

NOV 14 1984

Mr. Norman W. Curtis  
Vice President  
Engineering and Construction - Nuclear  
Pennsylvania Power & Light Company  
2 North Ninth Street  
Allentown, Pennsylvania 18101

Dear Mr. Curtis:

SUBJECT: Amendment No. 26 to Facility Operating License No. NPF-14 -  
Susquehanna Steam Electric Station, Unit 1

The Nuclear Regulatory Commission has issued the enclosed Amendment No.26 to Facility Operating License No. NPF-14 for the Susquehanna Steam Electric Station, Unit 1. The amendment is in response to your letters dated April 10, 1984 and May 18, 1984. This amendment changes Technical Specifications by modifying the temperature limit for determining the spray pond operable. This amendment also revises Technical Specifications as related to Special Reporting requirements discussed in NRC Generic Letter 83-43 dated December 19, 1983 and in response to changes in 10 CFR 50.72 and 10 CFR 50.73.

A copy of the related safety evaluation supporting Amendment No.26 to Facility Operating License NPF-14 is enclosed.

Sincerely,

**Original signed by:**

A. Schwencer, Chief  
Licensing Branch No. 2  
Division of Licensing

Enclosures:

- 1. Amendment No.26 to NPF-14
- 2. Safety Evaluation

cc w/enclosures:  
See next page

DISTRIBUTION  
See Attached

LB#2/DL RPerch:dh 10/30/84	LB#2/DL EHylton 10/24/84	LB#2/DL ASchwencer 10/13/84	OELD Goldberg 10/2/84
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*Handwritten notes: "with packet" and "change" above Goldberg; "1" below Goldberg.*



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

NOV 14 1984

Docket No. 50-387

Mr. Norman W. Curtis  
Vice President  
Engineering and Construction - Nuclear  
Pennsylvania Power & Light Company  
2 North Ninth Street  
Allentown, Pennsylvania 18101

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Sincerely,

A handwritten signature in cursive script, appearing to read "A. Schwencer".

A. Schwencer, Chief  
Licensing Branch No. 2  
Division of Licensing

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2. Safety Evaluation

cc w/enclosures:  
See next page

Issuance of Amendment No. 26 to Facility Operating License No. NPF-14  
Susquehanna Steam Electric Station, Unit 1

DISTRIBUTION

Docket File

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HDenton

JRutberg

AToaltson

WMiller, LFMB

NGrace

EJordan

LHarman

DBrinkman, SSPB

TBarnhart (4)

SUSQUEHANNA

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Vice President  
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2 North Ninth Street  
Allentown, Pennsylvania 18101

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Harrisburg, Pennsylvania 17120

Susquehanna

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Harrisburg, Pennsylvania 17120

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Board of Supervisors  
R. D. #1  
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U. S. Environmental Protection Agency  
Attn: EIS Coordinator  
Region III Office  
Curtis Building  
6th and Walnut Streets  
Philadelphia, Pennsylvania 19106



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

PENNSYLVANIA POWER & LIGHT COMPANY

ALLEGHENY ELECTRIC COOPERATIVE, INC.

DOCKET NO. 50-387

SUSQUEHANNA STEAM ELECTRIC STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 26  
License No. NPF-14

1. The Nuclear Regulatory Commission (the Commission or the NRC) having found that:
  - A. The applications for amendments filed by the Pennsylvania Power & Light Company, dated April 10, 1984 and May 18, 1984 comply with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's 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 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 the Facility Operating License No. NPF-14 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 26, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. PP&L shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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

FOR THE NUCLEAR REGULATORY COMMISSION

**Original signed by:**

A. Schwencer, Chief  
Licensing Branch No. 2  
Division of Licensing

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: **NOV 14 1984**

DL:LB#2/PM  
RPerch:dh  
10/30/84

DL:LB#2/LA  
EHY:bnA  
10/31/84

*AS*  
DL:LB#2/BC  
Schwencer  
~~10/31/84~~  
11/9/84

*with listed changes to SE*  
DL:AD:Attorney  
~~Goldberg~~  
10/2/84  
"

DL:AD:L  
TMNovak  
11/7/84

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

FOR THE NUCLEAR REGULATORY COMMISSION



A. Schwencer, Chief  
Licensing Branch No. 2  
Division of Licensing

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: NOV 14 1984

ATTACHMENT TO LICENSE AMENDMENT NO.26  
FACILITY OPERATING LICENSE NO. NPF-14  
DOCKET NO. 50-387

Replace the following pages of the Appendix "A" Technical Specifications with enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change.

<u>REMOVE</u>	<u>INSERT</u>
xix	xix
xx	xx
xxi	---
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1-5	1-5
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ADMINISTRATIVE CONTROLS

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## DEFINITIONS

### PHYSICS TESTS

1.28 PHYSICS TESTS shall be those tests performed to measure the fundamental nuclear characteristics of the reactor core and related instrumentation and 1) described in Chapter 14 of the FSAR, 2) authorized under the provisions of 10 CFR 50.59, or 3) otherwise approved by the Commission.

### PRESSURE BOUNDARY LEAKAGE

1.29 PRESSURE BOUNDARY LEAKAGE shall be leakage through a non-isolable fault in a reactor coolant system component body, pipe wall or vessel wall.

### PRIMARY CONTAINMENT INTEGRITY

1.30 PRIMARY CONTAINMENT INTEGRITY shall exist when:

- a. All primary containment penetrations required to be closed during accident conditions are either:
  1. Capable of being closed by an OPERABLE primary containment automatic isolation system, or
  2. Closed by at least one manual valve, blind flange, or deactivated automatic valve secured in its closed position, except as provided in Table 3.6.3-1 of Specification 3.6.3.
- b. All primary containment equipment hatches are closed and sealed.
- c. Each primary containment air lock is OPERABLE pursuant to Specification 3.6.1.3.
- d. The primary containment leakage rates are within the limits of Specification 3.6.1.2.
- e. The suppression chamber is OPERABLE pursuant to Specification 3.6.2.1.
- f. The sealing mechanism associated with each primary containment penetration; e.g., welds, bellows or O-rings, is OPERABLE.

### PROCESS CONTROL PROGRAM

1.31 The PROCESS CONTROL PROGRAM (PCP) shall contain the sampling, analysis, and formulation determination by which SOLIDIFICATION of radioactive wastes from liquid systems is assured.

### PURGE - PURGING

1.32 PURGE or PURGING shall be the controlled process of discharging air or gas from a confinement to maintain temperature, pressure, humidity, concentration or other operating condition, in such a manner that replacement air or gas is required to purify the confinement.

## DEFINITIONS

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### RATED THERMAL POWER

1.33 RATED THERMAL POWER shall be a total reactor core heat transfer rate to the reactor coolant of 3293 MWT.

### REACTOR PROTECTION SYSTEM RESPONSE TIME

1.34 REACTOR PROTECTION SYSTEM RESPONSE TIME shall be the time interval from when the monitored parameter exceeds its trip setpoint at the channel sensor until de-energization of the scram pilot valve solenoids. The response time may be measured by any series of sequential, overlapping or total steps such that the entire response time is measured.

### REPORTABLE EVENT

1.35 A REPORTABLE EVENT shall be any of those conditions specified in Section 50.73 to 10 CFR Part 50.

### ROD DENSITY

1.36 ROD DENSITY shall be the number of control rod notches inserted as a fraction of the total number of control rod notches. All rods fully inserted is equivalent to 100% ROD DENSITY.

### SECONDARY CONTAINMENT INTEGRITY

1.37 SECONDARY CONTAINMENT INTEGRITY shall exist when:

- a. All secondary containment penetrations required to be closed during accident conditions are either:
  1. Capable of being closed by an OPERABLE secondary containment automatic isolation system, or
  2. Closed by at least one manual valve, blind flange, or deactivated automatic damper secured in its closed position, except as provided in Table 3.6.5.2-1 of Specification 3.6.5.2.
- b. All secondary containment hatches and blowout panels are closed and sealed.
- c. The standby gas treatment system is OPERABLE pursuant to Specification 3.6.5.3.
- d. At least one door in each access to the secondary containment is closed.
- e. The sealing mechanism associated with each secondary containment penetration, e.g., welds, bellows or O-rings, is OPERABLE.
- f. The pressure within the secondary containment is less than or equal to the value required by Specification 4.6.5.1.a.

## 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 Specifications 3.0.3 and 3.0.4 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 0.05 g shall be restored to OPERABLE status within 24 hours and a CHANNEL CALIBRATION performed within 5 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 Accelerometers/Recorders		
a. Reactor Equipment, Unit 1	-0.25 to +0.25g	1
b. Reactor Bldg. Floor (RHR), Unit 1	"	1
c. ESSW Pumphouse Floor	"	1
d. Containment Foundation Unit 1	"	1
e. Containment Structure, Unit 1	"	1
2. Triaxial Peak Accelerographs		
a. Reactor Equipment, Unit 2	-0.5 to +0.5g	1
b. Reactor Piping, Unit 2	"	1
c. RHR Pump, Unit 2	"	1
3. Triaxial Seismic Switches <sup>(b)</sup>		
a. Containment Foundation, Unit 1	-0.25 to +0.25g	1(a)
4. Response-Spectrum Analyzer/recorder <sup>(b)(c)</sup>		
a. Containment Foundation, Unit 1	1-32 Hz	1(a)

<sup>(a)</sup>With reactor control room indication and annunciation.

<sup>(b)</sup>Receive signals from respective accelerometers.

<sup>(c)</sup>One instrument: on-line capability, with control room annunciation for the listed locations; off-line capability for all channels.

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 Accelerometers/Recorders			
a. Reactor Equipment, Unit 1	NA	SA	R
b. Reactor Bldg. Floor (RHR), Unit 1	NA	SA	R
c. ESSW Pumphouse Floor	NA	SA	R
d. Containment Foundation, Unit 1	NA	SA	R
e. Containment Structure, Unit 1	NA	SA	R
2. Triaxial Peak Accelerographs			
a. Reactor Equipment, Unit 2	NA	NA	R
b. Reactor Piping, Unit 2	NA	NA	R
c. RHR Pump, Unit 2	NA	NA	R
3. Triaxial Seismic Switches			
a. Containment Foundation, Unit 1	NA	SA	R
4. Response-Spectrum Analyzer/Recorders			
a. Containment Foundation, Unit 1	NA	SA	R

## INSTRUMENTATION

### METEOROLOGICAL MONITORING INSTRUMENTATION

#### LIMITING CONDITION FOR OPERATION

---

---

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

APPLICABILITY: At all times.

ACTION:

- a. With one or more meteorological monitoring instrumentation channels 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 Specifications 3.0.3 and 3.0.4 are not applicable.

#### SURVEILLANCE REQUIREMENTS

---

---

4.3.7.3 Each of the above required meteorological monitoring instrumentation channels 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.

## INSTRUMENTATION

### FIRE DETECTION INSTRUMENTATION

#### LIMITING CONDITION FOR OPERATION

---

3.3.7.9 As a minimum, the fire detection instrumentation for each fire detection zone shown in Table 3.3.7.9-1 shall be OPERABLE.

APPLICABILITY: Whenever equipment protected by the fire detection instrument is required to be OPERABLE.

#### ACTION:

With the number of OPERABLE fire detection instruments less than the Minimum Instruments OPERABLE requirement of Table 3.3.7.9-1:

- a. Within 1 hour, establish a fire watch patrol to inspect the zone(s) with the inoperable instrument(s) at least once per hour, unless the instrument(s) is located inside an inaccessible zone, then inspect the area surrounding the inaccessible zone at least once per hour.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

#### SURVEILLANCE REQUIREMENTS

---

4.3.7.9.1 Each of the above required fire detection instruments which are accessible during unit operation shall be demonstrated OPERABLE at least once per 6 months by performance of a CHANNEL FUNCTIONAL TEST. Fire detectors which are not accessible during unit operation shall be demonstrated OPERABLE by the performance of a CHANNEL FUNCTIONAL TEST during each COLD SHUTDOWN exceeding 24 hours unless performed in the previous 6 months.

4.3.7.9.2 The supervised circuits supervision associated with the detector alarms of each of the above required fire detection instruments shall be demonstrated OPERABLE at least once per 6 months.

TABLE 3.3.7.9-1

FIRE DETECTION INSTRUMENTATION

<u>INSTRUMENT LOCATION</u>		<u>INSTRUMENTS OPERABLE</u>							
<u>FIRE ZONE</u>	<u>ROOM OR AREA</u>	<u>ELEV.</u>	<u>HEAT TOTAL MIN.</u>		<u>IONIZATION TOTAL MIN.</u>		<u>PHOTO-ELECTRIC TOTAL MIN.</u>		
a. <u>Control Building</u>									
0-24D	Lower Relay Room	698'-1"	4	2	4	2	NA	NA	
0-24D	PGCC	698'-1"	54	27	30	15	NA	NA	
0-25A	Lower Cable Spreading Rm.	714'-0"	26	13	6	3	NA	NA	
0-25E	Lower Cable Spreading Rm.	714'-0"	20	10	6	3	NA	NA	
0-26H	Control Rm. (Under Flr. Unit 1)*	729'-1"	NA	NA	18	9	NA	NA	
0-26H	Control Room (Under Flr. Unit 2)*	729'-1"	NA	NA	15	7	NA	NA	
0-26H	Control Room	729'-1"	NA	NA	10	5	NA	NA	
0-26H	Control Rm. (Above Clg)*	729'-1"	NA	NA	9	4	NA	NA	
0-27C	Upper Cable Spreading Rm.	753'-0"	29	14	8	4	NA	NA	
0-27B	Upper Cable Spreading Rm.	753'-0"	28	14	5	2	NA	NA	
0-27E	Upper Relay Room	754'-1"	4	2	2	1	NA	NA	
0-27E	PGCC	754'-1"	55	27	30	15	NA	NA	
0-28K	Battery Room	771'-0"	NA	NA	1	1	NA	NA	
0-28L	Battery Room	771'-0"	NA	NA	1	1	NA	NA	
0-28M	Battery Room	771'-0"	NA	NA	1	1	NA	NA	
0-28N	Battery Room	771'-0"	NA	NA	1	1	NA	NA	
0-28I	Battery Room	771'-0"	NA	NA	1	1	NA	NA	
0-28J	Battery Room	771'-0"	NA	NA	1	1	NA	NA	
0-28G	Battery Room	771'-0"	NA	NA	1	1	NA	NA	
0-28F	Battery Room	771'-0"	NA	NA	1	1	NA	NA	
0-28E	Battery Room	771'-0"	NA	NA	1	1	NA	NA	
0-28C	Battery Room	771'-0"	NA	NA	1	1	NA	NA	
0-28D	Battery Room	771'-0"	NA	NA	1	1	NA	NA	
0-28T	Battery Room	771'-0"	NA	NA	1	1	NA	NA	
SUSQUEHANNA - UNIT 1			3/4 3-78		Amendment No. 17				

## INSTRUMENTATION

### RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION

#### LIMITING CONDITION FOR OPERATION

---

3.3.7.10 The radioactive liquid 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 limits of Specification 3.11.1.1 are not exceeded. The alarm/trip setpoints of these channels shall be determined in accordance with the methodology and parameters described in 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.
- b. With less than the minimum number of radioactive liquid effluent monitoring instrumentation channels OPERABLE, take the ACTION shown in Table 3.3.7.10-1. Restore the inoperable instrumentation to OPERABLE status within the time specified in the ACTION or explain why this inoperability was not corrected in a timely manner in the next Semiannual Radioactive Effluent Release Report.
- c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

#### SURVEILLANCE REQUIREMENTS

---

4.3.7.10 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 4.3.7.10-1.

TABLE 3.3.7.10-1

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>ACTION</u>
1. GROSS RADIOACTIVITY MONITORS PROVIDING AUTOMATIC TERMINATION OF RELEASE		
a. Liquid Radwaste Effluent Line	1*	100
2. GROSS RADIOACTIVITY MONITORS NOT PROVIDING AUTOMATIC TERMINATION OF RELEASE		
a. Service Water System Effluent Line	1	101
b. RHR Service Water System Effluent Line	1/loop	101
3. FLOW RATE MEASUREMENT DEVICES		
a. Liquid Radwaste Effluent Line	1	102
b. Discharge Canal	1	102

\*The monitor is required to be OPERABLE when liquid radwaste is being discharged or the channel shall be declared inoperable. The monitor, including the sample pump, is required to be in operation at all times if any discharge valve interlock is in an off-normal condition or is not functioning, i.e., sample pump flow low, high radiation alarm or radiation monitor failure.

TABLE 4.3.7.10-1 (Continued)

TABLE NOTATION

- (1) The CHANNEL FUNCTIONAL TEST shall also demonstrate that automatic isolation of this pathway and control room alarm annunciation occur if any of the following conditions exists:
  1. Instrument indicates measured levels above the alarm/trip setpoint.
  2. Circuit failure.
  3. Instrument indicates a downscale failure.
- (2) The CHANNEL FUNCTIONAL TEST shall also demonstrate that control room alarm annunciation occurs if any of the following conditions exists:
  1. Instrument indicates measured levels above the alarm setpoint.
  2. Circuit failure.
  3. Instrument indicates a downscale failure.
  4. Instrument controls not set in operate mode.
- (3) The initial CHANNEL CALIBRATION shall be performed using one or more of the reference standards certified by the National Bureau of Standards or using standards that have been obtained from suppliers that participate in measurement assurance activities with NBS. These standards shall permit calibrating the system over its intended range of energy and measurement range. For subsequent CHANNEL CALIBRATION, sources that have been related to the initial calibration shall be used. (Operating plants may substitute previously established calibration procedures for this requirement.)
- (4) CHANNEL CHECK shall consist of verifying indication of flow during periods of release. CHANNEL CHECK shall be made at least once per 24 hours on days on which continuous, periodic, or batch releases are made.

## INSTRUMENTATION

### RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

#### LIMITING CONDITION FOR OPERATION

---

3.3.7.11 The radioactive gaseous effluent monitoring instrumentation channels shown in Table 3.3.7.11-1 shall be OPERABLE with their alarm/trip setpoints set to ensure that the limits of Specification 3.11.2.1 are not exceeded. The alarm/trip setpoints of these channels shall be determined in accordance with the methodology and parameters in the ODCM.

APPLICABILITY: As shown in Table 3.3.7.11-1

#### ACTION:

- a. With a radioactive gaseous effluent monitoring instrumentation channel alarm/trip setpoint less conservative than required by the above Specification, immediately suspend the release of radioactive gaseous effluents monitored by the affected channel or declare the channel inoperable.
- b. With less than the minimum number of radioactive gaseous effluent monitoring instrumentation channels OPERABLE, take the ACTION shown in Table 3.3.7.11-1. Restore the inoperable instrumentation to OPERABLE status within the time specified in the ACTION or explain why this inoperability was not corrected in a timely manner in the next Semiannual Radioactive Effluent Release Report.
- c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

#### SURVEILLANCE REQUIREMENTS

---

4.3.7.11 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 4.3.7.11-1.

## INSTRUMENTATION

### LOOSE-PART DETECTION SYSTEM

#### LIMITING CONDITION FOR OPERATION

---

3.3.7.12 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 Specifications 3.0.3 and 3.0.4 are not applicable.

#### SURVEILLANCE REQUIREMENTS

---

4.3.7.12 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

### 3/4.3.8 TURBINE OVERSPEED PROTECTION SYSTEM

#### LIMITING CONDITION FOR OPERATION

---

3.3.8 At least one turbine overspeed protection system shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1 and 2.

ACTION:

With the above required turbine overspeed protection system inoperable, within 6 hours isolate the turbine from the steam supply.

#### SURVEILLANCE REQUIREMENTS

---

4.3.8.1 The provisions of Specification 4.0.4 are not applicable.

4.3.8.2 The above required turbine overspeed protection system shall be demonstrated OPERABLE:

- a. At least once per 7 days by:
  1. Cycling each of the following valves from the running position and observing valve closure:
    - a) Four high pressure turbine control valves,
    - b) Six low pressure turbine combined intermediate valves, and
    - c) Four high pressure turbine stop valves.
- 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 corrosion.

## REACTOR COOLANT SYSTEM

### 3/4.4.5 SPECIFIC ACTIVITY

#### LIMITING CONDITION FOR OPERATION

---

3.4.5 The specific activity of the primary coolant shall be limited to:

- a. Less than or equal to 0.2 microcuries per gram DOSE EQUIVALENT I-131, and
- b. Less than or equal to  $100/\bar{E}$  microcuries per gram.

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

#### ACTION:

- a. In OPERATIONAL CONDITIONS 1, 2 or 3 with the specific activity of the primary coolant;
  1. Greater than 0.2 microcuries per gram DOSE EQUIVALENT I-131 but less than or equal to 4.0 microcuries per gram, operation may continue for up to 48 hours provided that the cumulative operating time under these circumstances does not exceed 800 hours in any consecutive 12-month period. With the total cumulative operating time at a primary coolant specific activity greater than 0.2 microcuries per gram DOSE EQUIVALENT I-131 exceeding 500 hours in any consecutive six-month period, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 30 days indicating the number of hours of operation above this limit. The provisions of Specification 3.0.4 are not applicable.
  2. Greater than 0.2 microcuries per gram DOSE EQUIVALENT I-131 for more than 48 hours during one continuous time interval or for more than 800 hours cumulative operating time in a consecutive 12-month period, or greater than 4.0 microcuries per gram, be in at least HOT SHUTDOWN with the main steam line isolation valves closed within 12 hours.
  3. Greater than  $100/\bar{E}$  microcuries per gram, be in at least HOT SHUTDOWN with the main steamline isolation valves closed within 12 hours.
- b. In OPERABLE CONDITIONS 1, 2, 3 or 4, with the specific activity of the primary coolant greater than 0.2 microcuries per gram DOSE EQUIVALENT I-131 or greater than  $100/\bar{E}$  microcuries per gram, perform the sampling and analysis requirements of Item 4a of Table 4.4.5-1 until the specific activity of the primary coolant is restored to within its limit. A Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.9.2 within 30 days. This report shall contain the results of the specific activity analyses and the time duration when the specific activity of the coolant exceeded 0.2 microcuries per gram DOSE EQUIVALENT I-131 together with the following additional information.

## REACTOR COOLANT SYSTEM

### LIMITING CONDITION FOR OPERATION (Continued)

---

#### ACTION (Continued)

- c. In OPERATIONAL CONDITION 1 or 2, with:
1. THERMAL POWER changed by more than 15% of RATED THERMAL POWER in one hour\*, or
  2. The off-gas level, at the SJAE, increased by more than 10,000 microcuries per second in one hour during steady state operation at release rates less than 75,000 microcuries per second, or
  3. The off-gas level, at the SJAE, increased by more than 15% in one hour during steady state operation at release rates greater than 75,000 microcuries per second,

perform the sampling and analysis requirements of Item 4b of Table 4.4.5-1 until the specific activity of the primary coolant is restored to within its limit. Prepare and submit to the Commission a Special Report pursuant to Specification 6.9.2 at least once per 92 days containing the results of the specific activity analysis together with the below additional information for each occurrence.

#### Additional Information

1. Reactor power history starting 48 hours prior to:
  - a) The first sample in which the limit was exceeded, and/or
  - b) The THERMAL POWER or off-gas level change.
2. Fuel burnup by core region.
3. Clean-up flow history starting 48 hours prior to:
  - a) The first sample in which the limit was exceeded, and/or
  - b) The THERMAL POWER or off-gas level change.
4. Off-gas level starting 48 hours prior to:
  - a) The first sample in which the limit was exceeded, and/or
  - b) The THERMAL POWER or off-gas level change.

#### SURVEILLANCE REQUIREMENTS

---

4.4.5 The specific activity of the reactor coolant shall be demonstrated to be within the limits by performance of the sampling and analysis program of Table 4.4.5-1.

\*Not applicable during the Startup Test Program.

## CONTAINMENT SYSTEMS

### MSIV LEAKAGE CONTROL SYSTEM

#### LIMITING CONDITION FOR OPERATION

---

3.6.1.4 Two independent MSIV leakage control system (LCS) subsystems shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2 and 3.

ACTION:

With one MSIV leakage control system subsystem inoperable, restore the inoperable subsystem to OPERABLE status within 30 days or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

#### SURVEILLANCE REQUIREMENTS

---

4.6.1.4 Each MSIV leakage control system subsystem shall be demonstrated OPERABLE:

- a. At least once per 31 days by:
  1. Starting the blower(s) from the control room and operating the blower(s) for at least 15 minutes.
  2. Energizing the heaters and verifying a temperature rise indicating heater operation on downstream piping.
- b. At least once per 18 months by:
  1. Performance of a functional test which includes simulated actuation of the subsystem throughout its operating sequence, and verifying that each interlock and timer operates as designed, each automatic valve actuates to its correct position and the blower starts.
  2. Verifying that the blower develops at least the below required vacuum at the rated capacity:
    - a) Inboard valves, 15" H<sub>2</sub>O at 100 scfm.
    - b) Outboard valves, 60" H<sub>2</sub>O at 200 scfm.
- d. By verifying the operating instrumentation to be OPERABLE by performance of a:
  1. CHANNEL CHECK at least once per 24 hours,
  2. CHANNEL FUNCTIONAL TEST at least once per 31 days, and
  3. CHANNEL CALIBRATION at least once per 18 months.

## CONTAINMENT SYSTEMS

### PRIMARY CONTAINMENT STRUCTURAL INTEGRITY

#### LIMITING CONDITION FOR OPERATION

---

3.6.1.5 The structural integrity of the primary containment shall be maintained at a level consistent with the acceptance criteria in Specification 4.6.1.5.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2 and 3.

ACTION:

With the structural integrity of the primary containment not conforming to the above requirements, restore the structural integrity to within the limits within 24 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

#### SURVEILLANCE REQUIREMENTS

---

4.6.1.5.1 The structural integrity of the exposed accessible interior and exterior surfaces of the primary containment, including the liner plate, shall be determined during the shutdown for each Type A containment leakage rate test by a visual inspection of those surfaces. This inspection shall be performed prior to the Type A containment leakage rate to verify no apparent changes in appearance or other abnormal degradation.

4.6.1.5.2 Reports Any abnormal degradation of the primary containment structure detected during the required inspection shall be reported in a Special Report to the Commission pursuant to Specification 6.9.2 within 30 days. This report shall include a description of the condition of the concrete, the inspection procedure, the tolerances on cracking, and the corrective actions taken.

PLANT SYSTEMS

ULTIMATE HEAT SINK

LIMITING CONDITION FOR OPERATION

---

3.7.1.3 The spray pond shall be OPERABLE.

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

ACTION:

- a. With the groundwater level at any spray pond area observation well greater than or equal to 663' Mean Sea Level (MSL), 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 high groundwater level and the plans for restoring the level to within the limit.
- b. With the spray pond otherwise inoperable:
  1. In OPERATIONAL CONDITION 1, 2 or 3, be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.
  2. In OPERATIONAL CONDITION 4 or 5, declare the RHRSW system and the emergency service water system inoperable and take the ACTION required by Specifications 3.7.1.1 and 3.7.1.2.
  3. In Operational Condition \*, declare the emergency service water system inoperable and take the ACTION required by Specification 3.7.1.2. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

---

4.7.1.3 The spray pond shall be determined OPERABLE by verifying:

- a. The average water temperature, which shall be the arithmetical average of the spray pond water temperature at the surface, mid and bottom levels, to be less than or equal to 88°F at least once per 24 hours.
- b. The water level at the overflow weir is greater than or equal to 678'1" MSL USGS, at least once per 12 hours.
- c. The groundwater level at observation wells 1, 3, 4, 5, 6, and 1113 to be less than 663' MSL at least once per 31 days.

\*When handling irradiated fuel in the secondary containment.

## PLANT SYSTEMS

### 3/4.7.2 CONTROL ROOM EMERGENCY OUTSIDE AIR SUPPLY SYSTEM

#### LIMITING CONDITION FOR OPERATION

---

3.7.2 Two independent control room emergency outside air supply system subsystems shall be OPERABLE with each subsystem consisting of:

- a. One makeup fan, and
- b. One filter train.

APPLICABILITY: All OPERATIONAL CONDITIONS and \*.

#### ACTION:

- a. In OPERATIONAL CONDITION 1, 2 or 3 with one control room emergency outside air supply subsystem inoperable, restore the inoperable subsystem 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. In OPERATIONAL CONDITION 4, 5 or \*:
  1. With one control room emergency outside air supply subsystem inoperable, restore the inoperable subsystem to OPERABLE status within 7 days or initiate and maintain operation of the OPERABLE subsystem in the pressurization mode of operation.
  2. With both control room emergency outside air supply subsystems inoperable, suspend CORE ALTERATIONS, handling of irradiated fuel in the secondary containment and operations with a potential for draining the reactor vessel.
- c. The provisions of Specification 3.0.3 are not applicable in Operational Condition \*.

#### SURVEILLANCE REQUIREMENTS

---

4.7.2 Each control room emergency outside air supply subsystem shall be demonstrated OPERABLE:

- a. At least once per 31 days on a STAGGERED TEST BASIS by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that the subsystem operates for at least 10 hours with the heaters OPERABLE.
- b. At least once per 18 months or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire or chemical release in any ventilation zone communicating with the subsystem by:

---

\*When irradiated fuel is being handled in the secondary containment.

PLANT SYSTEMS

3/4.7.6 FIRE SUPPRESSION SYSTEMS

FIRE SUPPRESSION WATER SYSTEM

LIMITING CONDITION FOR OPERATION

---

3.7.6.1 The fire suppression water system shall be OPERABLE with:

- a. Two OPERABLE fire suppression pumps, one electric motor driven and one diesel driven, each with a capacity of 2500 gpm, with their discharge aligned to the fire suppression header,
- b. At least two separate water supplies, each with a minimum contained volume of 300,000 gallons, and
- c. Two OPERABLE flow paths capable of taking suction from any two of the following: (1) Unit 1 cooling tower basin, (2) Unit 2 cooling tower basin, (3) clarified water storage tank, and transferring the water through distribution piping with OPERABLE sectionalizing control or isolation valves to the yard hydrant curb valves, the last valve ahead of the water flow alarm device on each sprinkler or hose standpipe and the last valve ahead of the deluge valve on each deluge or spray system required to be OPERABLE per Specifications 3.7.6.2, 3.7.6.5, and 3.7.6.6.

APPLICABILITY: At all times.

ACTION:

- a. With one fire pump and/or one of the above required water supplies inoperable, restore the inoperable equipment to OPERABLE status within 7 days or provide an alternate backup pump or supply. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.
- b. With the fire suppression water system otherwise inoperable establish a backup fire suppression water system within 24 hours.

## PLANT SYSTEMS

### SURVEILLANCE REQUIREMENTS

---

- 4.7.6.1.1 The fire suppression water system shall be demonstrated OPERABLE:
- a. At least once per 7 days by verifying the minimum contained water supply volume.
  - b. At least once per 31 days by starting the electric motor driven fire suppression pump and operating it for at least 15 minutes on recirculation flow.
  - c. At least once per 31 days by verifying that each valve, manual, power operated or automatic, in the flow path is in its correct position.
  - d. At least once per 12 months by performance of a system flush.
  - e. At least once per 12 months by cycling each testable valve in the flow path through at least one complete cycle of full travel.
  - f. At least once per 18 months by performing a system functional test which includes simulated automatic actuation of the system throughout its operating sequence, and:
    1. Verifying that each automatic valve in the flow path actuates to its correct position,
    2. Verifying that each fire suppression pump develops at least 2500 gpm at a system head of 125 psig,
    3. Cycling each valve in the flow path that is not testable during plant operation through at least one complete cycle of full travel, and
    4. Verifying that each fire suppression pump starts sequentially to maintain the fire suppression water system pressure greater than or equal to 85 psig.
  - g. At least once per 3 years by performing a flow test of the system in accordance with Chapter 5, Section 11 of the Fire Protection Handbook, 14th Edition, published by the National Fire Protection Association.
- 4.7.6.1.2 The diesel driven fire suppression pump shall be demonstrated OPERABLE:
- a. At least once per 31 days by:
    1. Verifying the fuel storage tank contains at least 250 gallons of fuel.
    2. Starting the diesel driven pump from ambient conditions and operating for greater than or equal to 30 minutes on recirculation flow.

PLANT SYSTEMS

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

---

- b. At least once per 92 days by verifying that a sample of diesel fuel from the fuel storage tank, obtained in accordance with ASTM-D270-75, is within the acceptable limits specified in Table 1 of ASTM-D975-77 when checked for viscosity, water and sediment.
- c. At least once per 18 months by subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for the class of service.

4.7.6.1.3 The diesel driven fire pump diesel starting 24-volt battery bank and charger shall be demonstrated OPERABLE:

- a. At least once per 7 days by verifying that:
  - 1. The electrolyte level of each pilot cell is above the plates,
  - 2. The pilot cell specific gravity, corrected to 77°F, is greater than or equal to 1.200,
  - 3. The overall battery voltage is greater than or equal to 24 volts.
- b. At least once per 92 days by verifying that the specific gravity is appropriate for continued service of the battery.
- c. At least once per 18 months by verifying that:
  - 1. The cell and battery racks show no visual indication of physical damage or abnormal deterioration, and
  - 2. Terminal connections are clean, tight, free of corrosion and coated with anti-corrosion material.

PLANT SYSTEMS

SPRAY AND SPRINKLER SYSTEMS

LIMITING CONDITION FOR OPERATION

---

---

3.7.6.2 The following spray and sprinkler systems shall be OPERABLE:

- a. RCIC Pump Room, Unit 1
- b. HPCI Pump Room, Unit 1
- c. Upper Cable Spreading Room, Unit 1
- d. Lower Cable Spreading Room, Unit 1
- e. Diesel Generator A Room
- f. Diesel Generator B Room
- g. Diesel Generator C Room
- h. Diesel Generator D Room
- i. Fire Zones 1-3A and 1-3B
- j. Fire Zone 1-4A
- k. Fire Zone 1-5A
- l. Fire Zone 1-2B

APPLICABILITY: Whenever equipment protected by the spray and/or sprinkler systems is required to be OPERABLE.

ACTION:

- a. With one or more of the above required spray and/or sprinkler systems inoperable, within one hour establish a continuous fire watch with backup fire suppression equipment for those areas in which redundant systems or components could be damaged; for other areas, establish an hourly fire watch patrol.
- b. The provisions of Specification 3.0.3 and 3.0.4 are not applicable.

## PLANT SYSTEMS

### SURVEILLANCE REQUIREMENTS

---

4.7.6.2 Each of the above required spray and sprinkler systems shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying that each valve, manual, power operated or automatic, in the flow path is in its correct position.
- b. At least once per 12 months by cycling each testable valve in the flow path through at least one complete cycle of full travel.
- c. At least once per 18 months:
  1. By performing a system functional test which includes simulated automatic actuation of the system, and:
    - a) Verifying that the automatic valves in the flow path actuate to their correct positions on a test signal, and
    - b) Cycling each valve in the flow path that is not testable during plant operation through at least one complete cycle of full travel.
  2. By a visual inspection of the dry pipe spray and sprinkler headers to verify their integrity, and
  3. By a visual inspection of each deluge nozzle's spray area to verify that the spray pattern is not obstructed.
- d. At least once per 3 years by performing an air or water flow test through each open head spray and sprinkler header and verifying each open head spray and sprinkler nozzle is unobstructed.

PLANT SYSTEMS

CO<sub>2</sub> SYSTEMS

LIMITING CONDITIONS

---

3.7.6.3 The following low pressure CO<sub>2</sub> systems shall be OPERABLE:

- a. Control Room Under Floor, Unit 1
- b. Control Room Under Floor, Unit 2
- c. Lower Relay Room, Unit 1<sup>#</sup>
- d. Upper Relay Room, Unit 1<sup>#</sup>
- e. North Cable Chase
- f. Center Cable Chase
- g. Room C-411 Soffit
- h. Control Room Soffit, Unit 1
- i. Control Room Soffit, Unit 2

APPLICABILITY: Whenever equipment protected by the CO<sub>2</sub> systems is required to be OPERABLE.

ACTION:

- a. With one or more of the above required CO<sub>2</sub> systems inoperable, within one hour establish a continuous fire watch with backup fire suppression equipment for those areas in which redundant systems or components could be damaged; for other areas, establish an hourly fire watch patrol.
- b. The provisions of Specification 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

---

4.7.6.3.1 Each of the above required low pressure CO<sub>2</sub> systems shall be demonstrated OPERABLE at least once per 31 days by verifying that each valve, manual, power operated, or automatic, in the flow path is in its correct position.

4.7.6.3.2 Each of the above required low pressure CO<sub>2</sub> systems shall be demonstrated OPERABLE:

- a. At least once per 7 days by verifying the CO<sub>2</sub> storage tank level to be greater than (90)% and pressure to be greater than 270 psig, and
- b. At least once per 18 months by:
  1. Verifying the system valves and associated ventilation dampers and fire door release mechanisms actuate manually and automatically, upon receipt of a simulated actuation signal, and
  2. Flow from each accessible nozzle by performance of a "Puff Test."

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<sup>#</sup> Accessible nozzles.

PLANT SYSTEMS

HALON SYSTEMS

LIMITING CONDITION FOR OPERATION

---

3.7.6.4 The Halon systems in the following panel modules shall be OPERABLE with the storage tanks having at least 95% of full charge weight and 90% of full charge pressure:

10700	10701	10702	10703	10704	10705
10706	10730	10731	10732		

APPLICABILITY: Whenever equipment protected by the Halon systems is required to be OPERABLE.

ACTION:

- a. With one or more of the above required Halon systems inoperable, within one hour establish a continuous fire watch with backup fire suppression equipment for those areas in which redundant systems or components could be damaged; for other areas, establish an hourly fire watch patrol.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

---

4.7.6.4 Each of the above required Halon systems shall be demonstrated OPERABLE.

- a. At least once per 31 days by verifying that each valve, manual, power operated or automatic, in the flow path is in its correct position.
- b. At least once per 6 months by verifying Halon storage tank weight and pressure.
- c. At least once per 18 months by:
  1. Performance of a flow test through accessible headers and nozzles to assure no blockage.
  2. Performance of a functional test of the general alarm circuit and associated alarm and interlock devices.

PLANT SYSTEMS

FIRE HOSE STATIONS

LIMITING CONDITION FOR OPERATION

---

3.7.6.5 The fire hose stations shown in Table 3.7.6.5-1 shall be OPERABLE.

APPLICABILITY: Whenever equipment in the areas protected by the fire hose stations is required to be OPERABLE.

ACTION:

- a. With one or more of the fire hose stations shown in Table 3.7.6.5-1 inoperable, route an additional fire hose of equal or greater diameter to the unprotected area(s) from an OPERABLE hose station within 1 hour if the inoperable fire hose is the primary means of fire suppression; otherwise, route the additional hose within 24 hours.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

---

4.7.6.5 Each of the fire hose stations shown in Table 3.7.6.5-1 shall be demonstrated OPERABLE:

- a. At least once per 31 days by a visual inspection of the fire hose stations accessible during plant operation to assure all required equipment is at the station.
- b. At least once per 18 months by:
  1. Visual inspection of the fire hose stations not accessible during plant operation to assure all required equipment is at the station.
  2. Removing the hose for inspection and re-racking, and
  3. Inspecting all gaskets and replacing any degraded gaskets in the couplings.
- c. At least once per 3 years by:
  1. Partially opening each hose station valve to verify valve OPERABILITY and no flow blockage.
  2. Conducting a hose hydrostatic test at a pressure of 150 psig or at least 50 psig above the maximum fire main operating pressure, whichever is greater.

TABLE 3.7.6.5-1

FIRE HOSE STATIONS

<u>LOCATIONS</u>	<u>COLUMN</u>	<u>HOSE RACK NUMBER</u>
a. Control Structure		
E1. 697'-0"	L-26	1HR-171
E1. 697'-0"	L-32	2HR-171
E1. 714'-0"	L-26	1HR-162
E1. 714'-0"	L-31	2HR-162
E1. 729'-0"	L-25.9	1HR-158
E1. 729'-0"	L-32.1	2HR-158
E1. 754'-0"	L-26	1HR-136
E1. 754'-0"	L-32	2HR-136
E1. 771'-0"	L-26	1HR-125
E1. 771'-0"	L-31	2HR-125
b. Reactor Building		
E1. 645'-0"	R-29	1HR-271
E1. 645'-0"	P-20.6	1HR-272
E1. 645'-0"	U-22	1HR-273
E1. 645'-0"	R-37.4	2HR-271
E1. 645'-0"	U-30.5	2HR-272
E1. 645'-0"	R-30	2HR-273
E1. 670'-0"	O-27.5	1HR-261
E1. 670'-0"	Q-29	1HR-262
E1. 670'-0"	T-22	1HR-263
E1. 683'-0"	Q-27.5	1HR-251
E1. 683'-0"	Q-20.6	1HR-252
E1. 683'-0"	T-22	1HR-253
E1. 719'-1"	Q-27.5	1HR-241
E1. 719'-1"	S-27.5	1HR-242
E1. 719'-1"	Q-20.6	1HR-243
E1. 719'-1"	T-20.6	1HR-244
E1. 719'-1"	T-23.5	1HR-245
E1. 749'-1"	S-27.5	1HR-231
E1. 749'-1"	S-27.5	1HR-231
E1. 749'-1"	Q-20.6	1HR-232
E1. 749'-1"	T-20.6	1HR-233
E1. 779'-1"	P-26.5	1HR-221
E1. 779'-1"	S-26.5	1HR-222
E1. 779'-1"	Q-22	1HR-223
E1. 779'-1"	U-20.6	1HR-224
E1. 779'-1"	T-23.3	1HR-211
E1. 818'-1"	P-26.5	1HR-201
E1. 818'-1"	U-26.5	1HR-202
E1. 818'-1"	Q-20.6	1HR-203

## PLANT SYSTEMS

### YARD FIRE HYDRANTS AND HYDRANT HOSE HOUSES

#### LIMITING CONDITION FOR OPERATION

---

3.7.6.6 Yard fire hydrants 1FH122 and 1FH104 and associated hydrant hose houses shall be OPERABLE.

APPLICABILITY: Whenever equipment in the areas protected by the yard fire hydrants is required to be OPERABLE.

#### ACTION:

- a. With yard fire hydrants 1FH122 and/or 1FH104 and/or associated hydrant hose houses inoperable, route sufficient additional lengths of fire hose of equal or greater diameter located in adjacent OPERABLE hydrant hose house(s) to provide service to the unprotected area(s) within one hour.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

#### SURVEILLANCE REQUIREMENTS

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4.7.6.6 Yard fire hydrants 1FH122 and 1FH104 and associated hydrant hose houses shall be demonstrated OPERABLE:

- a. At least once per 31 days by visual inspection of the hydrant hose houses to assure all required equipment is at the hose houses.
- b. At least once per 6 months, during March, April or May and during September, October or November, by visually inspecting the yard fire hydrants and verifying that the hydrant barrels are dry and that the hydrants are not damaged.
- c. At least once per 12 months by:
  1. Conducting hose hydrostatic tests at a pressure of 150 psig or at least 50 psig above the maximum fire main operating pressure, whichever is greater.
  2. Replacement of all degraded gaskets in couplings.
  3. Performing a flow check of each hydrant.

## PLANT SYSTEMS

### 3/4.7.7 FIRE RATED ASSEMBLIES

#### LIMITING CONDITION FOR OPERATION

---

3.7.7 All fire rated assemblies, including walls, floor/ceilings, cable tray enclosures and other fire barriers separating safety related fire areas or separating portions of redundant systems important to safe shutdown within a fire area, and all sealing devices in fire rated assembly penetrations, including fire doors, fire windows, fire dampers, cable and piping penetration seals and ventilation seals shall be OPERABLE.

APPLICABILITY: At all times.

#### ACTION:

- a. With one or more of the above required fire rated assemblies and/or sealing devices inoperable, within one hour establish a continuous fire watch on at least one side of the affected assembly and/or sealing device or verify the OPERABILITY of fire detectors on at least one side of the inoperable fire assembly and/or sealing device and establish an hourly fire watch patrol.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

#### SURVEILLANCE REQUIREMENTS

---

4.7.7.1 Each of the above required fire rated assemblies and sealing devices shall be verified OPERABLE at least once per 18 months by performing a visual inspection of:

- a. The exposed surfaces of each fire rated assembly.
- b. Each fire window, fire damper, and associated hardware.
- c. At least 10 percent of each type of sealed penetration. If apparent changes in appearance or abnormal degradations are found, a visual inspection of an additional 10 percent of each type of sealed penetration shall be made. This inspection process shall continue until a 10 percent sample with no apparent changes in appearance or abnormal degradation is found.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

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- 4.7.7.2 Each of the above required fire doors shall be verified OPERABLE by:
- a. Verifying the position of each closed fire door at least once per 24 hours.
  - b. Verifying that doors with automatic hold-open and release mechanisms are free of obstructions at least once per 24 hours.
  - c. Verifying the position of each locked closed fire door at least once per 7 days.
  - d. Verifying the OPERABILITY of the fire door supervision system by performing a CHANNEL FUNCTIONAL TEST at least once per 31 days.
  - e. Inspecting the automatic hold-open, release and closing mechanism and latches at least once per 6 months.

## ELECTRICAL POWER SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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7. Simulating a loss of offsite power in conjunction with an ECCS actuation test signal, and:
  - a) Verifying deenergization of the emergency busses and load shedding from the emergency busses.
  - b) Verifying the diesel generator starts on the auto-start signal, energizes the emergency busses with permanently connected loads within 10 seconds, energizes the auto-connected loads through the load timers and operates for greater than or equal to 5 minutes while its generator is loaded with the emergency loads. After energization, the steady state voltage and frequency of the emergency busses shall be maintained at  $4160 \pm 400$  volts and  $60 \pm 3.0$  Hz during this test.
  - c) Verifying that all automatic diesel generator trips, except engine overspeed, generator differential and engine low lube oil pressure, are automatically bypassed upon loss of voltage on the emergency bus concurrent with an ECCS actuation signal.
8. Verifying the diesel generator operates for at least 24 hours. During the first 2 hours of this test, the diesel generator shall be loaded to greater than or equal to 4700 kw and during the remaining 22 hours of this test, the diesel generator shall be loaded to 4000 kw. The generator voltage and frequency shall be  $4160 \pm 400$  volts and  $60 \pm 3.0$  Hz within 10 seconds after the start signal; the steady state generator voltage and frequency shall be maintained within these limits during this test. Within 5 minutes after completing this 24-hour test, perform Surveillance Requirement 4.8.1.1.2.d.4.b).\*
9. Verifying that the auto-connected loads to each diesel generator do not exceed the 2000-hour rating of 4700 kw.
10. Verifying the diesel generator's capability to:
  - a) Synchronize with the offsite power source while the generator is loaded with its emergency loads upon a simulated restoration of offsite power,
  - b) Transfer its loads to the offsite power source, and
  - c) Be restored to its standby status.

---

\* If Surveillance Requirement 4.8.1.1.2.d.4.b) is not satisfactorily completed, it is not necessary to repeat the preceding 24 hour test. Rather, the diesel generator may be operated at 4000 kw for one hour or until operating temperature has stabilized.

## ELECTRICAL POWER SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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11. Verifying that with the diesel generator operating in a test mode and connected to its bus, a simulated ECCS actuation signal overrides the test mode by (1) returning the diesel generator to standby operation, and (2) automatically energizes the emergency loads with offsite power.
12. Verifying that with all diesel generator air start receivers pressurized to less than or equal to 240 psig and the compressors secured, the diesel generator starts at least 5 times from ambient conditions and accelerates to at least 600 rpm in less than or equal to 10 seconds for the first 2 starts and accelerates to at least 600 rpm in less than or equal to 19 seconds for the remaining 3 starts.
13. Verifying that the fuel transfer pump transfers fuel from each fuel storage tank to the engine-mounted day tank of each diesel via the installed cross connection lines.
14. Verifying that each diesel generator loading sequence timer shown in Table 4.8.1.1.2-2 is OPERABLE with its setpoint within  $\pm 10\%$  of its design setpoint.
15. Verifying that the following diesel generator lockout features prevent diesel generator starting and/or operation only when required:
  - a) Engine overspeed.
  - b) Generator differential.
  - c) Engine low lube oil pressure.
- e. At least once per 10 years or after any modifications which could affect diesel generator interdependence by starting all diesel generators simultaneously, during shutdown, and verifying that all diesel generators accelerate to at least 600 rpm in less than or equal to 13 seconds.
- f. At least once per 10 years by:
  1. Draining each fuel oil storage tank, removing the accumulated sediment and cleaning the tank using a sodium hypochlorite or equivalent solution, and
  2. Performing a pressure test of those portions of the diesel fuel oil system designed to Section III, subsection ND of the ASME Code in accordance with ASME Code Section 11 Article IWD-5000.

4.8.1.1.3 Reports - All diesel generator failures, valid or non-valid, shall be reported to the Commission in a Special Report pursuant to Specification 6.9.2 within 30 days. Reports of diesel generator failures shall include the information recommended in Regulatory Position C.3.b of Regulatory Guide 1.108, Revision 1, August 1977. If the number of failures in the last 100 valid tests, on a per nuclear unit basis, is greater than or equal to 7, the report shall be supplemented to include the additional information recommended in Regulatory Position C.3.b of Regulatory Guide 1.108, Revision 1, August 1977.

TABLE 4.11.1.1.1-1 (Continued)

TABLE NOTATION

- <sup>b</sup>A batch release is the discharge of liquid wastes of a discrete volume. Prior to sampling for analyses, each batch shall be isolated, and then thoroughly mixed to assure representative sampling.
- <sup>c</sup>The principal gamma emitters for which the LLD specification applies exclusively are the following radionuclides: Mn-54, Fe-59, Co-58, Co-60, Zn-65, Mo-99, Cs-134, Cs-137, Ce-141, and Ce-144. This list does not mean that only these nuclides are to be considered. Other gamma peaks that are identifiable, together with those of the above nuclides, shall also be analyzed and reported in the Semiannual Radioactive Effluent Release Report pursuant to Specification 6.9.1.8. |\*|
- <sup>d</sup>A composite sample is one in which the quantity of liquid sampled is proportional to the quantity of liquid waste discharged and in which the method of sampling employed results in a specimen that is representative of the liquids released.

## 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 5.1.3-1) shall be limited:

- a. During any calendar quarter to less than or equal to 1.5 mrems to the total body and to less than or equal to 5 mrems to any organ, and
- b. During any calendar year to less than or equal to 3 mrems to the total body and to less than or equal to 10 mrems 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 proposed corrective actions to be taken to assure that subsequent releases will be in compliance with the above limits. This Special Report shall also include the radiological impact on finished drinking water supplies at the nearest downstream drinking water source.
- b. The provisions of specifications 3.0.3 and 3.0.4 are not applicable.

#### SURVEILLANCE REQUIREMENTS

---

4.11.1.2 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 in the ODCM at least once per 31 days.

## RADIOACTIVE EFFLUENTS

### LIQUID WASTE TREATMENT SYSTEM

#### LIMITING CONDITION FOR OPERATION

---

3.11.1.3 The liquid radwaste treatment system, as described in the ODCM, shall be OPERABLE. The appropriate portions of the system shall be used to reduce the radioactive materials in liquid waste prior to their discharge when the projected doses due to the liquid effluent, from each reactor unit, to UNRESTRICTED AREAS (see Figure 5.1.3-1) 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, 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 subsystems, 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 Specifications 3.0.3 and 3.0.4 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 the methodology and parameters in the ODCM.

4.11.1.3.2 The liquid radwaste treatment system shall be demonstrated OPERABLE by operating the liquid radwaste treatment system equipment for at least 10 minutes at least once per 92 days unless the liquid radwaste system has been utilized to process radioactive liquid during the previous 92 days.

## RADIOACTIVE EFFLUENTS

### LIQUID HOLDUP TANKS

#### LIMITING CONDITION FOR OPERATION

---

3.11.1.4 The quantity of radioactive material contained in any outside temporary tanks 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 listed tanks exceeding the above limit, immediately suspend all additions of radioactive material to the tank and within 48 hours reduce the tank contents to within the limit.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

#### SURVEILLANCE REQUIREMENTS

---

4.11.1.4 The quantity of radioactive material contained in each of the above listed 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.

TABLE 4.11.2.1.2-1 (Continued)

TABLE NOTATION

<sup>a</sup>The LLD is the smallest concentration of radioactive material that will be detected with 95% probability with 5% probability of falsely concluding that a blank observation represents a "real" signal.

For a particular measurement systems (which may include radiochemical separation):

$$LLD = \frac{4.66 s_b}{E \cdot V \cdot 2.22 \times 10^6 \cdot Y \cdot \exp(-\lambda \Delta t)}$$

Where:

LLD is the a priori lower limit of detection as defined above (as microcuries per unit mass or volume),

$s_b$  is the standard deviation of the background counting rate or of the counting rate of a blank sample as appropriate (as counts per minute),

E is the counting efficiency (as counts per disintegration),

V is the sample size (in units of mass or volume),

$2.22 \times 10^6$  is the number of disintegrations per minute per microcurie,

Y is the fractional radiochemical yield (when applicable),

$\lambda$  is the radioactive decay constant for the particular radionuclide, and

$\Delta t$  is the elapsed time between midpoint of sample collection and time of counting (for plant effluents, not environmental samples)

The value of  $s_b$  used in the calculation of the LLD for a detection system shall be based on the actual observed variance of the background counting rate or of the counting rate of the blank samples (as appropriate) rather than on an unverified theoretically predicted variance. Typical values of E, V, Y, and  $\Delta t$  shall be used in the calculation.

TABLE 4.11.2.1.2-1 (Continued)

TABLE NOTATION

- b. If the iodine or particulate monitoring channel(s) is(are) inoperative, analyses shall also be performed following shutdown, startup, or a THERMAL POWER change exceeding 15 percent of the RATED THERMAL POWER within a one hour period.
- c. Particulate and/or charcoal samples shall be analyzed when an alarm is received indicating rate of activity buildup exceeds 3 times normal
- d. 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. If the iodine or particulate monitoring channel(s) is (are) inoperative, sampling 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 and analyses completed within 48 hours of changing. When samples collected for 24 hours are analyzed, the corresponding LLDs may be increased by a factor of 10.
- e. (Deleted)
- f. 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.
- g. 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, Xe-135m and Xe-138 for gaseous emissions and Mn-54, Fe-59, Co-58, Co-60, Zn-65, Mo-99, Cs-134, Cs-137, Ce-141 and Ce-144 for particulate emissions. This list does not mean that only these nuclides are to be considered. Other gamma peaks which are identifiable, together with those of the above nuclides, shall also be analyzed and reported in the Semiannual Radioactive Effluent and Release Report, pursuant to Specification 6.9.1.8.
- h. Under the provisions of footnote g. above, only noble gases need to be considered.

## 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, to areas at and beyond the SITE BOUNDARY (see Figure 5.1.3-1) 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 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 that have been taken to reduce the releases and the proposed corrective actions to be taken to assure that subsequent releases will be in compliance with the above limits.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

#### SURVEILLANCE REQUIREMENTS

---

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

## RADIOACTIVE EFFLUENTS

### DOSE - IODINE-131, 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, tritium, and all radionuclides in particulate form with half-lives greater than 8 days in gaseous effluents released, from each reactor unit, to areas at and beyond the SITE BOUNDARY (see Figure 5.1.3-1) 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, 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 the releases and the proposed corrective actions to be taken to assure that subsequent releases will be in compliance with the above limits.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

#### SURVEILLANCE REQUIREMENTS

---

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

RADIOACTIVE EFFLUENTS

GASEOUS RADWASTE TREATMENT SYSTEM

LIMITING CONDITION FOR OPERATION

---

3.11.2.4 The GASEOUS RADWASTE TREATMENT SYSTEM shall be in operation.

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

ACTION:

- a. With the GASEOUS RADWASTE TREATMENT SYSTEM inoperable for more than 7 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. Identification of the inoperable equipment or subsystems 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 Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

---

4.11.2.4 The GASEOUS RADWASTE TREATMENT SYSTEM shall be verified to be in operation at least once per 92 days.

## RADIOACTIVE EFFLUENTS

### VENTILATION EXHAUST TREATMENT SYSTEM

#### LIMITING CONDITION FOR OPERATION

---

3.11.2.5 The appropriate portions of the VENTILATION EXHAUST TREATMENT SYSTEM shall be OPERABLE and shall be used to reduce radioactive materials in gaseous waste prior to their discharge when the projected doses due to gaseous effluent releases from each reactor unit to areas at and beyond the SITE BOUNDARY (see Figure 5.1.3-1) when averaged over 31 days would exceed 0.3 mrem to any organ in a 31 day period.

APPLICABILITY: At all times.

#### ACTION:

- a. With the VENTILATION EXHAUST TREATMENT SYSTEM inoperable for more than 31 days, or with 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. Identification of the inoperable equipment or subsystems, 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 Specifications 3.0.3 and 3.0.4 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 VENTILATION EXHAUST TREATMENT SYSTEM shall be demonstrated OPERABLE by operating the VENTILATION EXHAUST TREATMENT SYSTEM equipment for at least 10 minutes, at least once per 92 days unless the appropriate system has been utilized to process radioactive gaseous effluents during the previous 92 days.

RADIOACTIVE EFFLUENTS

VENTING OR PURGING

LIMITING CONDITION FOR OPERATION

---

3.11.2.8 VENTING or PURGING of the Mark II containment drywell shall be through the Standby Gas Treatment System.

APPLICABILITY: Whenever the drywell is vented or purged.

ACTION:

- a. With the requirements of the above specification not satisfied, suspend all VENTING and PURGING of the drywell.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIRMENTS

---

4.11.2.8 The containment drywell shall be determined to be aligned for VENTING or PURGING through the Standby Gas Treatment System within 4 hours prior to start of and at least once per 12 hours during VENTING or PURGING of the drywell.

## RADIOACTIVE EFFLUENTS

### 3/4.11.3 SOLID RADWASTE SYSTEM

#### LIMITING CONDITION FOR OPERATION

---

3.11.3 The solid radwaste system shall be used in accordance with a PROCESS CONTROL PROGRAM, for the processing and packaging of radioactive wastes to ensure compliance with 10 CFR Part 20, 10 CFR Part 71, and Federal regulations governing the disposal of the waste.

APPLICABILITY: At all times.

ACTION:

- a. With the requirements of 10 CFR Part 20, and/or 10 CFR Part 71, not satisfied, suspend shipments of defectively processed or defectively packaged solid radioactive wastes from the site.
- b. With the solid radwaste system inoperable for more than 31 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. Identification of the inoperable equipment or subsystems and the reason for inoperability,
  2. Action(s) taken to restore the inoperable equipment to OPERABLE status,
  3. A description of the alternative used for SOLIDIFICATION and packaging of radioactive wastes, and
  4. Summary description of action(s) taken to prevent a recurrence.
- c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

#### SURVEILLANCE REQUIREMENTS

---

4.11.3.1 The solid radwaste system shall be demonstrated OPERABLE at least once per 92 days by:

- a. Operating the solid radwaste system at least once in the previous 92 days in accordance with the PROCESS CONTROL PROGRAM, or
- b. Verification of the existence of a valid contract for SOLIDIFICATION to be performed by a contractor in accordance with a PROCESS CONTROL PROGRAM.

## RADIOACTIVE EFFLUENTS

### SURVEILLANCE REQUIREMENTS (Continued)

---

4.11.3.2 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.
- 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 3 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.

## 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 mrems to the total body or any organ, except the thyroid, which shall be limited to less than or equal to 75 mrems.

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 Specifications 3.11.1.2.a, 3.11.1.2.b, 3.11.2.2.a, 3.11.2.2.b, 3.11.2.3.a, or 3.11.2.3.b, calculations should 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 Part 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 Specifications 3.0.3 and 3.0.4 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 Cumulative dose contributions from direct radiation from unit operation 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 6.9.1.7, 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.

## RADIOLOGICAL ENVIRONMENTAL MONITORING

### LIMITING CONDITION FOR OPERATION (Continued)

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- c. With milk or fresh leafy vegetable samples unavailable from one or more of the sample locations required by Table 3.12.1-1, identify locations for obtaining replacement samples and add them to the radiological environmental monitoring program within 30 days. The specific locations from which samples were unavailable may then be deleted from the monitoring program. Pursuant to Specification 6.9.1.8, identify the cause of the unavailability of samples and identify the new location(s) for obtaining replacement samples in the next Semiannual Radioactive Effluent Release Report and also include in the report a revised figure(s) and table for the ODCM reflecting the new location(s).
- d. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

### SURVEILLANCE REQUIREMENTS

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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 figure in the ODCM and shall be analyzed pursuant to the requirements of Tables 3.12.1-1, the detection capabilities required by Table 4.12.1-1.

4.12.2 Cumulative potential dose contributions for the current calendar year from radionuclides detected in environmental samples shall be determined in accordance with the methodology and parameters in the ODCM.

TABLE 3.12.1-1 (Continued)

Table Notation

<sup>a</sup> Specific parameters of distance and direction sector from the centerline of one reactor, and additional description where pertinent, shall be provided for each and every sample location in Table 3.12.1-1 in a table and figure(s) in the ODCM. Refer to NUREG-0133, "Preparation of Radiological Effluent Technical Specifications for Nuclear Power Plants," October 1978, and to Radiological Assessment Branch Technical Position, Revision 1, November 1979. Deviations are permitted from the required sampling schedule if specimens are unobtainable due to hazardous conditions, seasonal unavailability, malfunction of automatic sampling equipment and other legitimate reasons. If specimens are unobtainable due to sampling equipment malfunction, every effort shall be made to complete corrective action prior to the end of the next sampling period. All deviations from the sampling schedule shall be documented in the Annual Radiological Environmental Operating Report pursuant to Specification 6.9.1.7. It is recognized that, at times, it may not be possible or practicable to continue to obtain samples of the media of choice at the most desired location or time. In these instances suitable alternative media and locations may be chosen for the particular pathway in question and appropriate substitutions made within 30 days in the radiological environmental monitoring program. Pursuant to Specification 6.9.1.8, identify the cause of the unavailability of samples for that pathway and identify the new location(s) for obtaining replacement samples in the next Semiannual Radioactive Effluent Release Report and also include in the report a revised figure(s) and table for the ODCM reflecting the new location(s).

<sup>b</sup> One or more instruments, such as a pressurized ion chamber, for measuring and recording dose rate continuously may be used in place of, or in addition to, integrating dosimeters. For the purposes of this table, a thermoluminescent dosimeter (TLD) is considered to be one phosphor; two or more phosphors in a packet are considered as two or more dosimeters. Film badges shall not be used as dosimeters for measuring direct radiation. The 40 stations is not an absolute number. The number of direct radiation monitoring stations may be reduced according to geographical limitations; e.g., at an ocean site, some sectors will be over water so that the number of dosimeters may be reduced accordingly. The frequency of analysis or readout for TLD systems will depend upon the characteristics of the specific system used and should be selected to obtain optimum dose information with minimal fading.

<sup>c</sup> Methodology to guarantee complete recovery of radioiodine shall be described in the ODCM.

TABLE 3.12.1-1 (Continued)

Table Notation

<sup>d</sup> Airborne particulate sample filters shall be analyzed for gross beta radioactivity 24 hours or more after sampling to allow for radon and thoron daughter decay. If gross beta activity in air particulate samples is greater than ten times the yearly mean of control samples, gamma isotopic analysis shall be performed on the individual samples.

<sup>e</sup> Gamma isotopic analysis means the identification and quantification of gamma-emitting radionuclides that may be attributable to the effluents from the facility.

<sup>f</sup> The "upstream sample" shall be taken at a distance beyond significant influence of the discharge. The "downstream" sample shall be taken in the discharge line.

<sup>g</sup> A composite sample is one in which the quantity (aliquot) of liquid sampled is proportional to the quantity of flowing liquid and in which the method of sampling employed results in a specimen that is representative of the liquid flow. In this program composite sample aliquots shall be collected at time intervals that are very short (e.g., hourly) relative to the compositing period (e.g., monthly) in order to assure obtaining a representative sample.

<sup>h</sup> Groundwater samples shall be taken when this source is tapped for drinking or irrigation purposes in areas where the hydraulic gradient or recharge properties are suitable for contamination.

<sup>i</sup> The dose shall be calculated for the maximum organ and age group, using the methodology and parameters in the ODCM.

<sup>j</sup> If harvest occurs more than once a year, sampling shall be performed during each discrete harvest. If harvest occurs continuously, sampling shall be monthly. Attention shall be paid to including samples of tuborous and root food products.

Table 4.12.1-1 (Continued)

TABLE NOTATION

<sup>a</sup>This list does not mean that only these nuclides are to be considered. Other peaks that are identifiable at 95% confidence level together with those of the above nuclides, shall also be analyzed and reported in the Annual Radiological Environmental Operating report pursuant to Specification 6.9.1.7.

<sup>b</sup>Required detection capabilities for thermoluminescent dosimeters used for environmental measurements are given in Regulatory Guide 4.13.

<sup>c</sup>The LLD is defined, for purpose of these specifications, as the smallest concentration of radioactive material in a sample that will yield a net count (above system background) that will be detected with 95% probability with only 5% probability of falsely concluding that a blank observation represents a "real" signal.

For a particular measurement system (which may include radiochemical separation):

$$LLD = \frac{4.66 s_b}{E \cdot V \cdot 2/22 \cdot Y \cdot \exp(-\lambda \Delta t)}$$

Where:

LLD is the "a priori" lower limit of detection as defined above (as picocuries per unit mass or volume),

$s_b$  is the standard deviation of the background counting rate or of the counting rate of a blank sample as appropriate (as counts per minute),

E is the counting efficiency (as counts per disintegration),

B is the sample size (in units of mass or volume),

2.22 is the number of disintegrations per minute per picocurie,

Y is the fractional radiochemical yield (when applicable),

$\lambda$  is the radioactive decay constant for the particular radionuclide, and

Table 4.12.1-1 (Continued)

TABLE NOTATION

$\Delta t$  for environmental samples is the elapsed time between sample collection (or end of the sample collection period) and time of counting.

Typical values of E, V, Y, and  $\Delta t$  should be used in the calculation.

It should be recognized that the LLD is defined as a priori (before the fact) limit representing the capability of a measurement system and not as an posteriori (after the fact) limit for a particular measurement. Analyses shall be performed in such a manner that the stated LLDs will be achieved under routine conditions. Occasionally background fluctuations, unavoidably small sample sizes, the presence of interfering nuclides, or other uncontrollable circumstances may render these LLDs unachievable. In such cases, the contributing factors shall be identified and described in the Annual Radiological Environmental Operating Report pursuant to Specification 6.9.1.7.

<sup>d</sup>LLD for drinking water samples.

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## RADIOLOGICAL ENVIRONMENTAL MONITORING

### 3/4.12.2 LAND USE CENSUS

#### LIMITING CONDITION FOR OPERATION

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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 m<sup>2</sup> (500 ft<sup>2</sup>) 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 6.9.1.8. |<sub>1.2</sub>
- b. With a land use census identify a location(s) that yields a calculated dose or dose commitment (via the same exposure pathway) 20 percent greater than at a location from which 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. 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. Pursuant to Specification 6.9.1.8, 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 for the ODCM reflecting the new location(s). |<sub>1.4</sub>
- c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

#### SURVEILLANCE REQUIREMENTS

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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 6.9.1.7. |<sub>1.7</sub>

\*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 item 4c shall be followed, including analysis of control samples.

RADIOLOGICAL ENVIRONMENTAL MONITORING

3/4.12.3 INTERLABORATORY COMPARISON PROGRAM

LIMITING CONDITION FOR OPERATION

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3.12.3 Analyses shall be performed on radioactive materials 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 6.9.1.7.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

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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 6.9.1.7.

## ADMINISTRATIVE CONTROLS

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### 6.5 REVIEW AND AUDIT

#### 6.5.1 PLANT OPERATIONS REVIEW COMMITTEE (PORC)

##### FUNCTION

6.5.1.1 The PORC shall function to advise the Superintendent of Plant-Susquehanna on matters related to nuclear safety as described in Specification 6.5.1.6.

##### COMPOSITION

6.5.1.2 The PORC shall be composed of the:

Chairman:	Superintendent of Plant-Susquehanna
Member:	Assistant Superintendent of Plant-Susquehanna
Member:	Supervisor of Operations
Member:	Technical Supervisor
Member:	Supervisor of Maintenance
Member:	I&C/Computer Supervisor
Member:	Reactor Engineering Supervisor or Unit Reactor Engineer
Member:	Health Physics Supervisor
Member:	Shift Supervisor or Unit Supervisor

##### ALTERNATES

6.5.1.3 All alternate members shall be appointed in writing by the PORC Chairman to serve on a temporary basis; however, no more than two alternates shall participate as voting members in PORC activities at any one time.

##### MEETING FREQUENCY

6.5.1.4 The PORC shall meet at least once per calendar month and as convened by the PORC Chairman or his designated alternate.

##### QUORUM

6.5.1.5 The minimum quorum of the PORC necessary for the performance of the PORC responsibility and authority provisions of these Technical Specifications shall consist of the Chairman or his designated alternate and four members including alternates.

## ADMINISTRATIVE CONTROLS

### RESPONSIBILITIES

- 6.5.1.6 The PORC shall be responsible for:
- a. Review of all administrative procedures and changes thereto.
  - b. Review of all proposed tests and experiments that affect nuclear safety.
  - c. Review of all proposed changes to Appendix "A" Technical Specifications.
  - d. Review of all proposed changes or modifications to unit systems or equipment that affect nuclear safety.
  - e. Review of the safety evaluations for procedures and changes thereto completed under the provisions of 10 CFR 50.59.
  - f. Investigation of all violations of the Technical Specifications including the preparation and forwarding of reports covering evaluation and recommendations to prevent recurrence to the Vice President-Nuclear Operations and to the Susquehanna Review Committee.
  - g. Review all REPORTABLE EVENTS.
  - h. Review of unit operations to detect potential nuclear safety hazards.
  - i. Performance of special reviews, investigations or analyses and reports thereon as requested by the Superintendent of Plant-Susquehanna or the Susquehanna Review Committee.
  - j. Review of the Security Plan and shall submit recommended changes to the Susquehanna Review Committee.
  - k. Review of the Emergency Plan and shall submit recommended changes to the Susquehanna Review Committee.
  - l. Review of every unplanned onsite release of radioactive material to the environs including the preparation and forwarding of reports covering evaluation, recommendations and disposition of the corrective action to prevent recurrence to the Vice-President-Nuclear Operations and to the Chairman of the Susquehanna Review Committee.
  - m. Review of changes to the PROCESS CONTROL PROGRAM, OFFSITE DOSE CALCULATION MANUAL, and radwaste treatment systems.

## ADMINISTRATIVE CONTROLS

### REVIEW (Continued)

- d. Proposed changes to Appendix A Technical Specifications or this Operating License.
- e. Violations of codes, regulations, orders, Technical Specifications, license requirements, or of internal procedures or instructions having nuclear safety significance.
- f. Significant operating abnormalities or deviations from normal and expected performance of unit equipment that affect nuclear safety.
- g. All REPORTABLE EVENTS.
- h. All recognized indications of an unanticipated deficiency in some aspect of design or operation of structures, systems, or components that could affect nuclear safety.
- i. Reports and meetings minutes of the PORC.

### AUDITS

6.5.2.8 Audits of unit activities shall be performed under the cognizance of the SRC. These audits shall encompass:

- a. The conformance of unit operation to provisions contained within the Appendix A Technical Specifications and applicable license conditions at least once per 12 months.
- b. The performance, training and qualifications of the entire unit staff at least once per 12 months.
- c. The results of actions taken to correct deficiencies occurring in unit equipment, structures, systems or method of operation that affect nuclear safety at least once per 6 months.
- d. The performance of activities required by the Operational Quality Assurance Program to meet the criteria of Appendix "B", 10 CFR 50, at least once per 24 months.
- e. The Emergency Plan and implementing procedures at least once per 12 months.
- f. The Security Plan and implementing procedures at least once per 12 months.
- g. Any other area of unit operation considered appropriate by the SRC or the Senior Vice President-Nuclear.
- h. The Fire Protection Program and implementing procedures at least once per 24 months.

## ADMINISTRATIVE CONTROLS

### AUDITS (Continued)

- i. An independent fire protection and loss prevention inspection and audit shall be performed at least once per 12 months utilizing either qualified offsite licensee personnel or an outside fire protection firm.
- j. An inspection and audit of the fire protection and loss prevention program shall be performed by an outside qualified fire consultant at intervals no greater than 36 months.
- k. The radiological environmental monitoring program and the results thereof at least once per 12 months.
- l. The OFFSITE DOSE CALCULATION MANUAL and implementing procedures at least once per 24 months.
- m. The PROCESS CONTROL PROGRAM and implementing procedures for solidification of radioactive wastes at least once per 24 months.
- n. The performance of activities required by the Quality Assurance Program to meet the criteria of Regulatory Guide 4.15, December, 1977, at least once per 12 months.

### AUTHORITY

6.5.2.9 The SRC shall report to and advise the Senior Vice President-Nuclear on those areas of responsibility specified in Sections 6.5.2.7 and 6.5.2.8.

### RECORDS

6.5.2.10 Records of SRC activities shall be prepared, approved and distributed as indicated below:

- a. Minutes of each SRC meeting shall be prepared, approved and forwarded to the Senior Vice President-Nuclear within 14 days following each meeting.
- b. Reports of reviews encompassed by Section 6.5.2.7 above, shall be prepared, approved and forwarded to the Senior Vice President-Nuclear within 14 days following completion of the review.
- c. Audit reports encompassed by Section 6.5.2.8 above, shall be forwarded to the Senior Vice President-Nuclear and to the management positions responsible for the areas audited within 30 days after completion of the audit by the auditing organization.

## ADMINISTRATIVE CONTROLS

### 6.5.3 TECHNICAL REVIEW AND CONTROL

#### ACTIVITIES

Procedures and programs required by Technical Specification 6.8 and other procedures which affect plant nuclear safety as determined by the Superintendent of Plant -Susquehanna, and changes thereto, other than editorial or typographical changes, shall be reviewed as follows:

#### 6.5.3.1 Technical Review

- a. Each such procedure, program or procedure change shall be independently reviewed by an individual knowledgeable in the area affected other than the individual who prepared the procedure, program or procedure change. The Superintendent of Plant - Susquehanna shall approve all plant procedures, programs, and changes thereto.
- b. Individuals responsible for reviews performed in accordance with item 6.5.3.1.a above shall be members of the plant staff previously designated by Superintendent of Plant - Susquehanna. Each such review shall include a determination of whether or not additional, cross-disciplinary, review is necessary. If deemed necessary, such review shall be performed by the review personnel of the appropriate discipline.

Individuals performing these reviews shall meet or exceed the qualifications stated in section 4.4 of ANSI N18.1-1971 for the appropriate discipline.

- c. When required by 10 CFR 50.59, a safety evaluation to determine whether or not an unreviewed safety question is involved shall be included in the procedure review. Pursuant to 10 CFR 50.59, NRC approval of items involving unreviewed safety questions shall be obtained prior to Superintendent of Plant - Susquehanna approval for implementation.
- d. Written records of reviews performed in accordance with item 6.5.3.1.a above, including recommendations for approval or disapproval, shall be prepared and maintained.

All items not reviewed in accordance with item 6.5.3.1a. above shall be reviewed by PORC.

### 6.6 REPORTABLE EVENT ACTION

6.6.1 The following actions shall be taken for REPORTABLE EVENTS:

- a. The Commission shall be notified and/or a report submitted pursuant to the requirements of Section 50.73 to 10 CFR Part 50, and
- b. Each REPORTABLE EVENT shall be reviewed by the PORC and submitted to the SRC and the Vice President-Nuclear Operations.

## ADMINISTRATIVE CONTROLS

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### 6.7 SAFETY LIMIT VIOLATION

6.7.1 The following actions shall be taken in the event a Safety Limit is violated:

- a. The NRC Operations Center shall be notified by telephone as soon as possible and in all cases within one hour. The Vice President-Nuclear Operations and the SRC shall be notified within 24 hours.
- b. A Safety Limit Violation Report shall be prepared. The report shall be reviewed by the PORC. This report shall describe (1) applicable circumstances preceding the violation, (2) effects of the violation upon unit components, systems or structures, and (3) corrective action taken to prevent recurrence.
- c. The Safety Limit Violation Report shall be submitted to the Commission, the SRC and the Vice President-Nuclear Operations within 14 days of the violation.
- d. Critical operation of the unit shall not be resumed until authorized by the Commission.

### 6.8 PROCEDURES AND PROGRAMS

6.8.1 Written procedures shall be established, implemented and maintained covering the activities referenced below:

- a. The applicable procedures recommended in Appendix "A" of Regulatory Guide 1.33, Revision 2, February 1978.
- b. Refueling operations.
- c. Surveillance and test activities of safety related equipment.
- d. Security Plan implementation.
- e. Emergency Plan implementation.
- f. Fire Protection Program implementation.
- g. PROCESS CONTROL PROGRAM implementation.
- h. Offsite Dose Calculation Manual implementation.
- i. Quality Assurance Program for effluent and environmental monitoring, using the guidance of Regulatory Guide 4.15, February 1979.

6.8.2 Each procedure of 6.8.1(a) through (g) above, and changes thereto, shall be reviewed in accordance with Specifications 6.5.1.6 or 6.5.3, as appropriate, and approved by the Superintendent of Plant-Susquehanna prior to implementation and shall be reviewed periodically as set forth in administrative procedures.

Each procedure of 6.8.1, above, and changes thereto, that is established to implement those portions of the radiological effluent and environmental monitoring programs and those portions of the ODCM that are the responsibility of the Nuclear Support Group shall be reviewed by the Environmental Group Supervisor-Nuclear and approved by the Manager-Nuclear Support.

## ADMINISTRATIVE CONTROLS

### PROCEDURES AND PROGRAMS (Continued)

6.8.3 Temporary changes to procedures of 6.8.1 above may be made provided:

- a. The intent of the original procedure is not altered.
- b. The change is approved by two members of the unit management staff, at least one of whom holds a Senior Reactor Operator's License on the unit affected.
- c. The change is documented, reviewed in accordance with Specification 6.5.1.6 or 6.5.3, as appropriate, and approved by the Superintendent of Plant-Susquehanna within 14 days of implementation.

6.8.4 The following programs shall be established, implemented, and maintained:

a. Primary Coolant Sources Outside Containment

A program to reduce leakage from those portions of systems outside containment that could contain highly radioactive fluids during a serious transient or accident to as low as practical levels. The systems include the core spray, high pressure coolant injection, reactor core isolation cooling, reactor water cleanup, standby gas treatment, scram discharge and containment air monitoring systems.

The program shall include the following:

1. Preventive maintenance and periodic visual inspection requirements, and
2. Integrated leak test requirements for each system at refueling cycle intervals or less.

b. In-Plant Radiation Monitoring

A program which will ensure the capability to accurately determine the airborne iodine concentration in vital areas under accident conditions. This program shall include the following:

1. Training of personnel,
2. Procedures for monitoring, and
3. Provisions for maintenance of sampling and analysis equipment.

c. Post-accident Sampling

A program which will ensure the capability to obtain and analyze reactor coolant, radioactive iodines and particulates in plant gaseous effluents, and containment atmosphere samples under accident conditions. The program shall include the following:

1. Training of personnel.
2. Procedure for sampling and analysis,
3. Provisions for maintenance of sampling and analysis equipment.

## ADMINISTRATIVE CONTROLS

### 6.9 REPORTING REQUIREMENTS

#### ROUTINE REPORTS

6.9.1 In addition to the applicable reporting requirements of Title 10, Code of Federal Regulations, the following reports shall be submitted to the Regional Administrator of the Regional Office, unless otherwise noted.

#### STARTUP REPORTS

6.9.1.1 A summary report of plant startup and power escalation testing shall be submitted following (1) receipt of an operating license, (2) amendment to the license involving a planned increase in power level, (3) installation of fuel that has a different design or has been manufactured by a different fuel supplier, and (4) modifications that may have significantly altered the nuclear, thermal, or hydraulic performance of the unit.

6.9.1.2 The startup report shall address each of the tests identified in the FSAR and shall include a description of the measured values of the operating conditions or characteristics obtained during the test program and a comparison of these values with design predictions and specifications. Any corrective actions that were required to obtain satisfactory operation shall also be described. Any additional specific details required in license conditions based on other commitments shall be included in this report.

6.9.1.3 Startup reports shall be submitted within (1) 90 days following completion of the startup test program, (2) 90 days following resumption or commencement of commercial power operation, or (3) 9 months following initial criticality, whichever is earliest. If the Startup Report does not cover all three events, i.e., initial criticality, completion of startup test program, and resumption or commencement of commercial operation, supplementary reports shall be submitted at least every three months until all three events have been completed.

#### ANNUAL REPORTS<sup>1/</sup>

6.9.1.4 Annual reports covering the activities of the unit as described below for the previous calendar year shall be submitted prior to March 1 of each year. The initial report shall be submitted prior to March 1 of the year following initial criticality.

6.9.1.5 Reports required on an annual basis shall include:

- a. A tabulation on an annual basis of the number of station, utility, and other personnel, including contractors, receiving exposures greater than 100 mrem/yr and their associated manrem exposure according to work and job functions,<sup>2/</sup> e.g., reactor operations and surveillance, inservice inspection, routine maintenance, special maintenance (describe maintenance), waste processing, and refueling. The dose assignments to various duty functions may be estimated based on pocket dosimeter, TLD, or film badge measurements. Small exposures totalling less than 20 percent of the individual total dose need not be accounted for. In the aggregate, at least 80 percent of the total whole body dose received from external sources should be assigned to specific major work functions.

<sup>1/</sup> A single submittal may be made for a multiple unit station. The submittal should combine those sections that are common to all units at the station.

<sup>2/</sup> This tabulation supplements the requirements of §20.407 of 10 CFR Part 20.

## ADMINISTRATIVE CONTROLS

### MONTHLY OPERATING REPORTS

6.9.1.6 Routine reports of operating statistics and shutdown experience, including documentation of all challenges to the main steam system safety/relief valves, shall be submitted on a monthly basis to the Director, Office of Resource Management, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, with a copy to the Regional Administrator of the Regional Office no later than the 15th of each month following the calendar month covered by the report.

Any changes to the OFFSITE DOSE CALCULATION MANUAL shall be submitted with the Monthly Operating Report within 90 days in which the change(s) was made effective. In addition, a report of any major changes to the radioactive waste treatment systems shall be submitted with the Monthly Operating Report for the period in which the evaluation was reviewed and accepted by the PORC.

### ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT\*

6.9.1.7 Routine radiological environmental operating reports covering the operation of the unit during the previous calendar year shall be submitted prior to May 1 of each year. The initial report shall be submitted prior to May 1 of the year following initial criticality.

The Annual Radiological Environmental Operating Reports shall include summaries, interpretations, and an analysis of trends of the results of the radiological environmental surveillance activities for the report period, including a comparison (as appropriate), with preoperational studies, operational controls and previous environmental surveillance reports and an assessment of the observed impacts of the plant operation on the environment. The reports shall also include the results of land use censuses required by Specification 3.12.2.

The Annual Radiological Environmental Operating Reports shall include the results of all radiological environmental samples and of all environmental radiation measurements taken during the report period pursuant to the locations specified in the tables and figures in the ODCM, as well as summarized and tabulated results of these analyses and measurements in the format of the table in the Radiological Branch Technical Position, Revision 1, November 1979. In the event that some individual results are not available for inclusion with the report, the report shall be submitted noting and explaining the reasons for the missing results. The missing data shall be submitted as soon as possible in a supplementary report.

The reports shall also include the following: a summary description of the radiological environmental monitoring program; at least two legible maps covering all sampling locations keyed to a table giving distances and directions from the centerline of one reactor plant; the results of licensee participation in the Interlaboratory Comparison Program, required by Specification 3.12.3; discussion of all deviations from the Sampling Schedule of Table 3.12.1-1; and discussion of all analyses in which the LLD required by Table was not achievable.

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\*A single submittal may be made for a multiple unit station.

\*\*One map shall cover stations near the SITE BOUNDARY; a second shall include the more distant stations.

## ADMINISTRATIVE CONTROLS

### SEMI-ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT\*

- 6.9.1.8 Routine Radioactive Effluent Release Reports covering the operation of the unit during the previous 6 months of operation shall be submitted within 60 days after January 1 and July 1 of each year. The period of the first report shall begin with the date of initial criticality.

The Radioactive Effluent Release Reports shall include a summary of the quantities of radioactive liquid and gaseous effluents and solid waste released from the facility as outlined in Regulatory Guide 1.21, "Measuring, Evaluating, and Reporting Radioactivity in Solid Wastes and Releases of Radioactive Materials in Liquid and Gaseous Effluents from Light-Water-Cooled Nuclear Power Plants," Revision 1, June 1974, with data summarized on a quarterly basis following the format of Appendix B thereof.

The Radioactive Effluent Release Report to be submitted 60 days after January 1 of each year shall include an annual summary of hourly meteorological data collected over the previous year. This annual summary may be either in the form of an hour-by-hour listing on magnetic tape of wind speed, wind direction and atmospheric stability, and precipitation (if measured), or in the form of joint frequency distributions of wind speed, wind direction, atmospheric stability.\*\* This same report shall include an assessment of the radiation doses due to the radioactive liquid and gaseous effluents released from the unit or station during the previous calendar year. This same report shall also include an assessment of the radiation doses from radioactive liquid and gaseous effluents to MEMBERS OF THE PUBLIC due to their activities inside the SITE BOUNDARY (Figure 5.1-3) during the report period. All assumptions used in making these assessments (i.e., specific activity, exposure time and location) shall be included in these reports. The assessment of radiation doses shall be performed in accordance with the methodology and parameters of the Offsite Dose Calculation Manual (ODCM).

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\*A single submittal may be made for a multiple unit station. The submittal should combine those sections that are common to all units at the station; however, for units with separate radwaste systems, the submittal shall specify the releases of radioactive material from each unit.

\*\*In lieu of submission with the first half year Radioactive Effluent Release Report, the licensee has the option of retaining this summary of required meteorological data on site in a file that shall be provided to the NRC upon request.

## ADMINISTRATIVE CONTROLS

### SEMI-ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT\* (Continued)

The Radioactive Effluent Release Report to be submitted 60 days after January 1 of each year shall also include an assessment of radiation doses to the likely most exposed MEMBERS OF THE PUBLIC from reactor releases and other nearby uranium fuel cycle sources (including doses from primary effluent pathways and direct radiation) for the previous calendar year to show conformance with 40 CFR 190, Environmental Radiation Protection Standards for Nuclear Power Operation. Acceptable methods for calculating the dose contribution from liquid and gaseous effluents are given in Regulatory Guide 1.109, Rev. 1, October 1977.

The Radioactive Effluent Release Reports shall include the following information for each type of solid waste (as defined in 10 CFR PART 61) shipped offsite during the report period:

1. Container volume,
2. Total curie quantity (specify whether determined by measurement or estimate),
3. Principal radionuclides (specify whether determined by measurement or estimate),
4. Source of waste and processing employed (e.g., dewatered spent resin, compacted dry waste, evaporator bottoms),
5. Type of container (e.g., LSA, Type A, Type B, Large Quantity), and
6. Solidification agent or absorbent (e.g., cement; urea formaldehyde).

The Radioactive Effluent Release Reports shall include a list and description of unplanned releases from the site to UNRESTRICTED AREAS of radioactive materials in gaseous and liquid effluents on a quarterly basis.

The Radioactive Effluent Release Reports shall include a list and description of unplanned releases from the site to UNRESTRICTED AREAS OF radioactive materials in gaseous and liquid effluents made during the reporting period.

The Radioactive Effluent Release Reports shall include any changes made during the reporting period to the PROCESS CONTROL PROGRAM (PCP) and to the OFFSITE DOSE CALCULATION MANUAL (ODCM), as well as a listing of new locations for dose calculations and/or environmental monitoring identified by the land use census pursuant to Specification 3.12.2.

### SPECIAL REPORTS

6.9.2 Special reports shall be submitted to the Regional Administrator of the Regional Office within the time period specified for each report.

## ADMINISTRATIVE CONTROLS

### 6.10 RECORD RETENTION

In addition to the applicable record retention requirements of Title 10, Code of Federal Regulations, the following records shall be retained for at least the minimum period indicated.

6.10.1 The following records shall be retained for at least five years:

- a. Records and logs of unit operation covering time interval at each power level.
- b. Records and logs of principal maintenance activities, inspections, repair and replacement of principal items of equipment related to nuclear safety.
- c. ALL REPORTABLE EVENTS.
- d. Records of surveillance activities, inspections and calibrations required by these Technical Specifications.
- e. Records of changes made to the procedures required by Specification 6.8.1.
- f. Records of radioactive shipments.
- g. Records of sealed source and fission detector leak tests and results.
- h. Records of annual physical inventory of all sealed source material of record.

6.10.2 The following records shall be retained for the duration of the Unit Operating License:

- a. Records and drawing changes reflecting unit design modifications made to systems and equipment described in the Final Safety Analysis Report.
- b. Records of new and irradiated fuel inventory, fuel transfers and assembly burnup histories.
- c. Records of radiation exposure for all individuals entering radiation control areas.
- d. Records of gaseous and liquid radioactive material released to the environs.
- e. Records of transient or operational cycles for those unit components identified in Table 5.7.1-1.
- f. Records of reactor tests and experiments.
- g. Records of training and qualification for current members of the unit staff.

## ADMINISTRATIVE CONTROLS

### RECORD RETENTION (Continued)

- h. Records of in-service inspections performed pursuant to these Technical Specifications.
- i. Records of Quality Assurance activities required by the Operational Quality Assurance Manual.
- j. Records of reviews performed for changes made to procedures or equipment or reviews of tests and experiments pursuant to 10 CFR 50.59.
- k. Records of meetings of the PORC and the SRC and records of reviews conducted in accordance with Specification 3.5.3.
- l. Records of the service lives of all mechanical snubbers listed on Table 3.7.4-1 including the date at which the service life commences and associated installation and maintenance records.
- m. Records of analyses required by the radiological environmental monitoring program.

### 6.11 RADIATION PROTECTION PROGRAM

6.11.1 Procedures for personnel radiation protection shall be prepared consistent with the requirements of 10 CFR Part 20 and shall be approved, maintained and adhered to for all operations involving personnel radiation exposure.

### 6.12 HIGH RADIATION AREA

6.12.1 In lieu of the "control device" or "alarm signal" required by paragraph 20.203(c)(2) of 10 CFR 20, each high radiation area in which the intensity of radiation is greater than 100 mrem/hr but less than 1000 mrem/hr shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring issuance of a Radiation Work Permit (RWP)\*. Any individual or group of individuals permitted to enter such areas shall be provided with or accompanied by one or more of the following:

- a. A radiation monitoring device which continuously indicates the radiation dose rate in the area.
- b. A radiation monitoring device which continuously integrates the radiation dose rate in the area and alarms when a preset integrated dose is received. Entry into such areas with this monitoring device may be made after the dose rate level in the area has been established and personnel have been made knowledgeable of them.

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\*Health Physics personnel or personnel escorted by Health Physics personnel shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they are otherwise following plant radiation protection procedures for entry into high radiation areas.

## ADMINISTRATIVE CONTROLS

### 6.12 HIGH RADIATION AREA (Continued)

- c. A health physics qualified individual, i.e., qualified in radiation protection procedures, with a radiation dose rate monitoring device, who is responsible for providing positive control over the activities within the area and shall perform periodic radiation surveillance at the frequency specified by the unit Health Physics Supervision in the Radiation Work Permit.

6.12.2 In addition to the requirements of 6.12.1, areas accessible to personnel with radiation levels such that a major portion of the body could receive in one hour a dose greater than 1000 mrem shall be provided with locked doors to prevent unauthorized entry, and the keys shall be maintained under the administrative control of the Shift Foreman on duty and/or the unit Health Physicist. Doors shall remain locked except during periods of access by personnel under an approved RWP which shall specify the dose rate levels in the immediate work area and the maximum allowable stay time for individuals in that area. For individual areas accessible to personnel with radiation levels such that a major portion of the body could receive in one hour a dose in excess of 1000 mrem\* that are located within large areas, such as the containment, where no enclosure exists for purposes of locking, and no enclosure can be reasonably constructed around the individual areas, then that area shall be roped off, conspicuously posted and a flashing light shall be activated as a warning device. In lieu of the stay time specification of the RWP, direct or remote, such as use of closed circuit TV cameras, continuous surveillance may be made by personnel qualified in radiation protection procedures to provide positive exposure control over the activities within the area.

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\*Measurement made at 18" from source of radioactivity.

## ADMINISTRATIVE CONTROLS

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### 6.13 PROCESS CONTROL PROGRAM (PCP)

6.13.1 The PCP shall be approved by the Commission prior to implementation.

6.13.2 Licensee initiated changes to the PCP:

1. Shall be submitted to the Commission in the semi-annual Radioactive Effluent Release Report for the period in which the change(s) was made. This submittal shall contain:
  - a. Sufficiently detailed information to totally support the rationale for the change without benefit of additional or supplemental information;
  - b. A determination that the change did not reduce the overall conformance of the solidified waste product to existing criteria for solid wastes; and
  - c. Documentation of the fact that the change has been reviewed and found acceptable by the PORC.
2. Shall become effective upon review and acceptance by the PORC.

## ADMINISTRATIVE CONTROLS

### 6.14 OFFSITE DOSE CALCULATION MANUAL (ODCM)

6.14.1 The ODCM shall be approved by the Commission prior to implementation.

6.14.2 Licensee initiated changes to the ODCM:

1. Shall be submitted to the Commission in the Semiannual Radioactive Effluent Release Report for the period in which the change(s) was made effective. This submittal shall contain:
  - a. Sufficiently detailed information to totally support the rationale for the change without benefit of additional or supplemental information. Information submitted should consist of a package of those pages of the ODCM to be changed with each page numbered and provided with an approval and date box, together with appropriate analyses or evaluations justifying the change(s);
  - b. A determination that the change will not reduce the accuracy or reliability of dose calculations or setpoint determinations; and
  - c. Documentation of the fact that the change has been reviewed and found acceptable by the Manager-Nuclear Support.
2. Shall become effective upon review and acceptance by the Manager-Nuclear Support.

### 6.15 MAJOR CHANGES TO RADIOACTIVE WASTE TREATMENT SYSTEMS

6.15.1 Licensee initiated major changes to the radioactive waste systems, liquid, gaseous and solid:

1. Shall be reported to the Commission in the Monthly Operating Report for the period in which the evaluation was reviewed by the (PORC). The discussion of each change shall contain:
  - a. A summary of the evaluation that led to the determination that the change could be made in accordance with 10 CFR 50.59;
  - b. Sufficient detailed information to totally support the reason for the change without benefit of additional or supplemental information;
  - c. A detailed description of the equipment, components and processes involved and the interfaces with other plant systems;
  - d. An evaluation of the change which shows the predicted releases of radioactive materials in liquid and gaseous effluents and/or quantity of solid waste that differ from those previously predicted in the license application and amendments thereto;

ADMINISTRATIVE CONTROLS

MAJOR CHANGES TO RADIOACTIVE WASTE TREATMENT SYSTEMS (Continued)

- e. An evaluation of the change which shows the expected maximum exposures to individual in the unrestricted area and to the general population that differ from those previously estimated in the license application and amendments thereto;
  - f. A comparison of the predicted releases of radioactive materials, in liquid and gaseous effluents and in solid waste, to the actual releases for the period prior to when the changes are to be made;
  - g. An estimate of the exposure to plant operating personnel as a result of the change; and
  - h. Documentation of the fact that the change was reviewed and found acceptable by the PORC.
2. Shall become effective upon review and acceptance by the PORC.



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

SAFETY EVALUATION

AMENDMENT NO.26 TO NPF-14

SUSQUEHANNA STEAM ELECTRIC STATION, UNIT 1

DOCKET NO. 50-387

Introduction

The licensee in letters dated April 10, 1984 and May 18, 1984, proposed changes to the Technical Specifications of the operating license for Susquehanna Steam Electric Station, Unit 1 which are as follows:

- a) Raise the allowable water temperature in the spray pond from 81°F or less during normal operations to a temperature of 88°F or less during normal operations.
- b) Revise Technical Specifications as related to Special Reporting requirements discussed in NRC Generic Letter 83-43 dated December 19, 1983 and in response to changes in 10 CFR 50.72 and 10 CFR 50.73.

Evaluation

a) Ultimate Heat Sink (Spray Pond)

In Section 2.4.4 of the Susquehanna SER Supplement No. 6, the staff concluded that the Susquehanna Ultimate Heat Sink (Spray Pond) complied with Regulatory Guide 1.27 and met the requirements of GDC-44. This conclusion was subject to a technical specification that requires that the water temperature in the spray pond be 81°F or less during normal plant operation. The basis for the 81° limit was that the licensee's conservative analysis had shown that by having the initial pond temperature at 81° or less, the maximum pond temperature during a design basis accident would be below the design level of 95°F.

Although the licensee proposed the 81° temperature limit, they recognized at the time that solar heating during the hot summer months might result in pond temperatures higher than 81°F. Thus the licensee continued their investigation in an effort to find a means by which the temperature limit of 81° could be increased.

The licensee has now completed a new analysis of the thermal performance of the spray pond. This new analysis shows that the spray pond can provide sufficient cooling for a design basis accident (LOCA in one unit and a safe shutdown of the other) if the pond operating temperature is limited to 88°F. On the basis of this analysis the licensee requested that the Technical Specification limit of 81°F be increased to 88°F.

This new analysis differs from the original analysis in that the effects of wind have now been taken into consideration. Originally wind effects

were ignored. Since winds increase the efficiency of the heat transfer process, ignoring the wind's contribution to heat transfer in the original analysis was a conservative assumption.

The licensee also used meteorological data from the airport near Scranton in the new analysis, instead of the Harrisburg airport data used in the original analysis. The licensee believes that the Scranton data is more representative of the site than the Harrisburg data because the Scranton airport is only 27 miles from the site while the Harrisburg airport is 70 miles away and separated by a mountain range. The staff agrees that the Scranton airport is a more appropriate source of meteorological data.

Another change from the original analysis involves solar effects on the cooling pond. This change results in a higher solar heat load contribution to the spray pond than the original analysis.

A fourth difference between the original and the new analysis is the decay heat data. The staff reviewed the new decay heat data submitted by the licensee and found them acceptable with one small modification. Because the new heat loads did not take into account the addition of a fifth diesel generator at the plant, the heat load data points were increased to account for the possibility of the fifth diesel being on line with three of the existing four diesels.

The final change in the licensee's new analysis involves a revision in the emergency service water (ESW) flow rate. The revision reflects the results of a two unit flow balance test performed in December 1983.

Using conservative methods described in NUREG-0733, the staff independently analyzed the thermal performance of the spray pond. In its analysis the staff also used the long term, (1949-1982) weather record for the airport near Scranton to determine the periods of most adverse meteorology with respect to spray pond cooling performance and water loss. It was then conservatively assumed that the peak ambient spray pond temperature would occur at the same time as the peak temperature due to plant heat rejection and a computer simulation was made to determine the combined peak spray pond temperature.

Since the meteorology record used was for the Scranton airport and not for the site, the staff compared the long term airport data with the limited onsite data to determine if there were any significant discrepancies between the two sets. This comparison showed that there are some biases in the two data sets. The average bias for the onsite data indicated that the spray pond temperature should be slightly higher than predicted from the Scranton airport data. Thus the staff increased the peak spray pond temperature to account for this bias.

Based on its analysis, the staff concludes that if a design basis accident were to occur when the average temperature in the spray pond was at 88°F, the pond has sufficient cooling capacity to provide plant cooling water at a design temperature of 95°F. On this basis, the staff finds increasing the spray operating temperature in Technical Specification from 81°F to 88°F acceptable.

b) Special Reporting Requirements

Effective January 1, 1984, the requirements contained in Section 50.72 and Section 50.73 to 10 CFR Part 50 replaced all existing requirements for licensees to report "Reportable Occurrences" as defined in individual plant Technical Specifications. These changes were discussed in Generic Letter 83-43 dated December 19, 1983. In response to changes in 10 CFR 50.72 and 10 CFR 50.73, the licensee in a letter dated May 18, 1984, proposed Technical Specification changes to be consistent with the NRC rule changes. The staff has reviewed these changes and found them acceptable because the changes are administrative and clarify the Technical Specifications.

Environmental Consideration

A portion of this amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The staff has determined that the amendment in this regard 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 commulative 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, the part of this amendment involving spray pond operability meets the eligibility criteria for categorical exclusions set forth in 10 CFR 51.22(c)(9). The remainder of the amendment involves changes to recordkeeping and reporting requirements and meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22 (C)(10). 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.

Conclusion

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

Dated: **NOV 14 1984**