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3.0 LIMITING CONDITIONS FOR OPERATION	4.0 SURVEILLANCE REQUIREMENTS
	(c) When the main condenser offgas system pretreatment monitors indicate an increase in radioactive gaseous effluents of 25 percent or 5000 μCi/sec, whichever is greater, during steady state reactor operation a reactor coolant sample shall be taken and analyzed for radioactive iodines. (d) Isotopic analysis of reactor coolant samples shall be made at least once per month. (e) Whenever the steady state radioiodine concentration of prior operation is greater than 1 percent but less than 10 percent of Specification 3.6.C.1.(a), a sample of reactor coolant shall be taken within 24 hours of any reactor startup and analyzed for radioactive iodines of I-131 through I-135. (f) Whenever the steady state radioiodine concentration of prior operation is greater than 10 percent of Section 3.6.C.1.(a), a sample of reactor coolant shall be taken daily and prior to any reactor startup and analyzed for radioactive iodines of I-131 through I-135 as well as the coolant sample and analyses required by Specification 4.6.C.1.(e) above.

3.0 LIMITING CONDITIONS FOR OPERATION

3.8 MAIN CONDENSER OFFGAS

Applicability:

Applies to the radioactive release rate from the main condenser offgas.

Objective:

To limit the doses received at the site boundary from main condenser offgas in the event that effluent is discharged with less than full treatment.

Specification:

A. Main Condenser Offgas Activity

1. Whenever the Steam Jet Air Ejectors (SJAEs) are in operation, the gross gamma activity rate of the noble gases measured at the main condenser offgas system pretreatment monitor station shall be $\leq 2.6 \times 10^5$ µCi/second after a decay of 30 minutes.

2. When the gross gamma activity rate of the noble gases is not within the limit of 3.8.A.1 above, restore gross gamma activity rate of the noble gases to within the limit within 72 hours.

4.0 SURVEILLANCE REQUIREMENTS

4.8 MAIN CONDENSER OFFGAS

Applicability:

Applies to the sampling and monitoring of radioactive effluents discharged from the main condenser offgas.

Objective:

To limit the doses received at the site boundary from main condenser offgas in the event that effluent is discharged with less than full treatment.

Specification:

A. Main Condenser Offgas Activity

NOTE: Not required to be performed until 31 days after the SJAEs are in operation.

1. Verify the gross gamma activity rate of the noble gases is $\leq 2.6 \times 10^5$ µCi/second after a decay of 30 minutes:

a. Once every month.

b. 4 hours after a $\geq 50\%$ increase in the nominal steady state fission gas release after factoring out increases due to changes in thermal power level.

3.0 LIMITING CONDITIONS FOR OPERATION	4.0 SURVEILLANCE REQUIREMENTS
3. When 3.8.A.2 cannot be met, either: a. Isolate all main steam lines within 12 hours; or b. Isolate the SJAEs within 12 hours; or c. Be in hot shutdown within 12 hours and cold shutdown within the following 24 hours.	

Bases 3.8/4.8:

A. Main Condenser Offgas Activity

BACKGROUND

During unit operation, steam from the low pressure turbine is exhausted directly into the condenser. Air and noncondensible gases are collected in the condenser, then exhausted through the steam jet air ejectors (SJAEs) to the Main Condenser Offgas System. The offgas from the main condenser normally includes radioactive gases.

The Main Condenser Offgas System has been incorporated into the unit design to reduce the gaseous radwaste emission. This system uses a catalytic recombiner to recombine radiolytically dissociated hydrogen and oxygen. The gaseous mixture is cooled, and the water and condensibles are removed by the offgas condenser. The radioactivity of the main condenser offgas is measured at the outlet of steam jet air ejector (SJAE) after condensers.

The main condenser offgas limits satisfy Criterion 2 of the NRC Policy Statement.

LCO 3.8.A.1

Restricting the gross radioactivity release rate from the main condenser provides reasonable assurance that the total body exposure to an individual at the exclusion area boundary will not exceed a small fraction of the limits of 10 CFR 100 in the event that effluent is inadvertently discharged directly to the environment without treatment. The gross gamma activity is controlled to ensure that, during the event, the calculated offsite doses will be well within the limits of 10 CFR 100.

APPLICABILITY

The LCO is applicable when steam is being exhausted to the main condenser and the resulting noncondensibles are being processed via the Main Condenser Offgas System. This occurs when the reactor is in the run mode, and during startup and hot shutdown with any main steam line not isolated and the SJAE in operation. In cold shutdown and refueling, steam is not being exhausted to the main condenser and the requirements are not applicable.

LCO ACTIONS

3.8.A.2

If the offgas radioactivity rate limits is exceeded, 72 hours is allowed to restore the gross gamma activity rate to within the limit. The 72 hour completion time is reasonable, based on engineering judgment, the time required to complete the required action, the large margins associated with permissible dose and exposure limits, and the low probability of a release to the environment without treatment.

3.8.A.3.a. and 3.8.A.3.b.

If the gross gamma activity rate is not restored to within the limits in the associated completion time, all main steam lines or the SJAE must be isolated. This isolates the Main Condenser Offgas System from the source of the radioactive steam. The main steam lines are considered isolated if at least one main steam isolation valve in each main steam line is closed, and at least one main steam line drain valve in each drain line is closed. The 12 hour completion time is reasonable, based on operating experience, to perform the actions from full power conditions in an order manner and without challenging unit systems.

3.8.A.3.c.

An alternative to 3.8.A.3.a. and 3.8.A.3.b. is to place the unit in a mode in which the LCO does not apply. To achieve this status, the unit must be placed in at least hot shutdown within 12 hours and in cold shutdown within the following 24 hours. The allowed completion times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

SURVEILLANCE REQUIREMENTS

4.8.A.1

The SR, on a monthly basis, requires an isotopic analysis of an offgas sample to ensure that the required limits are satisfied. The noble gases to be sampled are Xe-133, Xe-135, Xe-138, Kr-85m, Kr-87, and Kr-88. If the measured rate of radioactivity increase significantly (by $\geq$ 50% after correcting for expected increases due to changes in thermal power), an isotopic analysis is also performed within 4 hours after the increase is noted, to ensure that the increase is not indicative of a sustained increase in the radioactivity rate. The monthly basis is adequate in view of other instrumentation that continuously monitor the offgas, and is acceptable, based on operating experience.

This surveillance is modified by a note indicating that the surveillance is not required to be performed until 31 days after the SJAEs are in operation. Only in this condition can radioactive fission gases be in the Main Condenser Offgas System at significant rates.