



Lee Nuclear Station – Safety Panel

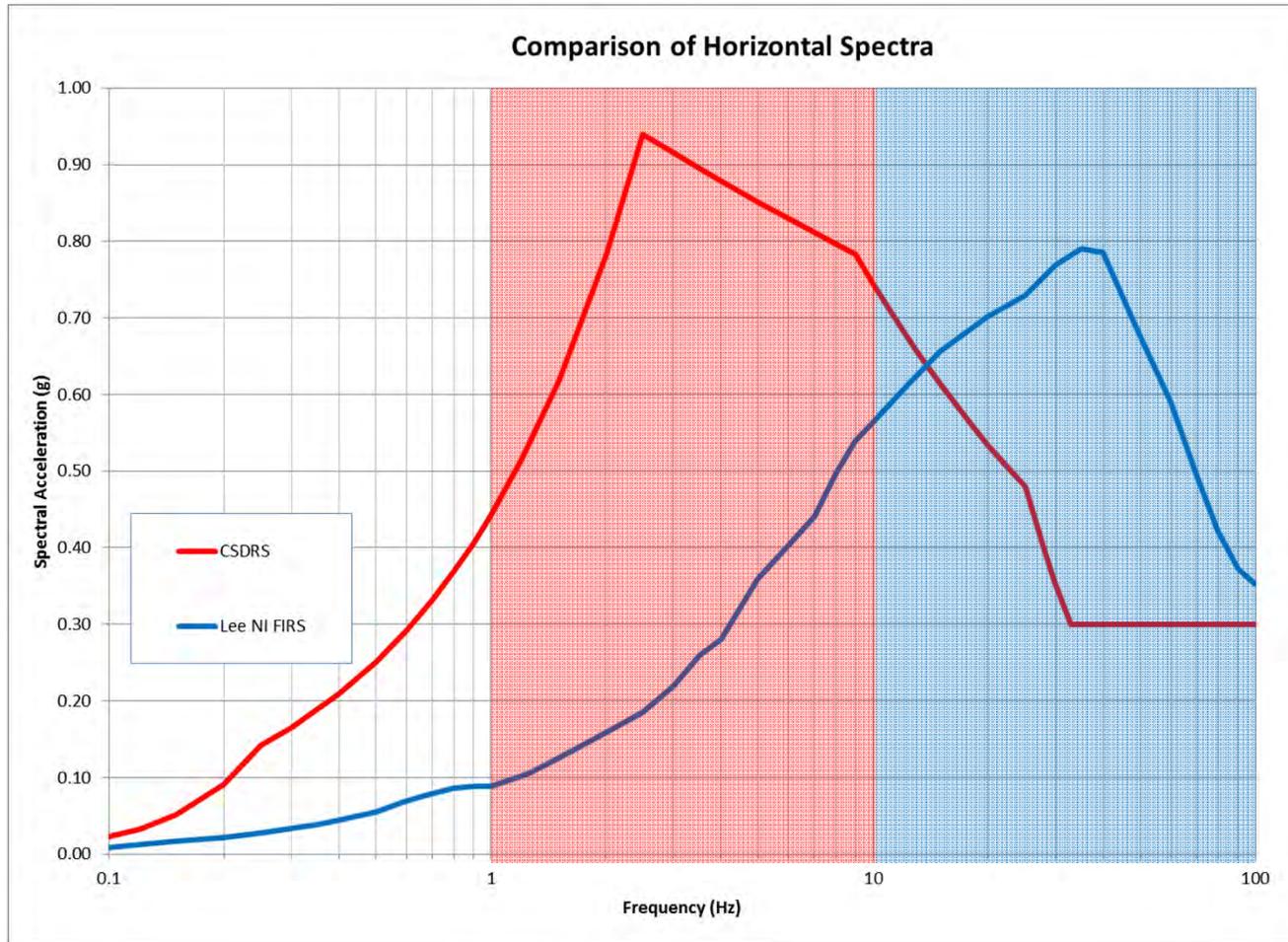
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Seismic Evaluation

- **AP1000** Standard Plant seismic design basis
 - Certified Seismic Design Response Spectra (CSDRS)
- **AP1000** Design Control Document allows qualification of a site where site spectra exceed CSDRS
 - Comparison of site spectra to Hard Rock High Frequency (HRHF) spectra or
 - Evaluation using same methodology used to qualify **AP1000** Standard Plant for HRHF spectra

Site Horizontal Spectra



Low Frequency: high displacements lead to high building and equipment forces and moments

High Frequency: low displacements lead to small non-damaging building and equipment forces and moments

Evaluation Methodology to Qualify Site

Evaluation per
AP1000 DCD

- Structures
- Major Equipment
- Piping Systems and Supports
- Equipment Qualification



In conclusion, the Lee site is qualified for deployment of the **AP1000** Standard Plant.

Emergency Operations Facility (EOF)

- NRC Commission approval required to locate EOF greater than 25 miles from the Lee site
- A Near Site Assembly Area is provided at a Duke Energy facility approximately 15 miles from the Lee site in Kings Mountain, NC
- Proposed License Condition to demonstrate integrated capability and functionality to respond to emergency events at Lee site and one additional nuclear site prior to fuel load

Duke Energy Carolinas Nuclear Fleet

