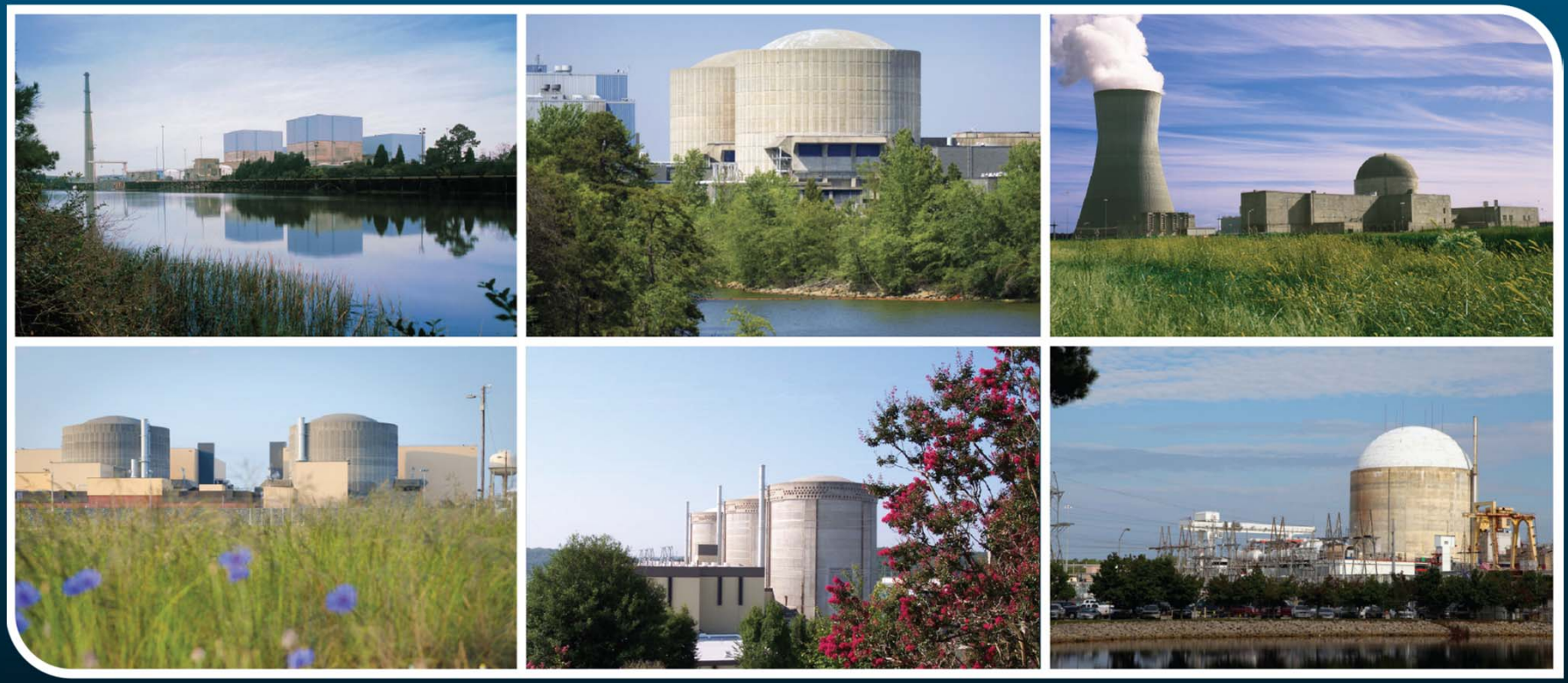


Harris Nuclear Plant Pre-Submittal Meeting – November 8, 2018

DUKE ENERGY®

License Amendment Request for

Shearon Harris Nuclear Power Plant
Emergency Plan Revision

Duke Energy Participants

- Jeff Robertson, Regulatory Affairs Manager
- David Thompson, Emergency Preparedness Corporate Manager
- Chuck Yarley, HNP Regulatory Affairs Engineer
- David Stih, HNP Emergency Preparedness Specialist

Summary

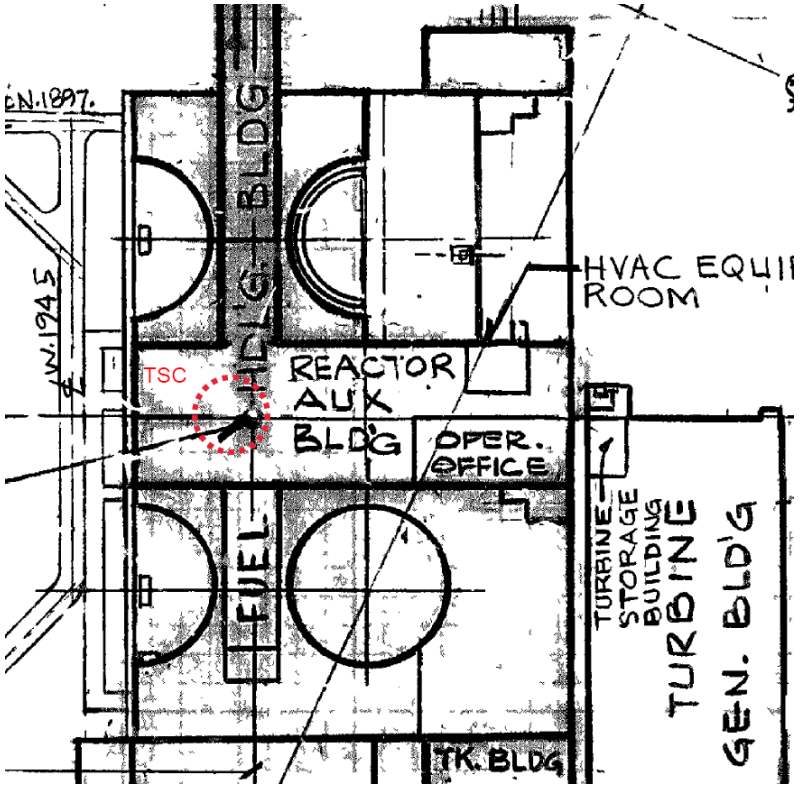
The LAR will revise the Emergency Plan as follows:

Currently per PLP-201	Revised PLP-201
TSC Exterior walls, roofs, and floor are built to Seismic Category 1, tornado, wind, and missile safety criteria.	Exterior walls, roof, and floor are designed and built to a nationally recognized building code…
Alerting, warning, and notification will be provided by sounding sirens, activation of tone-activated radios within five miles of the plant, and supplemented by announcements made through radio and television (EAS), sound trucks, bullhorns, and knocking on doors.	Alerting, warning, and notification will be provided by sounding sirens and supplemented by announcements made through radio and television (EAS), sound trucks, bullhorns, and knocking on doors.

Background: Technical Support Center

The Technical Support Center (TCS)

- Located in the Fuel Handling Building
  - Exterior walls generally built Seismic Category 1, tornado, wind, and missile safety-related criteria.
- Interior Walls and Ceilings are built to the North Carolina Building Code.
- There are roof and wall penetrations not built to nuclear safety-related criteria.



Background: Tone Alert Radios

- Currently, HNP ANS credits Sirens and Tone Alert Radios as primary.
  - Mobile Route Alerting is back-up.
  - Emergency Alert System (EAS) supplements both with notifications.

HNP supports Tone Alert Radios by:

- Distribution to all residencies within 5 miles of the plant.
- Yearly distribution of batteries.
- Yearly guidance on purpose and operation.
- Conducting annual testing and effectiveness surveys.

Background: Tone Alert Radios

Original (pre-2008) ANS Design:

- Used 69 Sirens
- Locations may be under 60 dBc

FEMA approval was contingent on supplementing original design.

Current (Post-2008) ANS Design:

- Uses 83 Sirens
- 60 dBc for essentially 100% population

Supplemental system no longer needed.

FEMA, State, and county approval Req.

Proposed Changes:

For TSC:

- The E-Plan will no longer state that the TSC is built to “safety-related criteria”.
- Instead, E-Plan will state that the TSC is built to a nationally recognized building code.

For Tone Alert Radios:

- The E-Plan will no longer include Tone Alert Radios as part of ANS.
- Instead, E-Plan will rely on sirens only for primary alerting system.

Regulatory Guidance – TSC and ANS

- 10 CFR 50.54(q), “Conditions of Licenses, Emergency Plans”
- 10 CFR 50.47, “Emergency Plans” and 10 CFR 50, Appendix E, "Emergency Planning and Preparedness for Production and Utilization Facilities“
- NRC Regulatory Issue Summary 2005-02, Revision 1, “Clarifying The Process For Making Emergency Plan Changes”
- NUREG-0654/FEMA-REP-1, Revision 1, “Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants”
- NUREG-0696, Dated February 1981, “Functional Criteria for Emergency Response Facilities”
- NUREG -0737 Supplement 1, Dated January 1983, “Clarification of TMI Action Plan Requirements”
- FEMA-REP-10, Dated November 1985, “Guide for the Evaluation of Alert and Notification Systems for Nuclear Power Plants,”

Precedents

The following LAR is an example of a recently approved Emergency Plan utilizing a siren-only ANS design:

- Vogtle, Unit 3 and 4, 2017 – NRC agrees Tone Alert Radios no longer required per approved VEGP ANS design.

Conclusion

- LAR is required to correct nonconformance with TSC documentation.
  - The TSC design is robust, meets regulatory guidance to protect the public.
- Change will also align ANS design with FEMA/Industry best practices.
  - Credits improved siren performance from 2008 ANS redesign.
  - Eliminates vulnerability to public and significant burden on the site.
    - Site and public coordination will no longer be required to distribute, install, and maintain Tone Alert Radios.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