

Turkey Point Nuclear Plant Evacuation Planning

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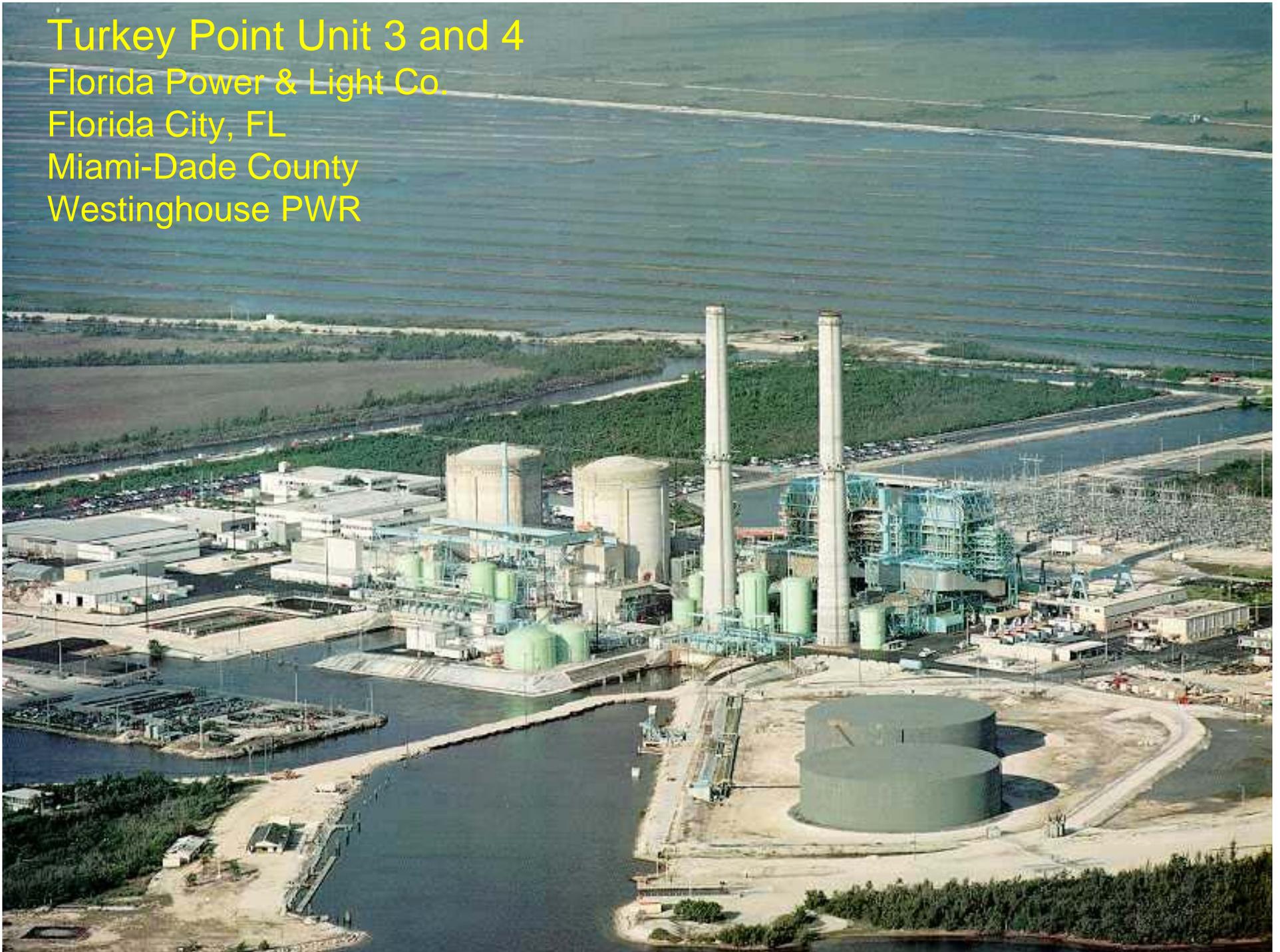


Florida Nuclear Plants

Approximately 25% of State's power comes from nuclear.

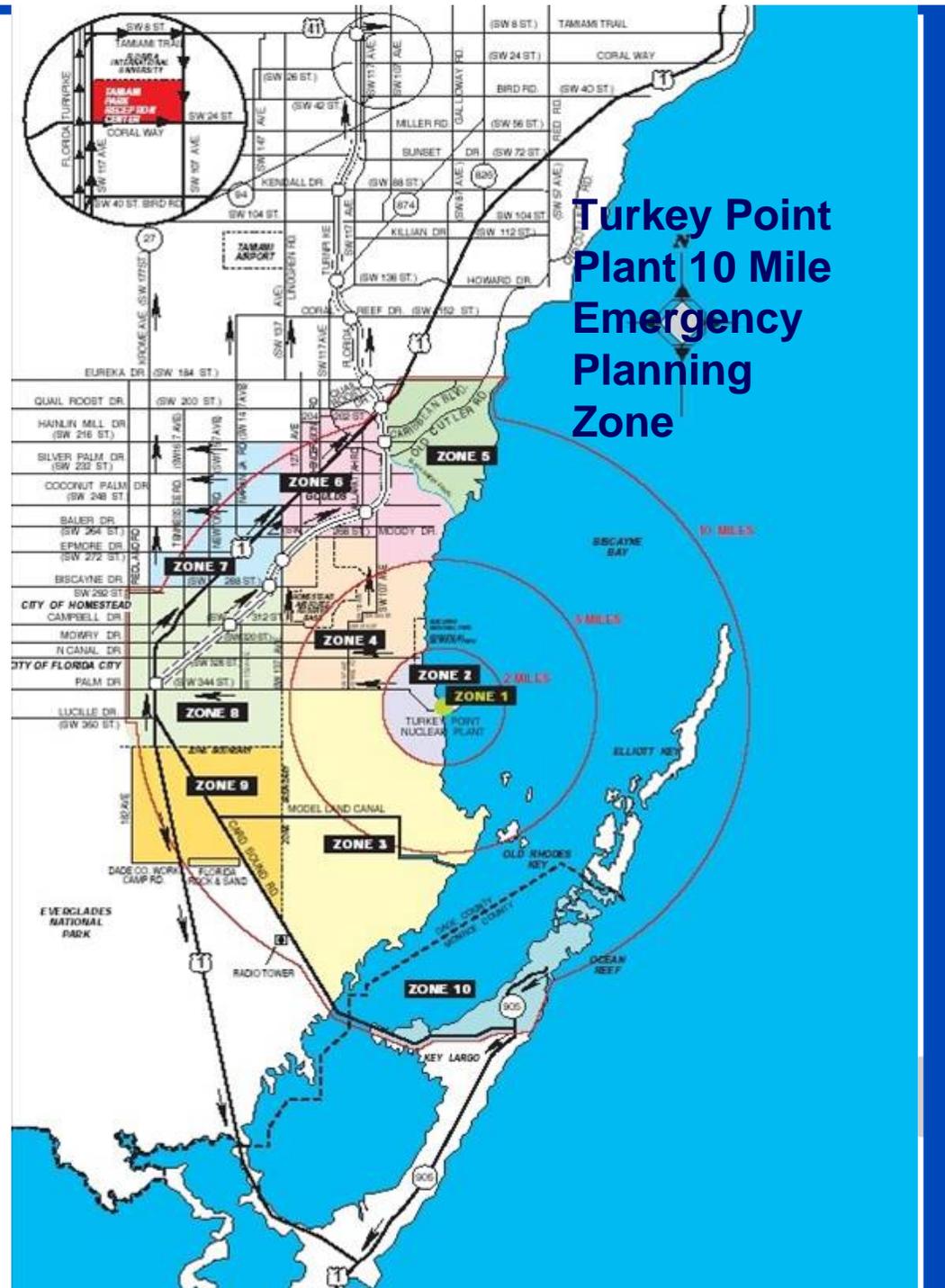


Turkey Point Unit 3 and 4
Florida Power & Light Co.
Florida City, FL
Miami-Dade County
Westinghouse PWR



NRC defined areas for pre – planned actions

- Sound technical basis
- Industry standard
- 10 mile plume EPZ
 - Pre-planned actions in place to quickly protect the public.
- 50 mile ingestion EPZ
 - longer term actions to manage the risk from standing/ living/ eating radioactive material over an extended period of time.



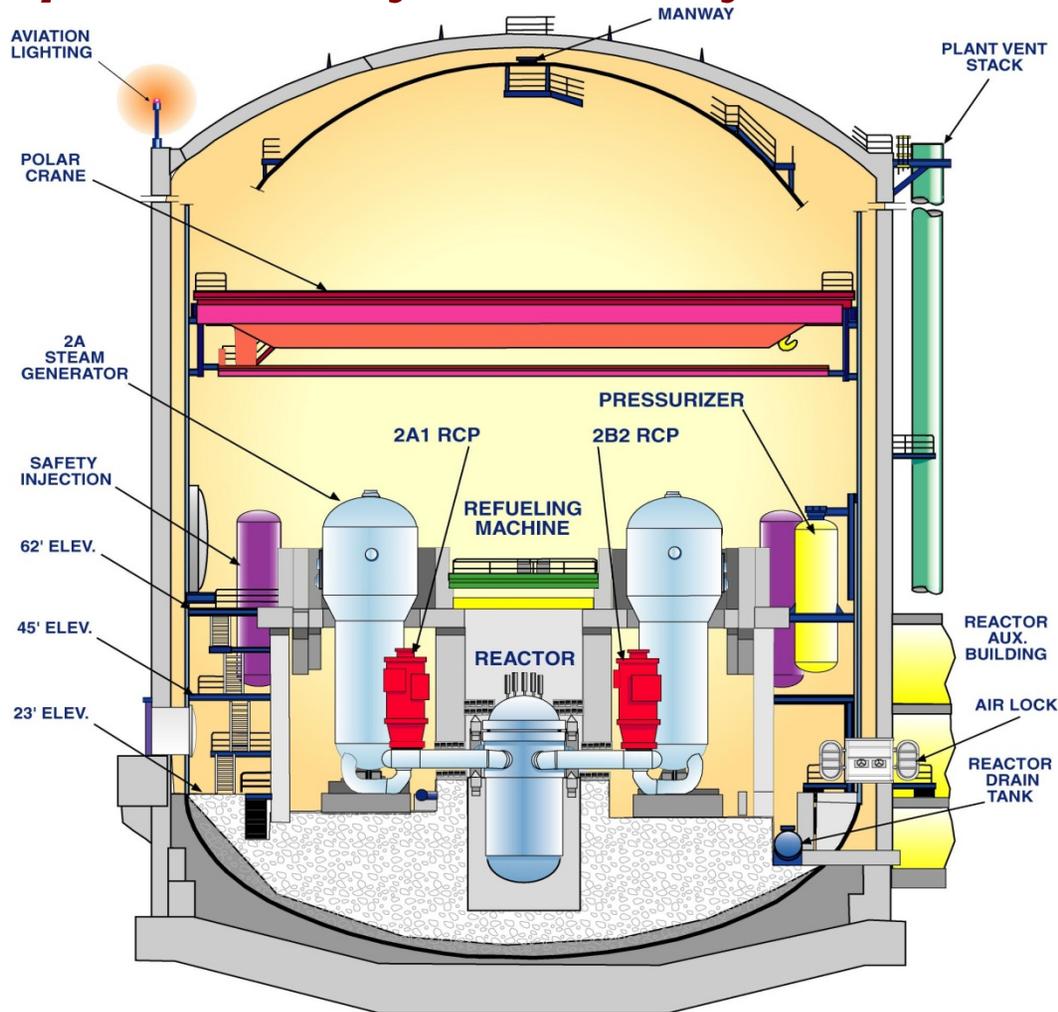
Turkey Point designs incorporate multiple and redundant systems

- Defense in Depth is part of plant design
- Cooling systems designed with redundancy
- Redundant power sources for critical systems
 1. Multiple off-site power lines (3)
 2. Emergency Diesel Generators (4)
 - Only one required to power cooling system
 - 7 days worth of fuel stored onsite
 - Fuel storage is protected
 3. Backup batteries for cooling and control room are stored onsite
 4. Multiple steam-driven Auxiliary Feed Water systems
 - Do not require AC power
 5. Portable diesel driven injection pumps
 - Pre-staged hoses and connections



Design Features ensure defense in depth through redundant equipment and alternate means to cool the reactor

All fuel inside a pressurized water reactor (PWR) is protected by a multi-layer containment system



PWR containment

1. Fuel cladding
 - Zircaloy; strength of stainless steel
2. Reactor vessel and cooling system
 - Vessel is protected by 9 inches to 1 foot of steel
3. Multi-layer containment structure
 - Over 3 feet concrete; steel liner inside the dome



Nuclear power plant safety systems are designed with “Defense-In-Depth”



Procedures and training for “worst case” events is in place at all FPL nuclear plants



Operators review procedures in the control room while putting St. Lucie Unit 2 online following a refueling outage.

- Tiered procedure levels
 - Normal, off-normal, emergency, severe accident
- Regular training for “worst case” scenarios
 - Seismic events
 - Severe weather
 - Loss of cooling
 - Loss of offsite/ onsite power
- Procedures and training have been tested in real events and simulated conditions
 - **Industry events and experience are routinely used to upgrade training and procedures**



Operators are trained and tested for a full week, every six weeks on time-critical emergency response.

Questions

