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**H. B. Robinson Nuclear Plant (RNP)**

- Located just outside of Hartsville South Carolina in Pine Ridge community
  - Approximately midway between Charlotte, North Carolina and Florence, South Carolina
- Westinghouse 3-loop Pressurized Water Reactor (PWR)
- Nuclear Plant Began Commercial Operation March 1971
- Generates 797 megawatts of power
- First Commercial Nuclear Power Plant In The Southeastern U.S.

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**Southern Exposure 2015 Overview**

- Full Scale Exercise named "Southern Exposure 2015"
- Participation included:
  - Federal agencies
  - State and local agencies
  - Private entities
- Conducted in conjunction with:
  - Biennial Nuclear Regulatory Commission (NRC) and Federal Emergency Management Agency (FEMA) Evaluated Exercise for RNP
  - South Carolina Ingestion Pathway Exercise (IPZ) that involves all areas within a 50 mile radius of the Robinson Nuclear Plant
    - South Carolina performs IPZ once every 8 years

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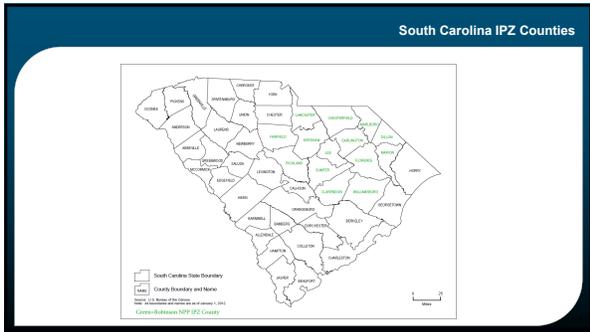
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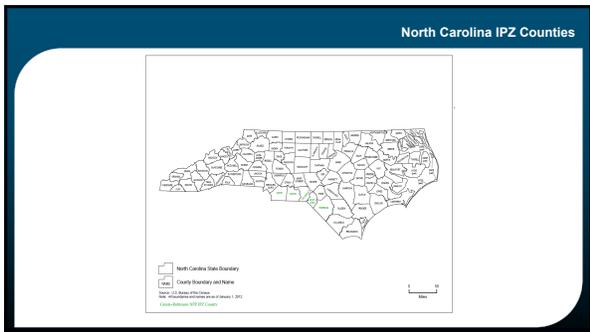
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### Southern Exposure Day 1 Scenario

0743 – Alert declared due to a vehicle crash in the Protected Area causing damage to a vital area

0831 – Reactor Coolant System (RCS) leak begins into Containment

0848 – Reactor is manually tripped resulting in 4 rods stuck out of core with multiple equipment failures

0929 – Site Area Emergency declared due to fuel failure resulting in Containment High Range Monitors indicating >100 R/hr

1042 – General Emergency declared due to RCS leak increase and additional fuel failure resulting in Containment High Range Monitors indicating >2,000 R/hr

1151 – Offsite radiological release starts from Containment through the Auxiliary Building and out the Plant Vent Stack

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Southern Exposure Day 2 Scenario

- Offsite radiological release mitigated at end of Day 1 play
- No additional onsite events occurred on Day 2
- RNP onsite Emergency Response Organization primarily supported offsite response agencies
  - State and locals
  - NRC
  - Institute of Nuclear Power Operations (INPO)
  - Nuclear Energy Institute (NEI)
  - Duke Emergency Crisis Operation Center (ECOC)
- RNP onsite "Recovery" procedures exercised

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Southern Exposure Day 2 Scenario

- Extended play between licensee with non-traditional organizations
  - Chief Nuclear Officer teleconferences with NEI, and INPO
    - Coordination of Industry response to assist and assess overall nuclear industry response
- Duke Energy participation as a member of the Unified Coordination Group typically composed of Federal Agencies and State Official(s)

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Lesson Learned #1

Conduct future Large Scale Multiple Agency Exercises outside of the NRC/FEMA Evaluated Biennial Exercise and IPZ Framework

- More realistic escalation of Exercise scenario up to General Emergency declaration
- Offsite agencies, including Federal Agencies can augment in real time
- Radiological release and protective action guidelines can be adjusted for offsite objectives
- Licensee Trusted Agent protocol and need for scenario confidentiality minimized
  - Scenario revised twice; once for offsite breach and one for internal breach of scenario

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Lesson Learned #2

New Demands Posed by More Players, Robust Joint Information System/Social Media Simulation

- SimulationDeck – Allowed social media play among NEI, Duke, federal/state agencies, 30-40 observers
- Challenged by slow speed of information flow re: verifying information and positioning industry effectively as a resource...how best to establish quicker response within EP structure
- Greater integration needed with member company communications and state agencies re: D.C. news conferences
- Improved coordination resulting from NRC presence in INPO Center
- Near Site Joint Information Center (JIC) initial command and control dependent on strong local leadership
  - Utility takes initial JIC lead but will relinquish control during extended event

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