

Summary

The Annual Radiological Environmental Operating Report presents data obtained through analyses of environmental samples collected for Arkansas Nuclear One's (ANO's) Radiological Environmental Monitoring Program (REMP) for the period January 1, 1997 through December 31, 1997. This report fulfills the requirements of ANO Unit 1 Technical Specification 6.12.2.5 and Unit 2 Technical Specification 6.9.4. During 1997, as in previous years, ANO detected radionuclides attributable to plant operations at the discharge location (Station 8). ANO personnel routinely monitor results from this area in order to note any trends. Their review of results from this area indicates the following:

- Tritium levels in the surface water media continue to be similar to the historic average and well below regulatory limits.
- Cobalt-60, Cesium-134 and Cesium-137 levels in the sediment media are not demonstrating any increase in comparison to previous years. Review indicates that 1997 levels are less than those of previous years and also well below regulatory limits.

Tritium, attributable to plant operations, was also detected at the intake surface water control location (Station 10). In 1996, the initial sample collection point was relocated to a different area in the service water bay for protection during wintry conditions. Prior to relocation, the sampler collected water unaffected by plant operations. However, after relocation, the sampler collected water affected by the plant's oily water separator discharge, thereby resulting in the collection of tritium contaminated water. After evaluating suitable alternative locations, ANO personnel moved the sampler to an area unaffected by plant operations during the fourth quarter of 1997.

Tritium at background levels was detected in the City of Russellville indicator drinking water location (Station 14) and, the Ouita control (Station 33) and Stewart indicator (Station 32) groundwater locations. Levels detected were below previous background measurements.

Cesium-137, attributable to fallout from previous atmospheric weapons testing, was detected at the intake indicator (Station 10) and Piney Creek control (Station 16) sediment sample locations. However, the levels detected were well below the historic average. Section 2.0 of this report discusses these results in more detail.

Radiological Environmental Monitoring Program

Radiation and radioactivity are monitored around ANO within a 22-mile radius. The REMP was established about two years before the station became operational (1974). This program provides data on background radiation and radioactivity which is normally present in the area. ANO has continued to monitor the environment by sampling air, milk, water, food products, vegetation, sediment and fish, as well as measuring radiation directly. Samples are collected from both indicator and control locations. Indicator locations are within approximately five miles of the site, and are expected to show any increases or buildup of radioactivity that might