

requirements of 10 CFR part 20 and 10 CFR part 50, appendix I.

The contribution of gases to the gaseous waste management system from building ventilation system is not expected to increase significantly with power uprate because (1) the amount of fission products released into the reactor coolant depends on the number of nature of the fuel rod defects and is not dependent on reactor power, and (2) the concentration of coolant activation products is expected to remain unchanged since the linear increase in the production of these products will be offset by the linear increase in steaming rate.

Based on its review of the gaseous waste management system, the staff concluded that there will not be a significant adverse effect on airborne effluents as a result of the power uprate.

The licensee has evaluated the effects of the power uprate on in-plant radiation levels in the LGS facility during normal and abnormal operation as well as from postulated accident conditions. The licensee has concluded that radiation levels from both normal and accident conditions may increase slightly. However, because many areas of the plant were designed for higher than expected radiation sources, the small increase in radiation levels expected due to power uprate will not affect radiation zoning or shielding in the plant.

During periods of normal and post-operation conditions, individual worker exposures will be maintained within acceptable limits by the existing, as low as is reasonably achievable (ALARA) program, which controls access to radiation areas. Procedure controls compensate for slightly increased radiation levels.

The offsite doses associated with normal operation are not significantly affected by operation at the uprated power level, and are expected to remain below the limits of 10 CFR part 20 and 10 CFR part 50, appendix I.

The main control room (MCR) habitability was evaluated. Post-accident MCR and technical support center doses were confirmed by the licensee to be within the limits of General Design Criterion (GDC) 19 or 10 CFR part 50, appendix A.

The increase in LOCA radiological consequences due to power uprate was analyzed by the licensees. The resultant offsite doses were found to be within guidelines of 10 CFR part 100. The events evaluated for uprate were the LOCA, the MSLBA, the FHA, and the CRDA. The whole body and thyroid doses were calculated for the exclusion area boundary (EAB), low population

zone (LPZ), and the control room. The plant-specific results for power uprate remain well below established regulatory limits. The doses resulting from the accidents analyzed are compared below with the applicable dose limits.

Location	LOCA radiological consequences		Limit
	UFSAR dose (rem) @3458 MWt	Dose (rem) @ 3527 MWt ¹	
Exclusion area: Whole body dose	0.67	0.68	25
Thyroid dose	0.15	0.15	300
Low population zone: Whole body dose	1.7	1.7	25
Thyroid dose	0.04	0.04	300
Main control room: Whole body dose	4.6	4.7	5
Thyroid dose	14.0	14.3	30
Beta	7.6	7.8	30

FHA Radiological Consequences

Exclusion area: Whole body dose	0.7	0.7	6
Thyroid dose	0.95	0.98	75
Low population zone: Whole body dose	0.099	0.102	6
Thyroid dose	0.13	0.135	75

CRDA Radiological Consequences

Exclusion area: Whole body dose	0.04	0.042	6
Thyroid dose	0.32	0.3	75
Low population zone: Whole body dose	0.014	0.0148	6

Location	LOCA radiological consequences		Limit
	UFSAR dose (rem) @3458 MWt	Dose (rem) @ 3527 MWt ¹	
Thyroid dose	0.62	0.63	75

¹This number represents 102% of the power uprate level. Doses based on 102% are consistent with Regulatory Guide 1.49, Revision 1 guidance and are provided to allow for possible instrument errors in determining the power level.

Based on a review of the licensee's major assumptions and methodology used in their reconstituted dose calculations and the staff's original safety evaluation, the staff concluded that the offsite radiological consequences and control room operator doses at uprated power levels still remain below 10 CFR part 100 dose reference values and GDC 19 dose limits. Therefore, the staff concludes that no significant adverse effect on radiation levels will result onsite or offsite from the planned power uprate.

It is expected that the increased energy requirements associated with operation at uprated power will require an increase in the reload fuel enrichment and will result in increased burnup. The NRC previously evaluated the environmental impacts associated with burnup values of up to 60,000 MWd/MT with fuel enrichments up to 5 percent ²³⁵U (published in the **Federal Register**, 53 FR 6040 dated February 29, 1988). The staff concluded that the environmental impacts associated with Table S-3 of 10 CFR 51.51, Uranium Fuel Cycle Environmental Data, and Table S-4 of 10 CFR 51.52, Environmental Impact of Transportation of Fuel and Waste, are conservative and bound the corresponding impacts for burnup levels of up to 60,000 MWd/MtU and ²³⁵U enrichments up to 5 percent by weight. In the January 23, 1995 submittal, the licensee indicated that while fuel burnup and enrichment levels may increase as a result of operation at uprated power, the burnup and enrichment will remain within the 5 percent enrichment and 60,000 MWd/MT value previously evaluated by the staff. Based on the above cited environmental assessment and the licensee's statements regarding expected burnup and enrichment values, the staff concludes that the environmental effects of increased fuel cycle and transportation activity as a result of operation at uprated power levels are not significant.