



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
WASHINGTON, D.C. 20555-0001

NORTHEAST NUCLEAR ENERGY COMPANY

DOCKET NO. 50-245

MILLSTONE NUCLEAR POWER STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 106  
License No. DPR-21

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Northeast Nuclear Energy Company (the licensee) dated April 19, 1999, as supplemented by letters dated August 25, October 14, and November 3, 1999, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

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

(2) Technical Specifications

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

3. This license amendment is effective as of the date of issuance and shall be implemented within 90 days of issuance (including the relocation of Technical Specifications to the Final Safety Analysis Report). In addition, the licensee shall include the relocated information in the Final Safety Analysis Report submitted to the NRC, pursuant to 10 CFR 50.71(e), as described in the licensee's application dated April 19, 1999, as supplemented by letters dated August 25, October 14, and November 3, 1999, and evaluated in the staff's Safety Evaluation dated November 9, 1999.

FOR THE NUCLEAR REGULATORY COMMISSION



Michael T. Masnik, Chief  
Decommissioning Section  
Project Directorate IV & Decommissioning  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: November 9, 1999

ATTACHMENT TO LICENSE AMENDMENT NO. 106

FACILITY OPERATING LICENSE NO. DPR-21

DOCKET NO. 50-245

With one exception, replace Appendix A, Technical Specifications, in their entirety with the attached revised Technical Specifications pages. The one exception is retain page 3/4 10-3 of the current Technical Specifications.

With one exception, replace Technical Specifications Bases in their entirety with the attached Technical Specifications Bases pages. The one exception is retain page B 3/4 10-2 of the current Technical Specifications Bases, and mark the top paragraph as not applicable (paragraphs C, D, and E of page B 3/4 10-2 remain in effect).

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**Technical Specifications  
Millstone Nuclear Power Station**

**Millstone Unit 1  
Waterford, Connecticut**

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## TABLE OF CONTENTS

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1.0	USE AND APPLICATION.....	1.1-1
1.1	Definitions.....	1.1-1
1.2	Logical Connectors.....	1.2-1
1.3	Completion Times.....	1.3-1
1.4	Frequency.....	1.4-1
2.0	SAFETY LIMITS.....	2.0-1
3.0	LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY .....	3.0-1
3.0	SURVEILLANCE REQUIREMENT (SR) APPLICABILITY.....	3.0-2
3.1	Defueled Systems .....	3.1-1*
3.2	Spent Fuel Handling.....	3.2-1*
4.0	DESIGN FEATURES.....	4.0-1
4.1	Site Location.....	4.0-1
4.2	Fuel Storage.....	4.0-1
5.0	ADMINISTRATIVE CONTROLS .....	5.0-1
5.1	Responsibility.....	5.0-1
5.2	Organization.....	5.0-2
5.3	Unit Staff Qualifications.....	5.0-5
5.4	Training.....	5.0-6
5.5	Procedures.....	5.0-7
5.6	Programs and Manuals.....	5.0-9
5.7	Reporting Requirements.....	5.0-15
5.8	High Radiation Area.....	5.0-18

\* To be issued by a future license amendment. Page 3/4 10.3, issued with Facility Operating license DPR-21 on October 31, 1986, remains in effect.

1.0 USE AND APPLICATION

1.1 Definitions

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----- NOTE -----

The defined terms of this section appear in capitalized type and are applicable throughout these Technical Specifications and Bases.

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<u>Term</u>	<u>Definition</u>
ACTIONS	ACTIONS shall be that part of a Specification that prescribes Required Actions to be taken under designated Conditions within specified Completion Times.
CERTIFIED FUEL HANDLER	A CERTIFIED FUEL HANDLER is an individual who complies with provisions of the CERTIFIED FUEL HANDLER training program required by Technical Specification 5.4.1.
OPERABLE- OPERABILITY	A system, subsystem, division, component or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified safety function(s) and when all necessary attendant instrumentation, controls, normal or emergency electrical power, cooling and seal water, lubrication, and other auxiliary equipment that are required for the system, subsystem, division, component or device to perform its specified safety function(s) are also capable of performing their related support function(s).

## 1.0 USE AND APPLICATION

### 1.2 Logical Connectors

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**PURPOSE**                    The purpose of this section is to explain the meaning of logical connectors.

Logical connectors are used in Technical Specifications (TS) to discriminate between, and yet connect, discrete Conditions, Required Actions, Completion Times, Surveillances, and Frequencies. The only logical connectors that appear in TS are AND and OR. The physical arrangement of these connectors constitutes logical conventions with specific meanings.

**BACKGROUND**                Several levels of logic may be used to state Required Actions. These levels are identified by the placement (or nesting) of the logical connectors and by the number assigned to each Required Action. The first level of logic is identified by the first digit of the number assigned to a Required Action and the placement of the logical connector in the first level of nesting (i.e., left justified with the number of the Required Action). The successive levels of logic are identified by additional digits of the Required Action number and by successive indentions of the logical connectors.

When logical connectors are used to state a Condition, Completion Time, Surveillance, or Frequency, only the first level of logic is used, and the logical connector is left justified with the statement of the Condition, Completion Time, Surveillance, or Frequency.

**EXAMPLES**                    The following examples illustrate the use of logical connectors.

(continued)

1.0 USE AND APPLICATION

1.2 Logical Connectors

EXAMPLES (continued)

EXAMPLE 1.2-1  
ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. LCO not met.	A.1 Verify..... <u>AND</u> A.2 Restore.....	

In this example the logical connector AND is used to indicate that when in Condition A, both Required Actions A.1 and A.2 must be completed.

(continued)



1.0 USE AND APPLICATION

1.2 Logical Connectors

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EXAMPLES (continued)

EXAMPLE 1.2-2

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. LCO not met.	A.1 Trip.....  <u>OR</u>  A.2.1 Verify.....  <u>AND</u>  A.2.2 Reduce	

This example represents a more complicated use of logical connectors. Required Actions A.1 and A.2 are alternative choices, only one of which must be performed as indicated by the use of the logical connector OR and the left justified placement. Either of the Actions may be chosen. If A.2 is chosen, then both A.2.1 and A.2.2 must be performed as indicated by the logical connector AND.

1.0 USE AND APPLICATION

1.3 Completion Times

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<b>PURPOSE</b>	The purpose of this section is to establish the Completion Time convention and to provide guidance for its use.
<b>BACKGROUND</b>	Limiting Conditions for Operation (LCOs) specify minimum requirements for ensuring the safe storage of irradiated fuel. The ACTIONS associated with an LCO state Conditions that typically describe the ways in which the requirements of the LCO can fail to be met. Specified with each stated Condition are Required Action(s) and Completion Times(s).
<b>DESCRIPTION</b>	The Completion Time is the amount of time allowed for completing a Required Action. It is referenced to the time of discovery of a situation (e.g., variable not within limits) that requires entering an ACTIONS Condition unless otherwise specified, providing the unit is in a MODE or specified condition stated in the Applicability of the LCO. Required Actions must be completed prior to the expiration of the specified Completion Time. An ACTIONS Condition remains in effect and the Required Actions apply until the Condition no longer exists or the unit is not within the LCO Applicability.
<b>EXAMPLES</b>	The following examples illustrate the use of Completion Times with different types of Conditions.

(continued)

1.0 USE AND APPLICATION

1.3 Completion Times

EXAMPLES (continued)

EXAMPLE 1.3-1

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Required Action and associated Completion Time not met.	A.1 Verify.....	6 hours
	<u>AND</u> A.2 Restore	36 hours

Condition A has two Required Actions. Each Required Action has its own separate Completion Time. Each Completion Time is referenced to the time that Condition A is entered. The Required Actions of Condition A are to perform the verification required by ACTION A.1 within 6 hours AND to perform the restoration required by ACTION A.2 within 36 hours. A total of 6 hours is allowed for performing ACTION A.1 and a total of 36 hours (not 42 hours) is allowed for performing ACTION A.2 from the time that Condition A was entered. If ACTION A.1 is completed within 3 hours, the time allowed completing ACTION A.2 is the next 33 hours because the total time allowed for completing ACTION A.2 is 36 hours.

IMMEDIATE  
COMPLETION  
TIME

When "Immediately" is used as a Completion Time, the Required Action should be pursued without delay and in a controlled manner.

1.0 USE AND APPLICATION

1.4 Frequency

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**PURPOSE** The purpose of this section is to define the proper use and application of Frequency requirements.

**DESCRIPTION** Each Surveillance Requirement (SR) has a specified Frequency in which the Surveillance must be met in order to meet the associated LCO. An understanding of the correct application of the specified Frequency is necessary for compliance with the SR.

The "Specified Frequency" is referred to throughout this section and each of the Specifications of Section 3.0, Surveillance Requirement (SR) Applicability. The "Specified Frequency" consists of the requirements of the Frequency column of each SR, as well as certain Notes in the Surveillance column that modify performance requirements.

**EXAMPLES** The following examples illustrate the various ways that Frequencies are specified. In these examples, the Applicability of the LCO (LCO not shown) is when irradiated fuel is stored in the fuel pool.

(continued)

1.0 USE AND APPLICATION

1.4 Frequency

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EXAMPLES (continued)

EXAMPLE 1.4-1

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
Verify parameter is within limits.	12 hours

Example 1.4-1 contains the type of SR most often encountered in the Technical Specifications (TS). The Frequency specifies an interval (12 hours) during which the associated Surveillance must be performed at least one time. Performance of the Surveillance initiates the subsequent interval. Although the Frequency is stated as 12 hours, an extension of the time interval to 1.25 times the interval specified in the Frequency is allowed by SR 3.0.2 for operational flexibility. The measurement of this interval continues at all times, even when the SR is not required to be met per SR 3.0.1 (such as when a variable is outside specified limits, or the unit is outside the Applicability of the LCO). If the interval specified by SR 3.0.2 is exceeded while the unit is in the specified condition in the Applicability of the LCO, and the performance of the Surveillance is not otherwise modified, then SR 3.0.3 becomes applicable.

(continued)

1.0 USE AND APPLICATION

1.4 Frequency

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EXAMPLES (continued)

EXAMPLE 1.4-2

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
Verify parameter is within limits.	Within 24 hours prior to moving irradiated fuel  <u>AND</u>  24 hours thereafter

Example 1.4-2 has two Frequencies. The first is a one time performance Frequency, and the second is of the type shown in Example 1.4-1. The logical connector "AND" indicates that both Frequency requirements must be met. The use of "prior to" indicates that the surveillance must be performed once before the initiation of fuel handling activities. This type of Frequency does not qualify for the extension allowed by SR 3.0.2. "Thereafter" indicates future performances must be established per SR 3.0.2, but only after a specified condition is first met (i.e., the "prior to" performance in this example).

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## 2.0 SAFETY LIMITS

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This section is not applicable since Millstone Unit 1 is permanently defueled.

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**3.0 LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY**

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LCO 3.0.1 LCOs shall be met during the specified conditions in the Applicability, except as provided in LCO 3.0.2.

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LCO 3.0.2 Upon discovery of the failure to meet an LCO, the required actions of the associated Conditions shall be met.

If the LCO is met or is no longer applicable prior to expiration of the specified Completion Time(s), completion of the required action is not required unless otherwise stated.

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### 3.0 SURVEILLANCE REQUIREMENT (SR) APPLICABILITY

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SR 3.0.1 SRs shall be met during specific conditions in the Applicability for individual LCOs unless otherwise stated in the SR. Failure to meet a Surveillance, whether such failure is experienced during the performance of the Surveillance or between performances of the Surveillance, shall be failure to meet the LCO. Failure to perform a Surveillance within the specified Frequency shall be failure to meet the LCO except as provided in SR 3.0.3. Surveillances do not have to be performed on inoperable equipment or variables outside specified limits.

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SR 3.0.2 The specified Frequency for each SR is met if the Surveillance is performed within 1.25 times the interval specified in the Frequency, as measured from the previous performance or as measured from the time a specified condition of the frequency is met.

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SR 3.0.3 If it is discovered that a Surveillance was not performed within its specified frequency, then compliance with the requirement to declare the LCO not met may be delayed from the time of discovery up to 24 hours or up to the limit of the specified frequency, whichever is less. This delay period is permitted to allow performance of the surveillance.

If the Surveillance is not performed within the delay period, the LCO must immediately be declared not met and the applicable Condition(s) must be entered. The Completion Times of the Required Actions begin immediately upon expiration of the delay period.

When the Surveillance is performed within the delay period and the Surveillance is not met, the LCO must immediately be declared not met and the applicable Condition(s) must be entered. The Completion Times of the Required Actions begin immediately upon failure to meet the Surveillance.

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## LIMITING CONDITION FOR OPERATION

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### 3.10 REFUELING AND SPENT FUEL HANDLING

#### C. Fuel Storage Pool Water Level

Whenever irradiated fuel is stored in the fuel storage pool, the pool water level shall be maintained at a level greater than or equal to 33 feet.

#### D. Crane Operability

The 110-ton redundant crane shall be OPERABLE when the crane is used for handling of a spent fuel cask.

#### E. Crane Travel With a Spent Fuel Cask

Spent fuel casks shall be prohibited from travel over irradiated fuel assemblies. When handling a spent fuel cask, the crane mode switch shall be in a "Mode 2" position and the mode switch key removed.

## SURVEILLANCE REQUIREMENT

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### 4.10 REFUELING AND SPENT FUEL HANDLING

#### C. Fuel Storage Pool Water Level

Whenever irradiated fuel is stored in the fuel storage pool, the pool level shall be recorded daily.

#### D. Crane Operability

Within 4 days prior to Spent Fuel Cask handling operations, a visual inspection of crane cables, sheaves, hook, yoke, and cask lifting trunnions will be made. Following these inspections, no-load mechanical and electrical tests will be conducted to verify proper operation of crane controls, brakes and lifting speeds. A load test will then be conducted by lifting the empty cask out of the pivot cradle. The above inspections and prelifting procedure shall meet the requirements of ANSI Standard B30.2, 1967.

#### E. Crane Interlocks and Switches

Crane interlocks and limit switches which prevent crane travel over irradiated fuel assemblies shall be demonstrated OPERABLE within seven days prior to handling of all spent fuel casks and every seven days thereafter during spent fuel cask handling.

## 4.0 DESIGN FEATURES

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4.1 Site Location     The Unit 1 Reactor Building is located on the site at Millstone Point in Waterford, Connecticut. The nearest site boundary on land is 2063 feet northeast of the reactor building (1620 feet northeast of the elevated stack), which is the minimum distance to the boundary of the exclusion area as described in 10CFR100.3(a). No part of the site that is closer to the reactor building than 2063 feet shall be sold or leased except to The Connecticut Light and Power Company, Western Massachusetts Electric Company or the Northeast Nuclear Energy Company or their corporate affiliates for use in conjunction with normal utility operations.

### 4.2 Fuel Storage

4.2.1 The new fuel storage facility shall be such that the  $K_{\text{eff}}$  dry is less than 0.90 and flooded is less than 0.95.

4.2.2 The  $K_{\text{eff}}$  of the spent fuel storage pool shall be less than or equal to 0.90. This  $K_{\text{eff}}$  value is satisfied with fuel assemblies having a maximum k-infinity of 1.24 in the normal reactor configuration at cold conditions, and an average U-235 enrichment of 3.8 weight percent or less.

4.2.3 The number of fuel assemblies stored in the spent fuel storage pool shall not exceed 3229 bundles.

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**5.0 ADMINISTRATIVE CONTROLS**

**5.1 Responsibility**

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**5.1.1** The Designated Officer shall be responsible for overall operation of the Millstone Station Site and shall delegate, in writing, the succession to this responsibility. The Designated Manager shall be responsible for overall Unit safe operation and shall delegate in writing the succession of this responsibility.

**5.1.2** The Shift Manager shall be responsible for the control room command function.

**5.1.3** Unless otherwise defined, the technical specification titles for members of the staff are generic titles. Unit-specific titles for the functions and responsibilities associated with these generic titles are identified in the Quality Assurance Topical Report.

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## 5.0 ADMINISTRATIVE CONTROLS

### 5.2 Organization

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#### 5.2.1 Onsite And Offsite Organizations

Onsite and offsite organizations shall be established for unit operation and corporate management, respectively. The onsite and offsite organizations shall include the positions for activities affecting the safe storage of irradiated fuel.

- a. Lines of authority, responsibility, and communication shall be established and defined for the highest management levels through intermediate levels to and including all operating organization positions. These relationships shall be documented and updated, as appropriate, in the form of organization charts, functional descriptions of departmental responsibilities and relationships, and job descriptions for key personnel positions, or in equivalent forms of documentation. These requirements shall be documented in the Quality Assurance Topical Report.
- b. The Designated Manager shall be responsible for overall unit safe operation and shall have control over those onsite activities and resources necessary for maintenance and storage of irradiated fuel in a safe condition.
- c. The Designated Officer shall have corporate responsibility for overall plant nuclear safety and shall take any measures needed to ensure acceptable performance of the staff in operating, maintaining, and providing technical support to ensure the safe storage of irradiated fuel.
- d. The individuals who train the CERTIFIED FUEL HANDLERS and those who carry out radiation protection functions or perform quality assurance functions may report to the appropriate onsite manager; however, they shall have sufficient organizational freedom to ensure their ability to perform their assigned functions.

(continued)

## 5.0 ADMINISTRATIVE CONTROLS

### 5.2 Organization

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#### 5.2.2 Facility Staff

- a. Each on duty shift shall be composed of at least the minimum shift crew composition shown in Table 5.2-1.
- b. At least one person qualified to stand watch in the control room shall be present in the control room when irradiated fuel is stored in the fuel storage pool.
- c. Deleted
- d. An individual qualified in radiation protection procedures shall be onsite during fuel handling operations.
- e. All fuel handling operations shall be directly supervised by a qualified individual.
- f. Administrative procedures shall be developed and implemented to limit the working hours of unit staff who perform functions important to the safe storage of irradiated fuel assemblies. These procedures should follow the general guidance of the NRC Policy Statement on working hours (Generic Letter No. 82-12).
- g. The Shift Manager shall be a CERTIFIED FUEL HANDLER.

(continued)

5.0 ADMINISTRATIVE CONTROLS

5.2 Organization

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5.2.2 Facility Staff (continued)

TABLE 5.2-1  
MINIMUM SHIFT CREW COMPOSITION (1)

<b>POSITION</b>	<b>NUMBER OF INDIVIDUALS REQUIRED TO FILL POSITION</b>
Certified Fuel Handler	1
Non-Certified Operator	1

- (1) The above shift crew composition may be less than the minimum requirements for a period of time not to exceed 2 hours in order to accommodate unexpected absence provided expeditious actions are taken to fill the required positions.
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5.0 ADMINISTRATIVE CONTROLS

5.3 Facility Staff Qualifications

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5.3.1 Each member of the facility staff shall meet or exceed the minimum qualifications of ANSI N18.1-1971 for comparable positions, except for:

5.3.1.1 The Operations Manager or Assistant Operations Manager shall be a CERTIFIED FUEL HANDLER.

5.3.1.2 The Health Physics Manager shall meet or exceed the qualifications of Regulatory Guide 1.8, Revision 1.

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5.0 ADMINISTRATIVE CONTROLS

5.4 Training

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5.4.1 An NRC approved training and retraining program for the CERTIFIED FUEL HANDLERS shall be maintained.

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## 5.0 ADMINISTRATIVE CONTROLS

### 5.5 Procedures

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- 5.5.1 Written procedures shall be established, implemented, and maintained covering the following activities:
- a. The procedures applicable to the safe storage of irradiated fuel recommended in Appendix "A" of Regulatory Guide 1.33, February 1978;
  - b. Fire Protection Program implementation;
  - c. Cold Weather Operations;
  - d. Quality assurance for radiological effluent and environmental monitoring;
  - e. Liquid and gaseous radioactive effluent discharges from the unit for all operations involving offsite releases of radioactive effluents. These procedures shall specify the use of appropriate waste treatment utilizing the guidance provided in the REMODCM;
  - f. Fuel handling operations;
  - g. All programs specified in Specification 5.6.
- 5.5.2 The Designated Manager, Designated Officer, or Designated Senior Officer may designate specific procedures and programs, or classes of procedures and programs to be reviewed in accordance with the Station Qualified Reviewer Program in lieu of review by the PORC or SORC. The review per the PORC, SORC, or Station Qualified Reviewer Program shall be in accordance with Northeast Utilities Quality Assurance Program (NUQAP).
- 5.5.3 Procedures listed in Specification 5.5, and changes thereto, shall be approved by the Designated Manager, or Designated Officer or by cognizant managers or directors who are designated as the Approval Authority by the Designated Manager, or Designated Officer as specified in administrative procedures. The Approval Authority for each procedure and program or class of procedure and program shall be specified in administrative procedures.

(continued)

## 5.0 ADMINISTRATIVE CONTROLS

### 5.5 Procedures (continued)

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5.5.4 Each procedure of Specification 5.5.1, and changes thereto, shall be reviewed by the PORC or SORC and shall be approved by the Designated Manager or Designated Officer, or be reviewed and approved in accordance with the Station Qualified Reviewer Program prior to implementation. Each procedure of Specification 5.5.1 shall be reviewed periodically as set forth in administrative procedures.

5.5.5 Temporary changes to procedures of Specification 5.5.1 above may be made provided:

- a. the intent of the original procedure is not altered;
- b. the change is approved by two members of the plant management staff, at least one of whom is a CERTIFIED FUEL HANDLER;
- c. the change is documented, reviewed by the PORC or SORC, or the Station Qualified Reviewer Program, as applicable, and approved by the Designated Manager, Designated Officer, or the Station Qualified Reviewer Program Department Manager within 14 days of implementation.

5.5.6 All procedures and procedure changes required for the Radiological Environmental Monitoring Program of Specification 5.6.1 shall be reviewed by an individual (other than the author) from the Radiological Assessment Branch or the Production Operation Services Laboratory (POSL) and approved by appropriate supervision.

5.5.7 Temporary changes may be made for the Radiological Environmental Monitoring Program provided the intent of the original procedure is not altered and the change is documented and reviewed by an individual (other than the author) from the Radiological Assessment Branch or the POSL, within 14 days of implementation.

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5.0 ADMINISTRATIVE CONTROLS

5.6 Programs and Manuals

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The following programs shall be established, implemented and maintained.

5.6.1 Radiological Effluent Monitoring and Offsite Dose Calculation Manual (REMODOCM)

- a. The REMODOCM shall contain the methodology and parameters used in the calculation of offsite doses resulting from radioactive gaseous and liquid effluents, in the calculation of gaseous and liquid effluent monitoring alarm and trip setpoints, and in the conduct of the radiological environmental monitoring program; and
- b. The REMODOCM shall also contain the radioactive effluent controls and radiological environmental monitoring activities and descriptions of the information that should be included in the Annual Radiological Environmental Operating, and Radioactive Effluent Release, reports required by Specification 5.7.2 and Specification 5.7.3.

Licensee initiated changes to the REMODOCM:

- a. Shall be documented and records of reviews performed shall be retained. This documentation shall contain:
  - 1) sufficient information to support the change(s) together with the appropriate analyses or evaluations justifying the change(s), and
  - 2) a determination that the change(s) will maintain the level of radioactive effluent control required by 10CFR20.1302, 40CFR Part 190, 10 CFR 50.36a and Appendix I to 10CFR50, and not adversely impact the accuracy or reliability of effluent, dose, or setpoint calculations;
- b. Shall become effective after review and acceptance by SORC and the approval of the designated officer; and

(continued)

## 5.0 ADMINISTRATIVE CONTROLS

5.6 Programs and Manuals

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5.6.1 Radiological Effluent Monitoring and Offsite Dose Calculation Manual (REMODOCM)  
(continued)

- c. Shall be submitted to the Commission in the form of a complete, legible copy of the entire REMODOCM as a part of or concurrent with the Radioactive Effluent Release Report for the period of the report in which any change in the REMODOCM was made. Each change shall be identified by markings in the margin of the affected pages, clearly indicating the area of the page that was changed, and shall indicate the date (i.e., month and year) the change was implemented.

(continued)

**5.0 ADMINISTRATIVE CONTROLS****5.6 Programs and Manuals**

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**5.6.2 Technical Specifications (TS) Bases Control Program**

This program provides a means for processing changes to the Bases of these Technical Specifications

- a. Changes to the Bases of the TS shall be made under appropriate administrative controls and reviews.
- b. Licensees may make changes to Bases without prior NRC approval provided the changes do not involve either of the following:
  1. a change in the TS incorporated in the license; or
  2. a change to the updated FSAR or Bases that involves an unreviewed safety question as defined in 10CFR50.59.
- c. The Bases Control Program shall contain provisions to ensure that the Bases are maintained consistent with the FSAR.
- d. Proposed changes that meet the criteria of Specification 5.6.2b above shall be reviewed and approved by the NRC prior to implementation. Changes to the Bases implemented without prior NRC approval shall be provided to the NRC on a frequency consistent with 10CFR50.71(e).

(continued)

**5.0 ADMINISTRATIVE CONTROLS****5.6 Programs and Manuals**

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**5.6.3 Fuel Storage Pool Water Chemistry Program**

This program provides controls for monitoring fuel storage pool water chemistry to minimize the potential effects of corrosion which could affect the safe storage of irradiated fuel. The program shall include identification for critical variables and control points for these variables. The program shall include sampling frequencies and define corrective actions to be taken for off control point chemistry conditions. The NRC will be notified prior to elimination or changes to the acceptance criteria for critical variables monitored.

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(continued)

5.0 ADMINISTRATIVE CONTROLS

5.6 Programs and Manuals

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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);
- 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;
- 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**

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**5.6.4 Radioactive Effluent Controls Program (continued)**

- g. Limitations on the dose rate resulting from radioactive material released in gaseous effluents to areas beyond the site boundary conforming to the dose associated with 10 CFR 20, Appendix B, Table II, Column 1 (1993 version);**
  - 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 due to releases of radioactivity and to radiation from uranium fuel cycle sources, conforming to 40 CFR 190.**
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## 5.0 ADMINISTRATIVE CONTROLS

5.7 Reporting Requirements

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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.

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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.

(continued)

5.0 ADMINISTRATIVE CONTROLS

5.7 Reporting Requirements

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5.7.2 Annual Radiological Environmental Operating 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.

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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 (REMODOCM), and in 10 CFR 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 REMODOCM, 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.

(continued)

**5.0 ADMINISTRATIVE CONTROLS****5.7 Reporting Requirements**

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**5.7.3 Radioactive Effluent Release Report**

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**NOTE**

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A single submittal may be made for a multiple unit station. The submittal should 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.

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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.

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5.0 ADMINISTRATIVE CONTROLS

5.8 High Radiation Area

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5.8 High Radiation Area

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

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5.8 High Radiation Area (continued)

- 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.
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**Technical Specifications  
Bases  
Millstone Nuclear Power Station**

**Millstone Unit 1  
Waterford, Connecticut**

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**TABLE OF CONTENTS**

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B 3.0	LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY .....	B 3.0-1
B 3.0	SURVEILLANCE REQUIREMENT (SR) APPLICABILITY .....	B 3.0-2
B 3.1	DEFUELED SYSTEMS .....	B 3.1-1*
B 3.2	SPENT FUEL HANDLING .....	B 3.2-1*

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\* To be issued by a future license amendment. Bases 3.10.C, D, and E on page B 3/4 10-2, issued with Facility Operating License DPR-21 on October 31, 1986, remain in effect.



## B 3.0 LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY

### BASES

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**LCOs** LCO 3.0.1 and 3.0.2 establish general requirements applicable to all Specifications and apply at all times, unless otherwise stated.

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**LCO 3.0.1** LCO 3.0.1 establishes the Applicability statement within each individual specification as the requirement for when the LCO is required to be met (i.e., when the facility is in the specified conditions of the Applicability statement of each specification).

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**LCO 3.0.2** LCO 3.0.2 establishes that upon discovery of a failure to meet an LCO, the associated ACTIONS shall be met. The Completion Time of each Required Action for an ACTIONS Condition is applicable from the point in time that an ACTIONS Condition is entered. The Required Actions establish those remedial measures that must be taken within specified Completion Times when the requirements of an LCO are not met. This specification establishes that:

- a. Completion of the Required Actions within the specified Completion Times constitutes compliance with a specification; and
- b. Completion of the Required Actions is not required when an LCO is met within the specified Completion Time, unless otherwise specified.

Completing the Required Actions is not required when an LCO is met or is no longer applicable, unless otherwise stated in the individual Specifications.

The Completion Times of the Required Actions are also applicable when a specified condition in the Applicability is entered intentionally. The reasons for intentionally relying on the ACTIONS include, but are not limited to, performance of Surveillances, preventive maintenance, corrective maintenance, or investigation of problems. Entering ACTIONS for these reasons must be done in a manner that does not compromise the safe storage of irradiated fuel. Intentional entry into ACTIONS should not be made for convenience.

## B 3.0 SURVEILLANCE REQUIREMENT (SR) APPLICABILITY

### BASES

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SRs SR 3.0.1 through 3.0.3 establish the general requirements applicable to all Specifications and apply at all times, unless otherwise specified.

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SR 3.0.1 SR 3.0.1 establishes the requirement that SRs must be met during the specified conditions in the Applicability for which the requirements of the LCO apply, unless otherwise specified in the individual SRs. This Specification is to ensure that surveillances are performed to verify that variables are within specified limits. Failure to meet a Surveillance within the specified Frequency, in accordance with SR 3.0.2, constitutes a failure to meet an LCO.

Surveillances do not have to be performed when the facility is in a specified condition for which the requirements of the associated LCO are not applicable, unless otherwise specified.

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SR 3.0.2 SR 3.0.2 permits a 25% extension of the interval specified in the Frequency. This extension facilitates Surveillance scheduling and considers facility conditions that may not be suitable for conducting the Surveillance (e.g., other ongoing Surveillance or maintenance activities).

The 25% extension does not significantly degrade the reliability that results from performing the Surveillance at its specified Frequency. This is based on the recognition that the most probable result of any particular Surveillance being performed is the verification of conformance with the SRs. Any exceptions to SR 3.0.2 are stated in the individual Specifications.

The provisions of SR 3.0.2 are not intended to be used repeatedly merely as a convenience to extend Surveillance intervals or periodic Completion Time intervals beyond those specified.

(continued)

## B 3.0 SURVEILLANCE REQUIREMENT (SR) APPLICABILITY

### BASES

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**SR 3.0.3** SR 3.0.3 establishes the flexibility to defer declaring an affected variable outside the specified limits when a Surveillance has not been completed within the specified Frequency. A delay period of up to 24 hours applies from the point of time that it is discovered that the Surveillance has not been performed in accordance to SR 3.0.2, and not at the time that the specified Frequency was not met.

This delay period provides adequate time to complete Surveillances that have been missed. This delay period permits the completion of a Surveillance before complying with Required Actions or other remedial measures that might preclude completion of the Surveillance.

The basis for this delay period includes consideration of facility conditions, adequate planning, availability of personnel, the time required to perform the Surveillance, the safety significance of the delay in completing the required Surveillance, and the recognition that the most probable result of any particular Surveillance being performed is the verification of conformance with the requirements. When a Surveillance with a Frequency based not on time intervals, but upon specified facility conditions or operational situations, is discovered not to have been performed when specified, SR 3.0.3 allows the full delay period of 24 hours to perform the Surveillance.

Failure to comply with specified Frequencies for SRs is expected to be an infrequent occurrence. Use of the delay period established by SR 3.0.3. is a flexibility which is not intended to be used as a convenience to extend Surveillance intervals.

(continued)

## B 3.0 SURVEILLANCE REQUIREMENT (SR) APPLICABILITY

### BASES

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#### SR 3.0.3 (continued)

If a Surveillance is not completed within the allowable delay period, then the variable is considered outside the specified limits and the Completion Times of the Required Actions for the applicable LCO Conditions begin immediately upon expiration of the delay period. If a Surveillance is failed within the delay period, then the variable is outside the specified limits and the Completion Times of the Required Actions for the applicable LCO Conditions begin immediately upon failure of the Surveillance.

Completion of the Surveillance within the delay period allowed by this Specification, or within the Completion Time of the ACTIONS, restores compliance with SR 3.0.1.

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