

5.0 ADMINISTRATIVE CONTROLS

The information in this section of the reference ABWR DCD, including all subsections, is incorporated by reference with the following departures and site-specific supplements. The site-specific supplements partially address COL License Information Item 16.1.

STD DEP 16.3-8

STD DEP 16.5-1

STD DEP 16.5-2

STD DEP 16.5-3

STD DEP 16.5-4

STD DEP T1 2.14-1

STD DEP T1 3.4-1

5.1 Responsibility

5.1.1 *The ~~{Plant Superintendent}~~ Plant General Manager shall be responsible for overall unit operation and shall delegate in writing the succession to this responsibility during his absence.*

The ~~{Plant Superintendent}~~ Plant General Manager, or his designee, in accordance with approved administrative procedures, shall approve, prior to implementation, each proposed test or experiment and proposed changes and modifications to unit systems or equipment that affect nuclear safety.

STD DEP 16.5-1

5.1.2 *The ~~{Shift Supervisor/Manager (SS)}~~ shall be responsible for the control room command function. A management directive to this effect, signed by the ~~{highest level of corporate or site management}~~ President & Chief Executive Officer, shall be issued annually to all station personnel. During any absence of the ~~{SS}~~ Shift Supervisor/Manager from the control room while the unit is in MODE 1, 2, or 3, ~~or 4~~, an individual with an active Senior Reactor Operator (SRO) license shall be designated to assume the control room command function. During any absence of the ~~{SS}~~ Shift Supervisor/Manager from the control room while the unit is in MODE 4 or 5, an individual with an active SRO license or Reactor Operator license shall be designated to assume the control room command function.*

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5.2 Organization

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 safety of the nuclear power plant.

- a. Lines of authority, responsibility, and communication shall be defined and established throughout highest management levels, intermediate levels, and all operating organization positions. These relationships shall be documented and updated, as appropriate, in 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 ~~applicant's FSAR~~ or the Quality Assurance Program Description (QAPD);*
- b. The ~~Plant Superintendent~~ Plant General Manager shall be responsible for overall safe operation of the plant and shall have control over those onsite activities necessary for safe operation and maintenance of the plant;*
- c. The ~~a specified corporate executive position~~ President & Chief Executive 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 the plant to ensure nuclear safety; and*
- d. The individuals who train the operating staff, carry out health physics, or perform quality assurance functions may report to the appropriate onsite manager; however, these individuals shall have sufficient organizational freedom to ensure their independence from operating pressures.*

5.2.2 Unit Staff

STD DEP 16.5-2

The unit staff organization shall include the following:

- a. ~~A auxiliary non-licensed operator shall be assigned to each reactor containing fuel and an additional auxiliary non-licensed operator shall be assigned for each control room from which a reactor is operating.~~¹

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- b. *At least one licensed Reactor Operator (RO) shall be present in the control room when fuel is in the reactor. In addition, while the unit is in MODE 1, 2, or 3 ~~or 4~~, at least one licensed Senior Reactor Operator (SRO) shall be present in the control room.*
- c. ~~A Health Physics Radiation Protection Technician shall be on site when fuel is in the reactor. The position may be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position.~~

¹ Two unit sites with both units shutdown or defueled require a total of three ~~auxiliary non-licensed~~ operators for the two units

- d. *Administrative procedures shall be developed and implemented to limit the working hours of unit staff who perform safety related functions (e.g., licensed SROs, licensed ROs, ~~health physicist~~ radiation protection technicians, ~~auxiliary non-licensed~~ operators, and key maintenance personnel).*

The controls shall include guidelines on working hours that ensure
~~*Adequate shift coverage shall be maintained without routine heavy use of overtime. The objective shall be to have operating personnel work an [8 or 12] hour day, nominal 40 hour week, while the unit is operating. However, in the event that unforeseen problems require substantial amounts of overtime to be used, or during extended periods of shutdown for refueling, major maintenance, or major plant modification, on a temporary basis the following guidelines shall be followed:*~~

- ~~*1. An individual should not be permitted to work more than 16 hours straight, excluding shift turnover time;*~~
- ~~*2. An individual should not be permitted to work more than 16 hours in any 24 hour period, nor more than 24 hours in any 48 hour period, nor more than 72 hours in any 7 day period, all excluding shift turnover time;]*~~
- ~~*3. A break of at least 8 hours should be allowed between work periods, including shift turnover time;*~~
- ~~*4. Except during extended shutdown periods, the use of overtime should be considered on an individual basis and not for the entire staff on a shift.*~~

Any deviation from the above guidelines shall be authorized in advance by the ~~[Plant Superintendent]~~ Plant General Manager or his designee, in accordance with approved administrative procedures, or by higher levels of management, in accordance with established procedures and with documentation of the basis for granting the deviation.

Controls shall be included in the procedures such that individual overtime shall be reviewed monthly by the ~~[Plant Superintendent]~~ Plant General Manager or his designee to ensure that excessive hours have not been assigned. Routine deviation from the above guidelines is not authorized.

~~OR~~

~~The amount of overtime worked by unit staff members performing safety related functions shall be limited and controlled in accordance with the NRC Policy Statement on working hours (Generic Letter 82-12).~~

- e. The Operations Division Manager ~~or Assistant Operations Manager~~ shall hold an active SRO license.
- f. The Shift Technical Advisor (STA) shall provide advisory technical support to the Shift Supervisor ~~(SS) Manager~~ in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the unit. In addition, the STA shall meet the qualifications specified by the Commission Policy Statement on Engineering Expertise on Shift.

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5.3 Unit Staff Qualifications

~~[Reviewer's Note: Minimum qualifications for members of the unit staff shall be specified by use of an overall qualification statement referencing an ANSI Standard acceptable to the NRC staff or by specifying individual position qualifications. Generally, the first method is preferable; however, the second method is adaptable to those unit staffs requiring special qualification statements because of unique organizational structures.]~~

5.3.1

Each member of the unit staff shall meet or exceed the minimum qualifications of ~~[Regulatory Guide 1.8, Revision 2, 1987, or more recent revisions, or ANSI Standard acceptable to the NRC staff]~~. The staff not covered by ~~[Regulatory Guide 1.8]~~ shall meet or exceed the minimum qualifications of ~~[Regulations, Regulatory Guides, or ANSI Standards acceptable to NRC staff]~~ ANSI N18.1-1971.

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5.4 Technical Specifications (TS) Bases Control

STD DEP 16.5-3

5.4.2

Licensees may make changes to Bases without prior NRC approval provided the changes do not involve either of the following:

- a. *A change in the plant-specific TS, or plant-specific DCD Tier 1 or Tier 2* information; or*
- b. *A change to the site-specific portion of the FSAR or Bases that requires NRC approval pursuant to ~~involves an unreviewed safety question as defined in 10 CFR 50.59, or a change to Tier 2 of the plant-specific ABWR DCD that involves an unreviewed safety question as defined in~~ requires NRC approval pursuant to the design certification rule for the ABWR (Appendix A to 10 CFR 52).*

Changes to the Bases implemented without prior NRC approval shall be provided to the NRC on a frequency consistent with 10 CFR 50.71.

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5.5 Procedures, Programs, and Manuals

5.5.1 Procedures

5.5.1.1 Scope

- b. The emergency operating procedures required to implement the requirements of NUREG-0737 and NUREG-0737, Supplement 1, as stated in {Generic Letter 82-33};

5.5.2 Programs and Manuals

The following programs shall be established, implemented, and maintained:

5.5.2.1 Offsite Dose Calculation Manual (ODCM)

Licensee initiated changes to the ODCM:

- b. Shall become effective after review and acceptance by plant reviews and the approval of the ~~{Plant Superintendent}~~ Plant General Manager; and

5.5.2.2 Primary Coolant Sources Outside Containment

STD DEP T1 2.14-1

~~The ABWR hydrogen recombiner elimination evaluation was provided in ABWR Licensing Topical Report (LTR) NEDO 33330P "Hydrogen Recombiner Requirements Elimination," dated May 2007. The information from page C-114 is incorporated by reference.~~

This program provides controls to minimize leakage from those portions of systems outside containment that could contain highly radioactive fluids during a serious transient or accident to levels as low as practicable. The systems include the Low Pressure Core Flooder, High Pressure Core Flooder, Residual Heat Removal, Reactor Core Isolation Cooling, ~~Hydrogen Recombiner~~, Post Accident Sampling, Standby Gas Treatment, Suppression Pool Cleanup, Reactor Water Cleanup, Fuel Pool Cooling and Cleanup, Process Sampling, Containment Atmospheric Monitoring, and Fission Product Monitor. The program shall include the following:

- a. Preventive maintenance and periodic visual inspection requirements; and
- b. Integrated leak test requirements for each system at refueling cycle intervals or less.

5.5.2.7

Ventilation Filter Testing Program (VFTP)

A program shall be established to implement the following required testing of Engineered Safety Feature (ESF) filter ventilation systems at the frequencies specified in ~~{Regulatory Guide 1.52, Revision 2}~~, and in accordance with Regulatory Guide 1.52, Revision 2; and ASME N510-1989; ~~and AG-1-1994~~ as specified below:

- a. Demonstrate for each of the ESF systems that an inplace test of the high efficiency particulate air (HEPA) filters shows a penetration and system bypass < ~~{0.05}~~% when tested in accordance with Regulatory Guide 1.52, Revision 2, and ASME N510-1989 at the system flowrate specified below ± 10 %:

ESF Ventilation System	Flowrate
Control Room Habitability System	<u>5.100 m³/h</u>
Standby Gas Treatment System	<u>6.800 m³/h</u>

- b. Demonstrate for each of the ESF systems that an inplace test of the charcoal adsorber shows a penetration and system bypass < ~~{0.05}~~% when tested in accordance with Regulatory Guide 1.52, Revision 2, and ASME N510-1989 at the system flowrate specified below ± 10 %:

ESF Ventilation System	Flowrate
Control Room Habitability System	<u>5.100 m³/h</u>
Standby Gas Treatment System	<u>6.800 m³/h</u>

5.5.2.7

Ventilation Filter Testing Program (VFTP) (continued)

- c. Demonstrate for each of the ESF systems that a laboratory test of a sample of the charcoal adsorber, when obtained as described in Regulatory Guide 1.52, Revision 2, shows the methyl iodide penetration less than the value specified below when tested in accordance with ~~{ASTM D3803-1989}~~ at a temperature of $\leq \{30\}^{\circ}\text{C}$ and greater than or equal to the relative humidity specified below:

ESF Ventilation System	Penetration	RH
Control Room Habitability System	0.175	70%
Standby Gas Treatment System	0.175	70%

Reviewer's Note: Allowable penetration = $\frac{100\% \text{ methyl iodide efficiency for charcoal credited in staff safety evaluation}}{\text{safety factor}}$.
Safety factor = $\{5\}$ for systems with heaters.

- d. Demonstrate for each of the ESF systems that the pressure drop across the combined HEPA filters, the prefilters, and the charcoal adsorbers is less than the value specified below when tested in accordance with Regulatory Guide 1.52, Revision 2, and ASME N510-1989 at the system flowrate specified below $\{\pm 10\}\%$:

ESF Ventilation System	Delta P	Flowrate
Control Room Habitability System	1745.8 Pa	5,100 m ³ /h
Standby Gas Treatment System	2147.9 Pa	6,800 m ³ /h

- e. Demonstrate that the heaters for each of the ESF systems dissipate the value specified below $\{\pm 10\}\%$ when tested in accordance with ASME N510-1989:

ESF Ventilation System	Wattage
Control Room Habitability System	65.6 kW
Standby Gas Treatment System	26.2 kW

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the VFTP test frequencies.

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5.7 Reporting Requirements

5.7.1 Routine Reports

The following reports shall be submitted in accordance with 10 CFR 50.4.

5.7.1.1 Annual Reports

STD DEP 16.5-4

	<p>-----NOTE-----</p> <p><i>A single submittal may be made for a multiple unit station. The submittal should combine sections common to all units at the station.</i></p>	
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Annual Reports covering the activities of the unit as described below for the previous calendar year shall be submitted by ~~March 31~~ April 30 of each year. The initial report shall be submitted by ~~March 31~~ April 30 of the year following initial criticality.

Reports required on an annual basis include:

a. Occupational Radiation Exposure Report

A tabulation on an annual basis of the number of station, utility, and other personnel (including contractors) for whom monitoring was required, receiving an annual deep dose equivalent > 1 mSv 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 dosimeter, thermoluminescent dosimeter (TLD), or film badge measurements. Small exposures totalling < 20% of the individual total dose need not be accounted for. In the aggregate, at least 80% of the total deep dose equivalent received from external sources should be assigned to specific major work functions; ~~and~~

~~*[b. Any other unit unique reports required on an annual basis.]*~~

5.7.1.2

Annual Radiological Environmental Operating Report

	<p>-----NOTE-----</p> <p><i>A single submittal may be made for a multiple unit station. The submittal should combine sections common to all units at the station.</i></p> <p>-----</p>	
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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 15 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 Offsite Dose Calculation Manual (ODCM), 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 ODCM, as well as summarized and tabulated results of these analyses and measurements [in the format of the table in the Radiological Assessment Branch Technical Position, Revision 1, November 1979]. ~~[The report shall identify the TLD results that represent collocated dosimeters in relation to the NRC TLD program and the exposure period associated with each result.]~~ 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 a supplementary report as soon as possible.

5.7.1.3

Radioactive Effluent Release Report

	<p>-----NOTE-----</p> <p><i>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.</i></p> <p>-----</p>	
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The Radioactive Effluent Release Report covering the operation of the unit during 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 ODCM and Process Control Program and in conformance with 10 CFR 50.36a and 10 CFR 50, Appendix I, Section IV.B.1.

5.7.1.4 Monthly Operating Reports

Routine reports of operating statistics and shutdown experience{, including documentation of all challenges to the safety/relief valves} shall be submitted on a monthly basis no later than the 15th of each month following the calendar month covered by the report.

5.7.1.5 CORE OPERATING LIMITS REPORT (COLR)

- a. *Core operating limits shall be established prior to each reload cycle, or prior to any remaining portion of a reload cycle, and shall be documented in the COLR for the following:*

~~The individual specifications that address core operating limits must be referenced here.~~

LCO 3.2.1, "Average Planar Linear Heat Generation Rate (APLHGR);"

LCO 3.2.2, "Minimum Critical Power Ratio (MCPR);"

LCO 3.2.3, "Linear Heat Generation Rate (LHGR);"

LCO 3.3.1.1, "SSLC Sensor Instrumentation;" and

LCO 3.3.4.1, "ATWS and EOC-RPT Instrumentation."

- b. *The analytical methods used to determine the core operating limits shall be those previously reviewed and approved by the NRC, specifically those described in the following documents:*

Identify the Topical Report(s) by number, title, date, and NRC staff approval document, or identify the staff Safety Evaluation Report for a plant specific methodology by NRC letter and date.

- c. *The core operating limits shall be determined such that all applicable limits (e.g., fuel thermal mechanical limits, core thermal hydraulic limits, Emergency Core Cooling Systems (ECCS) limits, nuclear limits such as SDM, transient analysis limits, and accident analysis limits) of the safety analysis are met.*
- d. *The COLR, including any midcycle revisions or supplements, shall be provided upon issuance for each reload cycle to the NRC.*

5.7.1.6 Reactor Coolant System (RCS) PRESSURE AND TEMPERATURE LIMITS REPORT (PTLR)

STD DEP 16.3-8

The RCS pressure and temperature limits, including heatup and cooldown rates, criticality, and hydrostatic and leak test limits, shall be established and documented in the PTLR. ~~[The individual Specifications that LCO 3.4.9, RCS Pressure and Temperature (P/T) Limits addresses the reactor vessel pressure and temperature limits and the heatup and cooldown rates may be referenced.]~~ The analytical methods used to determine the pressure and temperature limits including the heatup and cooldown rates shall be those previously reviewed and approved by the NRC in ~~[Topical Report(s), number, title, date, and NRC staff approval document, or staff safety evaluation report for a plant specific methodology by NRC letter and date]~~ Regulatory Guide 1.99, Revision 2, and in accordance with 10 CFR 50, Appendix G. The reactor vessel pressure and temperature limits, including those for heatup and cooldown rates, shall be determined so that all applicable limits (e.g., heatup limits, cooldown limits, and inservice leak and hydrostatic testing limits) of the analysis are met. The PTLR, including revisions or supplements thereto, shall be provided upon issuance for each reactor vessel fluency period.

5.7.2 Special Reports

STD DEP T1 3.4-1

~~Special Reports may be required covering inspection, test, and maintenance activities. These special reports are determined on an individual basis for each unit, and their preparation and submittal are designated in the Technical Specifications.~~

Special Reports shall be submitted in accordance with 10 CFR 50.4 within the time period specified for each report.

The following Special Reports shall be submitted:

- a. When a Special Report is required by Condition C of LCO 3.3.3.1, “Essential Multiplexer System Communication Function,” a report shall be submitted within the following 14 days. The report shall outline the cause of the inoperability, consideration of common mode failures, and the plans and schedule for restoring the EMS data communication transmission segments to OPERABLE status.
- b. When a Special Report is required by Specification 5.5.2.10, “Software Error Evaluation Program,” a report shall be submitted within the following 7 days. The report shall outline the cause of the inoperability, the affected components, and the plans and schedule for completing proposed remedial actions.