OPPD's Fort Calhoun Station
Managing Nuclear Waste

Nuclear generating plants produce a relatively small volume of waste compared to other types of electric-generating plants. This is one of the advantages of a nuclear plant – the volume of waste is small and easily managed. There are two types of nuclear waste: low-level and high-level.

Low-level waste includes exhausted resin, exhausted filter elements, retired equipment, clean-up liquids, protective garments discarded by workers, and other industrial rubbish that may contain very small amounts of radioactivity. The radiation levels in these materials are relatively low, and their decay is relatively rapid.

Much of the low-level waste is transported to a processing facility, where various methods, such as incineration and super-compaction, are used to reduce the volume of the waste as much as possible before it is placed into metal disposal containers. Other waste, such as filters and exhausted resin, is placed into high-integrity containers designed to ensure stability of the waste form. This low-level waste is eventually disposed of at federally licensed disposal facilities.

The used or spent fuel from nuclear reactors is the only source of high-level radioactive waste from nuclear generating plants.

At Fort Calhoun Station, spent fuel is stored under water in a special structure of steel and concrete, where the radioactive elements are allowed to decay. Eventually, this high-level waste will be shipped to a federally licensed repository. Starting in 2006, some of the spent fuel at the Fort Calhoun Station was transferred from the spent fuel pool to an onsite dry-cask storage facility, because the spent fuel pool is reaching its storage limit of spent fuel assemblies and a federally licensed repository has not been built.

Nuclear generating plants are not the main source of our nation's high-level radioactive waste. More than 95 percent of such waste comes from the national defense program. An additional small amount comes from nuclear medicine, university research, and other commercial sources.

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