



U.S. Changes Resulting from the Fukushima Accident

John M. Pelchat

Senior Government Liaison Officer, Region II

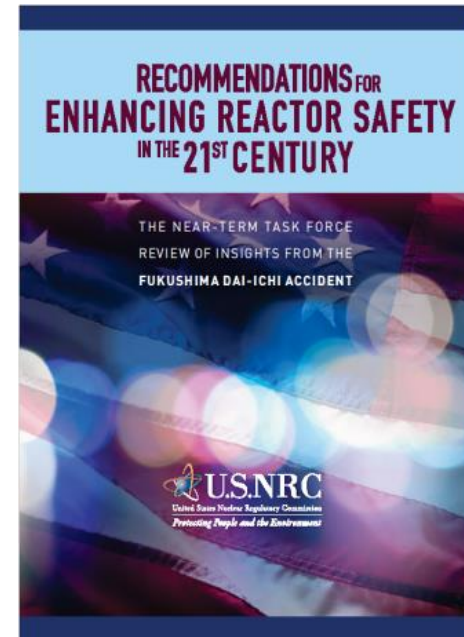
U.S. Nuclear Regulatory Commission

June 13, 2013



Lessons Learned: The Near-Term Task Force

- Within weeks of the accident, NRC created a task force to review the events and provide recommendations to enhance safety at U.S. plants
- Near-Term Task Force report issued July 2011



Summary of Regulatory Actions

- **Orders (issued March 2012)**



Mitigation strategies for extreme external events



Containment venting system for Mark I and II containments



Spent fuel pool water level instrumentation

- **Request for Information (issued March 2012)**



Seismic and flooding walkdowns (completed Nov. 2012)



Seismic and flooding hazard reevaluations



Emergency Preparedness staffing and communications

- **Rulemakings (ongoing)**



Station Blackout Mitigation Strategies (SBOMS)



Onsite Emergency Response Capabilities



Filtering and Confinement Strategies

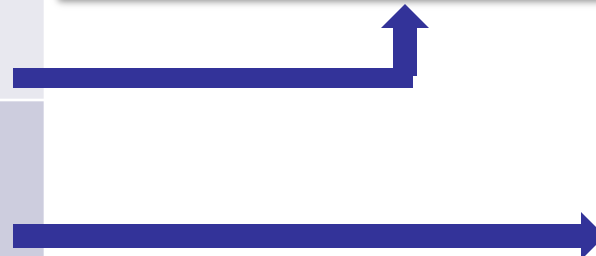


Mitigation Strategies For Extreme External Events



Requires a three-phase approach for maintaining or restoring core cooling, containment, and spent fuel cooling

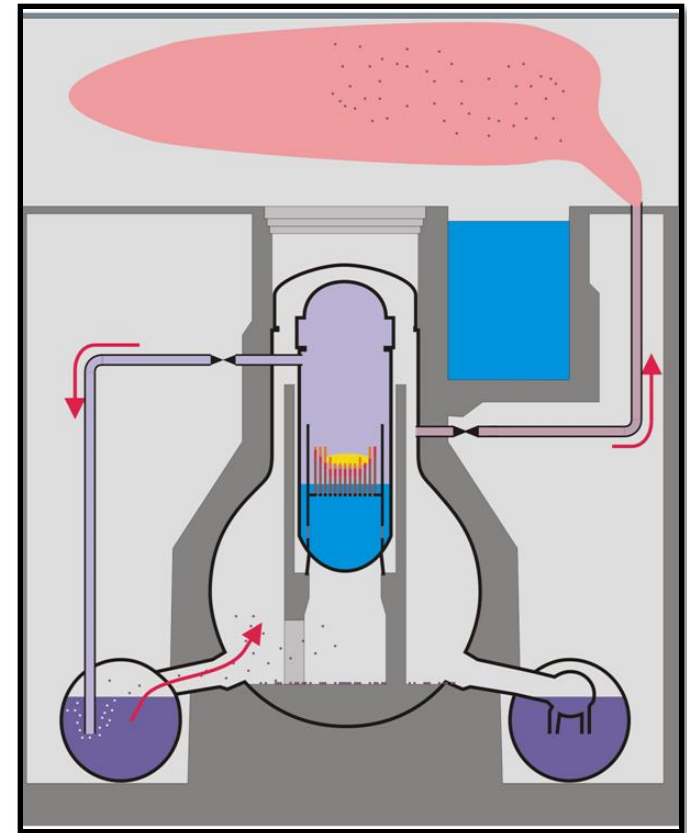
Phase	Licensee may use
Initial	Installed equipment
Transition	Portable, onsite equipment
Final	Resources obtained from offsite



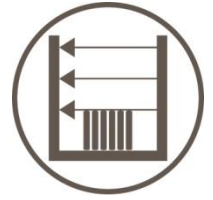
Containment Venting System



- Applies to boiling water reactors with certain designs
(No South Carolina plants)
- Vents help control pressure by removing heat
- May help prevent core damage
- Must continue to function if core damage/melting occurs
- Required to work when all power is lost

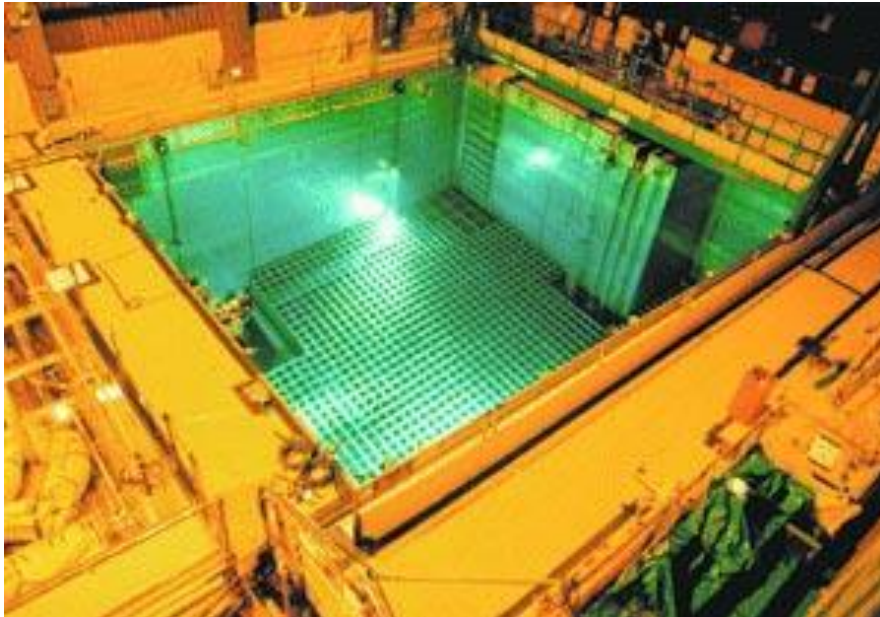


Spent Fuel Pool Instrumentation






Requires installation of water level instrumentation to indicate:

- 1 – Normal fuel pool level
- 2 – Below-normal level that still provides radiation shielding
- 3 – Very low level, near top of fuel racks, where immediate action to add make-up water should be taken



Requests for Information

- NRC asked licensees to:
 -  Inspect or “walk down” currently installed earthquake and flooding protection features, and correct degraded conditions
 -  Use present-day information to reevaluate the potential effects of an earthquake or flooding event
 -  Enhance emergency plans to ensure sufficient staffing and communication capabilities if multiple reactors at a single site are affected by the same event



Rulemaking Activities



Station Blackout Mitigation Strategies (SBOMS)

- Will make Mitigation Strategies Order a regulation



Onsite Emergency Response Capabilities

- Will integrate plant emergency procedures

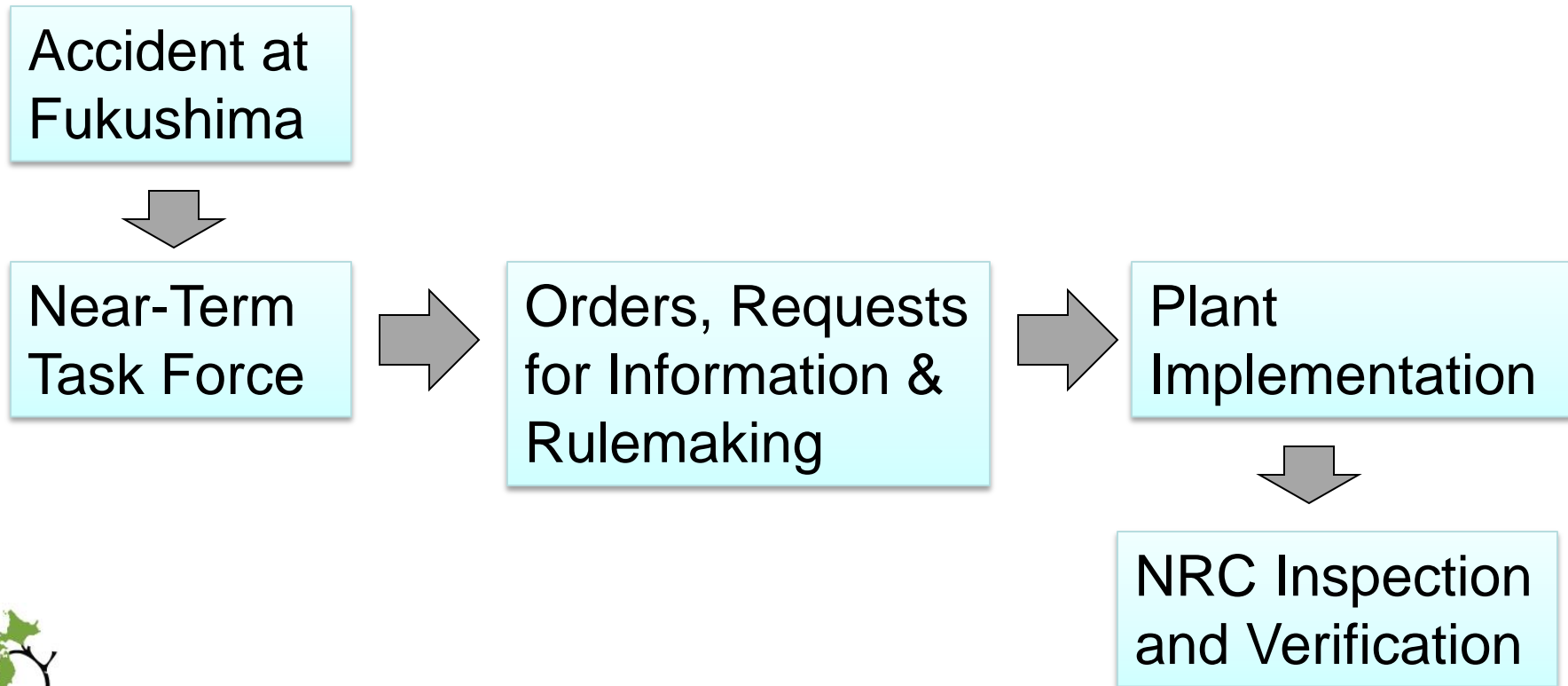


Filtering and Confinement Strategies

- Will consider additional protections to limit potential release of radioactive material



Process Overview



- **Catawba**

- Seismic and Flooding reevaluations – due March 2014
- All Orders to be fully implemented
 - Unit 1 – Fall 2015
 - Unit 2 – Spring 2015

- **Oconee**

- Seismic and Flooding reevaluations – submitted March 2013
- All Orders to be fully implemented:
 - Unit 1 – Fall 2016
 - Unit 2 – Fall 2015
 - Unit 3 – Spring 2015



South Carolina Plants

- **Robinson**

- Seismic & Flooding reevaluations – due March 2014
- All Orders to be fully implemented – Spring 2015

- **Summer**

- Seismic & Flooding reevaluations – submitted March 2013
- All Orders to be fully implemented – Fall 2015



More Information

- Public website

From www.nrc.gov, find link under “Spotlight” section called “Japan Lessons Learned”

THANK YOU

