Docket

JUL 11 1977

Docket No.: 50-320

MEMORANDUM FOR: W. Regan, Chief, Environmental Projects Branch No. 2, DSE

FROM: J. T. Collins, Chief, Effluent Treatment Systems Branch, DSE

SUBJECT: PROPOSED INTERIM EFFLUENT RADIOLOGICAL TECHNICAL SPECIFICATIONS FOR THREE MILE ISLAND NUCLEAR STATION, UNIT NO. 2

In response to your request, we have prepared and enclosed effluent radiological Technical Specifications for Three Mile Island, Unit No. 2. Since the radwaste treatment systems are common to both Units 1 and 2, we are proposing that the effluent radiological Technical Specifications currently in effect for Unit 1 be revised to include Unit 2. These interim specifications are based on the numerical design objectives given in RM 50-2 and are site related. These specifications will assure that releases from Units 1 and 2 will be "as low as is reasonably achievable."

When the modal effluent radiological Technical Specifications currently under development by the staff to implement the requirements of Appendix I have been approved by NRC management, we will revise the specifications for Unit 1 and 2 to reflect these requirements.

ORIGINAL SIGNED BY
JOHN T. COLLINS

John T. Collins, Chief
Effluent Treatment Systems Branch
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Enclosure:
as stated

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2.0 LIMITING CONDITIONS FOR OPERATION

2.3 RADIOACTIVE DISCHARGES

2.3.1 LIQUID EFFLUENTS

Applicability

Applies to the controlled release of radioactive liquids from TMI Unit Nos. 1 and 2.

Objective

To define the limits and conditions for the controlled release of radioactive effluents to the environs to ensure that these releases are as low as practicable. These releases should not result in radiation exposures in unrestricted areas greater than a few percent of natural background exposures. The instantaneous release rate for all effluent discharges should be within the limits specified in 10 CFR Part 20.

MONITORING REQUIREMENTS

Objective

To ensure that radioactive liquid releases from the facility are within the limits of Specifications 2.3.1 a through e.

3.0 LIMITING CONDITIONS FOR OPERATION

Objective (Cont'd)

To assure that the releases of radioactive liquids to unrestricted areas meet the as low as practicable concept, the following objectives apply:

a. The annual total quantity of radioactive materials in liquid waste, excluding tritium and dissolved gases, should not exceed five curies per radioactive waste-producing reactor, and the annual dose to the whole body or any organ of an individual should not exceed 5 mrem from the combined releases of Unit Nos. 1 and 2.

b. The annual average concentration of radioactive materials in the effluent from the Unit 1 Mechanical Draft Cooling Tower prior to dilution in the Susquehanna River, excluding tritium and

2.0 LIMITING CONDITIONS FOR OPERATION

Objectives (Cont'd)

b. (Cont'd) dissolved gases, should not exceed 2×10^{-3} μCi/ml.

c. The annual average concentration of tritium in liquid waste prior to dilution in the environment should not exceed 5×10^{-6} μCi/ml.

Specification

a. The radioactivity release concentration in effluents from Unit Nos. 1 and 2 to the environment shall not exceed the values specified in 10 CFR Part 20, Appendix B, for unrestricted areas.

b. The total release of radioactive liquid effluent from Unit Nos. 1 and 2 excluding tritium and noble gases, shall not exceed 10 curies per radioactive waste-producing

Specification

During release of liquid radioactive wastes from the Waste Evaporator Condensate Storage tank, the following conditions shall be met.

a. The liquid gross activity monitors, Unit 1: RM-L6, Unit 2: WD2-R-1311, or similar device, and records on the radwaste effluent line shall be operable.

b. The liquid gross activity

2.0 LIMITING CONDITIONS FOR OPERATION

Specification (Cont'd)

b. (Cont'd) reactor during any calendar quarter.

c. The equipment installed in the liquid radioactive waste system shall be maintained and shall be operated to process all radioactive liquid wastes prior to their discharge when the activity release rate will exceed 1.25 curies per radioactive waste producing reactor, excluding tritium and dissolved gases during any calendar quarter.

d. The maximum activity to be contained in one liquid radwaste tank, excluding tritium and dissolved gases, that can be discharged directly to the environs, shall not exceed 10 curies.

Specification (Cont'd)

b. (Cont'd) monitors, Unit 1: RM-LG Unit 2: WD2-R-1311, or similar device shall be set to alarm and automatically close the waste discharge valve WDL-V-25 (Unit 1) and (Unit 2), respectively prior to exceeding the limits specified in 10 CFR Part 20, Appendix B for unrestricted areas.

c. Liquid waste radioactivity and flow rate from the waste evaporator condensate storage tanks shall be continuously monitored and recorded during release. If this requirement cannot be met, continued release of liquid effluents shall be permitted only during the succeeding 48 hours provided that during this 48-hour period two independent samples of

2.0 LIMITING CONDITIONS FOR OPERATION

Specification (Cont'd)

e. When the release rate of radioactive effluents, excluding tritium and dissolved gases, exceeds 2.5 curies per radioactive waste-producing reactor during any calendar quarter, the licensee shall notify the Director, Directorate of Licensing within 30 days, identifying the causes and describing the proposed program of action to reduce such release rates.

Specification (Cont'd)

c. (Cont'd) each tank shall be analyzed and two station personnel shall independently check valving prior to the discharge.

Facility records shall be maintained of the radioactive concentrations and volume before dilution of each batch of liquid effluent released, and of the average dilution flow and length of time over which each discharge occurred.

Radioactive liquid waste sampling and activity analysis shall be performed in accordance with Table 1. In addition, prior to the release of each batch of liquid effluent, a sample shall be taken from that batch and analyzed for the concentration

3.0 LIMITING CONDITIONS FOR OPERATION

Specification (Cont'd)

of each significant gamma emitter to demonstrate compliance with Specification a using the flow into which the effluent is discharged.

The liquid effluent radiation monitors RM-L6 and WDL-R 1311 shall be calibrated at least quarterly by means of a known radioactive source. RM-L6 and WDL-R-1311 shall also have an instrument channel test monthly and a sensor check daily to verify that the read-out device is indicating as expected.

The ability of WDG-V-257 and WDG-V- to close automatically on receipt of a high radiation signal from RM-L6 and WDL-R-1311, respectively shall be checked annually.

TABLE 1

RADIOACTIVE LIQUID WASTE SAMPLING AND ANALYSIS

A. Monitor Tank Releases

Sampling Frequency	Type of Activity Analysis	Detectable Concentrations[3]
Each Batch	Individual Gamma Emitters	5×10^{-7} µCi/ml[2]
One Batch/Month	Dissolved Gases	10^{-5} µCi/ml
Weekly Composite[1]	Ba-140, La-140, I-131	10^{-6} µCi/ml
Monthly Composite[1]	H-3	10^{-5} µCi/ml
	Gross α	10^{-7} µCi/ml
	Sr 89	5×10^{-8} µCi/ml
Quarterly Composite[1]	Sr-90	5×10^{-8} µCi/ml

B. Primary Coolant

Weekly[4]	I-131, I-133	10^{-6} µCi/ml

NOTES

(1) A composite sample is one in which the quantity of liquid sampled is proportional to the quantity of liquid waste discharged from the plant.

(2) For certain mixtures of gamma emitters, it may not be possible to measure radionuclides in concentrations near their sensitivity limits when other nuclides are present in the sample in much greater concentrations. Under these circumstances, it will be more appropriate to calculate the concentrations of such radionuclides using measured ratios with those radionuclides which are routinely identified and measured.

TABLE 1 (Cont'd)

(3) The detectability limits for activity analysis are based on the technical feasibility and on the potential significance in the environment of the quantities released. For some nuclides, lower detection limits may be readily achievable and when nuclides are measured below the stated limits, they should also be reported.

(4) The power level and cleanup or purification flow rate at the sample time shall also be reported. When the activity level increases by 50% over the previous corresponding power level steady state release rate, the primary coolant shall be analyzed daily.

2.0 LIMITING CONDITIONS FOR OPERATION

Bases

Liquid radioactive waste release levels to unrestricted areas should be kept "as low as practicable" and are not to exceed the concentration limits specified in 10 CFR Part 20. The objective levels provide reasonable assurance that the resulting annual exposure to the whole body or any organ of an individual at unrestricted areas will not exceed five millirems per year. At the same time, these specifications permit the flexibility of operation, compatible with considerations of health and safety, to assure that the public is provided a dependable source of power under unusual operating conditions which may temporarily result in releases higher than the design objective levels but still within the concentration limits specified in 10 CFR Part 20. It is expected that by using this operational flexibility under unusual operating conditions, and exercing every effort to keep levels or radioactive material in liquid wastes as low as practicable, the annual releases will not exceed a small fraction of the annual average concentration limits specified in 10 CFR Part 20.

Bases

Specifications a, b, and c, above require that suitable equipment to monitor the releases of radioactive materials in liquid effluents are operating during any period these releases are taking place.

The surveillance requirements given in the remaining specifications provide assurance that liquid wastes are properly controlled and monitored during any planned release of radioactive materials in liquid effluents. These surveillance requirements provide the data for the licensee and the Commission to evaluate the station's performance relative to radioactive liquid wastes released to the environment. Reports on the quantities of radioactive materials released in liquid effluents shall be furnished to the Commission on the basis of Section 5.6.1 of these Technical Specifications. On the basis of such reports and any additional information obtained from the licensee or others, the Commission may require the licensee to take appropriate action.

260-09

2.0 LIMITING CONDITIONS FOR OPERATION

Bases (Cont'd)

The annual objectives have been developed based on operating experience taking into account a combination of variables including fuel failures, primary system leakage, primary-to-secondary system leakage, and the performance of the various waste treatment systems.

Specification a above requires the licensee to limit the concentration of radioactive materials in liquid effluents from the station to levels specified in 10 CFR Part 20, Appendix B, for unrestricted areas. This specification provides assurance that no member of the general public can be exposed to liquids containing radioactive materials in excess of limits considered permissible under the Commission's Rules and Regulations.

Specification b above establishes an upper limit for the release of radioactive liquid effluents, excluding tritium and dissolved gases, of 10 curies per unit during any calendar quarter. The intent of this specification is to permit the licensee the flexibility of operation to assure that the public is provided a dependable source of power

2.0 LIMITING CONDITIONS FOR OPERATION

Bases (Cont'd)

under unusual operating conditions which may temporarily result in releases higher than the levels normally achievable when the station and the liquid radwaste equipment are functioning as designed. Releases of up to 10 curies per radioactive waste-producing reactor during any calendar quarter will result in concentrations of radioactive materials in liquid effluents at small percentages of the limits specified in 10 CFR Part 20.

Specification c requires that the licensee shall maintain and operate the equipment installed in the liquid radioactive waste system to reduce the release of radioactive materials in liquid effluents to as low as practicable consistent with the requirements of 10 CFR Part 50.36a. Normal use and maintenance of installed equipment in the liquid radioactive system is expected to result in releases of not more than about five curies per radioactive waste-producing reactor per year, excluding tritium and dissolved gases during normal operations. In order to keep releases of radioactive materials as low as practicable, the specification requires, as a minimum, operation of equipment whenever the rate of release exceeds 1.25 curies per radioactive waste-producing reactor per quarter, excluding tritium and dissolved gases.

50-095

2.0 LIMITING CONDITIONS FOR OPERATION

Bases (Cont'd)

In addition to the limiting conditions for operation listed under Specification b, the reporting requirements of Specification e, in addition to the requirements of Section 5.6.2, delineate that the licensee shall identify the cause whenever the rate of radioactive effluents, excluding tritium and noble gases, exceeds 2.5 curies per radioactive waste-producing reactor during any calendar quarter and describe the proposed program of action to reduce such release rate. This report must be filed within 30 days following the calendar quarter in which the 2.5 curies release occurred.

2.3.2 Gaseous Effluents

Applicability

Applies to the controlled release of radioactive gases from TMI Unit Nos. 1 and 2.

Objective

To define the limits and conditions for the controlled release of radioactive effluents to the environs to ensure that these releases are as low as practicable. These releases

Objective

To ensure that radioactive gaseous releases from the facility are within the limits of specifications.

960-05

2.0 LIMITING CONDITIONS FOR OPERATION

Objective (Cont'd)

should not result in radiation exposures in unrestricted areas greater than a few percent of natural background exposures. The instantaneous release rate for all effluent discharges should be within the limits specified in 10 CFR Part 20.

To assure that the releases of radioactive gases to unrestricted areas meet the as low as practicable concept the following objectives apply:

a. The release rate of radioactive isotopes, averaged over a yearly interval, except I-131 and particulate radioisotopes with half lives greater than 8 days, discharged from Unit Nos. 1 and 2 should result in a dose rate at the site boundary of less than 10 mrem/yr to the whole body or any organ.

b. The release rate of I-131 and other particulate radioisotopes with half lives longer than 8 days, should result in a dose in the unrestricted area of less than 15 mrem/yr by inhalation or to the thyroid of a child through the cow-milk chain.

50-097

2.0 LIMITING CONDITIONS FOR OPERATION

Specification

a. The release rate of gross gaseous activity, except for halogens and particulates with half-lives longer than eight days.

$$\Sigma \frac{Q_i}{(MPC)_i} \leq 1.2 \times 10^5 \frac{m^3}{sec}$$

where Qi is the release rate in μCi/sec for isotope i, and MPCi is the maximum permissible concentration of isotope i as defined in Appendix B, Table II, Column 1, 10 CFR 20.

b. The release rate of I-131 and particulates with half-lives greater than eight days released to the environs as part of airborne effluents, shall not exceed 0.63 μCi/sec.

c. The release rate of gross gaseous activity shall not exceed:

$$\Sigma \frac{Q_i}{(MPC)_i} \leq 1.9 \times 10^4 \frac{m^3}{sec}$$

when averaged over any calendar quarter

d. The release rate of I-131 and particulates with half-lives greater than 8 days shall not exceed: 0.05 μCi/sec. when averaged over any calendar quarter.

Specification

During release of gaseous wastes, the following conditions shall be met:

A During release of gaseous waste from the waste gas decay tanks, the following conditions shall be met:

1. Waste gas discharge monitors (Unit 1: RM-A7; Unit 2: WDG-1480) similar device, shall be operable.

2. Auxiliary and Fuel Handling Building exhaust gas, iodine and particulate monitor RM-A8 or similar device, shall be operable.

3. The waste gas decay tank discharge valves (Unit 1: WDG-V47; Unit 2: WDG) shall be operable.

4. The waste gas decay tank discharge valves (Unit 1: WDG-V47; Unit 2: shall be closed on receipt of any one of the following conditions:

   a. a high radiation signal from the waste gas discharge monitor, (Unit 1: RM-A7; Unit 2: WDG-1480);

   b. a high radiation signal from the Auxiliary and Fuel Building exhaust monitor RM-A8;

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2.0 LIMITING CONDITIONS FOR OPERATION

Specification (Cont'd)

e. Radioactive gaseous wastes with half-lives greater than eight days collected in the gas decay tanks shall be held up a minimum of 45 days, except when the release rate shall not exceed:

1. $\Sigma \frac{Q_i}{MPC_i} \leq 2.4 \times 10^3 \frac{m^3}{sec}$ (noble gases)

2. 0.012 μCi/sec (iodine and particulates)

f. Radioactive gas and particulates purged from the reactor building shall be filtered through the high efficiency particulate air filters and charcoal absorbers.

g. The maximum activity to be contained in one gas decay tank shall not exceed 8800 curies (equivalent to Xe-133).

h. When the annual release rate of radioactive materials in gaseous wastes,

Specification (Cont'd)

c. a high flow signal from the Waste Gas Decay Tank discharge flow transmitter, (Unit 1: FT-123; Unit 2:), or;

d. a trip signal from the Auxiliary and Fuel Handling Building exhaust fans.

B. During purge of the Reactor Building, the following conditions shall be met:

1. The Reactor Building Purge Exhaust Monitor (Unit 1: RM-A9; Unit 2:) shall be operable.

2. The Purge Exhaust Valves (Unit 1: AH-V1A and AH-V1B; Unit 2: and) shall be operable.

3. The valves (Unit 1: AH-V1A and AH-V1B; Unit 2) shall be interlocked to close on receipt of a high radiation signal from the Reactor Building Exhaust Monitor (Unit 1: RM-A9; Unit 2: HP-R-3236)

C. The gross and particulate activity of gaseous wastes released to the environment shall be monitored and recorded by monitors STET (Auxiliary and Fuel Handling Building) and

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2.0 LIMITING CONDITIONS FOR OPERATION

Specification (Cont'd)

averaged over a calendar quarter exceeds

$$\Sigma \frac{Q_1}{(MPC)_1} \leq 4.8 \times 10^3 \frac{m^3}{sec}$$

(noble gases)

or

0.024 μCi/sec (iodine and particulates)

the licensee shall notify the Director, Directorate of Licensing within 30 days, identifying the causes and describing the proposed program of action to reduce such release rates.

Specification (Cont'd)

(Unit 1: RMA9 ; Unit 2: HP-R-3236) (Reactor Building) or similar devices. The flow rate for radioactive effluent streams and the Auxiliary and Fuel Handling Building and the Reactor Building, shall be monitored and recorded.

Gaseous effluents from the Waste Gas Decay Tanks and the Reactor Building Purge Exhaust shall be continuously monitored and recorded. Whenever any of these monitors is inoperable appropriate grab samples shall be taken and analyzed daily.

Radioactive gaseous waste sampling and activity analysis shall be performed in accordance with Table 2.

The waste gas decay tank effluent monitor, (Unit 1: RM-A7 ; Unit 2: WDG-1480) shall be tested using the installed check source or equivalent prior to any release of radioactive gas from a holdup tank and shall be calibrated at refueling intervals. The calibration procedure for RM-A7 and WDG-1480 shall consist of exposing the detector to a referenced calibration source in a controlled reproducible geometry.

During power operation, the condenser vacuum pump discharge shall be continuously monitored for gross radiogas activity. The monitor shall not be inoperable for more than a week. Whenever this

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TABLE 2

RADIOACTIVE GASEOUS WASTE SAMPLING AND ANALYSIS

	Sample Type	Sampling Frequency	Type of Activity Analysis	Detectable Concentration[1]
A.	Waste Gas Decay Tank Release			
	Gas	Each Tank	H-3	10^{-6} µCi/cc
		Release	Individual Gamma Emitters	10^{-4} µCi/cc[2]
B.	Reactor Building Purge Releases			
	Gas	Each Purge	H-3	10^{-6} µCi/cc
			Individual Gamma Emitters	10^{-4} µCi/cc[2]
C.	Condenser Vacuum Pump Releases			
	Gas	Monthly	H-3	10^{-6} µCi/cc
		Monthly[3]	Individual Gamma Emitters	10^{-4} µCi/cc[2]
D.	Auxiliary and Fuel Handling Building Exhaust Vent and Reactor Building Purge Vent Release Points			
	Gas	Continuous[3]	Gross (β,γ)	10^{-11} µCi/cc[1][2]
		Monthly	H-3	10^{-6} µCi/cc
	Charcoal	Weekly[4]	I-131	10^{-12} µCi/cc
			Ba-140, La-140, I-131	10^{-11} µCi/cc
		One Weekly Sample Per Month[4]	I-133, I-135	10^{-10} µCi/cc

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TABLE 2 (Cont'd)

Sample Type	Sampling Frequency	Type of Activity Analysis	Detectable Concentration(1)
Particulates	Monthly Composite of the Samples for the Month	Sr-89	10^{-11} µCi/cc
	Quarterly Composite of the Samples for the Quarter	Sr-90	10^{-11} µCi/cc
	Monthly Composite of the Samples for the Month	Gross α	10^{-11} µCi/cc

(1) The above detectability limits are based on technical feasibility and on the potential significance in the environment of the quantities released. For some nuclides, lower detection limits may be readily achievable and when nuclides are measured below the stated limits, they should also be reported.

(2) For certain mixtures of gamma emitters, it may not be possible to measure radionuclides at levels near their sensitivity limits when other nuclides are present in the sample at much higher level. Under these circumstances, it will be more appropriate to calculate the levels of such radionuclides using observed ratios in the gaseous component in the reactor coolant for those radionuclides which are measurable.

(3) Analysis shall also be performed following each refueling period, startup or similar operational occurrence which could alter the mixture of radionuclides.

(4) The iodine and particulate collection device shall be analyzed to determine the release rate increase for iodines and particulates daily, when the average daily gross radioactivity release rate equals or exceeds that given in 2.3.2 Specification C or when the steady state gross radioactivity release rate increases by 50% over the previous corresponding power level steady state release rate.

Specification (Cont'd)

monitor is inoperable a grab sample shall be taken daily and analyzed for gross radioactivity (β,γ)

Facility records of iodine and particulate releases with half-lives greater than eight days shall be maintained. The error associated with each sample analysis shall be retained.

Records shall be maintained and reports of the sampling and analysis results shall be submitted in accordance with Section 5.6.1 of these Specifications. Estimates of the error associated with each reported value should be included.

At least annually, automatic initiation and closure of the Waste Gas Decay Tank Discharge valve on alarm of RM-A7, RM-A8, and WD6-1480 shall be verified.

The Auxiliary and Fuel Handling Building and Unit Nos. 1 and 2 R.B. Purge Exhaust gas monitors RM-A8, RM-A9, and HP-R-3236 respectively, shall be calibrated at least quarterly by means of a known radioactive source. RM-A8, RM-A9, and HP-R-3236 shall have an instrument channel test at least monthly, and a sensor check at least daily to verify that the read-out device is indicating as expected.

2.0 LIMITING CONDITIONS FOR OPERATION

Bases

The specified levels provide reasonable assurance that the resulting annual exposure rate from noble gases at any location at the site boundary will not exceed 10 millirems per year. At the same time these specifications permit the flexibility of operation, compatible with consideration of health and safety, to assure that the public is provided a dependable source of power under unusual operating conditions which may temporarily result in releases higher than the design objective levels but still within the concentration limits specified in 10 CFR Part 20. It is expected that using this operational flexibility under unusual operating conditions, and by exerting every effort to keep levels of radioactive material in gaseous wastes as low as practicable, the annual releases will not exceed a small fraction of the annual concentration limits specified in 10 CFR Part 20. These efforts should include consideration of meteorological conditions during releases.

The annual objectives have been developed taking into account a combination of system variables including fuel failures, primary system leakage, primary to secondary system leakage, and the performance of radioisotope removal mechanisms.

Bases

Specifications a, b, and c above, require that suitable equipment to monitor the radioactive gaseous releases are operating during any period these releases are taking place.

The surveillance requirements given under the remaining Specifications above, provide assurance that radioactive gaseous effluents from the station are properly controlled and monitored over the life of the station. These surveillance requirements provide the data for the licensee and the Commission to evaluate the station's performance relative to radioactive gaseous wastes released to the environment. Reports on the quantities of radioactive materials released in gaseous effluents shall be furnished to the Commission on the basis of Section 5.6.1 of these Technical Specifications. On the basis of such reports and any additional information the Commission may obtain from the licensee or others, the Commission may from time to time require the licensee to take such action as the Commission deems appropriate.

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2.0 LIMITING CONDITIONS FOR OPERATION

Bases (Cont'd)

Specification a above requires the licensee to limit the concentration of radioactive materials, except for I-131 and particulate with half-lives greater than eight days, in gaseous effluents from the station to levels specified in 10 CFR Part 20, Appendix B, for unrestricted areas. Based on a X/Q of 8×10^{-6} sec/m^3, this specification provides assurance that no member of the general public would be exposed to limits containing radioactive materials in excess of limits specified in Commission's Rules and Regulations.

Specification b requires the licensee to limit the concentration of I-131 and particulates with half-lives greater than eight days released from the station to 1/233 of the levels of 10 CFR Part 20, Appendix B for unrestricted areas. This reduction factor of 233, and a grazing period of 5 months have been arbitrarily applied to radionuclides of iodine and to all radionuclides in particulate form with a half-life greater than eight days to allow for the milk exposure pathway. The release rate is determined by:

$$\Sigma \frac{Q\ (g)(700)}{(MPC)_{I-131}(3)} \leq \frac{Q}{X}\ \frac{(m^3)}{(sec)}$$

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2.0 LIMITING CONDITIONS FOR OPERATION

Bases (cont'd)

where Qi and MPC are defined in a above. The X/Q of 8.3×10^{-7} sec/m^3 is derived from the annual average meteorological data where the nearest cow grazes 1-1/2 miles ESE. The S value accounts for the fraction of time that the cow grazes in the pasture, i.e., 5 months per year.

Specification c above establishes an upper limit for the release of gaseous activity at 16 percent of instantaneous release limit of gross activity and 8 percent of the release rate of I-131 and particulates with half-lives greater than 8 days averaged over any calendar quarter. The intent of this specification is to permit the licensee the flexibility of operation to assure that the public is provided a dependable source of power under unusual operating conditions which may temporarily result in higher releases than the objectives.

Specification e requires a 45 day holdup time for radioactive gaseous wastes collected in the gas decay tanks to assure decay of most isotopes. The doses (mainly from Kr-85) at the site boundary after 45 days (mainly from Kr-85) of holdup is expected to result in less than 10 mrem/yr.

2.0 LIMITING CONDITIONS FOR OPERATION

Bases (Cont'd)

Specification f limits the radioactivity that may be released to the environment to "as low practicable".

Specification g limits the maximum offsite dose to well below the limits of 10 CFR Part 100, postulating that the rupture of a Waste Gas Decay Tank holding the maximum activity releases all of the contents to the atmosphere.

In addition to the limiting conditions for operation listed under a, b, and c above, the reporting requirements of Specification h delineate that the licensee shall identify the cause whenever the radioactive gaseous release rate exceeds 4 percent of Specification a or 2 percent of Specification b above, averaged over a calendar quarter, and describe the proposed program of action to reduce such release rate. The report must be filed within 30 days following the calendar quarter in which more than twice the design release rate occurred.

REFERENCES

(1) Meteorology and Atomic Energy 1968 pp. 204

(2) Meteorology and Atomic Energy 1968 pp. 112