

EXHIBIT B

LICENSE AMENDMENT REQUEST
DATED MARCH 20, 1978

This Exhibit consists of the following pages revised to incorporate all of the proposed Technical Specification changes:

TS B.2.4-4
TS B.2.4-8
TS B.2.4-13
TS B.2.4-17
TABLE TS B.2.4-2 (page 1 of 2)
TABLE TS B.2.4-2 (page 2 of 2)
TABLE TS B.2.4-3
TABLE TS B.2.4-1
FIGURE TS B.2.4-1

- e. The flow rate of liquid radioactive waste shall be continuously measured and recorded during release.
- f. The continuous effluent monitors listed in Table 2.4.3 shall be calibrated at least quarterly by means of a liquid or solid radioactive source which has been calibrated to a National Bureau of Standards source. Each monitor shall also have a functional test monthly and an instrument check prior to making a release.
- g. During each release of liquid radioactive waste, the liquid radwaste discharge monitor readings shall be correlated with the results of analyses performed prior to release.

Bases: These Specifications are applicable until Specifications prepared in accordance with Appendix I to 10 CFR Part 50 are issued by the Commission. In some cases these Specifications may be more restrictive than required by Appendix I. In the event that plant availability is adversely affected by these Specifications, the licensee may apply to the Commission for appropriate Technical Specification changes on a case by case basis.

Specification 2.4.1.2 requires the licensee to limit the concentration of radioactive materials in liquid waste effluents released from the site to levels specified in 10 CFR Part 20, Appendix B, Table II, Column 2, for unrestricted areas. This specification provides assurance that no member of the general public will be exposed to liquid containing radioactive materials in excess of limits considered permissible under the Commission's Regulations.

where the values of K_1 , L_1 , M_1 and N_1 are provided in Table 2.4-5, and are site dependent gamma and beta dose factors.

Q = the measured release rate (Ci/sec) of the radioiodines and radioactive materials in particulate forms with half-lives greater than eight days.

1.1 = average ratio of tissue to air energy absorption coefficients.

- a. Should any of the conditions of 2.4.3.a(1) or (2) be exceeded, the licensee shall take appropriate corrective action to bring the releases within these limits.

- (1) The release rate limit of noble gases from the site shall be such that

$$2.0 (Q_{TV} \bar{K}_V + Q_{Ts} \bar{K}_s) \leq 1$$

and

$$0.33 [Q_{TV} (\bar{L}_V + 1.1 \bar{N}_V) + Q_{Ts} (\bar{L}_s + 1.1 \bar{N}_s)] \leq 1$$

- (2) The release rate limit of all radioiodines and radioactive materials in particulate form with half-lives greater than eight days, released to the environs as part of the gaseous wastes from the site shall be such that

$$3.7 \times 10^5 Q_V + 2.5 \times 10^4 Q_s \leq 1$$

TABLE TS B.2.4-2

RADIOACTIVE GASEOUS WASTE SAMPLING AND ANALYSIS

Gaseous Source	Sampling Frequency	Type of Activity Analysis	Detectable Concentrations (uCi/ml) ^a
A. Containment Purges	Each Purge ^e	Principal Noble Gas Gamma Emitters	10 ⁻⁴ b
B. Environmental Release Points	Monthly (Gas Samples)	Principal Noble Gas Gamma Emitters ^f	10 ⁻⁴ b,c
		H-3	10 ⁻⁶
	Weekly (Charcoal Samples)	I-131	10 ⁻¹² d
	Monthly (Charcoal Samples)	I-133, I-135	10 ⁻¹⁰
	Weekly (Particulates)	Principal Particulate Gamma Emitters (at least for Ba-La-140 and I-131)	10 ⁻¹¹ d
	Monthly Composite ^e (Particulates)	Sr-89	10 ⁻¹¹
		Gross Alpha	10 ⁻¹¹
	Quarterly Composite ^e (Particulates)	Sr-90	10 ⁻¹¹

^a The above detectability limits for activity analysis 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.

^b Analyses shall also be performed following each refueling, startup, or similar operational occurrence which could alter the mixture of radionuclides.

^c 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 levels. Under these circumstances, it will be more appropriate to calculate the levels of such radionuclides using observed ratios with those radionuclides which are measurable.

TABLE TS B.2.4-2 Notes (continued)

- ^d When the average daily gross radioactivity release rate exceeds that given in 2.4.3.c(1) or where the steady-state gross radioactivity release rate increases by 50% over the previous corresponding power level steady-state release rate, the iodine and particulate collection devices for the release point whose contribution exceeds 50% of these rates shall be removed and analyzed to determine the change in iodine-131 and particulate release rate. The analyses for this release point shall be done daily following such change until it is shown that a pattern exists which can be used to predict the release rate after which it may revert to weekly sampling.
- ^e To be representative of the average quantities and concentrations of radioactive materials in particulate form released in gaseous effluents, samples should be collected in proportion to the rate of flow of the effluent streams.
- ^f Concentrations of individual gamma emitters in the Reactor Building vent may be below the minimum detectable levels with the existing analytical equipment. Therefore when isotopic analyses of samples from the vent cannot be performed, the isotopic content will be assumed to be that existing at the steam jet air ejector.
- ^g Containment purges are always made via the standby gas treatment system and the plant stack. The plant stack continuous gross gaseous, particulate, iodine, and tritium monitoring systems respond to these releases. An analysis for individual noble gas gamma emitters is made to permit the quantities of individual isotope to be quantified. Normally, noble gas releases due to containment purges are negligible compared to releases from the main condenser offgas system.

- c. An isotopic analysis shall be made of a representative sample of gaseous activity at the discharge of the steam jet air ejectors and at the plant stack:
- (1) at least monthly, and
 - (2) following each refueling outage, and
 - (3) if the steam jet air ejector monitors indicate an increase of greater than 50% in the steady state fission gas release after factoring out increases due to power changes.

Following each analysis, steam jet air ejector monitor and stack monitor readings shall be correlated with the results of the analysis.

- d. The continuous effluent monitors listed in Table 2.4.4 shall be calibrated at least quarterly by means of a known gaseous or solid radioactive source which has been calibrated to a National Bureau of Standards source. Each monitor shall have a functional test at least monthly and an instrument check at least daily.
- e. Sampling and analysis of radioactive material in gaseous waste, including particulate forms and radioiodines shall be performed in accordance with Table 2.4-2.
- f. The hydrogen monitors shall be functionally tested monthly and calibrated quarterly with an appropriate gas mixture source. Each monitor shall have a sensor check at least daily.
- g. Condenser air inleakage shall be evaluated weekly and used in conjunction with steam jet air ejector offgas isotopic analyses and Figure 2.4-1 to determine that the limit of Specification 2.4.3.j is not exceeded.

Specification 2.4 .f is intended to monitor the performance of the core. An increase in the activity levels of gaseous releases may be the result of defective fuel. Since core performance is of utmost importance in the resulting doses from accidents, a report must be filed within 10 days following the specified increase in activity level at the steam jet air ejector.

Specification 2.4.3.g requires that the drywell atmosphere receive treatment for the removal of gaseous iodine and particulates during purging. When containment integrity is not required, ventilation air is not treated but is released through the monitored reactor building vents.

Specification 2.4.3.h requires that hydrogen concentration upstream of the compressed radioactive gaseous storage tanks shall be monitored whenever the compressed storage subsystem is in use.

Specification 2.4.3.i requires offgas flow to the compressed storage tanks to be terminated in the event that the hydrogen monitors downstream of the recombiners are inoperable. This prevents the possible accumulation of an explosive mixture in portions of the offgas system which are not designed to fully withstand a hydrogen detonation.

Specification 2.4.3.j limits the maximum gross activity in one decay tank on the basis that accidental release of its contents to the environs by operator error after 12 hours decay should not result in exceeding the dose equivalent to the maximum quarterly release rate specified in Specification 2.4.3.c.1. Staff analysis of an elevated release under accident meteorology for a minimum release period of 8 hours indicated a release of 22,000 curies of Xe-133 or the dose equivalent would result in a whole body dose of 20 mrem from noble gases at the site boundary.

Calculations have been performed to determine the relationship between steam jet air ejector offgas activity and composition and condenser air inleakage. These calculations were used to determine the curves presented in Figure 2.4-1. The results of the measurement of condenser air inleakage and the average air ejector offgas release rate are used in conjunction with the

TABLE IS B-2.4-3

LOCATION OF LIQUID EFFLUENT MONITORS AND SAMPLERS

Process Stream or Release Point	Radiation Alarm	Auto Control to Isolation Valve	Continuous Monitor	Grab Sample Station	Measurement						High Liquid Level Alarm
					Gross Activity	I	Dissolved Gases	Alpha	H-3	Isotopic Analysis	
Floor Drain Sample Tank				X		X	X	X	X	X	X
Laundry Drain Tank				X		X	X	X	X	X	X
Primary Coolant System ^a				X		X					
Liquid Radwaste Discharge Pipe	X		X		X						
Service Water Discharge Pipe	X		X		X						
Closed Cooling Water System ^a	X		X		X						
Discharge Canal Sampler	X		X	X							

^a Not an effluent release point.

TABLE TS B.2.4-4

LOCATION OF GASEOUS PROCESS AND EFFLUENT MONITORS AND SAMPLERS

Process Stream or Release Point	Radiation Alarm	Auto Control to Isolation Valve	Continuous Monitor	Grab Sample Station	Measurement				
					Noble Gas	I	Particulate	H-3	Alpha
Condenser/Air Ejector (before gas treatment system) ^b	X	X	X	X	X				
Offgas Treatment System (before dilution and discharge) ^b				X	X				
Main Stack	X	X	X	X	X	X	X	X	X
Reactor Building Ventilation System	X	X	X	X	X	X	X	X	X
Turbine Building Operating Floor			X	X		X	X		
Mechanical Vacuum ^a Pump		X							

^a Isolation on main steam line high radiation.^b Not an effluent release point. Monitor surveillance requirements are specified in the Appendix A Technical Specifications.

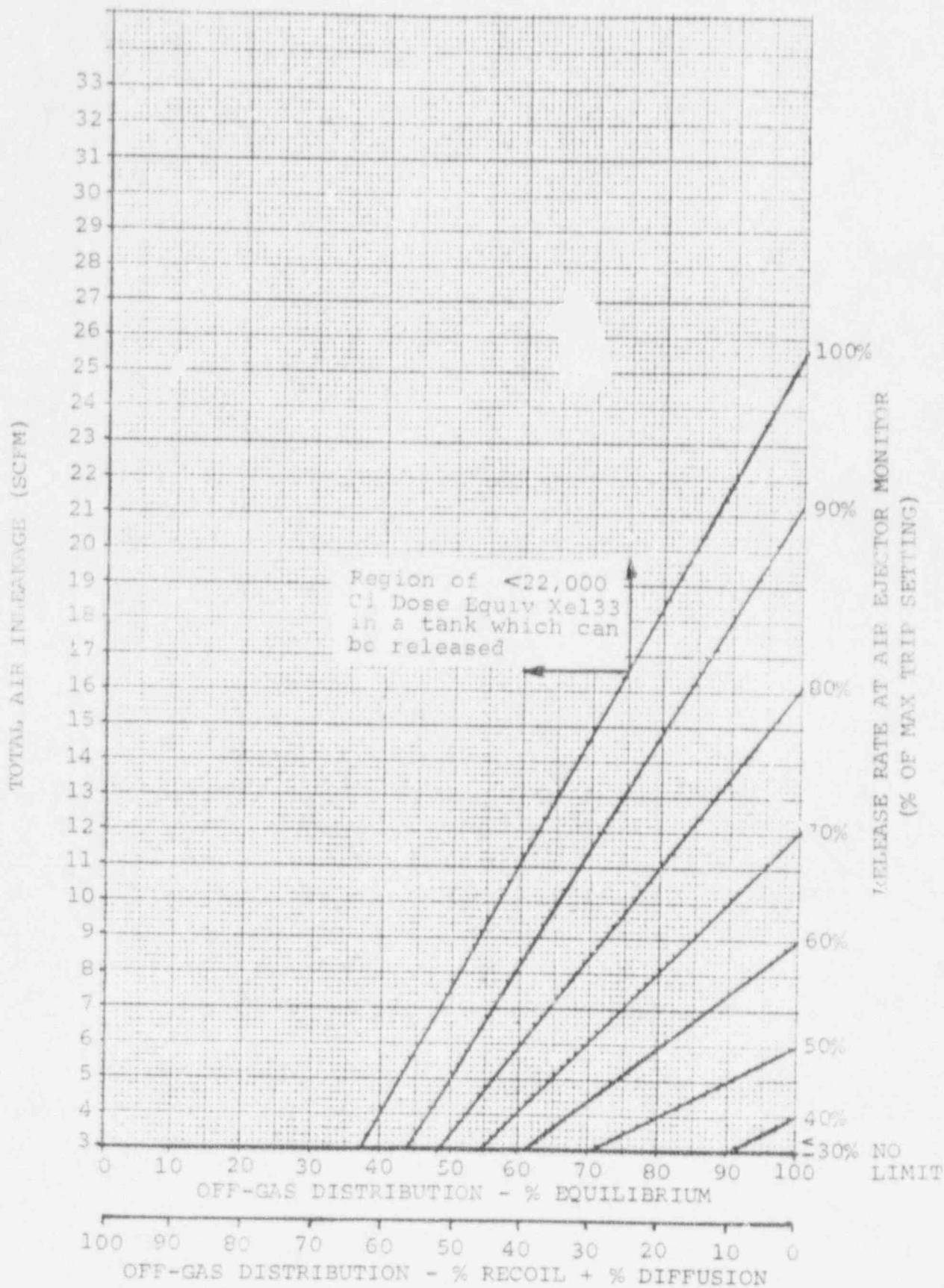


Figure TS B-2.4-1. Off-Gas Storage Tank Gross Activity Limits