

In the Matter of Entergy Nuclear Vermont Yankee, LLC and  
Entergy Nuclear Operations, Inc.

Consideration of Approval of License and Conforming  
Request Before the US Nuclear Regulatory Commission  
Atomic Safety and Licensing Board



The State of Vermont's Petition for Leave to  
Intervene and Hearing Request



# Two Contentions

- ▶ The license transfer and amendment request involves a potential significant safety and environmental hazard; does not provide sufficient evidence to demonstrate that it complies with 10 C.F.R. §§ 50.54(bb), 50.75(h)(1)(iv), and 50.82(8)(i)(A), (B), and (C); and does not provide sufficient evidence to demonstrate that, if approved, there will be reasonable assurance of adequate protection for the public health and safety as required by Section 182(a) of the Atomic Energy Act (42 U.S.C. § 2232(a)).
- ▶ The license transfer and amendment request do not include the environmental report required by 10 C.F.R. § 51.53(d), and have not undergone the environmental review required by the National Environmental Policy Act and 10 C.F.R. §§ 51.20, 51.70 AND 51.101.



# Bases for Contention I

- Insufficient evidence of financial assurance places Vermonters and neighboring citizens at risk that Northstar will deplete the Decommissioning Fund before it meets its obligation to safely decommission Vermont Yankee and manage its spent nuclear fuel.
- NRC-granted exemption to Entergy allowing \$225 million of Decommissioning Fund to be diverted for non-decommissioning expense of spent fuel management.
- History of cost overruns during decommissioning



# History of Cost Overruns During Decommissioning

- ▶ Strontium-90 contamination at Connecticut Yankee;
- ▶ Highly contaminated groundwater at Maine Yankee
- ▶ PCBs in paint covering the steel from the vapor container housing the nuclear reactor and underground cable sheathing An NRC report describing the near doubling of cost estimates by NRC as compared to site specific cost estimates at Diablo Canyon 1 and 2. and San Onofre 2 and 3.
- ▶ A Government Accounting Office report citing five DOE cleanup sites with cost overruns of more than 40%, with one expected to double its expected costs.
- ▶ NRC staff report that in the best-case scenario, there was a 1 in 3 chance of a shortfall in decommissioning, and other cost-escalation scenarios described the probability of success declining to 1 percent.



# Additional Bases for Contention I

- ▶ Northstar cannot rely on Entergy's exemption to use decommissioning funds for spent fuel management as it has not submitted a spent fuel management plan.
- ▶ That exemption is based on Entergy's SAFSTOR-based site-specific cost estimate and significant Decommissioning Fund growth. Northstar is planning prompt DECON that does not include such time for growth.
- ▶ NRC does not allow demonstration of financial assurance based on future funds recovered in litigation.
- ▶ There is no Entergy or Northstar NRC exemption to use decommissioning funds for site restoration.
- ▶ Northstar limited liability corporations do not appear to have any assets beyond the Decommissioning Fund and the net liability of a shutdown contaminated nuclear facility.
- ▶ Northstar's \$125 million "support agreement" is not a financial guarantee as required by NRC regulations, and no other plant has used this type of financial assurance.
- ▶ As a merchant plant, Northstar cannot go to ratepayers for help, and has no parent company guarantee.



# Other Atomic Safety Licensing Board (ASLB) Hearing Testimony

- ▶ Entergy's cost estimate is deficient because it fails to address indefinite onsite storage and periodic dry fuel transfer into new casks, including:
  - ▶ The costs of a Dry Fuel Transfer Station,
  - ▶ The purchase of 58 new casks,
  - ▶ Labor and material costs to transfer fuel every 100 years, and
  - ▶ The costs of maintaining security at the site for any time after 2052.
- ▶ The State challenges the validity of using decommissioning funds for property taxes, emergency preparedness, insurance and legal fees, lobbying fees, payments to host states and communities, and the disposal of non-radiologically contaminated materials, as well as spent fuel management.



# Bases for Contention II

- ▶ The National Environmental Policy Act (NEPA) requires environmental review on matters potentially affecting the environment.
- ▶ NRC regulations require applicants for a license amendment approving a license termination plan or decommissioning plan to submit a separate Supplement to Applicant's Environmental Report – Post Operating License Stage.
- ▶ The NRC is to take a “hard look” at the environmental consequences to ensure fully informed and well-considered decision-making, not acting on incomplete information.
- ▶ A Finding of No Significant Impact (FONSI) is reasonable from the agency with a convincing explanation addressing all potential environmental effects unless remote and highly speculative.
- ▶ A court will reverse an agency's decision not to prepare an environmental impact statement when the agency has failed to consider all of the substantially possible effects of its actions.



# The NRC Has Not Complied with NEPA or Applicable NRC Regulations to Date for the Proposed Transfer and License Amendment

- ▶ The NRC has not analyzed the potential environmental impacts of the reasonably foreseeable possibility of a shortfall in the Decommissioning Fund which would put the public health and safety and the environment at risk.
- ▶ The NRC has failed to consider cumulative impacts from all the non-decommissioning expenses that Northstar and Entergy propose to withdraw from the Decommissioning Fund.
- ▶ The NRC has failed to evaluate reasonable alternative, such as imposing license conditions requiring additional financial assurance.





# Affidavit of Dr. William Irwin

- ▶ A significant possibility of financial shortfall due to groundwater remediation and the indefinite storage of spent fuel.
- ▶ Testimony about strontium-90 contamination cost overruns at Connecticut Yankee, strontium-90 contamination of groundwater at Vermont Yankee, and demonstrated existence of leaks at Vermont Yankee. Each present a risk to public health and safety and merit consideration for unforeseen expenses.
- ▶ A full investigation and characterization of the Vermont Yankee site (radiological and non-radiological) has not occurred, and this may lead to significant cost overruns for unknown sources of contamination as was the case at Maine Yankee and Yankee Rowe, as well as Connecticut Yankee.



# Affidavit of Warren Brewer

- ▶ Eight ways Northstar could experience significant, unaccounted for, cost overruns that could lead to a shortfall in decommissioning funds:
  - ▶ Delays in work scheduling;
  - ▶ State law requirements for site restoration;
  - ▶ Discovery of previously unknown radiological or non-radiological contamination;
  - ▶ A radiological incident, including during spent fuel transfer;
  - ▶ Inadequate recovery of spent fuel management costs from the US Department of Energy (DOE);
  - ▶ Repackaging of spent nuclear fuel to meet DOE transportation requirements;
  - ▶ DOE recovers some or all of its past payments for delayed spent fuel disposal;
  - ▶ DOE fails to remove spent fuel from Vermont Yankee by 2052, and spent fuel must be repackaged in other casks.



# Affidavit of Warren Brewer

- ▶ Other sources of financial risk that place public health and safety at risk:
  - ▶ Northstar's reliance on the limited resources of the Decommissioning Trust Fund and the Vermont Yankee Site Restoration Fund and on potential litigation and settlement recoveries from the DOE.
  - ▶ Northstar's plan to perform license termination, spent fuel management and site restoration concurrently.
  - ▶ The current lack of publicly available information about the decommissioning.



# Affidavit of Charles B. Schwer

- The lack of a complete non-radiological site investigation and characterization creates significant uncertainty regarding what is required and what it will ultimately cost to clean up non-radiological pollution and complete site restoration.
- The Agency of Natural Resources is not able to determine at this time whether the work plan and related cost estimates for non-radiological clean up and site restoration that Entergy and Northstar rely upon in the PSDAR, revised PSDAR, and related filings are sufficient to address non-radiological pollution at the VY site.