



---

# Vermont Yankee Emergency Response Organization

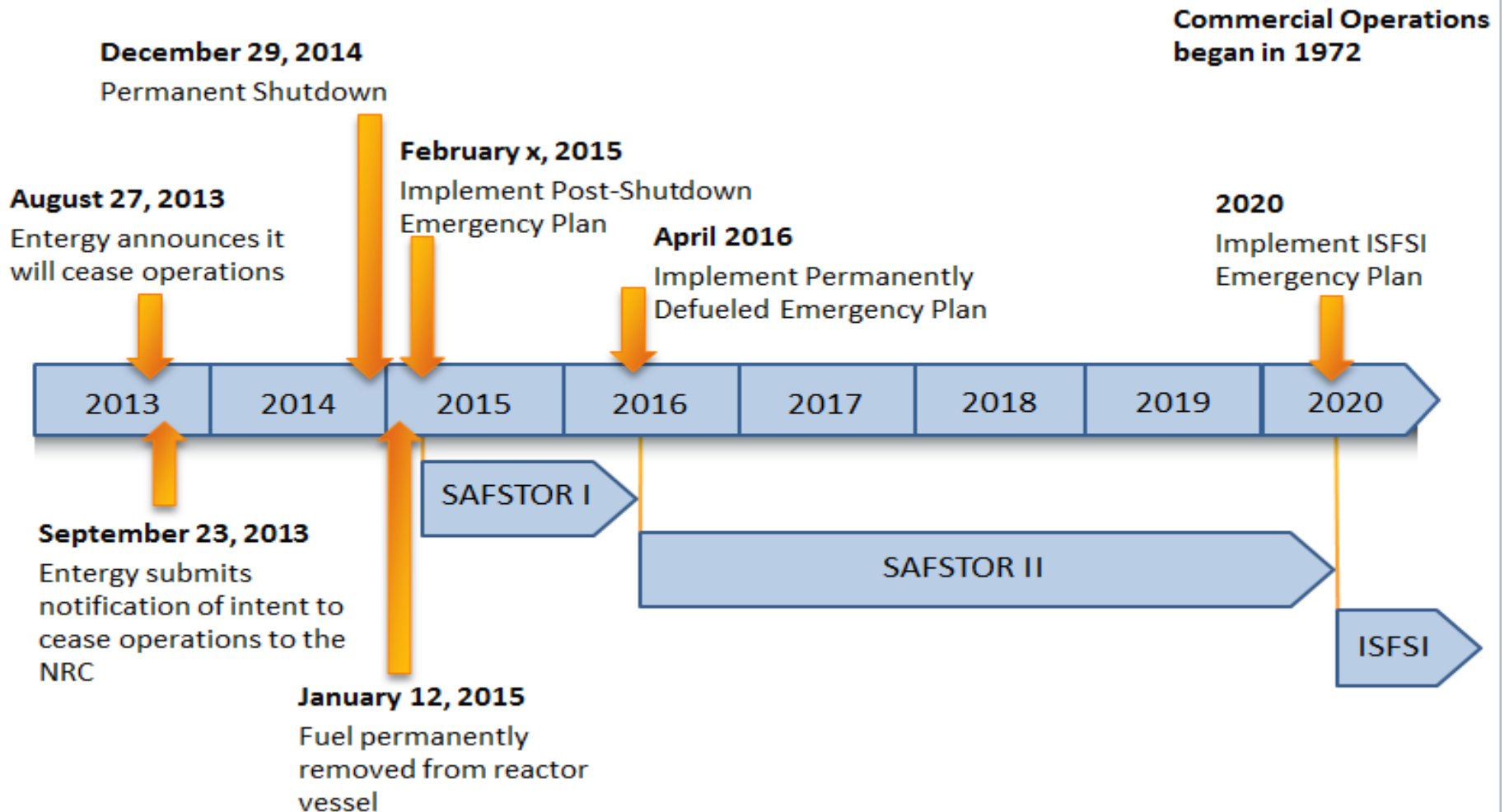
---

## SAFSTOR

January 23, 2015



# Vermont Yankee Timeline





# Emergency Planning Zone (10-mile EPZ)

## Vermont includes:

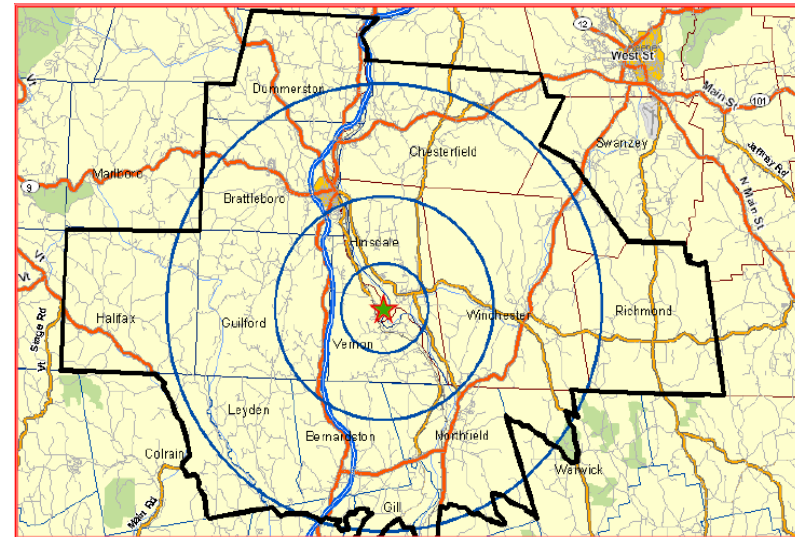
- ◆ Brattleboro
- ◆ Dummerston
- ◆ Halifax
- ◆ Vernon

## New Hampshire includes:

- ◆ Chesterfield
- ◆ Hinsdale
- ◆ Richmond
- ◆ Swanzey
- ◆ Winchester

## Massachusetts includes:

- Bernardston
- Colrain
- Gill
- Greenfield
- Leyden
- Northfield
- Warwick





# EPLAN Decommissioning Status

---

## EP Submittals made to date:

- ◆ Post-Shutdown EPlan License Amendment Request (LAR)
  - NRC Approval expected, February 2015
  
- ◆ EP exemption requests
  - NRC Commissioners expected to vote to grant exemptions, January 2015  
(supports Permanently Defueled EPlan and Emergency Action Levels (EALs))
  
- ◆ Permanently Defueled EPlan and EALs LAR
  - Submitted 6/12/14, Approval expected in Late 2015



# Post-Shutdown EPlan

---

- **NRC approval expected February 2015**
- **Implement promptly after NRC approval**
- **Fully compliant with existing regulation and guidance**
  - No exemptions from regulation
  - Until an exemption is issued, onsite and offsite programs are maintained and all EP requirements met, including exercises
- **Changes to on-shift and ERO staffing appropriate with lower risk of non-operating plant**
  - Maintain the capability to assess and monitor actual or potential offsite consequences of a radiological emergency and mitigate accidents associated with the Spent Fuel Pool



# Permanently Defueled EPlan

---

- **Approval expected by the NRC in 4<sup>th</sup> quarter of 2015**
- **Implementation expected in April 2016**
  - Calculations indicate that at that time, no design basis accidents or reasonably conceivable beyond design basis accident will be expected to result in EPA Protective Action Guides (PAGs) beyond the site boundary
- **Robust emergency plan commensurate with the reduced risk of an offsite release and types of possible accidents**
- **Fully compliant with regulation, as exempted**
- **Emergency Planning Zones**
  - Site Boundary commensurate with risk
  - According to the EPA PAG Manual, “EPZs are not necessary at those facilities where it is not possible for PAGs to be exceeded off-site.”
- **Emergency Action Levels**
  - Address only Spent Fuel Pool (SFP) and Independent Spent Fuel Storage Installation (ISFSI)
    - Radiological Conditions, Hazards, System Malfunctions
  - Unusual Event and Alert Classifications only



# Permanently Defueled Eplan (continued)

---

- **Declaration Time**

- VY maintains the capability to assess, classify and declare an emergency condition within **30 minutes** after the availability of indications to plant operators that an emergency action level threshold has been reached

- **Notification Time**

- Notification to VT, NH, MA within **60 minutes** of emergency declaration or change in classification

- **ERO Augmentation Time**

- Goal of the ERO is to augment the on-shift staff within **2 hours** of an Alert classification



# ISFSI EPlan

---

- LAR will be submitted in the future
- Implement after all fuel is transferred to the ISFSI- 2020
- Robust emergency plan commensurate with the reduced risk and types of possible accidents related to storage of spent fuel on ISFSI
- Fully compliant with regulation





# EP Capabilities Summary

EMERGENCY PREPAREDNESS CAPABILITY	PRESENT DAY TO PERMANENT SHUTDOWN (12/2014)	PERMANENT SHUTDOWN (12/2014) TO ZIRC FIRE REDUCTION (04/2016)	ZIRC FIRE REDUCTION (04/2016) TO ALL FUEL IN DRY STORAGE
<b>EMERGENCY IDENTIFICATION AND DECLARATION</b>			
NRC Approved Emergency Action Level Scheme	✓	✓	✓
Annual Review with VT Emergency Officials	✓	✓	✓
<b>EMERGENCY CLASSIFICATION LEVELS</b>			
Unusual Event	✓	✓	✓
Alert	✓	✓	✓
Site Area Emergency	✓	✓	✓
General Emergency	✓	✓	✓
<b>COMMUNICATION/OFFSITE NOTIFICATION SYSTEMS (FUNCTION PERFORMED BY VERMONT YANKEE) SYSTEMS OWNED OR MAINTAINED BY VY INDICATED IN BOLD TEXT</b>			
<b>InForm (Automated Notification System)</b>	✓	✓	✓
<b>Nuclear Alert System (Backup to InForm)</b>	✓	✓	✓
Commercial Telephone	✓	✓	✓
<b>Utility Microwave (Load Dispatchers)</b>	✓	✓	✓
<b>Mobile UHF Radio (Law Enforcement)</b>	✓	✓	✓
<b>NRC Telephone System</b>	✓	✓	✓
<b>Emergency Response Organization Notification</b>	✓	✓	✓
Southwest Fire Radio	✓	✓	✓
<b>Plant Intercom System</b>	✓	✓	✓
<b>Satellite Phone(s)</b>	✓	✓	✓
<b>Emergency Power Supply</b>	✓	✓	✓



# EP Capabilities Summary (continued)

EMERGENCY PREPAREDNESS CAPABILITY	PRESENT DAY TO PERMANENT SHUTDOWN (12/2014)	PERMANENT SHUTDOWN (12/2014) TO ZIRC FIRE REDUCTION (04/2016)	ZIRC FIRE REDUCTION (04/2016) TO ALL FUEL IN DRY STORAGE
<b>PUBLIC ALERT AND NOTIFICATION SYSTEMS (FUNCTION PERFORMED BY OFFSITE RESPONSE ORGANIZATIONS)</b>			
<b>SYSTEMS OWNED OR MAINTAINED BY VY INDICATED IN BOLD TEXT</b>			
<b>Sirens</b>	✓	✓	
<b>Tone Alert Radios</b>	✓	✓	
Emergency Alert System (EAS) <ul style="list-style-type: none"> <li>• Radio</li> <li>• Television</li> </ul>	✓	✓	✓
Route Alerting (Fire/Law Enforcement)	✓	✓	✓
Reverse-911 system(s)	✓	✓	✓
<b>EMERGENCY RESPONSE FACILITIES (VY FACILITIES)</b>			
Control Room	✓	✓	✓
Emergency Operations Facility	✓	✓	
Technical Support Center/Operations Support Center	✓	✓	
Joint Information Center	✓	✓	
<b>RADIOLOGICAL ASSESSMENT CAPABILITIES</b>			
Control Room	✓	✓	✓
Emergency Operations Facility	✓	✓	
Dose Projection Capability	✓	✓	✓
Radiation Protection Personnel	✓	✓	✓
Radiological Monitoring Equipment	✓	✓	✓



# EP Capabilities Summary (continued)

EMERGENCY PREPAREDNESS CAPABILITY	PRESENT DAY TO PERMANENT SHUTDOWN (12/2014)	PERMANENT SHUTDOWN (12/2014) TO ZIRC FIRE REDUCTION (04/2016)	ZIRC FIRE REDUCTION (04/2016) TO ALL FUEL IN DRY STORAGE
<b>ACCIDENT CONDITION ASSESSMENT CAPABILITIES</b>			
Process Monitors	✓	✓	✓
Radiological Monitors	✓	✓	✓
Meteorological Monitoring	✓	✓	✓
Fire Detection and Suppression	✓	✓	✓
Environmental Monitoring	✓	✓	✓
Laboratory Services	✓	✓	✓
<b>PROTECTIVE ACTION RECOMMENDATIONS</b>			
Evacuation	✓	✓	
Sheltering	✓	✓	
Potassium Iodide	✓	✓	
<b>COORDINATION WITH OFFSITE RESPONSE ORGANIZATIONS (LAW ENFORCEMENT, FIRE/RESCUE, AMBULANCE, MEDICAL)</b>			
Radio Communication with Local Law Enforcement	✓	✓	✓
911 Communications	✓	✓	✓
Letters of Agreement with Local Law Enforcement, Fire/Rescue, Ambulance, Medical	✓	✓	✓
Law Enforcement provides manpower and response capabilities (documented in letters of agreement with Security)	✓	✓	✓
Fire departments provide firefighting manpower and equipment to support VY when requested	✓	✓	✓
Ambulance services provide off-site medical transportation support	✓	✓	✓
Hospitals accept and render treatment to radiation accident patients	✓	✓	✓



# EP Capabilities Summary (continued)

EMERGENCY PREPAREDNESS CAPABILITY	PRESENT DAY TO PERMANENT SHUTDOWN (12/2014)	PERMANENT SHUTDOWN (12/2014) TO ZIRC FIRE REDUCTION (04/2016)	ZIRC FIRE REDUCTION (04/2016) TO ALL FUEL IN DRY STORAGE
Coordination with State Government Authorities	✓	✓	✓
Federal Government Support (National Response Framework)	✓	✓	✓
Additional Technical Support (as needed)	✓	✓	✓
<b>Public Information (SEE ABOVE FOR PUBLIC ALERT AND NOTIFICATION)</b>			
Joint Information Center	✓	✓	
Corporate Support	✓	✓	✓
Public Inquiry Phone	✓	✓	✓
<b>DRILLS</b>			
Biennial Drills	✓	✓	✓
Communications Tests	✓	✓	✓
Fire Drills	✓	✓	✓
Medical Drills	✓	✓	✓
Radiological Monitoring Drills	✓	✓	✓
Health Physics Drills	✓	✓	✓
Security Drills	✓	✓	✓
<b>OTHER</b>			
Evacuation Time Estimates	✓	✓	