September 7, 1989

Docket No. 50-341

Mr. B. Ralph Sylvia
Senior Vice President - Nuclear
Operations
Detroit Edison Company
6400 North Dixie Highway
Newport, Michigan 48166

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JStang	SNewberry
JCraig	

Dear Mr. Sylvia:

SUBJECT: AMENDMENT NO. 41 TO FACILITY OPERATING LICENSE NO. NPF-43: (TAC NO. 72759)

The Commission has issued the enclosed Amendment No. 41 to Facility Operating License No. NPF-43 for the Fermi-2 facility. This amendment consists of changes to the Plant Technical Specifications in response to your letter dated December 22, 1988.

The amendment revises Technical Specification 3/4.3.2 and the associated tables. The table entries previously listed in a section entitled "Containment Isolation" are separated into two sections; one for Primary Containment and one for Secondary Containment isolation functions. Revisions to table entries, table notations and nomenclature are made to either more clearly reflect the plant configuration, remove duplication or ambiguity, or reflect the new sections of the table. In addition, the definition of Channel Calibration is revised to better reflect standard industry practice. The application also made provisions to allow routine testing of the Reactor Water Cleanup system without necessitating removal of the system from service. This portion of the application will be handled in a future amendment under a separate cover.

A copy of the Safety Evaluation and the Notice of Issuance are also enclosed.

Sincerely,

/s/

John F. Stang, Project Manager
Project Directorate III-1
Division of Reactor Projects - III,
IV, V & Special Projects
Office of Nuclear Reactor Regulation

Enclosures:
1. Amendment No. 41 to NPF-43
2. Safety Evaluation
3. Notice of Issuance

cc w/enclosures:
See next page

[STANG FERMI2] *SEE PREVIOUS CONCURRENCES

LA/PD31:DRSP*	PM/PD31:DRSP*	DEST/DPLB*	DEST/SJCB*
PShuttleworth	JStang	CMcCracken	SNewberry
08/12/89	08/14/89	08/1 /89	08/ 7/89
		09	09
(A)D/PD31:DRSP	OGC*		
JThoma			
09/07/89	08/15/89		

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*See previous concurrence
[STANG FERMI2]

LA/PD31:DRSP*	PM/PD31:DRSP*	DEST/DPLB	DEST/SJCB
PShuttleworth	JStang	CMcCracken	SNewberry
08/12/89	08/14/89	08/17/89 09/1/89	08/17/89
(A)D/PD31:DRSP	OGC*		
JThoma			
08/ /89	08/15 89		

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(A)D/PD31:DRSP	OGC	
LYandell	EBuchmann	
08/ /89	08/15/89	

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

September 7, 1989

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Senior Vice President - Nuclear
Operations
Detroit Edison Company
6400 North Dixie Highway
Newport, Michigan 48166

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Mr. B. Ralph Sylvia
Detroit Edison Company

Fermi-2 Facility

cc:

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Newport, Michigan 48166

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

DETROIT EDISON COMPANY

WOLVERINE POWER SUPPLY COOPERATIVE, INCORPORATED

DOCKET NO. 50-341

FERMI-2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 41
License No. NPF-43

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by the Detroit Edison Company (the licensee) dated December 22, 1988, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. NPF-43 is hereby amended to read as follows:

   Technical Specifications and Environmental Protection Plan

   The Technical Specifications contained in Appendix A, as revised through Amendment No. 41, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. DECo shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

John O. Thoma

John O. Thoma, Acting Director
Project Directorate III-1
Division of Reactor Projects - III,
IV, V & Special Projects
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: September 7, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 41

FACILITY OPERATING LICENSE NO. NPF-43

DOCKET NO. 50-341

Replace the following pages of the Appendix "A" Technical Specifications with the attached pages. The revised pages are identified by Amendment number and contain a vertical line indicating the area of change. The corresponding overleaf pages are also provided to maintain document completeness.

REMOVE	INSERT
1-1	1-1
3/4 3-9	3/4 3-9
3/4 3-11	3/4 3-11
3/4 3-12	3/4 3-12
3/4 3-13	3/4 3-13
3/4 3-14	3/4 3-14
-------	3/4 3-14a
3/4 3-15	3/4 3-15
3/4 3-16	3/4 3-16
-------	3/4 3-17a
3/4 3-18	3/4 3-18
3/4 3-19	3/4 3-19
3/4 3-20	3/4 3-20
3/4 3-21	3/4 3-21
3/4 3-22	3/4 3-22
3/4 6-45	3/4 6-45
3/4 6-46	3/4 6-46

1.0 DEFINITIONS

The following terms are defined so that uniform interpretation of these specifications may be achieved. The defined terms appear in capitalized type and shall be applicable throughout these Technical Specifications.

ACTION

1.1 ACTION shall be that part of a Specification which prescribes remedial measures required under designated conditions.

AVERAGE PLANAR EXPOSURE

1.2 The AVERAGE PLANAR EXPOSURE shall be applicable to a specific planar height and is equal to the sum of the exposure of all the fuel rods in the specified bundle at the specified height divided by the number of fuel rods in the fuel bundle.

AVERAGE PLANAR LINEAR HEAT GENERATIN RATE

1.3 The AVERAGE PLANAR LINEAR HEAT GENERATION RATE (APLHGR) shall be applicable to a specific planar height and is equal to the sum of the LINEAR HEAT GENERATION RATES for all the fuel rods in the specified bundle at the specified height divided by the number of fuel rods in the fuel bundle.

CHANNEL CALIBRATION

1.4 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 and alarm and/or 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. Calibration of instrument channels with resistance temperature detectors (RTD) or thermocouple sensors shall consist of verification of operability of the sensing element and adjustment, as necessary, of the remaining adjustable devices in the channel.

CHANNEL CHECK

1.5 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/or status with other indications and/or status derived from independent instrument channels measuring the same parameter.

CHANNEL FUNCTIONAL TEST

1.6 A CHANNEL FUNCTIONAL TEST shall be:

a. Analog channels - the injection of a simulated signal into the channel as close to the sensor as practicable to verify OPERABILITY including alarm and/or trip functions and channel failure trips.

b. Bistable channels - the injection of a simulated signal into the sensor to verify OPERABILITY including alarm and/or trip functions.

The CHANNEL FUNCTIONAL TEST may be performed by any series of sequential, overlapping or total channel steps such that the entire channel is tested.

CORE ALTERATION

1.7 CORE ALTERATION shall be the addition, removal, relocation or movement of fuel, sources, incore instruments or reactivity controls within the reactor pressure vessel with the vessel head removed and fuel in the vessel. Normal movement of SRMs, IRMs, TIPs, or special movable detectors is not considered a CORE ALTERATION. Suspension of CORE ALTERATIONS shall not preclude completion of the movement of a component to a safe conservative position.

CRITICAL POWER RATIO

1.8 The CRITICAL POWER RATIO (CPR) shall be the ratio of that power in the assembly which is calculated by application of the GEXL correlations to cause some point in the assembly to experience boiling transition, divided by the actual assembly operating power.

DOSE EQUIVALENT I-131

1.9 DOSE EQUIVALENT I-131 shall be that concentration of I-131, microcuries per gram, which alone would produce the same thyroid dose as the quantity and isotopic mixture of I-131, I-132, I-133, I-134, and I-135 actually present. The thyroid dose conversion factors used for this calculation shall be those listed in Table III of TID-14844, "Calculation of Distance Factors for Power and Test Reactor Sites."

$\bar{E}$-AVERAGE DISINTEGRATION ENERGY

1.10 $\bar{E}$ shall be the average, weighted in proportion to the concentration of each radionuclide in the reactor coolant at the time of sampling, of the sum of the average beta and gamma energies per disintegration, in MeV, for isotopes, with half lives greater than 15 minutes, making up at least 95% of the total non-iodine activity in the coolant.

EMERGENCY CORE COOLING SYSTEM (ECCS) RESPONSE TIME

1.11 The EMERGENCY CORE COOLING SYSTEM (ECCS) RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its ECCS actuation set-point at the channel sensor until the ECCS equipment is capable of performing its safety function, i.e., the valves travel to their required positions, pump discharge pressures reach their required values, etc. Times shall include diesel generator starting and sequence loading delays where applicable. The response time may be measured by any series of sequential, overlapping or total steps such that the entire response time is measured.

FRACTION OF LIMITING POWER DENSITY

1.12 The FRACTION OF LIMITING POWER DENSITY (FLPD) shall be the LHGR existing at a given location divided by the specified LHGR limit for that bundle type.

FRACTION OF RATED THERMAL POWER

1.13 The FRACTION OF RATED THERMAL POWER (FRTP) shall be the measured THERMAL POWER divided by the RATED THERMAL POWER.

3/4.3.2 ISOLATION ACTUATION INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.2 The isolation actuation instrumentation channels shown in Table 3.3.2-1 shall be OPERABLE with their trip setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.3.2-2 and with ISOLATION SYSTEM RESPONSE TIME as shown in Table 3.3.2-3.

APPLICABILITY: As shown in Table 3.3.2-1.

ACTION:

a. With an isolation actuation instrumentation channel trip setpoint less conservative than the value shown in the Allowable Values column of Table 3.3.2-2, declare the channel inoperable until the channel is restored to OPERABLE status with its trip setpoint adjusted consistent with the Trip Setpoint value.

b. With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip System requirement for one trip system, place the inoperable channel(s) and/or that trip system in the tripped condition* within one hour. The provisions of Specification 3.0.4 are not applicable.

c. With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip System requirement for both trip systems, place at least one trip system** in the tripped condition within one hour and take the ACTION required by Table 3.3.2-1.

---

*An inoperable channel need not be placed in the tripped condition where this would cause an isolation to occur. In these cases, the inoperable channel shall be restored to OPERABLE status within 2 hours or the ACTION required by Table 3.3.2-1 for that Trip Function shall be taken.

**The trip system need not be placed in the tripped condition if this would cause an isolation to occur. When a trip system can be placed in the tripped condition without causing an isolation to occur, place the trip system with the most inoperable channels in the tripped condition; if both systems have the same number of inoperable channels, place either trip system in the tripped condition.

SURVEILLANCE REQUIREMENTS

4.3.2.1 Each isolation actuation instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL FUNCTIONAL TEST and CHANNEL CALIBRATION operations for the OPERATIONAL CONDITIONS and at the frequencies shown in Table 4.3.2.1-1.

4.3.2.2 LOGIC SYSTEM FUNCTIONAL TESTS and simulated automatic operation of all channels shall be performed at least once per 18 months.

4.3.2.3 The ISOLATION SYSTEM RESPONSE TIME of each isolation trip function shown in Table 3.3.2-3 shall be demonstrated to be within its limit at least once per 18 months. Each test shall include at least one channel per trip system such that all channels are tested at least once every N times 18 months, where N is the total number of redundant channels in a specific isolation trip system.

TABLE 3.3.2-1

ISOLATION ACTUATION INSTRUMENTATION

TRIP FUNCTION	VALVE GROUPS OPERATED BY SIGNAL	MINIMUM OPERABLE CHANNELS PER TRIP SYSTEM(a)	APPLICABLE OPERATIONAL CONDITION	ACTION
1. PRIMARY CONTAINMENT ISOLATION				
a. Reactor Vessel Low Water Level				
1) Level 3 (e)	13, 15	2	1, 2, 3	20
2) Level 2 (d)	2, 12, 14, 16, 17, 18	2	1, 2, 3	20
3) Level 1	1	2	1, 2, 3	20
b. Drywell Pressure - High (j)	2, 12, 13, 14, 15, 16, 17, 18	2	1, 2, 3	20
c. Main Steam Line				
1) Radiation - High	1, 2	2	1, 2, 3	21
2) Pressure - Low	1	2	1	22
3) Flow - High	1	2	1, 2, 3	21
d. Main Steam Line Tunnel Temperature - High	1	2(c)	1, 2, 3	21
e. Condenser Pressure - High	1	2	1, 2**, 3**	21
f. Turbine Bldg. Area Temperature - High	1	2	1, 2, 3	21
g. Deleted				
h. Manual Initiation	1, 2, 3, 5, 12, 13, 14 15, 16, 17, 18	1/valve	1, 2, 3	26

TABLE 3.3.2-1 (Continued)

ISOLATION ACTUATION INSTRUMENTATION

TRIP FUNCTION	VALVE GROUPS OPERATED BY SIGNAL	MINIMUM OPERABLE CHANNELS PER TRIP SYSTEM(a)	APPLICABLE OPERATIONAL CONDITION	ACTION
2. REACTOR WATER CLEANUP SYSTEM ISOLATION				
a. Δ Flow - High #	10, 11	1	1, 2, 3	23
b. Heat Exchanger/Pump/High Energy Piping Area Temperature - High	10, 11	6	1, 2, 3	23
c. Heat Exchanger/Pump/Phase Separator Area Ventilation Δ Temp. - High	10, 11	2	1, 2, 3	23
d. SLCS Initiation	11	NA	1, 2, 3	23
e. Reactor Vessel Low Water Level - Level 2 (d)	10, 11	2	1, 2, 3	23
f. Deleted				
g. Manual Initiation	10, 11	1/valve	1, 2, 3	26
3. REACTOR CORE ISOLATION COOLING SYSTEM ISOLATION				
a. RCIC Steam Line Flow - High				
1. Differential Pressure	8	1	1, 2, 3	23
2. Time Delay	8	1	1, 2, 3	23
b. RCIC Steam Supply Pressure - Low	8, 9(f)	2	1, 2, 3	23
c. RCIC Turbine Exhaust Diaphragm Pressure - High	8	2	1, 2, 3	23
d. RCIC Equipment Room Temperature - High	8	1	1, 2, 3	23
e. Manual Initiation	8, 9	1/valve	1, 2, 3	26

TABLE 3.3.2-1 (Continued)

ISOLATION ACTUATION INSTRUMENTATION

TRIP FUNCTION	VALVE GROUPS OPERATED BY SIGNAL	MINIMUM OPERABLE CHANNELS PER TRIP SYSTEM (a)	APPLICABLE OPERATIONAL CONDITION	ACTION
4. HIGH PRESSURE COOLANT INJECTION SYSTEM ISOLATION				
a. HPCI Steam Line Flow - High				
1. Differential Pressure	6	1	1, 2, 3	23
2. Time Delay	6	1	1, 2, 3	23
b. HPCI Steam Supply Pressure-Low	6, 7 (g)	2	1, 2, 3	23
c. HPCI Turbine Exhaust Diaphragm Pressure - High	6	2	1, 2, 3	23
d. HPCI Equipment Room Temperature - High	6	1	1, 2, 3	23
e. Manual Initiation	6, 7	1/valve	1, 2, 3	26
5. RHR SYSTEM SHUTDOWN COOLING MODE ISOLATION				
a. Reactor Vessel Low Water Level - Level 3	4(e)	2	1, 2, 3	25
b. Reactor Vessel (Shutdown Cooling Cut-in Permissive Interlock) Pressure - High	4	1	1, 2, 3	25
c. Manual Initiation	4	1/valve	1, 2, 3	26
6. SECONDARY CONTAINMENT ISOLATION				
a. Reactor Vessel Low Water Level - Level 2 (b) (d)	***	2	1, 2, 3, and *	24
b. Drywell Pressure - High (b) (j)	***	2	1, 2, 3	24
c. Fuel Pool Ventilation Exhaust Radiation-High (b)	***	2	1, 2, 3, and *	24
d. Manual Initiation (b)	***	1(i)	1, 2, 3, and *	27

TABLE 3.3.2-1 (Continued)

ISOLATION ACTUATION INSTRUMENTATION

ACTION STATEMENTS

ACTION 20 - Be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.

ACTION 21 - Be in at least STARTUP with the associated isolation valves closed within 6 hours or be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.

ACTION 22 - Be in at least STARTUP within 6 hours.

ACTION 23 - Close the affected system isolation valves within 1 hour and declare the affected system inoperable.

ACTION 24 - Establish SECONDARY CONTAINMENT INTEGRITY with the standby gas treatment system operating within 1 hour.

ACTION 25 - Disable in the closed position the affected system isolation valves within 1 hour and declare the shutdown cooling mode of RHR inoperable.

ACTION 26 - Restore the manual initiation function to OPERABLE status within 8 hours or close the affected system isolation valves within the next hour and declare the affected system inoperable.

ACTION 27 - Restore the manual initiation function to OPERABLE status within 8 hours or establish SECONDARY CONTAINMENT INTEGRITY with the Standby Gas Treatment System operating.

TABLE NOTATIONS

* When handling irradiated fuel in the secondary containment, during CORE ALTERATIONS, or during operations with a potential for draining the reactor vessel.

** The high condenser pressure input to the isolation actuation instrumentation may be bypassed during reactor shutdown or for reactor startup when condenser pressure is above the trip setpoint.

*** Actuates dampers shown in Table 3.6.5.2-1.

(a) A channel may be placed in an inoperable status for up to 2 hours for required surveillance without placing the channel or trip system in the tripped condition provided at least one other OPERABLE channel in the same trip system is monitoring that parameter. In addition, for the HPCI system and RCIC system isolation, provided that the redundant isolation valve, inboard or outboard, as applicable, in each line is OPERABLE and all required actuation instrumentation for that valve is OPERABLE, one channel may be placed in an inoperable status for up to 8 hours for required surveillance without placing the channel or trip system in the tripped condition.

(b) Also starts the standby gas treatment system.

(c) A channel is OPERABLE if 2 of 4 detectors in that channel are OPERABLE.

(d) This level signal actuates Groups 2, 10, 11, 12, 14, 16, 17, 18, and ***.

(e) This level signal actuates Groups 4, 13 and 15.

TABLE 3.3.2-1 (Continued)

ISOLATION ACTUATION INSTRUMENTATION

ACTION STATEMENTS

(f) Isolates with simultaneous RCIC Steam Supply Pressure-Low (Isolation Instrumentation) and Drywell Pressure-High (ECCS Actuation Instrumentation).

(g) Isolates with simultaneous HPCI Steam Supply Pressure-Low (Isolation Actuation Instrumentation) and Drywell Pressure-High (ECCS Actuation Instrumentation).

(h) Reserved.

(i) Secondary Containment Isolation Pushbottons.

(j) This pressure signal actuates Groups 2, 12, 13, 14, 15, 16, 17, 18, and ***.

With time delay of 45 seconds.

TABLE 3.3.2-2

ISOLATION ACTUATION INSTRUMENTATION SETPOINTS

TRIP FUNCTION	TRIP SETPOINT	ALLOWABLE VALUE
1. PRIMARY CONTAINMENT ISOLATION		
a. Reactor Vessel Low Water Level		
1) Level 3	$\geq$ 173.4 inches*	$\geq$ 171.9 inches
2) Level 2	$\geq$ 110.8 inches*	$\geq$ 103.8 inches
3) Level 1	$\geq$ 31.8 inches*	$\geq$ 24.8 inches
b. Drywell Pressure - High	$\leq$ 1.68 psig	$\leq$ 1.88 psig
c. Main Steam Line		
1) Radiation - High	$\leq$ 3.0 x full power background	$\leq$ 3.6 x full power background
2) Pressure - Low	$\geq$ 756 psig	$\geq$ 736 psig
3) Flow - High	$\leq$ 137.9% of rated flow/109.0 psid	$\leq$ 139.5% of rated flow/112.0 psid
d. Main Steam Line Tunnel Temperature - High	$\leq$ 200°F**	$\leq$ 206°F**
e. Condenser Pressure - High	$\leq$ 6.85 psia	$\leq$ 7.05 psia
f. Turbine Bldg. Area Temperature - High	$\leq$ 200°F	$\leq$ 206°F
g. Deleted		
h. Manual Initiation	NA	NA

TABLE 3.3.2-2 (Continued)

ISOLATION ACTUATION INSTRUMENTATION SETPOINTS

TRIP FUNCTION		TRIP SETPOINT	ALLOWABLE VALUE
2.	REACTOR WATER CLEANUP SYSTEM ISOLATION		
a.	Δ Flow - High	≤ 55.1 gpm	≤ 63.4 gpm
b.	Heat Exchanger/Pump/High Energy Piping Area Temperature - High	≤ 175°F**	≤ 183°F**
c.	Heat Exchanger/Pump/Phase Separator Area Ventilation Δ Temperature - High	≤ 50°F**	≤ 53°F**
d.	SLCS Initiation	NA	NA
e.	Reactor Vessel Low Water Level - Level 2	≥ 110.8 inches*	≥ 103.8 inches
f.	Deleted		
g.	Manual Initiation	NA	NA
3.	REACTOR CORE ISOLATION COOLING SYSTEM ISOLATION		
a.	RCIC Steam Line Flow - High		
1.	Differential Pressure	≤ 87.0 inches H_2O/90,875 lbm/hr**	≤ 95.0 inches H_2O/ 94,865 lbm/hr
2.	Time Delay	3 seconds	3±2 seconds
b.	RCIC Steam Supply Pressure - Low	≥ 62 psig	≥ 53 psig
c.	RCIC Turbine Exhaust Diaphragm Pressure - High	≤ 10 psig	≤ 20 psig
d.	RCIC Equipment Room Temperature - High	≤ 150°F**	≤ 160°F**
e.	Manual Initiation	NA	NA

TABLE 3.3.2-2 (Continued)

ISOLATION ACTUATION INSTRUMENTATION SETPOINTS

TRIP FUNCTION	TRIP SETPOINT	ALLOWABLE VALUE
4. HIGH PRESSURE COOLANT INJECTION SYSTEM ISOLATION		
a. HPCI Steam Line Flow - High		
1. Differential Pressure	< 395.0 inches H_2O/536,625 lbm**	< 410.0 inches H_2O/546,165 lbm/hr
2. Time Delay	3 seconds	3±2 seconds
b. HPCI Steam Supply Pressure - Low	≥ 100 psig	≥ 90 psig
c. HPCI Turbine Exhaust Diaphragm Pressure - High	≤ 10 psig	≤ 20 psig
d. HPCI Equipment Room Temperature - High	≤ 150°F**	≤ 162°F**
e. Manual Initiation	NA	NA
5. RHR SYSTEM SHUTDOWN COOLING MODE ISOLATION		
a. Reactor Vessel Low Water Level - Level 3	≥ 173.4 inches*	≥ 171.9 inches
b. Reactor Vessel (Shutdown Cooling Cut-in Permissive Interlock) Pressure - High	≤ 89.5 psig***	≤ 95.5 psig***
c. Manual Initiation	NA	NA

*Above TAF. See Bases Figure B 3/4 3-1.

**Initial setpoint. Final setpoint to be determined during startup test program. Any required change to this setpoint shall be submitted to the Commission within 90 days of test completion.

***Represents steam dome pressure; actual trip setpoint is corrected for cold water head with reactor vessel flooded.

TABLE 3.3.2-2 (Continued)

ISOLATION ACTUATION INSTRUMENTATION SETPOINTS

TRIP FUNCTION	TRIP SETPOINT	ALLOWABLE VALUE
6. SECONDARY CONTAINMENT ISOLATION		
a. Reactor Vessel Low Water Level - Level 2	$\geq$ 110.8 inches*	$\geq$ 103.8 inches
b. Drywell Pressure-High	$\leq$ 1.68 psig	$\leq$ 1.88 psig
c. Fuel Pool Ventilation Exhaust Radiation-High	$\leq$ 10 mR/hr**	$\leq$ 15 mR/hr**
d. Manual Initiation	NA	NA

*Above TAF. See Bases Figure B 3/4 3-1.

**Initial setpoint. Final setpoint to be determined during startup test program. Any required change to this setpoint shall be submitted to the Commission within 90 days of test completion.

TABLE 3.3.2-3

ISOLATION ACTUATION SYSTEM INSTRUMENTATION RESPONSE TIME

TRIP FUNCTION	RESPONSE TIME (Seconds)#
1. PRIMARY CONTAINMENT ISOLATION	
a. Reactor Vessel Low Water Level	
1) Level 3	$\leq 13^{(a)}$
2) Level 2	$\leq 13^{(a)**}$
3) Level 1	$\leq 1.0^{*}/\leq 13^{(a)**}$
b. Drywell Pressure - High	$\leq 13^{(a)}$
c. Main Steam Line	
1) Radiation - High[(b)]	$\leq 13^{(a)**}$
2) Pressure - Low	$\leq 13^{(a)**}$
3) Flow - High	$\leq 13^{(a)**}$
d. Main Steam Line Tunnel Temperature - High	NA
e. Condenser Pressure - High	NA
f. Turbine Bldg. Area Temperature - High	NA
g. Deleted	
h. Manual Initiation	NA
2. REACTOR WATER CLEANUP SYSTEM ISOLATION	
a. Δ Flow - High	NA
b. Heat Exchanger/Pump/High Energy Piping Area Temperature - High	NA
c. Heat Exchanger/Pump/Phase Separator Area Ventilation Temperature ΔT - High	NA
d. SLCS Initiation	NA
e. Reactor Vessel Low Water Level - Level 2	$\leq 13^{(a)}$
f. Deleted	
g. Manual Initiation	NA
3. REACTOR CORE ISOLATION COOLING SYSTEM ISOLATION	
a. RCIC Steam Line Flow - High	$\leq 13^{(a)}$
b. RCIC Steam Supply Pressure - Low	$\leq 13^{(a)}$
c. RCIC Turbine Exhaust Diaphragm Pressure - High	NA
d. RCIC Equipment Room Temperature - High	NA
e. Manual Initiation	NA

TABLE 3.3.2-3 (Continued)

ISOLATION ACTUATION SYSTEM INSTRUMENTATION RESPONSE TIME

TRIP FUNCTION	RESPONSE TIME (Seconds)#
4. HIGH PRESSURE COOLANT INJECTION SYSTEM ISOLATION	
a. HPCI Steam Flow - High	$\leq 13^{(a)}$
b. HPCI Steam Supply Pressure - Low	$\leq 13^{(a)}$
c. HPCI Turbine Exhaust Diaphragm Pressure - High	NA
d. HPCI Equipment Room Temperature - High	NA
e. Manual Initiation	NA
5. RHR SYSTEM SHUTDOWN COOLING MODE ISOLATION	
a. Reactor Vessel Low Water Level - Level 3	NA
b. Reactor Vessel (Shutdown Cooling Cut-in Permissive Interlock) Pressure - High	NA
c. Manual Initiation	NA
6. SECONDARY CONTAINMENT ISOLATION	
a. Reactor Vessel Low Water Level - Level 2	$\leq 13^{(a)}$
b. Drywell Pressure - High	$\leq 13^{(a)}$
c. Fuel Pool Ventilation Exhaust Radiation - High$^{(b)}$	$\leq 13^{(a)}$
d. Manual Initiation	NA

(a) The isolation system instrumentation response time shall be measured and recorded as a part of the ISOLATION SYSTEM RESPONSE TIME. Isolation system instrumentation response time specified includes diesel generator starting and sequence loading delays.

(b) Radiation detectors are exempt from response time testing. Response time shall be measured from detector output or the input of the first electronic component in the channel.

*Isolation system instrumentation response time for MSIVs only. No diesel generator delays assumed for MSIVs.

**Isolation system instrumentation response time for associated valves except MSIVs.

#Isolation system instrumentation response time specified for the Trip Function actuating each valve group shall be added to isolation time shown in Table 3.6.3-1 and 3.6.5.2-1 for valves in each valve group to obtain ISOLATION SYSTEM RESPONSE TIME for each valve.

TABLE 4.3.2.1-1

ISOLATION ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS

TRIP FUNCTION	CHANNEL CHECK	CHANNEL FUNCTIONAL TEST	CHANNEL CALIBRATION	OPERATIONAL CONDITIONS FOR WHICH SURVEILLANCE REQUIRED
1. PRIMARY CONTAINMENT ISOLATION				
a. Reactor Vessel Low Water Level-				
1) Level 3	S	M	R	1, 2, 3
2) Level 2	S	M	R	1, 2, 3
3) Level 1	S	M	R	1, 2, 3
b. Drywell Pressure - High	S	M	R	1, 2, 3
c. Main Steam Line				
1) Radiation - High	S	M	R	1, 2, 3
2) Pressure - Low	S	M	R	1
3) Flow - High	S	M	R	1, 2, 3
d. Main Steam Line Tunnel Temperature - High	S	M	R	1, 2, 3
e. Condenser Pressure - High	S	M	R	1, 2**, 3**
f. Turbine Bldg. Area Temperature - High	S	M	R	1, 2, 3
g. Deleted				
h. Manual Initiation	NA	R	NA	1, 2, 3

TABLE 4.3.2.1-1 (Continued)

ISOLATION ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS

TRIP FUNCTION	CHANNEL CHECK	CHANNEL FUNCTIONAL TEST	CHANNEL CALIBRATION	OPERATIONAL CONDITIONS FOR WHICH SURVEILLANCE REQUIRED
2. REACTOR WATER CLEANUP SYSTEM ISOLATION				
a. Δ Flow - High	S	M	R	1, 2, 3
b. Heat Exchanger/Pump/High Energy Piping Area Temperature - High	S	M	R	1, 2, 3
c. Heat Exchanger/Pump/Phase Separator Area Ventilation Δ Temperature - High	S	M	R	1, 2, 3
d. SLCS Initiation	NA	R	NA	1, 2, 3
e. Reactor Vessel Low Water Level - Level 2	S	M	R	1, 2, 3
f. Deleted				
g. Manual Initiation	NA	R	NA	1, 2, 3
3. REACTOR CORE ISOLATION COOLING SYSTEM ISOLATION				
a. RCIC Steam Line Flow - High				
1. Differential Pressure	S	M	R	1, 2, 3
2. Time Delay	NA	M	R	1, 2, 3
b. RCIC Steam Supply Pressure - Low	S	M	R	1, 2, 3
c. RCIC Turbine Exhaust Diaphragm Pressure - High	S	M	R	1, 2, 3
d. RCIC Equipment Room Temperature - High	S	M	R	1, 2, 3
e. Manual Initiation	NA	R	NA	1, 2, 3

TABLE 4.3.2.1-1 (Continued)

ISOLATION ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS

TRIP FUNCTION	CHANNEL CHECK	CHANNEL FUNCTIONAL TEST	CHANNEL CALIBRATION	OPERATIONAL CONDITIONS FOR WHICH SURVEILLANCE REQUIRED
4. HIGH PRESSURE COOLANT INJECTION SYSTEM ISOLATION				
a. HPCI Steam Line Flow - High				
1. Differential Pressure	S	M	R	1, 2, 3
2. Time Delay	NA	M	R	1, 2, 3
b. HPCI Steam Supply Pressure - Low	S	M	R	1, 2, 3
c. HPCI Turbine Exhaust Diaphragm Pressure - High	S	M	R	1, 2, 3
d. HPCI Equipment Room Temperature - High	S	M	R	1, 2, 3
e. Manual Initiation	NA	R	NA	1, 2, 3
5. RHR SYSTEM SHUTDOWN COOLING MODE ISOLATION				
a. Reactor Vessel Low Water Level - Level 3	S	M	R	1, 2, 3
b. Reactor Vessel (Shutdown Cooling Cut-in Permissive Interlock) Pressure - High	S	M	R	1, 2, 3
c. Manual Initiation	NA	R	NA	1, 2, 3
6. SECONDARY CONTAINMENT ISOLATION				
a. Reactor Vessel Low Water Level - Level 2	S	M	R	1, 2, 3, and *
b. Drywell Pressure - High	S	M	R	1, 2, 3
c. Fuel Pool Ventilation Exhaust Radiation - High	S	M	R	1, 2, 3, and *
d. Manual Initiation	NA	R	NA	1, 2, 3, and *

* When handling irradiated fuel in the secondary containment, during CORE ALTERATIONS, and during operations with a potential for draining the reactor vessel.

** May be bypassed under administrative control.

TABLE 3.6.3-1 (Continued)

PRIMARY CONTAINMENT ISOLATION VALVES

TABLE NOTATIONS (Continued)

8. Group 8 - Reactor Core Isolation Cooling (RCIC) System

RCIC Steam Line Flow - High
RCIC Steam Supply Pressure - Low
RCIC Turbine Exhaust Diaphragm Pressure - High
RCIC Equipment Room Temperature - High

9. Group 9 - Reactor Core Isolation Cooling (RCIC) Vacuum Breakers

Drywell Pressure - High with simultaneous RCIC
Steam Supply Pressure - Low

10. Group 10 - Reactor Water Cleanup (RWCU) System (Inboard)

RWCU Differential Flow - High
RWCU Area Temperature - High
RWCU Area Ventilation Differential Temperature - High
Reactor Vessel Low Water Level - Level 2

11. Group 11 - Reactor Water Cleanup (RWCU) System (Outboard)

SLCS Initiation (not a containment isolation signal)
RWCU Differential Flow - High
RWCU Area Temperature - High
RWCU Area Ventilation Differential Temperature - High
Reactor Vessel Low Water Level - Level 2

12. Group 12 - Torus Water Management System (TWMS)

Reactor Vessel Low Water Level - Level 2
Drywell Pressure - High

13. Group 13 - Drywell Sumps

Reactor Vessel Low Water Level - Level 3
Drywell Pressure - High

14. Group 14 - Drywell and Suppression Pool Ventilation System

Reactor Vessel Low Water Level - Level 2
Drywell Pressure - High

15. Group 15 - Traversing In-Core (TIP) System

Reactor Vessel Low Water Level - Level 3
Drywell Pressure - High

TABLE 3.6.3-1 (Continued)

PRIMARY CONTAINMENT ISOLATION VALVES

TABLE NOTATIONS (Continued)

15. Group 15 - Traversing In-Core (TIP) System (Continued)

    NOTE: Either of these signals initiate TIP withdrawal which results in automatic closure of the TIP Ball Valves when the TIP probe has entered the shield cask.

16. Group 16 - Nitrogen Inerting System

    Reactor Vessel Low Water Level - Level 2
    Drywell Pressure - High

17. Group 17 - Recirculation Pump System and Primary Containment Radiation Monitoring System

    Reactor Vessel Low Water Level - Level 2
    Drywell Pressure - High

18. Group 18 - Primary Containment Pneumatic Supply System

    Reactor Vessel Low Water Level - Level 2
    Drywell Pressure - High

(b) These valves are hydrostatically leak tested.

(c) Deleted.

(d) Also closes automatically as a result of Torus Room Floor Drain Sump Level - High - High and Drywell Floor Drain Sump Level - High - High.

(e) These valves may be closed remotely from one of the following locations:

    1) control room.
    2) their respective local panels.

(f) Will automatically reposition as a result of the actuation of the LPCI Loop Selection Logic.

(g) Will automatically close when the corresponding RHR loop flow is greater than 1500 gpm.

(h) Will automatically close when the corresponding core spray loop flow is greater than approximately 775 gpm.

(i) Will automatically close when a) HPCI Turbine Steam Stop Valve E41-F067 closes or b) HPCI Turbine Steam Supply Isolation Valve E41-F001 closes.

(j) Will automatically close as a result of the condition listed in Note (i), above, as well as when HPCI flow is greater than 1200 gpm.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 41 TO FACILITY OPERATING LICENSE NO. NPF-43

DETROIT EDISON COMPANY

WOLVERINE POWER SUPPLY COOPERATIVE, INCORPORATED

FERMI-2

DOCKET NO. 50-341

1.0 INTRODUCTION

By letter dated December 22, 1988, the Detroit Edison Company (DECo or the licensee) requested amendment to the Technical Specifications (TSs) appended to Facility Operating License No. NPF-43 for Fermi-2. The proposed amendment would revise TS 3/4.3.2 and the associate tables. The table entries previously listed in a section entitled "Containment Isolation" are separated into two sections; one for Primary Containment and one for Secondary Containment isolation functions. Revisions to table entries, table notations and nomenclature are made to either more clearly reflect the plant configuration, remove duplication or ambiguity, or reflect the new sections of the table. In addition, the definition of Channel Calibration is revised to better reflect standard industry practice. The application also includes provisions to allow routine testing of the Reactor Water Cleanup system without necessitating removal of the system from service. This portion of the application will be handled in a future amendment.

2.0 EVALUATION

The proposed changes to the TSs are evaluated individually below. Underlined text within the licensee's proposed TSs indicates new or changed language. Where language is proposed to be eliminated, both the existing and proposed wordings are given.

2.1 Definition of Channel Calibration

The proposed change to the Definitions section, CHANNEL CALIBRATION (1.4) is underlined.

CHANNEL CALIBRATION

1.4 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 and

alarm and/or 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. Calibration of instrument channels with resistance temperature detector (RTD) or thermocouple sensors shall consist of verification of operability of the sensing element and adjustment, as necessary,of the remaining adjustable devices in the channel.

The reason for the change is to provide clarification in the Channel Calibration definition for what constitutes an acceptable calibration of an instrument channel with RTD or thermocouple sensors.

The change reflects standard industry practice and provides assurance that temperature channels are calibrated such that they respond with the necessary range and accuracy to fulfill their safety function.

This proposed change clarifies the intent of the definition when RTD or thermocouple sensors are involved. The intent of the channel calibration is to adjust the channel output so that the channel responds with known range and accuracy. Most instrument channels contain an adjustable transmitter (sensor) which is also subject to drift. Thus, for most channels, a channel calibration includes adjustments to the transmitter (sensor) to re-establish proper input-output relationships.

Instrument channels with resistance temperature detector (RTD) and thermocouple sensors differ from the typical instrument channel in that the sensor has a fixed input-output response which cannot be adjusted or changed once installed. The fixed response of the sensor is determined prior to installation and is applied to the remainder of the channel in order to make the necessary adjustments to ensure the proper channel range and accuracy. Since there is no credible mechanism for the fixed response of the RTD or thermocouple to drift or vary, verification of the proper operation of these sensors does not require the extensive testing required of other sensors. The definition of Channel Calibration does not recognize this distinction.

To clarify the necessary testing requirements for a Channel Calibration, the licensee has proposed a change to the Channel Calibration definition, Specification 1.4, to indicate that calibration of instrument channels with RTD or thermocouple sensors shall consist of verification of the operability of the sensing element and adjustment, as necessary, of the remaining adjustable devices in the channel.

This issue of what constitutes an acceptable Channel Calibration for temperature channels has been previously reviewed by the staff in the closure of Fermi 2 Unresolved Item 341/86032-01 (DRP). The licensee provided information concerning temperature channel calibrations in letters of October 2, 1986 and October 10, 1986. The practices described were determined to be in conformance with standard industry practice and therefore acceptable. The change to the definition of Channel Calibration is consistent with the resolution of the above Unresolved Item and is therefore acceptable.

Based on the above evaluation the staff finds the proposed change to the Technical Specification acceptable.

2.2 TS 3/4.3.2 Isolation Actuation Instrumentation Footnotes, Clarification of the Term "Trip Function"

The proposed change to TS 3/4.3.2, Isolation Actuation Instrumentation, footnotes * and ** to ACTION b. and c. is an editorial change for clarification. The proposed changes are underlined.

* An inoperable channel need not be placed in the tripped condition where this would cause an isolation to occur. In these cases, the inoperable channel shall be restored to OPERABLE status within 2 hours or the ACTION required by Table 3.3.2-1 for that Trip Function shall be taken.

** The trip system need not be placed in the tripped condition if this would cause an isolation to occur. When a trip system can be placed in the tripped condition without causing an isolation to occur, place the trip system with the most inoperable channels in the tripped condition; if both systems have the same number of inoperable channels, place either trip system in the tripped condition.

The reason for the change is to clarify that the exceptions to the requirements to place a channel and/or trip system in the tripped condition apply only to situations where no closure of isolation valves would result.

The words "an isolation" are substituted for the "the trip function". This clarifies that a trip function means an isolation rather than a half-isolation which would result from one trip system being in the tripped condition.

The change provides clearer direction to the plant operators as to when the exception applies and results in the application of the TS requirements as currently intended. The change therefore acts to enhance safety. Based on the above evaluation the staff finds the proposed change acceptable.

2.3 Separation of Primary and Secondary Isolation Functions

TS 3/4.3.2, Isolation Actuation Instrumentation, does not clearly address secondary containment isolation. GE Standard TS (BWR/4) and the TS for similar BWR's have Secondary Containment Isolation and Primary Containment Isolation as separate sections of the tables. Currently, Fermi 2 TS have combined these two sections into a Containment Isolation section. While this is not incorrect, it does make the tables more difficult to read and understand as the "Valve Groups Operated By Signal" column lists only primary containment valve groups and addresses the secondary containment function by table notations. The proposed change would add Secondary Containment Isolation as a separate section. This change is a human

factors enhancement. Separation of Primary and Secondary Containment Isolation allows Table 3.3.2-1, Isolation Actuation Instrumentation, to be written in a more clear, precise manner.

The isolation instrumentation requirements for the following signals:

- Main Steam Line Radiation - High
- Main Steam Line Pressure - Low
- Main Steam Line Flow - High
- Main Steam Line Tunnel Temperature - High
- Condenser Pressure - High
- Turbine Building Area Temperature - High

apply to the Primary Containment Isolation Function exactly as currently listed for the "Containment Isolation" function. The requirements for these signals are therefore included unchanged in the new "Primary Containment Isolation" section.

The reason for the change is to remove confusion as to what trip functions apply to the Primary Containment and what functions apply to the Secondary Containment.

The change enhances safety by improving the usability of the Table and ensures the currently intended requirements are properly applied.

2.3.1 Reactor Vessel Low Water Level - Level 3 Containment Isolation

Table 3.3.2-1, Isolation Actuation Instrumentation, Item 1.a.1

Current:
1. Containment Isolation
a. Reactor Vessel Low Water Level
1) Level 3
Valve Groups Operated By Signal = 4, 13, 15

Proposed:
1. Primary Containment Isolation
a. Reactor Vessel Low Water Level
1) Level 3(e)
Valve Groups Operated By Signal = 13, 15

The reason for this change is to place the low water level signal in the new Primary Containment section. The listing of valve group 4 is removed and table notation (e) modified and applied to this signal to clarify that although all three of the valve groups currently listed actuate on the same signal, Groups 13 and 15 actuate for Primary Containment Isolation purposes and Group 4 for RHR Shutdown Cooling System Isolation purposes.

This proposed change deletes Valve Group 4 since Group 4 is addressed in Section 5 of this table. Section 1 of the table requires ACTION 25 while Section 5 of the table requires ACTION 25. These ACTIONS are as follows:

ACTION 20 - Be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.

ACTION 25 - Disable in the closed position the affected system isolation valves within 1 hour and declare the shutdown cooling mode of RHR inoperable.

Group 4 valves are the RHR Shutdown Cooling suction valves and the Reactor Vessel Head Spray isolation valves. ACTION 25 is an appropriate ACTION which would permit continued operation if Group 4 is the only valve group affected. If other valve groups are affected, specifically Groups 13 and 15 since they are actuated by the same instrument channels, ACTION 20 would apply as well as ACTION 25, due to Group 4 being listed in section 5 of the table. This would depend on the location in the circuitry of the malfunction. Table notation (e) has been revised to state that Groups 4, 13 and 15 are actuated by this isolation signal and is placed in the table where this signal appears.

The change enhances safety by improving the usability of Table 3.3.2-1 while ensuring all the necessary requirements are maintained in the new Primary Containment Section. This reduces the possibility of misinterpretation by the operator which could result in inappropriate action being taken. Based on the above evaluations the staff finds the TS change acceptable.

2.3.2 Reactor Vessel Low Water Level - Level 2 Containment Isolation

Table 3.3.2-1, Isolation Actuation Instrumentation, Item 1.a.2

Current: 1. Containment Isolation
a. Reactor Vessel Low Water Level
2) Level 2
Valve Groups Operated By Signal (1st line) = 2, 10, 11, 16, 17, 18

Proposed: 1. Primary Containment Isolation
a. Reactor Vessel Low Water Level
2) Level 2 (d)
Valve Groups Operated By Signal = 2, 12, 14, 16, 17, 18

Table notation (d) would be revised to indicate that the level signal also actuates Groups 2, 10, 11, 12, 14, 16, 17, 18, and ***. The table notation would be placed in all locations in the table where this signal is listed so that no group will be missed.

The reason for the change is to place the Reactor Vessel Low Water Level-Level 2 in the new Primary Containment Isolation section. The change also removes confusion as to the association between valve groups, signals and trip functions.

Valve Groups 10 and 11, RWCU inboard and outboard isolation valves, are listed in section 2 of this table. Listing them in section 1 as well is a duplication. In addition to the duplication, two ACTIONS apply. These are ACTION 20 from section 1 and ACTION 23 from section 2 of the table. The ACTIONS are as follows:

ACTION 20 - Be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.

ACTION 23 - Close the affected system isolation valves within 1 hour and declare the affected system inoperable.

ACTION 23 is appropriate for Groups 10 and 11, since operation may continue with RWCU inoperable. The instrumentation is the same as for the other valve groups listed. These other valve groups' instrumentation will follow ACTION 20. Therefore, if the instrumentation was inoperable, ACTION 20 would result. There is a possibility, however, that the malfunction is in the subsequent circuitry which would affect Groups 10 and/or 11 only. In this case, ACTION 23 only would apply. This proposed change would allow for this situation and at the same time avoid a duplication in the table. The addition of Groups 12 and 14 is addressed in 2.3.3 below.

The change enhances safety by improving the usability of Table 3.3.2-1 while ensuring all the necessary requirements are maintained in the new Primary Containment Section of Table 3.3.2-1.

These enhancements to the table will result in improved operator performance and reduce the probability of incorrect operator actions when using the table. Based on the above evaluation the staff finds the changes to the TS acceptable.

2.3.3 Reactor Vessel Low Water Level - Level 2 Valve Groups 12 and 14 Containment Isolation

Table 3.3.2-1, Isolation Actuation Instrumentation, Item 1.a.2

Current: 1. Containment Isolation
a. Reactor Vessel Low Water Level
2) Level 2
Valve Groups Operated By Signal (2nd line) = 12, 14(b)
Applicable OPERATIONAL CONDITION = 1, 2, 3 and *
ACTION 24

Proposed: Primary Containment Isolation
Delete the 2nd line.
Add Groups 12 and 14 to line 1.
Delete OPERATIONAL CONDITION *.
ACTION 20

ACTION 20 - Be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.

ACTION 24 - Establish SECONDARY CONTAINMENT INTEGRITY with the standby gas treatment system operating within 1 hour.

The reason for the change is to clarify that Valve Groups 12 and 14 (Torus Water Management System and Drywell and Suppression Pool Ventilation System) are associated with the Primary Containment Isolation function and not the Secondary Containment Isolation function.

Groups 12 and 14 are primary containment isolation valve groups which are required during OPERATIONAL CONDITION 1, 2, and 3 for purposes of maintaining PRIMARY CONTAINMENT INTEGRITY. The instrument channels which provide output to the isolation trip systems for Groups 12 and 14 are the same channels which provide output to the Secondary Containment Isolation trip systems. As currently listed, the conclusion could be drawn that the Primary Containment Isolation Valve Groups 12 and 14 are required to be OPERABLE to support SECONDARY CONTAINMENT INTEGRITY. In order to make the requirements clear, this proposed change to TS Table 3.3.2-1 lists Secondary Containment Isolation as section 6 of this table. In section 1, Primary Containment Isolation, Groups 12 and 14 do not require an applicability of OPERATIONAL CONDITION * since PRIMARY CONTAINMENT INTEGRITY is not required during OPERATIONAL CONDITION *. These groups are required in OPERATIONAL CONDITIONS 1, 2, and 3 and the appropriate ACTION is ACTION 20. This change results from separating the Containment Isolation section of Table 3.3.2-1 into two sections, Primary and Secondary Containment Isolation, for human factors consideration.

The change enhances safety by ensuring that the Applicability and Action Requirements for a signal associated with the Primary Containment Isolation trip function are properly specified. Based on the above evaluation the staff finds the changes to the TS acceptable.

2.3.4 Drywell Pressure - High Containment Isolation

Table 3.3.2-1, Isolation Actuation Instrumentation, Item 1.b

Current:
1. Containment Isolation
b. Drywell Pressure-High
Valve Groups Operated By Signal:
(1st line) 2, 13, 15, 16, 17, 18 ACTION 20
(2nd line) 12, 14(b) ACTION 24

Proposed:
1. Primary Containment Isolation
b. Drywell Pressure - High (j)
Valves Operated By Signal:
Delete the 2nd line.
Add Groups 12 and 14 to line 1.
ACTION 20.
(j) This pressure signal actuates Groups 2, 12, 13, 14, 15, 16, 17, 18, and ***.

The reason for the change is to add the Valve Groups and Action Requirements associated with the Primary Containment Isolation Function of the Drywell Pressure-High signal to the new Primary Containment section of Table 3.3.2-1. The change also makes a similar clarification for Valve Groups 12 and 14 as was discussed in 2.3.3 above. Table notation (j) is modified to ensure all Valve Groups associated with the Drywell Pressure-High signal are referenced.

Groups 12 and 14 are required for primary containment isolation. The requirements for starting the Standby Gas Treatment System and automatic secondary containment isolation on a Drywell Pressure-High signal are being added to section 6 of Table 3.3.2-1, Secondary Containment Isolation. Action 20 is the appropriate ACTION for the purpose of Primary Containment Isolation. As stated previously, it is possible that a malfunction of a signal could affect only a particular valve group depending on the location of the malfunction. By including these two groups in the list with an ACTION 20 requirement in Section 1, Primary Containment Isolation, and listing the applicable secondary containment group with an ACTION 24 requirement in Section 6, Secondary Containment Isolation, the appropriate ACTION will be listed for each isolation function.

New table notation (j) adds additional information to list all groups actuated by this parameter.

The change enhances safety by improving the usability of the table by grouping all Primary Containment Isolation requirements together separately. The change further ensures the proper ACTION requirements for the Primary Containment Isolation trip function are specified in the new location. Based on the above evaluation the staff find the TS change acceptable.

2.3.5 Fuel Pool Ventilation Exhaust Radiation - High Containment Isolation

Table 3.3.2-1, Isolation Actuation Instrumentation, Item 1.g

Current: 1. Containment Integrity
g. Fuel Pool Ventilation Exhaust Radiation-High
Valve Groups Operated By Signal = 14(b), 16
Applicable OPERATIONAL CONDITION = 1, 2, 3 and *
ACTION 24

Proposed: 1. Primary Containment Integrity
g. Delete this item.

The reason for the change is to clarify that the Fuel Pool Ventilation Exhaust Radiation-High signal is only associated with the Secondary Containment Isolation Function.

Fuel Pool Ventilation Exhaust Radiation-High is provided for the purpose of isolating the secondary containment and starting SGTS. UFSAR Section 15.7.4, Fuel Handling Accident, discusses the accident in detail. In this section, credit is taken only for the isolation of the normal ventilation system and the operation of the SGTS. As the Reactor Vessel Low Water - Level 2 and Drywell Pressure Level - High described in 2.3.3 and 2.3.4 above, the valve groups listed are primary containment isolation groups and ACTION 24 applies to secondary containment. The instrumentation channels which provide output to Groups 14 and 16 are the same channels which automatically start SGTS and initiate the secondary containment isolation.

In order to make the requirements for this instrumentation more clear, this proposed change would delete this isolation signal in Section 1, Primary Containment Isolation, and add it to Section 6, Secondary Containment Isolation.

Note (a) to Table 3.6.3-1, Primary Containment Isolation Valves, lists primary containment valve groups and the associated actuation signal for which instrumentation requirements are included in Specification 3.3.2. The removal of Fuel Pool Ventilation Exhaust Radiation-High signal from the signals required for Valve Groups 14 and 16 in Table 3.3.2-1 requires a corresponding change to Table 3.6.3-1 note (a).

The change enhances safety by correctly associating the secondary containment isolation signal with the safety function it performs and removing unnecessary and incomplete references to a logic for Primary Containment Valve Groups 14 and 16 which is secondary in importance and is not used in any safety analysis. Based on the above evaluation the staff finds the TS change acceptable.

2.3.6 Manual Initiation - Containment Isolation

Table 3.3.2-1, Isolation Actuation Instrumentation, Item 1.h

Current: 1. Containment Isolation
h. Manual Initiation
Valve Groups Operated By Signal = 1, 2, 4, 12, 14(b)
15, 16, 17, 18
Applicable OPERATIONAL CONDITION = 1, 2, 3 and *
(b) Also starts the standby gas treatment system

Proposed: 1. Primary Containment Isolation
h. Manual Initiation
Valve Groups Operated By Signal = Delete Group 4
Add Groups 3 & 5
Delete notation (b)
Applicable OPERATIONAL CONDITION = Delete "and *"

The reason for the change is to place all Primary Containment Isolation manual initiation requirements in the new Primary Containment section of Table 3.3.2-1.

The current section 1 of Table 3.3.2-1, Containment Isolation, addresses both primary and secondary containment isolations. The proposed section 1 addresses primary containment isolation only. The proposed Section 6 addresses secondary containment isolation. The application OPERATIONAL CONDITION * is for those signals which are required for secondary containment isolation. These requirements have been included in section 6, Secondary Containment Isolation. Since the primary containment valve groups are required for primary containment isolation, these valve groups remain in Section 1, Primary Containment Isolation with an Applicable OPERATIONAL CONDITION of 1, 2, and 3. As currently written, the * Applicability appears to apply to all valve groups listed. This is not the intent.

Group 4 is duplicated in Table 3.3.2-1, Section 5, RHR Shutdown Cooling Mode Isolation with ACTION 26 specified. This is the same ACTION specified in Section 1 of the Table. The applicable OPERATIONAL CONDITION is 1, 2, and 3. This is consistent with the applicability of the other primary containment isolation valves. This proposed change avoids duplication in the table.

Groups 3 (Residual Heat Removal System) and 5 (Core Spray System) are not currently listed. The instrumentation which automatically initiates the isolation of these valve groups is associated with the Emergency Core Cooling System Actuation Instrumentation and, therefore, not currently listed in this table. The manual initiation function for isolation of these valves consists of one channel per valve and is not currently included in either Specification. This proposed change would add them to Section 1 of Table 3.3.2-1, Primary Containment Isolation, to make clear this requirement to maintain a manual isolation capability for each of the valves in these two valve groups for the purposes of primary containment isolation. The current Specifications for Isolation Actuation Instrumentation and ECCS Actuation Instrumentation only makes clear that the ECCS actuation function is required.

Table notation (b) has been placed in Section 6 of Table 3.3.2-1, Secondary Containment Isolation, and is no longer useful in this Section 1 location as the standby gas treatment system is associated with the secondary containment.

Based on the above evaluation the staff finds the proposed TS acceptable.

2.4 Reactor Water Cleanup System (RWCS) Isolation

2.4.1 RWCS Heat Exchanger/Pump/High Energy Piping Area Temperature - High

Table 3.3.2-1, Isolation Actuation Instrumentation, Item 2.b

Current: 2. Reactor Water Cleanup System Isolation
b. Heat Exchanger/Pump/High Energy Piping Area Temperature-High.
Minimum OPERABLE Channels Per Trip System = 1

Proposed: Minimum OPERABLE Channels Per Trip System = 6

The reason for the change is to clarify the number of required channels per trip system based upon each sensor being the part of a separate channel.

There are six (6) separate locations which are monitored for ambient temperature high in the RWCS leak detection system. Each of these areas has two temperature sensors which input to two separate trip systems, for a total of six channels in each trip system. These areas monitored are as follows:

RWCS Pump A Room
RWCS Pump B Room
RWCS Heat Exchanger Room
RWCS Phase Separator Room
RWCS Open Trench Piping Area
RWCS Torus Room

Since these areas are located such that a break in one area would not be detected by another ambient temperature detector in the same trip system, each of these monitoring channels are required. In practice, these channels are currently being responded to in the same manner as this proposed change prescribes by applying the requirement on a per area basis. This proposed change will make the table better reflect the instrumentation installed.

In addition, the change enhances safety by clearly indicating the required number of channels per trip system and thus reducing the possibility of non-conservative misinterpretation of the requirement. Based upon the above evaluation the staff finds the proposed changes acceptable.

2.4.2 Heat Exchanger/Pump Area Ventilation Differential Temperature-High RWCS Isolation

Table 3.3.2-1, Isolation Actuation Instrumentation, Item 2.c

Current: 2. Reactor Water Cleanup System Isolation
c. Heat Exchanger/Pump Area Ventilation Differential Temperature-High
Minimum OPERABLE Channels Per Trip System = 1

Proposed: c. Heat Exchanger/Pump/Phase Separator Area Ventilation Differential Temperature-High
Minimum OPERABLE Channels Per Trip System = 2

The reason for the change is to clarify the plant areas covered by this trip function and the number of channels required to be operable in each trip system.

There are four (4) separate locations which are monitored for differential temperature between the inlet and outlet ventilation air ducts for break detection of the RWCS system. Two of these differential temperature channels provide input to one trip system and the other two channels input to the other trip system. The areas monitored are as follows:

Division 1 Trip System = RWCS Pump A Room
RWCS Heat Exchanger Room

Division 2 Trip System = RWCS Pump B Room
RWCS Phase Separator Room

As with the ambient temperature monitoring trip function described in 2.4.2 above, the areas are located such that these channels will monitor only their own specific area. Therefore, each of the two channels for a given trip system are required to be OPERABLE. These channels are also currently being responded to in the same manner as this proposed change prescribes. This proposed change will make the table better reflect the instrumentation installed.

In addition, the change enhances safety by clearly defining the plant areas covered by this trip function and the required number of channels per trip system. This reduces the probability of a non-conservative misinterpretation by the operator.

Based upon the above evaluation, the staff finds the proposed changes acceptable.

2.4.3 Reactor Vessel Low Water Level-Level 2 RWCS Isolation

Table 3.3.2-1, Isolation Actuation Instrumentation, Item 2.e

Current: 2. Reactor Water Cleanup System Isolation
e. Reactor Vessel Low Water Level - Level 2
Valves Groups Operated by Signal = 10, 11 (d)

Proposed: e. Reactor Vessel Low Water Level - Level 2 (d)
Valve Groups Operated by Signal = 10, 11

The reason for this change is to clarify the applicability of table notation (d).

This proposed change relocates table notation (d) for this parameter to indicate that it applies to the instrumentation channel rather than just to valve group 11. This notation provides additional information to list all of the valve groups which are isolated by this same instrumentation. This proposed change is a human factors enhancement to provide additional useful information.

In addition, the change enhances safety by ensuring that the footnote is properly interpreted and does not distract from the proper use of the Technical Specifications. Based upon the above evaluation the staff finds this change to be acceptable.

2.5 Reactor Core Isolation Cooling (RCIC) Steam Supply Pressure-Low RCIC Isolation

Table 3.3.2-1, Isolation Actuation Instrumentation, Item 3.b

Current: 3. RCIC System Isolation
b. RCIC Steam Supply Pressure-Low
Valve Groups Operated By Signal = 8, 9

Proposed: 3. RCIC System Isolation
b. RCIC Steam Supply Pressure-Low
Valve Groups Operated By Signal = 8, 9(f)

(f) Isolates with simultaneous RCIC Steam Supply Pressure-Low (Isolation Actuation Instrumentation) and Drywell Pressure-High (ECCS Actuation Instrumentation).

The reason for the change is to provide a table notation to completely describe the signals which must be present to cause an isolation of Valve Group 9.

This proposed change to add a new table notation (f) provides additional information concerning the Group 9 isolation. Since the Drywell Pressure-High signal is input from ECCS Actuation Instrumentation, it is not listed in this table. This table notation provides the information to tie these together. This is a human factors enhancement.

The change enhances safety by ensuring complete information is available to the operator and thereby eliminating a potential point of confusion. Based upon the above, the staff finds this change to be acceptable.

2.6 High Pressure Coolant Injection (HPCI) Steam Supply Pressure-Low HPCI Isolation

Table 3.3.2-1, Isolation Actuation Instrumentation, Item 4.b

Current: 4. HPCI System Isolation
b. HPCI Steam Supply Pressure-Low
Valve Groups Operated By Signal = 6, 7

Proposed: 4. HPCI System Isolation
b. HPCI Steam Supply Pressure-Low
Valve Groups Operated By Signal = 6, 7(g)

(g) Isolates with simultaneous HPCI Steam Supply Pressure-Low (Isolation Actuation Instrumentation) and Drywell Pressure-High (ECCS Actuation Instrumentation)

The reason for the change is to provide a table notation to completely describe the signals which must be present to cause an isolation of Valve Group 7.

The proposed change to add a new table notation (g) provides additional information concerning the Group 7 isolation. Since the Drywell Pressure-

High signal is input from ECCS Actuation Instrumentation, it is not listed in the table. This table notation provides the information to tie these together. This is a human factors enhancement.

The change enhances safety by ensuring complete information is available to the operator and thereby eliminating a potential source of confusion. Based upon the above, the staff finds the change to be acceptable.

2.7 Segregation of Secondary Containment Isolation Actuation Instrumentation Requirements

Table 3.3.2-1, Isolation Actuation Instrumentation, Item 6

Current: 1. Containment Isolation
Table notation (b)
(b) Also starts the standby gas treatment system.

Proposed: 6. Secondary Containment Isolation

The reason for the change is to establish a table section which lists the requirements for those signals associated with the Secondary Containment Isolation function.

Currently, table notation (b) is the only inference that the instrumentation applies to both primary and secondary containment isolations. This proposed change lists these requirements in a very specific manner in a separate section. As discussed above, this is consistent with Standard Technical Specifications and general industry practice.

The change enhances safety by providing the requirements for Secondary Containment Isolation Actuation together separately, thus, reducing the possibility of a non-conservative misinterpretation of the requirements.

2.7.1 Reactor Vessel Low Water Level-Level 2 Secondary Containment Isolation

Table 3.3.2-1, Isolation Actuation Instrumentation, Item 6.a

Current: 1. Containment Isolation
a. Reactor Vessel Low Water Level
2) Level 2

Valve Groups Operated by Signal = 2, 10, 11, 16, 17, 18
Applicable Operational Condition = 1, 2, 3
ACTION = ACTION 24

Valve Groups Operated by Signal = 12, 14 (b)
Applicable Operational Condition = 1, 2, 3
ACTION = ACTION 24

Proposed: 6. Secondary Containment Isolation
a. Reactor Vessel Low Water Level - Level 2 (b) (d)
Valve Groups Operated by Signal = ***
Applicable Operational Condition = 1, 2, 3, and *
ACTION = ACTION 24
*** Actuates dampers shown in Table 3.6.5.2-1.

The reason for the change is to place the requirements for Secondary Containment Isolation actuation from this signal in the new table section. The change also ensures other functions of the signal are referenced and provides a connection to the actuation of the secondary containment automatic isolation dampers listed in Table 3.6.5.2-1.

This proposed change is part of the separation of primary and secondary containment isolation into two separate sections in order to specifically address each in appropriate detail. The primary containment considerations are addressed in items 5) and 6) above. The footnote (***) refers to Table 3.6.5.2-1 which lists the secondary containment automatic isolation dampers that are isolated by this instrumentation. The current Table 3.3.2-1 does not provide this relationship. Table notation (d) identifies all groups actuated by this signal for information purposes.

The change enhances safety by clearly indicating the secondary containment isolation actuation requirements for the Level 2 signal separately in one location while incorporating all of the necessary requirements. This will reduce the probability of confusion on the part of the operator and reduce the likelihood of a non-conservative misinterpretation of the requirements. Based upon the above, the staff finds this change to be acceptable.

2.7.2 Drywell Pressure-High Secondary Containment Isolation

Table 3.3.2-1, Isolation Actuation Instrumentation, Item 6.b

Current: 1. Containment Isolation
b. Drywell Pressure-High

Valve Groups Operated by Signal = 2, 13, 15, 16, 17, 18
Applicable Operational Condition = 1, 2, and 3
ACTION = ACTION 20

Valve Groups Operated by Signal = 12, 14(b)
Applicable Operational Condition = 1, 2, 3
ACTION = ACTION 24

Proposed: 6. Secondary Containment Isolation
b. Drywell Pressure - High (b) (j)
Valve Groups Operated by Signal = ***
Applicable Operational Condition = 1, 2, and 3
ACTION = ACTION 24
*** Actuates dampers shown in Table 3.6.5.2-1.

The reason for the change is to place the requirements for secondary containment isolation actuation from this signal in the new table section. The change also ensures other functions of the signal are referenced and provides a connection to the actuation of the secondary containment automatic isolation dampers listed in Table 3.6.5.2-1.

This proposed change is also part of the separation of primary and secondary containment isolation into separate sections. The footnote (***) refers to Table 3.6.5.2-1, which lists the secondary containment automatic isolation dampers that are isolated by this instrumentation. The current Table 3.3.2-1 does not provide this relationship. The new table notation (j) identifies all groups actuated by this signal for information purposes.

The change enhances safety by clearly indicating the secondary containment isolation actuation requirements for the drywell pressure signal separately in one location while incorporating all of the necessary requirements. This will reduce the probability of confusion on the part of the operator and reduce the likelihood of a non-conservative misinterpretation of the requirements. Based upon the above, the staff finds this change to be acceptable.

2.7.3 Fuel Pool Ventilation Exhaust Radiation-High Secondary Containment Isolation

Table 3.3.2-1, Isolation Actuation Instrumentation, Item 6.c

Current:
1. Containment Isolation
g. Fuel Pool Ventilation Exhaust Radiation-High
Valve Groups Operated by Signal = 14(b), 16
Applicable Operational Condition = 1, 2, 3, and *
ACTION = ACTION 24

Proposed:
6. Secondary Containment Isolation
c. Fuel Pool Ventilation Exhaust Radiation-High (b)
Valve Groups Isolated by Signal = ***
Applicable Operational Condition = 1, 2, 3, and *
ACTION = ACTION 24

The reason for the change is to place the requirements for secondary containment isolation actuation from this signal in the new table section. The change provides a connection to the actuation of the standby gas treatment system and secondary containment automatic isolation dampers listed in Table 3.6.5.2-1.

Fuel Pool Ventilation Exhaust Radiation-High is currently listed in the Containment Isolation section with Groups 14 and 16 in the "valve groups operated by signal" column along with table notation (b), which states that this instrumentation also starts the standby gas treatment system. There is nothing stated specifically that the secondary containment automatic isolation dampers listed in Table 3.6.5.2-1 are also operated by this signal. Table notation (b) referring to the standby gas treatment system could be interpreted to mean that secondary containment isolations are also actuated by this signal, but it does not specify so. Footnote *** states that this signal also actuates dampers shown in Table 3.6.5.2-1. By specifying this footnote on the Valve Groups Operated by Signal Column, these dampers will now be listed. The applicable OPERATIONAL CONDITIONS 1, 2, 3, and * remain the same as the current Section 1, as does the specified ACTION 24.

The change enhances safety by clearly indicating the secondary containment isolation actuation requirements for the Fuel Pool Exhaust Radiation signal separately in one location while incorporating all of the necessary requirements. This will reduce the probability of confusion on the part of the operator and reduce the likelihood of a non-conservative misinterpretation of the requirements. Based upon the above, the staff finds the change to be acceptable.

2.7.4 Manual Initiation-Secondary Containment Isolation

Table 3.3.2-1, Isolation Actuation Instrumentation, Item 6.d

Current: 1. Containment Isolation
h. Manual Initiation
Valve Groups Operated by Signal = 1, 2, 4, 12, 13, 14(b), 15, 16, 17, 18
Minimum OPERABLE Channels per Trip System = 1/valve
ACTION = ACTION 26

Proposed: 6. Secondary Containment Isolation
d. Manual Initiation (b)
Valve Groups Operated by Signal = ***
Minimum OPERABLE Channels per Trip System = 1(i)
Applicable Operational Conditions = 1, 2, 3, and *
ACTION = ACTION 27
(i) Secondary Containment Isolation pushbuttons

The reason for the change is to place the requirements for manual secondary containment isolation actuation in the new table section. The change ensures the connection to the actuation of the standby gas treatment system (SGTS) and secondary containment automatic isolation dampers is clear and provides a clear action requirement which includes the need for the SGTS to be placed in operation. The change also ensures by new table notation (i), that the required function is clearly indicated.

The secondary containment automatic isolation dampers (footnote ***) are manually isolated by Secondary Containment Isolation pushbuttons. There is one pushbutton per trip system. The Minimum OPERABLE Channels Per Trip System is listed as 1. The new table notation (1) identifies this. ACTION 26, which is used for the manual isolation function in all other sections of this table, was used as the model in this proposed change to add a new ACTION 27. It reads as follows:

ACTION 27 - Restore the manual initiation function to OPERABLE status within 8 hours or establish SECONDARY CONTAINMENT INTEGRITY with the standby gas treatment system operating.

The underlined text is a modification of the wording of ACTION 26, to create ACTION 27 which better applies to the manual initiation function of Section 6 of Table 3.3.2-1, Secondary Containment Isolation. The ACTION of establishing SECONDARY CONTAINMENT INTEGRITY with the

Standby Gas Treatment System operating is the result of the closure of the affected isolation dampers.

The change enhances safety by clearly indicating the manual secondary containment isolation actuation requirements separately in one location while providing clearer and more complete requirements. This will provide greater assurance that the requirements will be understood and properly applied. Based upon the above, the staff finds the proposed change to be acceptable.

2.8 Table 3.3.2-1 Note *

Table 3.3.2-1, Isolation Actuation Instrumentation, Table Notations

Current: Footnote*
When handling irradiated fuel in the secondary containment and during CORE ALTERATIONS and operations with a potential for draining the reactor vessel.

Proposed: Footnote*
When handling irradiation fuel in the secondary containment, during CORE ALTERATIONS, or during operations with a potential for draining the reactor vessel.

The reason for the change is to clearly indicate that the three conditions in the note are intended to make requirements apply whenever any of the three conditions exists rather than whenever all of the three conditions exist.

This proposed change does not alter the intent of the footnote. This is simply an editorial change to indicate that this is applicable when any of the three conditions apply.

The change enhances safety by reducing the probability of a non-conservative misinterpretation of the footnote. Based upon the above, the staff finds the change to be acceptable.

2.9 Corresponding Changes to the Remaining Tables

Appropriate changes have been made to Table 3.3.2-2, Isolation Actuation Instrumentation Setpoints; Table 3.3.3-3, Isolation Actuation Instrumentation Response Times; Table 4.3.2.1-1, Isolation Actuation Instrumentation Surveillance Requirements. These changes make these tables consistent. The proposed changes correspond to the proposed changes to Table 3.3.2-1 previously described in regards to restructuring the tables for separate Primary and Secondary Containment Isolation sections and other format/ nomenclature changes. This is necessary for consistency between the tables of this Specification.

The changes enhance safety by making the remaining tables consistent with the as-modified Table 3.3.2-1. This is necessary to fully implement the safety benefits of the changes made in Table 3.3.2-1. Based upon the above, the staff finds the changes to be acceptable.

2.10 RWCS Isolation Time Delay Footnote

Table 3.3.2-3, Isolation Actuation Instrumentation Response Time, Item 2.a, footnote ##

Current: Table 3.3.2-3
2. RWCS Isolation
a. Differential Flow-High
Response Time (seconds) = NA ##
with time delay of 45 seconds

Proposed: Table 3.3.2-3
2. RWCS Isolation
a. Differential Flow-High
Response Time (seconds) = NA
Delete footnote ##

Table 3.3.2-1
2. RWCS Isolation
a. Differential Flow-High #
With time delay of 45 seconds

The reason for the change is to ensure that the informational footnote concerning the existence of a 45 second time delay is not construed to be a surveillance test requirement.

Currently, footnote ## is applied to the response time for this item in Table 3.3.2-3, Isolation Actuation Instrumentation Response Time. This is an informational item to inform the user that a time delay of 45 seconds is designed into the circuitry. This location of the footnote has led to confusion as to the response time requirement. The required response time is not applicable (NA). To avoid this confusion factor, this proposed change deletes the footnote from Table 3.3.2-3 and adds it to Table 3.3.2-1, Isolation Actuation Instrumentation, Item 2.a. This footnote # contains the same information but applies it to the proper table to avoid confusion.

The change does not have any adverse safety impact since the change involves the relocation of a purely informational footnote to a more appropriate location. Based upon the above, the staff finds the change to be acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

Pursuant to 10 CFR 51.21, 51.32 and 51.35, an environmental assessment and finding of no significant impact have been prepared and published in the Federal Register on August 31, 1989 (54 FR 36071). Accordingly, based upon the environmental assessment, we have determined that the issuance of this amendment will not have a significant effect on the quality of the human environment.

4.0 CONCLUSION

We have concluded, based on the considerations discussed above, that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: John Stang

Date: September 7, 1989

UNITED STATES NUCLEAR REGULTORY COMMISSION

DETROIT EDISON COMPANY

WOLVERINE POWER SUPPLY COOPERATIVE, INC.

DOCKET NO. 50-341

NOTICE OF ISSUANCE OF AMENDMENT TO

FACILITY OPERATING LICENSE

The U.S. Nuclear Regulatory Commission (Commission) has issued Amendment No. 41 to Facility Operating License No. NPF-43 issued to Detroit Edison Company (the licensee), which revised the Technical Specifications for operation of Fermi-2, located in Monroe County, Michigan.

The amendment is effective as of the date of issuance.

The amendment revises Technical Specifications 3/4.3.2 and the associated tables. The table entries previously listed in a section entitled "Containment Isolation" are separated into two sections; one for Primary Containment and one for Secondary Containment isolation functions. Revisions to table entries, table notations and nomenclature are made to either more clearly reflect the plant configuration, remove duplication or ambiguity, or reflect the new sections of the table. Provisions have been included to allow routine testing of the Reactor Water Cleanup system without necessitating removal of the system from service. In addition, the definition of Channel Calibration is revised to better reflect standard industry practice.

The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate

findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment.

Notice of Consideration of Issuance of Amendment and Opportunity for Hearing in connection with this action was published in the FEDERAL REGISTER on June 26, 1989 (54 FR 26866). No request for a hearing or petition for leave to intervene was filed following this notice.

The Commission has prepared an Environmental Assessment related to the action and has determined not to prepare an environmental impact statement. Based upon the environmental assessment, the Commission has concluded that the issuance of this amendment will not have a significant effect on the quality of the human behavior environment.

For further details with respect to the action, see (1) the application for amendment dated December 22, 1988, (2) Amendment No. 41 to License No. NPF-43, (3) the Commission's related Safety Evaluation, and (4) the Commission's Environmental Assessment. All of these items are available for public inspection at the Commission's Public Document Room, the Gelman Building, 2120 L Street, N.W., Washington, D.C., and at the Local Public Document Room. A copy of items (2), (3) and (4) may be obtained upon request addressed to the U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Director, Division of Reactor Projects III, IV, V & Special Projects.

Dated at Rockville, Maryland, this 7th day of September 1989.

FOR THE NUCLEAR REGULATORY COMMISSION

John F. Stang

John F. Stang, Project Manager
Project Directorate III-1
Division of Reactor Projects - III, IV, V and Special Projects
Office of Nuclear Reactor Regulation