

Nuclear Power Plant Decommissioning Including Under Extreme Conditions

Diablo Canyon Look-Ahead

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Unit One

Unit Two

Diablo Canyon Power Plant

Diablo Canyon Site Overview



Dry Cask Storage



Ancillary Buildings

Spent Fuel Pool

Power Block Structures

Original Seismic Design/Licensing

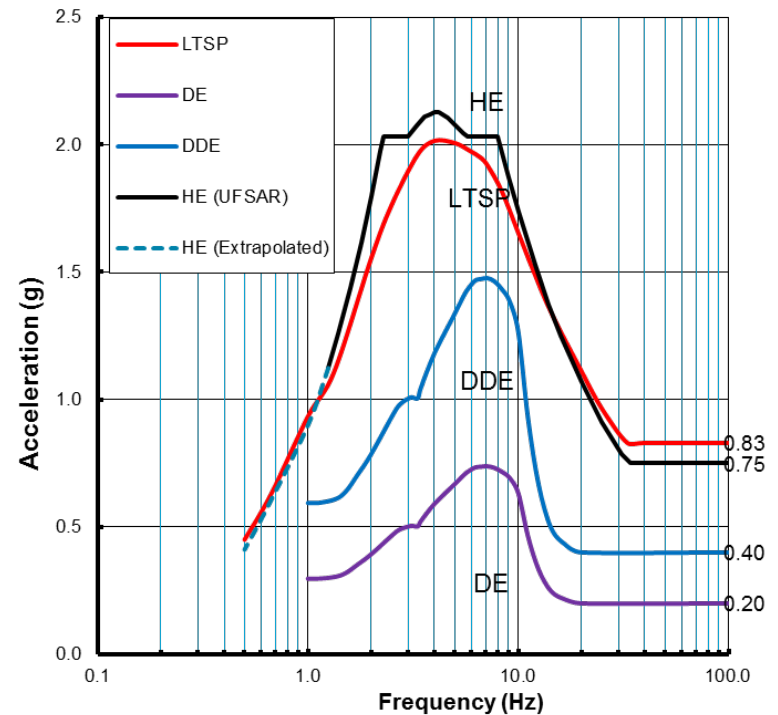
Ground Motion

DE: OBE Equivalent = 0.2 g

DDE: SSE Equivalent = 0.4 g

HE: Hosgri = 0.75 g

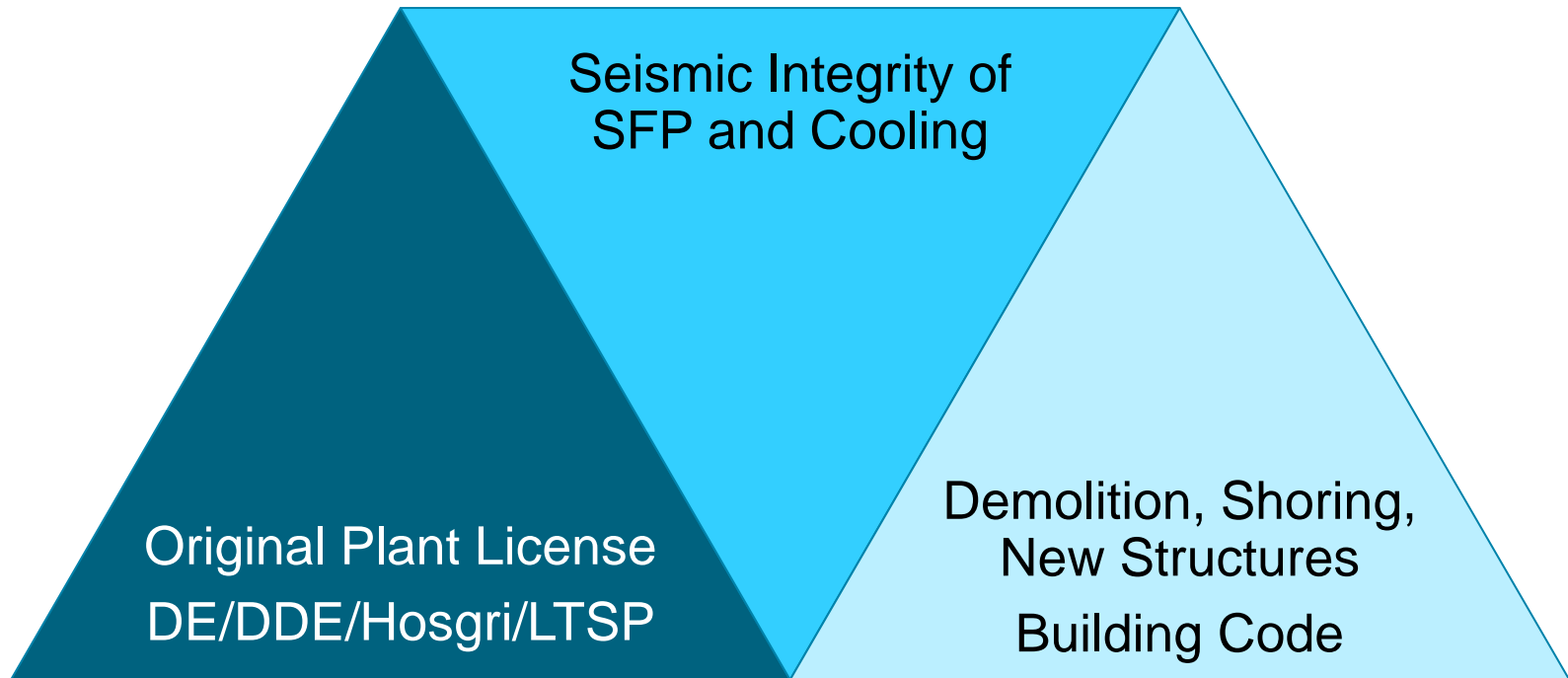
LTSP: Long Term Seismic Program = 0.83 g



Decommissioning Overview

- **Planning**
 - Developing the team, cost estimates, schedule, project execution plans, regulatory submittals.....
- **Plant shutdown**
 - U-1 2024 U-2 2025
- **Fuel transferred to spent fuel pool**
 - Seismic considerations while fuel is cooling in pool
- **Fuel transferred to dry storage**
- **Decommissioning Operations**
 - Remove large components (Logistics)
 - Construct new temporary buildings, shoring, support facilities
 - Demolish buildings

Changing Site, Changing Requirements



Fuel in reactor -> Fuel in pool -> Fuel in dry storage

Seismic considerations will change with the project

- **Spent fuel pool, structures and cooling**
 - Existing structures maintain current seismic design basis
 - Seismic requirements for new spent fuel pool cooling.
 - Flex equipment
- **New structures – shoring, temporary structures**
 - Building code requirements are not always clear.
 - **What is the appropriate return period for seismic motion?**
- **How to incorporate risk-informed decision making in assessing appropriate seismic hazard ?**