

X

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 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, 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.
and 6.6.B.2.b
- c. The provisions of Specifications 3.0.3, ~~and~~ 3.0.4, ^A 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 FUNCTIONAL TEST and CHANNEL CALIBRATION operations at the frequencies shown in Table 4.3.7.10-1.

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TABLE 3.3.7.10-1

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>ACTION</u>
1. GAMMA SCINTILLATION MONITOR PROVIDING ALARM AND AUTOMATIC TERMINATION OF RELEASE		
a. Liquid Radwaste Effluent Line (OD18-R802)	1	100
2. GAMMA SCINTILLATION MONITORS PROVIDING ALARM BUT NOT PROVIDING AUTOMATIC TERMINATION OF RELEASE		
a. Service Water System Effluent Line (ID18-K608)	1	101
b. RHR Service Water (Line A) Effluent Line (ID18-K604)	1	101
c. RHR Service Water (Line B) Effluent Line (ID18-K605)	1	101
3. FLOW RATE MEASUREMENT DEVICES		
a. Liquid Radwaste Effluent Line (OFIT-WF-017 and 018)	1	102
b. River Discharge - Blowdown Pipe (OFT-WL001)	1	102

*No change
(Superseded by Amendment 6)*

INSTRUMENTATION

TABLE 3.3.7.10-1 (Continued)

TABLE NOTATION

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- ACTION 100 - With the number of OPERABLE channels less than required by the Minimum Channels OPERABLE requirement, effluent releases may continue for up to 14 days provided that prior to initiating a release:
- a. At least two independent samples are analyzed in accordance with Specification 4.11.1.1.3, and
 - b. At least two technically qualified members of the Facility Staff independently verify the release rate calculations and discharge line valving;

Otherwise, suspend release of radioactive effluents via this pathway.

- ACTION 101 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue for up to 30 days provided that, at least once per 8 hours, grab samples are collected and analyzed at a limit of detection of at least 10^{-7} microcuries/ml or gamma spectrometric analysis.

- ACTION 102 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue for up to 30 days provided the flow rate is estimated at least once per 4 hours during actual releases. Pump curves for Instrument 3a, or for known valve positions for Instrument 3b, may be used to estimate flow.

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TABLE 4.3.7.10-1

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>SOURCE CHECK</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>CHANNEL CALIBRATION</u>
1. GAMMA SCINTILLATION MONITOR PROVIDING ALARM AND AUTOMATIC TERMINATION OF RELEASE				
a. Liquid Radwaste Effluents Line	D	P	Q(1)	R(3)
2. GAMMA SCINTILLATION MONITORS PROVIDING ALARM BUT NOT PROVIDING AUTOMATIC TERMINATION OF RELEASE				
a. Service Water System Effluent Line	D	M	Q(2)	R(3)
b. RHR Service Water (Line A) Effluent Line	D	M	Q(2)	R(3)
c. RHR Service Water (Line B) Effluent Line	D	M	Q(2)	R(3)
3. FLOW RATE MEASUREMENT DEVICES				
a. Liquid Radwaste Effluent Line	D(4)	N.A.	Q	R
b. River Discharge - Blowdown Pipe	D(4)	N.A.	Q	R

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no Sample

INSTRUMENTATION

TABLE 4.3.7.10-1 (Continued)

TABLE NOTATION

no change

- (1) The CHANNEL FUNCTIONAL TEST shall also demonstrate that automatic isolation of this pathway and control alarm annunciation occurs if any of the following conditions exist:
 1. Instrument indicates measured levels above the alarm/trip setpoint.
 2. Loss of power.
 3. Instrument alarms on downscale failure.
 4. Instrument controls not set in Operate or High Voltage mode.
- (2) The CHANNEL FUNCTIONAL TEST shall also demonstrate that control room alarm annunciation occurs if any of the following conditions exist:
 1. Instrument indicates measured levels above the alarm setpoint.
 2. Loss of power.
 3. Instrument alarms on downscale failure.
 4. Instrument controls not set in Operate or High Voltage mode.
- (3) The initial CHANNEL CALIBRATION shall be performed using one or more of the reference radioactive 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, the initial reference radioactive standards or radioactive sources that have been related to the initial calibration shall be used.
- (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 in which continuous, periodic, or batch releases are made.

TABLE 4.11.1-1

RADIOACTIVE LIQUID WASTE SAMPLING AND ANALYSIS PROGRAM

Liquid Release Type	Sampling Frequency	Minimum Analysis Frequency	Type of Activity Analysis	Lower Limit of Detection (LLD) ($\mu\text{Ci/ml}$) ^a	
A. Batch Waste Release Tanks ^d	P Each Batch	P Each Batch	Principal Gamma Emitters ^f	5×10^{-7}	
			I-131	1×10^{-6}	
	P One Batch/M	M	Dissolved and Entrained Gases (Gamma emitters)	1×10^{-5}	
	P Each Batch	M Composite ^b	H-3	1×10^{-5}	
			Gross Alpha	1×10^{-7}	
			P-32	1×10^{-6}	
	P Each Batch	Q Composite ^b	Sr-89, Sr-90	5×10^{-8}	
			Fe-55	1×10^{-6}	
	B. Continuous Releases ^e	Continuous ^c	W Composite ^c	Principal Gamma Emitters ^f	5×10^{-7}
				I-131	1×10^{-5}
M Grab Sample		M	Dissolved and Entrained Gases (Gamma Emitters)	1×10^{-5}	
Continuous ^c		M Composite ^c	H-3	1×10^{-5}	
			Gross Alpha	1×10^{-7}	
			P-32	1×10^{-6}	
Continuous ^c		Q Composite ^c	Sr-89, Sr-90	5×10^{-8}	
			Fe-55	1×10^{-6}	

TABLE 4.11.1-1 (Continued)

TABLE NOTATION

- a. The LLD is the smallest concentration of radioactive material in a sample 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 system (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 microcurie 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 transformation),

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

2.22×10^6 is the number of transformations per minute per microcurie,

Y is the fractional radiochemical yield (when applicable),

λ is the radioactive decay constant for the particular radionuclide, and

Δt 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 Δt shall be used in the calculation.

- b. 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 sample employed results in a specimen which is representative of the liquids released.

TABLE 4.11.1-1 (Continued)

TABLE NOTATION

no change

- c. To be representative of the quantities and concentrations of radioactive materials in liquid effluents, samples shall be collected continuously in proportion to the rate of flow of the effluent stream. Prior to analyses, all samples taken for the composite shall be thoroughly mixed in order for the composite sample to be representative of the effluent release.
- d. A batch release is the discharge of liquid waste of a discrete volume. Prior to sampling for analyses, each batch shall be isolated, and then thoroughly mixed, by a method described in the ODCM, to assure representative sampling.
- e. A continuous release is the discharge of liquid wastes of a nondiscrete volume; e.g., from a volume of system that has an input flow during the continuous release.
- f. 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 detected and reported. Other peaks which are measurable and identifiable, at the 95% confidence level, together with the above nuclides, shall also be identified and reported.

RADIOACTIVE EFFLUENTS

LIQUID WASTE TREATMENT SYSTEM

LIMITING CONDITION FOR OPERATION

3.11.1.3 The liquid radwaste treatment system shall be OPERABLE. The appropriate portions of the system shall be used to reduce the radioactive materials in liquid wastes prior to their discharge when the projected doses due to the liquid effluent from each reactor unit, from the site (see Figure 5.1.1-1), when averaged over 31 days, would exceed 0.06 mrem to the total body or 0.2 mrem to any organ.

APPLICABILITY: At all times.

ACTION:

- a. With the liquid radwaste treatment system inoperable for more than 31 days or with radioactive liquid waste being discharged without treatment and in excess of the above limits, in lieu of any other report required by Specification 6.6.A and 6.6.B, prepare and submit to the Commission within 30 days pursuant to Specification 6.6.C 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. ^{and 6.6.B.2.b}
- 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 shall be projected at least once per 31 days, in accordance with 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 30 minutes at least once per 92 days unless the liquid radwaste system has been utilized to process radioactive liquid effluents 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 the limits calculated in the ODCM.

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. *and 6.6.B.2.b*
- b. The provisions of Specifications 3.0.3, ~~and 3.0.4~~, ⁿ 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.

RADIOACTIVE EFFLUENTS

3/4. 11.2 GASEOUS EFFLUENTS

DOSE RATE

LIMITING CONDITION FOR OPERATION

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

- a. For noble gases: Less than or equal to 500 mrem/yr to the total body and less than or equal to 3000 mrem/yr to the skin, and
- b. For all radioiodines and for all radioactive materials in particulate form and radionuclides (other than noble gases) with half lives greater than 8 days: Less than or equal to 1500 mrem/yr to any organ *via the inhalation pathway.*

APPLICABILITY: At all times.

ACTION:

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

SURVEILLANCE REQUIREMENTS

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

4.11.2.1.2 The dose rate due to radioactive materials, other than noble gases, in gaseous effluents shall be determined to be within the above limits in accordance with the methods and procedures of the ODCM by obtaining representative samples and performing analyses in accordance with sampling and analysis program specified in Table 4.11.2-1.

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TABLE 4.11.2-1

RADIOACTIVE GASEOUS WASTE SAMPLING AND ANALYSIS PROGRAM

Gaseous Release Type	Sampling Frequency	Minimum Analysis Frequency	Type of Activity Analysis	Lower Limit of Detecting (LLD) ($\mu\text{Ci/ml}$) ^a
A. Containment Vent and Purge System	P Each Purge ^b Grab Sample	P Each Purge ^b	Principal Gamma Emitters ^g	1×10^{-4}
			H-3	1×10^{-6}
B. Main Vent Stack	M ^{b,e} Grab Sample	M ^b	Principal Gamma Emitters ^g	1×10^{-4}
			H-3	1×10^{-6}
C. Standby Gas Treatment System	D ^c Grab Sample	W ^c	Principal Gamma Emitters ^g	1×10^{-4}
D. All Release Types as listed in A and B above, at the Vent Stack, and as listed in C above, at the SBGTS whenever there is flow.	Continuous ^f	W ^d Charcoal Sample	I-131	1×10^{-12}
			I-133	1×10^{-10}
	Continuous ^f	W ^d Particulate Sample	Principal Gamma Emitters ^g (I-131, Others)	1×10^{-11}
			M Composite Particulate Sample	Gross Alpha
	Continuous ^f	Q Composite Particulate Sample	Sr-89, Sr-90	1×10^{-11}
	Continuous ^f	Noble Gas Monitor	Noble Gases Gross Beta & Gamma	1×10^{-6} (Xe-133 equivalent)

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RADIOACTIVE EFFLUENTS

DOSE - NOBLE GASES

LIMITING CONDITION FOR OPERATION

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

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

APPLICABILITY: At all times.

ACTION:

- a. With the calculated air dose from radioactive noble gases in gaseous effluents exceeding any of the above limits, in lieu of any other report required by Specification 6.6.A or 6.6.B, prepare and submit to the Commission within 30 days, pursuant to Specification 6.6.C, a Special Report which identifies the cause(s) for exceeding the limit(s) and defines the corrective actions to be taken to reduce the releases of radioactive noble gases in gaseous effluents during the remainder of the current calendar ~~quarter and during the year~~ ^{year} ~~subsequent three calendar quarters~~ so that the cumulative dose is within 10 mrad for gamma radiation and 20 mrad for beta radiation.
 and 6.6.B.2.b
- b. The provisions of Specifications 3.0.3, ~~and~~ ^{and} 3.0.4, ^{and} are not applicable.

SURVEILLANCE REQUIREMENTS

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

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RADIOACTIVE EFFLUENTS

DOSE - RADIOIODINES, RADIOACTIVE MATERIALS IN PARTICULATE FORM, AND RADIONUCLIDES OTHER THAN NOBLE GASES

LIMITING CONDITION FOR OPERATION

3.11.2.3 The dose to an individual from radioiodines and radioactive materials in particulate form, and radionuclides, other than noble gases, with half-lives greater than 8 days in gaseous effluents released, from each reactor unit, from the site (see Figure 5.1.1-1) shall be limited to the following:

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

APPLICABILITY: At all times.

ACTION:

- a. With the calculated dose from the release of radioiodines, radioactive materials in particulate form, or radionuclides (other than noble gases) with half lives greater than 8 days, in gaseous effluents exceeding any of the above limits, in lieu of any other report required by Specification 6.6.A or 6.6.B, prepare and submit to the Commission within 30 days, pursuant to Specification 6.6.C, a Special Report which identifies the cause(s) for exceeding the limit and defines the corrective actions to be taken to reduce the releases of radioiodines and radioactive materials in particulate form, and radionuclides, other than nobles gases, with half-lives greater than 8 days in gaseous effluents during the remainder of the current calendar quarter ~~and during the subsequent three calendar quarters,~~ ^{year} so that the cumulative dose or dose commitment to an individual from these releases is within 15 mrem to any organ.
- b. The provisions of Specifications 3.0.3, ^{and 6.6.B.2.b} ~~and 3.0.4,~~ _n are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.2.3 Dose Calculations Cumulative dose contributions for the current calendar quarter and current calendar year shall be determined in accordance with 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 system is in operation.

ACTION:

- a. With the GASEOUS RADWASTE TREATMENT SYSTEM inoperable for more than 7 days, in lieu of any other report required by Specification 6.6.A or 6.6.B, prepare and submit to the Commission within 30 days, pursuant to Specification 6.6.C, 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 6.6.B.2.b} ~~and~~ 3.0.4 ₁ 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 7 days.

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RADIOACTIVE EFFLUENTS

EXPLOSIVE GAS MIXTURE

LIMITING CONDITION FOR OPERATION

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

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

ACTION:

- a. With the concentration of hydrogen in the main condenser offgas treatment system exceeding the limit, restore the concentration to within the limit within 48 hours. *and 6.6.B.2.b*
- b. The provisions of Specifications 3.0.3 *and* 3.0.4 *are* not applicable. *A*

SURVEILLANCE REQUIREMENTS

4.11.2.6 The concentration of hydrogen in the main condenser offgas treatment system shall be determined to be within the above limits as required by Table 3.3.7.11-1 of Specification 3.3.7.11.

RADIOACTIVE EFFLUENTS

MAIN CONDENSER

LIMITING CONDITION FOR OPERATION

3.11.2.7 The release rate of the sum of the activities from the noble gases measured prior to the holdup line shall be limited to less than or equal to 3.4×10^5 microcuries/second.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2 and 3.

ACTION:

With the release rate of the sum of the activities of the noble gases prior to the holdup line exceeding 3.4×10^5 microcuries/second restore the release rate to within its limit within 72 hours or be in at least STARTUP with the main steam isolation valves closed within the next 6 hours.

SURVEILLANCE REQUIREMENTS

4.11.2.7.1 The radioactivity rate of noble gases prior to the holdup line shall be continuously monitored in accordance with Specification 3.3.7.11.

4.11.2.7.2 The release rate of the sum of the activities from noble gases prior to the holdup line shall be determined to be within the limits of Specification 3.11.2.7 at the following frequencies by performing an isotopic analysis of a representative sample of gases taken prior to the holdup line.

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

RADIOACTIVE EFFLUENTS

VENTING OR PURGING

LIMITING CONDITION FOR OPERATION

3.11.2.8 VENTING or PURGING of the containment drywell shall be through the Primary Containment Vent and Purge System or 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 6.6.B.2.b} ~~and~~ 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.2.8 The containment drywell shall be determined to be aligned for VENTING or PURGING through the Primary Containment Vent and Purge System or 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.

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RADIOACTIVE EFFLUENTS

3/4.11.3 SOLID RADIOACTIVE WASTE

LIMITING CONDITION FOR OPERATION

3.11.3 The solid radwaste system shall be OPERABLE and used, as applicable in accordance with a PROCESS CONTROL PROGRAM, for the SOLIDIFICATION and packaging of radioactive wastes to ensure meeting the requirements of 10 CFR Part 20 and of 10 CFR Part 71 prior to shipment of radioactive wastes from the site.

APPLICABILITY: At all times.

ACTION:

- a. With the packaging requirements of 10 CFR Part 20 and/or 10 CFR Part 71 not satisfied, suspend shipments of defectively packaged solid radioactive wastes from the site.
- b. With the solid radwaste system inoperable for more than 31 days, in lieu of any other report required by Specification 6.6.A or 6.6.B, prepare and submit to the Commission within 30 days, pursuant to Specification 6.6.C, 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 6.6.B.2.b} ~~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)

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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 6.7, to assure SOLIDIFICATION of subsequent batches of waste.

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RADIOACTIVE EFFLUENTS

3/4.11.4 TOTAL DOSE

LIMITING CONDITION FOR OPERATION

3.11.4 The dose or dose commitment to any member of the public, due to releases of radioactivity and radiation, from uranium fuel cycle sources shall be limited to less than or equal to 25 mrem to the total body or any organ (except the thyroid, which shall be limited to less than or equal to 75 mrem) over 12 consecutive months.

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, in lieu of any other report required by Specification 6.6.A or 6.6.B, prepare and submit, pursuant to Specification 6.6.C, a Special Report to the Director, Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, within 30 days, which defines the corrective action to be taken to reduce subsequent releases to prevent recurrence of exceeding the limits of Specification 3.11.4. This Special Report shall include an analysis which estimates the radiation exposure (dose) to a member of the public from uranium fuel cycle sources (including all effluents pathways and direct radiation) for a 12 consecutive month period that includes the release(s) covered by this report. If the estimated dose(s) exceeds the limits of Specification 3.11.4, and if the release condition resulting in violation of 40 CFR 190 has not already been corrected, the Special Report shall include a request for a variance in accordance with the provisions of 40 CFR 190 and including the specified information of § 190.11. Submittal of the report is considered a timely request, and a variance is granted until staff action on the request is complete. The variance only relates to the limits of 40 CFR 190, and does not apply in any way to the requirements for dose limitation of 10 CFR Part 20, as addressed in other sections of this technical specification.
- b. The provisions of Specifications 3.0.3 ^{and 6.6.B.2.b} and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.4 Dose Calculations 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 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 6.6.A or 6.6.B conducted as specified in Table 3.12.1-1, in lieu of any other report required by Specification 6.9.1, prepare and submit to the Commission, in the Annual Radiological Operating Report, 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 in an environmental sampling medium exceeding the reporting levels in Table 3.12.1-2 when averaged over any calendar quarter, in lieu of any other report required by 6.6.A or 6.6.B Specification 6.9.1, prepare and submit to the Commission within 30 days from the end of the affected calendar quarter a Report pursuant to Specification 6.9.1.13. 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:

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

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 an individual 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.

- c. With milk or fresh leafy vegetable samples unavailable from one or more of the sample locations required by Table 3.12.1-1, in lieu of any other report required by Specification 6.9.1, prepare and submit to the Commission within 30 days, pursuant to Specification 6.9.2, a Special Report which identifies the cause of the unavailability of samples and identifies locations for obtaining replacement samples. The locations from which samples were unavailable may then be deleted from those required by Table 3.12.1-1, provided the locations from which the replacement samples were obtained are added to the environmental monitoring program as replacement locations. 6.6.A or 6.6.B 6.6.C
- d. The provisions of Specifications 3.0.3 ^{and 6.6.B.2.b} and 3.0.4 _^ are not applicable.

RADIOLOGICAL ENVIRONMENTAL MONITORING

SURVEILLANCE REQUIREMENTS

no sample

4.12.1 The radiological environmental monitoring samples shall be collected pursuant to Table 3.12.1-1 from the locations given in the table and figure in the ODCM and shall be analyzed pursuant to the requirement of Tables 3.12.1-1 and 4.12.1-1.

X

RADIOLOGICAL ENVIRONMENTAL MONITORING

3/4.12.3 INTERLABORATORY COMPARISON PROGRAM

LIMITING CONDITION FOR OPERATION

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.
- b. The provisions of Specifications 3.0.3 ^{and 6.6.B.2.b} ~~and~~ 3.0.4 _^ are not applicable.

SURVEILLANCE REQUIREMENTS

4.12.3. A summary of the results obtained as part of the above required Interlaboratory Comparison Program and in accordance with the ODCM (or participants in the EPA crosscheck program shall provide the EPA program code designation for the unit) shall be included in the Annual Radiological Environmental Operating Report.

ATTACHMENT

LASALLE COUNTY STATION UNIT 1

TECHNICAL SPECIFICATION CHANGE REQUEST

NPF-11/82-15

Subject: Revise the Qualification Requirements for the Position of Operating Assistant Superintendent.

References (a): C. W. Schroeder letter to A. Schwencer dated August 30, 1982.

(b): A. Schwencer letter to L. O. DelGeorge dated September 2, 1982.

Background

Commonwealth Edison Company is considering certain personnel changes at LaSalle County Station. Included in these changes is the need to fill the position of Assistant Superintendent, Operations, which will be vacated due to promotion of the incumbent to the position of Superintendent.

The individual being considered for this position at LSCS has been employed by Commonwealth Edison for over 15 years. He has held an SRO license on Dresden Nuclear Power Station and has held many positions at Commonwealth Edison stations including:

Tech Staff Supervisor (Technical Manager)
Operating Engineer (Operations Manager)
Operating Assistant Superintendent (Assistant Plant Manager)

Discussion

Reference (a) reviewed the qualification requirements for the position of Operating Assistant Superintendent.

In order to allow this highly qualified individual to assume the position of Operating Assistant Superintendent at LSCS, the following agreement was proposed:

"An individual who meets the requirements of ANSI N18.1-1971, for the ANSI positions of Plant Manager and Operations Manager, with the sole exception that he does not hold a current SRO license on LSCS, will be allowed to assume the position of Operating Assistant Superintendent, providing:

- a) He sits for the SRO examination at LSCS no later than the first opportunity after six months following his appointment to the position.
- b) Operating decisions made by this individual prior to his holding a current SRO at LSCS shall be approved by, or directed through, individual(s) holding a current SRO license at LSCS."

In Reference (b), the NRC staff stated:

"In view of the experience of the individual being considered for this position, as discussed above, we conclude that your proposal to place this individual in this position for a limited time prior to obtaining an SRO license at LaSalle is acceptable provided that you request to amend the Technical Specifications to include the above temporary conditions."

This Technical Specification Change Request simply incorporates the temporary position requirements for Operating Assistant Superintendent into the Technical Specifications.

Conclusion

Commonwealth Edison Company finds no unresolved safety question involved in this Technical Specification Change Request. This change has already been approved by the NRC Staff, and is being submitted as requested by the Staff in Reference (b).

6.0 ADMINISTRATIVE CONTROLS

6.1 ORGANIZATION, REVIEW, INVESTIGATION, AND AUDIT

- A. The Station Superintendent shall have overall full-time responsibility for safe operation of the facility. During periods when the Station Superintendent is unavailable, he shall designate this responsibility to an established alternate who satisfies the ANSI N18.1 of March 8, 1971 experience requirements for plant manager.

The Shift Supervisor shall be responsible for directing and commanding the overall operation of the facility on his shift. The primary management responsibility of the Shift Supervisor shall be for safe operation of the nuclear facility on his shift under all conditions. A management directive signed by Division Vice President - Nuclear Stations emphasizing this primary management responsibility and that clearly establishes the command duties of the Shift Supervisor shall be reissued to all station personnel on an annual basis.

- B. The corporate management which relates to the operation of this station is shown in Figure 6.1-1.
- C. The normal functional organization for operation of the station shall be as shown in Figure 6.1-2. The shift manning for the station shall be as shown in Figure 6.1-3. The individual filling the position of Assistant Superintendent, Administrative and Support Services, shall meet the minimum acceptable level for "Technical Manager" as described in Section 4.2.4 of ANSI N18.1-1971.
1. At least one licensed Reactor Operator shall be in the control room when fuel is in the reactor. In addition, while the reactor is in OPERATIONAL CONDITION 1, 2 or 3, at least one licensed Senior Reactor Operator who has been designated by the Shift Supervisor to assume the control room direction responsibility shall be in the Control Room.
 2. A health physics technician* shall be on site when fuel is in the reactor.
 3. All CORE ALTERATIONS shall be observed and directly supervised by either a licensed Senior Reactor Operator or Senior Reactor Operator Limited to Fuel Handling who has no other concurrent responsibilities during this operation.
 4. A site Fire Brigade of at least 5 members shall be maintained onsite at all times*. The Fire Brigade shall not include the Shift Supervisor, the Station Control Room Engineer and the 2 other members of the minimum shift crew necessary for safe shutdown of the unit and any personnel required for other essential functions during a fire emergency.

* The health physics technician and Fire Brigade composition may be less than the minimum requirements for a period of time not to exceed two hours in order to accommodate unexpected absence provided immediate action is taken to fill the required positions.

** See next page 6-1 a

ADMINISTRATIVE CONTROLS

no change

5. The Onsite Nuclear Safety Group (ONSG) shall function to examine unit operating characteristics, NRC issuances, industry advisories, Licensee Event Reports and other sources of plant design and operating experience information, including plants of similar design, which may indicate areas for improving unit safety. The ONSG shall be composed of at least four, dedicated, full-time engineers of multi-disciplines located on site and shall be augmented on a part-time basis by personnel from other parts of the Commonwealth Edison Company organization to provide expertise not represented in the group. The ONSG shall be responsible for maintaining surveillance of unit activities to provide independent verification # that these activities are performed correctly and that human errors are reduced as much as practical. The ONSG shall make detailed recommendations for revised procedures, equipment modifications, maintenance activities, operations activities or other means of improving unit safety to the Director, Nuclear Safety.
6. The Station Control Room Engineer (SCRE) serves as the lead control room SRO during normal operations and as the Shift Technical Advisor (STA) during abnormal operating and accident conditions. In the event of abnormal operating or accident conditions, the SCRE will relinquish his job as control room SRO to the Shift Foreman and will assume the role of STA, when he shall provide technical support to the Shift Supervisor in the areas of thermal hydraulics, reactor engineering and plant analysis with regard to the safe operation of the unit.
7. Administrative procedures shall be developed and implemented to limit the working hours of unit staff who perform safety-related functions; e.g, senior reactor operators, reactor operators, health physicists, auxiliary operators, and key maintenance personnel.

Adequate shift coverage shall be maintained without routine heavy use of overtime. However, in the event that unforeseen problems require substantial amounts of overtime to be used, the following guidelines shall be followed:

- a. An individual should not be permitted to work more than 16 hours straight, excluding shift turnover time.
- b. An individual should not be permitted to work more than 16 hours in any 24-hour period, nor more than 24 hours in any 48-hour period, nor more than 72 hours in any seven day period, all excluding shift turnover time.
- c. A break of at least eight hours should be allowed between work periods, including shift turnover time.
- d. The use of overtime should be considered on an individual basis and not for the entire staff on a shift.

Not responsible for sign-off feature.

(add)

** Figure 6.1-2 indicates that the Operating Assistant Superintendent is required to hold an SRO license. The following exemption from this requirement is authorized:

An individual who meets the requirements of ANSE N18.1-1971, for the ANSE positions of Plant Manager and Operations Manager, with the sole exception that he does not hold a current SRO license at La Salle, will be allowed to assume the position of Operating Assistant Superintendent, providing

- a) He sits for the SRO examination at La Salle no later than the first opportunity after six months following his appointment to the position.
- b) Operating decisions made by this individual prior to his holding a current SRO at La Salle shall be approved by, or directed through, individual(s) holding a current SRO license at La Salle.

ATTACHMENT B

Status of Tech Spec Change Requests

<u>#</u>	<u>Topic</u>	<u>Submitted</u>	<u>NRC Action</u>
NPF-11/82-7	SRM Countrate (Required prior to source decay below 3 cps).	6/14/82	Issued Am. 2 7/09/82
NPF-11/82-8	Revise RCIC suction delta p alarm setpoint (Required prior to pressurization).	7/02/82	Issued Am. 2 7/09/82
NPF-11/82-9	Add commitment to complete torque checks on bolting on S/R valves outside containment (N.C. Requested to be submitted ASAP).	7/14/82	Issued Am. 3 7/15/82
NPF-11/82-10	Add ECCS delta p specification to reflect modification (License Condition 2.C.17)	8/19/82	
NPF-11/82-11	Revise RCIC surveillance to account for flow differences between test flow and normal flow paths (Required prior to restart after next shutdown/upgraded to emergency change on 8/12/82).	8/11/82	Verbal approval 8/13/82 Issued Am. 5 8/27/82
NPF-11/82-12	Revise Reactor Vessel Materials Surveillance Program Withdrawal Schedule (Previously approved by NRC on 5/07/82).	8/19/82	
NPF-11/82-13	Add Unit 2 Service Water Effluent Line Radiation Monitor (Required to use the third radwaste concentrator).	8/19/82	
NPF-11/82-14	Revise the Radioactive Effluent Technical Specifications in accordance with RETS Branch Approved Changes.	9/08/82	
NPF-11/82-15	Revise the Qualification Requirements for the Position of Operating Assistant Superintendent.	9/08/82	