



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

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-327

SEQUOYAH NUCLEAR PLANT, UNIT 1

LICENSE NO. DPR-77

AMENDMENT NO. 3

1. The Nuclear Regulatory Commission (the Commission) having found that:
 - A. The application for amendment to the Sequoyah Nuclear Plant, Unit 1 (the facility) license, DPR-77, filed by the Tennessee Valley Authority (licensee), dated March 28, 1980, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations as set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the license, as amended, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public, and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is hereby amended by page changes to the Appendix A Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. DPR-77 is hereby amended to read as follows:

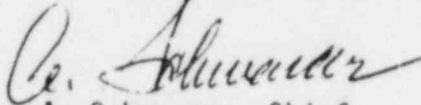
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(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 3, are hereby incorporated into the license. The licensee shall operate the facility in accordance with the Technical Specifications.

- A. This amended license is effective as of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



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

Attachment:
Appendix A Technical
Specification changes

Date of Issuance:
July 1, 1980

ATTACHMENT TO LICENSE AMENDMENT NO. 3

FACILITY OPERATING LICENSE NO. DPR-77

DOCKET NO. 50-327

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

Pages

3/4 3-70
3/4 3-70A (added)
3/4 3-71
3/4 3-71A (added)
3/4 3-72A (added)
3/4 3-75
3/4 3-76
3/4 3-77
3/4 11-2
3/4 11-2A (added)
3/4 11-4
3/4 11-11
8-1

INSTRUMENTATION

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.9 The radioactive liquid effluent monitoring instrumentation channels shown in Table 3.3-12 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 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 3.3-12.
- c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.9 Each radioactive liquid effluent monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK, SOURCE CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations at the frequencies shown in Table 4.3-8.

TABLE 3.3-12

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 | 30 |
| b. Steam Generator Blowdown Effluent Line | 1 | 31 |
| c. Condensate Demineralizer Effluent Line | 1 | 30 |
| 2. GROSS RADIOACTIVITY MONITORS NOT PROVIDING AUTOMATIC TERMINATION OF RELEASE | | |
| a. Essential Raw Cooling Water Effluent Line | 1 | 32 |
| b. Turbine Building Sump Effluent Line | 1 | 32 |
| 3. FLOW RATE MEASUREMENT DEVICES | | |
| a. Liquid Radwaste Effluent Line | 1 | 33 |
| b. Condensate Demineralizer Effluent Line | 1 | 33 |
| c. Steam Generator Blowdown Effluent Line | 1 | 33 |
| d. Cooling Tower Blowdown Effluent Line | 1 | 33 |
| 4. TANK LEVEL INDICATING DEVICES | | |
| a. Condensate Storage Tank | 1 | 34 |
| b. Steam Generator Layup Tank* | 1 | 34 |

*Required when connected to the secondary system

TABLE 3.3-12 (Continued)

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION

| <u>INSTRUMENT</u> | <u>MINIMUM CHANNELS OPERABLE</u> | <u>ACTION</u> |
|---|----------------------------------|---------------|
| 5. CONTINUOUS COMPOSITE SAMPLER AND SAMPLE FLOW MONITOR | | |
| a. Condensate Demineralizer Regenerant Effluent Line | 1 | 35 |

TABLE 3.3-12 (Continued)

TABLE NOTATION

- ACTION 30 - With the number of channels OPERABLE 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:
- At least two independent samples are analyzed in accordance with Specification 4.11.1.1.1, and
 - 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 31 - 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 grab samples are analyzed for gross radioactivity gamma at a limit of detection of at least 10^{-7} microcuries/gram:
- At least once per 8 hours when the specific activity of the secondary coolant is greater than 0.01 microcuries/gram DOSE EQUIVALENT I-131.
 - At least once per 24 hours when the specific activity of the secondary coolant is less than or equal to 0.01 microcuries/gram DOSE EQUIVALENT I-131.
- ACTION 32 - 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 for gross radioactivity gamma at a limit of detection of at least 10^{-7} microcuries/ml.
- ACTION 33 - 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 may be used to estimate flow.
- ACTION 34 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, liquid additions to this tank may continue for up to 30 days provided the tank liquid level is estimated during all liquid additions to the tank.

TABLE 3.3-12 (Continued)

TABLE NOTATION

ACTION 35 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue provided representative batch samples of each tank to be released are taken prior to release and composited for analysis according to Specification 3.11.1.1, footnote g.

TABLE 4.3-8

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

| <u>INSTRUMENT</u> | <u>CHANNEL CHECK</u> | <u>SOURCE CHECK</u> | <u>CHANNEL CALIBRATION</u> | <u>CHANNEL FUNCTIONAL TEST</u> |
|--|----------------------|---------------------|----------------------------|--------------------------------|
| 1. GROSS BETA OR GAMMA RADIOACTIVITY MONITORS PROVIDING ALARM AND AUTOMATIC TERMINATION OF RELEASE | | | | |
| a. Liquid Radwaste Effluents Line | D | P | R(3) | Q(1) |
| b. Steam Generator Blowdown Effluent Line | D | M | R(3) | Q(1) |
| c. Condensate Demineralizer Effluent Line | D | M | R(3) | Q(1) |
| 2. GROSS BETA OR GAMMA RADIOACTIVITY MONITORS PROVIDING ALARM BUT NOT PROVIDING AUTOMATIC TERMINATION OF RELEASE | | | | |
| a. Essential Raw Cooling Water Effluent Line | D | M | R(3) | Q(2) |
| b. Turbine Building Sump Effluent Line | D | M | R(3) | Q(2) |
| 3. FLOW RATE MEASUREMENT DEVICES | | | | |
| a. Liquid Radwaste Effluent Line | D(4) | N.A. | R | Q |
| b. Steam Generator Blowdown Effluent Line | D(4) | N.A. | R | Q |
| c. Condensate Demineralizer Effluent Line | D(4) | N.A. | R | Q |
| d. Cooling Tower Blowdown Effluent Line | D(4) | N.A. | R | Q |
| 4. TANK LEVEL INDICATING DEVICES | | | | |
| a. Condensate Storage Tank | D* | N.A. | R | Q |
| b. Steam Generator Layup Tank | D* | N.A. | R | N.A. |

TABLE 4.3-8 (Continued)

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

| <u>INSTRUMENT</u> | <u>CHANNEL CHECK</u> | <u>SOURCE CHECK</u> | <u>CHANNEL CALIBRATION</u> | <u>CHANNEL FUNCTIONAL TEST</u> |
|---|----------------------|---------------------|----------------------------|--------------------------------|
| 5. CONTINUOUS COMPOSITE SAMPLER AND SAMPLE FLOW MONITOR | | | | |
| a. Condensate Demineralizer Regenerant Effluent Line | P | N.A. | R | N.A. |

TABLE 3.3-13

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

| <u>INSTRUMENT</u> | <u>MINIMUM CHANNELS OPERABLE</u> | <u>APPLICABILITY</u> | <u>ACTION</u> |
|---|--------------------------------------|----------------------|---------------|
| 1. WASTE GAS DISPOSAL SYSTEM | | | |
| a. Noble Gas Activity Monitor | 1 | * | 40 |
| b. Effluent System Flow Rate Measuring Device | 1 | * | 41 |
| 2. WASTE GAS DISPOSAL SYSTEM EXPLOSIVE GAS MONITORING SYSTEM | | | |
| a. Hydrogen and Oxygen Monitors | 2 | ** | 43 |
| 3. CONDENSER VACUUM EXHAUST SYSTEM | | | |
| a. Noble Gas Activity Monitor | 1 | * | 42 |
| b. Flow Rate Monitor | 1 | * | 41 |
| 4. SHIELD BUILDING EXHAUST SYSTEM | | | |
| a. Noble Gas Activity Monitor | 1 | *** | 42 |
| b. Iodine Sampler | 1 | *** | 44 |
| c. Particulate Sampler | 1 | *** | 44 |
| d. Flow Rate Monitor | 1 | *** | 41 |
| e. Sampler Flow Rate Monitor | 1 | *** | 41 |

TABLE 3.3-13 (Continued)

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

| <u>INSTRUMENT</u> | <u>MINIMUM CHANNELS OPERABLE</u> | <u>APPLICABILITY</u> | <u>ACTION</u> |
|--|--------------------------------------|----------------------|---------------|
| 5. AUXILIARY BUILDING VENTILATION SYSTEM | | | |
| a. Noble Gas Activity Monitor | 1 | * | 42 |
| b. Iodine Sampler | 1 | * | 44 |
| c. Particulate Sampler | 1 | * | 44 |
| d. Flow Rate Monitor | 1 | * | 41 |
| e. Sampler Flow Rate Monitor | 1 | * | 41 |
| 6. SERVICE BUILDING VENTILATION SYSTEM | | | |
| a. Noble Gas Activity Monitor | 1 | * | 42 |
| b. Flow Rate Monitor | 1 | * | 41 |

TABLE 3.3-13 (Continued)

TABLE NOTATION

* At all times.

** During waste gas disposal system operation.

*** During shield building exhaust system operation.

ACTION 40 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, the contents of the tank(s) may be released to the environment for up to 14 days provided that prior to initiating the release:

- a. At least two independent samples of the tank's contents are analyzed, and
- b. At least two technically qualified members of the Facility Staff independently verify the release rate calculations and discharge valve lineup;

Otherwise, suspend release of radioactive effluents via this pathway.

ACTION 41 - 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.

ACTION 42 - 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 grab samples are taken at least once per 8 hours and these samples are analyzed for noble gas gross activity within 24 hours.

ACTION 43 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, operation of this waste gas disposal system may continue for up to 7 days provided grab samples are collected at least once per 4 hours and analyzed within the following 4 hours. With the hydrogen and oxygen monitors inoperable, be in at least HOT STANDBY within 6 hours.

ACTION 44 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via the affected pathway may continue for up to 30 days provided that within 4 hours after the channel has been declared inoperable samples are continuously collected with auxiliary sampling equipment as required in Table 4.11-2.

TABLE 4.3-9

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

| <u>INSTRUMENT</u> | <u>CHANNEL CHECK</u> | <u>SOURCE CHECK</u> | <u>CHANNEL CALIBRATION</u> | <u>CHANNEL FUNCTIONAL TEST</u> | <u>MODES IN WHICH SURVEILLANCE REQUIRED</u> |
|--|----------------------|---------------------|----------------------------|--------------------------------|---|
| 1. WASTE GAS DISPOSAL SYSTEM | | | | | |
| a. Noble Gas Activity Monitor | P | P | R(3) | Q(1) | * |
| b. Flow Rate Monitor | D | N.A. | R | Q | **** |
| 2. WASTE GAS DISPOSAL SYSTEM EXPLOSIVE GAS MONITORING SYSTEM | | | | | |
| a. Hydrogen Monitor | D | N.A. | Q(4) | M | ** |
| b. Oxygen Monitor | D | N.A. | Q(5) | M | ** |
| 3. CONDENSER VACUUM EXHAUST SYSTEM | | | | | |
| a. Noble Gas Activity Monitor | D | M | R(3) | Q(2) | * |
| b. Flow Rate Monitor | D | N.A. | R | Q | * |
| 4. SHIELD BUILDING EXHAUST SYSTEM | | | | | |
| a. Noble Gas Activity Monitor | D | M | R(3) | Q(2) | *** |
| b. Iodine Sampler | W | N.A. | N.A. | N.A. | *** |
| c. Particulate Sampler | W | N.A. | N.A. | N.A. | *** |
| d. Flow Rate Monitor | D | N.A. | R | Q | *** |
| e. Sampler Flow Rate Monitor | D | N.A. | R | Q | *** |

3/4.11 RADIOACTIVE EFFLUENTS

3/4.11.1 LIQUID EFFLUENTS

CONCENTRATION

LIMITING CONDITION FOR OPERATION

3.11.1.1 The concentration of radioactive material released from the site (see Figure 5.1-1) shall be limited to the concentrations specified in 10 CFR Part 20, Appendix B, Table II, Column 2 for radionuclides other than dissolved or entrained noble gases. For dissolved or entrained noble gases, the concentration shall be limited to 2×10^{-4} microcuries/ml total activity.

APPLICABILITY: At all times.

ACTION:

With the concentration of radioactive material released from the site exceeding the above limits, immediately restore the concentration to within the above limits.

SURVEILLANCE REQUIREMENTS

4.11.1.1.1 The radioactivity content of each batch of radioactive liquid waste shall be determined prior to release by sampling and analysis in accordance with Table 4.11-1. The results of pre-release analyses shall be used with the calculational methods in the ODCM to assure that the concentration at the point of release is maintained within the limits of Specification 3.11.1.1.

4.11.1.1.2 Post-release analyses of samples composited from batch releases shall be performed in accordance with Table 4.11-1. The results of the previous post-release analyses shall be used with the calculational methods in the ODCM to assure that the concentrations at the point of release were maintained within the limits of Specification 3.11.1.1.

4.11.1.1.3 The radioactivity concentration of liquids discharged from continuous release points shall be determined by collection and analysis of samples in accordance with Table 4.11-1. The results of the analyses shall be used with the calculational methods in the ODCM to assure that the concentrations at the point of release are maintained within the limits of Specification 3.11.1.1.

TABLE 4.11-1
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} | | | |
| | 1. Waste Condensate Tanks (3) | P One Batch/M | M | Dissolved and Entrained Gases (Gamma emitters) | 1×10^{-5} | | |
| | 2. Cask Decontamination Tank | | | | | | |
| | 3. Laundry Tanks (2) | | | | | | |
| | 4. Chemical Drain Tank | P Each Batch | M Composite ^b | H-3 | 1×10^{-5} | | |
| | 5. Monitor Tank | | | Gross Alpha | 1×10^{-7} | | |
| | 6. Distillate Tanks (2) | | | P-32 | 1×10^{-6} | | |
| | 7. Condensate Demineralizer Waste Evaporator Blowdown Tank (1) | P Each Batch | Q Composite ^b | Sr-89, Sr-90 | 5×10^{-8} | | |
| | | | | Fe-55 | 1×10^{-6} | | |
| B. Continuous Releases ^e | D Grab Sample | W Composite ^c | Principal Gamma Emitters ^f | 5×10^{-7} | | | |
| | | | I-131 | 1×10^{-6} | | | |
| | 1. Steam Generator Blowdown | M Grab Sample | M | Dissolved and Entrained Gases (Gamma Emitters) | 1×10^{-5} | | |
| | | | | | | D Grab Sample | M Composite ^c |
| | | Gross Alpha | 1×10^{-7} | | | | |
| | | P-32 | 1×10^{-6} | | | | |
| | | D Grab Sample | Q Composite ^c | Sr-89, Sr-90 | 5×10^{-8} | | |
| | | | | Fe-55 | 1×10^{-6} | | |
| | | 2. Turbine Building Sump | | | | | |

TABLE 4.11-1 (Continued)
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 |
|---------------------------------|----------------------------|----------------------------|--|---|
| C. Periodic Continuous Releases | Continuous ^g | W Composite ^c | Principal Gamma Emitters | 5×10^{-7} |
| | | | I-131 | 1×10^{-6} |
| 1. Non-Reclaimable Waste Tank | M ^g Grab Sample | M | Dissolved and Entrained Gases (Gamma Emitters) | 1×10^{-5} |
| | | | 2. High Crud Tanks (2) | Continuous ^g |
| Gross Alpha | 1×10^{-7} | | | |
| P-32 | 1×10^{-6} | | | |
| Continuous ^g | Q Composite ^c | Sr-89, Sr-90 | | 5×10^{-8} |
| | | Fe-55 | 1×10^{-6} | |

TABLE 4.11-1 (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.

TABLE 4.11-1 (Continued)

TABLE NOTATION

- 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 sampling employed results in a specimen which is representative of the liquids released.
- c. 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 wastes 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, together with the above nuclides, shall also be identified and reported.
- g. Releases from these tanks are continuously composited during releases. With the composite sampler or the sampler flow monitor inoperable, the sampling frequency shall be changed to require representative batch samples from each tank to be released to be taken prior to release and manually composite for these analyses.

TABLE 4.11-2 (Continued)

TABLE NOTATION

- b. Analyses shall also be performed following shutdown, startup, or a THERMAL POWER change exceeding 15 percent of RATED THERMAL POWER within a one hour period.
- c. Tritium grab samples shall be taken at least once per 24 hours when the refueling canal is flooded.
- 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). Sampling shall also be performed at least once per 24 hours for at least 7 days following each shutdown, startup or THERMAL POWER level change exceeding 15% of RATED THERMAL POWER in one hour and analysis shall be completed within 48 hours of changing. When samples collected for 24 hours are analyzed, the corresponding LLD's may be increased by a factor of 10.
- e. Tritium grab samples shall be taken at least once per 7 days from the ventilation exhaust from the spent fuel pool area, whenever spent fuel is in the spent fuel pool.
- 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, 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 detected and reported. Other peaks which are measureable and identifiable, together with the above nuclides, shall also be identified and report.
- h. During releases via this exhaust system.
- i. In MODES 1, 2, 3 and 4, the upper and lower compartments of the containment shall be sampled prior to VENTING or PURGING. Prior to entering MODE 5, the upper and lower compartments of the containment shall be sampled. The incore instrument room purge sample shall be obtained at the shield building exhaust between 5 and 10 minutes following initiation of the incore instrument room purge.

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 the site (see Figure 5.1-1) 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 6.9.1, prepare and submit to the Commission within 30 days, pursuant to Specification 6.9.2, a Special Report which identifies the cause(s) for exceeding the limit(s) and defines the corrective actions to be taken to reduce the releases of radioactive noble gases in gaseous effluents during the remainder of the current calendar quarter and during the subsequent three calendar quarters, so that the cumulative dose is within 10 mrad for gamma radiation and 20 mrad for beta radiation.
- b. The provisions of Specifications 3.0.3 and 3.0.4 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.

*Per reactor unit.

8.1 SPECIFICATION 3/4.11.1

Prior to initial criticality, the requirements for sampling and analysis for items A.6, A.7, and A.9 in Table 4.11-1 may be waived provided the release is through the turbine building sump (item B.2 of the Table 4.11-1).

8.2 SPECIFICATION 4.8.1.1.2c

The surveillance requirements for verifying diesel generator voltage and frequency during diesel generator starts is waived for the original surveillance interval only.

8.3 SPECIFICATION 4.7.8.1, ITEM D 3

The 1/4 inch negative pressure requirement within the spent fuel storage area and ESF pump rooms is waived during the low power test program. However, the auxiliary building gas treatment system shall be capable of maintaining these areas at a slight negative pressure during this period.

8.4 SPECIFICATION 3.3.3.10, TABLE 3.3- 3, ACTION 41

Flow rates for ventilation systems for the shield building exhaust, auxiliary building and service building may be estimated using the design flow rate for the appropriate fans. This interim waiver extends the 30-day limit for 18 months from the issuance of this license. This waiver is considered to be an interim measure until flow rate monitors for the ventilation system for these structures can be repaired or replaced.

8.5 SPECIFICATIONS 3.5.2, 3.5.3, 3.6.2.1, 3.6.3.1, and 3.7.1.2

Prior to initial criticality, the provisions of Specification 3.0.4 are not applicable when system inoperability has been determined solely on unresolved piping support or restraint deficiencies.