any of the above limits, in lieu of any other report required by Specification 6.9.1, prepare and submit to the Commission within 30 days, pursuant to Specification 6.9.2, a Special Report which identifies the cause(s) for exceeding the limit and defines the corrective actions to be taken to reduce the releases during the remainder of the current calendar quarter and the calendar year so that the cumulative dose or dose commitment to any REAL MEMBER OF THE PUBLIC from such releases during the calendar year is within mrem to any organ.

SURVEILLANCE REQUIREMENT

4.8.D.3

Gaseous Effluents - Dose, Radioiodines, Radioactive Material In Particulate Form, and Radionuclides Other Than Noble Gases

4.8.D.3.1 Dose Calculations - Cumulative dose contributions for the current calendar quarter and current calendar year shall be determined in accordance with Section II of the REMODCM once every 31 days.

4.8.D.3.2 Relative accuracy or conservatism of the calculations shall be confirmed by performance of the Radiological Environmental Monitoring Program as detailed in the REMODCM.

LIMITING CONDITION FOR OPERATION

3.8.D.4 Radioactive Effluents - Total Dose

3.8.D.4.1 The dose or dose commitment to any REAL MEMBER OF THE PUBLIC from the Millstone Site is limited to ≤ 25 mrem to the total body or any organ (except the thyroid, which is limited to ≤ 75 mrem) over a period of 12 consecutive months.

APPLICABILITY: At all times.

ACTION:

- a. With the calculated dose from the release of radioactive materials in liquid or gaseous effluents exceeding twice the limits of Specifications 3.8.C.2, 3.8.D.2, or 3.8.D.3, in lieu of any other report required by Specification 6.9.1, prepare and submit a Special Report to the Commission within 30 days pursuant to Specification 6.9.2 and limit the subsequent releases such that the dose or dose commitment to any REAL MEMBER OF THE PUBLIC from the Millstone Site is limited to ≤ 25 mrem to the total body or any organ (except thyroid, which is limited to ≤ 75 mrem) over 12 consecutive months. This Special Report shall include an analysis which demonstrates that radiation exposures to any REAL MEMBER OF THE PUBLIC from the Millstone Site (including all effluent pathways and direct radiation) are less than the 40 CFR Part 190 Standard.

If the estimated doses exceed the above limits, the Special Report shall include a request for a variance in accordance with the provisions of 40 CFR Part 190. Submittal of the report is considered a timely request and a variance is granted until staff action on the request is complete.

SURVEILLANCE REQUIREMENT

4.8.D.4 Radioactive Effluents - Total Dose

4.8.D.4.1 Cumulative dose contributions from liquid and gaseous effluents and direct radiation from the Millstone site shall be determined in accordance with Section II of the REMODCM once per 31 days.

LIMITING CONDITION FOR OPERATION

3.8.D.5

Explosive Gas Mixture

3.8.D.5.1 The concentration of hydrogen in the main condenser offgas treatment system, downstream of the recombiners, shall be limited to $\leq 4\%$ by volume.

APPLICABILITY: At all times.

- a. With the concentration of hydrogen greater than 4% but less than or equal to 8%, restore the concentration to within the limit within 48 hours. With the concentration of hydrogen greater than 8%, terminate use of the augmented OFF-GAS SYSTEM.

SURVEILLANCE REQUIREMENT

4.8.D.5

Explosive Gas Mixture

4.8.D.5.1 The concentration of hydrogen shall be determined to be within the above limits by monitoring the waste gases with the hydrogen monitor required OPERABLE by Table 3.8-2 or by compliance with Action A of Table 3.8-2 if the Monitor is inoperable.

LIMITING CONDITION FOR OPERATION

3.8.D.6 Steam Jet Air Ejector Noble Gas Activity

3.8.D.6.1 In the main condenser OFF-GAS SYSTEM, the noble-gas in-process activity rate shall not exceed 1.47×10^6 $\mu\text{Ci/sec}$ averaged over 15 minutes as measured at the off-gas monitor.

APPLICABILITY: At all times

ACTION:

With the noble gas activity exceeding the above limit, reduce the activity rate to within the limit within 72 hours or be in at least HOT STANDBY within the next 12 hours.

SURVEILLANCE REQUIREMENTS

4.8.D.6 Steam Jet Air Ejector Noble Gas Activity

4.8.D.6.1 The noble-gas in-process activity rate shall be continuously monitored by the steam jet air ejector off-gas monitor required OPERABLE in Table 3.8-2.

4.8.D.6.2 The noble-gas in-process activity rate shall be determined to be within the above limit by performance of the steam jet air ejector sampling required in Section I of the REMODCM.

When a snubber is found inoperable, an engineering evaluation is performed, in addition to the determination of the snubber mode of failure, in order to determine if any safety related component or system has been adversely affected by the inoperability of the snubber.

The engineering evaluation shall determine whether or not the snubber mode of failure has imparted a significant effect or degradation on the supported component or system.

To provide assurance of snubber reliability, a representative sample of the installed snubbers will be tested during plant shutdowns at eighteen (18) month intervals. Observed failures of these sample snubbers shall require testing of additional units.

Hydraulic snubbers and mechanical snubbers may each be treated as a different entity for the above surveillance programs.

J. Condensate Demineralizers

The criteria of the resin monitoring program and the resin replacement program have been established to protect the reactor from high chloride level should a seawater leak occur in the main condenser. These criteria will provide for a minimum unused capacity of 30 pounds of chloride ion (50 percent depletion in a resin which is approaching the limit of 0.75 meq/ml) before a planned regeneration of a resin. Should a seawater leak occur when a resin has 30 pounds of capacity remaining, this criteria will allow a sufficient buffer for an orderly plant shutdown.

The resin depletion can be calculated using the measured salt-splitting capacity, the flow through the bed, and the average influent conductivity. Based on this result, a depletion can be calculated which will assure a 30-pound chloride ion exchange reserve. Regeneration prior to this level of depletion will assure a sufficient ion exchange reserve for removal of chloride from the condensate system.

These factors form the basis for the frequency of sampling, analyzing, calculation and logging surveillance requirements. Since startup of Unit 1, the salt-splitting capacity of the resins has degraded about 15% from its initial value of 1.2 meq. A quarterly sampling frequency will be sufficient to detect the slow, long-term degradation of the resin. As conductivity increases, the calculation and logging will be increased to a weekly basis and ultimately on a daily basis when and if influent conductivity reaches 0.3 μ mho/cm or greater.

K. Mechanical Condenser Vacuum Pump

The purpose of selecting the mechanical condenser vacuum pump line is to limit the release of activity from the main condenser in the unlikely event of a control rod drop accident. During the postulated accident, fission products would be transported from the reactor to the main steamlines to the main condenser. The fission product radioactivity would be sensed by the main steamline radioactivity monitors and isolation would be initiated.

A. Radioactive Liquid Effluent Instrumentation

The radioactive liquid effluent instrumentation is provided to monitor and control, as applicable, the releases of radioactive materials in liquid effluents during actual or potential releases. The alarm/trip setpoints for these instruments shall be calculated in accordance with approved methods in the ODCM to ensure that the alarm/trip will occur prior to exceeding the limits of 10 CFR Part 20. The OPERABILITY and use of this instrumentation is consistent with the requirements of General Design Criteria 60, 63 and 64 of Appendix A to 10 CFR Part 50.

B. Radioactive Gaseous Effluent Instrumentation

The radioactive gaseous effluent instrumentation is provided to monitor and control, as applicable, the releases of radioactive materials in gaseous effluents during actual or potential releases. The alarm/trip setpoints for these instruments shall be calculated in accordance with approved methods in the ODCM to ensure that the alarm/trip will occur prior to exceeding the limits of 10 CFR Part 20. This instrumentation also includes provisions for monitoring (and controlling) the concentrations of potentially explosive gas mixtures in the waste gas holdup system. The OPERABILITY and use of this instrumentation is consistent with the requirements of General Design Criteria 60, 63 and 64 of Appendix A to 10 CFR Part 50.

C. Radioactive Liquid Effluents

1. This specification is provided to ensure that the concentration of radioactive materials released in liquid waste effluents from the site will be less than the concentration levels specified in 10 CFR Part 20, Appendix B, Table II. This instantaneous limitation provides additional assurance that the levels of radioactive materials in bodies of water outside the site will result in exposures within (1) the Section II.A design objectives of Appendix I, 10 CFR Part 50, to an individual and (2) the limits of 10 CFR Part 20.106(e) to the population. The concentration limit for dissolved or entrained noble gases is based upon the assumption that Xe-135 is the controlling radioisotope and its MPC in air (submersion) was converted to an equivalent concentration in water using the methods described in International Commission on Radiological Protection (ICRP) Publication 2.

2. This specification is provided to implement the requirements of Sections II.A, III.A and IV.A of Appendix I, 10 CFR Part 50. The Limiting Condition for Operation implements the guides set forth in Section II.A of Appendix I. The ACTION statements provide the required operating flexibility and at the same time implement the guides set forth in Section IV.A of Appendix I to assure that the releases of radioactive material in liquid effluents will be kept "as low as is reasonably achievable." The dose calculations in the ODCM implement the requirements in Section III.A of Appendix I that conformance with the guides of Appendix I is to be shown by calculational procedures based on models and data such that the actual exposure of an individual through appropriate pathways is unlikely to be substantially underestimated. The equations specified in the ODCM for calculating the doses due to the actual release rates of radioactive materials in liquid effluents will be consistent with the methodology provided in Regulatory Guide 1.109, "Calculation of annual Doses to Man from Routine Releases of Reactor Effluents for the Purpose of Evaluating Compliance with 10 CFR Part 50, Appendix I, "Revision 1, October 1977, and Regulatory Guide 1.113, "Estimating Aquatic Dispersion of Effluents from Accidental and Routine Reactor Releases for the Purpose of Implementing Appendix I," April 1977.

D. Radioactive Gaseous Effluents

1. This specification is provided to ensure that the dose rate at any time from gaseous effluents from all units on the site will be within the annual dose limits of 10 CFR Part 20 for all areas offsite. The annual dose limits are the doses associated with the concentrations of 10 CFR Part 20, Appendix B, Table II. These limits provide reasonable assurance that radioactive material discharged in gaseous effluents will not result in the exposure of an individual offsite to annual average concentrations exceeding the limits specified in Appendix B, Table II of 10 CFR Part 20 (10 CFR Part 20.106(b)). For individuals who may at times be within the site boundary, the occupancy of the individual will be sufficiently low to compensate for any increase in the atmospheric diffusion factor above that for the site boundary. The specified release rate limits restrict, at all times, the corresponding gamma and beta dose rates above background to an individual at or beyond the site boundary to ≤ 500 mrem/year to the total body or to ≤ 3000 mrem/year to the skin. These release rate limits also restrict, at all times, the corresponding thyroid dose rate above background to an infant via the cow-milk-infant pathway to ≤ 1500 mrem/year for the nearest cow to the plant.
 2. This specification is provided to implement the requirements of Sections II.B, III.A and IV.A of Appendix I, 10 CFR Part 50. The Limiting Condition for Operation implements the guides set forth in Section II.B of Appendix I. The ACTION statements provide the required operating flexibility and at the same time implement the guides set forth in Section IV.A of Appendix I to assure that the releases of radioactive material in gaseous effluents will be kept "as low as is reasonably achievable". The Surveillance Requirements implement the requirements in Section III.A of Appendix I that conformance with the guides of Appendix I is to be shown by calculational procedures based on models and data such that the actual exposure of an individual through the appropriate pathways is unlikely to be substantially underestimated. The dose calculations established in the ODCM for calculating the doses due to the actual release rates of radioactive noble gases in gaseous effluents will be consistent with the methodology provided in Regulatory Guide 1.109, "Calculation of Annual Doses to Man from Routine Releases of Reactor Effluents for the Purpose of Evaluating Compliance with 10 CFR Part 50, Appendix I", Revision 1, October 1977 and Regulatory Guide 1.111, "Methods for Estimating Atmospheric, Transport and Dispersion of Gaseous Effluents in Routine Releases from Light-Water-Cooled Reactors", Revision 1, July 1977.
- The ODCM equations provided for determining the air doses at the site boundary are based upon utilizing successively more realistic dose calculational methodologies. More realistic dose calculational methods are used whenever simplified calculations indicate a dose approaching a substantial portion of the regulatory limits. The methods used, in order are, previously determined air dose per released activity ratio, historical meteorological data and actual radionuclide mix released, or real time meteorology and actual radionuclides released.

3. This specification is provided to implement the requirements of Sections II.C, III.A and IV.A of Appendix I, 10 CFR Part 50. The Limiting Conditions for Operation are the guides set forth in Section II.C of Appendix I. The ACTION statements provide the required operating flexibility and at the same time implement the guides set forth in Section IV.A of Appendix I to assure that the releases of radioactive materials in gaseous effluents will be kept "as low as is reasonably achievable". The ODCM calculational methods specified in the surveillance requirements implement the requirements in Section III.A of Appendix I that conformance with the guides of Appendix I be shown by calculational procedures based on models and data such that the actual exposure of an individual through appropriate pathways is unlikely to be substantially underestimated. The ODCM calculational methods for calculating the doses due to the actual release rates of the subject materials will to be consistent with the methodology provided in Regulatory Guide 1.109, "Calculating of Annual Doses to Man from Routine Releases of Reactor Effluents for the Purpose of Evaluating Compliance with 10 CFR Part 50, Appendix I, "Revision 1, October 1977 and Regulatory Guide 1.111, "Methods for Estimating Atmospheric Transport and Dispersion of Gaseous Effluents in Routine Releases from Light-Water-Cooled Reactors", Revision 1, July 1977. These equations provide for determining the doses based upon either conservative atmospheric dispersion and an assumed critical nuclide mix or using real time meteorology and specific nuclides released. The release rate specifications for radioiodines, radioactive material in particulate form and radionuclides other than noble gases are dependent on the existing radionuclide pathways to man. The pathways which are examined in the development of these calculations are: 1) individual inhalation of airborne radionuclides, 2) deposition of radionuclides onto green leafy vegetation with subsequent consumption by man, 3) deposition onto grassy areas where milk animals and meat producing animals graze with consumption of the milk and meat by man, and 4) deposition on the ground with subsequent exposure of man.
4. This specification is provided to meet the reporting requirements of 40 CFR 190. For the purpose of the Special Report, it may be assumed that the dose commitment to any REAL MEMBER OF THE PUBLIC from other fuel cycle sources is negligible, with the exception that dose contributions from other nuclear fuel cycle facilities at the same site or within a radius of 5 miles must be considered.
5. This specification is provided to ensure that the concentration of potentially explosive gas mixtures contained in the waste gas treatment system is maintained below the flammability limits of hydrogen and oxygen. Maintaining the concentration of hydrogen and oxygen below their flammability limits provides assurance that the releases of radioactive materials will be controlled in conformance with the requirements of General Design Criterion 60 of Appendix A to 10 CFR Part 50.

6. Restricting the gross radioactivity rate of noble gases from the main condenser provides reasonable assurance that the total body exposure to an individual at the exclusion area boundary will not exceed a small fraction of the limits of 10 CFR Part 100 in the event this effluent is inadvertently discharged directly to the environment without treatment. This specification implements the requirements of General Design Criteria 60 and 64 of Appendix A to 10 CFR Part 50.

- f. The performance of activities in accordance with the RADIOLOGICAL EFFLUENT MONITORING AND OFFSITE DOSE CALCULATION MANUAL at least once per 24 months.
- g. The performance of activities required by the Quantity Controls Section of Regulatory Guides 1.21, Rev. 1, June 1974 and 4.1, Rev. 1, April 1975 at least once per 12 months.

ADMINISTRATIVE CONTROLS

SAFETY LIMIT VIOLATION (Continued)

- 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 violations.

6.8 PROCEDURES

6.8.1 Written procedures shall be established, implemented and maintained covering the activities referenced below.

- a. The applicable procedures recommended in Appendix "A" of Regulatory Guide 1.33, February, 1978.
- b. Refueling operations.
- c. Surveillance activities of safety related equipment.
- d. Security Plan implementation.
- e. Emergency Plan Implementation
- f. Fire Protection Program Implementation.
- g. Quality Control for effluent monitoring using the guidance in Regulatory Guide 1.21 Rev. 1, June 1974.
- h. Radiological Effluent Monitoring and Offsite Dose Calculation Manual (REMODCM) implementation, except for Section I.E., Radiological Environmental Monitoring.

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

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.

6.8.4 Written procedures shall be established, implemented and maintained covering Section LE, Radiological Environmental Monitoring, of the REMODCM.

6.8.5 All procedures and procedure changes required for the Radiological Environmental Monitoring Program of 6.8.4 above shall be reviewed by an individual (other than the author) from the Radiological Assessment Production Operation Service Laboratory (POSL) and approved by appropriate supervision.

Temporary changes may be made provided the intent of the original procedure is not altered and the change is documented and reviewed by an individual (other than the author) from the Radiological Assessment Branch or the POSL, 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 PSAR 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

THIRTY-DAY WRITTEN REPORT (Continued)

- a. Reactor protection system or engineering safety feature instrument settings which are found to be less conservative than those established by the technical specifications but which do not prevent the fulfillment of the functional requirements of affected systems.
- b. Conditions leading to operation in a degraded mode permitted by a limiting condition for operation of plant shutdown required by a limiting condition for operation.
- c. Observed inadequacies in the implementation of administrative or procedural controls which threaten to cause reduction of degree or redundancy provided in reactor protection systems or engineered safety features systems.
- d. Abnormal degradation of systems other than those specified in 6.9.1.8.c, above, designed to contain radioactive material resulting from the fission process.

ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT

6.9.1.10 Routine Annual Radiological Environmental Operating reports covering the operation of the unit during the previous calendar year shall be submitted prior to May 1 of each year.

The Annual Radiological Environmental Operating Report shall include that information delineated in the REMODCM.

SEMIANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT

6.9.1.11 Routine radioactive effluent release reports covering the operation of the unit during the previous 6 months of operation shall be submitted within 60 days after January 1 and July 1 of each year.

A supplemental report containing dose assessments for the previous year shall be submitted annually within 90 days after January 1.

The report shall include that information delineated in the REMODCM.

Any changes to the REMODCM shall be submitted in the Semiannual Radioactive Effluent Release 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 requirement 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.3.
- e. Fire detection instrumentation, Specification (3.12.E.2)
- f. Fire suppression systems, Specifications (3.12.A.2, 3.12.B.2, and 3.12.C.2).
- g. Radiological Effluent Reports required by Specifications in 3.8.C.2, 3.8.D.2, 3.8.D.3 and 3.8.D.4.

ADMINISTRATIVE CONTROLS

6.15 RADIOLOGICAL EFFLUENT MONITORING AND OFFSITE DOSE CALCULATION MANUAL (REMODCM)

Section I, Radiological Effluent Monitoring Manual, shall outline the sampling and analysis programs to determine the concentration of radioactive materials released offsite as well as dose commitments to individuals in those exposure pathways and for those radionuclides released as a result of station operation. It shall also specify operating guidelines for radioactive waste treatment systems and report content.

Changes to Section I shall be submitted to the Commission for approval prior to implementation.

Section II, the Offsite Dose Calculation Manual (ODCM), shall describe the methodology and parameters to be used in the calculation of offsite doses due to radioactive gaseous and liquid effluents and in the calculation of gaseous and liquid effluent monitoring instrumentation alarm/trip setpoints consistent with the applicable LCO's contained in these technical specifications.

Changes to Section II need not be submitted to the Commission for approval prior to implementation, but shall be included in the next Semi-Annual Radioactive Effluent Release Report.

6.16 RADIOACTIVE WASTE TREATMENT

Procedures for liquid and gaseous radioactive effluent discharges from the Unit shall be prepared, approved, maintained and adhered to for all operations involving offsite releases of radioactive effluents. These procedures shall specify the use of appropriate waste treatment utilizing the guidance provided in the REMODCM.

*The solid radioactive waste treatment system shall be operated in accordance with the Process Control Program to process wet radioactive wastes to meet shipping and burial ground requirements.