

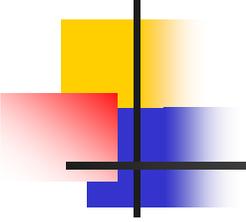
Regulators Experiences in Licensing and Inspection of Dry Cask Storage

June 2006

International Conference on Management of Spent Fuel from Nuclear Power Reactors
IAEA-CN-1444/56

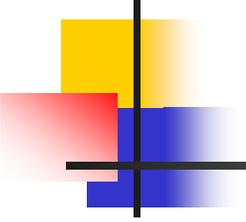
**E. William Brach, Director
Spent Fuel Project Office
U.S. Nuclear Regulatory Commission**





Overview

- Spent Fuel Storage Facility Status
- Types of licenses
 - Site specific
 - General
- Inspection
- Conclusion



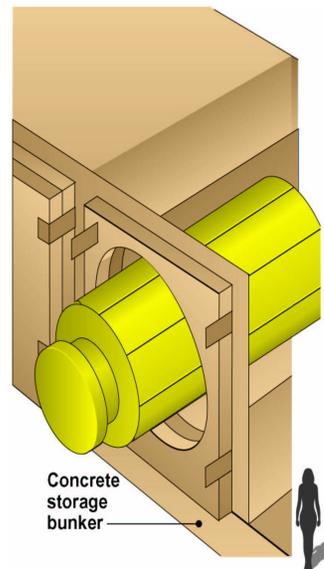
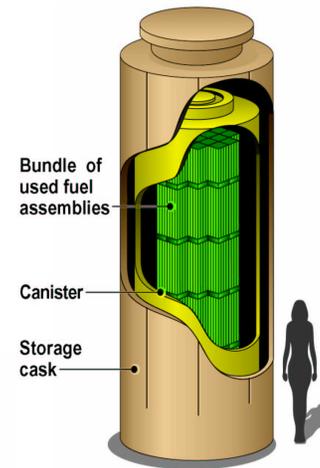
Spent Fuel Project Office Responsibilities

- Licensing and Inspection of Spent Fuel Storage Casks and Facilities
- Certification and Inspection of Spent Fuel and Radioactive Material Transportation Casks
- Coordination with State and Federal Agencies, International Regulatory Agencies, and Native American Tribes
- Public outreach

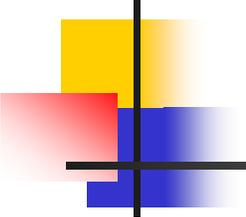
Spent Fuel Dry Storage Single & Dual Purpose Cask

At some nuclear reactors across the country, spent fuel is kept on site, above ground, in systems basically similar to the ones shown here.

1 Once the spent fuel has cooled, it is loaded into special canisters which are designed to hold Pressurized-Water Reactor and Boiling-Water Reactor assemblies. Water and air are removed. The canister is filled with inert gas, welded shut, and rigorously tested for leaks. It may then be placed in a "cask" for storage or transportation.



2 The canisters can also be stored in above-ground concrete bunkers, each of which is about the size of a one-car garage. Eventually they may be transported elsewhere for storage.



Current Independent Spent Fuel Storage Installation (ISFSI)

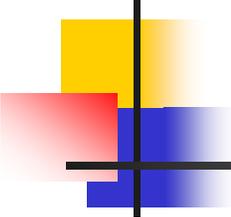
- 42 Licensed ISFSIs in 26 States
- 14 announced plans for new ISFSIs
- Over 800 loaded dry casks
- 15 approved storage cask designs
- 8 approved dual purpose cask design
- ISFSIs currently use or plan to use dual purpose casks for the future

Dresden Dry Cask Storage



Susquehanna Dry Cask Storage



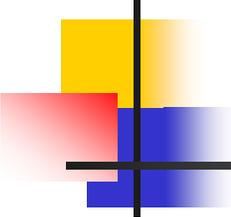


Options for Spent Fuel Storage Licensing

- Site Specific License
 - Available to Part 50 (reactor) licensees and other applicants
 - Required for away-from-reactor sites
 - Application submitted to NRC for approval
 - Opportunity for Hearing

- General License
 - Available only to Part 50 licensees
 - Require use of certified cask design
 - Requires site evaluation for compatibility with cask design

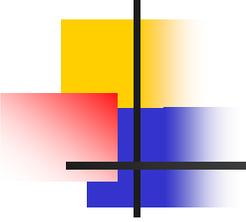
- Inspection Oversight
 - Same for both options
 - Inspection (site construction, cask fabrication, dry runs, cask loading)



Spent Fuel Storage Oversight

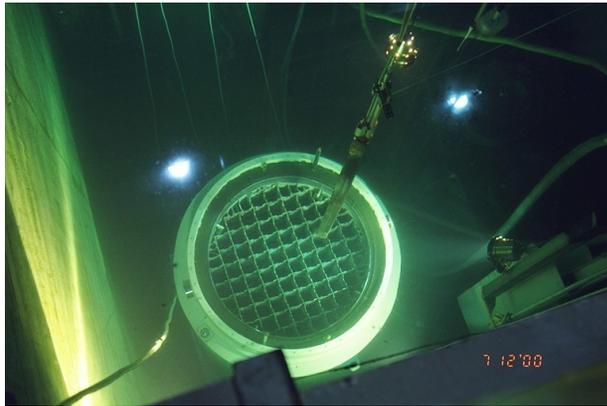
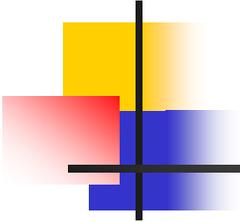
- Inspections are important element in SFPO's oversight of its licensees and certificate holders
- NRC task is to ensure that planned and existing licensed operations can be and are conducted without undue risk to the public
- NRC conducts periodic inspections to ensure licensees meet NRC's regulatory requirements

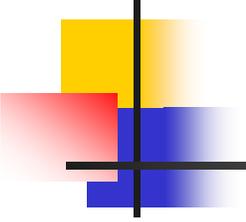
Inspection Lessons Learned Overview



- Complete on-site evaluation is very important
- Maintain questioning behavior
- Importance of QA and oversight at all phases of a project

Inspection Lessons Learned





Summary

- Safe and secure storage and transportation of spent fuel provided by:
 - Comprehensive regulations
 - Regulatory oversight and enhancements
 - Significant experience base & safety record
 - Robust cask and package designs
 - Continued vigilance & oversight