

# COMMERCIAL SPENT FUEL STORAGE DEMONSTRATION ACTIVITIES AT THE INEL

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# BACKGROUND

INEL supporting DOE-RW

Cooperative effort with PNL

Spent fuel and storage cask testing

- Tests conducted at Test Area North hot shop and hot cell
- Tested metal and concrete casks 1985-1991
- Tested intact and consolidated spent fuel assemblies

# CURRENT STATUS

Fuel stored in the casks on TAN Test Pad

TAN Hot Shop used for maintenance and inspections

Cask inventory

- TN-24 - 7 consolidated canisters
- VSC-17 - 17 consolidated canisters
- MC-10 - 18 intact 15x15 assemblies
- V-21 - 21 intact 15x15 assemblies

Monitoring to verify performance of casks and fuel

# MONITORING PROGRAM

Enhanced monitoring provides data on storage conditions

Daily surveillance

- Visual
- Cask internal pressure

Quarterly gas samples from VSC-17 and V-21

- Mass spectrometry ( $H_2$ ,  $O_2$ ,  $N_2$ , He, Ar,  $CO_2$ )
- Gamma scan (Kr-85)
- Carbon-14

Fuel inspections only if samples indicate fuel failures

Results in FY 1995 show no fuel failures

## FUTURE PLANS

- Continue monitoring program
- Annual gas sampling beginning FY 1996
- Inspect if problems occur
- Assess impacts of moving fuel to ICPP
- Final Inspection