Consumers Power

POWERING
MICHIGAN'S PROGRESS

Palisades Nuclear Plant: 27780 Blue Star Memorial Highway, Covert, MI 49043

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DOCKET 50-255 - LICENSE DPR-20 - PALISADES PLANT
TECHNICAL SPECIFICATION CHANGE REQUEST - ELECTRICAL POWER SYSTEMS

A request for a change to the Palisades Technical Specifications is enclosed. This change is necessary to update and clarify the Technical Specification Electrical Power System requirements and their bases. The proposed change completely rewrites the Electrical Power System sections of the Technical Specifications and their bases to closely emulate STS.

Palisades is currently preparing a Technical Specifications change request which will propose a complete conversion to Improved Standard Technical Specifications. The attached rewrite of the Electrical Power Systems sections of Technical Specifications is submitted at this time to update those sections more quickly than the entire conversion can be accomplished. This earlier request to update the electrical technical specifications has been discussed with the Palisades Senior Resident Inspector, the NRR Palisades Project Manager, and the Operating Technical Specifications Branch Chief.

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In addition to rewriting the electrical Technical Specifications to emulate the Improved Standard Technical Specifications, the proposed revision accomplishes the following items:

1. Clarification of the monthly diesel generator starting test.

2. Revision of the monthly diesel generator loading test to demonstrate the ability to carry peak accident loading. This revision will complete the action discussed in our February 13, 1995 letter which supplemented our response to the Notice of Violation associated with Inspection Report 94017.

3. Revision of the required stored fuel oil inventory to match current analyses. This revision completes the actions associated with concern number 50e of Inspection Report 91019, the Electrical Distribution System Functional Inspection (EDSFI). Completion of this action was discussed in CPCo letters dated February 24, 1994 and August 12, 1994. A TS change correcting the required DG fuel oil inventory was also discussed in the corrective action section of LER 89-005, dated April 3, 1989.

4. Clarification of the basis discussion of the diesel generator run time on the fuel oil stored in the day tank. This clarification completes the actions associated with concern number 21a of Inspection Report 91019, the Electrical Distribution System Functional Inspection (EDSFI). Completion of this action was discussed in CPCo letters dated February 24, 1994 and August 12, 1994.

5. Addition of Action Statements to address the condition of two diesel generators being simultaneously inoperable. This submittal completes the corrective action discussed in LER 93-013-01, dated February 10, 1994.

6. Resubmittal of changes for the addition of 480 V distribution buses, and redistribution of MCC loads (formerly submitted April 10, 1984, revised March 25, 1986, and withdrawn January 24, 1989.) Resubmittal of changes to address these buses completes Action 9 of the table attached to the CPCo January 24, 1989 letter "Outstanding Technical Specifications Change Requests.

7. Resubmittal of changes addressing the Offsite Power Modifications (formerly submitted November 13, 1989, and withdrawn June 26, 1992.)

8. Submittal of Fuel Oil testing requirements to replace those which were removed from the Technical Specifications with the Fire Protection requirements by Amendment 152 on August 21, 1992.

On May 1, 1995 a Technical Specification change request was submitted which was intended to accomplish Items 1 and 2 above. That change was not approved, and was subsequently withdrawn on November 13, 1995. This change proposes wording for the monthly diesel generator starting test requirement which is closer to the already approved wording in the existing test requirement than the formerly proposed wording. The proposed wording continues to include an added verification of generator voltage and frequency. The wording of the STS, for this test requirement, is inappropriate for Palisades due to our lack of installed instrumentation to accurately time the achievement of the desired voltage and frequency bands.

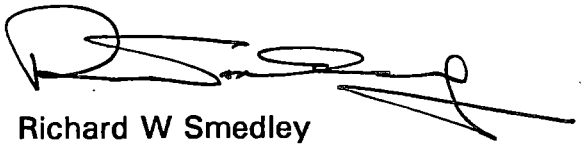
The enclosed change request provides a discussion of each proposed change. Five attachments are provided with the change request:

1. The proposed Technical Specifications pages.
2. The proposed Bases pages.
3. Existing pages marked to show changes,
4. A listing of each existing TS requirement and its closest corresponding proposed requirement with a short justification for the change.
5. A listing of each proposed TS requirement, its corresponding STS requirement, and a short discussion of the reasons for differences.

In order to provide time for procedure preparation and completion of the proposed additional surveillance testing (some of which are performed during shutdown periods), it is requested that implementation of the Amendment associated with this Technical Specification change request not be required until startup from the next refueling outage. That outage is currently expected to start early in November 1996. It is therefore requested that this change request be approved prior to June 30, 1996, in order to provide the necessary time for implementation of the new requirements.

SUMMARY OF COMMITMENTS

This letter establishes no new commitments, and makes no revisions to existing commitments.



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Enclosure

CONSUMERS POWER COMPANY
Docket 50-255
Request for Change to the Technical Specifications
License DPR-20

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:

I. Changes Proposed:

It is proposed that the sections of the existing Palisades Technical Specifications dealing with Electrical Power Systems, Limiting Condition for Operation (LCO) Section 3.7 and Surveillance Requirement (SR) Section 4.7, and their bases be totally rewritten to closely emulate the requirements of the Standard Technical Specifications for Combustion Engineering Plants, NUREG 1432, Revision 1 (STS), but to retain the existing Palisades Technical Specifications (TS) format.

Each change from the existing Electrical Power System TS requirements is discussed below. Attachment 4 provides a listing of each existing Electrical Power System TS requirement, its disposition in the proposed TS, and a short discussion of the reason for any change in requirements.

The proposed Electrical Power Systems requirements contain differences from the requirements and wording of the STS to reflect the Palisades design. Attachment 5 provides a listing of each proposed Electrical Power System TS requirement, the equivalent requirements in STS and existing TS, and a short discussion of the reasons for the differences between the proposed TS and the STS. The STS restrictions on performing certain surveillance testing during plant operation were not proposed. When equipment is replaced, modified, or repaired, surveillance testing must be performed to assure that TS requirements are met prior to declaring the equipment to be operable. Restrictions which would prohibit performing certain surveillance testing with the plant operating effectively prohibit repairing the associated equipment without a complete plant shutdown.

In a few instances, features of the existing TS were retained. No change has been proposed to the following features of the existing TS:

1. The Allowed Outage Time (AOT) for an inoperable DC bus,
2. The required action and AOT for an inoperable station battery,
3. The AOT for an inoperable Preferred AC bus,
4. The AOT for an inoperable Diesel Generator (DG),
5. The surveillance interval for DG starting and loading,
6. The surveillance interval for stored fuel oil quantity, and
7. The completion times for the general shutdown action (that action to be taken if the required actions cannot be completed within the specified time).

II. Discussion of Proposed Changes:

The Palisades Electrical Power System TS requirements are located in two sections. Section 3.7 (page 3-41) contains the LCOs and required actions, and Section 4.7 (page 4-42) contains the SRs. That general numbering has been maintained in the proposed TS. In the proposed Section 3.7, the individual LCOs are numbered 3.7.1 through 3.7.10 (pages 3-41 through 3-45h) corresponding to the STS LCOs 3.8.1 through 3.8.10 (pages 3.8-1 through 3.8-42). The proposed action statements are also numbered in a manner similar to the STS. In proposed Section 4.7, the SRs are numbered in a similar sequence to those of the STS, with 4.7.1.1 corresponding to 3.8.1.1, etc. Since the STS action statements and SRs are not all applicable to Palisades there is not a one-to-one correspondence between these numbering schemes.

Section 3.7 of the existing TS is made up of three subsections:

3.7.1, the original LCOs, applicable above 300°F;
3.7.2, the original action statements; and
3.7.3, recently added LCOs, applicable below 300°F.

Section 4.7 is also made up of three subsections:

4.7.1, Diesel Generator surveillance;
4.7.2, Station Battery surveillance; and
4.7.3, Emergency Lighting surveillance.

The proposed changes are described below. Each change is classified as one of the following four categories:

ADMINISTRATIVE - A change which is editorial in nature, which only involves movement of requirements within the TS without affecting their technical content, or clarifies existing TS requirements. These changes are described generically in the No Significant Hazards Determination.

RELOCATED - A change which only moves requirements, not meeting the 10 CFR 50.36(c)(2)(ii) criteria, from the TS to the FSAR, to the Operating Requirements Manual, or to other documents controlled under 10 CFR 50.59. These changes are described generically in the No Significant Hazards Determination.

MORE RESTRICTIVE - A change which only adds new requirements, or which revised an existing requirement resulting in additional operational restriction. These changes are described generically in the No Significant Hazards Determination.

LESS RESTRICTIVE - A change which deletes any existing requirement, or which revises any existing requirement resulting in less operational restriction. These changes are described individually in the No Significant Hazards Determination.

1. Existing "Applicability" and "Objective" statements deleted:

Both Sections 3.7 (page 3-41) and 4.7 (page 4-42) contain "applicability" statements which identify the equipment to which that section applies, rather than the conditions when the section applies; those applicability statements serve no purpose, being redundant to the wording of the LCO, and have been deleted. The wording of Sections 3.7.1 and 3.7.3 (pages 3-41 through 3-44) specify the applicable conditions; the proposed LCOs have applicability statements equivalent to those in STS. Both Section 3.7 and Section 4.7 contain "objective" statements; these statements serve no purpose and have also been deleted.

Change 1 is considered ADMINISTRATIVE because the existing "Applicability" and "Objective" statements contain no requirements and serve no function.

2. LCO applicable conditions changed to match STS:

The LCOs of both the existing Palisades TS and the STS are divided to apply during "operating" and "shutdown" conditions. The existing Palisades TS distinguish by being above 300°F; STS distinguish by being in a Mode above "Cold Shutdown." The applicabilities of the proposed TS are like those of STS.

Change 2 is considered MORE RESTRICTIVE because it requires two trains of electrical power equipment to be operable when the plant is between 300°F (when it is currently required) and 210°F (the upper limit of Cold Shutdown for Palisades) when only a single train is currently required.

3. Offsite AC source LCO changed to match STS:

LCOs 3.7.1a and 3.7.1b (page 3-41) appear as LCO 3.7.1.a (page 3-41) in the proposed TS. The equipment required by 3.7.1a and 3.7.1b is unchanged from the initial issue of the Palisades TS. They require that Startup Transformer 1-2 and Station Power Transformer 1-2 be operable. These two transformers and their associated circuits were the only offsite sources then available for the Class 1-E 2400 volt buses. Since that time an additional fully qualified offsite source, Safeguards Transformer 1-1, has been added. The wording of the proposed requirement, taken from STS, is more general then the existing LCO. It specifies two qualified offsite sources but does not identify them by equipment identifier. The revised wording would allow substitution of the newly installed Safeguards Transformer for the currently specified Station Power Transformer as one of the acceptable required sources.

Change 3 is considered LESS RESTRICTIVE because it is less specific about the required equipment.

4. Additional buses added to TS requirements:

LCOs 3.7.1c through 3.7.1g (page 4-41) appear as LCO 3.7.9 in the proposed TS. The required electrical distribution equipment is listed in the referenced table. All of the currently required equipment of 3.7.1c through 3.7.1g is included in the referenced table. The then-newly-added Motor Control Centers which were the subject of our April 10, 1984 Technical Specification change request have been included.

Change 4 is considered MORE RESTRICTIVE than in the existing TS because it requires additional equipment to be operable.

5. Battery charger LCO made more restrictive:

LCO 3.7.1h (page 3-41) appears as LCO 3.7.4 in the proposed TS. The proposed LCO requires Battery Chargers D15 and D16 to be operable, rather than the existing requirement "at least one charger on each bus" which allows operation with either charger D15 or D17 operable for one battery and either D16 or D18 for the other battery.

Palisades has two chargers for each battery, one powered from the associated AC power distribution train and the other powered from the opposite train. This configuration was reviewed by the NRC, under SEP Topic VI-7.C.1, and found to be acceptable.

The configuration with one cross-connected battery charger and one directly-connected charger suggests that the TS requirements be tailored to consider both its advantages and disadvantages. The cross-connected charger configuration is not used at most plants, and was not considered during the production of the STS.

As noted in the NRC SER for SEP Topic VI-7.C.1, dated October 14, 1987, the availability of cross-connected chargers provides additional assurance that DC control power and Preferred AC (powered from the DC buses through inverters) would be available during disturbances in the AC supply. Similarly, redundant DC power would be available if both chargers for one DC bus were operated in parallel. The existing Palisades TS 3.7.2h (page 3-41) take advantage of this redundant supply by requiring that both chargers be operated when a battery is inoperable. The battery AOT, with both chargers in operation, is 24 hours.

If, however, *only* a cross-connected charger were operable for one station battery, the loss of a DG concurrently with a Loss of Offsite Power would result in one safeguards train being without AC motive power, and the other train dependant on battery power alone for its DC control power. If a charger could not be restored before the battery was depleted, about four hours, neither safeguards train would be operable. A more restrictive LCO, disallowing continuous operation with either directly-connected charger inoperable, is therefore proposed.

The advantages of the Palisades configuration are reflected in the existing TS requirements which allow a 24 hour AOT for an inoperable station battery if both chargers are operated 3.7.2h (page 3-42). The disadvantages are addressed by the proposed requirement that continuous operation only be allowed if both directly-connected

chargers are operable. Appropriate required actions and completion times have been proposed for one required charger being inoperable. The seven day AOT in proposed Action 3.7.4.A, for a required battery charger, when a cross-connected charger is in service, was chosen because the condition is less restrictive than an inoperable DG, which has a seven day AOT.

Change 5 is considered MORE RESTRICTIVE because it does not allow continuous operation with a directly-connected charger inoperable.

6. Additional fuel oil required:

LCO 3.7.1i (page 3-41) DG operability requirements appear, unchanged, as LCO 3.7.1.b; the requirement for 2500 gallons of fuel in each DG day tank appears in proposed SR 4.7.1.5.

The requirement for fuel in the underground storage tank appears in proposed SR 4.7.3.1. The required amount of fuel has been increased to assure a 7 day supply considering the current accident load analysis. This increased amount of stored fuel oil is currently required by administrative controls.

Change 6 is considered MORE RESTRICTIVE because it requires additional fuel oil to be available.

7. Relocation of switchyard DC and AC power requirements:

LCOs 3.7.1j and 3.7.1k (page 3-41) contain requirements for operability of switchyard DC and AC power systems. The switchyard DC control power systems are used to control switchyard breakers and to provide protective relaying functions for the switchyard itself and the incoming transmission lines. The loss of switchyard control power would not cause a loss of offsite power. Switchyard control power is not used to control any of the on-site power supply functions. The switchyard AC power supplies the air compressors associated with the air operated switchyard breakers. These switchyard power requirements do not meet the criteria in 10 CFR 50.36(c)(2)(ii) for material in TS and will be relocated to the Operating Requirements Manual.

Change 7 is considered RELOCATED because it moves requirements which do not meet the selection criteria to the Operating Requirements manual.

8. Relocation of the requirement for 2400 VAC bus "1-E":

LCO 3.7.1l (page 3-41) requires 2400 Volt bus "1-E" to be operable when the plant is above 300°F. There are three 2400 volt buses in the AC distribution system. Buses "1-C" and "1-D" are Class 1-E buses and supply the 2400 volt Engineered Safeguards loads. Bus "1-E" is not considered Class 1-E, and does not supply any safeguards loads. It cannot be supplied from either DG. It was apparently included in the original Palisades TS because it supplies pressurizer heater transformer number 15 (the other, number 16, is supplied by Bus "1-D"). Since the issue of the initial TS, a plant modification has made an alternate supply to pressurizer heater Transformer 15 from Bus "1-C".

Bus "1-E" does not meet the criterion of 10 CFR 50.36(c)(2)(ii). The requirement to have bus "1-E" operable will be relocated to the Operating Requirements Manual.

Change 8 is considered RELOCATED because it moves requirements which do not meet the selection criteria to the Operating Requirements manual.

9. Revision of general shutdown action statement:

Action statement 3.7.2 (page 3.7-5) is, without its subparagraphs, a requirement to shut down the plant if the other required actions (presented in its subparagraphs) are not completed within the specified time. An action statement equivalent to 3.7.2 appears as the last, or next to last, action statement of each proposed LCO which is applicable above Cold Shutdown, LCOs 3.7.1, 3.7.4, 3.7.7, and 3.7.9. These proposed requirements are equivalent to the existing requirements.

Change 9 is considered to be ADMINISTRATIVE because it only rewords an existing requirement and moves it within the TS.

10. Revised AOTs for required offsite sources:

Required Actions 3.7.2a and 3.7.2b (page 3-42) allow 24 hours for restoration of an inoperable required offsite circuit (Station Power Transformer 1-2 or Startup Transformer 1-2), provided that the operability of both DGs is demonstrated immediately. In addition, continued operation beyond the 24 hour AOT is allowed with Startup Transformer 1-2 inoperable if a report is sent to the NRC.

The proposed Action, 3.7.1.A, allows 72 hours for restoration of an inoperable required offsite circuit, provided that a verification (SR 4.7.1.1, page 4-42) of proper breaker alignment and power availability is made each 8 hours.

The proposed Actions and completion times are those used in STS. The 72 hour completion time is that recommended in Regulatory Guide 1.93. The inoperability of an offsite circuit would have no implication that the operability of a DG might be degraded, so there is no need to impose additional start testing, with the accompanying wear, on the DGs. The retention of the option to continue operation beyond the AOT, with an inoperable required offsite circuit, based upon submittal of a report is not proposed.

The proposed action is, in some respects, less restrictive than the existing requirement. The proposed action has been, however, judged to be adequate and appropriate, as documented by its inclusion in STS.

Change 10 is considered LESS RESTRICTIVE, because the AOT is extended from 24 to 72 hours.

11. Revision of Action statements for inoperable distribution buses:

Action statements 3.7.2 "c" through "g" (page 3-42) provide an AOT of 8 hours for an inoperable distribution bus, provided there are no inoperable safety feature components associated with the redundant bus. The proposed Actions, 3.7.9 A, B, and C, provide the same AOT.

The limitation of having no inoperable safety feature on the redundant bus is accomplished by proposed Action 3.7.9.E.

The proposed Action 3.7.9.E is modified from Action 3.8.9.E (page 3.8-40) of the STS. The STS contain a requirement for a Safety Functions Determination Program, Section 5.5.15,(page 5.0-17) to provide assurance that entry into the conditions of two or more sperate LCOs does not result in the loss of a safety function. That is the intent of the restriction on having inoperable safety feature components on a redundant bus in the existing Actions 3.7.2 "c" through "g". Until a Safety Functions Determination Program is implemented at Palisades, the assurance that the AOT for an inoperable distribution bus does not allow continued operation with a loss of a safety function will be provided by the proposed Action 3.7.9.E.

Change 11 is considered ADMINISTRATIVE because is proposes the same actions and AOTs provided by the existing TS, but moves them within the TS.

12. Added requirement for one inoperable charger:

A new requirement is proposed under Action 3.7.4.A. That requirement contains two new required actions to be taken if one of the required battery chargers becomes inoperable. The first required action "Place the cross-connected charger for the affected battery in service; immediately" is implied by the existing TS which simply required one charger per bus to be operable. The second required action is new and places additional restriction on operation; it states "Restore the required charger to OPERABLE status; within 7 days."

The existing requirements allow unlimited continued operation with a single charger operable on each bus, without regard to the source of power to that charger. Additional discussion on the configuration of the battery chargers is provided under Change 5.

Change 12 is considered MORE RESTRICTIVE because it imposes new restrictions on operation.

13. Battery action statement rewritten:

Action 3.7.2h (page 3-42) allows continued operation for 24 hours with one station battery inoperable provided both associated battery chargers are placed in operation. This requirement is rewritten, as Action 3.7.4.B (page 3-45). Additional discussion of the battery and its charging circuits is provided under Change 5. There is no change in requirements proposed.

Change 13 is considered ADMINISTRATIVE because is proposes the same actions and AOT provided by the existing TS, but moves them within the TS.

14. DG action statement revised:

Action 3.7.2i (page 3-42) allows continued operation with one DG inoperable for 7 days in any month provided: 1) the other DG is started to verify operability, shut down, and the controls left in the automatic mode; and 2) there are no inoperable engineered safety feature components associated with the operable DG.

Proposed Action 3.7.1.B provides the same AOT of 7 days (total for both) during any month.

The requirement to test start the DG is modified to allow an alternative of verifying that the other DG is not inoperable due to a common cause failure, as is done in STS.

The requirement that the DG controls be left in the automatic mode is inherent in the LCO requirement for the DG to be operable.

The requirement that there are no inoperable engineered safety feature components associated with the operable DG is modified to emulate the comparable action of STS. The proposed action allows continued operation for four hours with both an inoperable DG and an inoperable safety feature component associated with the operable DG. This condition does not represent a loss of function, as would the occurrence of an inoperable distribution bus and an inoperable component associated with the opposite bus, because offsite power is available, therefore continued operation for a limited period is justified. The proposed time and action are identical to those in STS.

Change 14 is considered LESS RESTRICTIVE because it proposed an alternative to the existing requirement to test start a DG.

15. Relocation of Actions associated with relocated requirements:

Actions 3.7.2 "j" through "m" (page 3-43) are associated with switchyard control power LCOs 3.7.1 "j", "k", and "l" and will be relocated to the Operational Requirements Manual with their LCOs.

Change 15 is considered RELOCATED because it moves requirements which do not meet the selection criteria to the Operating Requirements Manual.

16. Shutdown electrical requirements rewritten to emulate STS:

LCO 3.7.3a (page 3-45a) requires one safeguards bus to be operable and capable of being supplied by offsite power and by an operable DG; LCO 3.7.3b (page 3-45a) contains an additional requirement that an additional safeguards bus be operable and capable of being supplied by offsite power when two trains of shutdown cooling are required by LCO 3.1.9 (page 3-25h).

These same requirements are contained within the proposed LCOs:

> Proposed LCO 3.7.2 requires one offsite circuit and one DG to be operable when in Cold Shutdown with fuel in the reactor. The offsite circuits, to be operable, must each be capable of supplying both safeguards buses. Therefore, a DG is required to be available to one safeguards bus and offsite power is required to be available to both, whether one or two trains of shutdown cooling are required.
>
> Proposed LCO 3.7.10 requires those buses necessary to support required equipment to be operable. Therefore one safeguards bus must be operable when one train of shutdown cooling is required, and both buses when two trains are required.

Change 16 is considered ADMINISTRATIVE because it proposes reworded, but technically equivalent, requirements and moves them within the TS.

17. Shutdown electrical action statements rewritten to emulate STS:

Action statements 3.7.3 "A", "B", and "E" (page 3-45a) require taking immediate action to suspend Refueling Operations (the Palisades TS equivalent to Core Alterations in STS), suspend movement of irradiated fuel, and to initiate action to restore the required electrical sources.

Proposed Actions 3.7.2.A and 3.7.10.A require taking immediate action to suspend Refueling Operations, suspend movement of irradiated fuel, and to initiate action to restore the required electrical equipment. These actions are equivalent.

Change 17 is considered ADMINISTRATIVE because it proposes equivalent requirements and moves them within the TS.

18. Relocation of crane operation and heavy load requirements:

Action statements 3.7.3 "C" and "D" (page 3-45a), taking immediate action to suspend of crane operations over irradiated fuel, and to suspend operations with potential for draining the PCS or fuel pool, will be relocated to the Operating Requirements Manual. Requirements limiting crane operations and movement of heavy loads do not meet the criterion of 10 CFR 50.36(c)(2)(ii). Similar requirements were omitted from STS in the rewrite of NUREG 0212 which produced NUREG 1432 (STS).

Change 18 is considered RELOCATED because it moves requirements which do not meet the selection criteria to the Operating Requirements Manual.

19. Movement of sequencer LCO from Instrument to Electrical section:

LCO 3.17.2 (page 3-66) currently requires the DBA and Normal Shutdown sequencers associated with each DG to be operable when the primary coolant system is above 300°F. Action 3.17.2.5 (page 3-66) directs that the associated DG be immediately declared inoperable if a sequencer is inoperable. It is proposed that the sequencer requirements be moved to LCO 3.7.1 to enhance the clarity of the required actions and to emulate the STS.

Proposed LCO 3.7.1 requires the DGs to be operable when the primary coolant system is above 210°F, and includes the sequencer operability as a requirement for DG operability. Proposed Action 3.7.1.F requires that the associated DG be immediately declared inoperable if a sequencer is inoperable.

Change 19 is considered MORE RESTRICTIVE than the existing requirements due to the expanded applicability.

20. Revision of the fuel oil tank level SR:

Item 8 of Surveillance Table 4.2.2 (page 4-11) requires verification of the quantity of fuel oil in the fuel oil storage tank each day. This requirement appears as proposed SR 4.7.3.1. As mentioned in the discussion of Change 6, the required amount of fuel oil has been increased. No change has been proposed to the SR frequency.

Change 20 is considered MORE RESTRICTIVE due to the greater quantity of stored fuel oil required.

21. Revising DG starting SR:

The existing monthly DG testing requirement is unchanged from initial issuance of the Facility Operating License in 1971. Since that time, the predicted accident loads imposed on the DGs have increased to the point where the required monthly testing no longer demonstrates that each DG can carry its predicted accident loading.

Existing requirement 4.7.1a (page 4-42) contains three parts:

> *Each diesel generator shall be manually started each month and demonstrated to be ready for loading within 10 seconds.*
>
> *The signal initiated to start the diesel shall be varied from one test to another to verify that A and B starting circuits are operable.*
>
> *The generator shall be synchronized from the control room, and loaded to 2400 ± 100 kW*

The requirements of the first and third sentences are contained within the revised wording, with the exceptions of the specified manual starting and synchronization from the control room. These two details are not specified in the proposed wording (nor in the STS) because no other practical alternative exists.

The requirements of the second sentence are not included in the proposed wording. Since the DG is not assumed to be single failure proof, the detail of verifying that both of the starting circuits function will be left to the testing procedure, as is done in STS.

The proposed DG starting test requirements in SR 4.7.1.2 consist of the existing requirement that the DG be ready for loading within 10 seconds, and the STS verification of achievement of acceptable voltage and frequency. The wording of the STS, for this test requirement, is inappropriate for Palisades due to our lack of installed instrumentation to accurately time the achievement of the desired voltage and frequency bands.

> The proposed wording of SR 4.7.1.2 combines the starting and timing test of STS SRs 3.8.1.2 and 3.8.1.7 because Palisades DG design does not include a slow starting option.
>
> The requirement that the DG be ready to load within 10 seconds is retained from the existing TS.

The proposed voltage range is based on the DG rating of 2400 ± 5% Volts. This provides adequate margin for the switchgear and both the 2400 and 480 volt safeguards motors.

The proposed minimum frequency is based on the accident analyses, rather than on electrical limitations. The accident analyses made no specific allowance for the safeguards pumps being operated at other than design speed. These analyses do, however, contain sufficient margin to assure adequate flow at a frequency of 59.5 Hz.

The proposed maximum frequency is based on the STS, and conforms to the guidance of Regulatory Guide 1.9.

The proposed testing load requirement wording was chosen because the peak predicted accident load is different for each DG, and includes not only automatically connected loads, but those operator connected loads which might be necessary under some circumstances. The predicted accident load profile, when potential operator connected loads are included, exceeds the continuous rating of the DG (but remains within the overload ratings) for a short period of time early in the event. By specifying that the DG be "loaded above the peak accident loading" for 15 minutes, the ability of the engine to supply this possible peak load is demonstrated, yet the DG is not routinely loaded over its continuous rating for a lengthy period. The 2300 to 2500 kW load range proposed for the balance of the monthly test is unchanged from the existing requirements.

The Palisades DGs are rated at 2750 kW for two hours, and 2500 kW for continuous loading. The proposed testing is, therefore, within the design rating of the DGs, and is not an "overload".

No change is proposed for the DG starting or load testing intervals.

Change 21 is considered LESS RESTRICTIVE since it deletes the requirements of the second sentence of the existing SR to vary the signal initiated to start the diesel shall from one test to another and to verify that A and B starting circuits are operable.

22. Revision of SR testing SIS without offsite power:

SR 4.7.1b (page 4-42) requires testing the overall operation of the emergency power system in responding to a safety injection signal coincident with a loss of offsite power. This same test is required by proposed SR 4.7.1.14. The proposed wording is taken from STS and contains requirements for verification of steady state voltage and frequency which are not in the existing TS.

Change 22 is considered MORE RESTRICTIVE because it requires additional verifications to those currently in TS.

23. Relocation of the DG inspection requirement:

SR 4.7.1c (page 4-42) requires an inspection of each DG, during plant shutdown, each refueling cycle. This requirement will be relocated to the FSAR. A similar requirement, SR 4.8.1.1.2d.1, exists in the former CE Standard Technical Specifications, NUREG 0212. It was

omitted from the current Standard Technical Specifications, NUREG 1432.

Change 23 is considered RELOCATED because it moves requirements which do not meet the selection criteria to the Operating Requirements Manual.

24. Revision of the DG loading verification:

SR 4.7.1d (page 4-42) requires verification that DG continuous loads have not been increased beyond the DG continuous rating. This requirement is rewritten as proposed SR 4.7.1.15.

The wording of requirement 4.7.1d was clarified. The existing wording could have been interpreted to be a prohibition of ever loading the DG above its continuous loading. Instead, this item is intended to provide the same requirement as Item 4.8.1.1.2.d.9 of the former STS, NUREG 0212. The wording was altered to clarify that the requirement was a periodic test, that it was to be accomplished by analytical means rather than by physical testing, that it dealt with running current (as opposed to starting current), and that it was to be performed each 18 months. The proposed 18 month frequency is the same as that in NUREG 0212.

Change 24 is considered ADMINISTRATIVE because it only clarifies an existing requirement.

25. Revision of fuel transfer system SR:

SR 4.7.1e (page 4-42) requires the fuel oil pump operability to be verified each month. Proposed SR 4.7.1.6 contains this verification requirement, but at a 92 day frequency. The proposed wording was taken from STS and enhanced to include the fuel oil transfer system controls. The proposed frequency is that used in the STS and corresponds to the testing requirements in the ASME Code, Section XI.

Change 25 is considered LESS RESTRICTIVE because a relaxed frequency is proposed for the subject SR.

26. Revision of station battery SRs:

SR 4.7.2a (page 3-42) requires monthly measurement of each battery cell voltage, and of pilot cell specific gravity and temperature. Proposed SR 4.7.6.2 requires verification that pilot cell electrolyte level, float voltage, and specific gravity meet the requirements in Table 3.7.6-1; proposed SR 4.7.6.3 requires measurement of pilot cell temperatures. No change has been proposed for the frequency of these tests.

SR 4.7.2b (page 3-42) requires measuring the specific gravity, electrolyte level, and amount of water added for each cell, and the temperature of every fifth cell each three months; proposed SR 4.7.6.4 requires verification that each cell electrolyte level, float voltage, and specific gravity meet the requirements in Table 3.7.6-1 each 92 days. Proposed SR 4.7.6.2 requires verification that the temperature of the pilot cells is $\geq$ 70°F each month.

The proposed SRs contain all of the requirements of the existing SRs with the exception of measuring and recording the amount of water added. That requirement is considered a maintenance practice, and does not appear in STS. It has been deleted.

SR 4.7.2c and 4.7.2d (page 3-42) are equivalent to proposed requirements 4.7.4.6 and 4.7.4.7. The proposed wording is taken from STS and is based upon the recommendations of IEEE-450.

Change 26 is considered LESS RESTRICTIVE because it deletes the requirement to measure and record the amount of water added to the battery.

27. Relocation of Emergency Lighting SR:

SR 4.7.3 (page 4-43) contains requirements for testing the emergency lighting system. There is no corresponding LCO. Emergency lighting does not meet the 10 CFR 50.36(c)(2)(ii) criterion for retention of material in TS. These requirements will be relocated to the Operational Requirements Manual.

Change 27 is considered RELOCATED because it moves requirements which do not meet the selection criteria to the Operating Requirements Manual.

28. Revision of Sequencer SRs:

Section 4 of Surveillance Table 4.17.2 (page 4-77) requires a channel functional test of each DBA sequencer each 92 days, and a channel functional test of each Normal Shutdown Sequencer and a channel calibration of each sequencer each 18 months.

The channel functional test requirement for the DBA sequencer is redundant to the 92 day test required by footnote (a) of that table and has been omitted from the proposed TS (footnote (a) remains unchanged). Proposed SR 4.7.1.10 and SR 4.7.1.14 require testing which accomplishes a channel functional tests of the Normal Shutdown Sequencer and the DBA sequencer each 18 months. Proposed SR 4.7.1.13 requires the calibration of each sequencer to be verified each 18 months. The proposed SRs are equivalent to the existing SRs, but emulate the STS in the wording and location of these requirements.

Change 28 is considered ADMINISTRATIVE since it only rewords an existing requirement and moves it within the TS.

29. New LCOs, Conditions, Actions, and SRS from STS:

Several new requirements, taken from STS, have been proposed. New LCOs, Conditions, Actions, and SRs are proposed. The new requirements are identified in Attachment 5 by an entry of "New" or "3.0.3" in the third column. The "3.0.3" entry is used for those newly proposed Conditions which would formerly have resulted in entry into 3.0.3. The "New" entry is used for items which are not addressed in the existing TS.

The new LCOs explicitly state requirements which were formerly inferred by the "Operability" definition. Electrical power system components are all support equipment, and their operability is

therefore required, due to the definition of operability, by the LCO for the supported equipment. The new LCOs are 3.7.5 (page 3-45a), DC Sources - Shutdown; 3.7.7 (page 3-45d), Inverters - Operating; 3.7.8 (page 3-45e), Inverters - Shutdown; and 3.7.10 (page 3-45h), Distribution Systems - Shutdown. In each case, the equipment required by the proposed LCOs is required by the existing TS due to the LCOs for instrumentation, control, and shutdown cooling equipment. The addition of the explicit LCO statements has no effect on operations or equipment requirements other than enhanced clarity. The addition of these new LCO statements may be considered either editorial changes or as more restrictive changes.

The proposed new Conditions and Actions, with the exception of those proposed for inoperable fuel oil transfer pumps (3.7.1 f & g, page 3-45e), are taken from STS. Those new Conditions labeled "New" provide additional Actions not required by existing TS and are, therefore, more restrictive than current TS. Those new Conditions labeled "3.0.3" typically provide alternative Actions to the shutdown currently required under the associated conditions by LCO 3.0.3. (The exceptions are those new Conditions 3.7.1 J (page 3-42) and 3.7.9 E (page 3-45f) which direct 3.0.3 entry.) The avoidance of a required shutdown might be considered less restrictive than existing TS.

These Conditions and their associated Actions which provide an alternative to a previously required LCO 3.0.3 shutdown (3.7.1 C, 3.7.1 D, and 3.7.1 E, page 4-42) all are applicable when only two of the required AC sources are operable. These required actions are in agreement with STS and with the recommendations of Regulatory Guide 1.93. It is judged more desirable to allow limited continued operation than to require an immediate shutdown with limited AC power availability. The proposed actions, when only two AC sources are operable are identical to those in STS with the exception of a note which is inapplicable and unnecessary for Palisades due to the arrangement of the offsite power circuits.

The existing TS require only a single operable fuel oil pump, and contain no action statement, other than LCO 3.0.3, for the condition when no pump is operable. The existing TS, therefore, require LCO 3.0.3 entry when both fuel oil transfer pumps are inoperable, but place no limitation on operation when one pump is inoperable.

Proposed Conditions 3.7.1.G, 3.7.1.H, and 3.7.1.J contain requirements for operation with one inoperable fuel oil transfer pump which are not currently in TS and have no equivalent in STS. Proposed Conditions 3.7.1.G and 3.7.1.H contain requirements which reflect the effects of a specific fuel oil transfer pump being inoperable. Proposed Condition 3.7.1.J requires immediate 3.0.3 entry when both fuel oil transfer pumps are inoperable. These plant specific requirements are necessary because the fuel oil system at Palisades is unlike that for which the STS requirements were conceived. The proposed TS for inoperable fuel oil transfer pumps are more restrictive than those of the existing TS.

The new SRs impose additional test requirements. Although many of these tests are currently conducted under administrative control, their addition to TS is more restrictive than existing TS.

Change 29 is considered MORE RESTRICTIVE because it adds requirements and operating restrictions which do not exist in the current Palisades TS.

III. Reasons for Changes:

The proposed changes are intended to clarify and update the Palisades TS Electric Power System requirements. The proposed TS changes include the following:

1. Completely rewrites Electric Power System Sections of TS, 3.7 and 4.7, and their bases to closely emulate STS. The more consistent structure of the STS requirement, the inclusion of LCOs for shutdown operations, and the expanded basis clarify the requirements for operators, management, and NRC personnel.

2. Resubmits TS changes for addition of 480 V distribution buses and redistribution of MCCs, submitted on April 10, 1984, updated on March 25, 1986, and subsequently withdrawn on January 24, 1989.

3. Revises the TS requirements for the Preferred AC buses, discussed in our August 24, 1988 letter on that subject.

4. Resubmits TS changes for offsite power modification, submitted on November 13, 1989, and subsequently withdrawn, as documented by an NRC letter dated June 26, 1992. The details of this modification were explained in our letters dated September 24, 1987 and April 27, 1989.

5. Completes a corrective action discussed in LER 93-13, dated December 23, 1993, and LER 93-13-01, dated February 10, 1994, to submit a Technical Specification change request proposing an action statement, other than LCO 3.0.3, for the condition of two diesel generators being simultaneously inoperable.

6. Proposes updating the required quantity of stored Diesel fuel, as discussed in our August 12, 1994, response to the Electrical Distribution System Functional Inspection Report, IR-91019.

IV. Analysis of No Significant Hazards Consideration

Consumers Power Company finds that this proposed Technical Specifications change involve no significant hazards and accordingly, a no significant hazards determination per 10CFR50.92(c) is justified.

As discussed in Section II, the each proposed change has been classified as Administrative, Relocated, More Restrictive, or Less Restrictive. Administrative, Relocated, and More Restrictive changes are discussed generically; Less Restrictive changes are discussed individually.

Evaluation of "ADMINISTRATIVE", "RELOCATED", and "MORE RESTRICTIVE" changes:

Nine of the 29 proposed changes are considered ADMINISTRATIVE":

1) Existing "Applicability" and "Objective" statements deleted
9) Revision of general shutdown action statement
11) Revision of Action statements for inoperable distribution buses
13) Battery action statement rewritten
16) Shutdown electrical requirements rewritten to emulate STS
17) Shutdown electrical action statements rewritten to emulate STS

22) Revision of SR testing SIS without offsite power
24) Revision of the DG loading verification
28) Revision of sequencer SRs

Six are considered "RELOCATED":
7) Relocation of switchyard DC and AC power requirements
8) Relocation of the requirement for 2400 VAC bus "1-E"
15) Relocation of Actions associated with relocated requirements
18) Relocation of crane operation and heavy load requirements
23) Relocation of the DG inspection requirement
27) Relocation of Emergency Lighting SR

Eight are considered "MORE RESTRICTIVE":
2) LCO applicable conditions changed to match STS
4) Additional buses added to TS requirements
5) Battery charger LCO made more restrictive
6) Additional fuel oil required
12) Added requirement for one inoperable charger
19) Movement of sequencer LCO from instrument to Electrical section
20) Revision of the fuel oil tank level SR
29) New LCOs, Conditions, Actions, and SRS from STS

"ADMINISTRATIVE" changes and "RELOCATED" changes move requirements, either within the TS or to documents controlled under 10 CFR 50.59, or clarifying existing TS requirements, without affecting their technical content. Since "ADMINISTRATIVE" and "RELOCATED" changes do not alter the technical content of any requirements, they cannot involve a significant increase in the probability or consequences of an accident previously evaluated, create the possibility of a new or different kind of accident from any previously evaluated, or involve a significant reduction in a margin of safety.

"MORE RESTRICTIVE" changes only add new requirements, or revise existing requirements to result in additional operational restrictions. Since the TS, with all "MORE RESTRICTIVE" changes incorporated, will still contain all of the requirements which existed prior to the changes; "MORE RESTRICTIVE" changes cannot involve a significant increase in the probability or consequences of an accident previously evaluated, create the possibility of a new or different kind of accident from any previously evaluated, or involve a significant reduction in a margin of safety.

<u>Evaluation of "LESS RESTRICTIVE" changes:</u>

Six of the 29 proposed changes are considered "LESS RESTRICTIVE":
3) Offsite AC source LCO changed to match STS
10) Revised AOTs for required offsite sources
14) DG action statement revised
21) Revising DG starting SR
25) Revision of fuel transfer system SR
26) Revision of station battery SRs

Do these "LESS RESTRICTIVE" changes involve a significant increase in the probability or consequences of an accident previously evaluated?

Change 3 revised the requirement for operable AC sources, using more general wording than the existing TS. The existing LCO requires that two explicitly specified transformers be operable; the proposed LCO requires that two qualified offsite circuits be operable. The proposed LCO will allow substitution of Safeguards Transformer 1-1 for Station Power Transformer 1-2 as a required AC source, but the quantity and quality of required offsite AC sources is unaffected. Since the capability and qualification of Safeguards Transformer 1-1 are equivalent to those of the Station Power transformer, neither the probability or consequences of an accident previously evaluated will be increased.

Change 10 is less restrictive only in its allowance of a 72 hour AOT for an inoperable offsite source instead of the 24 hour AOT currently required. The change also makes a considerably more restrictive change by eliminating the allowance, based on submittal of a report, for continuous operation with Startup Transformer 1-2 inoperable. Changing an AOT, alone, cannot increase the probability or consequences of an accident previously evaluated.

Change 14 allows, for an inoperable DG, verification that no common cause failure is involved in lieu of test starting the other DG. The intent of the test starting requirement is to verify that there is no common cause failure which also makes the other DG inoperable. The proposed action statement thereby accomplishes the same objective as that it replaces. Since the proposed action statement accomplishes the same objective as the one it replaces, operation in accordance with the proposed change will not increase the probability or consequences of an accident previously evaluated.

Change 21 revises the SR for the DG starting test. The proposed change does not alter any plant operating conditions, operating practices, equipment settings, or equipment capabilities. Therefore, operation of the facility in accordance with the proposed change will not involve an increase in the probability of an accident. Change 21 requires more rigorous testing of the DGs than required by the existing Technical Specifications. The more rigorous testing is intended to provide additional assurance that the DGs are capable of performing their design function and should, therefore, involve a reduction, rather than an increase, in the consequences of those accidents previously evaluated.

Change 25 revises the SR for testing the fuel transfer system. The proposed change does not alter any plant operating conditions, operating practices, equipment settings, or equipment capabilities. Therefore, operation of the facility in accordance with the proposed change will not involve an increase in the probability of an accident. The only "less Restrictive" feature of proposed SR is test interval extension from "each month" to "each 92 days." Changing a surveillance frequency, alone, cannot increase the probability or consequences of an accident previously evaluated.

Change 26 revises the station battery SRs. The proposed monthly and quarterly battery SRs contain all of the test requirements of the existing SRs with two exceptions: 1) the proposed interval for measuring each cell voltage is "each 92 days" instead of the existing "every month" and 2) the requirement to record the amount of water added has been deleted. Changing

a surveillance frequency or deleting a maintenance record cannot increase the probability or consequences of an accident previously evaluated.

Do changes create the possibility of a new or different kind of accident from any previously evaluated?

Change 3 only involves the specified offsite power sources. Since the Loss of Offsite Power is already considered in the accident analyses, operating the facility in accordance with Change 3 will not create the possibility of a new or different kind of accident from any previously evaluated.

Change 10 revises an AOT; Change 14 revises a required action, Change 21 revises a testing requirement; Changes 25 and 26 revise a surveillance interval; and Change 26 deletes the requirement for a maintenance record. None of these proposed changes alter any plant operating conditions, operating practices, equipment settings, or equipment capabilities. Therefore, operation of the facility in accordance with the proposed changes will not create the possibility of a new or different kind of accident from any previously evaluated.

Do changes involve a significant reduction in a margin of safety?

Change 3 does not alter the quantity or quality of offsite sources required to be available. Therefore, operating the facility in accordance with the proposed change will not involve a reduction in a margin of safety.

Change 10 revises an AOT; Change 14 revises a required action, Change 21 revises a testing requirement; Changes 25 and 26 revise a surveillance interval; and Change 26 deletes the requirement for a maintenance record. These proposed changes do not alter any plant operating conditions, operating practices, equipment settings, or equipment capabilities. Therefore, operating the facility in accordance with the proposed change will not involve a reduction in a margin of safety.

V. Conclusion

The Palisades Plant Review Committee has reviewed this Technical Specifications Change Request and has determined that proposing this change does not involve an unreviewed safety question. Further, the change involves no significant hazards consideration. This change has been reviewed by the Nuclear Performance Assessment Department.

CONSUMERS POWER COMPANY

To the best of my knowledge, the contents of this Technical Specifications change request, which rewrites the Electrical Power Systems sections to emulate the Standard Technical Specifications, are truthful and complete.

By _____
TJ Palmisano
Plant General Manager

Sworn and subscribed to before me this 27th day of December 1995.

Mary Ann Engle

Mary Ann Engle, Notary Public
Berrien County, Michigan
(Acting in Van Buren County, Michigan)
My commission expires February 16, 2000

[SEAL]