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DOCKET 50-255 - LICENSE DPR-20 - PALISADES PLANT
TECHNICAL SPECIFICATIONS INTERPRETATION - CHANNEL CALIBRATION

An interpretation of the Technical Specifications requirements for performance of surveillance requirements as they apply to instrumentation Channel Calibrations is enclosed. This interpretation was developed to answer questions raised by members of the Consumers Energy staff with respect to the intent of the Technical Specifications definition of Channel Calibration. Specifically, the phrase "The CHANNEL CALIBRATION . . ., and shall include the CHANNEL FUNCTIONAL TEST" raised the question as to whether the Channel Functional Test had to be completed concurrently with the balance of the calibration, or if it could be completed separately. We have concluded that it can be completed separately. Our interpretation is being forwarded to the NRC to assure that the NRC staff is aware of our conclusion.

This interpretation was discussed, briefly, during a telephone conversation with Mr. Carl Schulten, of the NRR Technical Specification Branch.

SUMMARY OF COMMITMENTS

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

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Enclosure

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ENCLOSURE

CONSUMERS ENERGY COMPANY
PALISADES PLANT
DOCKET 50-255

TECHNICAL SPECIFICATIONS INTERPRETATION
CHANNEL FUNCTIONAL TEST

SURVEILLANCE REQUIREMENTS, GENERAL DISCUSSION:

Both the definition of Operability and the generalized surveillance rules connect Operability of equipment to performance of the specified surveillance testing. The Operability definition requires that equipment be "capable of performing its specified functions" to be considered Operable. The functions demonstrated by the various surveillance requirements are among the "specified functions."

Current Technical Specification 4.0.3 states, in part, "Failure to [successfully] perform a Surveillance Requirement within the allowed surveillance interval, defined by Specification 4.0.2, shall constitute noncompliance with the operability requirements for a Limiting Condition for Operation."

In order for equipment to be considered Operable at any point in time, all portions of all specified surveillance requirements must have been completed within the specified interval (with the 25% allowance of SR 4.0.2). It is not required that all portions of a given surveillance requirement be performed by the same procedure or at the same time.

As discussed in the Basis for Specification 4.0.3, once a specified function has been verified by performance of a surveillance requirement, the equipment may be considered to be capable of performing that specified function for the specified surveillance interval unless it is subsequently found or known to be incapable of performing that function.

If a piece of equipment becomes inoperable due to its inability to perform certain specified functions, the prior performance of surveillance requirements demonstrating the ability to perform those functions may no longer be used as a basis for Operability. Sufficient testing must be performed to again verify the equipment's ability to perform the affected specified functions. Surveillance requirements for unaffected specified functions do not have to be reperformed.

TYPICAL INSTRUMENTATION AND CONTROL SURVEILLANCE:

The Operability of most required instrument and control equipment is verified by three types of surveillance testing: Channel Checks, Channel Functional Tests, and Channel Calibrations. Technical Specifications provide definitions for each of these tests. Channel Checks are typically required on a 12 hour or daily interval; Channel Functional Tests on a 31 day or quarterly interval, and Channel Calibrations on an 18 month or refueling interval.

Channel Checks verify that instrument readings are those expected for existing plant conditions; Channel Functional Tests verify equipment's ability to perform required automatic functions; and Channel Calibrations verify that instruments respond with the necessary range and accuracy to known values of the parameter which that channel monitors. Channel Calibrations include a Channel Functional Test.

In order to consider an instrument to be operable, all portions of the required surveillance must have been performed within the specified interval, however they need not have been performed concurrently, or in any particular sequence, as long as all required functions have been tested as required. Different portions of a surveillance test may be performed on different days or by different procedures; for example, the Channel Functional Test required by a Channel Calibration may be performed independently from the calibration.

Therefore, for a typical instrument, if a Channel Check has been performed within the last 12 hours, a Channel Functional Test has been performed within the last 31 days, and a Channel Calibration has been performed within the last 18 months (all intervals are allowed a 25% margin by SR 4.0.2), the equipment may be considered to be Operable unless there is other knowledge to the contrary.

POST MAINTENANCE TESTING:

If any required piece of equipment is made inoperable for maintenance or testing, the equipment must be considered to be inoperable until it is again verified that the equipment is capable of performing its specified functions. Sufficient testing must be performed to assure that the disabled functions have been restored to an Operable condition. It is not necessary to repeat performance of <u>all</u> required surveillance testing. It is, of course, acceptable to use a surveillance test procedure to perform this verification that equipment has been restored to an Operable condition, but it is not necessary; other appropriate testing can be used.

EXTRACTS FROM PALISADES TECHNICAL SPECIFICATIONS

DEFINITIONS:

OPERABLE - OPERABILITY: A system, subsystem, train, component, or device shall be OPERABLE, or have OPERABILITY, when it is capable of performing its specified functions, and when all necessary attendant instrumentation, controls, electrical power, cooling or seal water, lubrication, or other auxiliary equipment that are required for the system, subsystem, train, component, or device to perform its specified functions are also capable of performing their related support functions.

A CHANNEL CHECK shall be the qualitative assessment of channel behavior during operation by observation. This determination shall include, where possible, comparison of the channel indication and status with other indications and status derived from independent instrument channels measuring the same parameter. A CHANNEL CHECK shall include verification that the monitored parameter is within limits imposed by the Technical Specifications.

A CHANNEL FUNCTIONAL TEST shall be the injection of a simulated signal into the channel to verify that it is OPERABLE, including any alarm and trip initiating function.

A CHANNEL CALIBRATION shall be the adjustment, as necessary, of the channel output such that it responds with the necessary range and accuracy to known values of the parameter which the channel monitors. The CHANNEL CALIBRATION shall encompass the entire channel including the sensor, alarm, interlock, and trip functions, and shall include the CHANNEL FUNCTIONAL TEST. The CHANNEL CALIBRATION may be performed by any series of sequential, overlapping, or total channel steps such that the entire channel is calibrated. Neutron detectors may be excluded from CHANNEL CALIBRATIONS.

SURVEILLANCE REQUIREMENTS [General requirements]

4.0.1: Surveillance requirements shall be applicable during the reactor operating conditions associated with individual Limiting Conditions for Operation unless otherwise stated in an individual surveillance requirement.

4.0.2: Each Surveillance Requirement shall be performed within the specified surveillance interval with a maximum allowable extension not to exceed 25 percent of the surveillance interval.

4.0.3: Failure to perform a Surveillance Requirement within the allowed surveillance interval, defined by Specification 4.0.2, shall constitute noncompliance with the operability requirements for a Limiting Condition for Operation. The time limits of the action requirements are applicable at the time it is identified that a Surveillance Requirement has not been performed. The action requirements may be delayed for up to 24 hours to permit the completion of the surveillance when the allowable outage time limits of the action requirements are less than 24 hours. Surveillance Requirements do not have to be performed on inoperable equipment.

EXTRACTS FROM PALISADES TECHNICAL SPECIFICATIONS BASES

Specifications 4.0.1 through 4.0.4 establish the general requirements applicable to Surveillance Requirements. These requirements are based on the Surveillance requirements stated in the code of Federal Regulations, 10 CFR 50.36(c)(3):

> "Surveillance requirements are requirements relating to test, calibration, or inspection to ensure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions of operation will be met."

Specification 4.0.3 establishes the failure to perform a Surveillance Requirement within the allowed surveillance interval, defined by the provisions of Specification 4.0.2, as a condition that constitutes a failure to meet the operability requirements for a Limiting Condition for Operation. Under the provisions of this specification, systems and components are assumed to be operable when Surveillance Requirements have been satisfactorily performed within the specified time interval. However, nothing in this provision is to be construed as implying that systems or components are operable when they are found or known to be inoperable although still meeting the Surveillance Requirements. This specification also clarifies that the action requirements are applicable when Surveillance Requirements have not been completed within the allowed surveillance interval and that the time limits of the action requirements apply from the point in time it is identified that a surveillance has not been performed and not at the time that the allowed surveillance interval was exceeded. Completion of the Surveillance Requirement within the allowable outage time limits of the action requirements restores compliance with the requirements of Specification 4.0.3. However, this does not negate the fact that the failure to have performed the surveillance within the allowed surveillance interval, defined by the provisions of Specification 4.0.2, was a violation of the operability requirements of a Limiting Condition for Operation that is subject to enforcement action. Further, the failure to perform a surveillance within the provisions of Specifications 4.0.2 is a violation of a Technical Specification requirement and is, therefore, a reportable event under the requirements of 10 CFR 50.73(a)(2)(i)(B) because it is a condition prohibited by the plant's Technical Specifications.

If the allowable outage time limits of the action requirements are less than 24 hours or a shutdown is required to comply with action requirements, e.g., Specification 3.0.3, a 24-hour allowance is provided to permit a delay in implementing action requirements. This provides an adequate time limit to complete Surveillance Requirements that have not been performed. The purpose of this allowance is to permit the completion of a surveillance before a shutdown is required to comply with action requirements or before other remedial measures would be required that may preclude completion of a surveillance. The basis for this allowance includes consideration for plant conditions, adequate planning, availability of personnel, the time required to perform the surveillance, and the safety significance of the delay in completing the required surveillance. This provision also provides a time limit for the completion of Surveillance Requirements that become applicable as a consequence of plant condition changes imposed by action requirements and for completing Surveillance Requirements that are applicable when an exception to the requirements of Specification 4.0.4 is allowed. If a surveillance is not completed within the 24-hour allowance, the time limits of the action requirements are applicable at that time. When a surveillance is performed within the 24-hour allowance and the Surveillance Requirements are not met, the time limits of the action requirements are applicable at the time that the surveillance is terminated.

Surveillance Requirements do not have to be performed on inoperable equipment because the action requirements define the remedial measures that apply. However, following expiration of the surveillance interval, the Surveillance Requirements have to be met to demonstrate that inoperable equipment has been restored to operable status.