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DTE Energy



July 12, 2006
NRC-06-0044

10 CFR 50.90

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington D C 20555-0001

- References:
- 1) Fermi 2
NRC Docket No. 50-341
NRC License No. NPF-43
 - 2) Detroit Edison Letter to NRC "Proposed License Amendment to Revise Technical Specification 3.3.6.1, Primary Containment Isolation Instrumentation," NRC-04-0006, dated March 19, 2004.
 - 3) Detroit Edison Letter to NRC "Revision to License Amendment Request to Revise Technical Specification 3.3.6.1, Primary Containment Isolation Instrumentation," NRC-05-0016, dated March 17, 2005.
 - 4) Detroit Edison Letter to NRC "Revision to License Amendment Request to Revise Technical Specification 3.3.6.1, Primary Containment Isolation Instrumentation," NRC-06-0001, dated January 31, 2006.

Subject: Response to Request for Additional Information for Revision to License Amendment Request to Revise Technical Specification 3.3.6.1, "Primary Containment Isolation Instrumentation"

In Reference 4, Detroit Edison requested NRC approval of a proposed license amendment. The proposed change addresses an inconsistency that was inadvertently introduced during conversion to Improved Technical Specifications.

This letter provides revised pages to our request for amendment submittal (Reference 4) in response to a Staff request for additional information and clarification, dated May 2, 2006 and telephone calls of June 2, 2006 and June 21, 2006. Enclosure 1 of Reference 4 is revised by Enclosure 1 of this letter. The attached Enclosures 2, 3, and 4 replace Enclosures 2, 3, and 4 of Reference 4.

ADD

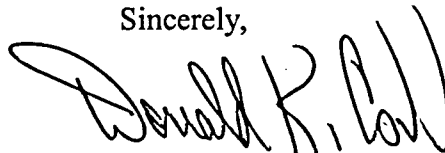
Enclosure 2 provides marked up replacement pages for Technical Specification (TS) 3.3.6.1. Enclosure 3 provides revised TS pages. Enclosure 4 provides revised pages for the Technical Specification Bases (for information only). These changes are minor and do not result in any change to the No Significant Hazards Consideration determination.

TS 3.3.6.1 and TS 3.3.6.1 Bases that apply to this amendment request have been reviewed to ensure the use of the terms "area" and "room" are applied consistently and in accordance with Fermi 2 plant nomenclature.

There are no new regulatory commitments associated with this proposed change.

If you have any questions regarding this submittal, please contact Ronald W. Gaston at (734) 586-5197.

Sincerely,

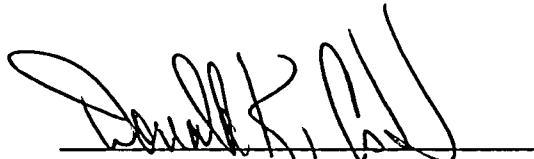
A handwritten signature in black ink, appearing to read "Donald K. Gaston". The signature is written in a cursive, somewhat stylized font.

Enclosures:

1. Evaluation For License Amendment Request
2. Proposed Technical Specification Change (Mark-Up)
3. Proposed Technical Specification Change
3. Marked up pages of the existing TS Bases showing the proposed changes (for information only)


cc: D. H. Jaffe
C. A. Lipa
NRC Resident Office
Regional Administrator, Region III
Supervisor, Electric Operators,
Michigan Public Service Commission

I, Donald K. Cobb, do hereby affirm that the foregoing statements are based on facts and circumstances which are true and accurate to the best of my knowledge and belief.

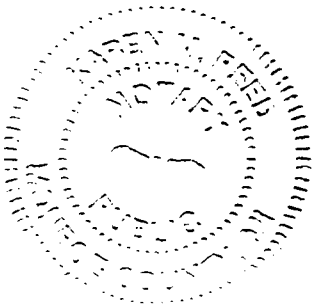


D. K. Cobb
Assistant Vice President
Nuclear Generation

On this 12th day of July, 2006 before me personally appeared Donald K. Cobb, being first duly sworn and says that he executed the foregoing as his free act and deed.



Notary Public



KAREN M. REED
NOTARY PUBLIC, STATE OF MI
COUNTY OF MONROE
MY COMMISSION EXPIRES Sep 2, 2011
ACTING IN COUNTY OF *Monroe*

**ENCLOSURE 1 to
NRC-06-0044**

EVALUATION FOR LICENSE AMENDMENT REQUEST

The last paragraph on page 6 of Enclosure 1 of Reference 4 is revised to read:

Fermi 2 has diversity in its RWCU temperature isolation instrumentation in that Area Ventilation Differential Temperature – High and the RWCU Area Temperature – High monitor for a small leak in the same rooms. The reliability of the RWCU system isolation function remains high even in the presence of single or multiple failures of differential temperature channels because of diversity of the LDS for the RWCU A Pump Room, RWCU B Pump Room, RWCU Phase Separator Room, and RWCU Heat Exchanger Room. A steam leak will cause a coincident trip of both the differential and ambient temperature channels in RWCU A Pump Room, RWCU B Pump Room, RWCU Phase Separator Room, and RWCU Heat Exchanger Room. There is no diversity for the RWCU Open Trench Above Pump Room and RWCU Torus Room areas

**ENCLOSURE 2 to
NRC-06-0044**

PROPOSED TECHNICAL SPECIFICATION CHANGE (MARK-UP)

TS PAGE:

3.3-50

3.3-53

3.3-58

Primary Containment Isolation Instrumentation
3.3.6.1

3.3 INSTRUMENTATION

3.3.6.1 Primary Containment Isolation Instrumentation

LCO 3.3.6.1 The primary containment isolation instrumentation for each Function in Table 3.3.6.1-1 shall be OPERABLE.

APPLICABILITY: According to Table 3.3.6.1-1.

ACTIONS

-----NOTE-----
Separate Condition entry is allowed for each channel.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more required channels inoperable.	A.1 Place channel in trip.	12 hours for Functions 1.f, 2.a, 2.c, and 6.b <u>AND</u> 24 hours for Functions other than Functions 1.f, 2.a, 2.c, and 6.b
B. One or more automatic Functions with isolation capability not maintained.	B.1 Restore isolation capability.	1 hour

(continued)

-----Note-----
With a Table 3.3.6.1-1 Function 5.c channel inoperable, isolation capability is considered maintained provided Function 5.b is OPERABLE in the affected room

b. 6 hours for Function 5 (other than non-redundant circuitry of 5.a) provided the associated Function maintains isolation capability.
 6 hours for Function 5.c provided Function 5.b is OPERABLE in the affected room;

Primary Containment Isolation Instrumentation
 3.3.6.1

SURVEILLANCE REQUIREMENTS

NOTES

1. Refer to Table 3.3.6.1-1 to determine which SRs apply for each Primary Containment Isolation Function.
2. When a channel is placed in an inoperable status solely for performance of required Surveillances, entry into associated Conditions and Required Actions may be delayed for up to:
 - a. 2 hours for Function 5.a when testing non-redundant circuitry that results in loss of isolation capability associated with this Function, provided Functions 5.b, 5.c, and 5.e are OPERABLE;
 - c ~~b~~: 6 hours for Functions 1, 2, ~~5 (other than non-redundant circuitry of 5.a)~~, and 6, provided the associated Function maintains isolation capability; and
 - d ~~c~~: 8 hours for Functions 3 and 4, provided the associated Function maintains isolation capability.

SURVEILLANCE		FREQUENCY
SR 3.3.6.1.1	Perform CHANNEL CHECK.	12 hours
SR 3.3.6.1.2	Perform CHANNEL FUNCTIONAL TEST.	92 days
SR 3.3.6.1.3	Verify the trip unit setpoint.	92 days
SR 3.3.6.1.4	Perform CHANNEL CALIBRATION.	18 months
SR 3.3.6.1.5	Perform LOGIC SYSTEM FUNCTIONAL TEST.	18 months
SR 3.3.6.1.6	Perform CHANNEL FUNCTIONAL TEST.	18 months

(continued)

Primary Containment Isolation Instrumentation
3.3.6.1

Table 3.3.6.1-1 (page 4 of 4)
Primary Containment Isolation Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER TRIP SYSTEM	CONDITIONS REFERENCED FROM REQUIRED ACTION C.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
5. Reactor Water Cleanup (RWCU) System Isolation					
a. Differential Flow - High	1.2.3	1	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.5	≈ 63.4 gpm
b. Area Temperature - High	1.2.3	1 per area (d)	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.5	≈ 183°F
c. Area Ventilation Differential Temperature - High	1.2.3	1 per room	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.5	≈ 53°F
d. SLC System Initiation	1.2	2(b)	I	SR 3.3.6.1.5	NA
e. Reactor Vessel Water Level - Low Low, Level 2	1.2.3	2	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.4 SR 3.3.6.1.5	≈ 103.8 inches
f. Manual Initiation	1.2.3	1 per valve	G	SR 3.3.6.1.6	NA
6. Shutdown Cooling System Isolation					
a. Reactor Steam Dome Pressure - High	1.2.3	1	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.4 SR 3.3.6.1.5	≈ 95.5 psig
b. Reactor Vessel Water Level - Low, Level 3	3.4.5	2(c)	J	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.4 SR 3.3.6.1.5	≈ 171.9 inches
c. Manual Initiation	1.2.3	1 per valve	G	SR 3.3.6.1.6	NA

(b) SLC System Initiation only inputs into one of the two trip systems.

(c) Only one trip system required in MODES 4 and 5 when RHR Shutdown Cooling System integrity maintained.

(d) For Function 5.c, Reactor Water Cleanup (RWCU) System Isolation, Area Ventilation Differential Temperature - High, the required channels is 1 per room.

**ENCLOSURE 3 to
NRC-06-0044**

PROPOSED TECHNICAL SPECIFICATION CHANGE

TS PAGE:

3.3-50

3.3-53

3.3-58

3.3 INSTRUMENTATION

3.3.6.1 Primary Containment Isolation Instrumentation

LC0 3.3.6.1 The primary containment isolation instrumentation for each Function in Table 3.3.6.1-1 shall be OPERABLE.

APPLICABILITY: According to Table 3.3.6.1-1.

ACTIONS

-----NOTE-----
Separate Condition entry is allowed for each channel.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more required channels inoperable.	A.1 Place channel in trip.	12 hours for Functions 1.f, 2.a, 2.c, and 6.b <u>AND</u> 24 hours for Functions other than Functions 1.f, 2.a, 2.c, and 6.b
-----NOTE----- With a Table 3.3.6.1-1 Function 5.c channel inoperable, isolation capability is considered maintained provided Function 5.b is OPERABLE in the affected room. ----- B. One or more automatic Functions with isolation capability not maintained.	B.1 Restore isolation capability.	1 hour

(continued)

SURVEILLANCE REQUIREMENTS

-----NOTES-----

1. Refer to Table 3.3.6.1-1 to determine which SRs apply for each Primary Containment Isolation Function.
2. When a channel is placed in an inoperable status solely for performance of required Surveillances, entry into associated Conditions and Required Actions may be delayed for up to:
 - a. 2 hours for Function 5.a when testing non-redundant circuitry that results in loss of isolation capability associated with this Function, provided Functions 5.b, 5.c, and 5.e are OPERABLE;
 - b. 6 hours for Function 5 (other than non-redundant circuitry of 5.a) provided the associated Function maintains isolation capability.
6 hours for Function 5.c provided Function 5.b is OPERABLE in the affected room;
 - c. 6 hours for Functions 1, 2, and 6, provided the associated Function maintains isolation capability; and
 - d. 8 hours for Functions 3 and 4, provided the associated Function maintains isolation capability.

SURVEILLANCE	FREQUENCY
SR 3.3.6.1.1 Perform CHANNEL CHECK.	12 hours
SR 3.3.6.1.2 Perform CHANNEL FUNCTIONAL TEST.	92 days
SR 3.3.6.1.3 Verify the trip unit setpoint.	92 days
SR 3.3.6.1.4 Perform CHANNEL CALIBRATION.	18 months
SR 3.3.6.1.5 Perform LOGIC SYSTEM FUNCTIONAL TEST.	18 months
SR 3.3.6.1.6 Perform CHANNEL FUNCTIONAL TEST.	18 months

(continued)

Primary Containment Isolation Instrumentation
3.3.6.1

Table 3.3.6.1-1 (page 4 of 4)
Primary Containment Isolation Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER TRIP SYSTEM	CONDITIONS REFERENCED FROM REQUIRED ACTION C.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
5. Reactor Water Cleanup (RWCU) System Isolation					
a. Differential Flow - High	1,2,3	1	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.5	≤ 63.4 gpm
b. Area Temperature - High	1,2,3	1 per area	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.5	≤ 183°F
c. Area Ventilation Differential Temperature - High	1,2,3	(d)	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.5	≤ 53°F
d. SLC System Initiation	1,2	2 ^(b)	I	SR 3.3.6.1.5	NA
e. Reactor Vessel Water Level - Low Low, Level 2	1,2,3	2	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.4 SR 3.3.6.1.5	≥ 103.8 inches
f. Manual Initiation	1,2,3	1 per valve	G	SR 3.3.6.1.6	NA
6. Shutdown Cooling System Isolation					
a. Reactor Steam Dome Pressure - High	1,2,3	1	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.4 SR 3.3.6.1.5	≤ 95.5 psig
b. Reactor Vessel Water Level - Low, Level 3	3,4,5	2(c)	J	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.4 SR 3.3.6.1.5	≥ 171.9 inches
c. Manual Initiation	1,2,3	1 per valve	G	SR 3.3.6.1.6	NA

(b) SLC System Initiation only inputs into one of the two trip systems.

(c) Only one trip system required in MODES 4 and 5 when RHR Shutdown Cooling System integrity maintained.

(d) For Function 5.c, Reactor Water Cleanup (RWCU) System Isolation, Area Ventilation Differential Temperature - High, the required channels is 1 per room.

**ENCLOSURE 4 to
NRC-06-0044**

**PROPOSED REVISED TECHNICAL SPECIFICATION BASES CHANGES
(FOR INFORMATION ONLY)**

INCLUDED PAGES:

**B 3.3.6.1- 1
B 3.3.6.1- 4
B 3.3.6.1-19
B 3.3.6.1-24
B 3.3.6.1-25
B 3.3.6.1-29
B 3.3.6.1-32**

B 3.3 INSTRUMENTATION

B 3.3.6.1 Primary Containment Isolation Instrumentation

BASES

BACKGROUND

The primary containment isolation instrumentation automatically initiates closure of appropriate primary containment isolation valves (PCIVs). The function of the PCIVs, in combination with other accident mitigation systems, is to limit fission product release during and following postulated Design Basis Accidents (DBAs). Primary containment isolation within the time limits specified for those isolation valves designed to close automatically ensures that the release of radioactive material to the environment will be consistent with the assumptions used in the analyses for a DBA.

The isolation instrumentation includes the sensors, relays, and switches that are necessary to cause initiation of primary containment and reactor coolant pressure boundary (RCPB) isolation. Most channels include electronic equipment (e.g., trip units) that compares measured input signals with pre-established setpoints. When the setpoint is exceeded, the channel output relay actuates, which then outputs a primary containment isolation signal to the isolation logic. Functional diversity is provided by monitoring a wide range of independent parameters. The input parameters to the isolation logics are (a) reactor vessel water level, (b) area ambient and differential temperatures, (c) main steam line (MSL) flow and radiation, (d) Standby Liquid Control (SLC) System initiation, (e) condenser pressure, (f) main steam line pressure, (g) high pressure coolant injection (HPCI) and reactor core isolation cooling (RCIC) steam line flow, (h) drywell pressure, (i) HPCI and RCIC steam line pressure, (j) HPCI and RCIC turbine exhaust diaphragm pressure, (k) reactor water cleanup (RWCU) differential flow, and (l) reactor steam dome pressure. Redundant sensor input signals from each parameter are typically provided for initiation of isolation. The only exceptions are SLC System initiation and RWCU differential flow. In addition, manual isolation of the valves is provided.

Primary containment isolation instrumentation has inputs to the trip logic of the isolation functions listed below.

, RWCU differential temperature

BASES

BACKGROUND (continued)

and Drywell Pressure-High Functions. These Functions receive inputs from four turbine exhaust diaphragm pressure and four steam supply pressure channels for each system. The outputs from the turbine exhaust diaphragm pressure and steam supply pressure channels are each connected to two two-out-of-two trip systems. Each trip system isolates one valve per associated penetration.

HPCI and RCIC Functions isolate the HPCI and RCIC isolation valves.

5. Reactor Water Cleanup System Isolation

The Reactor Vessel Water Level-Low Low, Level 2 Isolation Function receives input from four reactor vessel water level channels. The outputs from the reactor vessel water level channels are connected into two two-out-of-two trip systems.

The Differential Flow-High function is derived from three non-redundant flow transmitters and a non-redundant flow summer. The output of the summer is fed to two trip units, the outputs of which are channeled through relays into two trip systems. One trip system isolates the inboard isolation valve, while the other trip system isolates the two outboard isolation valves.

SLC System Initiation Functions receive input from two channels, with each channel in one trip system using a one-out-of-one logic. Both channels are only input to the trip systems that isolates the outboard isolation valves.

The Area Temperature-High Function receives input from twelve temperature monitors, six to each trip system. The Area Ventilation Differential Temperature-High Function receives input from four differential temperature monitors, two in each trip system. These are configured so that any one input will trip the associated trip system. One of the two trip systems is connected to the inboard valve and the other trip system is connected to the two outboard valves on each RWCU penetration.

Insert 1



RWCU Functions isolate the RWCU isolation valves.

Either trip system isolates the RWCU system.

Insert 1

The Area Temperature—High, and Area Ventilation Differential Temperature—High, Functions act together to provide protection from small leaks in the monitored areas and rooms of the RWCU system.

Area Ventilation Differential Temperature-High

BASES

APPLICABLE SAFETY ANALYSES, LCO, and APPLICABILITY (continued)

The Differential Flow-High Allowable Value ensures that a break of the RWCU piping is detected.

This Function isolates the RWCU isolation valves.

5.b., 5.c. Area and Area Ventilation Differential Temperature-High

Area Temperature-High
Differential Flow High

~~RWCU area and area ventilation differential temperatures are provided to detect a leak from the RWCU System. The isolation occurs even when very small leaks have occurred and is diverse to the high differential flow instrumentation for the hot portions of the RWCU System. If the small leak continues without isolation, offsite dose limits may be reached. Credit for these instruments is not taken in any transient or accident analysis in the UFSAR, since bounding analyses are performed for large breaks such as recirculation or MSL breaks.~~

, six areas

~~Area and area ventilation differential temperature signals are initiated from temperature elements that are located in the area or room that is being monitored. Twelve thermocouples provide input to the Area Temperature-High Function (two per area). Two channels per area are required to be OPERABLE to ensure that no single instrument failure can preclude the isolation function.~~

, four rooms

~~Eight thermocouples provide input to the Area Ventilation Differential Temperature-High Function. The output of these thermocouples is used to determine the differential temperature in four rooms containing RWCU piping and equipment. Each channel consists of a differential temperature instrument that receives inputs from thermocouples that are located in the inlet and outlet of the room cooling system and for a total of four available channels (one per room).~~

The Area and Area Ventilation Differential Temperature-High Allowable Values are set low enough to detect a leak equivalent to 25 gpm.

These Functions isolate the RWCU isolation valves, as appropriate.

A note has been added to Table 3.3.6.1-1 for Function 5.c, RWCU Area Differential Temperature - High, clarifying the required channels per room is one. Function 5.c has only one trip system per room.

BASES

ACTIONS (continued)

Condition. However, the Required Actions for inoperable primary containment isolation instrumentation channels provide appropriate compensatory measures for separate inoperable channels. As such, a Note has been provided that allows separate Condition entry for each inoperable primary containment isolation instrumentation channel.

A.1

Because of the diversity of sensors available to provide isolation signals and the redundancy of the isolation design, an allowable out of service time of 12 hours for Functions 1.f, 2.a, 2.c, and 6.b and 24 hours for Functions other than Functions 1.f, 2.a, 2.c, and 6.b has been shown to be acceptable (Refs. 5 and 6) to permit restoration of any inoperable channel to OPERABLE status. This out of service time is only acceptable provided the associated Function is still maintaining isolation capability (refer to Required Action B.1 Bases). If the inoperable channel cannot be restored to OPERABLE status within the allowable out of service time, the channel must be placed in the tripped condition per Required Action A.1. Placing the inoperable channel in trip would conservatively compensate for the inoperability, restore capability to accommodate a single failure, and allow operation to continue with no further restrictions. Alternately, if it is not desired to place the channel in trip (e.g., as in the case where placing the inoperable channel in trip would result in an isolation), Condition C must be entered and its Required Action taken. ~~As an administrative control (reference 12) with one or more RVCU Area Ventilation Differential Temperature High instruments inoperable TS 3.3.6.1, Condition B.1 should be entered.~~

B.1

Required Action B.1 is intended to ensure that appropriate actions are taken if multiple, inoperable, untripped channels within the same Function result in redundant automatic isolation capability being lost for the associated penetration flow path(s). The MSL Isolation Functions are considered to be maintaining isolation capability when sufficient channels are OPERABLE or in trip, such that both trip systems will generate a trip signal from the given Function on a valid signal. The other isolation functions are considered to be maintaining isolation capability when sufficient channels are OPERABLE or in trip, such that one

BASES

ACTIONS (continued)

trip system will generate a trip signal from the given Function on a valid signal. This ensures that one of the two PCIVs in the associated penetration flow path can receive an isolation signal from the given Function. For Functions 1.a, 1.b, 1.d, and 1.f, this would require both trip systems to have one channel OPERABLE or in trip. For Function 1.c, this would require both trip systems to have one channel, associated with each MSL, OPERABLE or in trip. For Functions 1.e and 1.g, each Function consists of channels that monitor several locations within a given area (e.g., different locations within the main steam tunnel area). Therefore, this would require both trip systems to have one channel per location OPERABLE or in trip. For Functions 2.a, 2.b, 2.c, 3.b, 3.c, 4.b, 4.c, 5.e, and 6.b, this would require one trip system to have two channels, each OPERABLE or in trip. For Functions 3.a, 3.d, 4.a, 4.d, 5.a, 5.d, and 6.a, this would require one trip system to have one channel OPERABLE or in trip. For Functions 5.b and 5.c, each Function consists of channels that monitor several different locations. Therefore, this would require one channel per location to be OPERABLE or in trip (the channels are not required to be in the same trip system).

The Condition does not include the Manual Initiation Functions (Functions 1.h, 2.d, 3.f, 4.f, 5.f, and 6.c), since they are not assumed in any accident or transient analysis. Thus, a total loss of manual initiation capability for 24 hours (as allowed by Required Action A.1) is allowed. ~~As an administrative control (reference i2) Condition B.1 is to be used for an inoperable RWCU Area Ventilation Differential Temperature High instrument. It is recognized that application of Condition B when a single channel of RWCU Area Ventilation Differential Temperature High is inoperable is conservative in this context. However, in the most restrictive reading of Condition B, isolation capability for RWCU Area Ventilation Differential Temperature High for a given room is not maintained if the channel is inoperable.~~

The Completion Time is intended to allow the operator time to evaluate and repair any discovered inoperabilities. The 1 hour Completion Time is acceptable because it minimizes risk while allowing time for restoration or tripping of channels.

rooms or areas

room or area

Insert 2

Insert 2

As noted, with a Table 3.3.6.1-1 Function 5.c channel inoperable, isolation capability is considered maintained provided Function 5.b is OPERABLE in the affected room. There is diversity in the RWCU temperature isolation instrumentation in that Area Ventilation Differential Temperature-High and the Area Temperature-High monitor for a small leak in the same rooms. The reliability of the RWCU system isolation function remains high even in the presence of single or multiple failures of differential temperature channels because a steam leak will cause a coincident trip of both the Area Ventilation Differential Temperature-High and the Area Temperature-High channels in RWCU A Pump Room, RWCU B Pump Room, RWCU Phase Separator Room, and RWCU Heat Exchanger Room. There is no diversity for the RWCU Open Trench Above Pump Room and RWCU Torus Room areas.

BASES

SURVEILLANCE REQUIREMENTS (continued)

(Refs. 5 and 6) assumption of the average time required to perform channel surveillance. That analysis demonstrated that the testing allowance does not significantly reduce the probability that the PCIVs will isolate the penetration flow path(s) when necessary.

Insert 3

SR 3.3.6.1.1

Performance of the CHANNEL CHECK once every 12 hours ensures that a gross failure of instrumentation has not occurred. A CHANNEL CHECK is normally a comparison of the parameter indicated on one channel to a similar parameter on other channels. It is based on the assumption that instrument channels monitoring the same parameter should read approximately the same value. Significant deviations between the instrument channels could be an indication of excessive instrument drift in one of the channels or of something even more serious. A CHANNEL CHECK will detect gross channel failure; thus, it is key to verifying the instrumentation continues to operate properly between each CHANNEL CALIBRATION.

Agreement criteria are determined by the plant staff based on a combination of the channel instrument uncertainties, including indication and readability. If a channel is outside the criteria, it may be an indication that the instrument has drifted outside its limit.

The Frequency is based on operating experience that demonstrates channel failure is rare. The CHANNEL CHECK supplements less formal, but more frequent, checks of channels during normal operational use of the displays associated with the channels required by the LCO.

SR 3.3.6.1.2 and SR 3.3.6.1.6

A CHANNEL FUNCTIONAL TEST is performed on each required channel to ensure that the entire channel will perform the intended function. A successful test of the required contact(s) of a channel relay may be performed by the verification of the change of state of a single contact of the relay. This clarifies what is an acceptable CHANNEL

Insert 3

Note 2.b clarifies that the isolation function is maintained for Function 5.c, RWCU Area Differential Temperature – High, provided Function 5.b, RWCU Area Temperature – High, is OPERABLE in the affected area.

BASES

SURVEILLANCE REQUIREMENTS (continued)

ISOLATION SYSTEM RESPONSE TIME tests are conducted on an 18 month STAGGERED TEST BASIS. The 18 month Frequency is consistent with the typical industry refueling cycle and is based upon plant operating experience that shows that random failures of instrumentation components causing serious response time degradation, but not channel failure, are infrequent occurrences.

REFERENCES

1. UFSAR, Section 6.3.
2. UFSAR, Chapter 15.
3. NEDO-31466, "Technical Specification Screening Criteria Application and Risk Assessment," November 1987.
4. UFSAR, Section 4.5.2.4.
5. NEDC-31677P-A, "Technical Specification Improvement Analysis for BWR Isolation Actuation Instrumentation," July 1990.
6. NEDC-30851P-A Supplement 2, "Technical Specifications Improvement Analysis for BWR Isolation Instrumentation Common to RPS and ECCS Instrumentation," March 1989.
7. UFSAR, Section 7.3.
8. UFSAR, Section 6.2.
9. NEDO-31400, "Safety Evaluation for Eliminating the BWR MSIV Closure Function and Scram Function of the MSL Radiation Monitor," Licensing Topical Plant Report for BWROG.
10. NEDO-32291, "System Analysis for Elimination of Selected Response Time Testing Requirements," January 1994; and Fermi-2 SER for Amendment 111, dated April 18, 1997.
11. NEDO-32291-A, Supplement 1, "System Analyses for The Elimination of Selected Response Time Testing Requirement," October 1999.
- ~~12. NRC Administrative Letter 98-10, "Dispositioning of Technical Specifications That Are Insufficient to Assure Plant Safety".~~