Design and Licensing of the Spent Fuel Dry Storage System

The dry storage system to be used at the Zion Station is NAC International’s MAGNASTOR® System that has undergone an extensive review process and is licensed by the Nuclear Regulatory Commission (NRC).

Extensive safety analyses and testing have been performed to conclude that licensed dry fuel storage casks will not release radioactive material under any credible accident conditions. The spent fuel dry storage system at the Zion Station will withstand natural and man-made disasters well beyond its design limit, for example:

- **Tornado**: 360 mph
- **Tornado Missiles**: up to 4,000 pounds at horizontal speeds of 126 mph
- **Flooding**: submerged in 50 feet of water due to flood or tsunami
- **Fire (accidental)**: internal pressure within acceptable levels
- **Seismic**: 0.37g
- **Tip-over (accidental)**: canister maintains structural integrity
- **Site temperature**: −40°F to +133°F
- **Snow**: >100 pounds per cubic foot

Dry storage concepts that do not adhere to current standards and regulations are not licensed by the NRC and offer no discernible benefit beyond current technology with respect to public health and safety risk, while displaying numerous features that would potentially diminish efficient and safe storage of spent fuel.

The Nuclear Regulatory Commission (NRC) approves and licenses all spent fuel dry storage systems by evaluating each design for resistance to accident conditions such as floods, earthquakes, tornado missiles, and temperature extremes.

For more information:

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