Consumers Energy

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

DOCKET 50-255 - LICENSE DPR-20 - PALISADES PLANT
TECHNICAL SPECIFICATION CHANGE REQUEST
INCORPORATION OF APPROVED TSTF CHANGES TO CE STS

This letter proposes Technical Specifications changes that incorporate changes made to the Standard Technical Specifications by NEI Technical Specifications Task Force changes TSTF 258, 287, and 325. TSTF 258 effects changes to various Administrative Controls specifications; TSTF 287 allows a 24 hour period to restore an inoperable control room ventilation boundary under LCO 3.7.10, Control Room Ventilation - Filtration; and TSTF 325 corrects the presentation of the Conditions associated with LCO 3.5.2, ECCS - Operating. In addition, changes similar to those for LCO 3.5.2 approved under TSTF 325 have been requested for four other Palisades LCOs (3.6.6, Containment Cooling; 3.7.5, Auxiliary Feedwater; 3.7.7, Component Cooling Water; and 3.7.8, Service Water) which are structured similarly to LCO 3.5.2. These change requests are arranged as five enclosures to this letter.

Enclosure 1 contains the discussions associated with the TSTF 258 changes and the existing Palisades Technical Specifications pages marked to show the proposed changes.

Enclosure 2 contains the discussions associated with the TSTF 287 changes and the existing Palisades Technical Specifications and Bases pages marked to show the proposed changes.

Enclosure 3 contains the discussions associated with the TSTF 325 changes and the existing Palisades Technical Specifications and Bases pages marked to show the proposed changes.

Enclosure 4 contains the discussions associated with the proposed changes for LCOs 3.6.6, 3.7.7, and 3.7.8 and the existing Palisades Technical Specifications and Bases pages marked to show the proposed changes.

Enclosure 5 contains the discussions associated with the proposed changes for LCO 3.7.5 and the existing Palisades Technical Specifications and Bases pages marked to show the proposed changes.

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Each enclosure also contains revised Technical Specifications and Bases pages with the proposed changes incorporated. Changed areas have been marked with a line in the right margin.

Consumers Energy requests 90 days after approval for implementation to accomplish the necessary procedure changes and training.

A copy of this letter has been sent to the appropriate official of the State of Michigan.

SUMMARY OF COMMITMENTS

This letter establishes one new commitment. Prior to implementation of the proposed Condition B for LCO 3.7.10, Control Room Ventilation Filtration, Consumers Energy will have procedures available describing compensatory measures to be taken in the event of any entry into LCO 3.7.10, Condition B.

Nathan L. Haskell
Director, Licensing and Performance Assessment

CC: Administrator, Region III, USNRC
Project Manager, NRR, USNRC
NRC Resident Inspector - Palisades
Lou Brandon, Michigan Department of Environmental Quality

Enclosures

CONSUMERS ENERGY COMPANY

TECHNICAL SPECIFICATION CHANGE REQUEST
INCORPORATION OF APPROVED TSTF CHANGES TO CE STS

To the best of my knowledge, the content of this Technical Specifications change request, which proposes changes similar to those made to the Standard Technical Specifications by NEI Technical Specifications Task Force changes TSTF 258, 287, and 325, is truthful and complete.

By Nathan L Haskell
Nathan L. Haskell
Director, Licensing and Performance Assessment

Sworn and subscribed to before me this 8th day of December 2000

Janice M. Milan
Janice M. Milan, Notary Public
Allegan County, Michigan
(Acting in Van Buren County, Michigan)
My commission expires September 6, 2003

ENCLOSURE 1

CONSUMERS ENERGY COMPANY
PALISADES PLANT
DOCKET 50-255

TECHNICAL SPECIFICATION CHANGE REQUEST

TSTF-258
CHANGES TO ADMINISTRATIVE CONTROLS

CONSUMERS ENERGY COMPANY
DOCKET 50-255
LICENSE DPR-20

ENCLOSURE 1
REQUEST FOR CHANGE TO THE TECHNICAL SPECIFICATIONS
TSTF-258 - CHANGES TO ADMINISTRATIVE CONTROLS

It is requested that the Technical Specifications contained in the Facility Operating License DPR-20, Docket 50-255, issued to Consumers Power Company on February 21, 1991, for the Palisades Plant be changed as described below. The proposed changes incorporate selected changes to the Standard Technical Specifications, Combustion Engineering Plants, NUREG 1432, Rev.1 (STS) by Technical Specifications Task Force (TSTF) change number 258, Revision 4.

Attachment 1 to this change request contains the proposed Technical Specifications pages. Attachment 2 contains existing pages marked to show the proposed change. Deleted text is shown as strike-out; added text is shown with a shaded background. Attachment 3 contains a copy of existing Specification 5.7, marked to show where each requirement can be found in the proposed version.

I. Changes Proposed

A. Changes to Section 5.2, Organization

1. Specification 5.5.2e, is revised to delete the specific detail of working hour limitations.

2. Specification 5.5.2g, is revised to delete the specific title for the "Shift Technical Advisor" position, and to clarify the requirements for that position.

B. Changes to Section 5.5.4, Radioactive Effluent Controls Program

1. Specifications 5.5.4b. e, and h are revised to be consistent with the intent of 10 CFR 20.

C. Changes to Section 5.7, High Radiation Area

1. Specification 5.7 is revised to be consistent with 10 CFR 20.1601(c). The existing specification is completely replaced by insert F from TSTF 258.

II. Discussion of Proposed Changes

A. Changes to Sections 5.2, Organization and 5.3, Plant Staff Qualifications

1. Section 5.2.2e. is revised from specific working hour limits to administrative procedures to control working hours. The proposed changes will provide reasonable assurance that impaired performance caused by excessive working hours will not jeopardize safe plant operation. Specific working hour limits are not otherwise required to be in the technical specifications under 10 CFR 50.36(c)(5). Specific controls for working hours of reactor plant staff are described in procedures that require a deliberate decision making process to minimize the potential for impaired personnel performance, and the established procedure control processes will provide sufficient control for changes to that procedure.

   Additionally, the statement "Controls shall be included in the procedures such that individual overtime shall be reviewed monthly by the plant superintendent or his designee to ensure that excessive hours have not been assigned." is being deleted. There is no guidance in Generic Letter 82-12 that discusses these additional controls. The additional requirement to have the plant superintendent or his designee review individual overtime on a monthly bases is unnecessary since sufficient administrative controls and policies exist, as well as the role of the individuals' supervisors in supervising personnel prevent excessive or abuse of overtime.

2. Section 5.2.2g is revised to eliminate the title of "Shift Technical Advisor (STA)." STAs are not used at all plants (the function may be fulfilled by one of the other on-shift individuals). Therefore, 5.2.2g is revised so that it does not imply that the STA and the Shift Supervisor must be different individuals. Option 1 of the Commission Policy Statement on Engineering Expertise on Shift is satisfied by assigning an individual with specified educational qualifications to each operating crew as one of the SROs (preferably the shift supervisor) required by 10 CFR 50.54(mX2)(i) to provide the technical expertise on shift. Therefore, the wording is revised so that the STA function may be provided by either a separate individual or an individual who also fulfills another role on the shift.

3. Section 5.3.3, which specifies the required qualifications for the Shift Technical Advisor and Shift Engineer, is revised to agree with the qualification requirements contained in Section 5.2.2g.

B. Changes to 5.5.4, Radioactive Effluent Controls Program.

1. After issuance of Generic Letter 89-01, 10 CFR 20 was updated. The NRC issued a draft Generic Letter, 93-XX, on proposed changes to STS based on the new 10 CFR 20. The proposed changes maintain the same overall level of effluent control while retaining the operational flexibility that exists with current TS under the previous 10 CFR 20. This limitation (i.e., less than 10 times the concentration values...) provides reasonable assurance that the levels of radioactive materials 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 50 and (2) restrictions authorized by 10 CFR 20.1301(e). These changes are intended to eliminate possible confusion or improper implementation of the revised 10 CFR 20 requirements. The recommendations in the April 9, 1997 letter uses the term "total body" in reference to the noble gas dose rate. This limit is based on the dosimetry of ICRP 2, and the correct term is "whole body" as shown in NUREG-1301, Specification 3.11.2.1, page 45. These changes are consistent with the changes to the STS approved under TSTF 258, Rev 4.

2. The provisions of SR 3.0.2 are applied to the Radioactive Effluent Controls Program surveillance frequencies (5.5.4e) to allow for scheduling flexibility. SR 3.0.2 permits a 25% extension of the interval specified in the Frequency (31 days). Allowing a 25% extension in the frequency of performing the monthly cumulative dose and projected dose calculation for the current quarter/year will have no affect on outcome of the calculations.

These changes are consistent with the changes to the STS approved under TSTF 258, Rev 4.

C. Changes to Specification 5.7, High Radiation Area.

Specification 5.7 is replaced in its entirety by Insert F from TSTF-258, Revision 4. Specification 5.7 of the Palisades Technical Specifications contains requirements nearly identical to those proposed, but does not present the requirements in as clear or complete arrangement. The only non-editorial changes between the existing Specification 5.7 requirements and those proposed is the deletion of reliance on maximum allowable stay times (a somewhat outmoded practice) and the acceptance of more modern techniques such as the use of closed circuit television and telemetry. These changes are consistent with the changes to the STS approved under TSTF 258, Rev 4.

Attachment 3 contains a copy of existing Specification 5.7, marked to show where each requirement can be found in the proposed version. Existing Specification 5.7 is arranged with three parts. Section 5.7.1 contains requirements which apply to high radiation areas with dose rates both below and above 1 R/hr; 5.7.2 contains additional requirements which apply to areas with dose rates above 1 R/hr; and 5.7.3 contains an exception to the 5.7.2 requirement for lockable access to areas greater than 1 R/hr. The proposed Specification 5.7 is arranged in two parts. Section 5.7.1 contains requirements which apply to high radiation areas with dose rates less than 1 R/hr; and 5.7.2 contains the requirements which apply to areas with dose rates above 1 R/hr. The contents of the existing and proposed versions of Specification 5.7 are equivalent with the following exceptions:

1. The proposed 5.7.1a contains clarification that the required barricade may be opened for entry and exit which is not explicitly stated in existing 5.7.1. That allowance in the existing specification may be inferred, however, from the following requirements applied to personnel entering the area.

2. The proposed 5.7.1b and 5.7.2b generalize the requirements for information contained in an RWP. Existing requirements require that an RWP contain "the maximum stay times for individuals in these areas"; the proposed requirements require "other appropriate radiation protection equipment and measures."

3. The proposed 5.7.1d.2 and 5.7.2d.1 contain an explicit requirement for "an appropriate alarm setpoint" for alarms used on certain personal radiation dose monitoring devices, which does not appear in the existing requirements.

4. The proposed 5.7.1d.3 and 5.7.2d.2 contain an allowance for providing individual radiation dose monitoring by telemetry, which was not provided in existing 5.7.

5. The proposed 5.7.1d.4.(ii) and 5.7.2d.3.(ii) provide an option of monitoring radiation dose of personnel in high radiation areas by closed circuit television, which was not provided in existing 5.7.

6. The proposed 5.7.1e and 5.7.2e provide clarification that the required dose rate determination, knowledge, and pre-job briefing is not required to be documented prior to initial entry into the high radiation area.

III. Analysis of No Significant Hazards Consideration

Four changes are proposed which emulate changes made to Standard Technical Specifications, Combustion Engineering Plants, NUREG 1432, Rev.1 (STS) by TSTF 258, Revision 4. Specific details are removed from the controls on working hours, the requirements for engineering expertise on shift have been clarified, the Radioactive Effluents Controls Program limits on effluents have been revised to better reflect the intent of 10 CFR 20, and the High Radiation Area controls have been revised to present the required controls in a clarified form.

The following evaluation supports the finding that operation of the facility in accordance with the proposed changes would not:

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

All four proposed changes deal exclusively with Administrative Controls. The changes only affect the details of controls placed on the plant staff and their working conditions. The proposed controls are consistent with the requirements approved for STS. None of the controls involved are assumed to be associated with any initiator of, or any mitigating equipment or mitigation actions for any accident previously evaluated. Therefore, the proposed changes will not involve a significant increase in the probability or consequences of an accident previously evaluated.

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

All four proposed changes deal exclusively with Administrative Controls. The changes only affect the details of controls placed on the plant staff and their working conditions. The proposed controls are consistent with the requirements approved for STS. The proposed changes would not result in any physical alterations to the plant configuration, no new equipment is added, no equipment interfaces are modified, no changes to any equipment's function or the method of operating the equipment are being made. As the proposed changes would not change the design, configuration or operation of the plant, no new or different kinds of accident modes are created. Therefore, the proposed changes do not create the possibility of a new or different kind of accident from any previously evaluated.

C. Involve a significant reduction in a margin of safety

All four proposed changes deal exclusively with Administrative Controls. The changes only affect the details of controls placed on the plant staff and their working conditions. The proposed controls are consistent with the requirements approved for STS. None of the controls involved are assumed to be associated with any initiator of, or any mitigating equipment or mitigation actions for any accident previously evaluated. Therefore, the proposed changes do not involve a significant reduction in a margin of safety.

IV. Conclusion

The Palisades Plant Review Committee has reviewed this Technical Specifications change request and has determined that the change involves no significant hazards consideration. The Plant Review Committee has determined that a request for an amendment to the Technical Specifications does not constitute an unreviewed safety question.

ENCLOSURE 1
ATTACHMENT 1

CONSUMERS ENERGY COMPANY
PALISADES PLANT
DOCKET 50-255

TSTF-258
CHANGES TO ADMINISTRATIVE CONTROLS

PROPOSED TECHNICAL SPECIFICATIONS PAGES

5.2 Organization

5.2.2 Plant Staff (continued)

c. Shift crew composition may be less than the minimum requirement of 10 CFR 50.54(m)(2)(i), and 5.2.2.a and 5.2.2.g for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the requirements.

d. A radiation safety 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.

e. Administrative procedures shall be developed and implemented to limit the working hours of personnel who perform safety-related functions (e.g., licensed SROs, licensed ROs, radiation safety personnel, auxiliary 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.

Any deviations from the overtime guidelines shall be authorized in advance by the plant superintendent or his designee, in accordance with approved administrative procedures, and with documentation of the basis for granting the deviation. Routine deviation from the working hour guidelines shall not be authorized.

Controls shall be included in the procedures to require a periodic independent review be conducted to ensure that excessive hours have not been assigned.

f. The operations manager or an assistant operations manager shall hold an SRO license. The individual holding the SRO license shall be responsible for directing the activities of the licensed operators.

g. An individual shall provide advisory technical support to the plant operations shift crew in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the plant. This individual shall meet the qualifications specified by the Commission Policy Statement on Engineering Expertise on Shift (Published in Federal Register 50 FR 43621, October 28, 1985).

5.0 ADMINISTRATIVE CONTROLS

5.3 Plant Staff Qualifications

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

5.3.2 The radiation safety manager shall meet the qualifications of a Radiation Protection Manager as defined in Regulatory Guide 1.8, September 1975. For the purpose of this section, "Equivalent," as utilized in Regulatory Guide 1.8 for the bachelor's degree requirement, may be met with four years of any one or combination of the following: (a) Formal schooling in science or engineering, or (b) operational or technical experience and training in nuclear power.

5.3.3 The individual, required by Specification 5.2.2g, assigned to provide advisory technical support to the plant operations shift crew, shall meet the qualifications specified by the Commission Policy Statement on Engineering Expertise on Shift (Published in Federal Register 50 FR 43621, October 28, 1985).

5.3.4 The plant staff who perform reviews which ensure compliance with 10 CFR 50.59 shall meet or exceed the minimum qualifications of ANS 3.1-1987, Section 4.7.1 and 4.7.2. A Senior Reactor Operator license or certification shall be considered equivalent to a bachelors degree for the purpose of this specification.

5.0 ADMINISTRATIVE CONTROLS

5.4 Procedures

5.4.1 Written procedures shall be established, implemented, and maintained covering the activities referenced below:

a. The applicable procedures recommended in of Regulatory Guide 1.33, Revision 2, February 1978.

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;

c. Site Fire Protection Program implementation.

d. All programs specified in Specification 5.5.

5.0 ADMINISTRATIVE CONTROLS

5.5 Programs and Manuals

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

5.5.1 Offsite Dose Calculation Manual (ODCM)

a. The ODCM 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 ODCM shall also contain (1) the radioactive effluent controls and radiological environmental monitoring activities and (2) descriptions of the information that should be included in the Radiological Environmental Operating Report, and Radioactive Effluent Release Report required by Specification 5.6.2 and Specification 5.6.3.

c. Changes to ODCM:

1. Shall be documented and records of reviews performed shall be retained. This documentation shall contain:

a. Sufficient information to support the change together with the appropriate analyses or evaluations justifying the changes, and

b. A determination that the change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR 190, 10 CFR 50.36a, and 10 CFR 50, Appendix I, and not adversely impact the accuracy or reliability of effluent, dose, or setpoint calculations.

2. Shall become effective after approval by the plant superintendent.

3. Shall be submitted to the NRC in the form of a complete, legible copy of the entire ODCM as a part of or concurrent with the Radioactive Effluent Release Report for the period of the report in which any change to the ODCM 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 (e.g., month/year) the change was implemented.

5.5 Programs and Manuals

5.5.2 Primary Coolant Sources Outside Containment

This program provides controls to minimize leakage to the engineered safeguards rooms, from those portions of systems outside containment that could contain highly radioactive fluids during a serious transient or accident, to as low as practical. The systems include the Containment Spray System, the Safety Injection System, the Shutdown Cooling System, and the containment sump suction piping. This program shall include the following:

a. Provisions establishing preventive maintenance and periodic visual inspection requirements, and

b. Integrated leak test requirements for each system at a frequency not to exceed refueling cycle intervals.

c. The portion of the shutdown cooling system that is outside the containment shall be tested either by use in normal operation or hydrostatically tested at 255 psig.

d. Piping from valves CV-3029 and CV-3030 to the discharge of the safety injection pumps and containment spray pumps shall be hydrostatically tested at no less than 100 psig.

e. The maximum allowable leakage from the recirculation heat removal systems' components (which include valve stems, flanges and pump seals) shall not exceed 0.2 gallon per minute under the normal hydrostatic head from the SIRW tank (approximately 44 psig).

5.5.3 Post Accident Sampling Program

This program provides controls which will ensure the capability to accurately determine the airborne iodine concentration in vital areas and which will ensure the capability to obtain and analyze reactor coolant, radioactive gases and particulates in plant gaseous effluents, and containment atmosphere samples under accident conditions. This program shall include the following:

a. Training of personnel,

b. Procedures for sampling and analysis, and

c. Provisions for maintenance of sampling and analytic equipment.

5.5 Programs and Manuals

5.5.4 Radioactive Effluent Controls Program

A program shall be provided conforming with 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 (1) shall be contained in the Offsite Dose Calculation Manual (ODCM), (2) shall be implemented by operating procedures, and (3) 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 ODCM,

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 ODCM,

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

e. 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;

f. 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,

5.5 Programs and Manuals

5.5.4 Radioactive Effluent Controls Program (continued)

g. 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 greater than 8 days in gaseous effluents released from each plant to areas beyond the site boundary conforming to 10 CFR 50, Appendix I,

h. Limitations on the annual doses 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 SR 3.0.2 and SR 3.0.3 are applicable to the Radioactive Effluent Controls Program surveillance frequency.

5.0 ADMINISTRATIVE CONTROLS

5.7 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:

5.7.1 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

5.7 High Radiation Area

5.7.1 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 (continued)

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, and 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.

5.7 High Radiation Area

5.7.2 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 supervisor, radiation protection manager, or his or her designee.

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 or group entering such an area shall possess:

1. A radiation monitoring device that continuously integrates the radiation 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, and with the means to communicate with and control every individual in the area, or

5.7 High Radiation Area

5.7.2 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 (continued)

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; and 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.

ENCLOSURE 1
ATTACHMENT 2

CONSUMERS ENERGY COMPANY
PALISADES PLANT
DOCKET 50-255

TSTF-258
CHANGES TO ADMINISTRATIVE CONTROLS

EXISTING PAGES MARKED TO SHOW PROPOSED CHANGES

5.2 Organization

5.2.2 Plant Staff (continued)

c. Shift crew composition may be less than the minimum requirement of 10 CFR 50.54(m)(2)(i), and 5.2.2.a and 5.2.2.g for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the requirements.

d. A radiation safety 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.

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

~~In the event that overtime is used, 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.~~

The controls shall include guidelines on working hours that ensure adequate shift coverage shall be maintained without routine heavy use of overtime.

Any deviations from the overtime guidelines shall be authorized in advance by the plant superintendent 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. Routine deviation from the working hour guidelines shall not be authorized.

Controls shall be included in the procedures ~~such that individual overtime shall be reviewed monthly by the plant superintendent or his designee to~~ to require a periodic independent review be conducted to ensure that excessive hours have not been assigned. ~~Routine deviation from the above guidelines is not authorized.~~

5.2 Organization

5.2.2 Plant Staff (continued)

f. The operations manager or an assistant operations manager shall hold an SRO license. The individual holding the SRO license shall be responsible for directing the activities of the licensed operators.

g. ~~The Shift Technical Advisor (STA)~~ An individual shall provide advisory technical support to the ~~Shift Supervisor (SS)~~ plant operations shift crew in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the plant. ~~If either SRO on shift satisfies the Shift Engineer qualification requirements, then the STA does not need to be stationed.~~ This individual shall meet the qualifications specified by the Commission Policy Statement on Engineering Expertise on Shift (Published in Federal Register 50 FR 43621, October 28, 1985).

5.0 ADMINISTRATIVE CONTROLS

5.3 Plant Staff Qualifications

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

5.3.2 The radiation safety manager shall meet the qualifications of a Radiation Protection Manager as defined in Regulatory Guide 1.8, September 1975. For the purpose of this section, "Equivalent," as utilized in Regulatory Guide 1.8 for the bachelor's degree requirement, may be met with four years of any one or combination of the following: (a) Formal schooling in science or engineering, or (b) operational or technical experience and training in nuclear power.

5.3.3 ~~The Shift Technical Advisor shall have a bachelor's degree or equivalent and the Shift Engineer shall have a bachelor's degree in a scientific or engineering discipline. Specific training for both the Shift Technical Advisor and the Shift Engineer shall include plant design, operations, and response and analysis of the plant for transients and accidents. The Shift Engineer shall hold a Senior Reactor Operator license.~~ The individual, required by Specification 5.2.2g, assigned to provide advisory technical support to the plant operations shift crew, shall meet the qualifications specified by the Commission Policy Statement on Engineering Expertise on Shift (Published in Federal Register 50 FR 43621, October 28, 1985).

5.3.4 The plant staff who perform reviews which ensure compliance with 10 CFR 50.59 shall meet or exceed the minimum qualifications of ANS 3.1-1987, Section 4.7.1 and 4.7.2. A Senior Reactor Operator license or certification shall be considered equivalent to a bachelors degree for the purpose of this specification.

5.5 Programs and Manuals

5.5.4 Radioactive Effluent Controls Program

A program shall be provided conforming with 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 (1) shall be contained in the Offsite Dose Calculation Manual (ODCM), (2) shall be implemented by operating procedures, and (3) 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 ODCM,

b. Limitations on the concentrations of radioactive material released in liquid effluents to unrestricted areas conforming ~~to 10 times the value in 10 CFR 20, Appendix B, Table 2, Column 2.~~ 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 ODCM,

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

e. 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 doses associated with 10 times the value listed in 10 CFR 20, Appendix B, Table 2, Column 1.~~ 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;

f. 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,

g. 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 greater than 8 days in gaseous effluents released from each plant to areas beyond the site boundary conforming to 10 CFR 50, Appendix I,

h. Limitations on the annual doses 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 SR 3.0.2 and SR 3.0.3 are applicable to the Radioactive Effluent Controls Program surveillance frequency.

5.7 High Radiation Area

5.7.1 Pursuant to 10 CFR 20, paragraph 20.1601(c), in lieu of the requirements of 10 CFR 20.1601, each high radiation area, as defined in 10 CFR 20, in which the intensity of radiation is > 100 mrem/hr but < 1000 mrem/hr, shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring issuance of a Radiation Work Permit (RWP). Individuals qualified in radiation protection procedures (e.g., radiation safety technicians) 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 < 1000 mrem/hr, 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 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 rate levels in the area have been established and personnel are aware of them.

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 Radiation Work Request.

5.7.2 In addition to the requirements of Specification 5.7.1, except as allowed by 5.7.3, areas with radiation levels ≥ 1000 mrem/hr 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 Shift Supervisor on duty or radiation safety supervision. Doors shall remain locked except during periods of access by personnel under an approved RWP that shall specify the dose rate levels in the immediate work areas and the maximum allowable stay times for individuals in those areas. 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.

5.7 High Radiation Area

~~5.7.3 For individual high radiation areas with radiation levels of ≥ 1000 mrem/hr, accessible to personnel, that are located within large areas such as reactor containment, where no enclosure exists for purposes of locking, or that cannot be continuously guarded, and where no enclosure can be reasonably constructed around the individual area, that individual area shall be barricaded and conspicuously posted, and a flashing light shall be activated as a warning device.~~

5.7 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:

5.7.1 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

5.7 High Radiation Area

5.7.1 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 (continued)

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, and 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.

5.7 High Radiation Area

5.7.2 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 supervisor, radiation protection manager, or his or her designee.

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 or group entering such an area shall possess:

1. A radiation monitoring device that continuously integrates the radiation 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, and with the means to communicate with and control every individual in the area, or

5.7 High Radiation Area

5.7.2 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 (continued)

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; and 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.

ENCLOSURE 1
ATTACHMENT 3

CONSUMERS ENERGY COMPANY
PALISADES PLANT
DOCKET 50-255

TSTF-258
CHANGES TO ADMINISTRATIVE CONTROLS

EXISTING PAGES MARKED TO SHOW PROPOSED LOCATION OF REQUIREMENTS

5.0 ADMINISTRATIVE CONTROLS

5.7 High Radiation Area

5.7.1 Pursuant to 10 CFR 20, paragraph 20.1601(c), in lieu of the requirements of 10 CFR 20.1601, each high radiation area, as defined in 10 CFR 20, in which the intensity of radiation is > 100 mrem/hr but < 1000 mrem/hr shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring issuance of a Radiation Work Permit (RWP). Individuals qualified in radiation protection procedures (e.g., radiation safety technicians) 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 < 1000 mrem/hr, provided they are otherwise following plant radiation protection procedures for entry into such high radiation areas. (>1000)

5.7 | 5.7.1 | 5.7.1.a | 5.7.1.b; 5.7.2.b | 5.7.1.c; 5.7.2.c

Any individual or group of individuals permitted to enter such areas shall be provided with or accompanied by one or more of the following:

5.7.1.d; 5.7.2.d

a. A radiation monitoring device that continuously indicates the radiation dose rate in the area.

5.7.1.d.1; 5.7.2.d.4

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 rate levels in the area have been established and personnel are aware of them.

5.7.1.d.2; 5.7.2.d.1 | 5.7.1.e; 5.7.2.e

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 Radiation Work Request.

5.7.1.d.4(1) | 5.7.2.d.3(1)

5.7.2 In addition to the requirements of Specification 5.7.1, except as allowed by 5.7.3, areas with radiation levels ≥ 1000 mrem/hr 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 Shift Supervisor on duty or radiation safety supervision. Doors shall remain locked except during periods of access by personnel under an approved RWP that shall specify the dose rate levels in the immediate work areas and the maximum allowable stay times for individuals in those areas. 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.

5.7.2 | 5.7.2.a | 5.7.2.a.1 | 5.7.2.a.2 | 5.7.2.b | 5.7.2.d.3(11)

5.7 High Radiation Area

5.7.3 For individual high radiation areas with radiation levels of ≥ 1000 mrem/hr, accessible to personnel, that are located within large areas such as reactor containment, where no enclosure exists for purposes of locking, or that cannot be continuously guarded, and where no enclosure can be reasonably constructed around the individual area, that individual area shall be barricaded and conspicuously posted, and a flashing light shall be activated as a warning device. — 5.7.2.f

ENCLOSURE 2

CONSUMERS ENERGY COMPANY
PALISADES PLANT
DOCKET 50-255

TECHNICAL SPECIFICATION CHANGE REQUEST

TSTF-287
ALLOWANCES FOR BREACH OF THE CONTROL ROOM ENVELOPE

CONSUMERS ENERGY COMPANY
DOCKET 50-255
LICENSE DPR-20

ENCLOSURE 2
REQUEST FOR CHANGE TO THE TECHNICAL SPECIFICATIONS
TSTF-287 - ALLOWANCES FOR BREACH OF THE CONTROL ROOM ENVELOPE

It is requested that the Technical Specifications contained in the Facility Operating License DPR-20, Docket 50-255, issued to Consumers Power Company on February 21, 1991, for the Palisades Plant be changed as described below. The proposed changes incorporate selected changes to the Standard Technical Specifications, Combustion Engineering Plants, NUREG 1432, Rev.1 (STS) by Technical Specifications Task Force (TSTF) change number 287, Revision 5. In addition, a correction has been made to the Action table for LCO 3.7.10, restoring Required Action D.2 (now renumbered to E.2). That action was inadvertently omitted from the final pages submitted prior to the issuance of Amendment 189 of the Technical Specifications.

Attachment 1 to this change request contains the proposed Technical Specifications pages. Attachment 2 contains existing pages marked to show the proposed change. Deleted text is shown as strike-out; added text is shown with a shaded background.

I. Changes Proposed

A. TSTF 287 changes to LCO 3.7.10, Control Room Ventilation Filtration

1. A note has been added modifying LCO 3.7.10, allowing the control room boundary to be opened intermittently under administrative control.

2. A new Condition (Condition B) has been added to the Action table for LCO 3.7.10, which addresses an inoperable control room boundary. The subsequent Conditions and Required Actions were renumbered accordingly and supporting editorial changes were made to the descriptions for Conditions B and E (now renumbered as Conditions C and F).

3. Conforming changes have been made to the Bases for LCO 3.7.10.

B. Correction to Action table of LCO 3.7.10

1. Required Action D.2, which was apparently omitted from the final pages submitted prior to the issuance of Technical Specifications Amendment 189, Improved Technical Specifications, has been restored. This Action was renumbered as Action E.2 as part of the above change.

II. Discussion of Proposed Technical Specifications Changes

A. TSTF 287 changes to LCO 3.7.10, Control Room Ventilation Filtration

1. A note has been added modifying LCO 3.7.10, allowing the control room boundary to be opened intermittently under administrative control. Since this note modifies the LCO requirements, it allows intermittent opening of the control room boundary without entering a Condition or taking Required Actions. A description of typical control methodology is provided in the Bases. This note is similar to the Note in LCO 3.6.3, Containment Isolation Valves, which allows containment penetrations to be unisolated under administrative controls.

2. A new Condition (Condition B) has been added to the Action table for LCO 3.7.10, which addresses an inoperable control room boundary. This Condition allows 24 hours for restoration of an inoperable control room boundary, avoiding an entry into LCO 3.0.3. Preplanned measures which provide temporary compensatory protection for the personnel within the control room boundary are to be put in place upon discovery that this Condition is applicable. These measures are discussed in the Bases. Consumers Energy has committed, in the cover letter for this change request, to have procedural guidance for those preplanned measures in place prior to implementation of this change. In addition, a Required Action has been proposed (B.1) which requires these preplanned actions be initiated immediately upon discovery that the containment envelope is inoperable.

B. Correction to Action table of LCO 3.7.10

Required Action D.2, which was apparently omitted from the final pages submitted prior to the issuance of Technical Specifications Amendment 189, Improved Technical Specifications, has been restored. This Action was renumbered as Action E.2 as part of the above change. The Required Actions for LCO 3.7.10, Condition E (as renumbered) are intended to drive the plant out of the applicable conditions for the LCO. These actions are the same as the actions for several other Conditions associated with Control Room Ventilation LCOs 3.7.10 and 3.7.11. This change simply corrects a typographical error. The Bases already address the omitted step and require no change due to this addition.

III. Analysis of No Significant Hazards Consideration

Two changes are proposed which emulate changes made to Standard Technical Specifications, Combustion Engineering Plants, NUREG 1432, Rev.1 (STS) by TSTF 287, Revision 5. A note has been added modifying LCO 3.7.10, allowing the control room boundary to be opened intermittently under administrative control and a new Condition (Condition B) has been added to the Action table for LCO 3.7.10, which addresses an inoperable control room boundary. In addition, supporting editorial changes were made to the balance of the Action table for LCO 3.7.10, and conforming changes have been made to the Bases.

The following evaluation supports the finding that operation of the facility in accordance with the proposed changes would not:

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

The proposed changes deal exclusively with allowances to temporarily deviate from the LCO 3.7.10 requirement (established by SR 3.7.10.4) for the control room boundary to be sufficiently air tight to maintain 0.125 inches of water differential when the ventilation system is in the emergency mode of operation. The proposed controls are consistent with the requirements approved for STS. None of the controls involved are assumed to be associated with any assumed initiator of any accident previously evaluated.

The proposed changes do allow temporary (up to 24 hours) relaxation of controls put in place to protect the operators from accidental releases of particulate radioactive materials. The utilization of this temporary allowance is expected to be infrequent, and the controls required when this allowance is utilized maintain the intended radiological protection for the operators in the control room areas. Since the protection of the operators in the control room areas will be provided by alternate means during the exercising of these allowances, there will be no effect on their perceived abilities to mitigate the consequences of an accident.

Therefore, operation of the facility in accordance with the proposed changes will not involve a significant increase in the probability or consequences of an accident previously evaluated.

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

The proposed changes deal exclusively with an allowance to temporarily provide radiological protection within the control room boundary by alternative means. The proposed controls are consistent with the requirements approved for STS. The proposed changes would not result in any physical alterations to the operating plant systems, no new equipment is added, no equipment interfaces are modified, no changes to any equipment's function or the method of operating the power generation or accident mitigating equipment are being made. As the proposed changes would not change the design, configuration or operation of the plant, no new or different kinds of accident modes are created. Therefore, the proposed changes do not create the possibility of a new or different kind of accident from any previously evaluated.

C. Involve a significant reduction in a margin of safety
The proposed changes deal exclusively with an allowance to temporarily provide radiological protection within the control room boundary by alternative means. The proposed controls are consistent with the requirements approved for STS. None of the controls involved are assumed to be associated with any initiator of, or any mitigating equipment or mitigation actions for any accident previously evaluated. Therefore, the proposed changes do not involve a significant reduction in a margin of safety.

IV. Conclusion

The Palisades Plant Review Committee has reviewed this Technical Specifications change request and has determined that the change involves no significant hazards consideration. The Plant Review Committee has determined that a request for an amendment to the Technical Specifications does not constitute an unreviewed safety question.

ENCLOSURE 2
ATTACHMENT 1

CONSUMERS ENERGY COMPANY
PALISADES PLANT
DOCKET 50-255

TSTF-287
ALLOWANCES FOR BREACH OF THE CONTROL ROOM ENVELOPE

PROPOSED TECHNICAL SPECIFICATIONS PAGES

3.7 PLANT SYSTEMS

3.7.10 Control Room Ventilation (CRV) Filtration

LCO 3.7.10 Two CRV Filtration trains shall be OPERABLE.

----------NOTE----------
The control room boundary may be opened intermittently under administrative control.

APPLICABILITY: MODES 1, 2, 3, 4,
During CORE ALTERATIONS,
During movement of irradiated fuel assemblies,
During movement of a fuel cask in or over the Spent Fuel Pool (SFP).

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One CRV Filtration train inoperable.	A.1	Restore CRV Filtration train to OPERABLE status.	7 days
B. Two CRV Filtration trains inoperable due to inoperable control room boundary in MODE 1, 2, 3, or 4.	B.1	Initiate preplanned compensatory measures.	Immediately
	AND		
	B.2	Restore control room boundary to OPERABLE status.	24 hours
C. Required Action and associated Completion Time of Condition A or B not met in MODE 1, 2, 3, or 4.	C.1	Be in MODE 3.	6 hours
	AND		
	C.2	Be in MODE 5.	36 hours

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Required Action and associated Completion Time of Condition A not met during CORE ALTERATIONS, during movement of irradiated fuel assemblies, or during movement of a fuel cask in or over the SFP.	D.1 Place OPERABLE CRV Filtration train in emergency mode. OR D.2.1 Suspend CORE ALTERATIONS. AND D.2.2 Suspend movement of irradiated fuel assemblies. AND D.2.3 Suspend movement of a fuel cask in or over the SFP.	Immediately Immediately Immediately Immediately
E. Two CRV Filtration trains inoperable during CORE ALTERATIONS, during movement of irradiated fuel assemblies, or during movement of a fuel cask in or over the SFP.	E.1 Suspend CORE ALTERATIONS. AND E.2 Suspend movement of irradiated fuel assemblies. AND E.3 Suspend movement of a fuel cask in or over the SFP.	Immediately Immediately Immediately

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
F. Two CRV Filtration trains inoperable in MODE 1, 2, 3, or 4 for reasons other than Condition B.	F.1 Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.10.1	Operate each CRV Filtration train for ≥ 10 continuous hours with associated heater (VHX-26A or VHX-26B) operating.	31 days
SR 3.7.10.2	Perform required CRV Filtration filter testing in accordance with Ventilation Filter Testing Program.	In accordance with the Ventilation Filter Testing Program
SR 3.7.10.3	----------NOTE---------- Only required to be met in MODES 1, 2, 3, and 4, and during movement of irradiated fuel assemblies in containment. ---------- Verify each CRV Filtration train actuates on an actual or simulated actuation signal.	18 months
SR 3.7.10.4	Verify one CRV Filtration train can maintain a positive pressure of ≥ 0.125 inches water gauge, relative to the adjacent area during the emergency mode of operation, at an emergency ventilation flow rate of ≥ 3040 cfm and ≤ 3520 cfm.	18 months

BASES

LCO (continued)

The CRV Filtration is considered OPERABLE when the individual components necessary to control operator exposure are OPERABLE in both trains. A CRV Filtration train is considered OPERABLE when the associated:

a. Main recirculation fan and emergency filter fan are OPERABLE;

b. HEPA filters and charcoal adsorber are not excessively restricting flow, and are capable of performing their filtration functions; and

c. Required heater, ductwork, valves, and dampers are OPERABLE,

In addition, the control room boundary must be maintained, including the integrity of the walls, floors, ceilings, ductwork, and access doors such that 0.125 inches water gauge positive pressure can be maintained in the emergency mode.

This LCO is modified by a Note allowing the control room boundary to be opened intermittently under administrative control. Since this Note modifies the LCO, no Condition entry is required when the control room boundary is opened under its provisions. For entry and exit through doors, the administrative control of the opening is performed by the person(s) entering or exiting the area. For other openings, these controls consist of stationing a dedicated individual at the opening who is in continuous communication with the control room. This individual will have a method to rapidly close the opening when a need for control room isolation is indicated.

APPLICABILITY

In MODES 1, 2, 3, and 4, the CRV Filtration must be OPERABLE to limit operator exposure during and following a DBA.

In MODES 5 and 6, the probability and consequences of a Design Basis Accident are reduced due to the pressure and temperature limitations in these MODES. Therefore, maintaining CRV Filtration OPERABLE is not required in MODE 5 or 6, except for the following situations under which significant radioactive releases can be postulated:

a. During CORE ALTERATIONS;

b. During movement of irradiated fuel assemblies; and

c. During movement of a fuel cask in or over the SFP.

BASES

ACTIONS

A.1

With one CRV Filtration train inoperable, action must be taken to restore OPERABLE status within 7 days. In this Condition, the remaining OPERABLE CRV Filtration subsystem is adequate to perform control room radiation protection function. However, the overall reliability is reduced because a single failure in the OPERABLE CRV Filtration train could result in loss of CRV Filtration function. The 7 day Completion Time is based on the low probability of a DBA occurring during this time period, and the ability of the remaining train to provide the required capability.

B.1 and B.2

If the control room boundary is inoperable in MODE 1, 2, 3, or 4, the CRV Filtration trains cannot perform their functions. Actions must be taken to restore an OPERABLE control room boundary within 24 hours. During the period that the control room boundary is inoperable, appropriate compensatory measures (consistent with the intent of General Design Criterion 19) shall be utilized to protect control room operators from potential hazards such as radioactive contamination, toxic chemicals, or smoke, and to ensure control room physical security. Preplanned measures shall be available to address these concerns for intentional entry into the Condition. The 24 hour Completion Time is reasonable based on the low probability of an analyzed event requiring control room isolation occurring during this time period, and the use of compensatory measures. The 24 hour Completion Time is a reasonable time to diagnose and repair most problems occurring with the control room boundary.

C.1 and C.2

If the inoperable CRV Filtration train or control room boundary cannot be restored to OPERABLE status within the required Completion Time of Condition A or B in MODE 1, 2, 3, or 4, the plant must be placed in a MODE that minimizes the accident risk. To achieve this status, the plant must be placed in at least MODE 3 within 6 hours, and in MODE 5 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

BASES

ACTIONS (continued)

D.1, D.2.1, D.2.2, and D.2.3

During CORE ALTERATIONS, during movement of irradiated fuel assemblies, during movement of a fuel cask in or over the SFP, if Required Action A.1 cannot be completed within the required Completion Time, the OPERABLE CRV Filtration train must be immediately placed in the emergency mode of operation. This action ensures that the remaining train is OPERABLE, that no failures preventing automatic actuation will occur, and that any active failure will be readily detected.

An alternative to Required Action D.1 is to immediately suspend activities that could result in a release of radioactivity that might require isolation of the control room. This places the plant in a condition that minimizes the accident risk. This does not preclude the movement of fuel assemblies or a fuel cask to a safe position.

E.1, E.2, and E.3

During CORE ALTERATIONS, during movement of irradiated fuel assemblies, or during movement of a fuel cask in or over the SFP, with two CRV Filtration trains inoperable, action must be taken immediately to suspend activities that could result in a release of radioactivity that might enter the control room. This places the plant in a condition that minimizes the accident risk. This does not preclude the movement of fuel assemblies or a fuel cask to a safe position.

F.1

If both CRV Filtration trains are inoperable in MODE 1, 2, 3, or 4 for reasons other than an inoperable control room boundary (i.e., Condition B), the CRV Filtration may not be capable of performing the intended function and the plant is in a condition outside the accident analyses. Therefore, LCO 3.0.3 must be entered immediately.

BASES

SURVEILLANCE REQUIREMENTS

SR 3.7.10.1

Standby systems should be checked periodically to ensure that they function properly. Since the environment and normal operating conditions on this system are not severe, testing each train once every month provides an adequate check on this system.

Monthly heater operations dry out any moisture accumulated in the charcoal from humidity in the ambient air. Each train must be operated for $\geq$ 10 continuous hours with the associated heater, VHX-26A or VHX-26B, energized. The 31 day Frequency is based on the known reliability of the equipment, and the two train redundancy available.

SR 3.7.10.2

This SR verifies that the required CRV Filtration testing is performed in accordance with the Ventilation Filter Testing Program (VFTP). The CRV Filtration filter tests are in accordance with Regulatory Guide 1.52 (Ref. 3) as described in the VFTP. The VFTP includes testing HEPA filter performance, charcoal adsorber efficiency, minimum system flow rate, and the physical properties of the activated charcoal (general use and following specific operations). Specific test frequencies and additional information are discussed in detail in the VFTP.

SR 3.7.10.3

This SR verifies each CRV Filtration train starts and operates on an actual or simulated actuation signal. Specific signals (e.g., containment high pressure, containment high radiation) are tested under Section 3.3, "Instrumentation." This SR is modified by a Note which states this SR is only required to be met in MODES 1, 2, 3 and 4 and during movement of irradiate fuel assemblies in containment. The instrumentation providing the input signal is not required in these plant conditions, therefore, to keep consistency with Section 3.3, "Instrumentation," the SR is not required to be met. The Frequency of 18 months is consistent with that specified in Reference 3.

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.7.10.4

This SR verifies the integrity of the control room enclosure and the assumed inleakage rates of potentially contaminated air. The control room positive pressure, with respect to potentially contaminated adjacent areas, is periodically tested to verify proper function of the CRV Filtration. During the emergency mode of operation, the CRV Filtration is designed to pressurize the control room ≥ 0.125 inches water gauge positive pressure with respect to adjacent areas in order to prevent unfiltered inleakage. The CRV Filtration is designed to maintain this positive pressure with one train at an emergency ventilation flow rate of ≥ 3040 cfm and ≤ 3520 cfm. The Frequency of 18 months is consistent with the guidance provided in NUREG-0800, Section 6.4 (Ref. 4).

REFERENCES

1. FSAR, Section 9.8
2. FSAR, Chapter 14
3. Regulatory Guide 1.52 (Rev. 2)
4. NUREG-0800, Section 6.4, Rev. 2, July 1981

ENCLOSURE 2
ATTACHMENT 2

CONSUMERS ENERGY COMPANY
PALISADES PLANT
DOCKET 50-255

TSTF-287
ALLOWANCES FOR BREACH OF THE CONTROL ROOM ENVELOPE

EXISTING PAGES MARKED TO SHOW PROPOSED CHANGES

3.7 PLANT SYSTEMS

3.7.10 Control Room Ventilation (CRV) Filtration

LCO 3.7.10 Two CRV Filtration trains shall be OPERABLE.

----------NOTE----------
The control room boundary may be opened intermittently under administrative control.

APPLICABILITY: MODES 1, 2, 3, 4,
During CORE ALTERATIONS,
During movement of irradiated fuel assemblies,
During movement of a fuel cask in or over the Spent Fuel Pool (SFP).

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One CRV Filtration train inoperable.	A.1	Restore CRV Filtration train to OPERABLE status.	7 days
B. Two CRV Filtration trains inoperable due to inoperable control room boundary in MODE 1, 2, 3, or 4.	B.1 AND B.2	Initiate preplanned compensatory measures. Restore control room boundary to OPERABLE status.	Immediately 24 hours
~~B~~C. Required Action and associated Completion Time of Condition A or B not met in MODE 1, 2, 3, or 4.	~~B~~C.1 AND ~~B~~C.2	Be in MODE 3. Be in MODE 5.	6 hours 36 hours

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
~~C~~D. Required Action and associated Completion Time of Condition A not met during CORE ALTERATIONS, during movement of irradiated fuel assemblies, or during movement of a fuel cask in or over the SFP.	~~C~~D.1 Place OPERABLE CRV Filtration train in emergency mode. OR ~~C~~D.2.1 Suspend CORE ALTERATIONS. AND ~~C~~D.2.2 Suspend movement of irradiated fuel assemblies. AND ~~C~~D.2.3 Suspend movement of a fuel cask in or over the SFP.	Immediately Immediately Immediately Immediately
~~D~~E. Two CRV Filtration trains inoperable during CORE ALTERATIONS, during movement of irradiated fuel assemblies, or during movement of a fuel cask in or over the SFP.	~~D~~E.1 Suspend CORE ALTERATIONS. AND E.2 Suspend movement of irradiated fuel assemblies. AND ~~D~~E.3 Suspend movement of a fuel cask in or over the SFP.	Immediately Immediately Immediately
~~E~~F. Two CRV Filtration trains inoperable in MODE 1, 2, 3, or 4 for reasons other than Condition B.	~~E~~F.1 Enter LCO 3.0.3.	Immediately

BASES

LCO (continued)

The CRV Filtration is considered OPERABLE when the individual components necessary to control operator exposure are OPERABLE in both trains. A CRV Filtration train is considered OPERABLE when the associated:

a. Main recirculation fan and emergency filter fan are OPERABLE;

b. HEPA filters and charcoal adsorber are not excessively restricting flow, and are capable of performing their filtration functions; and

c. Required heater, ductwork, valves, and dampers are OPERABLE,

In addition, the control room boundary must be maintained, including the integrity of the walls, floors, ceilings, ductwork, and access doors such that 0.125 inches water gauge positive pressure can be maintained in the emergency mode.

This LCO is modified by a Note allowing the control room boundary to be opened intermittently under administrative control. Since this Note modifies the LCO, no Condition entry is required when the control room boundary is opened under its provisions. For entry and exit through doors, the administrative control of the opening is performed by the person(s) entering or exiting the area. For other openings, these controls consist of stationing a dedicated individual at the opening who is in continuous communication with the control room. This individual will have a method to rapidly close the opening when a need for control room isolation is indicated.

APPLICABILITY

In MODES 1, 2, 3, and 4, the CRV Filtration must be OPERABLE to limit operator exposure during and following a DBA.

In MODES 5 and 6, the probability and consequences of a Design Basis Accident are reduced due to the pressure and temperature limitations in these MODES. Therefore, maintaining CRV Filtration OPERABLE is not required in MODE 5 or 6, except for the following situations under which significant radioactive releases can be postulated:

a. During CORE ALTERATIONS;

b. During movement of irradiated fuel assemblies; and

c. During movement of a fuel cask in or over the SFP.

BASES

ACTIONS

A.1

With one CRV Filtration train inoperable, action must be taken to restore OPERABLE status within 7 days. In this Condition, the remaining OPERABLE CRV Filtration subsystem is adequate to perform control room radiation protection function. However, the overall reliability is reduced because a single failure in the OPERABLE CRV Filtration train could result in loss of CRV Filtration function. The 7 day Completion Time is based on the low probability of a DBA occurring during this time period, and the ability of the remaining train to provide the required capability.

B.1 and B.2

If the control room boundary is inoperable in MODE 1, 2, 3, or 4, the CRV Filtration trains cannot perform their functions. Actions must be taken to restore an OPERABLE control room boundary within 24 hours. During the period that the control room boundary is inoperable, appropriate compensatory measures (consistent with the intent of General Design Criterion 19) shall be utilized to protect control room operators from potential hazards such as radioactive contamination, toxic chemicals, or smoke, and to ensure control room physical security. Preplanned measures shall be available to address these concerns for intentional entry into the Condition. The 24 hour Completion Time is reasonable based on the low probability of an analyzed event requiring control room isolation occurring during this time period, and the use of compensatory measures. The 24 hour Completion Time is a reasonable time to diagnose and repair most problems occurring with the control room boundary.

~~B.1 and B.2~~C.1 and C.2

If the inoperable CRV Filtration train or control room boundary cannot be restored to OPERABLE status within the required Completion Time of Condition A or B in MODE 1, 2, 3, or 4, the plant must be placed in a MODE that minimizes the accident risk. To achieve this status, the plant must be placed in at least MODE 3 within 6 hours, and in MODE 5 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

~~C.1, C.2.1, C.2.2, and C.2.3~~ D.1, D.2.1, D.2.2, and D.2.3

During CORE ALTERATIONS, during movement of irradiated fuel assemblies, during movement of a fuel cask in or over the SFP, if Required Action A.1 cannot be completed within the required Completion Time, the OPERABLE CRV Filtration train must be immediately placed in the emergency mode of operation. This action ensures that the remaining train is OPERABLE, that no failures preventing automatic actuation will occur, and that any active failure will be readily detected.

An alternative to Required Action ~~C.1~~D.1 is to immediately suspend activities that could result in a release of radioactivity that might require isolation of the control room. This places the plant in a condition that minimizes the accident risk. This does not preclude the movement of fuel assemblies or a fuel cask to a safe position.

BASES

ACTIONS (continued)

~~D.1, D.2, and D.3~~ E.1, E.2, and E.3

During CORE ALTERATIONS, during movement of irradiated fuel assemblies, or during movement of a fuel cask in or over the SFP, with two CRV Filtration trains inoperable, action must be taken immediately to suspend activities that could result in a release of radioactivity that might enter the control room. This places the plant in a condition that minimizes the accident risk. This does not preclude the movement of fuel assemblies or a fuel cask to a safe position.

~~E.1~~F.1

If both CRV Filtration trains are inoperable in MODE 1, 2, 3, or 4 for reasons other than an inoperable control room boundary (i.e., Condition B), the CRV Filtration may not be capable of performing the intended function and the plant is in a condition outside the accident analyses. Therefore, LCO 3.0.3 must be entered immediately.

SURVEILLANCE REQUIREMENTS

SR 3.7.10.1

Standby systems should be checked periodically to ensure that they function properly. Since the environment and normal operating conditions on this system are not severe, testing each train once every month provides an adequate check on this system.

Monthly heater operations dry out any moisture accumulated in the charcoal from humidity in the ambient air. Each train must be operated for $\geq$ 10 continuous hours with the associated heater, VHX-26A or VHX-26B, energized. The 31 day Frequency is based on the known reliability of the equipment, and the two train redundancy available.

SR 3.7.10.2

This SR verifies that the required CRV Filtration testing is performed in accordance with the Ventilation Filter Testing Program (VFTP). The CRV Filtration filter tests are in accordance with Regulatory Guide 1.52 (Ref. 3) as described in the VFTP. The VFTP includes testing HEPA filter performance, charcoal adsorber efficiency, minimum system flow rate, and the physical properties of the activated charcoal (general use and following specific operations). Specific test frequencies and additional information are discussed in detail in the VFTP.

ENCLOSURE 3

CONSUMERS ENERGY COMPANY
PALISADES PLANT
DOCKET 50-255

TECHNICAL SPECIFICATION CHANGE REQUEST

TSTF-325
CHANGES TO STRUCTURE OF ECCS - OPERATING LCO

CONSUMERS ENERGY COMPANY
DOCKET 50-255
LICENSE DPR-20

ENCLOSURE 3
REQUEST FOR CHANGE TO THE TECHNICAL SPECIFICATIONS
TSTF-325 - CHANGES TO STRUCTURE OF ECCS - OPERATING LCO

It is requested that the Technical Specifications contained in the Facility Operating License DPR-20, Docket 50-255, issued to Consumers Power Company on February 21, 1991, for the Palisades Plant be changed as described below. The proposed changes incorporate selected changes to the Standard Technical Specifications, Combustion Engineering Plants, NUREG 1432, Rev.1 (STS) by Technical Specifications Task Force (TSTF) change number 325.

Attachment 1 to this change request contains the proposed Technical Specifications pages. Attachment 2 contains existing pages marked to show the proposed change. Deleted text is shown as strike-out; added text is shownwith a shaded background.

I. Changes Proposed

A. TSTF 325 changes to LCO 3.5.2, ECCS Operating

1. The second part of the Condition B description, "At least 100% of the required ECCS flow available." has been deleted.

2. The wording of Condition C has been revised to limit its application to Conditions A or B.

3. The wording removed from Condition B has been made into a new condition, Condition D, which reads "Less than 100% of the required ECCS flow available." Required Action D.1, "Enter LCO 3.0.3" and its completion time "Immediately" have been added.

4. Conforming changes have been made to the Bases.

II. Discussion of Proposed Change

A. Changes to LCO 3.5.2, ECCS Operating

The need for this change is explained in the "Justification" section of TSTF 325. That justification is:

> *The current NUREG is incorrect in how it deals with ECCS inoperabilities. Condition A of LCO 3.5.2 deals with "One or more trains of ECCS inoperable AND at least 100% of the ECCS flow equivalent to a single OPERABLE ECCS train available." This allows inoperabilities to be present in both trains, as long as 100% equivalent flow is available; for example, high pressure injection inoperable in Train A and low pressure injection inoperable in Train B. If a situation were to occur which resulted in less than 100% ECCS flow (such as both low pressure injection pumps inoperable), then LCO 3.0.3 would be entered. However, the stated conditions for Condition A would no longer be applicable, as there was less than the 100% equivalent flow. It could be interpreted from the "AND" that Condition A is exited when LCO 3.0.3 is entered. This is in conflict with Section 1.3 of the NUREG on Completion Times, specifically Example 1.3-2. The intent is that even though LCO 3.0.3 is entered, the applicable Condition of the affected LCO (in this case, Condition A of LCO 3.5.2) should not be exited. Condition A should still be applicable, and the time tracked while in LCO 3.0.3. This will allow a smooth transition should a pump be restored and LCO 3.0.3 exited. This is accomplished by breaking up Condition A into 2 separate Conditions, such that with any pump/train inoperable, Condition A will still be applicable.*

Condition B in the Palisades Technical Specifications is equivalent to Condition A in the TSTF 325 justification. The wording of existing Condition B and proposed Condition D differs editorially from the wording in STS to provide consistency with other Palisades LCO Conditions. Like the change made by TSTF 325, the wording in the new condition is the same as that deleted from the existing condition. The Bases changes incorporate the information added to STS Bases by TSTF 325, but are more extensive. The additional bases changes were made to provide consistency among the bases for the five similarly structured Palisades LCOs. Changes to the other four Palisades LCOs structured like LCO 3.5.2 are addressed in Enclosures 4 and 5 to this letter.

This change is consistent with the change to the STS approved under TSTF 325.

III. Analysis of No Significant Hazards Consideration

A change is proposed which emulates changes made to Standard Technical Specifications, Combustion Engineering Plants, NUREG 1432, Rev.1 (STS) by TSTF 325. The structure of LCO 3.5.2, ECCS - Operating, has been rearranged to maintain Condition B in effect if failures should occur which reduce available flow to less than 100% of the required flow (that flow assumed in the accident analyses). The resulting requirements are those intended when the LCO was initially constructed and represent the way the LCO Conditions are being applied. Therefore there is no change in intent or application of the LCO. In the case where inoperable ECCS train components reduce available flow below that required, and a subsequent partial restoration is made to provide 100% of the required flow, the proposed change makes the literal requirements more conservative because (with the proposed arrangement) the Completion Time for Condition B would start when the initial inoperability occurred rather than (with literal interpretation of the existing arrangement) when Condition B was entered after the partial restoration.

The following evaluation supports the finding that operation of the facility in accordance with the proposed changes would not:

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

As described above, the proposed change corrects the structure of the LCO to assure its correct application. There is no change in intent or in the way the LCO is actually applied. The literal (and unintended) interpretation of the existing LCO structure could, under some circumstances, provide longer than intended Completion Times for restoration of operability. The proposed change only clarifies the requirements of the LCO Required Actions. Since the proposed change affects neither the LCO intent nor its application, the proposed change will not involve a significant increase in the probability or consequences of an accident previously evaluated.

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

As described above, the proposed change corrects the structure of the LCO to assure its correct application. There is no change in intent or in the way the LCO is actually applied. The proposed changes would not result in any physical alterations to the plant configuration, no new equipment is added, no equipment interfaces are modified, and no changes to any equipment's function or the method of operating the equipment are being made. As the proposed changes would not change the design, configuration or operation of the plant, no new or different kinds of accident modes are created. Therefore, the proposed changes do not create the possibility of a new or different kind of accident from any previously evaluated.

C. Involve a significant reduction in a margin of safety

As described above, the proposed change corrects the structure of the LCO to assure its correct application. The proposed change is consistent with the requirements of the STS. There is no change in intent or in the way the LCO is actually applied. Therefore, the proposed changes do not involve a significant reduction in a margin of safety.

IV. Conclusion

The Palisades Plant Review Committee has reviewed this Technical Specifications change request and has determined that the change involves no significant hazards consideration. The Plant Review Committee has determined that a request for an amendment to the Technical Specifications does not constitute an unreviewed safety question.

ENCLOSURE 3
ATTACHMENT 1

CONSUMERS ENERGY COMPANY
PALISADES PLANT
DOCKET 50-255

TSTF-325
CHANGES TO STRUCTURE OF ECCS - OPERATING LCO

PROPOSED TECHNICAL SPECIFICATIONS PAGES

3.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

3.5.2 ECCS - Operating

LCO 3.5.2 Two ECCS trains shall be OPERABLE.

APPLICABILITY: MODES 1 and 2,
MODE 3 with Primary Coolant System (PCS) temperature ≥ 325°F.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One LPSI subsystem inoperable.	A.1	Restore LPSI subsystem to OPERABLE status.	7 days
B. One or more ECCS trains inoperable for reasons other than Condition A.	B.1	Restore train(s) to OPERABLE status.	72 hours
C. Required Action and associated Completion Time of Condition A or B not met.	C.1 AND	Be in MODE 3.	6 hours
	C.2	Reduce PCS temperature to < 325°F.	24 hours
D. Less than 100% of the required ECCS flow available.	D.1	Enter LCO 3.0.3.	Immediately

BASES

APPLICABILITY

In MODES 1 and 2, and in MODE 3 with PCS temperature ≥ 325°F, the ECCS OPERABILITY requirements for the limiting Design Basis Accident (DBA) large break LOCA are based on full power operation. Although reduced power would not require the same level of performance, the accident analysis does not provide for reduced cooling requirements in the lower MODES. The HPSI pump performance is based on the small break LOCA, which establishes the pump performance curve and has less dependence on power. The requirements of MODE 2 and MODE 3 with PCS temperature ≥ 325°F, are bounded by the MODE 1 analysis.

The ECCS functional requirements of MODE 3, with PCS temperature < 325°F, and MODE 4 are described in LCO 3.5.3, "ECCS - Shutdown."

In MODES 5 and 6, plant conditions are such that the probability of an event requiring ECCS injection is extremely low. Core cooling requirements in MODE 5 are addressed by LCO 3.4.7, "PCS Loops - MODE 5, Loops Filled," and LCO 3.4.8, "PCS Loops - MODE 5, Loops Not Filled." MODE 6 core cooling requirements are addressed by LCO 3.9.4, "Shutdown Cooling (SDC) and Coolant Circulation - High Water Level," and LCO 3.9.5, "Shutdown Cooling (SDC) and Coolant Circulation - Low Water Level."

ACTIONS

A.1

Condition A is applicable whenever one LPSI subsystem is inoperable. With one LPSI subsystem inoperable, action must be taken to restore OPERABLE status within 7 days. In this condition, the remaining OPERABLE ECCS train is adequate to perform the heat removal function. However, the overall reliability is reduced because a single failure to the remaining LPSI subsystem could result in loss of ECCS function. The 7 day Completion Time is reasonable to perform corrective maintenance on the inoperable LPSI subsystem. While mechanical system LCOs typically provide a 72 hour Completion Time, this 7 day Completion Time is based on the findings of the deterministic and probabilistic analysis in Reference 5. Reference 5 concluded that extending the Completion Time to 7 days for an inoperable LPSI subsystem provides plant operational flexibility while simultaneously reducing overall plant risk. This is because the risks incurred by having the LPSI subsystem unavailable for a longer time at power will be substantially offset by the benefits associated with avoiding unnecessary plant transitions and by reducing risk during plant shutdown operations.

BASES

ACTIONS
(continued)

B.1

Condition B is applicable whenever one or more ECCS trains is inoperable for reasons other than one inoperable LPSI subsystem. Action B.1 requires restoration of both ECCS trains, (HPSI and LPSI) to OPERABLE status within 72 hours. The 72 hour Completion Time is based on an NRC study (Ref. 3), assuming that at least 100% of the required ECCS flow (that assumed in the safety analyses) is available. If less than 100% of the required ECCS flow is available, Condition D must also be entered.

Mechanical system LCOs typically provide a 72 hour Completion Time under conditions when a required system can perform its required safety function, but may not be able to do so assuming an additional failure. When operating in accordance with the Required Actions of an LCO Condition, it is not necessary to be able to cope with an additional single failure.

The ECCS can provide one hundred percent of the required ECCS flow following the occurance of any single active failure. Therefore, the ECCS function can be met during conditions when those components which could be deactivated by a single active failure are known to be inoperable. Under that condition, however, the ability to provide the function after the occurance of an additional failure cannot be guaranteed. Therefore, continued operation with one or more trains inoperable is allowed only for a limited time.

C.1 and C.2

Condition C is applicable when the Required Actions of Condition A or B cannot be completed within the required Completion Time. Either Condition A or B is applicable whenever one or more ECCS trains is inoperable. Therefore, when Condition C is applicable, either Condition A or B is also applicable. Being in Conditions A or B, and Condition C concurrently maintains both Completion Time clocks for instances where equipment repair allows exit from Condition C while the plant is still within the applicable conditions of the LCO.

If the inoperable ECCS trains cannot be restored to OPERABLE status within the required Completion Times of Condition A and B, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 6 hours and PCS temperature reduce to < 325°F within 24 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power in an orderly manner and without challenging plant systems.

BASES

ACTIONS (continued)

D.1

Condition D is applicable with one or more trains inoperable when there is less than 100% of the required ECCS flow available. Either Condition A or B is applicable whenever one or more ECCS trains is inoperable. Therefore, when this Condition is applicable, either Condition A or B is also applicable. Being in Conditions A or B, and Condition D concurrently maintains both Completion Time clocks for instances where equipment repair allows exit from Condition D (and LCO 3.0.3) while the plant is still within the applicable conditions of the LCO.

One hundred percent of the required ECCS flow can be provided by one OPERABLE HPSI subsystem and one OPERABLE LPSI subsystem. The required LPSI flow (that assumed in the safety analyses) is available if there is an OPERABLE LPSI flow path from the SIRWT to any two PCS loops. Shutdown cooling flow control valve, CV-3006 must be full open. The required HPSI flow (that assumed in the safety analyses) is available if there is an OPERABLE HPSI flow path from the SIRWT to each PCS loop (having less than all four PCS loop flowpaths may be acceptable if verified against current safety analyses). A Containment Spray Pump and a sub-cooled suction valve must be available to support each OPERABLE HPSI pump. In each case, an OPERABLE flow path must include an OPERABLE pump and OPERABLE loop injection valves.

Reference 4 describes situations in which one component, such as the shutdown cooling flow control valve, CV-3006, can disable both ECCS trains. With one or more components inoperable, such that 100% of the required ECCS flow (that assumed in the safety analyses) is not available, the facility is in a condition outside the accident safety analyses.

With less than 100% of the required ECCS flow available, the plant is in a condition outside the assumptions of the safety analyses. Therefore, LCO 3.0.3 must be entered immediately.

BASES

SURVEILLANCE REQUIREMENTS

SR 3.5.2.1

Verification of proper valve position ensures that the flow path from the ECCS pumps to the PCS is maintained. CV-3027 and CV-3056 are stop valves in the minimum recirculation flow path for the ECCS pumps. If either of these valves were closed when the PCS pressure was above the shutoff head of the ECCS pumps, the pumps could be damaged by running with insufficient flow and thus render both ECCS trains inoperable.

Placing HS-3027A and HS-3027B for CV-3027, and HS-3056A and HS-3056B for CV-3056, in the open position ensures that the valves cannot be inadvertently misaligned or change position as the result of an active failure. These valves are of the type described in Reference 4, which can disable the function of both ECCS trains and invalidate the accident analysis. CV-3027 and CV-3056 are capable of being closed from the control room since the SIRWT must be isolated from the containment during the recirculation phase of a LOCA. A 12 hour Frequency is considered reasonable in view of other administrative controls ensuring that a mispositioned valve is an unlikely possibility.

SR 3.5.2.2

Verifying the correct alignment for manual, power operated, and automatic valves in the ECCS flow paths provides assurance that the proper flow paths will exist for ECCS operation. This SR does not apply to valves that are locked, sealed, or otherwise secured in position, since these valves were verified to be in the correct position prior to locking, sealing, or securing. A valve that receives an actuation signal is allowed to be in a nonaccident position provided the valve automatically repositions within the proper stroke time. This Surveillance does not require any testing or valve manipulation. Rather, it involves verification that those valves capable of being mispositioned are in the correct position.

The 31 day Frequency is appropriate because the valves are operated under procedural control and an improper valve position would only affect a single train. This Frequency has been shown to be acceptable through operating experience.

BASES

SURVEILLANCE REQUIREMENTS (Continued)

SR 3.5.2.3

SR 3.5.2.3 verifies CV-3006 is in the open position and that its air supply is isolated. CV-3006 is the shutdown cooling flow control valve located in the common LPSI flow path. The valve must be verified in the full open position to support the low pressure injection flow assumptions used in the accident analyses. The inadvertent misposition of this valve could result in a loss of low pressure injection flow and thus invalidate these flow assumptions. CV-3006 is designed to be held open by spring force and closed by air pressure. To ensure the valve cannot be inadvertently misaligned or change position as the result of a hot short in the control circuit, the air supply to CV-3006 is isolated. Isolation of the air supply to CV-3006 is acceptable since the valve does not require automatic repositioning during an accident.

The 31 day Frequency has been shown to be acceptable through operating practice and the unlikely occurrence of the air supply to CV-3006 being unisolated coincident with a inadvertent valve misalignment event or a hot short in the control circuit.

SR 3.5.2.4

Periodic surveillance testing of ECCS pumps to detect gross degradation caused by impeller damage or other hydraulic component problems is required by Section XI of the ASME Code. This type of testing may be accomplished by measuring the pump developed head at only one point of the pump characteristic curve. This verifies both that the measured performance is within an acceptable tolerance of the original pump baseline performance and that the performance at the test flow is greater than or equal to the performance assumed in the plant safety analysis. SRs are specified in the Inservice Testing Program, which encompasses Section XI of the ASME Code. Section XI of the ASME Code provides the activities and Frequencies necessary to satisfy the requirements.

SR 3.5.2.5, SR 3.5.2.6, and SR 3.5.2.7

These SRs demonstrate that each automatic ECCS valve actuates to the required position on an actual or simulated actuation signal, i.e., on an SIS or RAS, that each ECCS pump starts on receipt of an actual or simulated actuation signal, i.e., on an SIS, and that the LPSI pumps stop on receipt of an actual or simulated actuation signal, i.e., on an RAS. This Surveillance is not required for valves that are locked, sealed, or otherwise secured in the required position under administrative controls.

BASES

SURVEILLANCE REQUIREMENTS

SR 3.5.2.5, SR 3.5.2.6, and SR 3.5.2.7 (continued)

The 18 month Frequency is based on the need to perform these Surveillances under the conditions that apply during a plant outage and the potential for unplanned transients if the Surveillances were performed with the reactor at power. The 18 month Frequency is also acceptable based on consideration of the design reliability of the equipment and operating experience. The actuation logic is tested as part of the Engineered Safety Feature (ESF) testing, and equipment performance is monitored as part of the Inservice Testing Program.

SR 3.5.2.8

The HPSI Hot Leg Injection motor operated valves and the LPSI loop injection valves have position switches which are set at other than the full open position. This surveillance verifies that these position switches are set properly.

The HPSI Hot leg injection valves are manually opened during the post-LOCA long term cooling phase to admit HPSI injection flow to the PCS hot leg. The open position limit switch on each HPSI hot leg isolation valves is set to establish a predetermined flow split between the HPSI injection entering the PCS hot leg and cold legs.

The LPSI loop injection MOVs open automatically on a SIS signal. The open position limit switch on each LPSI loop injection valve is set to establish the maximum possible flow through that valve. The design of these valves is such that excessive turbulence is developed in the valve body when the valve disk is at the full open position. Stopping the valve travel at slightly less than full open reduces the turbulence and results in increased flow. Verifying that the position stops are properly set ensures that a single low pressure safety injection subsystem is capable of delivering the flow rate required in the safety analysis.

The 18 month Frequency is based on the same factors as those stated above for SR 3.5.2.5, SR 3.5.2.6, and SR 3.5.2.7.

SR 3.5.2.9

Periodic inspection of the containment sump ensures that it is unrestricted and stays in proper operating condition. The 18 month Frequency is based on the need to perform this Surveillance under outage conditions. This Frequency is sufficient to detect abnormal degradation and is confirmed by operating experience.

BASES

REFERENCES

1. FSAR, Section 5.1

2. FSAR, Section 14.17

3. NRC Memorandum to V. Stello, Jr., from R. L. Baer, "Recommended Interim Revisions to LCOs for ECCS Components," December 1, 1975

4. IE Information Notice No. 87-01, January 6, 1987

5. CE-NPSD-994, "CEOG Joint Applications Report for Safety Injection Tank AOT/STI Extension," May 1995

ENCLOSURE 3
ATTACHMENT 2

CONSUMERS ENERGY COMPANY
PALISADES PLANT
DOCKET 50-255

TSTF-325
CHANGES TO STRUCTURE OF ECCS - OPERATING LCO

EXISTING PAGES MARKED TO SHOW PROPOSED CHANGES

3.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

3.5.2 ECCS - Operating

LCO 3.5.2 Two ECCS trains shall be OPERABLE.

APPLICABILITY: MODES 1 and 2,
MODE 3 with Primary Coolant System (PCS) temperature ≥ 325°F.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One LPSI subsystem inoperable.	A.1	Restore LPSI subsystem to OPERABLE status.	7 days
B. One or more ECCS trains inoperable for reasons other than Condition A. ~~AND~~ ~~At least 100% of the required ECCS flow available.~~	B.1	Restore train(s) to OPERABLE status.	72 hours
C. Required Action and associated Completion Time of Condition A or B not met.	C.1 AND C.2	Be in MODE 3. Reduce PCS temperature to < 325°F.	6 hours 24 hours
D. Less than 100% of the required ECCS flow available.	D.1	Enter LCO 3.0.3	Immediately

BASES

APPLICABILITY

In MODES 1 and 2, and in MODE 3 with PCS temperature ≥ 325°F, the ECCS OPERABILITY requirements for the limiting Design Basis Accident (DBA) large break LOCA are based on full power operation. Although reduced power would not require the same level of performance, the accident analysis does not provide for reduced cooling requirements in the lower MODES. The HPSI pump performance is based on the small break LOCA, which establishes the pump performance curve and has less dependence on power. The requirements of MODE 2 and MODE 3 with PCS temperature ≥ 325°F, are bounded by the MODE 1 analysis.

The ECCS functional requirements of MODE 3, with PCS temperature < 325°F, and MODE 4 are described in LCO 3.5.3, "ECCS - Shutdown."

In MODES 5 and 6, plant conditions are such that the probability of an event requiring ECCS injection is extremely low. Core cooling requirements in MODE 5 are addressed by LCO 3.4.7, "PCS Loops - MODE 5, Loops Filled," and LCO 3.4.8, "PCS Loops - MODE 5, Loops Not Filled." MODE 6 core cooling requirements are addressed by LCO 3.9.4, "Shutdown Cooling (SDC) and Coolant Circulation - High Water Level," and LCO 3.9.5, "Shutdown Cooling (SDC) and Coolant Circulation - Low Water Level."

ACTIONS

A.1

Condition A is applicable whenever one LPSI subsystem is inoperable. With one LPSI subsystem inoperable, action must be taken to restore OPERABLE status within 7 days. In this condition, the remaining OPERABLE ECCS train is adequate to perform the heat removal function. However, the overall reliability is reduced because a single failure to the remaining LPSI subsystem could result in loss of ECCS function. The 7 day Completion Time is reasonable to perform corrective maintenance on the inoperable LPSI subsystem. While mechanical system LCOs typically provide a 72 hour Completion Time, this ~~The~~ 7 day Completion Time is based on the findings of the deterministic and probabilistic analysis in Reference 5. Reference 5 concluded that extending the Completion Time to 7 days for an inoperable LPSI subsystem provides plant operational flexibility while simultaneously reducing overall plant risk. This is because the risks incurred by having the LPSI subsystem unavailable for a longer time at power will be substantially offset by the benefits associated with avoiding unnecessary plant transitions and by reducing risk during plant shutdown operations.

BASES

ACTIONS
(continued)

B.1

~~With one or more trains inoperable, for reasons other than Condition A but at least 100% of the required ECCS flow available, the inoperable components must be returned to OPERABLE status within 72 hours.~~ Condition B is applicable whenever one or more ECCS trains is inoperable for reasons other than one inoperable LPSI subsystem. Action B.1 requires restoration of both ECCS trains, (HPSI and LPSI) to OPERABLE status within 72 hours. The 72 hour Completion Time is based on an NRC study (Ref. 3), assuming that at least 100% of the required ECCS flow (that assumed in the safety analyses) is available ~~using a reliability evaluation and is a reasonable amount of time to effect many repairs~~. If less than 100% of the required ECCS flow is available, Condition D must also be entered.

~~An ECCS train is inoperable if it is not capable of delivering the assumed flow to the PCS. The individual components are inoperable if they are not capable of performing their required function, or if supporting systems are not available.~~

~~The safety analyses assume that only one train of safety injection is available to mitigate an accident. While operating under the provisions of an ACTION, an additional single failure need not be assumed in assuring that a loss of function has not occurred. Therefore, the required LPSI flow (that assumed in the safety analyses) is available if there is an OPERABLE LPSI flow path from the SIRWT to any two PCS loops. The required HPSI flow (that assumed in the safety analyses) is available if there is an OPERABLE HPSI flow path from the SIRWT to each PCS loop. In each case, an OPERABLE flow path must include an OPERABLE pump and an OPERABLE loop injection valve.~~

~~The LCO requires the OPERABILITY of two independent subsystems. Due to the redundancy of trains and the diversity of subsystems, the inoperability of one component in a train does not necessarily render the ECCS incapable of performing its function. Neither does the inoperability of two different components, each in a different train, necessarily result in a loss of function for the ECCS. The intent of this Condition is to maintain a combination of OPERABLE equipment such that 100% of the ECCS flow assumed to be delivered by a single OPERABLE train remains available. This allows increased flexibility in plant operations when components in opposite trains are inoperable.~~

BASES

ACTIONS

B.1 (continued)

~~An event accompanied by a loss of offsite power and the failure of an emergency DG can disable one ECCS train until power is restored. A reliability analysis (Ref. 4) has shown that the impact with one full ECCS train inoperable is sufficiently small to justify continued operation for 72 hours.~~

Mechanical system LCOs typically provide a 72 hour Completion Time under conditions when a required system can perform its required safety function, but may not be able to do so assuming an additional failure. When operating in accordance with the Required Actions of an LCO Condition, it is not necessary to be able to cope with an additional single failure.

~~Reference 4 describes situations in which one component, such as the shutdown cooling flow control valve, CV-3006, can disable both ECCS trains. With one or more components inoperable, such that 100% of the required ECCS flow (that assumed in the safety analyses) is not available, the facility is in a condition outside the accident analyses. Therefore, LCO 3.0.3 must be immediately entered.~~

The ECCS can provide one hundred percent of the required ECCS flow following the occurance of any single active failure. Therefore, the ECCS function can be met during conditions when those components which could be deactivated by a single active failure are known to be inoperable. Under that condition, however, the ability to provide the function after the occurance of an additional failure cannot be guaranteed. Therefore, continued operation with one or more trains inoperable is allowed only for a limited time.

C.1 and C.2

Condition C is applicable when the Required Actions of Condition A or B cannot be completed within the required Completion Time. Either Condition A or B is applicable whenever one or more ECCS trains is inoperable. Therefore, when Condition C is applicable, either Condition A or B is also applicable. Being in Conditions A or B, and Condition C concurrently maintains both Completion Time clocks for instances where equipment repair allows exit from Condition C while the plant is still within the applicable conditions of the LCO.

BASES

ACTIONS

C.1 and C.2 (continued)

If the inoperable ECCS trains cannot be restored to OPERABLE status within the ~~associated~~ required Completion Times of Condition A and B, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 6 hours and PCS temperature reduce to < 325°F within 24 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power in an orderly manner and without challenging plant systems.

D.1

Condition D is applicable with one or more trains inoperable when there is less than 100% of the required ECCS flow available. Either Condition A or B is applicable whenever one or more ECCS trains is inoperable. Therefore, when this Condition is applicable, either Condition A or B is also applicable. Being in Conditions A or B, and Condition D concurrently maintains both Completion Time clocks for instances where equipment repair allows exit from Condition D (and LCO 3.0.3) while the plant is still within the applicable conditions of the LCO.

One hundred percent of the required ECCS flow can be provided by one OPERABLE HPSI subsystem and one OPERABLE LPSI subsystem. The required LPSI flow (that assumed in the safety analyses) is available if there is an OPERABLE LPSI flow path from the SIRWT to any two PCS loops. Shutdown cooling flow control valve, CV-3006 must be full open. The required HPSI flow (that assumed in the safety analyses) is available if there is an OPERABLE HPSI flow path from the SIRWT to each PCS loop (having less than all four PCS loop flowpaths may be acceptable if verified against current safety analyses). A Containment Spray Pump and a sub-cooled suction valve must be available to support each OPERABLE HPSI pump. In each case, an OPERABLE flow path must include an OPERABLE pump and OPERABLE loop injection valves.

Reference 4 describes situations in which one component, such as the shutdown cooling flow control valve, CV-3006, can disable both ECCS trains. With one or more components inoperable, such that 100% of the required ECCS flow (that assumed in the safety analyses) is not available, the facility is in a condition outside the accident safety analyses.

With less than 100% of the required ECCS flow available, the plant is in a condition outside the assumptions of the safety analyses. Therefore, LCO 3.0.3 must be entered immediately.

ENCLOSURE 4

CONSUMERS ENERGY COMPANY
PALISADES PLANT
DOCKET 50-255

TECHNICAL SPECIFICATION CHANGE REQUEST

CHANGES TO STRUCTURE OF
CONTAINMENT COOLING, COMPONENT COOLING, AND SERVICE WATER LCOs

CONSUMERS ENERGY COMPANY
DOCKET 50-255
LICENSE DPR-20

ENCLOSURE 4
REQUEST FOR CHANGE TO THE TECHNICAL SPECIFICATIONS

CHANGES TO STRUCTURE OF CONTAINMENT COOLING, COMPONENT COOLING, AND SERVICE WATER LCOs

It is requested that the Technical Specifications contained in the Facility Operating License DPR-20, Docket 50-255, issued to Consumers Power Company on February 21, 1991, for the Palisades Plant be changed as described below. The proposed changes are similar to, and identical in purpose to, changes made to the Standard Technical Specifications, Combustion Engineering Plants, NUREG 1432, Rev.1 (STS) by Technical Specifications Task Force (TSTF) change number 325. TSTF 325 applies only to LCO 3.5.2. Unlike STS, Palisades Technical Specifications contain three additional LCOs structured like STS LCO 3.5.2. Those are LCO 3.6.6, Containment Cooling; LCO 3.7.7, Component Cooling Water; and LCO 3.7.8, Service Water.

The change made by TSTF 325 corrects the structure of the Conditions and Required Actions of LCO 3.5.2 to assure the intended actions are taken within the intended Completion Time. The same LCO structure was used for all of the three additional subject Palisades LCOs and, consequently, the same changes are proposed to each of those LCOs for the reasons given in TSTF 325. This enclosure requests changes, similar to those addressed by TSTF 325, for the above listed LCOs.

Attachment 1 to this change request contains the proposed Technical Specifications pages. Attachment 2 contains existing pages marked to show the proposed change. Deleted text is shown as strike-out; added text is shownwith a shaded background.

I. Changes Proposed

A. Changes to LCO 3.6.6, Containment Cooling Systems

1. The second part of the Condition A description, "AND - At least 100% of the required post accident containment cooling capability available." has been deleted.

2. The wording of Condition B has been revised to limit its application to Condition A.

3. The wording removed from Condition B has been and made into a new condition, Condition C, which reads "Less than 100% of the required post-accident containment cooling capability available." Required Action C.1, "Enter LCO 3.0.3" and its completion time "Immediately" have been added.

4. Conforming changes have been made to the Bases.

B. Changes to LCO 3.7.7, Component Cooling Water System

1. The second part of the Condition A description, "AND - At least 100% of the required CCW post accident capability available." has been deleted.

2. The wording of Condition B has been revised to limit its application to Condition A.

3. The wording removed from Condition A has been made into a new condition, Condition C, which reads "Less than 100% of the required post accident CCW capability available." Required Action C.1, "Enter LCO 3.0.3" and its completion time "Immediately" have been added.

4. Conforming changes have been made to the Bases.

C. Changes to LCO 3.7.8, Service Water System

1. The second part of the Condition A description, "AND - At least 100% of the required SWS post accident capability available." has been deleted.

2. The wording of Condition B has been revised to limit its application to Condition A.

3. The wording removed from Condition A has been made into a new condition, Condition C, which reads "Less than 100% of the required post accident SWS capability available." Required Action C.1, "Enter LCO 3.0.3" and its completion time "Immediately" have been added.

4. Conforming changes have been made to the Bases.

II. Discussion of Proposed Change

A. Changes to LCO 3.6.6 Containment Cooling Systems

The need for this change is similar to that explained in the "Justification" section of TSTF 325. That justification is:

> *The current NUREG is incorrect in how it deals with ECCS inoperabilities. Condition A of LCO 3.5.2 deals with "One or more trains of ECCS inoperable AND at least 100% of the ECCS flow equivalent to a single OPERABLE ECCS train available." This allows inoperabilities to be present in both trains, as long as 100% equivalent flow is available; for example, high pressure injection inoperable in Train A and low pressure injection inoperable in Train B. If a situation were to occur which resulted in less than 100% ECCS flow (such as both low pressure injection pumps inoperable), then LCO 3.0.3 would be entered. However, the stated conditions for Condition A would no longer be applicable, as there was less than the 100% equivalent flow. It could be interpreted from the "AND" that Condition A is exited when LCO 3.0.3 is entered. This is in conflict with Section 1.3 of the NUREG on Completion Times, specifically Example 1.3-2. The intent is that even though LCO 3.0.3 is entered, the applicable Condition of the affected LCO (in this case, Condition A of LCO 3.5.2) should not be exited. Condition A should still be applicable, and the time tracked while in LCO 3.0.3. This will allow a smooth transition should a pump be restored and LCO 3.0.3 exited. This is accomplished by breaking up Condition A into 2 separate Conditions, such that with any pump/train inoperable, Condition A will still be applicable.*

The structural difficulties that exist in STS LCO addressed by TSTF 325, exist in five Palisades LCOs. Enclosure 3 to this letter requests the TSTF 325 changes for LCO 3.5.2; this Enclosure requests similar changes for LCOs 3.6.6, 3.7.7, and 3.7.8; and Enclosure 5 to this letter requests similar changes for LCO 3.7.5.

The wording of existing Conditions A, and proposed Conditions C, differs editorially from the wording in STS. Like the change proposed in Enclosure 3, the wording in the new Condition C is based on that deleted from the existing Condition A. The Bases changes incorporate similar information to that added to STS Bases by TSTF 325, but are more extensive. The additional bases changes were made to provide consistency among the bases for the five similarly structured Palisades LCOs.

These changes are consistent with the intent of the change to the STS approved under TSTF 325.

III. Analysis of No Significant Hazards Consideration

Changes are proposed for three Palisades LCOs structured like LCO 3.5.2 which emulate changes made to Standard Technical Specifications, Combustion Engineering Plants, NUREG 1432, Rev.1 (STS) by TSTF 325. The structure of LCOs 3.6.6, 3.7.7, and 3.7.8 has been rearranged to maintain Condition A in effect if failures should occur which reduce available flow to less than 100% of the required cooling capability (that assumed in the accident analyses). The resulting requirements are those intended when the LCOs were initially constructed and represent the way the LCO Conditions are being applied. Therefore there is no change in intent or application of the LCOs. In the case where inoperable required components reduce available cooling below that required, and a subsequent partial restoration is made to provide 100% of the required cooling, the proposed change makes the literal requirements more conservative because (with the proposed arrangement) the Completion Time for Condition A would start when the initial inoperability occurred rather than (with literal interpretation of the existing arrangement) when Condition A was entered after the partial restoration.

The following evaluation supports the finding that operation of the facility in accordance with the proposed changes would not:

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

As described above, the proposed changes correct the structure of the subject LCOs to assure their correct application. There is no change in intent or in the way the LCOs are actually applied. The literal (and unintended) interpretation of the existing LCO structure would could, under some circumstances, provide longer than intended Completion Times for restoration of operability. The proposed changes only clarify the requirements of the LCO Required Actions. Since the proposed changes affect neither the LCO intent nor their application, the proposed changes will not involve a significant increase in the probability or consequences of an accident previously evaluated.

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

As described above, the proposed changes correct the structure of LCOs 3.6.6, 3.7.7, and 3.7.8 to assure their correct application. There is no change in intent or in the way the LCOs are actually applied. The proposed changes would not result in any physical alterations to the plant configuration, no new equipment is added, no equipment interfaces are modified, and no changes to any equipment's function or the method of operating the equipment are being made. As the proposed changes would not change the design, configuration or operation of the plant, no new or different kinds of accident modes are created. Therefore, the proposed changes do not create the possibility of a new or different kind of accident from any previously evaluated.

C. Involve a significant reduction in a margin of safety

As described above, the proposed changes correct the structure of the subject LCOs to assure their correct application. The proposed changes are consistent with the changes made to the STS by TSTF 325. There is no change in intent or in the way the LCOs are actually applied. Therefore, the proposed changes do not involve a significant reduction in a margin of safety.

IV. Conclusion

The Palisades Plant Review Committee has reviewed this Technical Specifications change request and has determined that the change involves no significant hazards consideration. The Plant Review Committee has determined that a request for an amendment to the Technical Specifications does not constitute an unreviewed safety question.

ENCLOSURE 4
ATTACHMENT 1

CONSUMERS ENERGY COMPANY
PALISADES PLANT
DOCKET 50-255

CHANGES TO STRUCTURE OF
CONTAINMENT COOLING, COMPONENT COOLING, AND SERVICE WATER LCOs

PROPOSED TECHNICAL SPECIFICATIONS PAGES

3.6 CONTAINMENT SYSTEMS

3.6.6 Containment Cooling Systems

LCO 3.6.6 Two containment cooling trains shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One or more containment cooling trains inoperable.	A.1	Restore train(s) to OPERABLE status.	72 hours
B. Required Action and associated Completion Time of Condition A not met.	B.1	Be in MODE 3.	6 hours
	AND		
	B.2	Be in MODE 4.	30 hours
C. Less than 100% of the required post accident containment cooling capability available.	C.1	Enter LCO 3.0.3.	Immediately

BASES

LCO (continued)

The Containment Spray System portion of the containment cooling trains includes three spray pumps, two spray headers, nozzles, valves, piping, instruments, and controls to ensure an OPERABLE flow path capable of taking suction from the SIRWT upon an ESF actuation signal and automatically transferring suction to the containment sump.

The Containment Air Cooler System portion of the containment cooling train which must be OPERABLE includes the three safety related air coolers which each consist of four cooling coil banks, the safety related fan which must be in operation to be OPERABLE, gravity-operated fan discharge dampers, instruments, and controls to ensure an OPERABLE flow path.

CAC fans V-1A, V-2A, V-3A, and V-4A must be in operation to be considered OPERABLE. These fans only receive a start signal from the DBA sequencer; they are assumed to be in operation, and are not started by either a CHP or an SIS signal.

APPLICABILITY

In MODES 1, 2, and 3, a large break LOCA event could cause a release of radioactive material to containment and an increase in containment pressure and temperature requiring the operation of the containment spray trains and containment cooling trains.

In MODES 4, 5 and 6, the probability and consequences of these events are reduced due to the pressure and temperature limitations of these MODES. Thus, the Containment Spray and Containment Cooling systems are not required to be OPERABLE in MODES 4, 5 and 6.

ACTIONS

A.1

Condition A is applicable whenever one or more containment cooling trains is inoperable. Action A.1 requires restoration of both trains to OPERABLE status within 72 hours. The 72 hour Completion Time for Condition A is based on the assumption that at least 100% of the required post accident containment cooling capability (that assumed in the safety analyses) is available. If less than 100% of the required post containment accident cooling is available, Condition C must also be entered.

BASES

ACTIONS

A.1 (continued)

Mechanical system LCOs typically provide a 72 hour Completion Time under conditions when a required system can perform its required safety function, but may not be able to do so assuming an additional failure. When operating in accordance with the Required Actions of an LCO Condition, it is not necessary to be able to cope with an additional single failure.

The Containment Cooling systems can provide one hundred percent of the required post accident cooling capability following the occurance of any single active failure. Therefore, the containment cooling function can be met during conditions when those components which could be deactivated by a single active failure are known to be inoperable. Under that condition, however, the ability to provide the function after the occurance of an additional failure cannot be guaranteed. Therefore, continued operation with one or more trains inoperable is allowed only for a limited time.

B.1 and B.2

Condition B is applicable when the Required Actions of Condition A cannot be completed within the required Completion Time. Condition A is applicable whenever one or more trains is inoperable. Therefore, when Condition B is applicable, Condition A is also applicable. (If less than 100% of the post accident containment cooling capability is available, Condition C must be entered as well.) Being in Conditions A and B concurrently maintains both Completion Time clocks for instances where equipment repair allows exit from Condition B while the plant is still within the applicable conditions of the LCO.

If the inoperable containment cooling trains cannot be restored to OPERABLE status within the required Completion Time of Condition A, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 6 hours and to MODE 4 within 30 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

BASES

ACTIONS (continued)

C.1

Condition C is applicable with one or more trains inoperable when there is less than 100% of the required post accident containment cooling capability available. Condition A is applicable whenever one or more trains is inoperable. Therefore, when this Condition is applicable, Condition A is also applicable. Being in Conditions A and C concurrently maintains both Completion Time clocks for instances where equipment repair restores 100% of the required post accident containment cooling capability while the LCO is still applicable, allowing exit from Condition C (and LCO 3.0.3).

One hundred percent of the required post accident cooling capability can be provided with both MSIV bypass valves closed if either;

1. Two containment spray pumps, two spray headers, and one CAC fan are OPERABLE, or

2. One containment spray pump, two spray headers, and three safety related CACs, are OPERABLE (at least two service water pumps must be OPERABLE if CACs are to be relied upon).

One hundred percent of the required post accident cooling capability can be provided for operation with one or both MSIV bypass valves open (or closed) if;

1. One containment spray pump, two spray headers, and two safety related CACs, are OPERABLE (at least two service water pumps must be OPERABLE if CACs are to be relied upon).

2. Two containment spray pumps, one spray header, and three safety related CACs are OPERABLE (at least three service water pumps must be OPERABLE to provide the necessary service water flow to assure OPERABILITY of the CACs), or

3. One containment spray pump, one spray header, and three safety related CACs are OPERABLE (at least three service water pumps must be OPERABLE to provide the necessary service water flow to assure OPERABILITY of the CACs).

With less than 100% of the required post accident containment cooling capability available, the plant is in a condition outside the assumptions of the safety analyses. Therefore, LCO 3.0.3 must be entered immediately.

BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.6.1

Verifying the correct alignment for manual, power operated, and automatic valves, excluding check valves, in the Containment Spray System provides assurance that the proper flow path exists for Containment Spray System operation. This SR also does not apply to valves that are locked, sealed, or otherwise secured in position since these were verified to be in the correct positions prior to being secured. This SR also does not apply to valves that cannot be inadvertently misaligned, such as check valves. This SR does not require any testing or valve manipulation. Rather, it involves verification, through a system walkdown, that those valves outside containment and capable of potentially being mispositioned, are in the correct position.

SR 3.6.6.2

Operating each safety related Containment Air Cooler fan unit for $\geq$ 15 minutes ensures that all trains are OPERABLE and are functioning properly. The 31 day Frequency was developed considering the known reliability of the fan units, the two train redundancy available, and the low probability of a significant degradation of the containment cooling train occurring between surveillances.

SR 3.6.6.3

Verifying the containment spray header is full of water to the 735 ft elevation minimizes the time required to fill the header. This ensures that spray flow will be admitted to the containment atmosphere within the time frame assumed in the containment analysis. The 31 day Frequency is based on the static nature of the fill header and the low probability of a significant degradation of the water level in the piping occurring between surveillances.

SR 3.6.6.4

Verifying a total service water flow rate of $\geq$ 4800 gpm to CACs VHX-1, VHX-2, and VHX-3, when aligned for accident conditions, provides assurance the design flow rate assumed in the safety analyses will be achieved (Ref. 8). Also considered in selecting this Frequency were the known reliability of the cooling water system, the two train redundancy, and the low probability of a significant degradation of flow occurring between surveillances.

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.6.6.5

Verifying that each containment spray pump's developed head at the flow test point is greater than or equal to the required developed head ensures that spray pump performance has not degraded during the cycle. Flow and differential pressure are normal tests of centrifugal pump performance required by Section XI of the ASME Code (Ref. 5).

Since the containment spray pumps cannot be tested with flow through the spray headers, they are tested on recirculation flow. This test confirms one point on the pump design curve and is indicative of overall performance. Such inservice inspections confirm component OPERABILITY, trend performance, and detect incipient failures by indicating abnormal performance. The Frequency of this SR is in accordance with the Inservice Testing Program.

SR 3.6.6.6 and SR 3.6.6.7

SR 3.6.6.6 verifies each automatic containment spray valve actuates to its correct position upon receipt of an actual or simulated actuation signal. This Surveillance is not required for valves that are locked, sealed, or otherwise secured in the required position under administrative controls. SR 3.6.6.7 verifies each containment spray pump starts automatically on an actual or simulated actuation signal. The 18 month Frequency is based on the need to perform these Surveillances under the conditions that apply during a plant outage and the potential for an unplanned transient if the Surveillances were performed with the reactor at power.

Operating experience has shown that these components usually pass the Surveillances when performed at the 18 month Frequency. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint.

Where the surveillance of containment sump isolation valves is also required by SR 3.5.2.5, a single surveillance may be used to satisfy both requirements.

SR 3.6.6.8

This SR verifies each containment cooling fan actuates upon receipt of an actual or simulated actuation signal. The 18 month Frequency is based on engineering judgement and has been shown to be acceptable through operating experience. See SR 3.6.6.6 and SR 3.6.6.7, above, for further discussion of the basis for the 18 month Frequency.

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.6.6.9

With the containment spray inlet valves closed and the spray header drained of any solution, low pressure air or smoke can be blown through test connections. Performance of this SR demonstrates that each spray nozzle is unobstructed and provides assurance that spray coverage of the containment during an accident is not degraded. Due to the passive design of the nozzle, a test at 10 year intervals is considered adequate to detect obstruction of the spray nozzles.

REFERENCES

1. FSAR, Section 5.1
2. FSAR, Section 14.18
3. FSAR, Sections 6.2
4. FSAR, Section 6.3
5. ASME, Boiler and Pressure Vessel Code, Section XI
6. FSAR, Table 14.18.1-3
7. FSAR, Table 14.18.2-1
8. FSAR, Table 9-1
9. EA-GEJ-99-02 Rev. 0, Single Failure Assumption for Main Steam Line Break (MSLB) and Improved Tech Spec Equipment Operability Requirements, October, 2000.

3.7 PLANT SYSTEMS

3.7.7 Component Cooling Water (CCW) System

LCO 3.7.7 Two CCW trains shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more CCW trains inoperable.	A.1 Restore train(s) to OPERABLE status.	72 hours
B. Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 5.	6 hours 36 hours
C. Less than 100% of the required post accident CCW cooling capability available.	C.1 Enter LCO 3.0.3.	Immediately

BASES

ACTIONS

A.1

Condition A is applicable whenever one or more CCW trains is inoperable. Action A.1 requires restoration of both trains to OPERABLE status within 72 hours. The 72 hour Completion Time is based on the assumption that at least 100% of the required CCW post accident cooling capability (that assumed in the safety analyses) is available. (If, however, less than 100% of the CCW post accident cooling is available, Condition C must also be entered.)

Mechanical system LCOs typically provide a 72 hour Completion Time under conditions when a required system can perform its required safety function, but may not be able to do so assuming an additional failure. When operating in accordance with the Required Actions of an LCO Condition, it is not necessary to be able to cope with an additional single failure.

The CCW system can provide one hundred percent of the required post accident cooling capability following the occurance of any single active failure. Therefore, the CCW function can be met during conditions when those components which could be deactivated by a single active failure are known to be inoperable. Under that condition, however, the ability to provide the function after the occurance of an additional failure cannot be guaranteed. Therefore, continued operation with one or more trains inoperable is allowed only for a limited time.

B.1 and B.2

Condition B is applicable when the Required Actions of Condition A cannot be completed within the required Completion Time. Condition A is applicable whenever one or more trains is inoperable. Therefore, when Condition B is applicable, Condition A is also applicable. (If less than 100% of the post accident CCW cooling capability is available, Condition C must be entered as well.) Being in Conditions A and B concurrently maintains both Completion Time clocks for instances where equipment repair allows exit from Condition B while the plant is still within the applicable conditions of the LCO.

If the required CCW trains cannot be restored to OPERABLE status within the associated Completion Time, the plant must be placed in a MODE in which the LCO does not apply. To achieve this status, the plant must be placed in at least MODE 3 within 6 hours and in MODE 5 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

BASES

ACTIONS (continued)

C.1

Condition C is applicable with one or more trains inoperable when there is less than 100% of the required CCW post accident cooling capability available. Condition A is applicable whenever one or more trains is inoperable. Therefore, when this Condition is applicable, Condition A is also applicable. Being in Conditions A and C concurrently maintains both Completion Time clocks for instances where equipment repair restores 100% of the required CCW post accident cooling capability while the LCO is still applicable, allowing exit from Condition C (and LCO 3.0.3).

Any single CCW pump can provide one hundred percent of the required CCW post accident cooling capability. One hundred percent of the required CCW post accident cooling can also be provided despite the inoperability of one or more of those CCW valves closed by Safety Injection, which isolate cooling to non-essential loads, provided there are sufficient CCW pumps available to supply the additional flow.

The Component Cooling System cools three groups of loads:

1. Safety related loads outside the containment,

2. Non-safety related loads outside the Containment, and

3. Non-safety related loads inside the Containment.

As discussed in the Background section of these bases, each of these groups of loads can be cooled by the flow from one CCW pump.

One hundred percent of the required CCW post accident cooling capability can be provided by one CCW pump if both CCW heat exchangers are available and if:

1. One CCW Containment Isolation Valve, CV-0910, CV-0911, or CV-0940, is OPERABLE, and

2. One CCW header isolation valve for the non-safety related loads outside the containment, CV-0944, CV-0944A, or CV-0977B, is OPERABLE.

BASES

ACTIONS

C.1 (continued)

One hundred percent of the required CCW post accident cooling capability can be provided by two CCW pumps if both CCW heat exchangers are available and if:

1. One CCW Containment Isolation Valve, CV-0910, CV-0911, or CV-0940, is OPERABLE, or

2. One CCW header isolation valve for the non-safety related loads outside the containment, CV-0944, CV-0944A, or CV-0977B, is OPERABLE.

One hundred percent of the required CCW post accident cooling capability can be provided by three CCW pumps if both CCW heat exchangers are available, even with CCW flow being provided to both the safety-related loads and the non-safety related loads inside and outside the containment.

With less than 100% of the required CCW post accident cooling capability available, the plant is in a condition outside the assumptions of the safety analyses. Therefore, LCO 3.0.3 must be entered immediately.

SURVEILLANCE REQUIREMENTS

SR 3.7.7.1

Verifying the correct alignment for manual, power operated, and automatic valves in the CCW flow path provides assurance that the proper flow paths exist for CCW operation. This SR does not apply to valves that are locked, sealed, or otherwise secured in position, since these valves are verified to be in the correct position prior to locking, sealing, or securing. This SR also does not apply to valves that cannot be inadvertently misaligned, such as check valves. This Surveillance does not require any testing or valve manipulation; rather, it involves verification that those valves capable of potentially being mispositioned are in their correct position.

This SR is modified by a Note indicating that the isolation of the CCW to components or systems may render those components inoperable but does not affect the OPERABILITY of the CCW System.

The 31 day Frequency is based on engineering judgment, is consistent with the procedural controls governing valve operation, and ensures correct valve positions.

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.7.7.2

This SR verifies proper automatic operation of the CCW valves on an actual or simulated actuation signal. Specific signals (e.g., safety injection, RAS) are tested under Section 3.3, "Instrumentation." This Surveillance is not required for valves that are locked, sealed, or otherwise secured in the required position under administrative controls. This SR is modified by a Note which states this SR is only required to be met in MODES 1, 2, and 3. The instrumentation providing the input signal is not required in MODE 4, therefore, to keep consistency with Section 3.3, "Instrumentation," the SR is not required to be met in this MODE. Operating experience has shown that these components usually pass the Surveillance when performed at the 18 month Frequency. Therefore, the Frequency is acceptable from a reliability standpoint.

SR 3.7.7.3

This SR verifies proper automatic operation of the CCW pumps on an actual or simulated actuation signal in the "with standby power available" mode which tests the starting of the pumps by the SIS-X relays. The starting of the pumps by the sequencer is performed in Section 3.8, "Electrical Power Systems." This SR is modified by a Note which states this SR is only required to be met in MODES 1, 2, and 3. The instrumentation providing the input signal is not required in MODE 4, therefore, to keep consistency with Section 3.3, "Instrumentation," the SR is not required to be met in this MODE. Operating experience has shown these components usually pass the Surveillance when performed at the 18 month Frequency. Therefore, the Frequency is acceptable from a reliability standpoint.

REFERENCES

1. FSAR, Section 9.3

3.7 PLANT SYSTEMS

3.7.8 Service Water System (SWS)

LCO 3.7.8 Two SWS trains shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more SWS trains inoperable.	A.1 Restore train(s) to OPERABLE status.	72 hours
B. Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 5.	6 hours 36 hours
C. Less than 100% of the required post accident SWS cooling capability available.	C.1 Enter LCO 3.0.3.	Immediately

BASES

APPLICABILITY

In MODES 1, 2, 3, and 4, the SWS System is a normally operating system, which is required to support the OPERABILITY of the equipment serviced by the SWS and required to be OPERABLE in these MODES.

In MODES 5 and 6, the OPERABILITY requirements of the SWS are determined by the systems it supports.

ACTIONS

A.1

Condition A is applicable whenever one or more SWS trains is inoperable. Action A.1 requires restoration of both trains to OPERABLE status within 72 hours. The 72 hour Completion Time is based on the assumption that at least 100% of the required SWS post accident cooling capability (that assumed in the safety analyses) is available. (If, however, less than 100% of the SWS post accident cooling is available, Condition C must also be entered.)

Mechanical system LCOs typically provide a 72 hour Completion Time under conditions when a required system can perform its required safety function, but may not be able to do so assuming an additional failure. When operating in accordance with the Required Actions of an LCO Condition, it is not necessary to be able to cope with an additional single failure.

The SWS system can provide one hundred percent of the required post accident cooling capability following the occurrence of any single active failure. Therefore, the SWS function can be met during conditions when those components which could be deactivated by a single active failure are known to be inoperable. Under that condition, however, the ability to provide the function after the occurrence of an additional failure cannot be guaranteed. Therefore, continued operation with one or more trains inoperable is allowed only for a limited time.

BASES

ACTIONS (continued)

B.1 and B.2

Condition B is applicable when the Required Actions of Condition A cannot be completed within the required Completion Time. Condition A is applicable whenever one or more trains is inoperable. Therefore, when Condition B is applicable, Condition A is also applicable. (If less than 100% of the post accident SWS cooling capability is available, Condition C must be entered as well.) Being in Conditions A and B concurrently maintains both Completion Time clocks for instances where equipment repair allows exit from Condition B while the plant is still within the applicable conditions of the LCO.

If the inoperable SWS trains cannot be restored to OPERABLE status within the associated required Completion Time of Condition A, the plant must be placed in a MODE in which the LCO does not apply. To achieve this status, the plant must be placed in at least MODE 3 within 6 hours and in MODE 5 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

C.1

Condition C is applicable with one or more trains inoperable when there is less than 100% of the required SWS post accident cooling capability available. Condition A is applicable whenever one or more trains is inoperable. Therefore, when this Condition is applicable, Condition A is also applicable. Being in Conditions A and C concurrently maintains both Completion Time clocks for instances where equipment repair restores 100% of the required SWS post accident cooling capability while the LCO is still applicable, allowing exit from Condition C (and LCO 3.0.3).

The Service Water System cools three groups of loads:

1. Critical loads inside the Containment,
2. Critical loads outside the Containment, and
3. Non-critical loads in the Turbine Building.

As discussed in the Background section of these bases, each of these groups of loads can be cooled by the flow from one SWS pump.

BASES

ACTIONS

C.1 (continued)

One hundred percent of the required SWS post accident cooling capability can be provided by any one SWS pump if:

1. The non-critical SWS header isolation valve, CV-1359, is OPERABLE, and

2. Plant conditions allow adequate containment cooling to be provided without reliance on CACs and one SWS Containment Isolation Valve, CV-0824 or CV-0847, is OPERABLE.

One hundred percent of the required SWS post accident cooling capability can be provided by any two SWS pumps if:

1. The non-critical SWS header isolation valve, CV-1359, is OPERABLE, or

2. Plant conditions allow adequate containment cooling to be provided without reliance on CACs and one SWS Containment Isolation Valve, CV-0824 or CV-0847, is OPERABLE.

One hundred percent of the required SWS post accident cooling capability can be provided by three SWS pumps even with SWS flow being provided to both the CACs and the Non-critical SWS header.

With less than 100% of the required SWS post accident cooling capability available, the plant is in a condition outside the assumptions of the safety analyses. Therefore, LCO 3.0.3 must be entered immediately.

BASES

SURVEILLANCE REQUIREMENTS

SR 3.7.8.1

Verifying the correct alignment for manual, power operated, and automatic valves in the SWS flow path ensures that the proper flow paths exist for SWS operation. This SR does not apply to valves that are locked, sealed, or otherwise secured in position, since they are verified to be in the correct position prior to locking, sealing, or securing. This SR also does not apply to valves that cannot be inadvertently misaligned, such as check valves. This Surveillance does not require any testing or valve manipulation; rather, it involves verification that those valves capable of potentially being mispositioned are in the correct position. This SR is modified by a Note indicating that the isolation of SWS to components or systems may render those components inoperable but does not affect the OPERABILITY of the SWS.

The 31 day Frequency is based on engineering judgment, is consistent with the procedural controls governing valve operation, and ensures correct valve positions.

SR 3.7.8.2

This SR verifies proper automatic operation of the SWS valves on an actual or simulated actuation signal. Specific signals (e.g., safety injection) are tested under Section 3.3, "Instrumentation." This Surveillance is not required for valves that are locked, sealed, or otherwise secured in the required position under administrative controls. This SR is modified by a Note which states this SR is only required to be met in MODES 1, 2, and 3. The instrumentation providing the input signal is not required in MODE 4, therefore, to keep consistency with Section 3.3, "Instrumentation," the SR is not required to be met in this MODE. Operating experience has shown that these components usually pass the Surveillance when performed at the 18 month Frequency. Therefore, the Frequency is acceptable from a reliability standpoint.

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.7.8.3

The SR verifies proper automatic operation of the SWS pumps on an actual or simulated actuation signal in the "with standby power available" mode which tests the starting of the pumps by the SIS-X relays. The starting of the pumps by the sequencer is performed in Section 3.8, "Electrical Power Systems." This SR is modified by a Note which states this SR is not required to be met in MODE 4. The instrumentation providing the input signal is not required in MODE 4, therefore, to keep consistency with Section 3.3, "Instrumentation," the SR is not required to be met in this MODE. Operating experience has shown that these components usually pass the Surveillance when performed at the 18 month Frequency. Therefore, the Frequency is acceptable from a reliability standpoint.

REFERENCES

1. FSAR, Section 9.1
2. FSAR, Section 6.1

ENCLOSURE 4
ATTACHMENT 2

CONSUMERS ENERGY COMPANY
PALISADES PLANT
DOCKET 50-255

CHANGES TO STRUCTURE OF
CONTAINMENT COOLING, COMPONENT COOLING, AND SERVICE WATER LCOs

EXISTING PAGES MARKED TO SHOW PROPOSED CHANGES

3.6 CONTAINMENT SYSTEMS

3.6.6 Containment Cooling Systems

LCO 3.6.6 Two containment cooling trains shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more containment cooling trains inoperable. ~~AND~~ ~~At least 100% of the required post accident containment cooling capability available.~~	A.1 Restore train(s) to OPERABLE status.	72 hours
B. Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 4.	6 hours 30 hours
C. Less than 100% of the required post accident containment cooling capability available.	C.1 Enter LCO 3.0.3	Immediately

BASES

LCO (continued)

The Containment Spray System portion of the containment cooling trains includes three spray pumps, two spray headers, nozzles, valves, piping, instruments, and controls to ensure an OPERABLE flow path capable of taking suction from the SIRWT upon an ESF actuation signal and automatically transferring suction to the containment sump.

The Containment Air Cooler System portion of the containment cooling train which must be OPERABLE includes the three safety related air coolers which each consist of four cooling coil banks, the safety related fan which must be in operation to be OPERABLE, gravity-operated fan discharge dampers, instruments, and controls to ensure an OPERABLE flow path.

CAC fans V-1A, V-2A, V-3A, and V-4A must be in operation to be considered OPERABLE. These fans only receive a start signal from the DBA sequencer; they are assumed to be in operation, and are not started by either a CHP or an SIS signal.

APPLICABILITY

In MODES 1, 2, and 3, a large break LOCA event could cause a release of radioactive material to containment and an increase in containment pressure and temperature requiring the operation of the containment spray trains and containment cooling trains.

In MODES 4, 5 and 6, the probability and consequences of these events are reduced due to the pressure and temperature limitations of these MODES. Thus, the Containment Spray and Containment Cooling systems are not required to be OPERABLE in MODES 4, 5 and 6.

ACTIONS

A.1

~~The Containment Cooling system can provide one hundred percent of the required post accident cooling capability following the occurance of any single active failure. Therefore, the containment cooling function can be met during conditions when those components which could be deactivated by a single active failure are known to be inoperable. Under that condition, however, the ability to provide the function after the occurance of an additional failure cannot be guaranteed. Therefore, continued operation with one or more trains inoperable is allowed only for a limited time.~~

BASES

ACTIONS

A.1 (continued)

~~With one or more trains of containment cooling inoperable, but at least 100% of the required post accident containment cooling capability (that assumed in the safety analyses; see Reference 2) available, the inoperable containment cooling components must be restored to OPERABLE status within 72 hours.~~Condition A is applicable whenever one or more containment cooling trains is inoperable. Action A.1 requires restoration of both trains to OPERABLE status within 72 hours. The 72 hour Completion Time for Condition A is based on the assumption that at least 100% of the required post accident containment cooling capability (that assumed in the safety analyses) is available. If less than 100% of the required post containment accident cooling is available, Condition C must also be entered.

Mechanical system LCOs typically provide a 72 hour Completion Time under conditions when a required system can perform its required safety function, but may not be able to do so assuming an additional failure. When operating in accordance with the Required Actions of an LCO Condition, it is not necessary to be able to cope with an additional single failure.

The Containment Cooling systems can provide one hundred percent of the required post accident cooling capability following the occurance of any single active failure. Therefore, the containment cooling function can be met during conditions when those components which could be deactivated by a single active failure are known to be inoperable. Under that condition, however, the ability to provide the function after the occurance of an additional failure cannot be guaranteed. Therefore, continued operation with one or more trains inoperable is allowed only for a limited time.

~~One hundred percent of the required post accident cooling capability can be provided with both MSIV bypass valves closed if either;~~

~~1. Two containment spray pumps, two spray headers, and one CAC fan are OPERABLE; or~~
~~2. One containment spray pump, two spray headers, and three safety related CACs, are OPERABLE (at least two service water pumps must be OPERABLE if CACs are to be relied upon).~~

~~One hundred percent of the required post accident cooling capability can be provided for operation with a MSIV bypass valve open or closed if;~~

~~1. One containment spray pump, two spray headers, and two safety related CACs, are OPERABLE (at least two service water pumps must be OPERABLE if CACs are to be relied upon).~~
~~2. Two containment spray pumps, one spray header, and three safety related CACs are OPERABLE (at least three service water pumps must be OPERABLE to provide the necessary service water flow to assure OPERABILITY of the CACs); or~~
~~3. One containment spray pump, one spray header, and three safety related CACs are OPERABLE (at least three service water pumps must be OPERABLE to provide the necessary service water flow to assure OPERABILITY of the CACs).~~

~~The 72 hour Completion Time was developed taking into account the redundant heat removal capabilities afforded by the other Containment Cooling train and the low probability of an event occurring during this period.~~

BASES

ACTIONS (continued)

B.1 and B.2

Condition B is applicable when the Required Actions of Condition A cannot be completed within the required Completion Time. Condition A is applicable whenever one or more trains is inoperable. Therefore, when Condition B is applicable, Condition A is also applicable. (If less than 100% of the post accident containment cooling capability is available, Condition C must be entered as well.) Being in Conditions A and B concurrently maintains both Completion Time clocks for instances where equipment repair allows exit from Condition B while the plant is still within the applicable conditions of the LCO.

If the ~~Required Action and associated Completion Time of this LCO are not met~~ inoperable containment cooling trains cannot be restored to OPERABLE status within the required Completion Time of Condition A, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 6 hours and to MODE 4 within 30 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

C.1

Condition C is applicable with one or more trains inoperable when there is less than 100% of the required post accident containment cooling capability available. Condition A is applicable whenever one or more trains is inoperable. Therefore, when this Condition is applicable, Condition A is also applicable. Being in Conditions A and C concurrently maintains both Completion Time clocks for instances where equipment repair restores 100% of the required post accident containment cooling capability while the LCO is still applicable, allowing exit from Condition C (and LCO 3.0.3).

One hundred percent of the required post accident cooling capability can be provided with both MSIV bypass valves closed if either;

1. Two containment spray pumps, two spray headers, and one CAC fan are OPERABLE, or

2. One containment spray pump, two spray headers, and three safety related CACs, are OPERABLE (at least two service water pumps must be OPERABLE if CACs are to be relied upon).

One hundred percent of the required post accident cooling capability can be provided for operation with one or both MSIV bypass valves open (or closed) if;

1. One containment spray pump, two spray headers, and two safety related CACs, are OPERABLE (at least two service water pumps must be OPERABLE if CACs are to be relied upon).

BASES

ACTIONS

C.1 (continued)

2. Two containment spray pumps, one spray header, and three safety related CACs are OPERABLE (at least three service water pumps must be OPERABLE to provide the necessary service water flow to assure OPERABILITY of the CACs), or

3. One containment spray pump, one spray header, and three safety related CACs are OPERABLE (at least three service water pumps must be OPERABLE to provide the necessary service water flow to assure OPERABILITY of the CACs).

With less than 100% of the required post accident containment cooling capability available, the plant is in a condition outside the assumptions of the safety analyses. Therefore, LCO 3.0.3 must be entered immediately.

SURVEILLANCE REQUIREMENTS

SR 3.6.6.1

Verifying the correct alignment for manual, power operated, and automatic valves, excluding check valves, in the Containment Spray System provides assurance that the proper flow path exists for Containment Spray System operation. This SR also does not apply to valves that are locked, sealed, or otherwise secured in position since these were verified to be in the correct positions prior to being secured. This SR also does not apply to valves that cannot be inadvertently misaligned, such as check valves. This SR does not require any testing or valve manipulation. Rather, it involves verification, through a system walkdown, that those valves outside containment and capable of potentially being mispositioned, are in the correct position.

SR 3.6.6.2

Operating each safety related Containment Air Cooler fan unit for $\geq$ 15 minutes ensures that all trains are OPERABLE and are functioning properly. The 31 day Frequency was developed considering the known reliability of the fan units, the two train redundancy available, and the low probability of a significant degradation of the containment cooling train occurring between surveillances.

SR 3.6.6.3

Verifying the containment spray header is full of water to the 735 ft elevation minimizes the time required to fill the header. This ensures that spray flow will be admitted to the containment atmosphere within the time frame assumed in the containment analysis. The 31 day Frequency is based on the static nature of the fill header and the low probability of a significant degradation of the water level in the piping occurring between surveillances.

3.7 PLANT SYSTEMS

3.7.7 Component Cooling Water (CCW) System

LCO 3.7.7 Two CCW trains shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more CCW trains inoperable. ~~AND~~ ~~At least 100% of the required CCW post accident cooling capability available.~~	A.1 Restore train(s) to OPERABLE status.	72 hours
B. Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 5.	6 hours 36 hours
C. Less than 100% of the required post accident CCW cooling capability available.	C.1 Enter LCO 3.0.3	Immediately

BASES

ACTIONS A.1

~~With one or more trains of CCW inoperable, but at least 100% of the required CCW post accident cooling capability available, the inoperable components must be restored to OPERABLE status within 72 hours~~. Condition A is applicable whenever one or more CCW trains is inoperable. Action A.1 requires restoration of both trains to OPERABLE status within 72 hours. The 72 hour Completion Time is based on the assumption that at least 100% of the required CCW post accident cooling capability (that assumed in the safety analyses) is available. (If, however, less than 100% of the CCW post accident cooling is available, Condition C must also be entered.)

Mechanical system LCOs typically provide a 72 hour Completion Time under conditions when a required system can perform its required safety function, but may not be able to do so assuming an additional failure. When operating in accordance with the Required Actions of an LCO Condition, it is not necessary to be able to cope with an additional single failure.

The CCW system can provide one hundred percent of the required post accident cooling capability following the occurance of any single active failure. Therefore, the CCW function can be met during conditions when those components which could be deactivated by a single active failure are known to be inoperable. Under that condition, however, the ability to provide the function after the occurance of an additional failure cannot be guaranteed. Therefore, continued operation with one or more trains inoperable is allowed only for a limited time.

~~Any single CCW pump can provide one hundred percent of the required CCW post accident cooling capability. This Condition allows for the loss of any two CCW pumps even if they are supplied from different electrical trains of power as long as one CCW pump is available. It also would allow for the inoperability of one or more of those valves, closed by Safety Injection, which isolate cooling to non-essential loads, provided there are sufficient CCW pumps available to supply the additional flow.~~

~~The Component Cooling System cools three groups of loads:~~
~~1. Safety related loads outside the containment,~~
~~2. Non-safety related loads outside the Containment, and~~
~~3. Non-safety related loads inside the Containment.~~

~~As discussed in the Background section of these bases, each of these groups of loads can be cooled by the flow from one CCW pump.~~

~~One hundred percent of the required CCW post accident cooling capability can be provided by one CCW pump if both CCW heat exchangers are available and if:~~

~~1. One CCW Containment Isolation Valve, CV-0910, CV-0911, or CV-0940, is OPERABLE, and~~
~~2. One CCW header isolation valve for the non-safety related loads outside the containment, CV-0944, CV-0944A, or CV-0977B, is OPERABLE.~~

BASES

ACTIONS

A.1 (continued)

~~One hundred percent of the required CCW post accident cooling capability can be provided by two CCW pumps if both CCW heat exchangers are available and if:~~

~~1. One CCW Containment Isolation Valve, CV-0910, CV-0911, or CV-0940, is OPERABLE, or~~

~~2. One CCW header isolation valve for the non-safety related loads outside the containment, CV-0944, CV-0944A, or CV-0977B, is OPERABLE.~~

~~One hundred percent of the required CCW post accident cooling capability can be provided by three CCW pumps if both CCW heat exchangers are available, even with CCW flow being provided to both the safety-related loads, and the non-safety related loads inside and outside the containment.~~

~~The 72 hour Completion Time was developed taking into account the redundant heat removal capability afforded by the remaining CCW components and the low probability of a DBA occurring during this period.~~

B.1 and B.2

Condition B is applicable when the Required Actions of Condition A cannot be completed within the required Completion Time. Condition A is applicable whenever one or more trains is inoperable. Therefore, when Condition B is applicable, Condition A is also applicable. (If less than 100% of the post accident CCW cooling capability is available, Condition C must be entered as well.) Being in Conditions A and B concurrently maintains both Completion Time clocks for instances where equipment repair allows exit from Condition B while the plant is still within the applicable conditions of the LCO.

If the required CCW trains cannot be restored to OPERABLE status within the associated Completion Time, the plant must be placed in a MODE in which the LCO does not apply. To achieve this status, the plant must be placed in at least MODE 3 within 6 hours and in MODE 5 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

BASES

ACTIONS (continued)

C.1

Condition C is applicable with one or more trains inoperable when there is less than 100% of the required CCW post accident cooling capability available. Condition A is applicable whenever one or more trains is inoperable. Therefore, when this Condition is applicable, Condition A is also applicable. Being in Conditions A and C concurrently maintains both Completion Time clocks for instances where equipment repair restores 100% of the required CCW post accident cooling capability while the LCO is still applicable, allowing exit from Condition C (and LCO 3.0.3).

Any single CCW pump can provide one hundred percent of the required CCW post accident cooling capability. One hundred percent of the required CCW post accident cooling can also be provided despite the inoperability of one or more of those CCW valves closed by Safety Injection, which isolate cooling to non-essential loads, provided there are sufficient CCW pumps available to supply the additional flow.

The Component Cooling System cools three groups of loads:

1. Safety related loads outside the containment,

2. Non-safety related loads outside the Containment, and

3. Non-safety related loads inside the Containment.

As discussed in the Background section of these bases, each of these groups of loads can be cooled by the flow from one CCW pump.

One hundred percent of the required CCW post accident cooling capability can be provided by one CCW pump if both CCW heat exchangers are available and if:

1. One CCW Containment Isolation Valve, CV-0910, CV-0911, or CV-0940, is OPERABLE, and

2. One CCW header isolation valve for the non-safety related loads outside the containment, CV-0944, CV-0944A, or CV-0977B, is OPERABLE.

One hundred percent of the required CCW post accident cooling capability can be provided by two CCW pumps if both CCW heat exchangers are available and if:

1. One CCW Containment Isolation Valve, CV-0910, CV-0911, or CV-0940, is OPERABLE, or

2. One CCW header isolation valve for the non-safety related loads outside the containment, CV-0944, CV-0944A, or CV-0977B, is OPERABLE.

One hundred percent of the required CCW post accident cooling capability can be provided by three CCW pumps if both CCW heat exchangers are available, even with CCW flow being provided to both the safety-related loads and the non-safety related loads inside and outside the containment.

With less than 100% of the required CCW post accident cooling capability available, the plant is in a condition outside the assumptions of the safety analyses. Therefore, LCO 3.0.3 must be entered immediately.

3.7 PLANT SYSTEMS

3.7.8 Service Water System (SWS)

LCO 3.7.8 Two SWS trains shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more SWS trains inoperable. ~~AND~~ ~~At least 100% of the required SWS post accident cooling capability available.~~	A.1 Restore train(s) to OPERABLE status.	72 hours
B. Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 5.	6 hours 36 hours
C. Less than 100% of the required post accident SWS cooling capability available.	C.1 Enter LCO 3.0.3	Immediately

BASES

APPLICABILITY

In MODES 1, 2, 3, and 4, the SWS System is a normally operating system, which is required to support the OPERABILITY of the equipment serviced by the SWS and required to be OPERABLE in these MODES.

In MODES 5 and 6, the OPERABILITY requirements of the SWS are determined by the systems it supports.

ACTIONS

A.1

~~With one or more trains of SWS inoperable, but at least 100% of the required SWS post accident cooling capability available, the inoperable components must be restored to OPERABLE status within 72 hours.~~

Condition A is applicable whenever one or more SWS trains is inoperable. Action A.1 requires restoration of both trains to OPERABLE status within 72 hours. The 72 hour Completion Time is based on the assumption that at least 100% of the required SWS post accident cooling capability (that assumed in the safety analyses) is available. (If, however, less than 100% of the SWS post accident cooling is available, Condition C must also be entered.)

Mechanical system LCOs typically provide a 72 hour Completion Time under conditions when a required system can perform its required safety function, but may not be able to do so assuming an additional failure. When operating in accordance with the Required Actions of an LCO Condition, it is not necessary to be able to cope with an additional single failure.

The SWS system can provide one hundred percent of the required post accident cooling capability following the occurrence of any single active failure. Therefore, the SWS function can be met during conditions when those components which could be deactivated by a single active failure are known to be inoperable. Under that condition, however, the ability to provide the function after the occurrence of an additional failure cannot be guaranteed. Therefore, continued operation with one or more trains inoperable is allowed only for a limited time.

~~This Condition allows for the loss of any two SWS pumps even if they are supplied from different electrical trains of power. If two SWS pumps are inoperable, then plant conditions must allow one hundred percent of the required post accident containment cooling capability to be provided without reliance on the CACs. This Condition would also allow for the inoperability of one or more of those valves, closed by a Safety Injection Signal, which isolate cooling to non-essential loads, provided there are sufficient SWS pumps available to supply the additional flow.~~

BASES

ACTIONS

A.1 (continued)

~~The Service Water System cools three groups of loads:~~
~~1. Critical loads inside the Containment,~~
~~2. Critical loads outside the Containment, and~~
~~3. Non-critical loads in the Turbine Building.~~

~~As discussed in the Background section of these bases, each of these groups of loads can be cooled by the flow from one SWS pump.~~

~~One hundred percent of the required SWS post accident cooling capability can be provided by any one SWS pump if:~~

~~1. The non-critical SWS header isolation valve, CV-1359, is OPERABLE, and~~

~~2. Plant conditions allow adequate containment cooling to be provided without reliance on CACs and one SWS Containment Isolation Valve, CV-0824 or CV-0847, is OPERABLE.~~

~~One hundred percent of the required SWS post accident cooling capability can be provided by any two SWS pumps if:~~

~~1. The non-critical SWS header isolation valve, CV-1359, is OPERABLE, or~~

~~2. Plant conditions allow adequate containment cooling to be provided without reliance on CACs and one SWS Containment Isolation Valve, CV-0824 or CV-0847, is OPERABLE.~~

~~One hundred percent of the required SWS post accident cooling capability can be provided by three SWS pumps even with SWS flow being provided to both the CACs and the Non-critical SWS header.~~

~~The 72 hour Completion Time was developed taking into account the redundant heat removal capability afforded by the remaining SWS components and the low probability of a DBA occurring during this period~~.

BASES

ACTIONS
(continued)

B.1 and B.2

Condition B is applicable when the Required Actions of Condition A cannot be completed within the required Completion Time. Condition A is applicable whenever one or more trains is inoperable. Therefore, when Condition B is applicable, Condition A is also applicable. (If less than 100% of the post accident SWS cooling capability is available, Condition C must be entered as well.) Being in Conditions A and B concurrently maintains both Completion Time clocks for instances where equipment repair allows exit from Condition B while the plant is still within the applicable conditions of the LCO.

If the ~~required~~ inoperable SWS trains cannot be restored to OPERABLE status within the associated required Completion Time of Condition A, the plant must be placed in a MODE in which the LCO does not apply. To achieve this status, the plant must be placed in at least MODE 3 within 6 hours and in MODE 5 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

C.1

Condition C is applicable with one or more trains inoperable when there is less than 100% of the required SWS post accident cooling capability available. Condition A is applicable whenever one or more trains is inoperable. Therefore, when this Condition is applicable, Condition A is also applicable. Being in Conditions A and C concurrently maintains both Completion Time clocks for instances where equipment repair restores 100% of the required SWS post accident cooling capability while the LCO is still applicable, allowing exit from Condition C (and LCO 3.0.3).

The Service Water System cools three groups of loads:
1. Critical loads inside the Containment,
2. Critical loads outside the Containment, and
3. Non-critical loads in the Turbine Building.

As discussed in the Background section of these bases, each of these groups of loads can be cooled by the flow from one SWS pump.

BASES

ACTIONS (continued)

One hundred percent of the required SWS post accident cooling capability can be provided by any one SWS pump if:

1. The non-critical SWS header isolation valve, CV-1359, is OPERABLE, and

2. Plant conditions allow adequate containment cooling to be provided without reliance on CACs and one SWS Containment Isolation Valve, CV-0824 or CV-0847, is OPERABLE.

One hundred percent of the required SWS post accident cooling capability can be provided by any two SWS pumps if:

1. The non-critical SWS header isolation valve, CV-1359, is OPERABLE, or

2. Plant conditions allow adequate containment cooling to be provided without reliance on CACs and one SWS Containment Isolation Valve, CV-0824 or CV-0847, is OPERABLE.

One hundred percent of the required SWS post accident cooling capability can be provided by three SWS pumps even with SWS flow being provided to both the CACs and the Non-critical SWS header.

With less than 100% of the required SWS post accident cooling capability available, the plant is in a condition outside the assumptions of the safety analyses. Therefore, LCO 3.0.3 must be entered immediately.

SURVEILLANCE REQUIREMENTS

SR 3.7.8.1

Verifying the correct alignment for manual, power operated, and automatic valves in the SWS flow path ensures that the proper flow paths exist for SWS operation. This SR does not apply to valves that are locked, sealed, or otherwise secured in position, since they are verified to be in the correct position prior to locking, sealing, or securing. This SR also does not apply to valves that cannot be inadvertently misaligned, such as check valves. This Surveillance does not require any testing or valve manipulation; rather, it involves verification that those valves capable of potentially being mispositioned are in the correct position. This SR is modified by a Note indicating that the isolation of SWS to components or systems may render those components inoperable but does not affect the OPERABILITY of the SWS.

The 31 day Frequency is based on engineering judgment, is consistent with the procedural controls governing valve operation, and ensures correct valve positions.

ENCLOSURE 5

CONSUMERS ENERGY COMPANY
PALISADES PLANT
DOCKET 50-255

TECHNICAL SPECIFICATION CHANGE REQUEST

CHANGES TO STRUCTURE OF
AUXILIARY FEEDWATER LCO

CONSUMERS ENERGY COMPANY
DOCKET 50-255
LICENSE DPR-20

ENCLOSURE 5
REQUEST FOR CHANGE TO THE TECHNICAL SPECIFICATIONS

CHANGES TO STRUCTURE OF AUXILIARY FEEDWATER LCO

It is requested that the Technical Specifications contained in the Facility Operating License DPR-20, Docket 50-255, issued to Consumers Power Company on February 21, 1991, for the Palisades Plant be changed as described below.The proposed changes are similar to, and identical in purpose to, changes made to the Standard Technical Specifications, Combustion Engineering Plants, NUREG 1432, Rev.1 (STS) by Technical Specifications Task Force (TSTF) change number 325.TSTF 325 applies only to LCO 3.5.2.Unlike STS, Palisades Auxiliary Feedwater LCO is basically structured like STS LCO 3.5.2.

The change made by TSTF 325 corrects the structure of the Conditions and Required Actions of that LCO to assure the intended actions are taken within the intended Completion Time.The same (or similar in the case of LCO 3.7.5) LCO structure was used for five Palisades LCOs and, consequently, a similar change is proposed to each of those LCOs for the same reasons given in TSTF 325.The TSTF 325 change to LCO 3.5.2 is requested in Enclosure 3 to this letter.This enclosure requests changes, similar to those addressed by TSTF 325, for the Auxiliary Feedwater LCO.

Attachment 1 to this change request contains the proposed Technical Specifications pages.Attachment 2 contains existing pages marked to show the proposed change.Deleted text is shown as strike-out; added text is shown with a shaded background.

I. Changes Proposed

A. Changes to LCO 3.7.5, Auxiliary Feedwater System

1. An editorial change has been made to Note 2 which types the word "operable" in upper case letters.

2. The second and third parts of the Condition A description, "AND - At least 100% of the required AFW flow available to each steam generator - AND - At least two AFW pumps OPERABLE." has been deleted

3. The second part of the Condition B description, "One or more AFW trains inoperable for reasons other than Condition A with at least 100% of the required AFW flow available in MODE 1, 2, or 3." has been replaced with two new parts "Less than 100% of the required AFW flow available to either steam generator. - OR - Fewer than two AFW pumps OPERABLE in mode 1, 2, OR 3."

4. The wording of Condition C has been revised to address the condition where insufficient AFW flow is available to achieve a plant shutdown while in any Mode within the applicable conditions of LCO 3.7.5.

5. Conforming changes have been made to the Bases.

II. Discussion of Proposed Change

A. Changes to LCO 3.7.5, Auxiliary Feedwater System

1. The change made to Note 2, which types the word "operable" in upper case letters, corrects a typographical error. It is conventional, within the Technical Specifications and their Bases, to type those words defined in Section 1.1 in upper case letters.

2 - 4 LCO 3.7.5 requires two trains of AFW equipment to be Operable, thereby assuring the availability of full AFW flow even with the occurance of a single active failure concurrent with the loss of either on-site AC power or off-site AC power. The "A/B" AFW train contains both a steam turbine driven pump and an electric motor driven pump, thereby providing the ability to operate powered from diverse energy sources. The "C" AFW train contains a single electric motor driven pump. Either train can feed either steam generator.

The Actions table of LCO 3.7.5 is intended to address three situations where the LCO is not met.

The first situation exists when at least two AFW pumps are operable but one or more other pieces of AFW equipment is inoperable, possibly reducing the ability to cope with an additional failure, but with sufficient equipment available to provide 100% of the AFW flow assumed in the safety analyses to each steam generator. This situation represents a loss of redundancy, but not a loss of function (e.g., one AFW pump is inoperable or the flow path from one AFW train to one steam generator is inoperable.)

The second situation exists when either two AFW pumps are inoperable, or 100% AFW flow is available, but not to each steam generator. This situation represents some loss of function (the ability to provide 100% AFW flow to each steam generator, which would be needed if the other steam generator should suffer a tube or piping failure) but does not involve the inability to provide sufficient AFW to one steam generator (or to both combined) to effect a plant shutdown and cooldown (e.g., the AFW flow path to one steam generator is inoperable or two AFW pumps are inoperable.)

The third situation exists when insufficient AFW flow is available to effect a safe plant shutdown and cooldown (e.g., all three AFW pumps become inoperable or the combined flow to both steam generators is less than 100% of the flow assumed in the safety analyses.)

The existing LCO 3.7.5 Conditions address these three situations, but were unintentionally written to address them exclusively (i.e., being in any one Condition excluded also being in any of the others). It was intended, as shown in the examples of Section 1.3, that Condition A would continue to apply even if a subsequent inoperability required entry into Condition B or even Condition C. This is the same situation as existed in STS LCO 3.5.2 prior to approval of TSTF 325. Changes have been made to the Actions table for LCO 3.7.5 to correct the structure. These changes are similar to those made to STS LCO 3.5.2 by TSTF 325.

III. Analysis of No Significant Hazards Consideration

Changes are proposed to LCO 3.7.5, Auxiliary Feedwater, which emulate changes made to Standard Technical Specifications, Combustion Engineering Plants, NUREG 1432, Rev.1 (STS) by TSTF 325. The structure of LCO 3.7.5 has been rearranged to maintain Condition A (and, in certain circumstances, Condition B) in effect if failures should occur which reduce available flow to less than 100% of the required flow (that flow assumed in the accident analyses). The resulting requirements are those intended when the LCO was initially constructed and represent the way the LCO Conditions are being applied. Therefore there is no change in intent or application of the LCO. In the case where inoperable AFW train components reduce available flow below that required, and a subsequent partial restoration is made to provide 100% of the required flow, the proposed change makes the literal requirements more conservative because (with the proposed arrangement) the Completion Time for Condition A (and possibly Condition B) would start when the initial inoperability occurred rather than (with literal interpretation of the existing arrangement) when Condition A (or B) was entered after the partial restoration.

The following evaluation supports the finding that operation of the facility in accordance with the proposed changes would not:

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

As described above, the proposed change corrects the structure of the LCO to assure its correct application. There is no change in intent or in the way the LCO is actually applied. The literal (and unintended) interpretation of the existing LCO structure could, under some circumstances, provide longer than intended Completion Times for restoration of operability. The proposed change only clarifies the requirements of the LCO Required Actions. Since the proposed change affects neither the LCO intent nor its application, the proposed change will not involve a significant increase in the probability or consequences of an accident previously evaluated.

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

As described above, the proposed change corrects the structure of the LCO to assure its correct application. There is no change in intent or in the way the LCO is actually applied. The proposed changes would not result in any physical alterations to the plant configuration, no new equipment is added, no equipment interfaces are modified, no changes to any equipment's function or the method of operating the equipment are being made. As the proposed changes would not change the design, configuration or operation of the plant, no new or different kinds of accident modes are created. Therefore, the proposed changes do not create the possibility of a new or different kind of accident from any previously evaluated.

C. Involve a significant reduction in a margin of safety

As described above, the proposed change corrects the structure of the LCO to assure its correct application. The proposed changes are consistent with the intent of the changes made to the STS by TSTF 325. There is no change in intent or in the way the LCO is actually applied. Therefore, the proposed changes do not involve a significant reduction in a margin of safety.

IV. Conclusion

The Palisades Plant Review Committee has reviewed this Technical Specifications change request and has determined that the change involves no significant hazards consideration. The Plant Review Committee has determined that a request for an amendment to the Technical Specifications does not constitute an unreviewed safety question.

ENCLOSURE 5
ATTACHMENT 1

CONSUMERS ENERGY COMPANY
PALISADES PLANT
DOCKET 50-255

CHANGES TO STRUCTURE OF
AUXILIARY FEEDWATER LCO

PROPOSED TECHNICAL SPECIFICATIONS PAGES

3.7 PLANT SYSTEMS

3.7.5 Auxiliary Feedwater (AFW) System

LCO 3.7.5 Two AFW trains shall be OPERABLE.

----------NOTES----------

1. Only one AFW train, which includes a motor driven pump, is required to be OPERABLE in MODE 4.

2. The steam driven pump is only required to be OPERABLE prior to making the reactor critical.

3. Two AFW pumps may be placed in manual for testing, for a period of up to 4 hours.

APPLICABILITY: MODES 1, 2, and 3,
MODE 4 when steam generator is relied upon for heat removal.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more AFW trains inoperable in MODE 1, 2, or 3.	A.1 Restore train(s) to OPERABLE status.	72 hours

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Required Action and associated Completion Time of Condition A not met. OR Less than 100% of the required AFW flow available to either steam generator. OR Less than two AFW pumps OPERABLE in MODE 1, 2, OR 3.	B.1 Be in MODE 3. AND B.2 Be in MODE 4.	6 hours 30 hours
C. Less than 100% of the required AFW flow available, to both steam generators.	----------NOTE---------- LCO 3.0.3 and all other LCO Required Actions requiring MODE changes or power reductions are suspended until at least 100% of the required AFW flow is available. ---------- C.1 Initiate action to restore one AFW train to OPERABLE status.	Immediately

BASES

APPLICABILITY (continued)

In MODE 4, the AFW System may be used for heat removal via the steam generator.

In MODES 5 and 6, the steam generators are not normally used for decay heat removal, and the AFW System is not required.

ACTIONS

A.1

Condition A is applicable whenever one or more AFW trains is inoperable, in MODE 1, 2, or 3. Action A.1 requires restoration of both trains to OPERABLE status within 72 hours. The 72 hour Completion Time is based on the assumption that at least 100% of the required AFW flow (that assumed in the safety analyses) is available to each steam generator. If the flow available to either steam generator is less than 100% of the required AFW flow, or if less than two AFW pumps are OPERABLE, Condition B must also be entered. In addition, if the combined flow available to both steam generators is less than 100% of the required AFW flow, Condition C must be entered as well.

Mechanical system LCOs typically provide a 72 hour Completion Time under conditions when a required system can perform its required safety function, but may not be able to do so assuming an additional failure. When operating in accordance with the Required Actions of an LCO Condition, it is not necessary to be able to cope with an additional single failure.

The AFW system can provide one hundred percent of the required AFW flow to each steam generator following the occurrence of any single active failure. Therefore, the AFW function can be met during conditions when those components which could be deactivated by a single active failure are known to be inoperable. Under that condition, however, the ability to provide the function after the occurrence of an additional failure cannot be guaranteed. Therefore, continued operation with one or more trains inoperable is allowed only for a limited time.

BASES

ACTIONS (continued)

B.1 and B.2

Condition B is applicable: 1) when the Required Actions of Condition A cannot be completed within the required Completion Time, 2) when the flow available to either steam generator is less than 100% of the required AFW flow, or 3) when less than two AFW pumps are OPERABLE. Condition A is applicable whenever one or more trains is inoperable. Therefore, when Condition B is applicable, Condition A is also applicable. (If the combined flow available to both steam generators is less than 100% of the required AFW flow, Condition C must be entered as well.) Being in Conditions A and B concurrently maintains both Completion Time clocks for instances where equipment repair allows exit from Condition B while the plant is still within the applicable conditions of the LCO.

Continued plant operation is not allowed if the available AFW flow to either steam generator is less than the required flow, because adequate AFW flow cannot be assured following a main steam line break affecting that steam generator (consider the case where the break occurs in the AFW piping). Therefore, if 1) the inoperable AFW trains cannot be restored to OPERABLE status within the required Completion Time of Condition A, or 2) the flow available to either steam generator is less than 100% of the required AFW flow, or 3) less than two AFW pumps are OPERABLE in MODES 1, 2, and 3, the plant must be placed in a MODE in which the LCO does not apply (except as noted in Condition C). To achieve this status, the plant must be placed in at least MODE 3 within 6 hours, and in MODE 4 within 30 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

BASES

ACTIONS (continued)

C.1

Condition C is applicable if the combined flow available to both steam generators is less than 100% of the required AFW flow; Condition A is applicable whenever one or more trains is inoperable; and Condition B is applicable when the flow available to either steam generator is less than 100% of the required AFW flow, or when less than two AFW pumps are OPERABLE. Therefore, when Condition C is applicable, Conditions A and B are also applicable. Being in Conditions A, B, and C concurrently maintains the Completion Time clocks for instances where equipment repair allows exit from Condition C while the plant is still within the applicable conditions of the LCO.

One hundred percent AFW flow (that assumed in the safety analyses) can be provided by any one OPERABLE AFW pump and an OPERABLE flow path to each steam generator.

Required Action C.1 is modified by a Note indicating that all required MODE changes or power reductions are suspended until at least 100% of the required AFW flow is available. In this condition, there may be inadequate AFW flow available to remove decay heat and allow a stable plant shutdown.

With less than 100% of the required AFW flow available (ie. less than the AFW flow assumed in the safety analyses, while in MODES 1, 2, and 3, or less than the required AFW train OPERABLE while in MODE 4 with a steam generator relied upon for heat removal), the plant is in a seriously degraded Condition with no safety related means for conducting a cooldown, and only limited means for conducting a cooldown with nonsafety grade equipment. In such a condition, the plant should not be perturbed by any action, including a power change, that might result in a trip. The seriousness of this condition requires that action be started immediately to restore at least 100% of the required AFW flow available. LCO 3.0.3 is not applicable, as it could force the plant into a less safe condition.

BASES

SURVEILLANCE REQUIREMENTS

SR 3.7.5.1

Verifying the correct alignment for the required manual, power operated, and automatic valves in the AFW water and steam supply flow path provides assurance that the proper flow paths exist for AFW operation. This SR does not apply to valves that are locked, sealed, or otherwise secured in position, since these valves are verified to be in the correct position prior to locking, sealing, or securing. This SR also does not apply to valves that cannot be inadvertently misaligned, such as check valves. This Surveillance does not require any testing or valve manipulations; rather, it involves verification that those valves capable of potentially being mispositioned are in the correct position.

This test need not be performed for the steam driven AFW pump for MODE 4 operation.

The 31 day Frequency is based on engineering judgment, is consistent with the procedural controls governing valve operation, and ensures correct valve positions.

SR 3.7.5.2

Verifying that each required AFW pump's developed head at the flow test point is greater than or equal to the required developed head ensures that AFW pump performance has not degraded during the cycle. Flow and differential head are normal tests of pump performance required by Section XI of the ASME Code (Ref. 2). This test confirms one point on the pump design curve and is indicative of overall performance. Such inservice tests confirm component OPERABILITY, trend performance, and detect incipient failures by indicating abnormal performance.

This SR is modified by a Note indicating that this SR for the turbine driven AFW pump does not have to be met in MODE 3 when steam pressure is below 800 psig. This is because there is insufficient steam pressure and pump discharge pressure to allow the turbine driven pump to reach the normal test conditions.

Performance of inservice testing, discussed in the ASME Code, Section XI (Ref. 2), at 3 month intervals satisfies this requirement.

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.7.5.3

This SR ensures that AFW can be delivered to the appropriate steam generator, in the event of any accident or transient that generates an AFAS, by demonstrating that each automatic valve in the flow path actuates to its correct position on an actual or simulated actuation signal. Specific signals (e.g., AFAS) are tested under Section 3.3, "Instrumentation." This Surveillance is not required for valves that are locked, sealed, or otherwise secured in the required position under administrative controls. The 18 month Frequency is acceptable, based on the design reliability and operating experience of the equipment.

This SR is modified by a Note which states the SR is only required to be met in MODES 1, 2, and 3 when AFW is not in operation. With AFW in operation, the required trains are already aligned with the flow control valves in manual control.

SR 3.7.5.4

This SR ensures that the AFW pumps will start in the event of any accident or transient that generates an AFAS by demonstrating that each AFW pump starts automatically on an actual or simulated actuation signal. Specific signals (e.g., AFAS, handswitch) are tested under Section 3.3, "Instrumentation."

This test need not be performed for the steam driven AFW pump for MODE 4 operation.

The 18 month Frequency is acceptable, based on the design reliability and operating experience of the equipment.

This SR is modified by a Note. The Note states that the SR is only required to be met in MODES 1, 2, and 3. In MODE 4, the required pump is already operating and the autostart function is not required.

REFERENCES

1. FSAR, Section 9.7

2. ASME, Boiler and Pressure Vessel Code, Section XI, Inservice Inspection, Article IWV-3400.

3. Palisades Design Basis Document 1.03, Auxiliary Feedwater System, Section 3.4.1.

ENCLOSURE 5
ATTACHMENT 2

CONSUMERS ENERGY COMPANY
PALISADES PLANT
DOCKET 50-255

CHANGES TO STRUCTURE OF
AUXILIARY FEEDWATER LCO

EXISTING PAGES MARKED TO SHOW PROPOSED CHANGES

3.7 PLANT SYSTEMS

3.7.5 Auxiliary Feedwater (AFW) System

LCO 3.7.5 Two AFW trains shall be OPERABLE.

----------NOTES----------

1. Only one AFW train, which includes a motor driven pump, is required to be OPERABLE in MODE 4.
2. The steam driven pump is only required to be ~~operable~~ OPERABLE prior to making the reactor critical.
3. Two AFW pumps may be placed in manual for testing, for a period of up to 4 hours.

APPLICABILITY: MODES 1, 2, and 3,
MODE 4 when steam generator is relied upon for heat removal.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more AFW trains inoperable in MODE 1, 2, or 3. ~~AND~~ ~~At least 100% of required AFW flow available to each steam generator.~~ ~~AND~~ ~~At least two AFW pumps OPERABLE.~~	A.1 Restore train(s) to OPERABLE status.	72 hours

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Required Action and associated Completion Time of Condition A not met. OR ~~One or more AFW trains inoperable for reasons other than Condition A with at least 100% of the required AFW flow available in MODE 1, 2, or 3.~~ Less than 100% of the required AFW flow available to either steam generator. OR Less than two AFW pumps OPERABLE in MODE 1, 2, OR 3.	B.1 Be in MODE 3. AND B.2 Be in MODE 4.	6 hours 30 hours
C. ~~Two AFW trains inoperable with less~~ Less than 100% of the required AFW flow available, ~~in MODE 1, 2, or 3~~ to both steam generators. ~~OR~~ ~~Required AFW train inoperable in MODE 4.~~	----------NOTE---------- LCO 3.0.3 and all other LCO Required Actions requiring MODE changes or power reductions are suspended until at least 100% of the required AFW flow is available. ---------- C.1 Initiate action to restore one AFW train to OPERABLE status.	Immediately

BASES

APPLICABILITY (continued)

In MODE 4, the AFW System may be used for heat removal via the steam generator.

In MODES 5 and 6, the steam generators are not normally used for decay heat removal, and the AFW System is not required.

ACTIONS

A.1

Condition A is applicable whenever one or more AFW trains is inoperable, ~~With one or more AFW trains (pump or flow paths) inoperable~~, in MODE 1, 2, or 3, ~~and at least 100% of the required AFW flow available to each steam generator, and at least two AFW pumps OPERABLE, action must be taken to restore the components~~. Action A.1 requires restoration of both trains to OPERABLE status within 72 hours. The 72 hour Completion Time is based on the assumption that at least 100% of the required AFW flow (that assumed in the safety analyses) is available to each steam generator. ~~is reasonable based on the redundant capabilities afforded by the AFW System, the time needed for repairs, and the low probability of a DBA event occurring during this period. Two AFW pumps and the associated flow paths remain to supply feedwater to both steam generators.~~ If the flow available to either steam generator is less than 100% of the required AFW flow, or if less than two AFW pumps are OPERABLE, Condition B must also be entered. In addition, if the combined flow available to both steam generators is less than 100% of the required AFW flow, Condition C must be entered as well.

Mechanical system LCOs typically provide a 72 hour Completion Time under conditions when a required system can perform its required safety function, but may not be able to do so assuming an additional failure. When operating in accordance with the Required Actions of an LCO Condition, it is not necessary to be able to cope with an additional single failure.

The AFW system can provide one hundred percent of the required AFW flow to each steam generator following the occurrence of any single active failure. Therefore, the AFW function can be met during conditions when those components which could be deactivated by a single active failure are known to be inoperable. Under that condition, however, the ability to provide the function after the occurrence of an additional failure cannot be guaranteed. Therefore, continued operation with one or more trains inoperable is allowed only for a limited time.

BASES

ACTIONS (continued)

B.1 and B.2

Condition B is applicable: 1) when the Required Actions of Condition A cannot be completed within the required Completion Time, 2) when the flow available to either steam generator is less than 100% of the required AFW flow, or 3) when less than two AFW pumps are OPERABLE. Condition A is applicable whenever one or more trains is inoperable. Therefore, when Condition B is applicable, Condition A is also applicable. (If the combined flow available to both steam generators is less than 100% of the required AFW flow, Condition C must be entered as well.) Being in Conditions A and B concurrently maintains both Completion Time clocks for instances where equipment repair allows exit from Condition B while the plant is still within the applicable conditions of the LCO.

Continued plant operation is not allowed if the available AFW flow to either steam generator is less than the required flow, because adequate AFW flow cannot be assured following a main steam line break affecting that steam generator (consider the case where the break occurs in the AFW piping). ~~When Required Action A.1 cannot be completed~~ Therefore, if 1) the inoperable AFW trains cannot be restored to OPERABLE status within the required Completion Time of Condition A, or ~~with one or more AFW trains (pump or flow paths) inoperable, for reasons other than Condition A with at least 100% of the required AFW flow available~~ 2) the flow available to either steam generator is less than 100% of the required AFW flow, or 3) less than two AFW pumps are OPERABLE in MODES 1, 2, and 3, the plant must be placed in a MODE in which the LCO does not apply (except as noted in Condition C). To achieve this status, the plant must be placed in at least MODE 3 within 6 hours, and in MODE 4 within 30 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

BASES

ACTIONS
(continued)

C.1

~~Required Action C.1 is modified by a Note indicating that all required MODE changes or power reductions are suspended until at least 100% of the required AFW flow is available.~~

Condition C is applicable if the combined flow available to both steam generators is less than 100% of the required AFW flow; Condition A is applicable whenever one or more trains is inoperable; and Condition B is applicable when the flow available to either steam generator is less than 100% of the required AFW flow, or when less than two AFW pumps are OPERABLE. Therefore, when Condition C is applicable, Conditions A and B are also applicable. Being in Conditions A, B, and C concurrently maintains the Completion Time clocks for instances where equipment repair allows exit from Condition C while the plant is still within the applicable conditions of the LCO.

One hundred percent AFW flow (that assumed in the safety analyses) can be provided by any one OPERABLE AFW pump and an OPERABLE flow path to each steam generator.

Required Action C.1 is modified by a Note indicating that all required MODE changes or power reductions are suspended until at least 100% of the required AFW flow is available. In this condition, there may be inadequate AFW flow available to remove decay heat and allow a stable plant shutdown.

With ~~two trains inoperable and~~ less than 100% of the required AFW flow available (ie. less than the AFW flow assumed in the safety analyses, while in MODES 1, 2, and 3, or less than the required AFW train ~~inoperable~~ OPERABLE while in MODE 4 with a steam generator relied upon for heat removal), the plant is in a seriously degraded Condition with no safety related means for conducting a cooldown, and only limited means for conducting a cooldown with nonsafety grade equipment. In such a condition, the plant should not be perturbed by any action, including a power change, that might result in a trip. The seriousness of this condition requires that action be started immediately to restore at least 100% of the required AFW flow available. LCO 3.0.3 is not applicable, as it could force the plant into a less safe condition.