

makeup pumps, which are indoors, will operate at the same level, however, in some cases cycling on slightly more frequently. The pumps at the Bradshaw Station are variable speed and, when used, will operate at a slightly higher speed. The pumps are indoors; therefore, the outside noise level increase will be insignificant.

The licensee has stated that there are no changes required to the LGS Environmental Protection Plan as a result of operation at uprated power levels. Specifically the licensee stated:

Other non-radiological environmental impacts of the proposed power rerate were reviewed based on the information submitted in the Environmental Report, Operating License Stage, the NRC Final Environmental Statement (FES), Operating License Appendix B (i.e., Environmental Protection Plan), the requirements of the applicable NPDES permits, which include the outfall limits, and the Delaware River Basin Commission Water Use permit. We have concluded the proposed power rerate will have insignificant impacts on the non-radiological elements of concern and the plant will be operated in an environmentally acceptable manner as established by the FES. Existing Federal, State and Local regulatory permits presently in effect will accommodate power rerate without modification.

The FES described the impact of plant operation on fogging in the vicinity of the facility. The FES discussed that the increase in fogging due to plant operation was expected to blend in with the natural fog and be indistinguishable. The staff expects that operation of the plant at uprated power levels will result in only a minimal increase in fogging over that discussed in the FES. Thus, the impact of plant operation on local fogging, including operation at uprated power, remains insignificant.

#### *Radiological Environmental Assessment*

The licensee evaluated the impact of the proposed amendment to show that the applicable regulatory acceptance criteria continue to be satisfied for the uprated power conditions. In conducting this evaluation, the licensee considered the effect of the higher power level on source terms, onsite and offsite doses, and control room habitability during both normal operation and accident conditions. The licensee provided information regarding the radiological environmental effects of the proposed action in NEDC-32225P and supplemental information in the January 6, 1995 submittal. In Sections 8.1 and 8.2 of NEDC-32225P, the licensee discussed the potential effect of power rerate on liquid and gaseous radioactive waste systems. Sections 8.3 and 8.4 discussed the potential effect of power uprate on radiation sources in the

reactor coolant resulted from coolant activation products, activated corrosion products and fission products. Section 8.5 of the Topical Report discussed the radiation levels during normal operation, normal post-operation, post-accident, and offsite doses during normal operation. Finally, Section 9.2 of NEDC-32225P presented the results of calculated whole body and thyroid doses at the uprated power and current authorized power conditions at the exclusion area boundary and the low population zone that might result from the postulated design basis radiological accidents [i.e., loss-of-coolant-accident (LOCA), main steam line break accident (MSLBA) outside containment, fuel handling accident (FHA) and control rod drop accident (CRDA)].

In Section 8.1 of NEDC-32225P, the licensee stated that there will be only a slight increase in the liquid radwaste collection as a result of operation at higher power levels. The liquid waste system collects, monitors, processes, stores, and returns processed radioactive waste to the plant for reuse or for discharge. The largest contributor to the liquid waste results from the backwash of the condensate demineralizers and deepbeds. The rate of loading on the demineralizers increases, resulting in the average time between backwash precoat being reduced slightly; this reduction does not affect plant safety. Similarly, the reactor water cleanup (RWCU) filter/demineralizers will require slightly more frequent backwashes due to slightly higher levels of activation and fission products. The power uprate will increase the flow rate through the condensate demineralizers, with a subsequent reduction in the average time between backwashing. Additionally, neither the floor drain collector subsystem nor the waste collector subsystem is expected to experience a significant increase in the total volume of liquid waste due to operation at the uprated level.

The licensee stated that while the activated corrosion products in liquid wastes are expected to increase proportionally to the square of the power increase, the total volume of processed waste is not expected to increase appreciably. Based on its analyses of the liquid radwaste system, the licensee has concluded the requirements of 10 CFR part 20 and 10 CFR part 50, appendix I, will be met. Based on the above considerations, the staff concluded that the power uprate will have no significant adverse effects on liquid effluents.

The gaseous waste management systems collect, control, process, store

and dispose of gaseous radioactive waste generated during normal operation and abnormal operational occurrences. These systems include the standby gas treatment system (SGTS), off-gas recombiner system, the ambient temperature charcoal treatment system, and various building ventilation systems. Various devices and processes, such as radiation monitors, filters, isolation dampers, and fans, are used to control airborne radioactive gases. The licensee states that the activity of airborne effluents released through building vents is not expected to increase significantly with power uprate and the systems are designed to meet the requirements of 10 CFR part 20 and 10 CFR part 50, appendix I.

In its power uprate submittal, the licensee has stated that the greatest contributor of radioactive gases is the noncondensable radioactive gases from the main condenser, including activation gases (principally N-16, O-19, and N-13) and radioactive noble gas parents. The increase in production of these gases is expected to be approximately proportional to the core power increase. These noncondensable radioactive gases, along with nonradioactive air due to inleakage to the condenser, are continuously removed from the main condensers by the stream jet air ejectors (SJAЕ). The SJAЕs discharge into the offgas system. The flow of these gases into the offgas system is included with the flow of H<sub>2</sub> and O<sub>2</sub> to the recombiner, which will also increase linearly with core power. Radioactive gases and H<sub>2</sub> and O<sub>2</sub> pass from the recombiner through a holdup pipe, cooler condenser, adsorber bed, and high-efficiency particulate air (HEPA) filters and exit the facility through the north stack. Gaseous activity effluent release rates are monitored down stream of the adsorber bed and alarms are provided in the control room. The licensee has stated that the operational increases in hydrogen, oxygen, and noble gases due to uprate are not significant when compared to the current total system flow which also includes air from condenser inleakage and steam flows from the air ejector.

The design basis for the offgas system is for activity release rates of 100,000 microcuries per second based on a mixture of activation and fission product gases and fuel leakage and a 30-minute holdup time. The system is designed to meet the requirements of 10 CFR part 20 and 10 CFR part 50, appendix I. Performance of the system at uprated power levels is expected to remain within the system design basis and, thus, to continue to meet the