FLOODPLAIN ASPECTS OF THE
FARLEY NUCLEAR PLANT SITE
DOCKET NO. 50-364

All major plant structures and site construction were substantially complete at the time Executive Order 11988, Floodplain Management, was signed by President Carter in May 1977. This includes intake structures, discharge facilities, and dam embankments. It is, therefore, our conclusion that consideration of alternative locations for those structures identified as being in the floodplain is neither required nor practicable.

The Chattahooche River is utilized by the plant as a source of normal cooling water. Construction of a storage reservoir has produced an additional water body at the site. The reservoir is located on a stream that discharges to the Catawba River. The attached figure shows the locations of the plant features and the affected bodies.

For the Chattahooche River, the one-percent chance (100-year) flood level at the site is approximately elevation 119.5 feet msl. Major plant structures are at plant yard grade which is 154.5 feet msl. Portions of the intake and discharge structures are, by design, located below the 100-year flood levels. The plant has been designed to withstand the flooding effects of a Probable Maximum Flood (PMF) which reaches an elevation of 153.3 ft. msl. No plant structures will therefore be affected by flooding on the Chattahooche River. In addition, plant construction has had minimal effect on flood levels on the river.

For the storage reservoir, the 100-year flood level is less than elevation 190 ft. msl. Intervening topography protects the plant from flooding. The service water intake structure located on the reservoir, has been designed for the PMF, which reaches an elevation of 192.2 ft. msl.

Construction of the small dam for the storage reservoir has altered flood levels on the small stream which was impounded. This effect is unavoidable where dams are constructed. As previously mentioned, the dam was constructed prior to the issuance of E.O. 11988.

We also conclude that the plant structures other than the dam in the floodplain will have negligible effect on post-construction water levels during a flood event. This conclusion is based on the small cross sectional area of those structures in relation to the area of flow available in the reservoirs. In this case, flood levels are relatively unaffected by any small flow obstructions. The dam is totally located on the applicant's property and neither the 100-year flood nor PMF pool elevation adversely impact off-site property.