Dominion Nuclear Connecticut, Inc.
Millstone Power Station
Rope Ferry Road
Waterford, CT 06385

Dominion

MAY 13 2002

Docket Nos. 50-245
50-336
50-423
B18560

RE: 10 CFR 50.90

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

Millstone Nuclear Power Station, Unit Nos. 1, 2 and 3
Technical Specification Change Request
Changes to Selected Unit Nos. 1, 2 and 3 Radiological Related
Technical Specifications

Pursuant to 10 CFR 50.90, Dominion Nuclear Connecticut, Inc. (DNC) proposes to amend Operating License Nos. DPR-21, DPR-65 and NPF-49 by revising the Millstone Unit No. 1 Permanently Defueled Technical Specifications (PDTS) and the Unit Nos. 2 and 3 Technical Specifications (TS) in accordance with Technical Specification Task Force (TSTF) travelers 152, 258 and 308, to reflect changes due to the revision to Part 20 of Title 10 of the Code of Federal Regulations (CFR). Changes to the following specifications are proposed:

- Occupational Radiation Exposure Report (Unit No. 1 - PDTS 5.7.1, Unit No. 2 - TS 6.9.1.5a and Unit No. 3 - TS 6.9.1.2a)
- High Radiation Area Specification (Unit No. 1 - PDTS 5.8.1, 5.8.2 and 5.8.3; Unit Nos. 2 and 3 - TS 6.12.1 and 6.12.2)
- Radioactive Effluent Controls Program (Unit No. 1 - PDTS 5.6.4, Unit No. 2 - TS 6.20 and Unit No. 3 - TS 6.15)

Attachment 1 provides a discussion of the proposed changes and the Safety Summary. Attachment 2 provides the No Significant Hazards Consideration (SHC) discussion. Attachments 3, 4 and 5 provide a marked-up version of the appropriate pages of the current Unit No. 1 PDTS and the Unit Nos. 2 and 3 TS, respectively. Attachments 6, 7 and 8 provide the retyped pages for the Unit No. 1 PDTS and the Unit Nos. 2 and 3 TS.

Environmental Considerations

DNC has evaluated the proposed changes against the criteria for identification of licensing and regulatory actions requiring environmental assessment in accordance with 10 CFR 51.22. DNC has determined that the proposed changes meet the criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) and as such, has determined that no irreversible consequences exist in accordance with 10 CFR 50.92(b).

A001

This determination is based on the fact that the changes are being proposed as an amendment to a license issued pursuant to 10 CFR 50 that changes a requirement with respect to use of a facility component located within the restricted area, as defined in 10 CFR 20, or that changes an inspection or surveillance requirement, and that the amendment request meets the following specific criteria.

(i) The proposed changes involve no significant hazards consideration.

As demonstrated in Attachment 2, the proposed changes do not involve a significant hazards consideration.

(ii) There is no change in the types or increase in the amounts of any effluent that may be released off site. It is proposed to revise the occupational radiation exposure report, high radiation area, and radioactive effluent controls program specifications consistent with applicable guidance of 10 CFR 20. These changes will not change the types or the amounts of any effluent released off site.

The proposed changes are consistent with and do not change the design basis of the plant. The proposed changes will not result in an increase in power level, will not increase the production of radioactive waste and byproducts, and will not alter the flowpath or method of disposal of radioactive waste or byproducts. Therefore, the proposed changes will not increase the type and amounts of effluents that may be released off site.

(iii) There is no significant increase in individual or cumulative occupational radiation exposure.

The proposed changes will not result in changes in the configuration of the facility. There will be no change in the level of controls or methodology used for processing radioactive effluents or the handling of solid radioactive waste. There will be no change to the normal radiation levels within the plant. Therefore, there will be no increase in individual or cumulative occupational radiation exposure resulting from the proposed changes.

Conclusions

The proposed changes do not impact the public health and safety (see the Safety Assessment provided in Attachment 1) and does not involve a Significant Hazards Consideration pursuant to the provisions of 10 CFR 50.92 (see SHC provided in Attachment 2).

Site Operations Review Committee and Nuclear Safety Assessment Board

The Site Operations Review Committee and Nuclear Safety Assessment Board have reviewed and concurred with the determinations.

Schedule

We request issuance of this amendment by May 31, 2003, with the amendment to be implemented within 120 days of issuance.

State Notification

In accordance with 10 CFR 50.91(b), a copy of this License Amendment Request is being provided to the State of Connecticut.

There are no regulatory commitments contained within this letter.

If you should have any questions regarding this submittal, please contact Mr. Ravi Joshi at (860) 440-2080.

Very truly yours,

DOMINION NUCLEAR CONNECTICUT, INC.

J. Alan Price
Site Vice President - Millstone

Lorrie A. Arzamarski
Notary Public
Commission Expires
February 28, 2006

Subscribed and sworn to before me

this 13th day of May, 2002

Lorrie A. Arzamarski
Notary Public

Date Commission Expires: 2/28/06

Attachments (8):
1) Discussion of the Proposed Changes and the Safety Summary
2) Significant Hazards Consideration
3) Marked-up Unit No. 1 Permanently Defueled Technical Specification Pages
4) Marked-up Unit No. 2 Technical Specification Pages
5) Marked-up Unit No. 3 Technical Specification Pages
6) Retyped Unit No. 1 Permanently Defueled Technical Specification Pages
7) Retyped Unit No. 2 Technical Specification Pages
8) Retyped Unit No. 3 Technical Specification Pages

cc: See next page
cc: H. J. Miller, Region I Administrator
J. B. Hickman, NRC Project Manager, Millstone Unit No. 1

T. J. Jackson, NRC Inspector, Region I, Millstone Unit No. 1
R. B. Ennis, NRC Senior Project Manager, Millstone Unit No. 2
NRC Senior Resident Inspector, Millstone Unit No. 2
V. Nerses, NRC Senior Project Manager, Millstone Unit No. 3
NRC Senior Resident Inspector, Millstone Unit No. 3

Director
Bureau of Air Management
Monitoring and Radiation Division
Department of Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

Docket Nos. 50-245
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Attachment 1

Millstone Nuclear Power Station, Unit Nos. 1, 2 and 3

Technical Specification Change Request
Changes to Selected Unit Nos. 1, 2 and 3 Radiological Related
Technical Specifications
Discussion of the Proposed Changes and the Safety Summary

Technical Specification Change Request
Changes to Selected Unit Nos. 1, 2 and 3 Radiological Related
Technical Specifications
Discussion of the Proposed Changes and the Safety Summary

Introduction

Pursuant to 10 CFR 50.90, Dominion Nuclear Connecticut, Inc. (DNC) proposes to amend Operating License Nos. DPR-21, DPR-65 and NPF-49 by revising the Millstone Unit No. 1 Permanently Defueled Technical Specifications (PDTS) and the Unit Nos. 2 and 3 Technical Specifications (TS) in accordance with Technical Specification Task Force (TSTF) travelers 152, 258 and 308, to reflect changes due to the revision to Part 20 of Title 10 of the Code of Federal Regulations (CFR). Changes to the following specifications are proposed:

- Occupational Radiation Exposure Report (Unit No. 1 - PDTS 5.7.1, Unit No. 2 - TS 6.9.1.5a and Unit No. 3 - TS 6.9.1.2a)
- High Radiation Area Specification (Unit No. 1 - PDTS 5.8.1, 5.8.2 and 5.8.3; Unit Nos. 2 and 3 - TS 6.12.1 and 6.12.2)
- Radioactive Effluent Controls Program (Unit No. 1 - PDTS 5.6.4, Unit No. 2 - TS 6.20 and Unit No. 3 - TS 6.15)

Description of Proposed Changes to the Technical Specifications

The following radiological or radioactive effluent related technical specifications are proposed to be revised for consistency with the revision to 10 CFR Part 20. The wording and formatting of associated U.S. Nuclear Regulatory Commission (NRC) approved TSTF travelers has been utilized.

The Index for the technical specifications will be modified to reflect the proposed changes. Several formatting changes are also proposed to enhance readability and for consistency between units.

A. Occupational Radiation Exposure Report: Unit No. 1 - PDTS 5.7.1, Unit No. 2 - Unit TS 6.9.1.5a, and Unit No. 3 - TS 6.9.1.2a

Unit No. 1 - PDTS 5.7.1, Unit No. 2 - TS 6.9.1.5a, and Unit No. 3 - TS 6.9.1.2a are proposed to be revised in accordance with TSTF-152[1] to incorporate changes required for consistency with the current 10 CFR 20.

The proposed changes are:

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[1] Technical Specification Task Force (TSTF)-152, "Revise Reporting Requirements to be Consistent with 10 CFR 20," Approved March 31, 1997.

- The requirement for the annual tabulation of personnel receiving exposures greater than 100 mrems (deep dose equivalent) is proposed to be clarified to indicate it applies only to those for whom monitoring was required to be performed.
- The annual tabulation of personnel "receiving exposures greater than 100 mrem/yr and their associated man-rem exposure" is revised to apply to those "receiving an annual deep dose equivalent > 100 mrems and the associated collective deep dose equivalent (reported in person - rem)" to comply with the revision to 10 CFR 20.
- A sentence has been added clarifying that the annual tabulation supplements the requirements of 10 CFR 20.2206.
- The term pocket dosimeter has been changed to pocket ionization chamber.
- Dose assignments can be estimated using electronic dosimeters.
- The phrase "whole body dose" has been changed to "deep dose equivalent" to reflect current 10 CFR 20 terminology.

10 CFR 20.2206[(2)] paragraph (b) states, "Each licensee ... shall submit an annual report of the results of individual monitoring carried out by the licensee for each individual for whom monitoring was required by § 20.1502 during that year." Paragraph (c) states, "The licensee shall file the [Occupational Radiation Exposure] report required by § 20.2206(b), covering the preceding year, on or before April 30 of each year." To conform with TSTF-152 and the CFR it is proposed to change the required submittal date from "March 1" to "April 30" within the following specifications; Unit No. 1 - PDTS 5.7.1, Unit No. 2 - TS 6.9.1.5a, and Unit No. 3 - TS 6.9.1.2a.

Also, the following administrative changes are proposed for readability and to align specifications between units. Add the title "Occupational Radiation Exposure Report" to Unit No. 2 Specification 6.9.1.5a and Unit No. 3 Specification 6.9.1.2a to correspond with Unit No. 1 Specification 5.7.1 and TSTF-152. The footnote stating, "A single submittal may be made for a multiple unit station...." is added as a note in Specifications 6.9.1.5a and 6.9.1.2a in the Unit Nos. 2 and 3 TS after the title for consistency with the format of the other radiological reports within the Administrative Controls section. This is also consistent with industry guidance (e.g., NUREG-1431).

In order to simplify the ANNUAL REPORTS section of the Unit Nos. 2 and 3 TS, several changes are proposed. First, revise the first sentence of Unit No. 2 Specification 6.9.1.4 and Unit No. 3 Specification 6.9.1.2 which specifies the submittal date for annual reports to state, "Annual reports covering the activities of the unit as described below for the previous calendar year shall be submitted in accordance with 10 CFR 50.4." Remove the second sentence stating "The

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(2) Code of Federal Regulations, Title 10, Part 20, Section 2206, "Reports of individual monitoring."

initial report shall be submitted prior to March 1 of the year following initial criticality." from Unit Nos. 2 and 3 Specifications 6.9.1.4 and 6.9.1.2, respectively, as this condition is no longer applicable.

Renumber Unit No. 2 Specifications 6.9.1.5 Items b., c., and d., as 6.9.1.5.b, 6.9.1.5.c and 6.9.1.5.d, and renumber Unit No. 3 Specifications 6.9.1.2 Items b. and c., as 6.9.1.2.b, 6.9.1.2.c. Add the following sentence to the end of each paragraph for the renumbered Unit No. 2 Specifications 6.9.1.5.b, 6.9.1.5.c and 6.9.1.5.d, and Unit No. 3 Specifications 6.9.1.2.b, 6.9.1.2.c, "The report covering the previous calendar year shall be submitted prior to March 1 of each year." Move the respective specification number within the Unit No. 3 TS for the Annual Radiological Environmental Operating Report and the Radiological Effluent Release Report to in front of the respective title. These changes are editorial in nature.

B. <u>High Radiation Area Specification: Unit No. 1 - PDTS 5.8.1, 5.8.2 and 5.8.3, Unit Nos. 2 and 3 - TS 6.12.1 and 6.12.2</u>

It is proposed to revise Unit No. 1 PDTS "High Radiation Area" Specification 5.8 and Unit Nos. 2 and 3 TS Specification 6.12 in accordance with TSTF-258[3] to incorporate changes for consistency with the current 10 CFR Part 20. The Unit Nos. 2 and 3 Specification 6.12 reflect versions of the original standard technical specifications (STS) for the Combustion Engineering and Westinghouse reactor designs. Unit No. 1 Specification 5.8 is based on the improved STS for the General Electric BWR/4 design (Revision 1) and already includes the necessary Part 20 changes. It is proposed to adopt the wording of the "High Radiation Area" specification from the current revision (Revision 2) of the improved STS, in accordance with TSTF-258, so that each program will reflect identical wording of requirements, for consistency, ease of use, and better reflect application of technological improvements.

Technological improvements, e.g., remote reading dosimeters and remote monitoring capabilities were not available when the original specification was developed, and clarifications to radiation monitoring administrative requirements have evolved since the original STS were developed. This proposed specification is based upon current NRC and industry best practices and provides improvements in worker safety, ALARA, and exposure control.

The High Radiation Area specification is to be revised in accordance with 10 CFR 20.1601(c) and updates the acceptable alternative controls to those given in 10 CFR 20.1601. TSTF-258 indicates that these proposed modifications are consistent with a draft Generic Letter (93-XX) on proposed modifications to STS NUREGs based on the revised 10 CFR 20 and a letter from C. Grimes (NRC) to J. Davis (NEI), dated an April 9, 1997.

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[3] Technical Specification Task Force (TSTF)-258, Revision 4, "Changes to Section 5.0, Administrative Controls," Approved June 29, 1999.

As indicated within TSTF-258, the improved STS high radiation area specification was extensively reformatted between issuance of Revision 1 and 2 of the improved STS NUREGs. To reduce the length of the High Radiation Area specification some requirements, were formerly referred to by reference later in the specification where they were modified, but now are fully restated (as modified), reducing confusion in interpretation. Most of the changes to this specification result from this restatement of requirements, not the adoption of large numbers of new requirements. Several general changes are proposed:

- The reference to the old 10 CFR Part 20 paragraph allowing alternative, NRC approved, methods for control of access to high radiation areas, i.e., 10 CFR 20.203(c)(5), in Unit Nos. 2 and 3 TS have been replaced with a reference to the new 10 CFR 20.1601(c).
- Titles have been added to separate requirements into two levels of high radiation areas; those with dose rates $\leq$1.0 and those for areas >1.0 rem/hour (measured at 30 centimeters (cm) from the radiation source or any surface penetrated by the radiation). Also, the second title indicates that the dose rate is capped at less than 500 rads/hour (at 1 meter) for areas with rates >1.0 rem/hour to differentiate high from very high radiation areas.
- The survey distance has been reduced from 45 to 30 cm (from approximately 18 to 12 inches) in accordance with 10 CFR 20.1003.
- The concept that activities in high radiation areas can be controlled by means equivalent to RWPs has been added to the Unit Nos. 2 and 3 TS.
- Clarify that different forms of self-reading dosimeters (e.g., pocket ionization chamber or electronic dosimeter) can be used.
- Reference to specific titles, i.e., Health Physics Technician, Health Physics Manager, or Radiation Protection Manager have been removed and replaced by reference to a functional title or description.
- Also, the title for the operations person responsible for the administrative control of door and gate keys has been changed from the appropriate supervisor for Unit No. 1 in Specification 5.8.1 and Shift Supervisor (or shift supervisor) for Unit Nos. 2 and 3 in Specification 6.12.2, to the functional title of shift manager. This functional title sufficiently specifies this position and will prevent needless TS changes in the future.

The following additional changes as described in more detail within TSTF-258 are also proposed:

- New Specifications 6.12.1d.4.(ii) for Unit Nos. 2 and 3, and Specification and 5.8.1d.4.(ii) for Unit No. 1, are proposed to provide an allowance for continuing with a job when communication is lost with a worker under certain conditions. TSTF-258 states, "In the event that communications are lost between an individual worker, and the Radiation Protection [RP] staff providing the remote surveillance, the worker should be able to continue to work in the area provided that the worker can communicate with other workers in the same area who are working on the same job and under the same RWP [Radiation Work Permit], and provided that the communications remain satisfactory between these workers and the RP staff providing the remote surveillance." The revised wording of this specification provides an acceptable alternative when there is a loss of communication with a worker based on satisfactory communication between RP staff and other workers, working on the same job, under the same RWP.
- New Specifications 6.12.1e. and 6.12.2e. for Unit Nos. 2 and 3, and Specifications 5.8.1e. and 5.8.2e. for Unit No. 1, as described within TSTF-258, are proposed to provide an allowance to allow any individual or group of individuals to enter a high radiation area when accompanied by an individual qualified in radiation protection procedures with a radiation dose rate monitoring device. The qualified individual is responsible for providing positive control and shall perform periodic radiation surveillances at the frequency specified in the RWP. Furthermore, these continuously escorted personnel will receive a pre-job briefing prior to entry into such areas. This dose rate determination, knowledge, and pre-job briefing does not require documentation prior to initial entry. Many plant's original TS requirements allowed this option, which compliments practices of requiring qualified individual escort at all times during work in the higher level high radiation area. This option provides adequate protection while, keeping with ALARA practices, minimizing exposure to the [radiation protection] qualified individual.
- New Specification 6.12.2a for Unit Nos. 2 and 3, and Specification 5.8.2a for Unit No. 1, is proposed as described within TSTF-258, to provide an allowance to allow "Each entryway to such an area shall be conspicuously posted as a high radiation area and shall be provided with a locked or continuously guarded door or gate that prevents unauthorized entry..." This change is consistent with Regulatory Guide 8.38, Section 2.5, "Controls for High Radiation Areas (Control Points and Barriers)," which indicates that the use of a locked door or one control point where positive control over personnel entry is exercised, is acceptable. Posting an individual to monitor a door provides positive controls over a high radiation area.
- New Specifications 6.12.2f. for Unit Nos. 2 and 3 and Specification 5.8.2f. for Unit No. 1 continue the practice, as described within TSTF-258 of not

having "individual areas that are within a larger area [such as a Containment] where no enclosure exists for the purpose of locking and where no enclosure can reasonably be constructed around the individual area" controlled as a high radiation area. It is not always practical to apply standard high radiation area controls. Instead of a locked door or gate, or continuous guarding, these areas "shall be barricaded, conspicuously posted, and a clearly visible flashing light shall be activated at the area as a warning device." This provision has applied in many plant's custom TS, as well as the previous STS, and Revision 1 of the improved STS. This provision exists in Unit Nos. 2 and 3 Specification 6.12.2 (second paragraph) and Specification 5.8.3 for Unit No. 1. The TSTF proposal retains this provision, but revises the wording somewhat to reflect editorial changes.

These proposed changes revise the Unit Nos. 1, 2 and 3 technical specifications to reflect the most current revision (Revision 2) of the improved STS NUREGs in accordance with TSTF-258.

Also, as an administrative change to enhance readability of the specifications it is proposed to move Unit Nos. 2 and 3 Specifications 6.11, Radiation Protection Program, and 6.12, High Radiation Area, to the same page immediately after Specification 6.10 - eliminating empty space on the intervening pages and to renumber the pages accordingly.

C. Radioactive Effluent Controls Program: Unit No. 1 - PDTS 5.6.4, Unit No. 2 - TS 6.20, and Unit No. 3 - TS 6.15

It is proposed to revise the items listed below within Unit No. 1 - PDTS 5.6.4, Unit No. 2 - TS 6.20, and Unit No. 3 - TS 6.15, "Radioactive Effluent Controls Program," (RECP) in accordance with the respective TSTF traveler (discussed below) to reflect the current revision to 10 CFR 20.

After issuance of Generic Letter 89-01,[4] 10 CFR 20 was updated. As described in TSTF-258,[3] the NRC issued a draft Generic Letter (93-XX), on providing proposed modifications to STS NUREGs based on the new 10 CFR 20. TSTF-258 indicates that these proposed modifications were consistent with the draft generic letter and an April 9, 1997, letter from C. Grimes to J. Davis with some exceptions and editorial changes. These changes maintain the same overall level of effluent control while retaining the operational flexibility that existed with the then current TS under the previous 10 CFR 20. The following changes are proposed:

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[4] U.S. Nuclear Regulatory Commission, Generic Letter 89-01, "Implementation Of Programmatic Controls For Radiological Effluent Technical Specifications In The Administrative Controls Section Of The Technical Specifications And The Relocation Of Procedural Details Of RETS To The Offsite Dose Calculation Manual Or To The Process Control Program," dated January 31, 1989.

1. Revise Unit No. 1 - PDTS 5.6.4 Item b., Unit No. 2 - TS 6.20 Item b., and Unit No. 3 - TS 6.15 Item b., consistent with TSTF-258, to clarify that the program includes "limitations on the concentrations of radioactive material released in liquid effluents to unrestricted areas, conforming to ten times the concentration values in Appendix B, Table 2, Column 2 to 10 CFR 20.1001-20.2402." The proposed change maintains the same level of effluent control while retaining the operational flexibility that exists with the current TS under the previous 10 CFR 20. This limitation (i.e., less than ten times the concentration values in Appendix B, Table 2, Column 2 to 10 CFR 20.1001-20.2402) provides reasonable assurance that the levels of radioactive material in bodies of water in Unrestricted Areas will result in exposures within (1) the Section II.A design objectives of Appendix I to 10 CFR Part 50 and (2) restrictions authorized by 10 CFR 20.1301(e). This change is in accordance with TSTF-258.

2. Revise Unit No. 1 - PDTS 5.6.4 Item g., Unit No. 2 - TS 6.20 Item g., and Unit No. 3 - TS 6.15 Item g., consistent with TSTF-258, to clarify that the program includes "limitations on the dose rate resulting from radioactive material released in gaseous effluents from the site to areas at or beyond the site boundary" and instead of referencing the previous version of 10 CFR 20, Appendix B, Table II, Column I, provide specific values for the maximum yearly noble gas dose rate to the whole body and the skin. Also, instead of referencing the previous version of 10 CFR 20, Appendix B, Table II, Column I, provide a yearly dose rate limit of <1500 mrem to any organ for doses resulting from iodine-131, iodine-133, tritium, and all radionuclides in particulate form with half-lives greater than 8 days. These clarifications are in accordance with TSTF-258.

3. Clarify Unit No. 1 - PDTS 5.6.4 Item j., Unit No. 2 - TS 6.20 Item j., and Unit No. 3 - TS 6.15 Item j., consistent with TSTF-258, to indicate that the program includes "limitations on the annual dose or dose commitment to any member of the public, *beyond the site boundary,* [emphasis added] due to releases of radioactivity and to radiation from uranium fuel cycle sources." This clarification is in accordance with the wording of TSTF-258.

4. Add to Unit No. 1 - PDTS 5.6.4; a new paragraph after Item j., Unit No. 2 - TS 6.20; a new paragraph after Item j., and Unit No. 3 - TS 6.15; a new paragraph after Item j., consistent with TSTF-258, to reflect that the 25 percent extension of the surveillance interval provisions of Specification 3.0.2 for Unit No. 1, and Specification 4.0.2 for Unit Nos. 2 and 3, are applicable to the RECP surveillance frequency. Also, included in these new paragraphs as part of the RECP, consistent with TSTF-258, are the provisions of Specification 3.0.3 for Unit No. 1, and Specification 4.0.3 for Unit Nos. 2 and 3, indicating that compliance with the requirements to declare a Limiting Condition of Operation (LCO) not met may be delayed for up to 24 hours from the time of discovery (when the

time limits of the Action are less than 24 hours) to permit completion of the surveillance.

These provisions were clearly indicated as being in place when the RECP surveillances were controlled under LCOs within the respective technical specification. With the transfer and incorporation of these LCOs into the Radiological Effluent Monitoring and Offsite Dose Calculation Manual (REMODCM) and associated procedures, this allowance is no longer clearly specified. Adding these provisions to the governing program within the respective technical specification clearly indicates that these provisions remain in effect. These provisions prevent unnecessary shutdowns or power reductions by allowing time to perform a missed surveillance, considering that the most likely outcome of late performance is that the surveillance is passed satisfactorily. As described in TSTF-258, allowing a 25 percent extension in the frequency (surveillance interval) for performing the monthly cumulative dose and projected dose calculation for the current quarter/year will have no affect on outcome of the calculations.

5. Clarify Unit No. 1 - PDTS 5.6.4 Item e., Unit No. 2 - TS 6.20 Item e., and Unit No. 3 - TS 6.15 Item e. consistent with TSTF-308.[5] The respective specification requires that a RECP be instituted for the control of radioactive effluents and for maintaining the doses to members of the public from radioactive effluents ALARA. Program element, Item e. states,

> "Determination of cumulative and projected dose contributions from radioactive effluents for the current calendar quarter and current calendar year in accordance with the methodology and parameters in the REMODCM at least every 31 days."

As described in TSTF-308, GL 89-01 appears to have combined two surveillance requirements (SR) together to create this program element; one SR for determining the cumulative dose contributions from liquid effluents (required for the current calendar quarter and year, at least once per 31 days), the second SR for *projecting doses* [emphasis added] at least once per 31 days *when the Liquid Radwaste Treatment Systems are not being fully utilized.* [emphasis added] TSTF-308 states, "In combining these requirements in Generic Letter 89-01, the new program element can be interpreted to require determining [the] projected dose contribution for the current calendar quarter and current calendar year every 31 days." This change clarifies that when the applicable processing equipment is operating (per REMODCM requirements) performing dose projections is not required. This TSTF change does not modify the requirement, it

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[5] Technical Specification Task Force (TSTF)-308, Revision 1, "Determination of Cumulative and Projected Dose Contributions in RECP [Radioactive Effluent Controls Program]," Approved July 6, 2000.

clarifies the wording to require projected dose contributions as directed by the methodology of the REMODCM.

Attachments 3, 4 and 5 provide the marked-up current version of the appropriate pages of the Unit No. 1 PDTS and the Unit Nos. 2 and 3 TS, respectively. Attachments 6, 7 and 8 provide the retyped pages for the Unit No. 1 PDTS and the Unit Nos. 2 and 3 TS.

Safety Summary

This proposed revision modifies selected radiological related specifications within the administrative controls section to correspond with the NRC approved TSTFs and 10 CFR Part 20 requirements. These changes reflect advances in technology, e.g., remote reading dosimeters and remote monitoring capabilities, changes in the regulations (i.e., 10 CFR Part 20), and clarifications and improvements in radiation monitoring administrative requirements that have developed based on NRC and industry best practices. These changes result in improvements in measuring of occupational dose, clarifications to more clearly reflect radiological effluent limits, and improvements in worker safety, ALARA, and exposure control.

These changes modify the Occupational Radiation Exposure Report, Radioactive Effluent Controls Program, and High Radiation Area Specifications to fully reflect (where applicable) revised 10 CFR 20 requirements and incorporate editorial rewording for consistency with the NRC approved TSTFs. Since the revised 10 CFR 20 requirements are applicable to the Millstone units, these changes are considered to be administrative in nature.

The proposed changes do not alter any regulatory requirements. The proposed changes have no impact on plant operation, do not alter any plant configuration, or system, structure, component functions, or their operation. The change does not impact the acceptance criteria for any design basis accident described in the respective Unit Nos. 2 or 3 Updated Final Safety Analysis Report or the Unit No. 1 Defueled Safety Analysis Report. Since these changes are solely administrative or editorial, they cannot affect the likelihood, the consequences, or introduce a new or different kind of accident. Therefore, DNC considers these proposed changes to each TS to be acceptable and safe.

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Attachment 2

Millstone Nuclear Power Station, Unit Nos. 1, 2 and 3

Technical Specification Change Request
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Technical Specifications
Significant Hazards Consideration

Technical Specification Change Request
Changes to Selected Unit Nos. 1, 2 and 3 Radiological Related
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Significant Hazards Consideration

Description of the Proposed Change

Pursuant to 10 CFR 50.90, Dominion Nuclear Connecticut, Inc. (DNC) proposes to amend Operating License Nos. DPR-21, DPR-65 and NPF-49 by revising the Millstone Unit No. 1 Permanently Defueled Technical Specifications (PDTS) and the Unit Nos. 2 and 3 Technical Specifications (TS) in accordance with Technical Specification Task Force (TSTF) travelers 152,[1] 258,[2] and 308[3] to reflect changes due to the revision to Part 20 of Title 10 of the Code of Federal Regulations (CFR). Changes to the following specifications are proposed:

- Occupational Radiation Exposure Report (Unit No. 1 - PDTS 5.7.1, Unit No. 2 - TS 6.9.1.5a and Unit No. 3 - TS 6.9.1.2a)
- High Radiation Area Specification (Unit No. 1 - PDTS 5.8.1, 5.8.2 and 5.8.3; Unit Nos. 2 and 3 - TS 6.12.1 and 6.12.2)
- Radioactive Effluent Controls Program (Unit No. 1 - PDTS 5.6.4, Unit No. 2 - TS 6.20 and Unit No. 3 - TS 6.15)

Significant Hazards Consideration

In accordance with 10 CFR 50.92, DNC has reviewed the proposed changes and concluded that the changes do not involve a Significant Hazards Consideration (SHC). The basis for this conclusion is that the three criteria of 10 CFR 50.92(c) are not compromised. The proposed changes do not involve an SHC because the changes would not:

1. Involve a significant increase in the probability or consequences of an accident previously evaluated.

   It is proposed to revise the Occupational Radiation Exposure Report, Radioactive Effluent Controls Program, and High Radiation Area Specifications in accordance with TSTF travelers 152, 258 and 308, to reflect changes due to the revision to 10 CFR Part 20.

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(1) Technical Specification Task Force (TSTF)-152, "Revise Reporting Requirements to be Consistent with 10 CFR 20," Approved March 31, 1997.

(2) Technical Specification Task Force (TSTF)-258, Revision 4, "Changes to Section 5.0, Administrative Controls," Approved June 29, 1999.

(3) Technical Specification Task Force (TSTF)-308, Revision 1, "Determination of Cumulative and Projected Dose Contributions in RECP [Radioactive Effluent Controls Program]," Approved July 6, 2000.

These changes do not have an impact on the acceptance criteria for any design basis accident described in the respective Unit Nos. 2 or 3 Updated Final Safety Analysis Report (UFSAR) or the Unit No. 1 Defueled Safety Analysis Report (DSAR).

The changes have no impact on plant equipment operation. Since the changes are administrative or editorial in nature they cannot affect the likelihood or consequences of accidents. Therefore, the proposed changes will not increase the probability or consequences of an accident previously evaluated.

2. Create the possibility of a new or different kind of accident from any accident previously evaluated.

The revisions to the Occupational Radiation Exposure Report, Radioactive Effluent Controls Program, and High Radiation Area Specifications in accordance with TSTF travelers 152, 258 and 308 will have no affect on plant operation. Since the proposed changes are solely administrative or editorial in nature, they do not affect plant operation in any way.

The proposed changes do not involve a physical alteration of the plant or change the plant configuration (no new or different type of equipment will be installed). The proposed changes do not require any new or unusual operator actions. The changes do not alter the way any structure, system, or component functions and do not alter the manner in which the plant is operated. The changes do not introduce any new failure modes. Therefore, the proposed changes will not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Involve a significant reduction in a margin of safety.

Since the proposed changes are solely administrative or editorial changes to the TS, they do not affect plant operation in any way. The proposed changes to each unit's technical specifications will revise them to reflect the requirements of the current 10 CFR Part 20, standardize terminology, provide clearer guidance, clarify inconsistencies, remove extraneous information, and result in minor format changes that will not result in any technical changes to current requirements.

The proposed changes have no effect on any safety analyses assumptions and therefore does not impact any margins of safety. The proposed changes do not impact any acceptance criteria for the design basis accidents described in the respective Unit Nos. 2 or 3 UFSAR or the Unit No. 1 DSAR and does not impact the consequences of accidents previously evaluated. Therefore, the proposed changes will not result in a reduction in a margin of safety.

Docket Nos. 50-245
50-336
50-423
B18560

Attachment 3

Millstone Nuclear Power Station, Unit Nos. 1, 2 and 3

Technical Specification Change Request
Changes to Selected Unit Nos. 1, 2 and 3 Radiological Related
Technical Specifications
Marked-up Unit No. 1 Permanently Defueled Technical Specifications Pages

Technical Specification Change Request
Changes to Selected Unit Nos. 1, 2 and 3 Radiological Related
Technical Specifications
Marked-up Unit No. 1 Permanently Defueled Technical Specification Page(s)

Changes to the following Technical Specification page(s) have been proposed.

Technical Specification Section Number(s)	Title(s) of Section(s)	Affected Page(s) and Amendment No(s).
5.6.4	Radioactive Effluent Controls Program (Items: b., e., g., j. and new last paragraph.)	Pages 5.0-13 and 5.0-14, Am. No. 106
5.7.1	Occupational Radiation Exposure Report	Page 5.0-15, Am. No. 106
5.8.1	High Radiation Area	Pages 5.0-18, Am. No. 106
5.8.2	High Radiation Area	Pages 5.0-19, Am. No. 106
5.8.3	High Radiation Area	Pages 5.0-19, Am. No. 106

5.0 ADMINISTRATIVE CONTROLS

5.6 Programs and Manuals

5.6.4 Radioactive Effluent Controls Program

This program conforms to 10 CFR 50.36a for the control of radioactive effluents and for maintaining the doses to members of the public from radioactive effluents as low as reasonably achievable. The program shall be contained in the REMODCM, shall be implemented by procedures, and shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

a. Limitations on the functional capability of radioactive liquid and gaseous monitoring instrumentation including surveillance tests and setpoint determination in accordance with the methodology in the REMODCM;

b. Limitations on the concentrations of radioactive material released in liquid effluents to unrestricted areas, conforming to 10 CFR 20, Appendix B, Table II, Column 2 (1993 version);

Insert

c. Monitoring, sampling, and analysis of radioactive liquid and gaseous effluents in accordance with 10 CFR 20.1302 and with the methodology and parameters in the REMODCM;

d. Limitations on the annual and quarterly doses or dose commitment to a member of the public from radioactive materials in liquid effluents released from each unit to unrestricted areas, conforming to 10 CFR 50, Appendix I;

e. Determination of cumulative and projected dose contributions from radioactive effluents for the current calendar quarter and current calendar year in accordance with the methodology and parameters in the REMODCM at least every 31 days;

Insert A

f. Limitations on the functional capability and use of the liquid and gaseous effluent treatment systems to ensure that appropriate portions of these systems are used to reduce releases of radioactivity when the projected doses in a period of 31 days would exceed 2% of the guidelines for the annual dose or dose commitment, conforming to 10 CFR 50, Appendix I;

(continued)

5.0 ADMINISTRATIVE CONTROLS

5.6 Programs and Manuals

5.6.4 Radioactive Effluent Controls Program (continued)

g. Limitations on the dose rate resulting from radioactive material released in gaseous effluents from the site to areas at or beyond the site boundary conforming to the dose associated with 10 CFR 20, Appendix B, Table II, Column 1 (1993 version);

Insert B

h. Limitations on the annual and quarterly air doses resulting from noble gases released in gaseous effluents from each unit to areas beyond the site boundary, conforming to 10 CFR 50, Appendix I;

i. Limitations on the annual and quarterly doses to a member of the public from iodine-131, iodine-133, tritium, and all radionuclides in particulate form with half lives > 8 days in gaseous effluents released from each unit to areas beyond the site boundary, conforming to 10 CFR 50, Appendix I; and

j. Limitations on the annual dose or dose commitment to any member of the public, beyond the site boundary, due to releases of radioactivity and to radiation from uranium fuel cycle sources, conforming to 40 CFR 190.

Insert C

Unit No. 1 Inserts - Pages 5.0-13 and 5.0-14

Inserts for Radioactive Effluent Controls Program

Insert (Item b.)

ten times the concentration values in Appendix B, Table 2, Column 2 to 10 CFR 20.1001-20.2402;

Insert 'A' (Item e.)

Determination of projected dose contributions from radioactive effluents in accordance with the methodology in the REMODCM at least every 31 days;

Insert 'B' (Item g.)

shall be in accordance with the following:

1. For noble gases: a dose rate ≤ 500 mrem/yr to the whole body and a dose rate ≤ 3000 mrem/yr to the skin, and

2. For iodine-131, iodine-133, tritium, and all radionuclides in particulate form with half-lives greater than 8 days: a dose rate ≤ 1500 mrem/yr to any organ;

Insert 'C' (Add new paragraph after Item j.)

The provisions of Specification 3.0.2 and Specification 3.0.3 are applicable to the Radioactive Effluent Controls Program surveillance frequency.

5.0 ADMINISTRATIVE CONTROLS

5.7 Reporting Requirements

The following reports shall be submitted in accordance with 10CFR50.4.

5.7.1 Occupational Radiation Exposure Report

NOTE

A single submittal may be made for a multiple unit station. The submittal should combine sections common to all units at the station.

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 (e.g., reactor operations and surveillance, inservice inspection, routine maintenance, special maintenance [describe maintenance], waste processing, and refueling). This tabulation supplements the requirements of 10CFR Part 20.2206. The dose assignments to various duty functions may be estimated based on pocket dosimeter, thermoluminescent dosimeter (TLD), or film badge measurements. Small exposures totaling 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 should be assigned to specific major work functions. The report shall be submitted by March 1 of each year.

Insert D

(continued)

Unit No. 1 Insert 'D' - Page 5.0-15

Specification 5.7.1

A tabulation on an annual basis of the number of station, utility, and other personnel (including contractors), for whom monitoring was performed, receiving an annual deep dose equivalent > 100 mrems and the associated collective deep dose equivalent (reported in person - rem) according to work and job functions (e.g., reactor operations and surveillance, inservice inspection, routine maintenance, special maintenance (describe maintenance), waste processing, and refueling). This tabulation supplements the requirements of 10 CFR 20.2206. The dose assignments to various duty functions may be estimated based on pocket ionization chamber, thermoluminescence dosimeter (TLD), electronic dosimeter, or film badge measurements. Small exposures totaling < 20 percent of the individual total dose need not be accounted for. In the aggregate, at least 80 percent of the total deep dose equivalent received from external sources should be assigned to specific major work functions. The report covering the previous calendar year shall be submitted by April 30 of each year.

5.0 ADMINISTRATIVE CONTROLS

5.8 High Radiation Area

5.8 High Radiation Area ← Insert E

5.8.1 Pursuant to 10CFR Part 20.1601(c), in lieu of the requirements of 10CFR Part 20.1601(a), each high radiation area as defined in 10 CFR Part 20 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 or equivalent. Individuals trained and qualified in radiation protection procedures (e.g., a health physics technician) or personnel continuously escorted by such individuals may be exempted from this RWP requirement while performing their assigned duties in high radiation areas where radiation doses could be received that are equal to or less than 1 rem in 1 hour (measured at 30 centimeters from any source of radiation) provided they are otherwise following plant radiation protection procedures, or a general radiation protection RWP, for entry into such high radiation areas.

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 that continuously indicates the radiation dose rate in the area,

b. A radiation monitoring device that 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 rates in the area have been determined and personnel have been made knowledgeable of them,

c. An individual qualified in radiation protection procedures with a radiation dose rate monitoring device. This individual is responsible for providing positive radiation protection control over the activities within the area and shall perform periodic radiation surveillance at the frequency specified in the radiation protection procedures or the applicable RWP.

(continued)

5.0 ADMINISTRATIVE CONTROLS

5.8 High Radiation Area

5.8 High Radiation Area (continued) ← Insert E

5.8.2 In addition to the requirements of Specification 5.8.1, areas that are accessible to personnel and that have radiation levels greater than 1.0 rem (but less than 500 rads at 1 meter) in 1 hour at 30 cm from the radiation source, or from any surface penetrated by the radiation, shall be provided with locked or continuously guarded doors to prevent unauthorized entry, and the keys shall be maintained under the administrative control of the appropriate supervisor on duty or health physics supervision. Doors shall remain locked except during periods of access by personnel under an approved RWP that specifies the dose rates in the immediate work areas and the maximum allowable stay time for individuals in that area. In lieu of a stay time specification on the RWP, direct or remote continuous surveillance (such as closed circuit TV cameras) may be made by personnel qualified in radiation protection procedures to provide positive exposure control over the activities being performed within the area.

5.8.3 Individual high radiation areas that are accessible to personnel, that could result in radiation doses greater than 1.0 rem in 1 hour, and that are within large areas where no enclosure exists to enable locking and where no enclosure can be reasonably constructed around the individual area shall be barricaded and conspicuously posted. A flashing light shall be activated whenever the dose rate in such an area exceeds or is expected to exceed 1.0 rem in 1 hour at 30 cm from the radiation source or from any surface penetrated by the radiation.

Unit No. 1 Insert 'E' - Pages 5.0-18 and 5.0-19

Specification 5.8

As provided in paragraph 20.1601(c) of 10 CFR Part 20, the following controls shall be applied to high radiation areas in place of the controls required by paragraph 20.1601 (a) and (b) of 10 CFR Part 20:

5.8.1 High Radiation Areas with Dose Rates Not Exceeding 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation

a. Each entryway to such an area shall be barricaded and conspicuously posted as a high radiation area. Such barricades may be opened as necessary to permit entry or exit of personnel or equipment.

b. Access to, and activities in, each such area shall be controlled by means of Radiation Work Permit (RWP) or equivalent that includes specification of radiation dose rates in the immediate work area(s) and other appropriate radiation protection equipment and measures.

c. Individuals qualified in radiation protection procedures and personnel continuously escorted by such individuals may be exempted from the requirement for an RWP or equivalent while performing their assigned duties provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas.

d. Each individual or group entering such an area shall possess:

1. A radiation monitoring device that continuously displays radiation dose rates in the area, or

2. A radiation monitoring device that continuously integrates the radiation dose rates in the area and alarms when the device's dose alarm setpoint is reached, with an appropriate alarm setpoint, or

3. A radiation monitoring device that continuously transmits dose rate and cumulative dose information to a remote receiver monitored by radiation protection personnel responsible for controlling personnel radiation exposure within the area, or

4. A self-reading dosimeter (e.g., pocket ionization chamber or electronic dosimeter) and,

Unit No. 1 Insert 'E' - Pages 5.0-18 and 5.0-19

Specification 5.8

(i) Be under the surveillance, as specified in the RWP or equivalent, while in the area, of an individual qualified in radiation protection procedures, equipped with a radiation monitoring device that continuously displays radiation dose rates in the area; who is responsible for controlling personnel exposure within the area, or

(ii) Be under the surveillance as specified in the RWP or equivalent, while in the area, by means of closed circuit television, of personnel qualified in radiation protection procedures, responsible for controlling personnel radiation exposure in the area, and with the means to communicate with individuals in the area who are covered by such surveillance.

e. Except for individuals qualified in radiation protection procedures, or personnel continuously escorted by such individuals, entry into such areas shall be made only after dose rates in the area have been determined and entry personnel are knowledgeable of them. These continuously escorted personnel will receive a pre-job briefing prior to entry into such areas. This dose rate determination, knowledge, and pre-job briefing does not require documentation prior to initial entry.

5.8.2 High Radiation Areas with Dose Rates Greater than 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation, but less than 500 rads/hour at 1 Meter from the Radiation Source or from any Surface Penetrated by the Radiation

a. Each entryway to such an area shall be conspicuously posted as a high radiation area and shall be provided with a locked or continuously guarded door or gate that prevents unauthorized entry, and, in addition:

1. All such door and gate keys shall be maintained under the administrative control of the shift manager, radiation protection manager, or his or her designees, and

2. Doors and gates shall remain locked except during periods of personnel or equipment entry or exit.

b. Access to, and activities in, each such area shall be controlled by means of an RWP or equivalent that includes specification of radiation dose rates in the immediate work area(s) and other appropriate radiation protection equipment and measures.

Unit No. 1 Insert 'E' - Pages 5.0-18 and 5.0-19

Specification 5.8

c. Individuals qualified in radiation protection procedures may be exempted from the requirement for an RWP or equivalent while performing radiation surveys in such areas provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas.

d. Each individual group entering such an area shall possess:

1. A radiation monitoring device that continuously integrates the radiation dose rates in the area and alarms when the device's dose alarm setpoint is reached, with an appropriate alarm setpoint, or

2. A radiation monitoring device that continuously transmits dose rate and cumulative dose information to a remote receiver monitored by radiation protection personnel responsible for controlling personnel radiation exposure within the area with the means to communicate with and control every individual in the area, or

3. A self-reading dosimeter (e.g., pocket ionization chamber or electronic dosimeter) and,

(i) Be under the surveillance, as specified in the RWP or equivalent, while in the area, of an individual qualified in radiation protection procedures, equipped with a radiation monitoring device that continuously displays radiation dose rates in the area; who is responsible for controlling personnel exposure within the area, or

(ii) Be under the surveillance as specified in the RWP or equivalent, while in the area, by means of closed circuit television, of personnel qualified in radiation protection procedures, responsible for controlling personnel radiation exposure in the area, and with the means to communicate with and control every individual in the area.

4. In those cases where options (2) and (3), above, are impractical or determined to be inconsistent with the "As Low As is Reasonably Achievable" principle, a radiation monitoring device that continuously displays radiation dose rates in the area.

Unit No. 1 Insert 'E' - Pages 5.0-18 and 5.0-19

Specification 5.8

e. Except for individuals qualified in radiation protection procedures, or personnel continuously escorted by such individuals, entry into such areas shall be made only after dose rates in the area have been determined and entry personnel are knowledgeable of them. These continuously escorted personnel will receive a pre-job briefing prior to entry into such areas. This dose rate determination, knowledge, and pre-job briefing does not require documentation prior to initial entry.

f. Such individual areas that are within a larger area where no enclosure exists for the purpose of locking and where no enclosure can reasonably be constructed around the individual area need not be controlled by a locked door or gate, nor continuously guarded, but shall be barricaded, conspicuously posted, and a clearly visible flashing light shall be activated at the area as a warning device.

Docket Nos. 50-245
50-336
50-423
B18560

Attachment 4

Millstone Nuclear Power Station, Unit Nos. 1, 2 and 3

Technical Specification Change Request
Changes to Selected Unit Nos. 1, 2 and 3 Radiological Related
Technical Specifications
Marked-up Unit No. 2 Technical Specifications Pages

Technical Specification Change Request
Changes to Selected Unit Nos. 1, 2 and 3 Radiological Related
Technical Specifications
Marked-up Unit No. 2 Technical Specification Page(s)

Changes to the following Technical Specification page(s) have been proposed.

Technical Specification Section Number(s)	Title(s) of Section(s)	Affected Page(s) and Amendment No(s).
Index	INDEX	Page XVII, Am. No. 264
6.9.1.4	ANNUAL REPORTS	Page 6-17, Am. No. 163
6.9.1.5	ANNUAL REPORTS	Page 6-17, Am. No. 163
6.9.1.5a.	ANNUAL REPORTS: (Occupational Radiation Exposure Report)	Page 6-17, Am. No. 163
6.9.1.5b.	ANNUAL REPORTS (SG Tube Inspection)	Page 6-17, Am. No. 163
6.9.1.5c.	ANNUAL REPORTS (Specific Activity Report)	Page 6-17, Am. No. 163
6.9.1.5d.	ANNUAL REPORTS (PORV & SV challenges)	Page 6-18, Am. No. 250
N/A	SPECIAL REPORTS (CONT.) Page	Page 6-20, Am. No. 250
N/A	REVERSE OF PAGE 6-20 INTENTIONALLY LEFT BLANK	Reverse of Page 6-20
N/A	"This page intentionally deleted." Page	Page 6-21, Am. No. 239
6.11	RADIATION PROTECTION PROGRAM	Page 6-22, Am. No. 239
6.12.1	HIGH RADIATION AREA	Page 6-22, Am. No. 239

Technical Specification Change Request
Changes to Selected Unit Nos. 1, 2 and 3 Radiological Related
Technical Specifications
Marked-up Unit No. 2 Technical Specification Page(s)

Technical Specification Section Number(s)	Title(s) of Section(s)	Affected Page(s) and Amendment No(s).
6.12.2	HIGH RADIATION AREA	Page 6-23, Am. No. 163
6.20	RADIOACTIVE EFFLUENT CONTROLS PROGRAM (Items: b., e., g., j. and new last paragraph.)	Pages 6-26 and 6-27, Am. No. 250
N/A	Reactor Coolant Pump Flywheel Inspection Report Page	Page 6-28, Am. No. 264

August 28, 1992

ANNUAL REPORTS[1]

in accordance with 10 CFR 50.4.

6.9.1.4 Annual reports covering the activities of the unit as described below for the previous calendar year shall be submitted prior to March 1 of each year. The initial report shall be submitted prior to March 1 of the year following initial criticality.

6.9.1.5 Reports required on an annual basis shall include:

a. 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,[2] 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 estimates 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.

Insert A →

6.9.1.5.→b. The complete results of steam generator tube inservice inspections performed during the report period (reference Specification 4.4.5.5.b). ← Insert B

6.9.1.5.→c. The results of specific activity analysis in which the primary coolant exceeded the limits of Specification 3.4.8. The following information shall be included: (1) Reactor power history starting 48 hours prior to the first sample in which the limit was exceeded; (2) Results of the last isotopic analysis for radioiodine performed prior to exceeding the limit, results of analysis while limit was exceeded and results of one analysis after the radioiodine activity was reduced to less than the limit. Each result should include date and time of sampling and the radioiodine concentrations; (3) Clean-up system flow history starting 48 hours prior to the first sample in which the limit was exceeded; (4) Graph of the I-131 concentration and one other radioiodine isotope concentration in microcuries per gram as a function of time for the duration of the specific activity above the steady-state level; and (5) The time duration when the specific activity of the primary coolant exceeded the radioiodine limit. ← Insert B

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1 A single submittal may be made for a multiple unit station. The submittal should combine those sections that are common to all units at the station.

2 This tabulation supplements the requirements of 20.407 of 10 CFR Part 20.

Unit No. 2 Insert 'A' - Page 6-17

Specification 6.9.1.5a.

6.9.1.5a OCCUPATIONAL RADIATION EXPOSURE REPORT

- NOTE -

A single submittal may be made for a multiple unit station. The submittal should combine sections common to all units at the station.

A tabulation on an annual basis of the number of station, utility, and other personnel (including contractors), for whom monitoring was performed, receiving an annual deep dose equivalent > 100 mrems and the associated collective deep dose equivalent (reported in person - rem) according to work and job functions (e.g., reactor operations and surveillance, inservice inspection, routine maintenance, special maintenance (describe maintenance), waste processing, and refueling). This tabulation supplements the requirements of 10 CFR 20.2206. The dose assignments to various duty functions may be estimated based on pocket ionization chamber, thermoluminescence dosimeter (TLD), electronic dosimeter, or film badge measurements. Small exposures totaling < 20 percent of the individual total dose need not be accounted for. In the aggregate, at least 80 percent of the total deep dose equivalent received from external sources should be assigned to specific major work functions. The report covering the previous calendar year shall be submitted by April 30 of each year.

Unit No. 2 Insert 'B' - Page 6-17 and 6-18

Specifications 6.9.1.5.b., 6.9.1.5.c. and 6.9.1.5.d.

The report covering the previous calendar year shall be submitted prior to March 1 of each year.

(6.9.1.5.d.) Documentation of all failures (inability to lift or reclose within the tolerances allowed by the design basis) and challenges to the pressurizer PORVs or safety valves. ← Insert B

ANNUAL RADIOLOGICAL REPORTS

6.9.1.6a ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT

----------NOTE----------
A single submittal may be made for a multiple unit station. The submittal shall combine sections common to all units at the station.

The Annual Radiological Environmental Operating Report covering the operation of the unit during the previous calendar year shall be submitted by May 1 of each year. The report shall include summaries, interpretations, and analyses of trends of the results of the Radiological Environmental Monitoring Program for the reporting period. The material provided shall be consistent with the objectives outlined in the Radiological Effluent Monitoring and Offsite Dose Calculation Manual (REMODCM), and in 10 CFR Part 50, Appendix I, Sections IV.B.2, IV.B.3, and IV.C.

The Annual Radiological Environmental Operating Report shall include the results of analyses of all radiological environmental samples and of all environmental radiation measurements taken during the period pursuant to the locations specified in the table and figures in the REMODCM, as well as summarized and tabulated results of these analyses and measurements. In the event that some individual results are not available for inclusion with the report, the report shall be submitted noting and explaining the reasons for the missing results. The missing data shall be submitted in the next annual report.

6.9.1.6b RADIOACTIVE EFFLUENT RELEASE REPORT

----------NOTE----------
A single submittal may be made for a multiple unit station. The submittal shall combine sections common to all units at the station; however, for units with separate radwaste systems, the submittal shall specify the releases of radioactive material from each unit.

The Radioactive Effluent Release Report covering the operation of the unit in the previous year shall be submitted prior to May 1 of each year in accordance with 10 CFR 50.36a. The report shall include a summary of the quantities of radioactive liquid and gaseous effluents and solid waste released from the unit. The material provided shall be consistent with the objectives outlined in the REMODCM and in conformance with 10 CFR 50.36a and 10 CFR Part 50, Appendix I, Section IV.B.1.

MONTHLY OPERATING REPORT

6.9.1.7 Routine reports of operating statistics and shutdown experience shall be submitted on a monthly basis to the U.S. Nuclear Regulatory Commission,Document Control Desk, Washington, D.C. 20555, one copy to the Regional

SPECIAL REPORTS (CONT.)

b. Deleted

c. Deleted

d. ECCS Actuation, Specifications 3.5.2 and 3.5.3.

e. Deleted

f. Deleted

g. RCS Overpressure Mitigation, Specification 3.4.9.3.

h. Deleted

i. Degradation of containment structure, Specification 4.6.1.6.4.

j. Steam Generator Tube Inspection, Specification 4.4.5.1.5.

k. Accident Monitoring Instrumentation, Specification 3.3.3.8.

l. Radiation Monitoring Instrumentation, Specification 3.3.3.1.

m. Reactor Coolant System Vents, Specification 3.4.11.

6.10 Deleted.

Move Specifications 6.11 and 6.12 to here.

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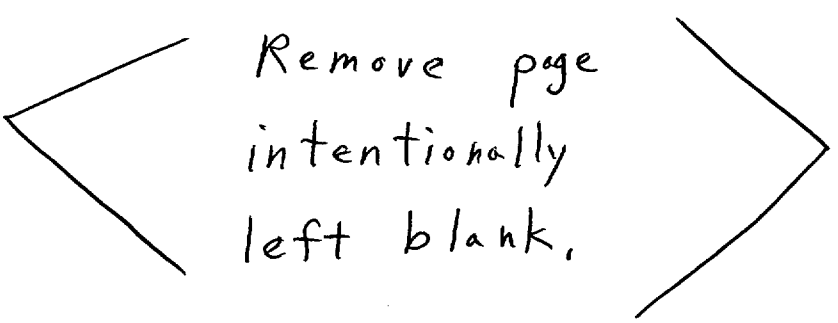

August 13, 1999

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Move Specifications 6.11 and 6.12 to page 6-20.

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 ← Insert C

6.12.1 Pursuant to paragraph 20.203(c)(5) of 10 CFR Part 20, in lieu of the "control device" or "alarm signal" required by paragraph 20.203(c), each high radiation area, as defined in 10 CFR Part 20, in which the intensity of radiation is equal to or less than 1000 mR/h at 45 cm (18 in.) from the radiation source or from any surface which the radiation penetrates 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 (RWP). Individuals qualified in radiation protection procedures (e.g., Health Physics Technician) or personnel continuously escorted by such individuals may be exempt from the RWP issuance requirement during the performance of their assigned duties in high radiation areas with exposure rates equal to or less than 1000 mR/h, provided they are otherwise following plant radiation protection procedures for entry into such high radiation areas. 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; or

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 levels in the area have been established and personnel have been made knowledgeable of them; or

c. An individual 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 shall perform periodic radiation surveillance at the frequency specified by the Health Physics Manager in the RWP.

6.12 HIGH RADIATION AREA (CONT.) ← Insert C

6.12.2 In addition to the requirements of Specification 6.12.1, areas accessible to personnel with radiation levels greater than 1000 mR/h at 45 cm (18 in.) from the radiation source or from any surface which the radiation penetrates shall be provided with locked doors to prevent unauthorized entry, and the keys shall be maintained under the administrative control of the Shift Supervisor on duty and/or Health Physics supervision. Doors shall remain locked except during period of access by personnel under an approved RWP which shall specify the dose rate levels in the immediate work areas and the maximum allowable stay time for individuals in that area. In lieu of the stay time specification of the RWP, direct or remote (such as closed-circuit TV cameras) continuous surveillance may be made by personnel qualified in radiation protection procedures to provide positive exposure control over the activities being performed within the area.

For individual high radiation areas accessible to personnel with radiation levels greater than 1000 mR/h that are located within large areas where no enclosure exists for purposes of locking, and where no enclosure can be reasonably constructed around the individual area, that individual area shall be barricaded, conspicuously posted, and a flashing light shall be activated as a warning device.

6.13 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.

6.14 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.

Unit No. 2 Insert 'C' - Pages 6-22 and 6-23

Specification 6.12

As provided in paragraph 20.1601(c) of 10 CFR Part 20, the following controls shall be applied to high radiation areas in place of the controls required by paragraph 20.1601 (a) and (b) of 10 CFR Part 20:

6.12.1 High Radiation Areas with Dose Rates Not Exceeding 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation

a. Each entryway to such an area shall be barricaded and conspicuously posted as a high radiation area. Such barricades may be opened as necessary to permit entry or exit of personnel or equipment.

b. Access to, and activities in, each such area shall be controlled by means of Radiation Work Permit (RWP) or equivalent that includes specification of radiation dose rates in the immediate work area(s) and other appropriate radiation protection equipment and measures.

c. Individuals qualified in radiation protection procedures and personnel continuously escorted by such individuals may be exempted from the requirement for an RWP or equivalent while performing their assigned duties provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas.

d. Each individual or group entering such an area shall possess:

1. A radiation monitoring device that continuously displays radiation dose rates in the area, or

2. A radiation monitoring device that continuously integrates the radiation dose rates in the area and alarms when the device's dose alarm setpoint is reached, with an appropriate alarm setpoint, or

3. A radiation monitoring device that continuously transmits dose rate and cumulative dose information to a remote receiver monitored by radiation protection personnel responsible for controlling personnel radiation exposure within the area, or

4. A self-reading dosimeter (e.g., pocket ionization chamber or electronic dosimeter) and,

(i) Be under the surveillance, as specified in the RWP or equivalent, while in the area, of an individual qualified in

radiation protection procedures, equipped with a radiation monitoring device that continuously displays radiation dose rates in the area; who is responsible for controlling personnel exposure within the area, or

(ii) Be under the surveillance as specified in the RWP or equivalent, while in the area, by means of closed circuit television, of personnel qualified in radiation protection procedures, responsible for controlling personnel radiation exposure in the area, and with the means to communicate with individuals in the area who are covered by such surveillance.

e. Except for individuals qualified in radiation protection procedures, or personnel continuously escorted by such individuals, entry into such areas shall be made only after dose rates in the area have been determined and entry personnel are knowledgeable of them. These continuously escorted personnel will receive a pre-job briefing prior to entry into such areas. This dose rate determination, knowledge, and pre-job briefing does not require documentation prior to initial entry.

6.12.2 High Radiation Areas with Dose Rates Greater than 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation, but less than 500 rads/hour at 1 Meter from the Radiation Source or from any Surface Penetrated by the Radiation

a. Each entryway to such an area shall be conspicuously posted as a high radiation area and shall be provided with a locked or continuously guarded door or gate that prevents unauthorized entry, and, in addition:

1. All such door and gate keys shall be maintained under the administrative control of the shift manager, radiation protection manager, or his or her designees, and

2. Doors and gates shall remain locked except during periods of personnel or equipment entry or exit.

b. Access to, and activities in, each such area shall be controlled by means of an RWP or equivalent that includes specification of radiation dose rates in the immediate work area(s) and other appropriate radiation protection equipment and measures.

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Specification 6.12

c. Individuals qualified in radiation protection procedures may be exempted from the requirement for an RWP or equivalent while performing radiation surveys in such areas provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas.

d. Each individual group entering such an area shall possess:

1. A radiation monitoring device that continuously integrates the radiation dose rates in the area and alarms when the device's dose alarm setpoint is reached, with an appropriate alarm setpoint, or

2. A radiation monitoring device that continuously transmits dose rate and cumulative dose information to a remote receiver monitored by radiation protection personnel responsible for controlling personnel radiation exposure within the area with the means to communicate with and control every individual in the area, or

3. A self-reading dosimeter (e.g., pocket ionization chamber or electronic dosimeter) and,

(i) Be under the surveillance, as specified in the RWP or equivalent, while in the area, of an individual qualified in radiation protection procedures, equipped with a radiation monitoring device that continuously displays radiation dose rates in the area; who is responsible for controlling personnel exposure within the area, or

(ii) Be under the surveillance as specified in the RWP or equivalent, while in the area, by means of closed circuit television, of personnel qualified in radiation protection procedures, responsible for controlling personnel radiation exposure in the area, and with the means to communicate with and control every individual in the area.

4. In those cases where options (2) and (3), above, are impractical or determined to be inconsistent with the "As Low As is Reasonably Achievable" principle, a radiation monitoring device that continuously displays radiation dose rates in the area.

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Specification 6.12

e. Except for individuals qualified in radiation protection procedures, or personnel continuously escorted by such individuals, entry into such areas shall be made only after dose rates in the area have been determined and entry personnel are knowledgeable of them. These continuously escorted personnel will receive a pre-job briefing prior to entry into such areas. This dose rate determination, knowledge, and pre-job briefing does not require documentation prior to initial entry.

f. Such individual areas that are within a larger area where no enclosure exists for the purpose of locking and where no enclosure can reasonably be constructed around the individual area need not be controlled by a locked door or gate, nor continuously guarded, but shall be barricaded, conspicuously posted, and a clearly visible flashing light shall be activated at the area as a warning device.

6.19 CONTAINMENT LEAKAGE RATE TESTING PROGRAM

A program shall be established to implement the leakage rate testing of the primary containment as required by 10CFR50.54(o) and 10CFR50, Appendix J, Option B as modified by approved exemptions. This program shall be in accordance with the guidelines contained in Regulatory Guide 1.163, "Performance-Based Containment Leak-Test Program," dated September 1995.

The peak calculated primary Containment internal pressure for the design basis loss of coolant accident is P_a.

The maximum allowable primary containment leakage rate, L_a, at P_a, is 0.5% of primary containment air weight per day.

Leakage rate acceptance criteria are:

a. Primary containment overall leakage rate acceptance criterion is $< 1.0\ L_a$. During the first unit startup following testing in accordance with this program, the leakage rate acceptance criteria are $< 0.60\ L_a$ for the combined Type B and Type C tests, and $< 0.75\ L_a$ for Type A tests;

b. Air lock testing acceptance criteria are:

   1. Overall air lock leakage rate is $\leq 0.05\ L_a$ when tested at $\geq P_a$.

   2. For each door, pressure decay is ≤ 0.1 psig when pressurized to ≥ 25 psi for at least 15 minutes.

The provisions of SR 4.0.2 do not apply for test frequencies specified in the Primary Containment Leakage Rate Testing Program.

The provisions of SR 4.0.3 are applicable to the Primary Containment Leakage Rate Testing Program.

6.20 RADIOACTIVE EFFLUENT CONTROLS PROGRAM

This program conforms to 10 CFR 50.36a for the control of radioactive effluents and for maintaining the doses to members of the public from radioactive effluents as low as reasonably achievable. The program shall be contained in the REMODCM, shall be implemented by procedures, and shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

a. Limitations on the functional capability of radioactive liquid and gaseous monitoring instrumentation including surveillance tests and setpoint determination in accordance with the methodology in the REMODCM;

b. Limitations on the concentrations of radioactive material released in liquid effluents to unrestricted areas, conforming to 10 CFR 20, Appendix B, Table II, Column 2 (1993 version);

Insert

c. Monitoring, sampling, and analysis of radioactive liquid and gaseous effluents in accordance with 10 CFR 20.1302 and with the methodology and parameters in the REMODCM;

d. Limitations on the annual and quarterly doses or dose commitment to a member of the public from radioactive materials in liquid effluents released from each unit to unrestricted areas, conforming to 10 CFR 50, Appendix I;

e. Determination of cumulative and projected dose contributions from radioactive effluents for the current calendar quarter and current calendar year in accordance with the methodology and parameters in the REMODCM at least every 31 days; ← Insert D

f. Limitations on the functional capability and use of the liquid and gaseous effluent treatment systems to ensure that appropriate portions of these systems are used to reduce releases of radioactivity when the projected doses in a period of 31 days would exceed 2% of the guidelines for the annual dose or dose commitment, conforming to 10 CFR 50, Appendix I;

g. Limitations on the dose rate resulting from radioactive material released in gaseous effluents from the site to areas at or beyond the site boundary to a dose rate which, if the release were to occur for a full year, would cause a dose of 500 mrem. This conforms to the dose associated with the 1993 version of 10 CFR 20, Appendix B, Table II, Column I; ← Insert E

h. Limitations on the annual and quarterly air doses resulting from noble gases released in gaseous effluents from each unit to areas beyond the site boundary, conforming to 10 CFR 50, Appendix I;

i. Limitations on the annual and quarterly doses to a member of the public from iodine-131, iodine-133, tritium, and all radionuclides in particulate form with half lives > 8 days in gaseous effluents released from each unit to areas beyond the site boundary, conforming to 10 CFR 50, Appendix I; and

j. Limitations on the annual dose or dose commitment to any member of the public, beyond the site boundary, due to releases of radioactivity and to radiation from uranium fuel cycle sources, conforming to 40 CFR 190.

← Insert F

6.21 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM

A program shall be provided to monitor the radiation and radionuclides in the environs of the plant. The program shall provided (1) representative measurements of radioactivity in the highest potential exposure pathways, and (2) verification of the accuracy of the effluent monitoring program and modeling of environmental exposure pathways. The program shall (1) be contained in the REMODCM, (2) conform to that guidance of Appendix I to 10 CFR Part 50, and (3) include the following:

a. Monitoring, sampling, analysis, and reporting of radiation and radionuclides in the environment in accordance with the methodology and parameters in the REMODCM.

Moved to page 6-28.

Unit No. 2 Inserts 'D, E, F' - Pages 6-26 and 6-27

Inserts for Specification 6.20, Radioactive Effluent Controls Program

Insert (Item b.)

ten times the concentration values in Appendix B, Table 2, Column 2 to 10 CFR 20.1001-20.2402;

Insert 'D' (Item e.)

Determination of projected dose contributions from radioactive effluents in accordance with the methodology in the REMODCM at least every 31 days;

Insert 'E' (Item g.)

shall be in accordance with the following:

1. For noble gases: a dose rate ≤500 mrem/yr to the whole body and a dose rate ≤3000 mrem/yr to the skin, and

2. For iodine-131, iodine-133, tritium, and all radionuclides in particulate form with half-lives greater than 8 days: a dose rate ≤1500 mrem/yr to any organ;

Insert 'F' (Add new paragraph after Item j.)

The provisions of Specification 4.0.2 and Specification 4.0.3 are applicable to the Radioactive Effluent Controls Program surveillance frequency.

February 1, 2002

b. A Land Use Census to ensure that changes in the use of areas at and beyond the SITE BOUNDARY are identified and that modifications to the monitoring program are made if required by the results of this census, and

c. Participation in a Interlaboratory Comparison Program to ensure that independent checks on the precision and accuracy of the measurements of radioactive materials in environmental sample matrices are performed as part of the quality assurance program for environmental monitoring.

6.22 Reactor Coolant Pump Flywheel Inspection Report

This program shall provide for the inspection of each reactor coolant pump flywheel by either qualified in-place UT examination over the volume from the inner bore of the flywheel to the circle of one-half the outer radius, or a surface examination (magnetic particle testing and/or penetrant testing) of exposed surfaces defined by the volume of the disassembled flywheels at least once every 10 years.

6.21 up through Item a, moved to this page.

Docket Nos. 50-245
50-336
50-423
B18560

Attachment 5

Millstone Nuclear Power Station, Unit Nos. 1, 2 and 3

Technical Specification Change Request
Changes to Selected Unit Nos. 1, 2 and 3 Radiological Related
Technical Specifications
Marked-up Unit 3 Technical Specifications Pages

Technical Specification Change Request
Changes to Selected Unit Nos. 1, 2 and 3 Radiological Related
Technical Specifications
Marked-up Unit No. 3 Technical Specification Page(s)

Changes to the following Technical Specification page(s) have been proposed.

Technical Specification Section Number(s)	Title(s) of Section(s)	Affected Page(s) and Amendment No(s).
Index	INDEX	Page XIX, Am. No. 188
6.9.1.2	ANNUAL REPORTS	Page 6-18, Am. No. 69
6.9.1.2a	ANNUAL REPORTS: (Occupational Radiation Exposure Report)	Page 6-18, Am. No. 69
6.9.1.2b	ANNUAL REPORTS (Specific Activity Report)	Page 6-18, Am. No. 69
6.9.1.2.c	ANNUAL REPORTS (PORV & SV challenges)	Page 6-19, Am. No. 188
N/A	REVERSE OF PAGE 6-18 INTENTIONALLY LEFT BLANK	Reverse of Page 6-18
6.9.1.3	ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT	Page 6-19, Am. No. 188
6.9.1.4	RADIOACTIVE EFFLUENT RELEASE REPORT	Page 6-19, Am. No. 188
N/A	Blank area of page after deleted Item 6.10. (Moving Specs. 6.11 and 6.12 to this page.)	Page 6-21, Am. No. 173
6.11	RADIATION PROTECTION PROGRAM	Page 6-22, Am. No. 173
6.12.1	HIGH RADIATION AREA	Page 6-23, Am. No. 69

Technical Specification Change Request
Changes to Selected Unit Nos. 1, 2 and 3 Radiological Related
Technical Specifications
Marked-up Unit No. 3 Technical Specification Page(s)

Technical Specification Section Number(s)	Title(s) of Section(s)	Affected Page(s) and Amendment No(s).
6.12.2	HIGH RADIATION AREA	Page 6-23, Am. No. 69
6.15	RADIOACTIVE EFFLUENT CONTROLS PROGRAM (Items: b., e., g., j. and new last paragraph)	Pages 6-25 and 6-26, Am. No. 188

SECTION PAGE

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 operation), supplementary reports shall be submitted at least every 3 months until all three events have been completed.

ANNUAL REPORTS* submitted in accordance with 10 CFR 50.4

6.9.1.2 Annual Reports covering the activities of the unit as described below for the previous calendar year shall be submitted prior to March 1 of each year. The initial report shall be submitted prior to March 1 of the year following initial criticality.

Reports required on an annual basis shall include:

a. 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** (e.g., reactor operations and surveillance, inservice inspection, routine maintenance, special maintenance (describe maintenance), waste processing, and refueling). The dose assignments to various duty functions may be estimated based on pocket dosimeter, thermoluminescent 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 should be assigned to specific major work functions;

Insert A

6.9.1.2.→b. The results of specific activity analyses in which the reactor coolant exceeded the limits of Specification 3.4.8. The following information shall be included: (1) Reactor power history starting 48 hours prior to the first sample in which the limit was exceeded (in graphic and tabular format); (2) Results of the last isotopic analysis for radioiodine performed prior to exceeding the limit, results of analysis while limit was exceeded and results of one analysis after the radioiodine activity was reduced to less than limit. Each result should include date and time of sampling and the radioiodine concentrations; (3) Clean-up flow history starting 48 hours prior to the first sample in which the limit was exceeded; (4) Graph of the I-131 concentration (μCi/gm) and one other radioiodine isotope concentration (μCi/gm) as a function of time for the

* A single submittal may be made for a multiple unit station. The submittal should combine those sections that are common to all units at the station.

** This tabulation supplements the requirement of Section 20.407 of 10 CFR Part 20.

Unit No. 3 Insert 'A' - Page 6-18

Specification 6.9.1.2a.

6.9.1.2a OCCUPATIONAL RADIATION EXPOSURE REPORT

- NOTE -

A single submittal may be made for a multiple unit station. The submittal should combine sections common to all units at the station.

A tabulation on an annual basis of the number of station, utility, and other personnel (including contractors), for whom monitoring was performed, receiving an annual deep dose equivalent > 100 mrems and the associated collective deep dose equivalent (reported in person - rem) according to work and job functions (e.g., reactor operations and surveillance, inservice inspection, routine maintenance, special maintenance (describe maintenance), waste processing, and refueling). This tabulation supplements the requirements of 10 CFR 20.2206. The dose assignments to various duty functions may be estimated based on pocket ionization chamber, thermoluminescence dosimeter (TLD), electronic dosimeter, or film badge measurements. Small exposures totaling < 20 percent of the individual total dose need not be accounted for. In the aggregate, at least 80 percent of the total deep dose equivalent received from external sources should be assigned to specific major work functions. The report covering the previous calendar year shall be submitted by April 30 of each year.

Unit No. 3 Insert 'B' - Page 6-18 and 6-19

Specifications 6.9.1.2.b. and 6.9.1.2.c.

The report covering the previous calendar year shall be submitted prior to March 1 of each year.

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ANNUAL REPORTS (Continued)

duration of the specific activity above the steady-state level; and (5) The time duration when the specific activity of the reactor coolant exceeded the radioiodine limit.

Insert B

6.9.1.2.→c. Documentation of all challenges to the pressurizer power-operated relief valves (PORVs) and safety valves; and

ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT

----------NOTE----------

A single submittal may be made for a multiple unit station. The submittal shall combine sections common to all units at the station.

6.9.1.3 The Annual Radiological Environmental Operating Report covering the operation of the unit during the previous calendar year shall be submitted by May 1 of each year. The report shall include summaries, interpretations, and analyses of trends of the results of the Radiological Environmental Monitoring Program for the reporting period. The material provided shall be consistent with the objectives outlined in the Radiological Effluent Monitoring and Offsite Dose Calculation Manual (REMODCM), and in 10 CFR Part 50, Appendix I, Sections IV.B.2, IV.B.3, and IV.C.

The Annual Radiological Environmental Operating Report shall include the results of analyses of all radiological environmental samples and of all environmental radiation measurements taken during the period pursuant to the locations specified in the table and figures in the REMODCM, as well as summarized and tabulated results of these analyses and measurements. In the event that some individual results are not available for inclusion with the report, the report shall be submitted noting and explaining the reasons for the missing results. The missing data shall be submitted in the next annual report.

RADIOACTIVE EFFLUENT RELEASE REPORT

----------NOTE----------

A single submittal may be made for a multiple unit station. The submittal shall combine sections common to all units at the station; however, for units with separate radwaste systems, the submittal shall specify the releases of radioactive material from each unit.

6.9.1.4 The Radioactive Effluent Release Report covering the operation of the unit in the previous year shall be submitted prior to May 1 of each year in accordance with 10 CFR 50.36a. The report shall include a summary of the quantities of radioactive liquid and gaseous effluents and solid waste released from the unit. The material provided shall be consistent with the objectives outlined in the REMODCM and in conformance with 10 CFR 50.36a and 10 CFR Part 50, Appendix I, Section IV.B.1.

6.9.1.6.c The core operating limits shall be determined so that all applicable limits (e.g. fuel thermal-mechanical limits, core thermal-hydraulic limits, ECCS limits, nuclear limits such as shutdown margin, and transient and accident analysis limits) of the safety analysis are met.

6.9.1.6.d The CORE OPERATING LIMITS REPORT, including any mid-cycle revisions or supplements thereto, shall be provided upon issuance, for each reload cycle, to the NRC Document Control Desk with copies to the Regional Administrator and Resident Inspector.

SPECIAL REPORTS

6.9.2 Special reports shall be submitted to the U.S. Nuclear Regulatory Commission, Document Control Desk, Washington, D.C. 20555, one copy to the Regional Administrator Region I, and one copy to the NRC Resident Inspector, within the time period specified for each report.

6.10 Deleted.

Move Specifications 6.11 and 6.12 to here.

6.11 RADIATION PROTECTION PROGRAM

6.11.1 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.

Move Specification 6.12 to here.

Move Specifications 6.11 and 6.12 to page old 6-21.

Move Specification 6.12 to page 6-21.

August 28, 1992

6.12 HIGH RADIATION AREA ← Insert C

6.12.1 Pursuant to paragraph 20.203(c)(5) of 10 CFR Part 20, in lieu of the "control device" or "alarm signal" required by paragraph 20.203(c),each high radiation area, as defined in 10 CFR Part 20, in which the intensity of radiation is equal to or less than 1000 mR/h at 45 cm (18 in.) from the radiation source or from any surface which the radiation penetrates 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 (RWP). Individuals qualified in radiation protection procedures (e.g., Health Physics Technician) or personnel continuously escorted by such individuals may be exempt from the RWP issuance requirement during the performance of their assigned duties in high radiation areas with exposure rates equal to or less than 1000 mR/h, provided they are otherwise following plant radiation protection procedures for entry into such high radiation areas. 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; or

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 levels in the area have been established and personnel have been made knowledgeable of them; or

c. An individual 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 shall perform periodic radiation surveillance at the frequency specified by the Health Physics Manager in the RWP.

6.12.2 In addition to the requirements of Specification 6.12.1, areas accessible to personnel with radiation levels greater than 1000 mR/h at 45 cm (18 in.) from the radiation source or from any surface which the radiation penetrates shall be provided with locked doors to prevent unauthorized entry, and the keys shall be maintained under the administrative control of the shift supervisor on duty and/or health physics supervision. Doors shall remain locked except during periods of access by personnel under an approved RWP which shall specify the dose rate levels in the immediate work areas and the maximum allowable stay time for individuals in that area. In lieu of the stay time specification of the RWP, direct or remote (such as closed circuit TV cameras) continuous surveillance may be made by personnel qualified in radiation protection procedures to provide positive exposure control over the activities being performed within the area.

For individual high radiation areas accessible to personnel with radiation levels of greater than 1000 mR/h that are located within large areas, such as PWR containment, where no enclosure exists for purposes of locking, and where no enclosure can be reasonably constructed around the individual area, that individual area shall be barricaded, conspicuously posted, and a flashing light shall be activated as a warning device.

Unit No. 3 Insert 'C' - Page 6-23

Specification 6.12

As provided in paragraph 20.1601(c) of 10 CFR Part 20, the following controls shall be applied to high radiation areas in place of the controls required by paragraph 20.1601 (a) and (b) of 10 CFR Part 20:

6.12.1 High Radiation Areas with Dose Rates Not Exceeding 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation

a. Each entryway to such an area shall be barricaded and conspicuously posted as a high radiation area. Such barricades may be opened as necessary to permit entry or exit of personnel or equipment.

b. Access to, and activities in, each such area shall be controlled by means of Radiation Work Permit (RWP) or equivalent that includes specification of radiation dose rates in the immediate work area(s) and other appropriate radiation protection equipment and measures.

c. Individuals qualified in radiation protection procedures and personnel continuously escorted by such individuals may be exempted from the requirement for an RWP or equivalent while performing their assigned duties provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas.

d. Each individual or group entering such an area shall possess:

1. A radiation monitoring device that continuously displays radiation dose rates in the area, or

2. A radiation monitoring device that continuously integrates the radiation dose rates in the area and alarms when the device's dose alarm setpoint is reached, with an appropriate alarm setpoint, or

3. A radiation monitoring device that continuously transmits dose rate and cumulative dose information to a remote receiver monitored by radiation protection personnel responsible for controlling personnel radiation exposure within the area, or

4. A self-reading dosimeter (e.g., pocket ionization chamber or electronic dosimeter) and,

(i) Be under the surveillance, as specified in the RWP or equivalent, while in the area, of an individual qualified in

radiation protection procedures, equipped with a radiation monitoring device that continuously displays radiation dose rates in the area; who is responsible for controlling personnel exposure within the area, or

(ii) Be under the surveillance as specified in the RWP or equivalent, while in the area, by means of closed circuit television, of personnel qualified in radiation protection procedures, responsible for controlling personnel radiation exposure in the area, and with the means to communicate with individuals in the area who are covered by such surveillance.

e. Except for individuals qualified in radiation protection procedures, or personnel continuously escorted by such individuals, entry into such areas shall be made only after dose rates in the area have been determined and entry personnel are knowledgeable of them. These continuously escorted personnel will receive a pre-job briefing prior to entry into such areas. This dose rate determination, knowledge, and pre-job briefing does not require documentation prior to initial entry.

6.12.2 High Radiation Areas with Dose Rates Greater than 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation, but less than 500 rads/hour at 1 Meter from the Radiation Source or from any Surface Penetrated by the Radiation

a. Each entryway to such an area shall be conspicuously posted as a high radiation area and shall be provided with a locked or continuously guarded door or gate that prevents unauthorized entry, and, in addition:

1. All such door and gate keys shall be maintained under the administrative control of the shift manager, radiation protection manager, or his or her designees, and

2. Doors and gates shall remain locked except during periods of personnel or equipment entry or exit.

b. Access to, and activities in, each such area shall be controlled by means of an RWP or equivalent that includes specification of radiation dose rates in the immediate work area(s) and other appropriate radiation protection equipment and measures.

c. Individuals qualified in radiation protection procedures may be exempted from the requirement for an RWP or equivalent while performing radiation surveys in such areas provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas.

d. Each individual group entering such an area shall possess:

1. A radiation monitoring device that continuously integrates the radiation dose rates in the area and alarms when the device's dose alarm setpoint is reached, with an appropriate alarm setpoint, or

2. A radiation monitoring device that continuously transmits dose rate and cumulative dose information to a remote receiver monitored by radiation protection personnel responsible for controlling personnel radiation exposure within the area with the means to communicate with and control every individual in the area, or

3. A self-reading dosimeter (e.g., pocket ionization chamber or electronic dosimeter) and,

(i) Be under the surveillance, as specified in the RWP or equivalent, while in the area, of an individual qualified in radiation protection procedures, equipped with a radiation monitoring device that continuously displays radiation dose rates in the area; who is responsible for controlling personnel exposure within the area, or

(ii) Be under the surveillance as specified in the RWP or equivalent, while in the area, by means of closed circuit television, of personnel qualified in radiation protection procedures, responsible for controlling personnel radiation exposure in the area, and with the means to communicate with and control every individual in the area.

4. In those cases where options (2) and (3), above, are impractical or determined to be inconsistent with the "As Low As is Reasonably Achievable" principle, a radiation monitoring device that continuously displays radiation dose rates in the area.

e. Except for individuals qualified in radiation protection procedures, or personnel continuously escorted by such individuals, entry into such areas shall be made only after dose rates in the area have been determined and entry personnel are knowledgeable of them. These continuously escorted personnel will receive a pre-job briefing prior to entry into such areas. This dose rate determination, knowledge, and pre-job briefing does not require documentation prior to initial entry.

f. Such individual areas that are within a larger area where no enclosure exists for the purpose of locking and where no enclosure can reasonably be constructed around the individual area need not be controlled by a locked door or gate, nor continuously guarded, but shall be barricaded, conspicuously posted, and a clearly visible flashing light shall be activated at the area as a warning device.

6.15 RADIOACTIVE EFFLUENT CONTROLS PROGRAM

This program conforms to 10 CFR 50.36a for the control of radioactive effluents and for maintaining the doses to members of the public from radioactive effluents as low as reasonably achievable. The program shall be contained in the REMODCM, shall be implemented by procedures, and shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

a. Limitations on the functional capability of radioactive liquid and gaseous monitoring instrumentation including surveillance tests and setpoint determination in accordance with the methodology in the REMODCM;

b. Limitations on the concentrations of radioactive material released in liquid effluents to unrestricted areas, conforming to 10 CFR 20, Appendix B, Table II, Column 2 (1993 version); Insert

c. Monitoring, sampling, and analysis of radioactive liquid and gaseous effluents in accordance with 10 CFR 20.1302 and with the methodology and parameters in the REMODCM;

d. Limitations on the annual and quarterly doses or dose commitment to a member of the public from radioactive materials in liquid effluents released from each unit to unrestricted areas, conforming to 10 CFR 50, Appendix I;

e. Determination of cumulative and projected dose contributions from radioactive effluents for the current calendar quarter and current calendar year in accordance with the methodology and parameters in the REMODCM at least every 31 days; Insert D

f. Limitations on the functional capability and use of the liquid and gaseous effluent treatment systems to ensure that appropriate portions of these systems are used to reduce releases of radioactivity when the projected doses in a period of 31 days would exceed 2% of the guidelines for the annual dose or dose commitment, conforming to 10 CFR 50, Appendix I;

g. Limitations on the dose rate from this site at any time resulting from radioactive material released in gaseous effluents to areas at or beyond the site boundary to a dose rate which, if the release were to occur for a full year, would cause a dose of 500 mrem. This conforms to the dose associated with the 1993 version of 10 CFR 20, Appendix B, Table II, Column I; Insert E

h. Limitations on the annual and quarterly air doses resulting from noble gases released in gaseous effluents from each unit to areas beyond the site boundary, conforming to 10 CFR 50, Appendix I;

i. Limitations on the annual and quarterly doses to a member of the public from iodine-131, iodine-133, tritium, and all radionuclides in particulate form with half lives > 8 days in gaseous effluents released from each unit to areas beyond the site boundary, conforming to 10 CFR 50, Appendix I; and

, beyond the site boundary,

j. Limitations on the annual dose or dose commitment to any member of the public due to releases of radioactivity and to radiation from uranium fuel cycle sources, conforming to 40 CFR 190.

← Insert F

6.16 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM

A program shall be provided to monitor the radiation and radionuclides in the environs of the plant. The program shall provided (1) representative measurements of radioactivity in the highest potential exposure pathways, and (2) verification of the accuracy of the effluent monitoring program and modeling of environmental exposure pathways. The program shall (1) be contained in the REMODCM, (2) conform to the guidance of Appendix I to 10 CFR Part 50, and (3) include the following:

a. Monitoring, sampling, analysis, and reporting of radiation and radionuclides in the environment in accordance with the methodology and parameters in the REMODCM.

b. A Land Use Census to ensure that changes in the use of areas at and beyond the SITE BOUNDARY are identified and that modifications to the monitoring program are made if required by the results of this census, and

c. Participation in a Interlaboratory Comparison Program to ensure that independent checks on the precision and accuracy of the measurements of radioactive materials in environmental sample matrices are performed as part of the quality assurance program for environmental monitoring.

Unit No. 3 Inserts 'D, E, F' - Pages 6-25 and 6-26

Inserts for Specification 6.15, Radioactive Effluent Controls Program

Insert (Item b.)

ten times the concentration values in Appendix B, Table 2, Column 2 to 10 CFR 20.1001-20.2402;

Insert 'D' (Item e.)

Determination of projected dose contributions from radioactive effluents in accordance with the methodology in the REMODCM at least every 31 days;

Insert 'E' (Item g.)

shall be in accordance with the following:

1. For noble gases: a dose rate ≤500 mrem/yr to the whole body and a dose rate ≤3000 mrem/yr to the skin, and

2. For iodine-131, iodine-133, tritium, and all radionuclides in particulate form with half-lives greater than 8 days: a dose rate ≤1500 mrem/yr to any organ;

Insert 'F' (Add new paragraph after Item j.)

The provisions of Specification 4.0.2 and Specification 4.0.3 are applicable to the Radioactive Effluent Controls Program surveillance frequency.

Docket Nos. 50-245
50-336
50-423
B18560

Attachment 6

Millstone Nuclear Power Station, Unit Nos. 1, 2 and 3

Technical Specification Change Request
Changes to Selected Unit Nos. 1, 2 and 3 Radiological Related
Technical Specifications
Retyped Unit No. 1 Permanently Defueled Technical Specifications Pages

5.0 ADMINISTRATIVE CONTROLS

5.6 Programs and Manuals

5.6.4 Radioactive Effluent Controls Program

This program conforms to 10 CFR 50.36a for the control of radioactive effluents and for maintaining the doses to members of the public from radioactive effluents as low as reasonably achievable. The program shall be contained in the REMODCM, shall be implemented by procedures, and shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

a. Limitations on the functional capability of radioactive liquid and gaseous monitoring instrumentation including surveillance tests and setpoint determination in accordance with the methodology in the REMODCM;

b. Limitations on the concentrations of radioactive material released in liquid effluents to unrestricted areas, conforming to ten times the concentration values in Appendix B, Table 2, Column 2 to 10 CFR 20.1001-20.2402;

c. Monitoring, sampling, and analysis of radioactive liquid and gaseous effluents in accordance with 10 CFR 20.1302 and with the methodology and parameters in the REMODCM;

d. Limitations on the annual and quarterly doses or dose commitment to a member of the public from radioactive materials in liquid effluents released from each unit to unrestricted areas, conforming to 10 CFR 50, Appendix I;

e. Determination of cumulative dose contributions from radioactive effluents for the current calendar quarter and current calendar year in accordance with the methodology and parameters in the REMODCM at least every 31 days. Determination of projected dose contributions from radioactive effluents in accordance with the methodology in the REMODCM at least every 31 days;

f. Limitations on the functional capability and use of the liquid and gaseous effluent treatment systems to ensure that appropriate portions of these systems are used to reduce releases of radioactivity when the projected doses in a period of 31 days would exceed 2% of the guidelines for the annual dose or dose commitment, conforming to 10 CFR 50, Appendix I;

(continued)

5.0 ADMINISTRATIVE CONTROLS

5.6 Programs and Manuals

5.6.4 Radioactive Effluent Controls Program (continued)

g. Limitations on the dose rate resulting from radioactive material released in gaseous effluents from the site to areas at or beyond the site boundary shall be in accordance with the following:

1. For noble gases: a dose rate $\leq$ 500 mrem/yr to the whole body and a dose rate $\leq$ 3000 mrem/yr to the skin, and

2. For iodine-131, iodine-133, tritium, and all radionuclides in particulate form with half-lives greater than 8 days: a dose rate $\leq$ 1500 mrem/yr to any organ;

h. Limitations on the annual and quarterly air doses resulting from noble gases released in gaseous effluents from each unit to areas beyond the site boundary, conforming to 10 CFR 50, Appendix I;

i. Limitations on the annual and quarterly doses to a member of the public from iodine-131, iodine-133, tritium, and all radionuclides in particulate form with half lives > 8 days in gaseous effluents released from each unit to areas beyond the site boundary, conforming to 10 CFR 50, Appendix I; and

j. Limitations on the annual dose or dose commitment to any member of the public, beyond the site boundary, due to releases of radioactivity and to radiation from uranium fuel cycle sources, conforming to 40 CFR 190.

The provisions of Specification 3.0.2 and Specification 3.0.3 are applicable to the Radioactive Effluent Controls Program surveillance frequency.

5.0 ADMINISTRATIVE CONTROLS

5.7 Reporting Requirements

The following reports shall be submitted in accordance with 10CFR50.4.

5.7.1 Occupational Radiation Exposure Report

---------- NOTE ----------
A single submittal may be made for a multiple unit station. The submittal should combine sections common to all units at the station.

A tabulation on an annual basis of the number of station, utility, and other personnel (including contractors), for whom monitoring was performed, receiving an annual deep dose equivalent > 100 mrems and the associated collective deep dose equivalent (reported in person - rem) according to work and job functions (e.g., reactor operations and surveillance, inservice inspection, routine maintenance, special maintenance (describe maintenance), waste processing, and refueling). This tabulation supplements the requirements of 10 CFR Part 20.2206. The dose assignments to various duty functions may be estimated based on pocket ionization chamber, thermoluminescence dosimeter (TLD), electronic dosimeter, or film badge measurements. Small exposures totaling < 20 percent of the individual total dose need not be accounted for. In the aggregate, at least 80 percent of the total deep dose equivalent received from external sources should be assigned to specific major work functions. The report covering the previous calendar year shall be submitted by April 30 of each year.

(continued)

5.0 ADMINISTRATIVE CONTROLS

5.8 High Radiation Area

5.8 High Radiation Area

As provided in paragraph 20.1601(c) of 10 CFR Part 20, the following controls shall be applied to high radiation areas in place of the controls required by paragraph 20.1601(a) and (b) of 10 CFR Part 20:

5.8.1 High Radiation Areas with Dose Rates Not Exceeding 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation

a. Each entryway to such an area shall be barricaded and conspicuously posted as a high radiation area. Such barricades may be opened as necessary to permit entry or exit of personnel or equipment.

b. Access to, and activities in, each such area shall be controlled by means of Radiation Work Permit (RWP) or equivalent that includes specification of radiation dose rates in the immediate work area(s) and other appropriate radiation protection equipment and measures.

c. Individuals qualified in radiation protection procedures and personnel continuously escorted by such individuals may be exempted from the requirement for an RWP or equivalent while performing their assigned duties provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas.

d. Each individual or group entering such an area shall possess:

1. A radiation monitoring device that continuously displays radiation dose rates in the area, or

2. A radiation monitoring device that continuously integrates the radiation dose rates in the area and alarms when the device's dose alarm setpoint is reached, with an appropriate alarm setpoint, or

3. A radiation monitoring device that continuously transmits dose rate and cumulative dose information to a remote receiver monitored by radiation protection personnel responsible for controlling personnel radiation exposure within the area, or

4. A self-reading dosimeter (e.g., pocket ionization chamber or electronic dosimeter) and,

(i) Be under the surveillance, as specified in the RWP or equivalent, while in the area, of an individual qualified in radiation protection procedures,

(continued)

5.0 ADMINISTRATIVE CONTROLS

5.8 High Radiation Area

5.8 High Radiation Area (continued)

equipped with a radiation monitoring device that continuously displays radiation dose rates in the area; who is responsible for controlling personnel exposure within the area, or

(ii) Be under the surveillance as specified in the RWP or equivalent, while in the area, by means of closed circuit television, of personnel qualified in radiation protection procedures, responsible for controlling personnel radiation exposure in the area, and with the means to communicate with individuals in the area who are covered by such surveillance.

e. Except for individuals qualified in radiation protection procedures, or personnel continuously escorted by such individuals, entry into such areas shall be made only after dose rates in the area have been determined and entry personnel are knowledgeable of them. These continuously escorted personnel will receive a pre-job briefing prior to entry into such areas. This dose rate determination, knowledge, and pre-job briefing does not require documentation prior to initial entry.

5.8.2 High Radiation Areas with Dose Rates Greater than 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation, but less than 500 rads/hour at 1 Meter from the Radiation Source or from the any Surface Penetrated by the Radiation

a. Each entryway to such an area shall be conspicuously posted as a high radiation area and shall be provided with a locked or continuously guarded door or gate that prevents unauthorized entry, and, in addition:

1. All such door and gate keys shall be maintained under the administrative control of the shift manager, radiation protection manager, or his or her designees, and

2. Doors and gates shall remain locked except during periods of personnel or equipment entry or exit.

b. Access to, and activities in, each such area shall be controlled by means of an RWP or equivalent that includes specification of radiation dose rates in the immediate work area(s) and other appropriate radiation protection equipment and measures.

c. Individuals qualified in radiation protection procedures may be exempted from the requirement for an RWP or equivalent while performing radiation surveys in such

(continued)

5.0 ADMINISTRATIVE CONTROLS

5.8 High Radiation Area

5.8 High Radiation Area (continued)

areas provided that they are otherwise following plant radiation protection procedures for entry to, exit from and work in such areas.

d. Each individual group entering such an area shall possess:

1. A radiation monitoring device that continuously integrates the radiation dose rates in the area and alarms when the device's dose alarm setpoint is reached, with an appropriate alarm setpoint, or

2. A radiation monitoring device that continuously transmits dose rate and cumulative dose information to a remote receiver monitored by radiation protection personnel responsible for controlling personnel radiation exposure within the area with the means to communicate with and control every individual in the area, or

3. A self-reading dosimeter (e.g., pocket ionization chamber or electronic dosimeter) and,

(i) Be under the surveillance, as specified in the RWP or equivalent, while in the area, of an individual qualified in radiation protection procedures, equipped with a radiation monitoring device that continuously displays radiation dose rates in the area; who is responsible for controlling personnel exposure within the area, or

(ii) Be under the surveillance as specified in the RWP or equivalent, while in the area, by means of closed circuit television, of personnel qualified in radiation protection procedures, responsible for controlling personnel radiation exposure in the area, and with the means to communicate with and control every individual in the area.

4. In those cases where options (2) and (3), above, are impractical or determined to be inconsistent with the "As Low As is Reasonably Achievable" principle, a radiation monitoring device that continuously displays radiation dose rates in the area.

e. Except for individuals qualified in radiation protection procedures, or personnel continuously escorted by such individuals, entry into such areas shall be made only after dose rates in the area have been determined and entry personnel are knowledgeable of them. These continuously escorted personnel will receive a pre-job briefing prior to entry into such areas. This dose rate determination, knowledge, and pre-job briefing does not require documentation prior to initial entry.

(continued)

5.0 ADMINISTRATIVE CONTROLS

5.8 High Radiation Area

5.8 High Radiation Area (continued)

f. Such individual areas that are within a larger area where no enclosure exists for the purpose of locking and where no enclosure can reasonably be constructed around the individual area need not be controlled by a locked door or gate, nor continuously guarded, but shall be barricaded, conspicuously posted, and a clearly visible flashing light shall be activated at the area as a warning device.

Docket Nos. 50-245
50-336
50-423
B18560

Attachment 7

Millstone Nuclear Power Station, Unit Nos. 1, 2 and 3

Technical Specification Change Request
Changes to Selected Unit Nos. 1, 2 and 3 Radiological Related
Technical Specifications
Retyped Unit No. 2 Technical Specifications Pages

ANNUAL REPORTS[1]

6.9.1.4 Annual reports covering the activities of the unit as described below for the previous calendar year shall be submitted in accordance with 10 CFR 50.4.

6.9.1.5a. OCCUPATIONAL RADIATION EXPOSURE REPORT

----------NOTE----------

A single submittal may be made for a multiple unit station. The submittal should combine sections common to all units at the station.

A tabulation, on an annual basis of the number of station, utility, and other personnel (including contractors), for whom monitoring was performed, receiving an annual deep dose equivalent > 100 mrems and the associated collective deep dose equivalent (reported in person-rem) according to work and job functions (e.g., reactor operations and surveillance, inservice inspection, routine maintenance, special maintenance (describe maintenance), waste processing and refueling). This tabulation supplements the requirements of 10 CFR 20.2206. The dose assignments to various duty functions may be estimated based on pocket ionization chamber, thermoluminescence dosimeter (TLD), electronic dosimeter, or film badge measurements. Small exposures totaling < 20 percent of the individual total dose need not be accounted for. In the aggregate, at least 80 percent of the total deep dose equivalent received from external sources should be assigned to specific major work functions. The report covering the previous calendar year shall be submitted by April 30 each year.

6.9.1.5b. The complete results of steam generator tube inservice inspections performed during the report period (reference Specification 4.4.5.5.b). The report covering the previous calendar year shall be submitted prior to March 1 of each year.

6.9.1.5c. The results of specific activity analysis in which the primary coolant exceeded the limits of Specification 3.4.8. The following information shall be included: (1) Reactor power history starting 48 hours prior to the first sample in which the limit was exceeded; (2) Results of the last isotopic analysis for radioiodine performed prior to exceeding the limit, results of analysis while limit was exceeded and results of one analysis after the radioiodine activity was reduced to less than the limit. Each result should include date and time of sampling and the radioiodine concentrations; (3) Clean-up system flow history starting 48 hours prior to the first sample in which the limit was exceeded; (4) Graph of the I-131 concentration and one other radioiodine isotope concentration in microcuries per gram as a function of time for the duration of the specific activity above the steady-state level; and (5) The time duration when the specific activity of the primary coolant exceeded the radioiodine limit. The report covering the previous calendar year shall be submitted prior to March 1 of each year.

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1 A single submittal may be made for a multiple unit station. The submittal should combine those sections that are common to all units at the station.

6.9.1.5d. Documentation of all failures (inability to lift or reclose within the tolerances allowed by the design basis) and challenges to the pressurizer PORVs or safety valves. The report covering the previous calendar year shall be submitted prior to March 1 of each year.

ANNUAL RADIOLOGICAL REPORTS

6.9.1.6a ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT

----------NOTE----------
A single submittal may be made for a multiple unit station. The submittal shall combine sections common to all units at the station.

The Annual Radiological Environmental Operating Report covering the operation of the unit during the previous calendar year shall be submitted by May 1 of each year. The report shall include summaries, interpretations, and analyses of trends of the results of the Radiological Environmental Monitoring Program for the reporting period. The material provided shall be consistent with the objectives outlined in the Radiological Effluent Monitoring and Offsite Dose Calculation Manual (REMODCM), and in 10 CFR Part 50, Appendix I, Sections IV.B.2, IV.B.3, and IV.C.

The Annual Radiological Environmental Operating Report shall include the results of analyses of all radiological environmental samples and of all environmental radiation measurements taken during the period pursuant to the locations specified in the table and figures in the REMODCM, as well as summarized and tabulated results of these analyses and measurements. In the event that some individual results are not available for inclusion with the report, the report shall be submitted noting and explaining the reasons for the missing results. The missing data shall be submitted in the next annual report.

6.9.1.6b RADIOACTIVE EFFLUENT RELEASE REPORT

----------NOTE----------
A single submittal may be made for a multiple unit station. The submittal shall combine sections common to all units at the station; however, for units with separate radwaste systems, the submittal shall specify the releases of radioactive material from each unit.

The Radioactive Effluent Release Report covering the operation of the unit in the previous year shall be submitted prior to May 1 of each year in accordance with 10 CFR 50.36a. The report shall include a summary of the quantities of radioactive liquid and gaseous effluents and solid waste released from the unit. The material provided shall be consistent with the objectives outlined in the REMODCM and in conformance with 10 CFR 50.36a and 10 CFR Part 50, Appendix I, Section IV.B.1.

MONTHLY OPERATING REPORT

6.9.1.7 Routine reports of operating statistics and shutdown experience shall be submitted on a monthly basis to the U.S. Nuclear Regulatory Commission, Document Control Desk, Washington, D.C. 20555, one copy to the Regional

SPECIAL REPORTS (CONT.)

b. Deleted

c. Deleted

d. ECCS Actuation, Specifications 3.5.2 and 3.5.3.

e. Deleted

f. Deleted

g. RCS Overpressure Mitigation, Specification 3.4.9.3.

h. Deleted

i. Degradation of containment structure, Specification 4.6.1.6.4.

j. Steam Generator Tube Inspection, Specification 4.4.5.1.5.

k. Accident Monitoring Instrumentation, Specification 3.3.3.8.

l. Radiation Monitoring Instrumentation, Specification 3.3.3.1.

m. Reactor Coolant System Vents, Specification 3.4.11.

6.10 Deleted

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

As provided in paragraph 20.1601(c) of 10 CFR Part 20, the following controls shall be applied to high radiation areas in place of the controls required by paragraph 20.1601(a) and (b) of 10 CFR Part 20:

6.12.1 High Radiation Areas with Dose Rates Not Exceeding 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation

a. Each entryway to such an area shall be barricaded and conspicuously posted as a high radiation area. Such barricades may be opened as necessary to permit entry or exit of personnel or equipment.

b. Access to, and activities in, each such area shall be controlled by means of Radiation Work Permit (RWP) or equivalent that includes specification of radiation dose rates in the immediate work area(s) and other appropriate radiation protection equipment and measures.

6.12 HIGH RADIATION AREA (CONT.)

c. Individuals qualified in radiation protection procedures and personnel continuously escorted by such individuals may be exempted from the requirement for an RWP or equivalent while performing their assigned duties provided that they are otherwise following plant radiation protection procedures from entry to, exit from, and work in such areas.

d. Each individual or group entering such an area shall possess:

1. A radiation monitoring device that continuously displays radiation dose rates in the area, or

2. A radiation monitoring device that continuously integrates the radiation dose rates in the area and alarms when the device's dose alarm setpoint is reached, with an appropriate alarm setpoint, or

3. A radiation monitoring device that continuously transmits dose rate and cumulative dose information to a remote receiver monitored by radiation protection personnel responsible for controlling personnel radiation exposure within the area, or

4. A self-reading dosimeter (e.g., pocket ionization chamber or electronic dosimeter) and,

(i) Be under the surveillance, as specified in the RWP or equivalent, while in the area, of an individual qualified in radiation protection procedures, equipped with a radiation monitoring device that continuously displays radiation dose rates in the area; who is responsible for controlling personnel exposure within the area, or

(ii) Be under the surveillance as specified in the RWP or equivalent, while in the area, by means of closed circuit television, of personnel qualified in radiation protection procedures, responsible for controlling personnel radiation exposure in the area, and with the means to communicate with individuals in the area who are covered by such surveillance.

e. Except for individuals qualified in radiation protection procedures, or personnel continuously escorted by such individuals, entry into such areas shall be made only after dose rates in the area have been determined and entry personnel are knowledgeable of them. These continuously escorted personnel will receive a pre-job briefing prior to entry into such areas. This dose rate determination, knowledge, and pre-job briefing does not require documentation prior to initial entry.

6.12 HIGH RADIATION AREA (CONT.)

6.12.2 High Radiation Areas with Dose Rates Greater than 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation, but less than 500 rads/hour at 1 Meter from the Radiation Source or from any Surface Penetrated by the Radiation

a. Each enterway to such an area shall be conspicuously posted as a high radiation area and shall be provided with a locked or continuously guarded door or gate that prevents unauthorized entry, and, in addition:

1. All such door and gate keys shall be maintained under the administrative control of the shift manager, radiation protection manager, or his or her designees, and

2. Doors and gates shall remain locked except during periods of personnel or equipment entry or exit.

b. Access to, and activities in, each such area shall be controlled by means of an RWP or equivalent that includes specification of radiation dose rates in the immediate work area(s) and other appropriate radiation protection equipment and measures.

c. Individuals qualified in radiation protection procedures may be exempted from the requirement for an RWP or equivalent while performing radiation surveys in such areas provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas.

d. Each individual group entering such an area shall possess:

1. A radiation monitoring device that continuously integrates the radiation dose rates in the area and alarms when the device's dose alarm setpoint is reached, with an appropriate alarm setpoint, or

2. A radiation monitoring device that continuously transmits dose rate and cumulative dose information to a remote receiver monitored by radiation protection personnel responsible for controlling personnel radiation exposure within the area with the means to communicate with and control every individual in the area, or

3. A self-reading dosimeter (e.g., pocket ionization chamber or electronic dosimeter) and,

(i) Be under the surveillance, as specified in the RWP or equivalent, while in the area, of an individual qualified in radiation protection procedures, equipped with a radiation monitoring device that continuously displays radiation dose rates in the area; who is responsible for controlling personnel exposure within the area, or

(ii) Be under the surveillance as specified in the RWP or equivalent, while in the area, by means of closed circuit television, of personnel qualified in radiation protection procedures, responsible for controlling personel radiation exposure in the area, and with the means to communicate with and control every individual in the area.

6.12 HIGH RADIATION AREA (CONT.)

4. In those cases where options (2) and (3), above, are impractical or determined to be inconsistent with the "As Low As is Reasonably Achievable" principle, a radiation monitoring device that continuously displays radiation dose rates in the area.

e. Except for individuals qualified in radiation protection procedures, or personnel continuously escorted by such individuals, entry into such areas shall be made only after dose rates in the area have been determined and entry personnel are knowledgeable of them. These continuously escorted personnel will receive a pre-job briefing prior to entry into such areas. This dose rate determination, knowledge, and pre-job briefing does not require documentation prior to initial entry.

f. Such individual areas that are within a larger area where no enclosure exists for the purpose of locking and where no enclosure can reasonably be constructed around the individual area need not be controlled by a locked door or gate, nor continuously guarded, but shall be barricaded, conspicuously posted, and a clearly visible flashing light shall be activated at the area as a warning device.

6.13 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.

6.14 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.

6.19 CONTAINMENT LEAKAGE RATE TESTING PROGRAM

A program shall be established to implement the leakage rate testing of the primary containment as required by 10CFR50.54(o) and 10CFR50, Appendix J, Option B as modified by approved exemptions. This program shall be in accordance with the guidelines contained in Regulatory Guide 1.163, "Performance-Based Containment Leak-Test Program," dated September 1995.

The peak calculated primary Containment internal pressure for the design basis loss of coolant accident is P_a.

The maximum allowable primary containment leakage rate, L_a, at P_a, is 0.5% of primary containment air weight per day.

Leakage rate acceptance criteria are:

a. Primary containment overall leakage rate acceptance criterion is $< 1.0\ L_a$. During the first unit startup following testing in accordance with this program, the leakage rate acceptance criteria are $< 0.60\ L_a$ for the combined Type B and Type C tests, and $< 0.75\ L_a$ for Type A tests;

b. Air lock testing acceptance criteria are:

   1. Overall air lock leakage rate is $\leq 0.05\ L_a$ when tested at $\geq P_a$.

   2. For each door, pressure decay is ≤ 0.1 psig when pressurized to ≥ 25 psig for at least 15 minutes.

The provisions of SR 4.0.2 do not apply for test frequencies specified in the Primary Containment Leakage Rate Testing Program.

The provisions of SR 4.0.3 are applicable to the Primary Containment Leakage Rate Testing Program.

6.20 RADIOACTIVE EFFLUENT CONTROLS PROGRAM

This program conforms to 10 CFR 50.36a for the control of radioactive effluents and for maintaining the doses to members of the public from radioactive effluents as low as reasonably achievable. The program shall be contained in the REMODCM, shall be implemented by procedures, and shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

a. Limitations on the functional capability of radioactive liquid and gaseous monitoring instrumentation including surveillance tests and setpoint determination in accordance with the methodology in the REMODCM;

b. Limitations on the concentrations of radioactive material released in liquid effluents to unrestricted areas, conforming to ten times the connection values in Appendix B, Table 2, Column 2 to 10 CFR 20.1001-20.2402;

6.20 RADIOACTIVE EFFLUENT CONTROLS PROGRAM (CONT.)

c. Monitoring, sampling, and analysis of radioactive liquid and gaseous effluents in accordance with 10 CFR 20.1302 and with the methodology and parameters in the REMODCM;

d. Limitations on the annual and quarterly doses or dose commitment to a member of the public from radioactive materials in liquid effluents released from each unit to unrestricted areas, conforming to 10 CFR 50, Appendix I;

e. Determination of cumulative dose contributions from radioactive effluents for the current calendar quarter and current calendar year in accordance with the methodology and parameters in the REMODCM at least every 31 days. Determination of projected dose contributions from radioactive effluents in accordance with the methodology in the REMODCM at least every 31 days;

f. Limitations on the functional capability and use of the liquid and gaseous effluent treatment systems to ensure that appropriate portions of these systems are used to reduce releases of radioactivity when the projected doses in a period of 31 days would exceed 2% of the guidelines for the annual dose or dose commitment, conforming to 10 CFR 50, Appendix I;

g. Limitations on the dose rate resulting from radioactive material released in gaseous effluents from the site to areas at or beyond the site boundary shall be in accordance with the following:

   1. For noble gases: a dose rate $\leq$ 500 mrem/yr to the whole body and a dose rate $\leq$ 3000 mrem/yr to the skin, and

   2. For iodine-131, iodine-133, tritium, and all radionuclides in particulate form with half-lives greater than 8 days: a dose rate $\leq$ 1500 mrem/yr to any organ;

h. Limitations on the annual and quarterly air doses resulting from noble gases released in gaseous effluents from each unit to areas beyond the site boundary, conforming to 10 CFR 50, Appendix I;

i. Limitations on the annual and quarterly doses to a member of the public from iodine-131, iodine-133, tritium, and all radionuclides in particulate form with half lives > 8 days in gaseous effluents released from each unit to areas beyond the site boundary, conforming to 10 CFR 50, Appendix I; and

j. Limitations on the annual dose or dose commitment to any member of the public, beyond the site boundary, due to releases of radioactivity and to radiation from uranium fuel cycle sources, conforming to 40 CFR 190.

The provisions of Specification 4.0.2 and Specification 4.0.3 are applicable to the Radioactive Effluent Controls Program surveillance frequency.

6.21 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM

A program shall be provided to monitor the radiation and radionuclides in the environs of the plant. The program shall provided (1) representative measurements of radioactivity in the highest potential exposure pathways, and (2) verification of the accuracy of the effluent monitoring program and modeling of environmental exposure pathways. The program shall (1) be contained in the REMODCM, (2) conform to that guidance of Appendix I to 10 CFR Part 50, and (3) include the following:

a. Monitoring, sampling, analysis, and reporting of radiation and radionuclides in the environment in accordance with the methodology and parameters in the REMODCM.

b. A Land Use Census to ensure that changes in the use of areas at and beyond the SITE BOUNDARY are identified and that modifications to the monitoring program are made if required by the results of this census, and

c. Participation in a Interlaboratory Comparison Program to ensure that independent checks on the precision and accuracy of the measurements of radioactive materials in environmental sample matrices are performed as part of the quality assurance program for environmental monitoring.

6.22 Reactor Coolant Pump Flywheel Inspection Report

This program shall provide for the inspection of each reactor coolant pump flywheel by either qualified in-place UT examination over the volume from the inner bore of the flywheel to the circle of one-half the outer radius, or a surface examination (magnetic particle testing and/or penetrant testing) of exposed surfaces defined by the volume of the disassembled flywheels at least once every 10 years.

Docket Nos. 50-245
50-336
50-423
B18560

Attachment 8

Millstone Nuclear Power Station, Unit Nos. 1, 2 and 3

Technical Specification Change Request
Changes to Selected Unit Nos. 1, 2 and 3 Radiological Related
Technical Specifications
Retyped Unit No. 3 Technical Specifications Pages

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 operation), supplementary reports shall be submitted at least every 3 months until all three events have been completed.

ANNUAL REPORTS*

6.9.1.2 Annual Reports covering the activities of the unit as described below for the previous calendar year shall be submitted in accordance with 10 CFR 50.4.

6.9.1.2a. OCCUPATIONAL RADIATION EXPOSURE REPORT

----------NOTE----------

A single submittal may be made for a multiple unit station. The submittal should combine sections common to all units at the station.

A tabulation on an annual basis of the number of station, utility, and other personnel (including contractors), for whom monitoring was performed, receiving an annual deep dose equivalent > 100 mrems and the associated collective deep dose equivalent (reported in person - rem) according to work and job functions (e.g., reactor operations and surveillance, inservice inspection, routine maintenance, special maintenance (describe maintenance), waste processing, and refueling). This tabulation supplements the requirements of 10 CFR 20.2206. The dose assignments to various duty functions may be estimated based on pocket ionization chamber, thermoluminescence dosimeter (TLD), electronic dosimeter, or film badge measurements. Small exposures totalling < 20 percent of the individual total dose need not be accounted for. In the aggregate, at least 80 percent of the total deep dose equivalent received form external sources should be assigned to specific major work functions. The report covering the previous calendar year shall be submitted by April 30 of each year.

6.9.1.2b. The results of specific activity analyses in which the reactor coolant exceeded the limits of Specification 3.4.8. The following information shall be included: (1) Reactor power history starting 48 hours prior to the first sample in which the limit was exceeded (in graphic and tabular format); (2) Results of the last isotopic analysis for radioiodine performed prior to exceeding the limit, results of analysis while limit was exceeded and results of one analysis after the radioiodine activity was reduced to less than limit. Each result should include date and time of sampling and the radioiodine concentrations; (3) Clean-up flow history starting 48 hours prior to the first sample in which the limit was exceeded; (4) Graph of the I-131 concentration (μCi/gm) and one other radioiodine isotope concentration (μCi/gm) as a function of time for the

* A single submittal may be made for a multiple unit station. The submittal should combine those sections that are common to all units at the station.

ANNUAL REPORTS (Continued)

duration of the specific activity above the steady-state level; and (5) The time duration when the specific activity of the reactor coolant exceeded the radioiodine limit. The report covering the previous calendar year shall be submitted prior to March 1 of each year.

6.9.1.2c. Documentation of all challenges to the pressurizer power-operated relief valves (PORVs) and safety valves. The report covering the previous calendar year shall be submitted prior to March 1 of each year; and

6.9.1.3 ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT

----------NOTE----------

A single submittal may be made for a multiple unit station. The submittal shall combine sections common to all units at the station.

The Annual Radiological Environmental Operating Report covering the operation of the unit during the previous calendar year shall be submitted by May 1 of each year. The report shall include summaries, interpretations, and analyses of trends of the results of the Radiological Environmental Monitoring Program for the reporting period. The material provided shall be consistent with the objectives outlined in the Radiological Effluent Monitoring and Offsite Dose Calculation Manual (REMODCM), and in 10 CFR Part 50, Appendix I, Sections IV.B.2, IV.B.3, and IV.C.

The Annual Radiological Environmental Operating Report shall include the results of analyses of all radiological environmental samples and of all environmental radiation measurements taken during the period pursuant to the locations specified in the table and figures in the REMODCM, as well as summarized and tabulated results of these analyses and measurements. In the event that some individual results are not available for inclusion with the report, the report shall be submitted noting and explaining the reasons for the missing results. The missing data shall be submitted in the next annual report.

6.9.1.4 RADIOACTIVE EFFLUENT RELEASE REPORT

----------NOTE----------

A single submittal may be made for a multiple unit station. The submittal shall combine sections common to all units at the station; however, for units with separate radwaste systems, the submittal shall specify the releases of radioactive material from each unit.

The Radioactive Effluent Release Report covering the operation of the unit in the previous year shall be submitted prior to May 1 of each year in accordance with 10 CFR 50.36a. The report shall include a summary of the quantities of radioactive liquid and gaseous effluents and solid waste released from the unit. The material provided shall be consistent with the objectives outlined in the REMODCM and in conformance with 10 CFR 50.36a and 10 CFR Part 50, Appendix I, Section IV.B.1.

6.9.1.6.c The core operating limits shall be determined so that all applicable limits (e.g. fuel thermal-mechanical limits, core thermal-hydraulic limits, ECCS limits, nuclear limits such as shutdown margin, and transient and accident analysis limits) of the safety analysis are met.

6.9.1.6.d The CORE OPERATING LIMITS REPORT, including any mid-cycle revisions or supplements thereto, shall be provided upon issuance, for each reload cycle, to the NRC Document Control Desk with copies to the Regional Administrator and Resident Inspector.

SPECIAL REPORTS

6.9.2 Special reports shall be submitted to the U.S. Nuclear Regulatory Commission, Document Control Desk, Washington, D.C. 20555, one copy to the Regional Administrator Region I, and one copy to the NRC Resident Inspector, within the time period specified for each report.

6.10 Deleted.

6.11 RADIATION PROTECTION PROGRAM

6.11.1 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

As provided in paragraph 20.1601(c) of 10 CFR Part 20, the following controls shall be applied to high radiation areas in place of the controls required by paragraph 20.1601(a) and (b) of 10 CFR Part 20:

6.12.1 High Radiation Areas with Dose Rates Not Exceeding 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation

a. Each entryway to such an area shall be barricaded and conspicuously posted as a high radiation area. Such barricades may be opened as necessary to permit entry or exit of personnel or equipment.

b. Access to, and activities in, each such area shall be controlled by means of Radiation Work Permit (RWP) or equivalent that includes specification of radiation dose rates in the immediate work area(s) and other appropriate radiation protection equipment and measures.

c. Individuals qualified in radiation protection procedures and personnel continuously escorted by such individuals may be exempted from the requirement for an RWP or equivalent while performing their assigned duties provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas.

d. Each individual or group entering such an area shall possess:

1. A radiation monitoring device that continuously displays radiation dose rates in the area, or

6.12 HIGH RADIATION AREA (cont.)

2. A radiation monitoring device that continuously integrates the radiation dose rates in the area and alarms when the device's dose alarm setpoint is reached, with an appropriate alarm setpoint, or

3. A radiation monitoring device that continuously transmits dose rate and cumulative dose information to a remote receiver monitored by radiation protection personnel responsible for controlling personnel radiation exposure within the area, or

4. A self-reading dosimeter (e.g., pocket ionization chamber or electronic dosimeter) and,

   (i) Be under the surveillance, as specified in the RWP or equivalent, while in the area, of an individual qualified in radiation protection procedures, equipped with a radiation monitoring device that continuously displays radiation dose rates in the area; who is responsible for controlling personnel exposure within the area, or

   (ii) Be under the surveillance as specified in the RWP or equivalent, while in the area, by means of closed circuit television, of personnel qualified in radiation protection procedures, responsible for controlling personnel radiation exposure in the area, and with the means to communicate with individuals in the area who are covered by such surveillance.

e. Except for individuals qualified in radiation protection procedures, or personnel continuously escorted by such individuals, entry into such areas shall be made only after dose rates in the area have been determined and entry personnel are knowledgeable of them. These continuously escorted personnel will receive a pre-job briefing prior to entry into such areas. This dose rate determination, knowledge, and pre-job briefing does not require documentation prior to initial entry.

6.12.2 High Radiation Areas with Dose Rates Greater than 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation, but less than 500 rads/hour at 1 Meter from the Radiation Source or from any Surface Penetrated by the Radiation

a. Each entryway to such an area shall be conspicuously posted as a high radiation area and shall be provided with a locked or continuously guarded door or gate that prevents unauthorized entry, and, in addition:

   1. All such door and gate keys shall be maintained under the administrative control of the shift manager, radiation protection manager, or his or her designees, and

   2. Doors and gates shall remain locked except during periods of personnel or equipment entry or exit.

b. Access to, and activities in, each such area shall be controlled by means of an RWP or equivalent that includes specification of radiation dose rates in the immediate work area(s) and other appropriate radiation protection equipment and measures.

6.12 HIGH RADIATION AREA (cont.)

c. Individuals qualified in radiation protection procedures may be exempted from the requirement for an RWP or equivalent while performing radiation surveys in such areas provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas.

d. Each individual group entering such an area shall possess:

1. A radiation monitoring device that continuously integrates the radiation dose rates in the area and alarms when the device's dose alarm setpoint is reached, with an appropriate alarm setpoint, or

2. A radiation monitoring device that continuously transmits dose rate and cumulative dose information to a remote receiver monitored by radiation protection personnel responsible for controlling personnel radiation exposure within the area with the means to communicate with and control every individual in the area, or

3. A self-reading dosimeter (e.g., pocket ionization chamber or electronic dosimeter) and,

(i) Be under the surveillance, as specified in the RWP or equivalent, while in the area, of an individual qualified in radiation protection procedures, equipped with a radiation monitoring device that continuously displays radiation dose rates in the area; who is responsible for controlling personnel exposure within the area, or

(ii) Be under the surveillance as specified in the RWP or equivalent, while in the area, by means of closed circuit television, of personnel qualified in radiation protection procedures, responsible for controlling personnel radiation exposure in the area, and with the means to communicate with and control every individual in the area.

4. In those cases where options (2) and (3), above, are impractical or determined to be inconsistent with the "As Low As is Reasonably Achievable" principle, a radiation monitoring device that continuously displays radiation dose rates in the area.

e. Except for individuals qualified in radiation protection procedures, or personnel continuously escorted by such individuals, entry into such areas shall be made only after dose rates in the area have been determined and entry personnel are knowledgeable of them. These continuously escorted personnel will receive a pre-job briefing prior to entry into such areas. This dose rate determination, knowledge, and pre-job briefing does not require documentation prior to initial entry.

f. Such individuals areas that are within a larger area where no enclosure exists for the purpose of locking and where no enclosure can reasonably be constructed around the individual area need not be controlled by a locked door or gate, nor continuously guarded, but shall be barricaded, conspicuously posted, and a clearly visible flashing light shall be activated at the area as a warning device.

6.15 RADIOACTIVE EFFLUENT CONTROLS PROGRAM

This program conforms to 10 CFR 50.36a for the control of radioactive effluents and for maintaining the doses to members of the public from radioactive effluents as low as reasonably achievable. The program shall be contained in the REMODCM, shall be implemented by procedures, and shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

a. Limitations on the functional capability of radioactive liquid and gaseous monitoring instrumentation including surveillance tests and setpoint determination in accordance with the methodology in the REMODCM;

b. Limitations on the concentrations of radioactive material released in liquid effluents to unrestricted areas, conforming to ten times the concentration values in Appendix B, Table 2, Column 2 to 10 CFR 20.1001-20.2402;

c. Monitoring, sampling, and analysis of radioactive liquid and gaseous effluents in accordance with 10 CFR 20.1302 and with the methodology and parameters in the REMODCM;

d. Limitations on the annual and quarterly doses or dose commitment to a member of the public from radioactive materials in liquid effluents released from each unit to unrestricted areas, conforming to 10 CFR 50, Appendix I;

e. Determination of cumulative dose contributions from radioactive effluents for the current calendar quarter and current calendar year in accordance with the methodology and parameters in the REMODCM at least every 31 days. Determination of projected dose contributions from radioactive effluents in accordance with the methodology in the REMODCM at least every 31 days;

f. Limitations on the functional capability and use of the liquid and gaseous effluent treatment systems to ensure that appropriate portions of these systems are used to reduce releases of radioactivity when the projected doses in a period of 31 days would exceed 2% of the guidelines for the annual dose or dose commitment, conforming to 10 CFR 50, Appendix I;

g. Limitations on the dose rate resulting from radioactive material released in gaseous effluents from the site to areas at or beyond the site boundary shall be in accordance with the following:

   1. For noble gases: a dose rate $\leq$ 500 mrem/yr to the whole body and a dose rate $\leq$ 3000 mrem/yr to the skin, and

   2. For iodine-131, iodine-133, tritium, and all radionuclides in particulate form with half-lives greater than 8 days: a dose rate $\leq$ 1500 mrem/yr to any organ;

h. Limitations on the annual and quarterly air doses resulting from noble gases released in gaseous effluents from each unit to areas beyond the site boundary, conforming to 10 CFR 50, Appendix I;

i. Limitations on the annual and quarterly doses to a member of the public from iodine-131, iodine-133, tritium, and all radionuclides in particulate form with half lives > 8 days in gaseous effluents released from each unit to areas beyond the site boundary, conforming to 10 CFR 50, Appendix I; and

j. Limitations on the annual dose or dose commitment to any member of the public, beyond the site boundary, due to releases of radioactivity and to radiation from uranium fuel cycle sources, conforming to 40 CFR 190.

The provisions of Specification 4.0.2 and Specification 4.0.3 are applicable to the Radiative Effluent Controls Program surveillance frequency.

6.16 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM

A program shall be provided to monitor the radiation and radionuclides in the environs of the plant. The program shall provided (1) representative measurements of radioactivity in the highest potential exposure pathways, and (2) verification of the accuracy of the effluent monitoring program and modeling of environmental exposure pathways. The program shall (1) be contained in the REMODCM, (2) conform to the guidance of Appendix I to 10 CFR Part 50, and (3) include the following:

a. Monitoring, sampling, analysis, and reporting of radiation and radionuclides in the environment in accordance with the methodology and parameters in the REMODCM.

b. A Land Use Census to ensure that changes in the use of areas at and beyond the SITE BOUNDARY are identified and that modifications to the monitoring program are made if required by the results of this census, and

c. Participation in a Interlaboratory Comparison Program to ensure that independent checks on the precision and accuracy of the measurements of radioactive materials in environmental sample matrices are performed as part of the quality assurance program for environmental monitoring.