

May 24, 1990

Docket No. 50-440

Mr. Michael D. Lyster, Vice President
Nuclear Group
The Cleveland Electric Illuminating
Company
10 Center Road
Perry, Ohio 44081

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Dear Mr. Lyster:

SUBJECT: AMENDMENT NO. 30 TO FACILITY OPERATING LICENSE NO. NPF-58
(TAC NO. 66284)

The Commission has issued the enclosed Amendment No. 30 to Facility Operating License No. NPF-58 for the Perry Nuclear Power Plant, Unit No. 1. This amendment revises the Technical Specifications in response to your application dated September 17, 1987.

This amendment modifies the general limiting conditions for operation (LCOs) to allow entry into an operational condition under certain circumstances when compliance with the LCO's related ACTION STATEMENTS would allow continued operation for an unlimited period of time. The general surveillance requirements are also modified to clarify the time at which the ACTION STATEMENT time limits begin relative to failure to perform a surveillance requirement and to allow for a delay of the ACTION STATEMENT requirements for up to 24 hours to complete the surveillance if the allowable time is less than 24 hours. It also clarifies that restrictions on entry into OPERATIONAL CONDITIONS based on failure to comply with surveillance requirements shall not prevent passage into or through OPERATIONAL CONDITIONS as required by ACTION STATEMENTS. The related BASES have also been changed to reflect the changes to the Technical Specifications (TS).

You are reminded that, based on the commitments and certifications contained in your March 12, 1990 letter, the administrative controls to limit the use of the TS 3.0.4 exceptions and appropriate operator training must be implemented before the effective date of this amendment. As requested in your March 12, 1990 letter, we are making the effective date of this amendment "not later than 45 days after issuance" to allow you time to implement your administrative controls and complete operator training. We request that you inform us of the date on which you implemented the provisions of this amendment.

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PDR ADOCK 05000440
P PDC

U-01
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CP-1

Mr. Alvin Kaplan

-2-

May 24, 1990

A copy of the Safety Evaluation is also enclosed. Notice of issuance will be included in the Commission's next biweekly Federal Register notice.

Sincerely,

/s/

Timothy G. Colburn, Sr. Project Manager
Project Directorate III-3
Division of Reactor Projects - III, IV, V
& Special Projects
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 30 to
License No. NPF-58
2. Safety Evaluation

cc w/enclosures:
See next page

Office: LA/PDIII-3
Surname: PKreutzer
Date: 5/1/90

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PM/PDIII-3
TColburn/tg
5/4/90

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PD/PDIII-3
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5/4/90

OGC-WF1
CPW
5/4/90

Mr. Michael D. Lyster
The Cleveland Electric
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Perry Nuclear Power Plant
Unit 1

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

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY, ET AL.

DOCKET NO. 50-440

PERRY NUCLEAR POWER PLANT, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 30
License No. NPF-58

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by The Cleveland Electric Illuminating Company, Duquesne Light Company, Ohio Edison Company, Pennsylvania Power Company, and Toledo Edison Company (the licensees) dated September 17, 1987 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-58 is hereby amended to read as follows:

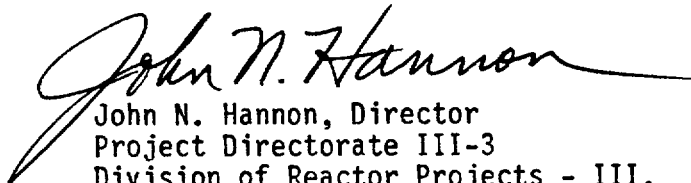
9008270249 900524
FDR ADOCK 05000440
P PDC

(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 30 are hereby incorporated into this license. The Cleveland Electric Illuminating Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective upon issuance, to be implemented not later than 45 days after issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in black ink, reading "John N. Hannon", with a long, sweeping horizontal line extending to the right.

John N. Hannon, Director
Project Directorate III-3
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: May 24, 1990

ATTACHMENT TO LICENSE AMENDMENT NO.

FACILITY OPERATING LICENSE NO. NPF-58

DOCKET NO. 50-440

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

<u>Remove</u>	<u>Insert</u>
3/4 0-1	3/4 0-1
3/4 0-2	3/4 0-2
3/4 3-15	3/4 3-15
3/4 3-31	3/4 3-31
3/4 3-52	3/4 3-52
3/4 3-67	3/4 3-67
3/4 3-70	3/4 3-70
3/4 3-79	3/4 3-79
3/4 3-82	3/4 3-82
3/4 3-83	3/4 3-83
3/4 3-84	3/4 3-84
3/4 3-89	3/4 3-89
3/4 3-98	3/4 3-98
3/4 3-99	3/4 3-99
3/4 4-13	3/4 4-13
3/4 4-25	3/4 4-25
3/4 4-27	3/4 4-27
3/4 6-40	3/4 6-40
3/4 7-14	3/4 7-14
3/4 9-17	3/4 9-17
3/4 11-5	3/4 11-5
3/4 11-6	3/4 11-6
3/4 11-7	3/4 11-7
3/4 11-12	3/4 11-12
3/4 11-13	3/4 11-13
3/4 11-14	3/4 11-14
3/4 11-15	3/4 11-15
3/4 11-16	3/4 11-16
3/4 11-18	3/4 11-18
3/4 11-20	3/4 11-20
3/4 12-1	3/4 12-1
3/4 12-13	3/4 12-13
3/4 12-14	3/4 12-14
B 3/4 0-1	B 3/4 0-1
B 3/4 0-2	B 3/4 0-2
B 3/4 0-3	B 3/4 0-3
-	B 3/4 0-4
-	B 3/4 0-5
-	B 3/4 0-6

3/4.0 APPLICABILITY

LIMITING CONDITION FOR OPERATION

3.0.1 Compliance with the Limiting Conditions for Operation contained in the succeeding Specifications is required during the OPERATIONAL CONDITIONS or other conditions specified therein; except that upon failure to meet the Limiting Conditions for Operation, the associated ACTION requirements shall be met.

3.0.2 Noncompliance with a Specification shall exist when the requirements of the Limiting Condition for Operation and associated ACTION requirements are not met within the specified time intervals. If the Limiting Condition for Operation is restored prior to expiration of the specified time intervals, completion of the Action requirements is not required.

3.0.3 When a Limiting Condition for Operation is not met, except as provided in the associated ACTION requirements, within one hour action shall be initiated to place the unit in an OPERATIONAL CONDITION in which the Specification does not apply by placing it, as applicable, in:

1. At least STARTUP within the next 6 hours,
2. At least HOT SHUTDOWN within the following 6 hours, and
3. At least COLD SHUTDOWN within the subsequent 24 hours.

Where corrective measures are completed that permit operation under the ACTION requirements, the ACTION may be taken in accordance with the specified time limits as measured from the time of failure to meet the Limiting Condition for Operation. Exceptions to these requirements are stated in the individual Specifications.

This Specification is not applicable in OPERATIONAL CONDITIONS 4 or 5.

3.0.4 Entry into an OPERATIONAL CONDITION or other specified condition shall not be made when the conditions for the Limiting Conditions for Operation are not met and the associated ACTION requires a shutdown if they are not met within a specified time interval. Entry into an OPERATIONAL CONDITION or other specified condition may be made in accordance with the ACTION requirements when conformance to them permits continued operation of the facility for an unlimited period of time. This provision shall not prevent passage through or to OPERATIONAL CONDITIONS as required to comply with ACTION requirements. Exceptions to these requirements are stated in the individual Specifications.

APPLICABILITY

SURVEILLANCE REQUIREMENTS

4.0.1 Surveillance Requirements shall be met during the OPERATIONAL CONDITIONS or other conditions specified for individual Limiting Conditions for Operation unless otherwise stated in an individual Surveillance Requirement.

4.0.2 Each Surveillance Requirement shall be performed within the specified time interval with:

- a. A maximum allowable extension not to exceed 25% of the surveillance interval, but
- b. The combined time interval for any 3 consecutive surveillance intervals shall not exceed 3.25 times the specified surveillance interval.

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

4.0.4 Entry into an OPERATIONAL CONDITION or other specified applicable condition shall not be made unless the Surveillance Requirement(s) associated with the Limiting Condition for Operation have been performed within the applicable surveillance interval or as otherwise specified. This provision shall not prevent passage through or to OPERATIONAL CONDITIONS as required to comply with ACTION requirements.

4.0.5 Surveillance Requirements for inservice inspection and testing of ASME Code Class 1, 2, and 3 components shall be applicable as follows:

- a. Inservice inspection of ASME Code Class 1, 2, and 3 components and inservice testing of ASME Code Class 1, 2, and 3 pumps and valves shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50, Section 50.55a(g), except where specific written relief has been granted by the Commission pursuant to 10 CFR 50, Section 50.55a(g)(6)(i).
- b. Surveillance intervals specified in Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda for the inservice inspection and testing activities required by the ASME Boiler and Pressure Vessel Code and applicable Addenda shall be applicable as follows in these Technical Specifications:

ASME Boiler and Pressure Vessel
Code and applicable Addenda
terminology for inservice
inspection and testing activities

Weekly
Monthly
Quarterly or every 3 months
Semiannually or every 6 months
Every 9 months
Yearly or annually

Required frequencies
for performing inservice
inspection and testing
activities

At least once per 7 days
At least once per 31 days
At least once per 92 days
At least once per 184 days
At least once per 276 days
At least once per 366 days

TABLE 3.3.2-1 (Continued)

ISOLATION ACTUATION INSTRUMENTATION
ACTION

- ACTION 20 - Be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.
- ACTION 21 - Close the affected system isolation valve(s) within one hour or:
a. In OPERATIONAL CONDITION 1, 2 or 3, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
b. In Operational Condition *, suspend CORE ALTERATIONS, handling of irradiated fuel in the primary containment and operations with a potential for draining the reactor vessel.
- ACTION 22 - Restore the manual initiation function to OPERABLE status within 48 hours or:
a. In OPERATIONAL CONDITION 1, 2, or 3, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
b. In OPERATIONAL CONDITION *, suspend CORE ALTERATIONS, operations with a potential for draining the reactor vessel, and handling of irradiated fuel in the primary containment.
- ACTION 23 - 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 24 - Be in at least STARTUP within 6 hours.
- ACTION 25 - Verify SECONDARY CONTAINMENT INTEGRITY with the annulus exhaust gas treatment system operating within one hour.
- ACTION 26 - Restore the manual initiation function to OPERABLE status within 8 hours or close the affected system isolation valves within 1 hour and declare the affected system inoperable.
- ACTION 27 - Close the affected system isolation valves within one hour and declare the affected system inoperable.
- ACTION 28 - Within one hour lock the affected system isolation valves closed, or verify, by remote indication, that the valve(s) is closed and electrically disarmed, or isolate the penetration(s) and declare the affected system inoperable.

NOTES

- * When handling irradiated fuel in the primary containment and during CORE ALTERATIONS and operations with a potential for draining the reactor vessel.
- ** When any turbine stop valve is greater than 90% open and/or the key locked Condenser Low Vacuum Bypass Switch is in the normal position.
- # During CORE ALTERATIONS and operations with a potential for draining the reactor vessel.

TABLE 3.3.2-1 (Continued)

ISOLATION ACTUATION INSTRUMENTATION
ACTION

NOTES (Continued)

- (a) A channel may be placed in an inoperable status for up to 2 hours for required surveillance without placing the trip system in the tripped condition provided at least one other OPERABLE channel in the same trip system is monitoring that parameter.
- (b) Also actuates the standby subsystem of the annulus exhaust gas treatment system.
- (c) Also actuates the control room emergency filtration system in the recirculation mode of operation.
- (d) Also trips and isolates the mechanical vacuum pumps.
- (e) Closes only RWCU system isolation valve(s) 1G33-F004 (SLCS Pump A) and 1G33-F001 (SLCS Pump B).
- (f) Manual initiation isolates 1E51-F064 and 1E51-F031 only and only following manual or automatic initiation of the RCIC system.
- (g) Containment and Drywell Purge System inboard and outboard isolation valves each use a separate two out of two isolation logic.
- (h) Requires RCIC system steam supply pressure - low coincident with drywell pressure high to isolate valve 1E51-F077.
- (i) For this signal, one trip system has two channels which close valves 1E51-F063 and 1E51-F076 while the other trip system has two channels which close valve 1E51-F064.
- (j) Isolates both RHR and RCIC.
- (k) There is only one (1) RCIC manual initiation channel for valve group 9.

TABLE 3.3.3-1 (Continued)
EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION
ACTION

- ACTION 30 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip Function requirement:
a. With one channel inoperable, place the inoperable channel in the tripped condition within one hour or declare the associated system inoperable.
b. With more than one channel inoperable, declare the associated system inoperable.
- ACTION 31 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip Function requirement, declare the associated ADS trip system or ECCS inoperable.
- ACTION 32 - With the number of OPERABLE channels less than the Minimum OPERABLE Channels per Trip Function requirement, place the inoperable channel in the tripped condition within one hour.
- ACTION 33 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip Function requirement, restore the inoperable channel to OPERABLE status within 8 hours or declare the associated ADS valve or ECCS inoperable.
- ACTION 34 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip Function requirement:
a. For one trip system, place that trip system in the tripped condition within one hour or declare the HPCS system inoperable.
b. For both trip systems, declare the HPCS system inoperable.
- ACTION 35 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip Function requirement, place at least one inoperable channel in the tripped condition within one hour, or align the HPCS system to take suction from the suppression pool, or declare the HPCS system inoperable.
- ACTION 36 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip Function requirement, place at least one inoperable channel in the tripped condition within one hour or declare the HPCS system inoperable.
- ACTION 37 - With the number of OPERABLE channels less than the Total Number of Channels, declare the associated emergency diesel generator inoperable and take the ACTION required by Specification 3.8.1.1 or 3.8.1.2, as appropriate.
- ACTION 38 - With the number of OPERABLE channels less than the Total Number of Channels, place the inoperable channel in the tripped condition within 1 hour; operation may then continue until performance of the next required CHANNEL FUNCTIONAL TEST.
- ACTION 39 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip Function requirement, place the inoperable channel in the tripped condition within one hour. Restore the inoperable channel to OPERABLE status within 7 days or declare the associated system inoperable.

TABLE 3.3.3-2

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION SETPOINTS

<u>TRIP FUNCTION</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUE</u>
A. <u>DIVISION 1 TRIP SYSTEM</u>		
1. <u>RHR-A (LPCI MODE) AND LPCS SYSTEM</u>		
a. Reactor Vessel Water Level - Low, Level 1	≥ 16.5 inches*	≥ 14.3 inches
b. Drywell Pressure - High	≤ 1.68 psig	≤ 1.88 psig
c. LPCS Pump Discharge Flow - Low (Bypass)	≥ 1350 gpm	≥ 1200 gpm
d. Reactor Vessel Pressure - Low (LPCS Injection Valve Permissive)	577.7 ± 15 psig	$577.7 + 30, -95$ psig
e. Reactor Vessel Pressure - Low (LPCI Injection Valve Permissive)	$502.5 + 5, -10$ psig	$502.5 + 10, -40$ psig
f. LPCI Pump A Start Time Delay Relay	≤ 5 seconds	≤ 5.25 seconds
g. LPCI Pump A Discharge Flow - Low (Bypass)	≥ 1650 gpm	≥ 1450 gpm
h. Manual Initiation	NA	NA
2. <u>AUTOMATIC DEPRESSURIZATION SYSTEM TRIP SYSTEM "A"</u>		
a. Reactor Vessel Water Level - Low, Level 1	≥ 16.5 inches*	≥ 14.3 inches
b. Manual Inhibit	NA	NA
c. ADS Timer	≤ 105 seconds	≤ 117 seconds
d. Reactor Vessel Water Level - Low, Level 3 (Permissive)	≥ 177.7 inches*	≥ 177.1 inches
e. LPCS Pump Discharge Pressure - High (Permissive)	≥ 145 psig, increasing	≥ 125 psig, increasing
f. LPCI Pump A Discharge Pressure - High (Permissive)	≥ 125 psig, increasing	≥ 115 psig, increasing
g. Manual Initiation	NA	NA

TABLE 3.3.5-1

REACTOR CORE ISOLATION COOLING SYSTEM ACTUATION INSTRUMENTATION

<u>FUNCTIONAL UNITS</u>	<u>MINIMUM OPERABLE CHANNELS PER TRIP SYSTEM^(a)</u>	<u>ACTION</u>
a. Reactor Vessel Water Level - Low, Level 2	2	50
b. Reactor Vessel Water Level - High, Level 8	2 ^(b)	51
c. Condensate Storage Tank Water Level - Low	2 ^(c)	52
d. Suppression Pool Water Level - High	2 ^(c)	52
e. Manual Initiation	1 ^(d)	53

-
- (a) A channel may be placed in an inoperable status for up to 2 hours for required surveillance without placing the trip system in the tripped condition provided at least one other OPERABLE channel in the same trip system is monitoring that parameter.
- (b) One trip system with two-out-of-two logic.
- (c) One trip system with one-out-of-two logic.
- (d) There is only one manual switch.

TABLE 3.3.5-1 (continued)
REACTOR CORE ISOLATION COOLING SYSTEM
ACTUATION INSTRUMENTATION

- ACTION 50 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip System requirement:
- a. For one trip system, place the inoperable channel(s) and/or that trip system in the tripped condition within one hour or declare the RCIC system inoperable.
 - b. For both trip systems, declare the RCIC system inoperable.
- ACTION 51 - With the number of OPERABLE channels less than required by the Minimum OPERABLE channels per Trip System requirement, declare the RCIC system inoperable.
- ACTION 52 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip System requirement, place at least one inoperable channel in the tripped condition within one hour, or align the RCIC system to take suction from the suppression pool, or declare the RCIC system inoperable.
- ACTION 53 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip System requirement, restore the inoperable channel to OPERABLE status within 8 hours or declare the RCIC system inoperable.

INSTRUMENTATION

SEISMIC MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.7.2 The seismic monitoring instrumentation shown in Table 3.3.7.2-1 shall be OPERABLE.

APPLICABILITY: At all times.

ACTION:

- a. With one or more of the above required seismic monitoring instruments inoperable for more than 30 days, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 10 days outlining the cause of the malfunction and the plans for restoring the instrument(s) to OPERABLE status.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.7.2.1 Each of the above required seismic monitoring instruments shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL FUNCTIONAL TEST and CHANNEL CALIBRATION operations at the frequencies shown in Table 4.3.7.2-1.

4.3.7.2.2 Each of the above required seismic monitoring instruments actuated during a seismic event greater than or equal to 0.05g shall be restored to OPERABLE status within 24 hours and a CHANNEL CALIBRATION performed within 30 days following the seismic event. Data shall be retrieved from actuated instruments and analyzed to determine the magnitude of the vibratory ground motion. A Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.9.2 within 10 days describing the magnitude, frequency spectrum and resultant effect upon unit features important to safety.

TABLE 3.3.7.2-1
SEISMIC MONITORING INSTRUMENTATION

<u>INSTRUMENTS AND SENSOR LOCATIONS</u>	<u>MEASUREMENT RANGE</u>	<u>MINIMUM INSTRUMENTS OPERABLE</u>
1. Triaxial Time-History Accelerographs		
a. D51-N101 Reactor Building Foundation	0.01 - 1.0g	1
b. D51-N111 Containment Vessel	0.01 - 1.0g	1
c. D51-N100 Reactor Building Foundation	0.005 - 0.02g	1(b)
d. D51-N110 Reactor Building Foundation	0.005 - 0.02g	1(b)
2. Triaxial Peak Accelerographs		
a. D51-R120 Reactor Recirculation Pump	0.05 - 1.0g	1
b. D51-R130 HPCS Piping in Reactor Building	0.05 - 1.0g	1
c. D51-R140 HPCS Pump Base Mat	0.05 - 1.0g	1
3. Triaxial Seismic Switches		
a. D51-N150 Reactor Building Foundation	0.025 - 0.25g	1(a)
4. Triaxial Response-Spectrum Recorders		
a. D51-R160 Reactor Building Foundation	2 - 25.4 Hz	1(a)
b. D51-R170 Reactor Recirculation Piping Support	2 - 25.4 Hz	1
c. D51-R180 HPCS Pump Base Mat	2 - 25.4 Hz	1
d. D51-R190 RCIC Pump Base Mat	2 - 25.4 Hz	1

(a) With control room annunciation.

(b) Seismic trigger with control room annunciation.

TABLE 4.3.7.2-1

SEISMIC MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENTS AND SENSOR LOCATIONS</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>CHANNEL CALIBRATION</u>
1. Triaxial Time-History Accelerographs			
a. D51-N101 Reactor Building Foundation	M	SA	R
b. D51-N111 Containment Vessel	M	SA	R
c. D51-N100 Reactor Building Foundation	NA	SA	R
d. D51-N110 Reactor Building Foundation	NA	SA	R
2. Triaxial Peak Accelerographs			
a. D51-R120 Reactor Recircula- tion Pump	NA	NA	R
b. D51-R130 HPCS Piping in Reactor Building	NA	NA	R
c. D51-R140 HPCS Pump Base Mat	NA	NA	R
3. Triaxial Seismic Switches			
a. D51-N150 Reactor Building Foundation	M ^(a)	SA	R
4. Triaxial Response-Spectrum Recorders			
a. D51-R160 Reactor Building Foundation	M	NA	R
b. D51-R170 Reactor Recircula- tion Piping Support	NA	NA	R
c. D51-R180 HPCS Pump Base Mat	NA	NA	R
d. D51-R190 RCIC Pump Base Mat	NA	NA	R

(a) Except seismic trigger.

INSTRUMENTATION

METEOROLOGICAL MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.7.3 The meteorological monitoring instrumentation shown in Table 3.3.7.3-1 shall be OPERABLE.

APPLICABILITY: At all times.

ACTION:

- a. With one or more of the above required meteorological monitoring instruments inoperable for more than 7 days, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 10 days outlining the cause of the malfunction and the plans for restoring the instrumentation to OPERABLE status.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.7.3 Each of the above required meteorological monitoring instruments shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK and CHANNEL CALIBRATION operations at the frequencies shown in Table 4.3.7.3-1.

Table 3.3.7.5-1 (Continued)

ACCIDENT MONITORING INSTRUMENTATIONS

ACTION STATEMENTS

ACTION 80 -

- a. With the number of OPERABLE accident monitoring instrumentation channels less than the Required Number of Channels shown in Table 3.3.7.5-1, restore the inoperable channel(s) to OPERABLE status within 7 days or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- b. With the number of OPERABLE accident monitoring instrumentation channels less than the Minimum Channels OPERABLE requirements of Table 3.3.7.5-1, restore the inoperable channel(s) to OPERABLE status within 48 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN with the following 24 hours.
- c. The provisions of Specification 3.0.4 are not applicable.

ACTION 81 - With the number of OPERABLE Channels less than required by the Minimum Channels OPERABLE requirement, either restore the inoperable Channel(s) to OPERABLE status within 72 hours, or:

- a. Initiate the preplanned alternate method of monitoring the appropriate parameter(s), and
- b. Prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 14 days following the event outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.

ACTION 82 -

- a. With the number of OPERABLE accident monitoring instrumentation channels less than the Minimum Channels OPERABLE requirements of Table 3.3.7.5-1, verify the valve(s) position by use of alternate indication methods; restore the inoperable channel(s) to OPERABLE status at the next time the valve is required to be demonstrated OPERABLE pursuant to Specification 4.0.5.

TABLE 4.3.7.5-1

ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>APPLICABLE OPERATIONAL CONDITIONS</u>
1. Reactor Vessel Pressure	M	R	1, 2, 3
2. Reactor Vessel Water Level	M	R	1, 2, 3
3. Suppression Pool Water Level	M	R	1, 2, 3
4. Suppression Pool Water Temperature	M	R	1, 2, 3
5. Primary Containment Pressure	M	R	1, 2, 3
6. Primary Containment Air Temperature	M	R	1, 2, 3
7. Drywell Pressure	M	R	1, 2, 3
8. Drywell Air Temperature	M	R	1, 2, 3
9. Primary Containment and Drywell Hydrogen Concentration Analyzer and Monitor	NA	Q*	1, 2, 3
10. Safety/Relief Valve Position Indicators	M	R	1, 2, 3
11. Primary Containment/Drywell Area Gross Gamma Radiation Monitors	M	R**	1, 2, 3
12. Offgas Ventilation Exhaust Monitor [#]	M	R	1, 2, 3
13. Turbine Building/Heater Bay Ventilation Exhaust Monitor [#]	M	R	1, 2, 3
14. Unit 1 Vent Monitor [#]	M	R	1, 2, 3
15. Unit 2 Vent Monitor [#]	M	R	1, 2, 3
16. Neutron Flux			
a. Average Power Range	M	R	1, 2, 3
b. Intermediate Range	M	R	1, 2, 3
c. Source Range	M	R	1, 2, 3
17. Primary Containment Isolation Valve Position	M	R	1, 2, 3

*Using sample gas containing:

- One volume percent hydrogen, balance nitrogen.
- Four volume percent hydrogen, balance nitrogen.

**The CHANNEL CALIBRATION shall consist of an electronic calibration of the channel, not including the detector, for range decades above 10 R/hr and a one point calibration check of the detector below 10 R/hr with an installed or portable gamma source.

[#]High and intermediate range D19 system noble gas monitors.

INSTRUMENTATION

SOURCE RANGE MONITORS

LIMITING CONDITION FOR OPERATION

3.3.7.6 At least the following source range monitor channels shall be OPERABLE:

- a. In OPERATIONAL CONDITION 2*, three.
- b. In OPERATIONAL CONDITION 3 and 4, two.

APPLICABILITY: OPERATIONAL CONDITIONS 2*, 3 and 4.

ACTION:

- a. In OPERATIONAL CONDITION 2* with one of the above required source range monitor channels inoperable, restore at least 3 source range monitor channels to OPERABLE status within 4 hours or be in at least HOT SHUTDOWN within the next 12 hours.
- b. In OPERATIONAL CONDITION 3 or 4 with one or more of the above required source range monitor channels inoperable, verify all insertable control rods to be fully inserted in the core and lock the reactor mode switch in the Shutdown position within one hour.

SURVEILLANCE REQUIREMENTS

4.3.7.6 Each of the above required source range monitor channels shall be demonstrated OPERABLE by:

- a. Performance of a:
 1. CHANNEL CHECK at least once per:
 - a) 12 hours in CONDITION 2*, and
 - b) 24 hours in CONDITION 3 or 4.
 2. CHANNEL CALIBRATION** at least once per 18 months.
- b. Performance of a CHANNEL FUNCTIONAL TEST:
 1. Within 24 hours prior to moving the reactor mode switch from the Shutdown position, if not performed within the previous 7 days, and
 2. At least once per 31 days.
- c. Verifying, prior to withdrawal of control rods, that the SRM count rate is at least 0.7 cps*** with the detector fully inserted.

*With IRM's on range 2 or below.

**Neutron detectors may be excluded from CHANNEL CALIBRATION.

***Provided the signal-to-noise ratio is ≥ 2 .

INSTRUMENTATION

TRAVERSING IN-CORE PROBE SYSTEM

LIMITING CONDITION FOR OPERATION

3.3.7.7 The traversing in-core probe system shall be OPERABLE with either:

- a. Five movable detectors, drives and readout equipment to map the core, and indexing equipment to allow all five detectors to be calibrated in a common location.

OR

- b. With one or more TIP measurement locations inoperable, data may be replaced by data obtained from that location's symmetric counterpart if the substitute TIP data was obtained from an OPERABLE measurement location; provided the reactor core is operating in a type A control rod pattern and the total core TIP uncertainty for the present cycle has been determined to be less than 8.7 percent (standard deviation). Symmetric counterpart data may be substituted for a maximum of ten TIP measurement locations.

APPLICABILITY: When the traversing in-core probe is used for:

- a.* Recalibration of the LPRM detectors, and
- b.* Monitoring the APLHGR, LHGR, MCPR, or MFLPD.

ACTION:

With the traversing in-core probe system inoperable, do not use the system for the above applicable monitoring or calibration functions. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.7.7 The traversing in-core probe system shall be demonstrated OPERABLE by normalizing each of the above required detector outputs within 72 hours prior to use when required for the LPRM calibration function.

*Only the detector(s) in the location(s) of interest are required to be OPERABLE.

INSTRUMENTATION

LOOSE-PART DETECTION SYSTEM

LIMITING CONDITION FOR OPERATION

3.3.7.8 The loose-part detection system shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1 and 2.

ACTION:

- a. With one or more loose-part detection system channels inoperable for more than 30 days, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 10 days outlining the cause of the malfunction and the plans for restoring the channel(s) to OPERABLE status.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.7.8 Each channel of the loose-part detection system shall be demonstrated OPERABLE by performance of a:

- a. CHANNEL CHECK at least once per 24 hours,
- b. CHANNEL FUNCTIONAL TEST at least once per 31 days, and
- c. CHANNEL CALIBRATION at least once per 18 months.

INSTRUMENTATION

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.7.9 The radioactive liquid effluent monitoring instrumentation channels shown in Table 3.3.7.9-1 shall be OPERABLE with their alarm/trip setpoints set to ensure that the limits of Specification 3.11.1.1 are not exceeded. The alarm/trip setpoints of these channels shall be determined and adjusted in accordance with the OFFSITE DOSE CALCULATION MANUAL (ODCM).

APPLICABILITY: At all times.

ACTION:

- a. With a radioactive liquid effluent monitoring instrumentation channel alarm/trip setpoint less conservative than required by the above specification, immediately suspend the release of radioactive liquid effluents monitored by the affected channel or declare the channel inoperable, or change the setpoint so it is acceptably conservative.
- b. With less than the minimum number of radioactive liquid effluent monitoring instrumentation channels OPERABLE, take the ACTION shown in Table 3.3.7.9-1. Restore the inoperable instrumentation to OPERABLE status within 30 days and, if unsuccessful, explain why this inoperability was not corrected in a timely manner in the next Semiannual Radioactive Effluent Release Report.
- c. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.7.9 Each radioactive liquid effluent monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK, SOURCE CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations at the frequencies shown in Table 4.3.7.9-1.

INSTRUMENTATION

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.7.10 The radioactive gaseous effluent monitoring instrumentation channels shown in Table 3.3.7.10-1 shall be OPERABLE with their alarm/trip setpoints set to ensure that the limit of Specification 3.11.2.1* are not exceeded. The alarm/trip setpoints of applicable channels shall be determined and adjusted in accordance with the methodology and parameters in the ODCM.

APPLICABILITY: As shown in Table 3.3.7.10-1

ACTION:

- a. With a radioactive gaseous effluent monitoring instrumentation channel alarm/trip setpoint less conservative than required by the above specification, declare the channel inoperable, or change the setpoint so it is acceptably conservative.
- b. With less than the minimum number of radioactive gaseous effluent monitoring instrumentation channels OPERABLE, take the ACTION shown in Table 3.3.7.10-1. Restore the inoperable instrumentation to OPERABLE status within 30 days and, if unsuccessful, explain why this inoperability was not corrected in a timely manner in the next Semiannual Radioactive Effluent Release Report.
- c. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.7.10 Each radioactive gaseous effluent monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK, SOURCE CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations at the frequencies shown in Table 4.3.7.10-1.

*See Specification 3.11.2.6 for the Main Condenser Offgas Hydrogen Monitor (1N64-N012A/B) limit.

TABLE 3.3.7.10-1
RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABILITY</u>	<u>ACTION</u>
1. OFFGAS VENT RADIATION MONITOR			
a. Noble Gas Activity Monitor	1	*	121
b. Iodine Sampler	1	*	122
c. Particulate Sampler	1	*	122
d. Effluent System Flow Rate Monitor	1	*	123
e. Sampler Flow Rate Monitor	1	*	123
2. UNIT 1 VENT RADIATION MONITOR			
a. Noble Gas Activity Monitor	1	1, 2, 3 4, 5	125 121
b. Iodine Sampler	1	*	122
c. Particulate Sampler	1	*	122
d. Effluent System Flow Rate Monitor	1	*	123
e. Sampler Flow Rate Monitor	1	*	123

INSTRUMENTATION

SURVEILLANCE REQUIREMENTS (Continued)

- b. At least once per 18 months by performance of a CHANNEL CALIBRATION of the turbine overspeed protection instrumentation.
- c. At least once per 40 months* by disassembling at least one of each of the above valves and performing a visual and surface inspection of all valve seats, disks and stems and verifying no unacceptable flaws or excessive corrosion. If unacceptable flaws or excessive corrosion are found, all other valves of that type shall be inspected.

*The initial surveillance test interval is extended on a one-time basis to the first refueling outage.

INSTRUMENTATION

3/4.3.9 PLANT SYSTEMS ACTUATION INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.9 The plant systems actuation instrumentation channels shown in Table 3.3.9-1 shall be OPERABLE with their trip setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.3.9-2.

APPLICABILITY: As shown in Table 3.3.9-1.

ACTION:

- a. With a plant system actuation instrumentation channel trip setpoint less conservative than the value shown in the Allowable Values column of Table 3.3.9-2, declare the channel inoperable and either place the inoperable channel in the tripped condition until the channel is restored to OPERABLE status with its trip setpoint adjusted consistent with the Trip Setpoint value, or declare the associated system inoperable.
- b. For the containment spray system:
 1. With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip System requirement for one trip system, place at least one inoperable channel in the tripped condition within one hour or declare the associated system inoperable.
 2. With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip System requirement for both trip systems, declare the associated system inoperable.
- c. For the feedwater system/main turbine trip system:
 1. With the number of OPERABLE channels one less than required by the Minimum OPERABLE Channels requirement, restore the inoperable channel to OPERABLE status within 7 days or be in at least STARTUP within the next 6 hours.
 2. With the number of OPERABLE channels two less than required by the Minimum OPERABLE Channels requirement, restore at least one of the inoperable channels to OPERABLE status within 72 hours or be in at least STARTUP within the next 6 hours.

INSTRUMENTATION

LIMITING CONDITION FOR OPERATION (Continued)

ACTION (Continued)

d. For the suppression pool makeup system:

1. For the Drywell Pressure-High and the Reactor Vessel Water Level-Low, Level 1:

With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip Function requirement:

- a) With one channel inoperable, place the inoperable channel in the tripped condition within one hour or declare the associated system(s) inoperable.
- b) With more than one channel inoperable, declare the associated system(s) inoperable.

2. For the Suppression Pool Water Level-Low, Suppression Pool Makeup Timer and the SPMU Manual Initiation:

With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip System requirement, restore the inoperable channels to OPERABLE status within 8 hours; otherwise, declare the associated suppression pool makeup system inoperable and take the action required by Specification 3.6.3.4.

SURVEILLANCE REQUIREMENTS

4.3.9.1 Each plant system 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 4.3.9.1-1.

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

TABLE 3.3.9-1
PLANT SYSTEMS ACTUATION INSTRUMENTATION

<u>TRIP FUNCTION</u>	<u>MINIMUM OPERABLE CHANNELS PER TRIP SYSTEM^(a)</u>	<u>APPLICABLE OPERATIONAL CONDITIONS</u>
1. <u>CONTAINMENT SPRAY SYSTEM</u>		
a. Drywell Pressure - High	2	1, 2, 3
b. Containment Pressure - High	2	1, 2, 3
c. Reactor Vessel Water Level - Low, Level 1	2	1, 2, 3
d. Timers		
(1) System A and B (10 minute timer)	1	1, 2, 3
(2) System B (1.5 minute timer)	1	1, 2, 3
e. Manual Initiation	1	1, 2, 3
2. <u>FEEDWATER SYSTEM/MAIN TURBINE TRIP SYSTEM</u>		
a. Reactor Vessel Water Level - High, Level 8	3	1
3. <u>SUPPRESSION POOL MAKEUP SYSTEM</u>		
a. Drywell Pressure - High	2	1, 2, 3
b. Reactor Vessel Water Level - Low, Level 1	2	1, 2, 3
c. Suppression Pool Water Level - Low	2	1, 2, 3
d. Suppression Pool Makeup Timer	1	1, 2, 3
e. SPMU Manual Initiation	1	1, 2, 3

(a) A channel may be placed in an inoperable status for up to 2 hours for required surveillance without placing the trip system in the tripped condition provided at least one other OPERABLE channel in the same trip system is monitoring that parameter.

REACTOR COOLANT SYSTEM

3/4.4.4 CHEMISTRY

LIMITING CONDITION FOR OPERATION

3.4.4 The chemistry of the reactor coolant system shall be maintained within the limits specified in Table 3.4.4-1.

APPLICABILITY: At all times.

ACTION:

a. In OPERATIONAL CONDITION 1:

1. With the conductivity, chloride concentration or pH exceeding the limit specified in Table 3.4.4-1 for less than 72 hours during one continuous time interval and, for conductivity and chloride concentration, for less than 336 hours per year, but with the conductivity less than 10 $\mu\text{mho/cm}$ at 25°C and with the chloride concentration less than 0.5 ppm, this need not be reported to the Commission.
2. With the conductivity, chloride concentration or pH exceeding the limit specified in Table 3.4.4-1 for more than 72 hours during one continuous time interval or with the conductivity and chloride concentration exceeding the limit specified in Table 3.4.4-1 for more than 336 hours per year, be in at least STARTUP within the next 6 hours.
3. With the conductivity exceeding 10 $\mu\text{mho/cm}$ at 25°C or chloride concentration exceeding 0.5 ppm, be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.

b. In OPERATIONAL CONDITION 2 and 3, with the conductivity, chloride concentration or pH exceeding the limit specified in Table 3.4.4-1 for more than 48 hours during one continuous time interval, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

c. At all other times:

1. With the:
 - a) Conductivity or pH exceeding the limit specified in Table 3.4.4-1, restore the conductivity and pH to within the limit within 72 hours, or
 - b) Chloride concentration exceeding the limit specified in Table 3.4.4-1, restore the chloride concentration to within the limit within 24 hours, or

perform an engineering evaluation to determine the effects of the out-of-limit condition on the structural integrity of the reactor coolant system. Determine that the structural integrity of the reactor coolant system remains acceptable for continued operation prior to proceeding to OPERATIONAL CONDITION 3.

2. The provisions of Specification 3.0.3 are not applicable.

REACTOR COOLANT SYSTEM

SURVEILLANCE REQUIREMENTS

4.4.4 The reactor coolant shall be determined to be within the specified chemistry limit by:

- a. Measurement prior to pressurizing the reactor during each startup, if not performed within the previous 72 hours.
- b. Analyzing a sample of the reactor coolant for:
 1. Chlorides at least once per:
 - a) 72 hours, and
 - b) 8 hours whenever conductivity is greater than the limit in Table 3.4.4-1.
 2. Conductivity at least once per 72 hours.
 3. pH at least once per:
 - a) 72 hours, and
 - b) 8 hours whenever conductivity is greater than the limit in Table 3.4.4-1.
- c. Continuously recording the conductivity of the reactor coolant, or, when the continuous recording conductivity monitor is inoperable, obtaining an in-line conductivity measurement at least once per:
 1. 4 hours in OPERATIONAL CONDITIONS 1, 2 and 3, and
 2. 24 hours at all other times.
- d. Performance of a CHANNEL CHECK of the continuous conductivity monitor with an in-line flow cell at least once per:
 1. 7 days, and
 2. 24 hours whenever conductivity is greater than the limit in Table 3.4.4-1.

REACTOR COOLANT SYSTEM

3/4.4.8 STRUCTURAL INTEGRITY

LIMITING CONDITION FOR OPERATION

3.4.8 The structural integrity of ASME Code Class 1, 2 and 3 components shall be maintained in accordance with Specification 4.4.8.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3, 4 and 5.

ACTION:

- a. With the structural integrity of any ASME Code Class 1 component(s) not conforming to the above requirements, restore the structural integrity of the affected component(s) to within its limit or isolate the affected component(s) prior to increasing the Reactor Coolant System temperature greater than 50°F above the minimum temperature required by NDT considerations.
- b. With the structural integrity of any ASME Code Class 2 component(s) not conforming to the above requirements, restore the structural integrity of the affected component(s) to within its limit or isolate the affected component(s) prior to increasing the Reactor Coolant System temperature to greater than 200°F.
- c. With the structural integrity of any ASME Code Class 3 component(s) not conforming to the above requirements, restore the structural integrity of the affected component(s) to within its limit or isolate the affected component(s) from service.

SURVEILLANCE REQUIREMENTS

4.4.8 No requirements other than Specification 4.0.5.

REACTOR COOLANT SYSTEM

3/4.4.9 RESIDUAL HEAT REMOVAL

HOT SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.4.9.1 Two[#] shutdown cooling mode loops of the residual heat removal (RHR) system shall be OPERABLE and ,unless at least one recirculation pump is in operation, at least one shutdown cooling mode loop shall be in operation*,^{##} with each loop consisting of at least:

- a. One OPERABLE RHR pump, and
- b. Two OPERABLE RHR heat exchangers.

APPLICABILITY: OPERATIONAL CONDITION 3, with reactor vessel pressure less than the RHR cut-in permissive setpoint.

ACTION:

- a. With less than the above required RHR shutdown cooling mode loops OPERABLE, immediately initiate corrective action to return the required loops to OPERABLE status as soon as possible. Within one hour and at least once per 24 hours thereafter, demonstrate the operability of at least one alternate method capable of decay heat removal for each inoperable RHR shutdown cooling mode loop. Be in at least COLD SHUTDOWN within 24 hours.**
- b. With no RHR shutdown cooling mode loop or recirculation pump in operation, : immediately initiate corrective action to return at least one RHR shutdown cooling mode loop or recirculation pump to operation as soon as possible. Within one hour establish reactor coolant circulation by an alternate method and monitor reactor coolant temperature and pressure at least once per hour.
- c. The provisions of Specifications 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.4.9.1 At least one shutdown cooling mode loop of the residual heat removal system, one recirculation pump or alternate method shall be determined to be in operation and circulating reactor coolant at least once per 12 hours.

[#]One RHR shutdown cooling mode loop may be inoperable for up to 2 hours for surveillance testing provided the other loop is OPERABLE and in operation.

*The shutdown cooling pump may be removed from operation for up to 2 hours per 8 hour period provided the other loop is OPERABLE.

^{##}The RHR shutdown cooling mode loop may be removed from operation during hydrostatic testing.

**Whenever two or more RHR subsystems are inoperable, if unable to attain COLD SHUTDOWN as required by this ACTION, maintain reactor coolant temperature as low as practical by use of alternate heat removal methods.

REACTOR COOLANT SYSTEM

COLD SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.4.9.2 Two[#] shutdown cooling mode loops of the residual heat removal (RHR) system shall be OPERABLE and, unless at least one recirculation pump is in operation, at least one shutdown cooling mode loop shall be in operation*,^{##} with each loop consisting of at least:

- a. One OPERABLE RHR pump, and
- b. Two OPERABLE RHR heat exchangers.

APPLICABILITY: OPERATIONAL CONDITION 4 when heat losses to the ambient are not sufficient** to maintain OPERATIONAL CONDITION 4.

ACTION:

- a. With less than the above required RHR shutdown cooling mode loops OPERABLE, within one hour and at least once per 24 hours thereafter, demonstrate the operability of at least one alternate method capable of decay heat removal for each inoperable RHR shutdown cooling mode loop.
- b. With no RHR shutdown cooling mode loop or recirculation pump in operation, within one hour establish reactor coolant circulation by an alternate method and monitor reactor coolant temperature and pressure at least once per hour.

SURVEILLANCE REQUIREMENTS

4.4.9.2 At least one shutdown cooling mode loop of the residual heat removal system, recirculation pump or alternate method shall be determined to be in operation and circulating reactor coolant at least once per 12 hours.

[#]One RHR shutdown cooling mode loop may be inoperable for up to 2 hours for surveillance testing provided the other loop is OPERABLE and in operation.

^{##}The shutdown cooling mode loop may be removed from operation during hydrostatic testing.

*The shutdown cooling pump may be removed from operation for up to 2 hours per 8 hour period provided the other loop is OPERABLE.

**Ambient losses must be such that no increase in reactor vessel water temperature will occur (even though COLD SHUTDOWN conditions are being maintained).

Table 3.6.4-1 Containment Isolation Valves

- NOTES:**
- a. Isolation valve for instrument line which penetrates the containment, conforms to the requirements of Regulatory Guide 1.11. The In-service Inspection (ISI) program will provide assurance of the operability and integrity of the isolation provisions. Type "C" testing will not be performed on the instrument line isolation valves. The instrument lines will be within the boundaries of the Type "A" test, open to the media (containment atmosphere or suppression pool water) to which they will be exposed under postulated accident conditions. Three exceptions to the above are penetrations P401, P318, and P425. Isolation valves for these three penetrations include the H₂ analyzer and Post Accident Sampling System valves. These valves are normally closed post-LOCA, opened only intermittently, and will receive Type C tests.
 - b. Hydrostatic leak test at ≥ 1.10 Pa.
 - c. See Specification 3.3.2, Table 3.3.2-1, for isolation signal(s) associated with each valve groups 1-9. Valve groups 10-13, 16 and 17 are as follows:
 - Valve Group 10 - MSIV Leakage Control System
 - Valve Group 11 - Reactor Recirculation System
 - Valve Group 12 - Combustible Gas Control System
 - Valve Group 13 - Drywell Vacuum Relief System
 - Valve Group 16 - HPCS
 - Valve Group 17 - LPCS
 - d. Test connection valve.
 - e. Remote manually controlled valve.
 - f. Check valve.
 - g. See Section 3/4.4.7, "Main Steam Line Isolation Valves."
 - h. During Type C testing, valve stem and bonnet are checked for leaks as potential secondary containment bypass leakage paths.
 - i. Not required to be OPERABLE in OPERATIONAL CONDITION **.
 - j. Not required to be OPERABLE in OPERATIONAL CONDITIONS 1, 2 and 3.
 - k. These valves may be opened as necessary to supply fire mains in OPERATIONAL CONDITION**.

*Standard closure time, based upon nominal pipe diameter, is approximately 12 inches/min for gate valves and approximately 4 inches/min for globe valves.

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

3/4.6.5 VACUUM RELIEF

CONTAINMENT VACUUM BREAKERS

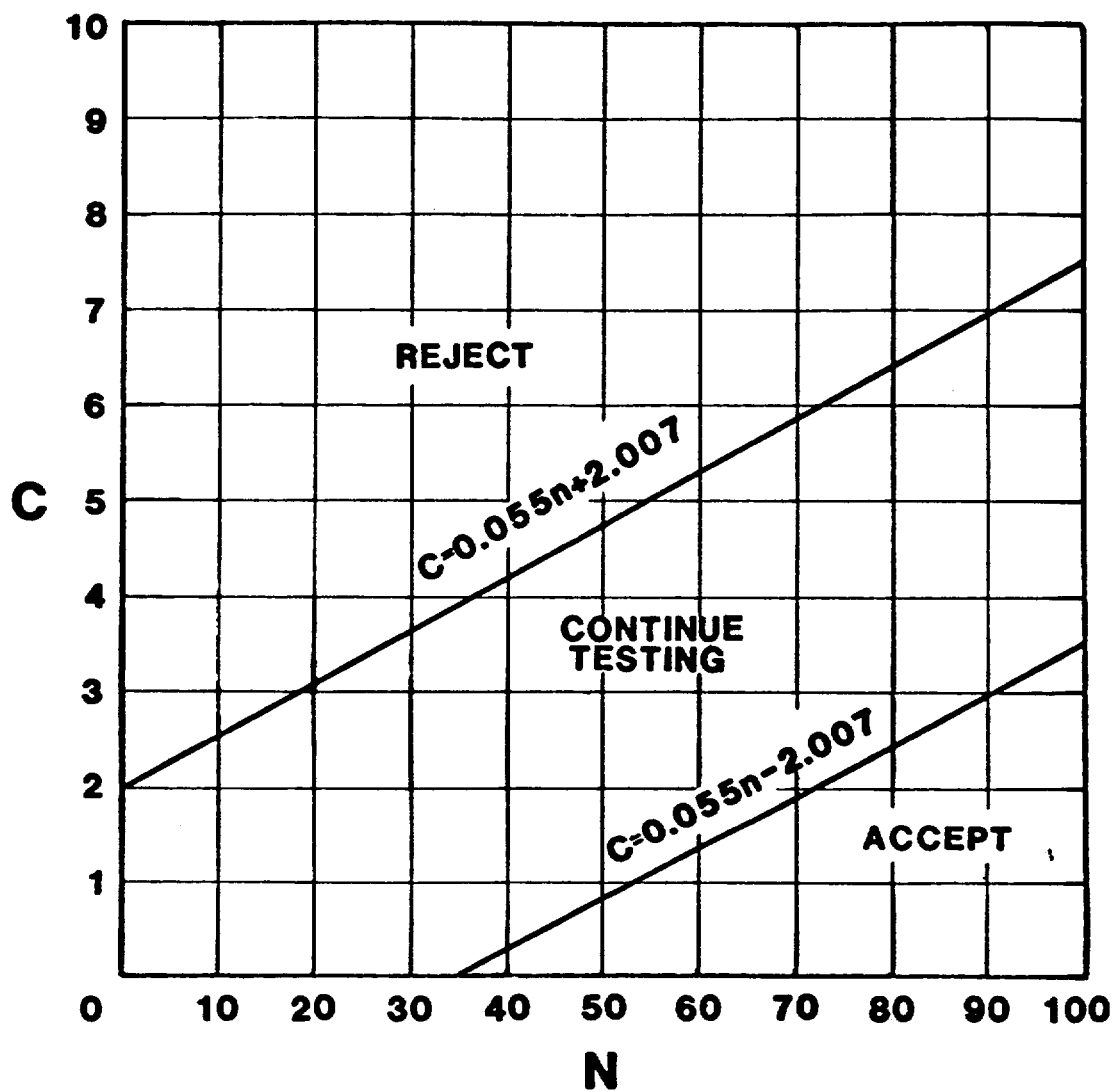
LIMITING CONDITION FOR OPERATION

3.6.5.1 All containment vacuum breakers shall be OPERABLE and the vacuum breakers shall be closed.

APPLICABILITY: Whenever PRIMARY CONTAINMENT INTEGRITY is required per Specifications 3.6.1.1.1 and 3.6.1.1.2.

ACTION:

- a. With one containment vacuum breaker inoperable for opening but known to be closed, operation may continue.
- b. With two containment vacuum breakers inoperable and/or with one or two containment vacuum breakers open, within 4 hours close the motor operated isolation valve(s). Restore at least 3 vacuum breakers to OPERABLE and closed status within 72 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- c. With more than two containment vacuum breakers inoperable and/or open, be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours, and:
 1. Maintain an unobstructed opening(s) in the containment that equals or exceeds the flow area provided by two open vacuum breakers, or
 2. Deactivate the containment spray by closing at least one valve in each containment spray supply header and deenergizing the power supply to its motor operator.
- d. With the position indicator of any containment vacuum breaker inoperable, restore the inoperable position indicator to OPERABLE status within 14 days or verify the vacuum breaker to be closed at least once per 24 hours by local indication. Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.



SAMPLE PLAN 2) FOR SNUBBER FUNCTIONAL TEST

Figure 4.7.4-1

PLANT SYSTEMS

3/4.7.5 SEALED SOURCE CONTAMINATION

LIMITING CONDITION FOR OPERATION

3.7.5 Each sealed source containing radioactive material either in excess of 100 microcuries of beta and/or gamma emitting material or 10 microcuries of alpha emitting material shall be free of greater than or equal to 0.005 microcuries of removable contamination.

APPLICABILITY: At all times.

ACTION:

- a. With a sealed source having removable contamination in excess of the above limit, withdraw the sealed source from use and either:
 1. Decontaminate and repair the sealed source, or
 2. Dispose of the sealed source in accordance with Commission Regulations.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.5.1 Test Requirements - Each sealed source shall be tested for leakage and/or contamination by:

- a. The licensee, or
- b. Other persons specifically authorized by the Commission or an Agreement State.

The test method shall have a detection sensitivity of at least 0.005 microcuries per test sample.

4.7.5.2 Test Frequencies - Each category of sealed sources, excluding startup sources and fission detectors previously subjected to core flux, shall be tested at the frequency described below.

- a. Sources in use - At least once per six months for all sealed sources containing radioactive material:
 1. With a half-life greater than 30 days, excluding Hydrogen 3, and
 2. In any form other than gas.

REFUELING OPERATIONS

LOW WATER LEVEL

LIMITING CONDITION FOR OPERATION

3.9.11.2 Two shutdown cooling mode loops of the residual heat removal (RHR) system shall be OPERABLE and at least one loop shall be in operation,* with each loop consisting of at least:

- a. One OPERABLE RHR pump, and
- b. Two OPERABLE RHR heat exchangers.

APPLICABILITY: OPERATIONAL CONDITION 5, when irradiated fuel is in the reactor vessel and the water level is less than 22 feet 10 inches above the top of the reactor pressure vessel flange and heat losses to the ambient are not sufficient** to maintain OPERATIONAL CONDITION 5.

ACTION:

- a. With less than the above required shutdown cooling mode loops of the RHR system OPERABLE, within one hour and at least once per 24 hours thereafter, demonstrate the operability of at least one alternate method capable of decay heat removal for each inoperable RHR shutdown cooling mode loop.
- b. With no RHR shutdown cooling mode loop in operation, within one hour establish reactor coolant circulation by an alternate method and monitor reactor coolant temperature at least once per hour.

SURVEILLANCE REQUIREMENTS

4.9.11.2 At least one shutdown cooling mode loop of the residual heat removal system or alternate method shall be verified to be in operation and circulating reactor coolant at least once per 12 hours.

*The shutdown cooling pump may be removed from operation for up to 2 hours per 8-hour period.

**Ambient losses must be such that no increase in reactor vessel water temperature will occur (even though REFUELING conditions are being maintained).

REFUELING OPERATIONS

3/4.9.12 INCLINED FUEL TRANSFER SYSTEM

LIMITING CONDITION FOR OPERATION

3.9.12 The inclined fuel transfer system (IFTS) may be in operation provided that:

- a. The access door and floor plugs of all rooms through which the transfer system penetrates are closed and locked.
- b. All access interlocks and palm switches are OPERABLE.
- c. The Versa blocking valve located in the Fuel Handling Building IFTS hydraulic power unit is OPERABLE.
- d. At least one IFTS carriage position indicator is OPERABLE at each of the twelve proximity sensors and at least one liquid level sensor is OPERABLE.
- e. All keylock switches which provide IFTS access control-transfer system lockout are OPERABLE.
- f. The warning light outside of the access door is OPERABLE.

APPLICABILITY: When the IFTS blank flange is removed.

ACTION:

- a. With one or more access interlocks, warning lights, and/or palm switches inoperable, operation of the IFTS may continue provided that entry into the area is prohibited by establishing a continuous watch and conspicuously posting as a high radiation area.
- b. With the requirements of the above specification not satisfied, suspend IFTS operation with the IFTS at either terminal point. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.12.1 Within 4 hours prior to the startup of the IFTS, verify that no personnel are in areas immediately adjacent to the IFTS tube and that the access door and floor plugs to rooms through which the IFTS tube penetrates are closed and locked.

RADIOACTIVE EFFLUENTS

DOSE

LIMITING CONDITION FOR OPERATION

3.11.1.2 The dose or dose commitment to a MEMBER OF THE PUBLIC from radioactive materials in liquid effluents released, from each reactor unit, to UNRESTRICTED AREAS (see Figure 5.1.1-1) shall be limited:

- a. During any calendar quarter to less than or equal to 1.5 mrem to the total body and to less than or equal to 5 mrem to any organ, and
- b. During any calendar year to less than or equal to 3 mrem to the total body and to less than or equal to 10 mrem to any organ.

APPLICABILITY: At all times.

ACTION:

- a. With the calculated dose from the release of radioactive materials in liquid effluents exceeding any of the above limits, prepare and submit to the Commission within 30 days, pursuant to Specification 6.9.2, a Special Report which identifies the cause(s) for exceeding the limit(s) and defines the corrective actions that have been taken to reduce the releases and the corrective actions to be taken to ensure that future releases will be in compliance with the above limits.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.1.2 Dose Calculations. Cumulative dose contributions from liquid effluents for the current calendar quarter and the current calendar year shall be determined in accordance with the methodology and parameters of the ODCM at least once per 31 days.

RADIOACTIVE EFFLUENTS

LIQUID RADWASTE TREATMENT SYSTEM

LIMITING CONDITION FOR OPERATION

3.11.1.3 The LIQUID RADWASTE TREATMENT SYSTEM shall be OPERABLE and appropriate portions of the system shall be used to reduce the release of radioactivity when the projected doses due to the liquid effluent from each reactor unit to UNRESTRICTED AREAS (see Figure 5.1.1-1) would exceed 0.06 mrem to the total body or 0.2 mrem to any organ, in a 31-day period.

APPLICABILITY: At all times.

ACTION:

- a. With radioactive liquid waste being discharged without treatment and in excess of the above limits, and any portion of the liquid radwaste treatment system not in operation, prepare and submit to the Commission, within 30 days pursuant to Specification 6.9.2, a Special Report which includes the following information:
 1. Explanation of why liquid radwaste was being discharged without treatment, identification of any inoperable equipment or sub-systems, and the reason for the inoperability, and
 2. Action(s) taken to restore the inoperable equipment to OPERABLE status, and
 3. Summary description of action(s) taken to prevent a recurrence.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.1.3.1 Doses due to liquid releases from each reactor unit to UNRESTRICTED AREAS shall be projected at least once per 31 days, in accordance with methodology and parameters in the ODCM.

4.11.1.3.2 The installed LIQUID RADWASTE TREATMENT SYSTEM shall be demonstrated OPERABLE by meeting Specifications 3.11.1.1 and 3.11.1.2.

RADIOACTIVE EFFLUENTS

LIQUID HOLDUP TANKS

LIMITING CONDITION FOR OPERATION

3.11.1.4 The quantity of radioactive material contained in any outside temporary tank, not including liners for shipping radwaste, shall be limited to less than or equal to 10 curies, excluding tritium and dissolved or entrained noble gases.

APPLICABILITY: At all times.

ACTION:

- a. With the quantity of radioactive material in any of the above specified tanks exceeding the above limit, immediately suspend all additions of radioactive material to the tanks and within 48 hours reduce the tank contents to within the limit, and describe the events leading to the condition in the next Semiannual Radioactive Effluent Release Report pursuant to Specification 6.9.1.8.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.1.4 The quantity of radioactive material contained in each of the above specified tanks shall be determined to be within the above limit by analyzing a representative sample of the tank's contents at least once per 7 days when radioactive materials are being added to the tank.

RADIOACTIVE EFFLUENTS

3/4.11.2 GASEOUS EFFLUENTS

DOSE RATE

LIMITING CONDITION FOR OPERATION

3.11.2.1 The dose rate due to radioactive materials released in gaseous effluents from the site to areas at and beyond the SITE BOUNDARY (see Figure 5.1.1-1) shall be limited to the following:

- a. For noble gases: Less than or equal to 500 mrem/yr to the total body and less than or equal to 3000 mrem/yr to the skin, and
- b. For all iodine-131, iodine-133, tritium and all radionuclides in particulate form with half lives greater than 8 days: Less than or equal to 1500 mrem/yr to any organ.

APPLICABILITY: At all times.

ACTION:

With the dose rate(s) exceeding the above limits, immediately decrease the release rate(s) to within the above limit(s).

SUREVEILLANCE REQUIREMENTS

4.11.2.1.1 The dose rate due to noble gases in gaseous effluents shall be determined to be within the above limits in accordance with the methodology and parameters of the ODCM.

4.11.2.1.2 The dose rate due to iodine-131, iodine-133, tritium and to radionuclides in particulate form with half lives greater than 8 days in gaseous effluents shall be determined to be within the above limits in accordance with the methodology and parameters of the ODCM by obtaining representative samples and performing analyses in accordance with the sampling and analysis program specified in Table 4.11.2.1.2-1.

TABLE 4.11.2.1.2-1 (Continued)

RADIOACTIVE GASEOUS WASTE SAMPLING AND ANALYSIS PROGRAM

TABLE NOTATION (Continued)

- b. Analyses shall also be performed following startup, shutdown, or a THERMAL POWER change exceeding 15 percent of the RATED THERMAL POWER within a one hour period. This requirement does not apply if (1) analysis shows that the DOSE EQUIVALENT I-131 concentration in the primary coolant has not increased more than a factor of 3; and (2) the noble gas monitor shows that effluent activity has not increased more than a factor of 3.
- c. Samples shall be changed at least once per 7 days and analyses shall be completed within 48 hours after changing or after removal from sampler. Sampling and analyses shall also be performed at least once per 24 hours for at least 7 days following each shutdown, startup or THERMAL POWER change exceeding 15 percent of RATED THERMAL POWER in one hour. When samples collected for 24 hours are analyzed, the corresponding LLD's may be increased by a factor of 10. This requirement does not apply if (1) analysis shows that the DOSE EQUIVALENT I-131 concentration in the primary coolant has not increased more than a factor of 3; and (2) the noble gas monitor shows that effluent activity has not increased more than a factor of 3.
- d. The ratio of the sample flow rate to the sampled stream flow rate shall be known for the time period covered by each dose or dose rate calculation made in accordance with Specifications 3.11.2.1, 3.11.2.2 and 3.11.2.3.
- e. The principal gamma emitters for which the LLD specification applies exclusively are the following radionuclides: Kr-87, Kr-88, Xe-133, Xe-133m, Xe-135, and Xe-138 for gaseous emissions and Mn-54, Fe-59, Co-58, Co-60, Zn-65, Mo-99, I-131, Cs-134, Cs-137, Ce-141 and Ce-144 for particulate emissions. This list does not mean that only these nuclides are to be detected and reported. Other peaks which are measurable and identifiable, together with the above nuclides, shall also be identified and reported in the Semiannual Radiological Effluent Release Report pursuant to Specification 6.9.1.7 in the format outlined in Regulatory Guide 1.21, Appendix B, Revision 1, June 1974.
- f. Sampling and analysis of gaseous release points shall be performed initially whenever a high alarm setpoint is exceeded or whenever two or more of the alert setpoints are exceeded. If the high alarm setpoint or two or more of the alert setpoints continue to be exceeded, verify at least once per 4 hours via the radiation monitors that plant releases are below the Specification 3.11.2.1 dose rate limits and sampling and analysis shall be performed at least once per 12 hours.

RADIOACTIVE EFFLUENTS

DOSE - NOBLE GASES

LIMITING CONDITION FOR OPERATION

3.11.2.2 The air dose due to noble gases released in gaseous effluents, from each reactor unit, from the site to areas at and beyond the SITE BOUNDARY (see Figure 5.1.1-1) shall be limited to the following:

- a. During any calendar quarter: Less than or equal to 5 mrad for gamma radiation and less than or equal to 10 mrad for beta radiation, and
- b. During any calendar year: Less than or equal to 10 mrad for gamma radiation and less than or equal to 20 mrad for beta radiation.

APPLICABILITY: At all times.

ACTION:

- a. With the calculated air dose from the radioactive noble gases in gaseous effluents exceeding any of the above limits, prepare and submit to the Commission within 30 days, pursuant to Specification 6.9.2, a Special Report which identifies the cause(s) for exceeding the limit(s) and defines the corrective actions to be taken to ensure that future releases will be in compliance with Specification 3.11.2.2.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.2.2 Dose Calculations. Cumulative dose contributions for noble gases for the current calendar quarter and current calendar year shall be determined in accordance with the methodology and parameters in the ODCM at least once per 31 days.

RADIOACTIVE EFFLUENTS

DOSE - IODINE-131, IODINE-133, TRITIUM AND RADIONUCLIDES IN PARTICULATE FORM

LIMITING-CONDITION FOR OPERATION

3.11.2.3 The dose to a MEMBER OF THE PUBLIC from iodine-131, iodine-133, tritium and radionuclides in particulate form with half-lives greater than 8 days in gaseous effluents released, from each reactor unit, from the site to areas at and beyond the SITE BOUNDARY (see Figure 5.1.1-1) shall be limited to the following:

- a. During any calendar quarter: Less than or equal to 7.5 mrem to any organ, and
- b. During any calendar year: Less than or equal to 15 mrem to any organ.

APPLICABILITY: At all times.

ACTION:

- a. With the calculated dose from the release of iodine-131, iodine-133, tritium and radionuclides in particulate form, with half-lives greater than 8 days, in gaseous effluents exceeding any of the above limits, prepare and submit to the Commission within 30 days, pursuant to Specification 6.9.2, a Special Report which identifies the cause(s) for exceeding the limit and defines the corrective actions that have been taken to reduce releases and the proposed corrective actions to be taken to ensure that future releases will be in compliance with Specification 3.11.2.3.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.2.3 Dose Calculations. Cumulative dose contributions from iodine-131, iodine-133, tritium and radionuclides in particulate form with half-lives greater than 8 days for the current calendar quarter and current calendar year shall be determined in accordance with the methodology and parameters in the ODCM at least once per 31 days.

RADIOACTIVE EFFLUENTS

GASEOUS RADWASTE (OFFGAS) TREATMENT

LIMITING CONDITION FOR OPERATION

3.11.2.4 The GASEOUS RADWASTE TREATMENT (OFFGAS) SYSTEM shall be in operation. The Charcoal bypass mode shall not be used unless the offgas post-treatment radiation monitor is OPERABLE as specified in Table 3.3.7.1-1.

APPLICABILITY: Whenever the main condenser air ejector evacuation system is in operation.

ACTION:

- a. With gaseous radwaste from the main condenser air ejector system being discharged without treatment for more than 7 consecutive days, prepare and submit to the Commission within 30 days, pursuant to Specification 6.9.2, a Special Report which includes the following information:
 1. Explanation of why gaseous radwaste was being discharged without treatment, identification of the inoperable equipment or subsystems which resulted in gaseous radwaste being discharged without treatment, and the reason for inoperability,
 2. Action(s) taken to restore the inoperable equipment to OPERABLE status, and
 3. Summary description of action(s) taken to prevent a recurrence.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.2.4 The readings of relevant instrumentation shall be checked at least once per 12 hours when the main condenser air ejector is in use to ensure that the gaseous radwaste treatment system is functioning.

RADIOACTIVE EFFLUENTS

VENTILATION EXHAUST TREATMENT SYSTEMS

LIMITING CONDITION FOR OPERATION

3.11.2.5 The VENTILATION EXHAUST TREATMENT SYSTEMS shall be OPERABLE and appropriate portions of the system shall be used to reduce releases of radioactivity when the projected dose due to gaseous effluent releases from each reactor unit to areas at and beyond the SITE BOUNDARY (see Figure 5.1.1-1) in a 31 day period would exceed 0.3 mrem to any organ of a MEMBER OF THE PUBLIC.

APPLICABILITY: At all times.

ACTION:

- a. With radioactive gaseous waste being discharged without treatment and in excess of the above limits, prepare and submit to the Commission within 30 days, pursuant to Specification 6.9.2, a Special Report which includes the following information:
 1. Explanation of why gaseous radwaste was being discharged without treatment, identification of any inoperable equipment or subsystems which resulted in gaseous radwaste being discharged without treatment, and the reason for the inoperability,
 2. Action(s) taken to restore the inoperable equipment to OPERABLE status, and
 3. Summary description of action(s) taken to prevent a recurrence.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.2.5.1 Doses due to gaseous releases from each reactor unit to areas at and beyond the SITE BOUNDARY shall be projected at least once per 31 days in accordance with the methodology and parameters in the ODCM.

4.11.2.5.2 The installed VENTILATION EXHAUST TREATMENT SYSTEMS shall be demonstrated OPERABLE by meeting Specifications 3.11.2.1 and 3.11.2.3.

RADIOACTIVE EFFLUENTS

EXPLOSIVE GAS MIXTURE

LIMITING CONDITION FOR OPERATION

3.11.2.6 The concentration of hydrogen in the offgas treatment system shall be limited to less than or equal to 4% by volume.

APPLICABILITY: Whenever the offgas treatment system is in operation.

ACTION:

- a. With the concentration of hydrogen in the offgas treatment system exceeding the limit, restore the concentration to within the limit within 48 hours.
- b. With the continuous monitor inoperable, utilize grab sampling procedures.
- c. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.2.6 The concentration of hydrogen in the offgas treatment system shall be determined to be within the above limits by continuously monitoring the waste gas in the offgas treatment system whenever the main condenser evacuation system is in operation with the hydrogen monitor OPERABLE as required by Table 3.3.7.10-1 of Specification 3.3.7.10.

RADIOACTIVE EFFLUENTS

MAIN CONDENSER

LIMITING CONDITION FOR OPERATION

3.11.2.7 The release rate of the sum of the activities of the noble gases Kr-85m, Kr-87, Kr-88, Xe-133, Xe-135, and Xe-138 measured at the main condenser air ejector shall be limited to less than or equal to 358 millicuries/second, after 30 minutes decay.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2* and 3*

ACTION:

With the release rate of the specified noble gases at the main condenser air ejector effluent exceeding 358 millicuries/second after 30 minutes decay, restore the release rate to within its limit within 72 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

SURVEILLANCE REQUIREMENTS

4.11.2.7.1 The release rate of noble gases at the outlet of the main condenser air ejector shall be continuously monitored in accordance with Specification 3.3.7.1.

4.11.2.7.2 The release rate of the specified noble gases from the main condenser air ejector shall be determined to be within the limits of Specification 3.11.2.7 at the following frequencies** by performing an isotopic analysis of a representative sample of gases taken at the discharge (prior to dilution and/or discharge) of the main condenser air ejector.

- a. At least once per 31 days.
- b. Within 4 hours following an increase, as indicated by the Offgas Pretreatment Radiation Monitor, of greater than 50%, after factoring out increases due to changes in THERMAL POWER level, in the nominal steady state fission gas release from the primary coolant.

*When the main condenser air ejector is in operation.

**The provisions of Specification 4.0.4 are not applicable.

RADIOACTIVE EFFLUENTS

3/4.11.3 SOLID RADWASTE TREATMENT

LIMITING CONDITION FOR OPERATION

3.11.3 Radioactive wastes shall be SOLIDIFIED or dewatered in accordance with the PROCESS CONTROL PROGRAM to meet shipping and transportation requirements during transit, and disposal site requirements when received at the disposal site.

APPLICABILITY: At all times.

ACTION:

- a. With SOLIDIFICATION or dewatering not meeting disposal site and shipping and transportation requirements, suspend shipment of the inadequately processed wastes and correct the PROCESS CONTROL PROGRAM, the procedures and/or the solid waste system as necessary to prevent recurrence.
- b. With the SOLIDIFICATION or dewatering not performed in accordance with the PROCESS CONTROL PROGRAM, (1) test the improperly processed waste in each container to ensure that it meets burial ground and shipping requirements and (2) take appropriate administrative action to prevent recurrence.
- c. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.3.1 If the SOLIDIFICATION method is used, the PROCESS CONTROL PROGRAM shall be used to verify the SOLIDIFICATION of at least one representative test specimen from at least every tenth batch of each type of wet radioactive waste (e.g., filter sludges, spent resins, evaporator bottoms, and sodium sulfate solutions).

- a. If any test specimen fails to verify SOLIDIFICATION, the SOLIDIFICATION of the batch under test shall be suspended until such time as additional test specimens can be obtained, alternative SOLIDIFICATION parameters can be determined in accordance with the PROCESS CONTROL PROGRAM, and a subsequent test verifies SOLIDIFICATION. SOLIDIFICATION of the batch may then be resumed using the alternative SOLIDIFICATION parameters determined by the PROCESS CONTROL PROGRAM.

RADIOACTIVE EFFLUENTS

SURVEILLANCE REQUIREMENTS (Continued)

- b. If the initial test specimen from a batch of waste fails to verify SOLIDIFICATION, the PROCESS CONTROL PROGRAM shall provide for the collection and testing of representative test specimens from each consecutive batch of the same type of wet waste until at least three consecutive initial test specimens demonstrate SOLIDIFICATION. The PROCESS CONTROL PROGRAM shall be modified as required, as provided in Specification 6.13, to assure SOLIDIFICATION of subsequent batches of waste.
- c. With the installed equipment incapable of meeting Specification 3.11.3 or declared inoperable, restore the equipment to OPERABLE status or provide the contract capability to process wastes as necessary to satisfy all applicable transportation and disposal requirements.

RADIOACTIVE EFFLUENTS

3/4.11.4 TOTAL DOSE

LIMITING CONDITION FOR OPERATION

3.11.4 The annual (calendar year) dose or dose commitment to any MEMBER OF THE PUBLIC, due to releases of radioactivity and radiation, from uranium fuel cycle sources shall be limited to less than or equal to 25 mrem to the total body or any organ, except the thyroid, which shall be limited to less than or equal to 75 mrem.

APPLICABILITY: At all times.

ACTION:

- a. With the calculated doses from the release of radioactive materials in liquid or gaseous effluents exceeding twice the limits of Specification 3.11.1.2a., 3.11.1.2b., 3.11.2.2a., 3.11.2.2b., 3.11.2.3a., or 3.11.2.3b., calculations shall be made including direct radiation contributions from the reactor units and from outside storage tanks to determine whether the above limits of Specification 3.11.4 have been exceeded. If such is the case, prepare and submit to the Commission within 30 days, pursuant to Specification 6.9.2, a Special Report that defines the corrective action to be taken to reduce subsequent releases to prevent recurrence of exceeding the above limits and includes the schedule for achieving conformance with the above limits. This Special Report, as defined in 10 CFR 20.405c, shall include an analysis that estimates the radiation exposure (dose) to a MEMBER OF THE PUBLIC from uranium fuel cycle sources, including all effluent pathways and direct radiation, for the calendar year that includes the release(s) covered by this report. It shall also describe levels of radiation and concentrations of radioactive material involved, and the cause of the exposure levels or concentrations. If the estimated dose(s) exceeds the above limits, and if the release condition resulting in violation of 40 CFR Part 190 has not already been corrected, the Special Report shall include a request for a variance in accordance with the provisions of 40 CFR Part 190. Submittal of the report is considered a timely request, and a variance is granted until staff action on the request is complete.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.4.1 Cumulative dose contributions from liquid and gaseous effluents shall be determined in accordance with Specifications 4.11.1.2, 4.11.2.2, and 4.11.2.3, and in accordance with the methodology and parameters in the ODCM.

4.11.4.2 If the cumulative dose contributions exceed the limits defined in 3.11.4, ACTION a, cumulative dose contributions from direct radiation from unit operation including outside storage tanks shall be determined in accordance with the methodology and parameters in the ODCM.

3/4.12 RADIOLOGICAL ENVIRONMENTAL MONITORING

3/4.12.1 MONITORING PROGRAM

LIMITING CONDITION FOR OPERATION

3.12.1 The radiological environmental monitoring program shall be conducted as specified in Table 3.12.1-1.

APPLICABILITY: At all times.

ACTION:

- a. With the radiological environmental monitoring program not being conducted as specified in Table 3.12.1-1, prepare and submit to the Commission, in the Annual Radiological Environmental Operating Report per Specification 6.9.1.6, a description of the reasons for not conducting the program as required and the plans for preventing a recurrence.
- b. With the level of radioactivity as the result of plant effluents in an environmental sampling medium at a specified location exceeding the reporting levels of Table 3.12.1-2 when averaged over any calendar quarter, prepare and submit to the Commission within 30 days pursuant to Specification 6.9.2 a Special Report that identifies the cause(s) for exceeding the limit(s) and defines the corrective actions to be taken to reduce radioactive effluents so that the potential annual dose to a MEMBER OF THE PUBLIC is less than the calendar year limits of Specifications 3.11.1.2, 3.11.2.2 and 3.11.2.3. When more than one of the radionuclides in Table 3.12.1-2 are detected in the sampling medium, this report shall be submitted if:

$$\frac{\text{concentration (1)}}{\text{reporting level (1)}} + \frac{\text{concentration (2)}}{\text{reporting level (2)}} + \dots \geq 1.0$$

When radionuclides other than those in Table 3.12.1-2 are detected and are the result of plant effluents, this report shall be submitted if the potential annual dose* to a MEMBER OF THE PUBLIC is equal to or greater than the calendar year limits of Specifications 3.11.1.2, 3.11.2.2 and 3.11.2.3. This report is not required if the measured level of radioactivity was not the result of plant effluents; however, in such an event, the condition shall be reported and described in the Annual Radiological Environmental Operating Report required by Specification 6.9.1.6.

- c. With milk or broad leaf vegetation samples unavailable from one or more of the sample locations required by Table 3.12.1-1, identify specific locations for obtaining replacement samples and add them within 30 days to the Radiological Environmental Monitoring Program given in the ODCM. The specific locations from which samples were unavailable may then be deleted from the monitoring program. Pursuant to Specification 6.14, submit in the next Semiannual Radioactive Effluent Release Report documentation for a change in the ODCM including a revised figure(s) and table for the ODCM reflecting the new location(s) with supporting information identifying the cause of the unavailability of samples and justifying the selection of the new location(s) for obtaining samples.
- d. The provisions of Specification 3.0.3 are not applicable.

*The methodology and parameters used to estimate the potential annual dose to a MEMBER OF THE PUBLIC shall be indicated in this report.

RADIOLOGICAL ENVIRONMENTAL MONITORING

SURVEILLANCE REQUIREMENTS

4.12.1 The radiological environmental monitoring samples shall be collected pursuant to Table 3.12.1-1 from the specific locations given in the table and figures in the ODCM and shall be analyzed pursuant to the requirements of Table 3.12.1-1 and the detection capabilities required by Table 4.12.1-1.

RADIOLOGICAL ENVIRONMENTAL MONITORING

3/4.12.2 LAND USE CENSUS

LIMITING CONDITION FOR OPERATION

3.12.2 A land use census shall be conducted and shall identify within a distance of 8 km (5 miles) the location in each of the 16 meteorological sectors of the nearest milk animal, the nearest residence and the nearest garden* of greater than 50 m² (500 ft²) producing broad leaf vegetation.

APPLICABILITY: At all times.

ACTION:

- a. With a land use census identifying a location(s) which yields a calculated dose or dose commitment greater than the values currently being calculated in Specification 4.11.2.3, identify the new location(s)* in the next Semiannual Radioactive Effluent Release Report, pursuant to Specification 6.9.1.7.
- b. With a land use census identifying a location(s) which yields a calculated dose or dose commitment (via the same exposure pathway) 20 percent greater than at a location from which milk and/or broad leaf vegetation samples are currently being obtained in accordance with Specification 3.12.1, add the new location(s) to the radiological environmental monitoring program within 30 days. If no milk and/or broad leaf vegetation samples are identified in the new sector with the highest D/Q value, then the next sector with the highest D/Q value will be considered and so on until a sampling location can be established. The sampling location(s), excluding the control station location, having the lowest calculated dose or dose commitment(s), via the same exposure pathway, may be deleted from this monitoring program after October 31 of the year in which this land use census was conducted.* Identify the new location(s) in the next Semiannual Radioactive Effluent Release Report and also include in the report a revised figure(s) and table(s) for the ODCM reflecting the new location(s).
- c. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.12.2 The land use census shall be conducted during the growing season at least once per 12 months using that information that will provide the best results, such as by a door-to-door survey, aerial survey, or by consulting local agriculture authorities. The results of the land use census shall be included in the Annual Radiological Environmental Operating Report pursuant to Specification 6.9.1.6.

*Broad leaf vegetation sampling of at least three different kinds of vegetation may be performed at the site boundary in each of two different direction sectors with the highest predicted D/Qs in lieu of the garden census. Specifications for broad leaf vegetation sampling in Table 3.12.1-1 shall be followed, including analysis of control samples.

RADIOLOGICAL ENVIRONMENTAL MONITORING

3/4.12.3 INTERLABORATORY COMPARISON PROGRAM

LIMITING CONDITION FOR OPERATION

3.12.3 Analyses shall be performed on radioactive materials that correspond to samples required by Table 3.12.1-1. These materials are supplied as part of an Interlaboratory Comparison Program which has been approved by the Commission.

APPLICABILITY: At all times.

ACTION:

- a. With analyses not being performed as required above, report the corrective actions taken to prevent a recurrence to the Commission in the Annual Radiological Environmental Operating Report pursuant to Specification 6.9.1.6.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.12.3 A summary of the results obtained as part of the above required Interlaboratory Comparison Program shall be included in the Annual Radiological Environmental Operating Report pursuant to Specification 6.9.1.6.

3/4 LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

3/4.0 APPLICABILITY

BASES

Specifications 3.0.1 through 3.0.4 establish the general requirements applicable to Limiting Conditions for Operation. These requirements are based on the requirements for Limiting Conditions for Operation stated in the Code of Federal Regulations, 10 CFR 50.36(c)(2):

"Limiting conditions for operation are the lowest functional capability or performance levels of equipment required for safe operation of the facility. When a limiting condition for operation of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the technical specification until the condition can be met."

Specification 3.0.1 establishes the Applicability statement within each individual specification as the requirement for when (i.e., in which OPERATIONAL CONDITIONS or other specified conditions) conformance to the Limiting Conditions for Operation is required for safe operation of the facility. The ACTION requirements establish those remedial measures that must be taken within specified time limits when the requirements of a Limiting Condition for Operation are not met. It is not intended that the shutdown ACTION requirements be used as an operational convenience which permits (routine) voluntary removal of a system(s) or component(s) from service in lieu of other alternatives that would not result in redundant systems or components being inoperable.

There are two basic types of ACTION requirements. The first specifies the remedial measures that permit continued operation of the facility which is not further restricted by the time limits of the ACTION requirements. In this case, conformance to the ACTION requirements provides an acceptable level of safety for unlimited continued operation as long as the ACTION requirements continue to be met. The second type of ACTION requirement specifies a time limit in which conformance to the conditions of the Limiting Condition for Operation must be met. This time limit is the allowable outage time to restore an inoperable system or component to OPERABLE status or for restoring parameters within specified limits. If these actions are not completed within the allowable outage time limits, a shutdown is required to place the facility in an OPERATIONAL CONDITION or other specified condition in which the specification no longer applies.

The specified time limits of the ACTION requirements are applicable from the point in time it is identified that a Limiting Condition for Operation is not met. The time limits of the ACTION requirements are also applicable when a system or component is removed from service for surveillance testing or investigation or operational problems. Individual specifications may include a specified time limit for the completion of a Surveillance Requirement when equipment is removed from service. In this case, the allowable outage time limits of the ACTION requirements are applicable when this limit expires if the surveillance has not been completed. When a shutdown is required to comply with ACTION requirements,

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BASES (Continued)

the plant may have entered an OPERATIONAL CONDITION in which a new specification becomes applicable. In this case, the time limits of the ACTION requirements would apply from the point in time that the new specification becomes applicable if the requirements of the Limiting Condition for Operation are not met.

Specification 3.0.2 establishes that noncompliance with a specification exists when the requirements of the Limiting Condition for Operation are not met and the associated ACTION requirements have not been implemented within the specified time interval. The purpose of this specification is to clarify that (1) implementation of the ACTION requirement within the specified time interval constitutes compliance with a specification, and (2) completion of the remedial measures of the ACTION requirements is not required when compliance with a Limiting Condition of Operation is restored within the time interval specified in the associated ACTION requirements.

Specification 3.0.3 establishes the shutdown ACTION requirements that must be implemented when a Limiting Condition for Operation is not met and the condition is not specifically addressed by the associated ACTION requirements. The purpose of this specification is to delineate the time limits for placing the unit in a safe shutdown CONDITION when plant operation cannot be maintained within the limits for safe operation defined by the Limiting Conditions for Operation and its ACTION requirements. It is not intended to be used as an operational convenience which permits (routine) voluntary removal of redundant systems or components from service in lieu of other alternatives that would not result in redundant systems or components being inoperable. One hour is allowed to prepare for an orderly shutdown before initiating a change in plant operation. This time permits the operator to coordinate the reduction in electrical generation with the load dispatcher to ensure the stability and availability of the electrical grid. The time limits specified to reach lower CONDITIONS of operation permit the shutdown to proceed in a controlled and orderly manner that is well within the specified maximum cooldown rate and within the cooldown capabilities of the facility assuming only the minimum required equipment is OPERABLE. This reduces thermal stresses on components of the primary coolant system and the potential for a plant upset that could challenge safety systems under conditions for which this specification applies.

If remedial measures permitting limited continued operation of the facility under the provisions of the ACTION requirements are completed, the shutdown may be terminated. The time limits of the ACTION requirements are applicable from the point in time there was a failure to meet a Limiting Condition for Operation. Therefore, the shutdown may be terminated if the ACTION requirements have been met or the time limits of the ACTION requirements have not expired, thus providing an allowance for the completion of the required actions.

The time limits of Specification 3.0.3 allow 37 hours for the plant to be in COLD SHUTDOWN when a shutdown is required during POWER operation. If the plant is in a lower CONDITION of operation when a shutdown is required, the time limit for reaching the next lower CONDITION of operation applies. However, if a lower CONDITION of operation is reached in less time than allowed, the total allowable

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BASES (Continued)

time to reach COLD SHUTDOWN, or other OPERATIONAL CONDITION, is not reduced. For example, if STARTUP is reached in 2 hours, the time allowed to reach HOT SHUTDOWN is the next 11 hours because the total time to reach HOT SHUTDOWN is not reduced from the allowable limit of 13 hours. Therefore, if remedial measures are completed that would permit a return to POWER operation, a penalty is not incurred by having to reach a lower CONDITION of operation in less than the total time allowed.

The same principle applies with regard to the allowable outage time limits of the ACTION requirements, if compliance with the ACTION requirements for one specification results in entry into an OPERATIONAL CONDITION or condition of operation for another specification in which the requirements of the Limiting Condition for Operation are not met. If the new specification becomes applicable in less time than specified, the difference may be added to the allowable outage time limits of the second specification. However, the allowable outage time limits of ACTION requirements for a higher CONDITION of operation may not be used to extend the allowable outage time that is applicable when a Limiting Condition for Operation is not met in a lower CONDITION of operation.

The shutdown requirements of Specification 3.0.3 do not apply in CONDITIONS 4 and 5, because the ACTION requirements of individual specifications define the remedial measures to be taken.

Specification 3.0.4 establishes limitations on a change in OPERATIONAL CONDITIONS when a Limiting Condition for Operation is not met. It precludes placing the facility in a higher CONDITION of operation when the requirements for a Limiting Condition for Operation are not met and continued noncompliance to these conditions would result in a shutdown to comply with the ACTION requirements if a change in CONDITIONS were permitted. The purpose of this specification is to ensure that facility operation is not initiated or that higher CONDITIONS of operation are not entered when corrective action is being taken to obtain compliance with a specification by restoring equipment to OPERABLE status or parameters to specified limits. Compliance with ACTION requirements that permit continued operation of the facility for an unlimited period of time provides an acceptable level of safety for continued operation without regard to the status of the plant before or after a change in OPERATIONAL CONDITIONS. Therefore, in this case, entry into an OPERATIONAL CONDITION or other specified condition may be made in accordance with the provisions of the ACTION requirements. The provisions of this specification should not, however, be interpreted as endorsing the failure to exercise good practice in restoring systems or components to OPERABLE status before plant startup.

When a shutdown is required to comply with ACTION requirements, the provisions of Specification 3.0.4 do not apply because they would delay placing the facility in a lower CONDITION of operation.

Specifications 4.0.1 through 4.0.5 establish the general requirements applicable to Surveillance Requirements. These requirements are based on the

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BASES (Continued)

Surveillance Requirements stated in the Code of Federal Regulations, 10 CFR 50.36(c)(3):

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

Specification 4.0.1 establishes the requirement that surveillances must be performed during the OPERATIONAL CONDITIONS or other conditions for which the requirements of the Limiting Conditions for Operation apply unless otherwise stated in an individual Surveillance Requirement. The purpose of this specification is to ensure that surveillances are performed to verify the operational status of systems and components and that parameters are within specified limits to ensure safe operation of the facility when the plant is in an OPERATIONAL CONDITION or other specified condition for which the individual Limiting Conditions for Operation are applicable. Surveillance Requirements do not have to be performed when the facility is in an OPERATIONAL CONDITION for which the requirements of the associated Limiting Condition for Operation do not apply unless otherwise specified. The Surveillance Requirements associated with a Special Test Exception are only applicable when the Special Test Exception is used as an allowable exception to the requirements of a specification.

Specification 4.0.2 establishes the conditions under which the specified time interval for Surveillance Requirements may be extended. Item a. permits an allowable extension of the normal surveillance interval to facilitate surveillance scheduling and consideration of plant operating conditions that may not be suitable for conducting the surveillance; e.g., transient conditions or other ongoing surveillance or maintenance activities. Item b. limits the use of the provisions of item a. to ensure that it is not used repeatedly to extend the surveillance interval beyond that specified. The limits of Specification 4.0.2 are based on engineering judgment and the recognition that the most probable result of any particular surveillance being performed is the verification of conformance with the Surveillance Requirements. These provisions are sufficient to ensure that the reliability ensured through surveillance activities is not significantly degraded beyond that obtained from the specified surveillance interval.

Specification 4.0.3 establishes that the failure to perform a Surveillance Requirement within the allowed surveillance interval, defined by the provisions of Specification 4.0.2, is a condition that constitutes a failure to meet the OPERABILITY requirements for a Limiting Condition for Operation. Under the provisions of this specification, systems and components are assumed to be OPERABLE when Surveillance Requirements have been satisfactorily performed within the specified time interval. However, nothing in this provision is to be construed as implying that systems or components are OPERABLE when they are found or known to be inoperable although still meeting the Surveillance Requirements. This specification also clarifies that the ACTION requirements are applicable when Surveillance Requirements have not been completed within the allowed surveillance interval and that the time limits of the ACTION requirements apply from the

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BASES (Continued)

point in time it is identified that a surveillance has not been performed and not at the time that the allowed surveillance interval was exceeded. Completion of the Surveillance Requirement within the allowable outage time limits of the ACTION requirements restores compliance with the requirements of Specification 4.0.3. However, this does not negate the fact that the failure to have performed the surveillance within the allowed surveillance interval, defined by the provisions of Specification 4.0.2., constitutes a failure to meet the OPERABILITY requirements for a Limiting Condition for Operation and any reports required by 10 CFR 50.73 shall be determined based on the length of time the surveillance interval has been exceeded, and the corresponding Limiting Conditions for Operation ACTION time requirements, as discussed in NUREG-1022, Supplement 1.

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

Surveillance Requirements do not have to be performed on inoperable equipment because the ACTION requirements define the remedial measures that apply. However, the Surveillance Requirements have to be met to demonstrate that inoperable equipment has been restored to OPERABLE status.

Specification 4.0.4 establishes the requirement that all applicable surveillances must be met before entry into an OPERATIONAL CONDITION or other condition of operation specified in the Applicability statement. The purpose of this specification is to ensure that system and component OPERABILITY requirements or parameter limits are met before entry into an OPERATIONAL CONDITION or other specified condition for which these systems and components ensure safe operation of the facility. This provision applies to changes in OPERATIONAL CONDITIONS or other specified conditions associated with plant shutdown as well as startup.

Under the provisions of this specification, the applicable Surveillance Requirements must be performed within the specified surveillance interval to

3/4.0 APPLICABILITY

BASES (Continued)

assume that the Limiting Conditions for Operation are met during initial plant startup or following a plant outage.

When a shutdown is required to comply with ACTION requirements, the provisions of Specification 4.0.4 do not apply because this would delay placing the facility in a lower CONDITION of operation.

Specification 4.0.5 establishes the requirement that inservice inspection of ASME Code Class 1, 2, and 3 components and inservice testing of ASME Code Class 1, 2, and 3 pumps and valves shall be performed in accordance with a periodically updated version of Section XI of the ASME Boiler and Pressure Vessel Code and Addenda as required by 10 CFR 50.55a. These requirements apply except when relief has been provided in writing by the Commission.

This specification includes a clarification of the frequencies for performing the inservice inspection and testing activities required by Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda. This clarification is provided to ensure consistency in surveillance intervals throughout the Technical Specifications and to remove any ambiguities relative to the frequencies for performing the required inservice inspection and testing activities.

Under the terms of this specification, the more restrictive requirements of the Technical Specifications take precedence over the ASME Boiler and Pressure Vessel Code and applicable Addenda. The requirements of Specification 4.0.4 to perform surveillance activities before entry into an OPERATIONAL CONDITION or other specified condition takes precedence over the ASME Boiler and Pressure Vessel Code provision that allows pumps and valves to be tested up to one week after return to normal operation. The Technical Specification definition of OPERABLE does not allow a grace period before a component, which is not capable of performing its specified function, is declared inoperable and takes precedence over the ASME Boiler and Pressure Vessel Code provision that allows a valve to be incapable of performing its specified function for up to 24 hours before being declared inoperable.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 30 TO FACILITY OPERATING LICENSE NO. NPF-58

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY, ET AL.

PERRY NUCLEAR POWER PLANT, UNIT NO. 1

DOCKET NO. 50-440

1.0 INTRODUCTION

By letter dated September 17, 1987, the Cleveland Electric Illuminating Company, Duquesne Light Company, Ohio Edison Company, Pennsylvania Power Company, and Toledo Edison Company (the licensees), requested an amendment to Facility Operating License No. NPF-58 for the Perry Nuclear Power Plant Unit No. 1. The proposed amendment would change the plant Technical Specifications (TSs) based on the recommendations provided by the staff in Generic Letter (GL) 87-09 related to the applicability of limiting conditions for operations (LCO) and the surveillance requirements of the TS 3.0 and 4.0. Specifically, the licensees have requested the following revisions to TS 3.0.4, 4.0.3 and 4.0.4 as follows:

Specification 3.0.4 would be revised to define when its provisions apply; i.e., when the affected action statements permit continued operation for an unlimited period of time, instead of defining when the provisions of Specification 3.0.4 do not apply.

Specification 4.0.3 would be revised to incorporate a 24-hour delay in implementing Action Requirements due to a missed surveillance when the Action Requirements provide a restoration time that is less than 24 hours.

Specification 4.0.4 would be revised to clarify that "This provision shall not prevent passage through or to OPERATIONAL CONDITIONS as required to comply with Action Requirements."

2.0 EVALUATION

The changes proposed by the licensees have been reviewed considering the limitations set forth in GL 87-09 for TS 3.0.4, 4.0.3 and 4.0.4 as follows.

Specification 3.0.4

GL 87-09 recognizes, in part, that Specification 3.0.4 unduly restricts facility operation when conformance to the Action Requirements provides an acceptable level of safety for continued operation in any mode. For an LCO that has Action Requirements permitting continued operation for an unlimited period of time, entry into an operational mode or other specified condition of operation

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should be permitted in accordance with those Action Requirements. The restriction on change in operational modes or other specified conditions should apply only where the Action Requirements establish a specified time interval in which the LCO must be met or a shutdown of the facility would be required or where entry into that operational mode would result in entry into an Action Statement with such time constraints. However, nothing in the staff position stated in GL 87-09 should be interpreted as endorsing or encouraging plant startup with inoperable equipment. The GL 87-09 itself states that startup with inoperable equipment should be the exception rather than the rule.

By letter dated March 12, 1990, the licensees have provided confirmation that the remedial measures prescribed by the ACTION STATEMENT of each change involving Specification 3.0.4 is consistent with the Updated Safety Analysis Report and its supporting safety analyses. Further, the licensees have provided confirmation and certification that appropriate administrative controls and procedures are in place for limiting the use of Specification 3.0.4 exceptions in conjunction with the proposed TS change submitted in response to GL 87-09. Additionally, no changes are proposed that affect plant configuration, setpoints, operating parameters, or the operator/equipment interface.

Based on review of the licensees' proposal, and confirmations related above, the staff concludes in granting the exceptions proposed in response to GL 87-09 that: 1) the remedial measures prescribed by the ACTION STATEMENT for each change involving the applicability of the Specification 3.0.4 exception should provide a sufficient level of protection to permit operational mode changes and safe long-term operation consistent with the plant's Updated Safety Analysis Report; and 2) the licensees have in place adequate administrative controls and procedures which will ensure that it will be the exception rather than the rule that startup of the plant with important safety features inoperable will occur.

The staff, therefore, finds the following change to Specification 3.0.4 proposed by the licensees to be acceptable:

"Entry into an OPERATIONAL CONDITION or other specified condition shall not be made when the conditions for the Limiting Conditions for Operation are not met and the associated ACTION requires a shutdown if they are not met within a specified time interval. Entry into an OPERATIONAL CONDITION or specified condition may be made in accordance with Action Requirements when conformance to them permits continued operation of the facility for an unlimited period of time."

The licensees retain two disclaimer statements in TS 3.0.4 in addition to the above change. These are: "This provision shall not prevent passage through or to OPERATIONAL CONDITIONS as required to comply with ACTION requirements. Exceptions to these requirements are stated in the individual Specifications." These statements serve to clarify the use of TS 3.0.4 and are acceptable.

Specification 4.0.3

In GL 87-09 the staff stated that it is overly conservative to assume that systems or components are inoperable when a surveillance requirement has not been performed, because the vast majority of surveillances demonstrate that systems or components in fact are operable. Because the allowable outage time limits of some Action Requirements do not provide an appropriate time limit for performing a missed surveillance before shutdown requirements apply, the TS should include a time limit that would allow a delay of the required actions to permit the performance of the missed surveillance.

This time limit should be based on considerations of plant conditions, adequate planning, availability of personnel, the time required to perform the surveillance, as well as the safety significance of the delay in completion of the surveillance. After reviewing possible limits, the staff concluded that, based on these considerations, 24 hours would be an acceptable time limit for completing a missed surveillance when the allowable outage times of the Action Requirements are less than this time limit or when shutdown Action Requirements apply. The 24-hour time limit would balance the risks associated with an allowance for completing the surveillance within this period against the risks associated with the potential for a plant upset and challenge to safety systems when the alternative is a shutdown to comply with Action Requirements before the surveillance can be completed.

This limit does not waive compliance with Specification 4.0.3. Under Specification 4.0.3, the failure to perform a surveillance requirement will continue to constitute noncompliance with the operability requirements of an LCO and to bring into play the applicable Action Requirements.

Based on the above, the following change to Specification 4.0.3 is acceptable:

"Failure to perform a Surveillance Requirement within the allowed surveillance interval, defined by Specification 4.0.2, shall constitute noncompliance with the OPERABILITY requirements for a Limiting Condition for Operation. The time limits of the ACTION requirements are applicable at the time it is identified that a Surveillance Requirement has not been performed. Compliance with the ACTION requirements may be delayed for up to 24 hours to permit the completion of the surveillance when the allowable outage time limits of the ACTION requirements are less than 24 hours."

Additionally, the licensees have retained a clarifying statement in TS 4.0.3 which states: "Surveillance Requirements do not have to be performed on inoperable equipment." This clarifies that equipment which has been declared inoperable no longer requires surveillance to be performed since their purpose is to ensure operability. This statement is acceptable.

Specification 4.0.4

TS 4.0.4 prohibits entry into an OPERATIONAL CONDITION or other specified condition until all required surveillances have been performed. This could cause an interpretation problem when OPERATIONAL CONDITION changes are required in order to comply with ACTION statements. Specifically, two possible conflicts between TSs 4.0.3 and 4.0.4 could exist. The first conflict arises because TS 4.0.4 prohibits entry into an operational mode or other specified condition when surveillance requirements have not been performed within the specified surveillance interval. The licensees' proposed modification to resolve this conflict involves the revision to TS 4.0.3 to permit a delay of up to 24 hours in the application of the Action Requirements, as explained above, and a clarification of TS 4.0.4 to allow passage through or to operational modes as required to comply with Action Requirements. The second potential conflict between TSs 4.0.3 and 4.0.4 arises because an exception to the requirements of 4.0.4 is allowed when surveillance requirements can only be completed after entry into a mode or condition. However, after entry into this mode or condition, the requirements of TS 4.0.3 may not be met because the surveillance requirements may not have been performed within the allowable surveillance interval.

The licensees propose to resolve these conflicts by adding the following clarifying statement to TS 4.0.4:

"This provision shall not prevent passage through or to OPERATIONAL CONDITIONS as required to comply with ACTION requirements."

The NRC staff has provided in GL 87-09 a clarification that: (a) it is not the intent of 4.0.3 that the Action Requirements preclude the performance of surveillances allowed under any exception to TS 4.0.4; and (b) that the delay of up to 24 hours in TS 4.0.3 for the applicability of Action Requirements provides an appropriate time limit for the completion of surveillance requirements that become applicable as a consequence of any exception to TS 4.0.4.

Consequently the NRC staff finds the proposed changes to TS 4.0.4 acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

This amendment involves a change to a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 or a change to a surveillance requirement. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that this amendment involves no significant hazards

consideration and there has been no public comment on such finding. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

4.0 CONCLUSION

The staff has 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: T. Colburn, NRR/PD33

Dated: May 24, 1990