SNC000083
Vogtle ESP Mandatory Hearing Presentation #6
Safety Topic #4

Site Emergency Plan

Ted Amundson
Consultant
EP Consulting

Ted Amundson

- Professional Experience
  - 32 years in the commercial nuclear industry
    - System Engineer
    - Training Manager
    - Quality Assurance Director
    - Engineering General Superintendent
    - Business Support Manager
      - Emergency Preparedness
- Education
  - Bachelors Mechanical Engineering (Aeronautical Option)
  - Masters Mechanical Engineering

Exhibit SNC000084

Regulatory Bases

- 10 CFR 52.17 (b)(2)(ii)
  - Propose complete and integrated emergency plan
- 10 CFR 50.47(b)
  - 16 planning standards
- 10 CFR 50 Appendix E
  - Content of emergency plans
  - Implementing procedures
  - Emergency Response Data System (ERDS)

Regulatory Guidance

- Reg. Guide 1.101
  - NUREG 0654/FEMA Rep 1, Rev. 1
  - NEI 99-01 - Emergency Action Levels (EALs)
- NUREG 0654/FEMA Rep 1, Supplement 2
- NEI 07-01
  - EAL Development
- NUREG 0696
  - Emergency Response Facility Function (TSC, OSC)
- NUREG 0737, Supplement 1
  - Emergency Response Facility Capability (TSC, OSC)

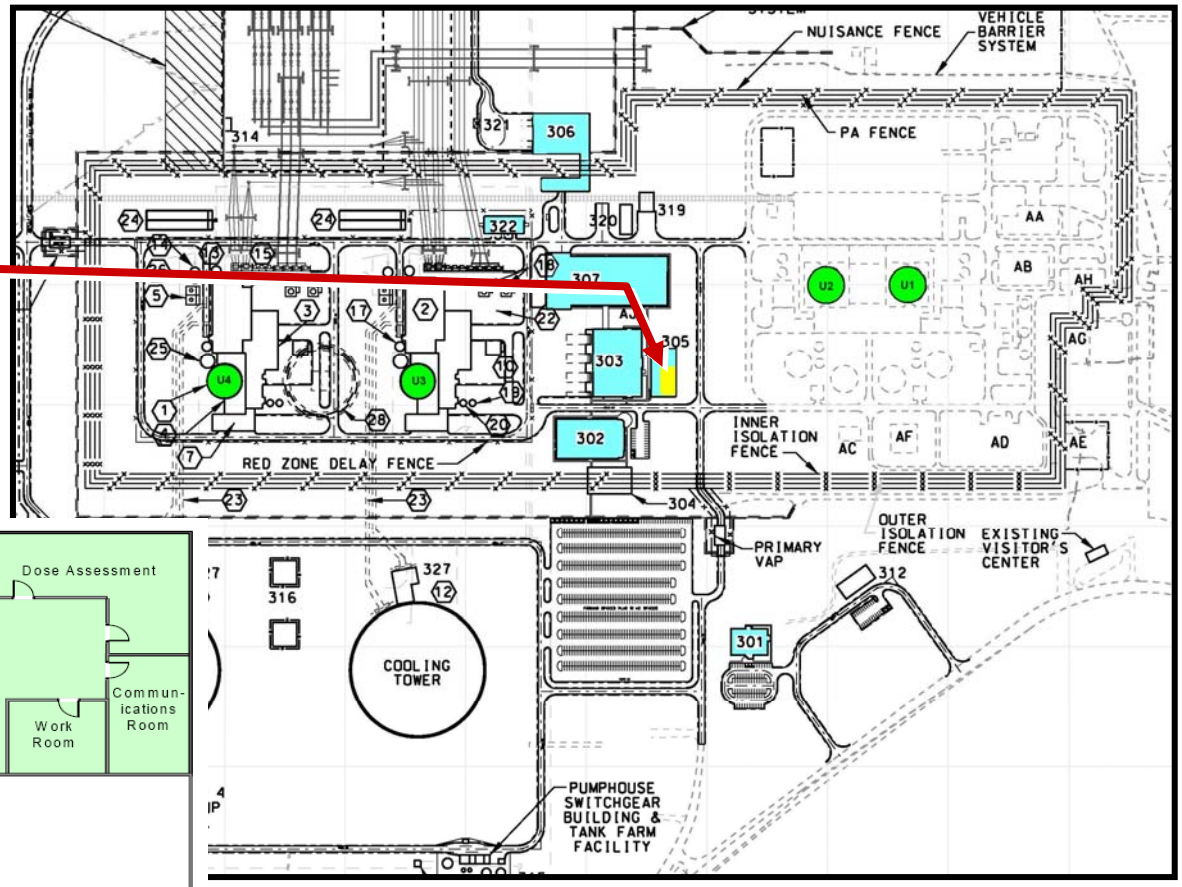
Emergency Plan Development

- Existing emergency plan modified to include new Units
  - Base plan for elements common to all four Units
  - Base plan supported by two annexes
    - One annex for elements unique to Units 1 and 2
    - One annex for elements unique to Units 3 and 4
- Common Technical Support Center (TSC) for all Units
- Use existing Emergency Offsite Facility (EOF)
- New evacuation time estimate study
  - No significant impediments to Emergency planning
- Obtained concurrence from State and local agencies

SNC000085
SNC000086
SNC000087
SNC000088 , App. 13.3A

EP Features – TSC

- **Common TSC**
- **Common PA**
- **TSC Location**
- **TSC Layout**



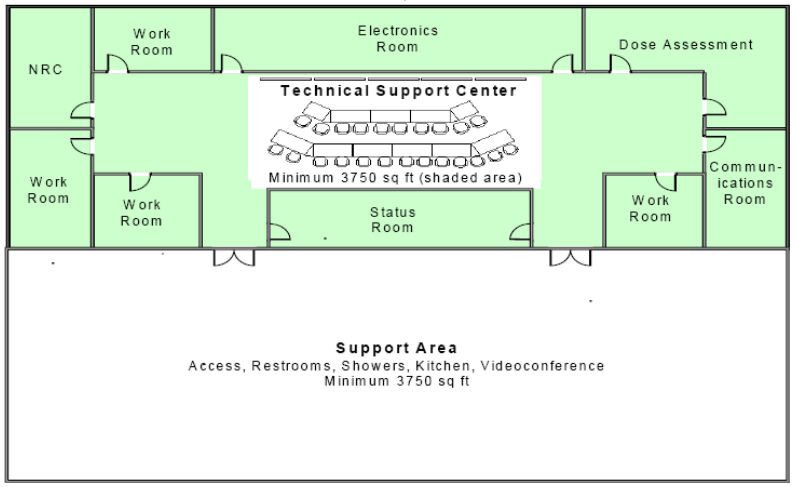


Exhibit SNC000089

Certifying Agencies

- Aiken County Emergency Services
- Allendale County EPA
- AREVA ANP, Inc.
- Barnwell County EMA
- Bechtel Power Corporation
- Burke County EMA
- Burke County Sheriff's Department
- Burke County Medical Center
- Doctors Hospital
- Dr. B. Lamar Murray
- Georgia DNR

Exhibit SNC000088, section 13.5, Table 13.3-3

Certifying Agencies (Cont.)

- Georgia OHS
- Joseph M, Still Burn Centers Inc.
- Medical Specialists, Inc.
- National Oceanic and Atmospheric Administration (NWS)
- Radiation Management Consultants, Inc.
- South Carolina DHEC
- South Carolina EMD
- US DOE
- Westinghouse Electric Co. Nuclear Services
- WSRC Emergency Management

Exhibit SNC000088, section 13.5, Table 13.3-3

Emergency Plan Key Elements

- Emergency Classifications – 10 CFR 50.47(b)(4)
- Notifications – 10 CFR 50.47(b)(5)
- Accident Assessment – 10 CFR 50.47(b)(9)
- Protective Response – 10 CFR 50.47(b)(10)
- Emergency Communications – 10 CFR 50.47(b)(6)
- Emergency Facilities and Equipment – 10 CFR 50.47(b)(8)

Emergency Classifications

- Classification and Emergency Action Level Basis
  - EAL - A pre-determined, site specific, observable threshold for a plant Initiating Condition (IC) that places the plant in a given emergency classification level.
  - IC - One of a predetermined subset of nuclear power plant conditions where either the potential exists for a radiological emergency, or such an emergency has occurred.
  - NEI 07-01
    - NEI 99-01

SNC000085, Annex V2, Section D and Appendix V2-3

Notifications

- ERO
  - On-site – public address system
  - Off-site – auto dialer
- State, Local, SRS, and NRC
  - ENN
  - ENS
- Public
  - Tone Alert Radios
  - Sirens
  - Local routing of vehicles and boats

Exhibit SNC000085, section E

Accident Assessment

- Methods
  - Radiological monitoring
    - On-site
    - Off-site
  - Radiochemistry analysis
- Equipment
  - Radiation monitors
  - Plant computer monitoring systems
- Systems
  - Meteorological Information Data Acquisition System (MIDAS)

Exhibit:SNC000085, Section I

Protective Response

- On-site Personnel
  - Alerting
  - Assembly and Accountability
  - Site Dismissal
- Public
  - Protective Action Recommendations (PARs)
    - Sheltering
    - Evacuation

Emergency Communications

- NRC
  - Federal Telecommunications System (FTS)
    - Emergency Notification System (ENS)
    - Health Physics Network (HPN)
  - Emergency Response Data System (ERDS)
- State and Local
  - Emergency Notification Network (ENN)
- On – Site
  - Control Room
    - Dedicated circuits – TSC, EOF, OSC
    - ENS
    - ENN
    - Other normal power plant communications

Exhibit SNC000085, section F

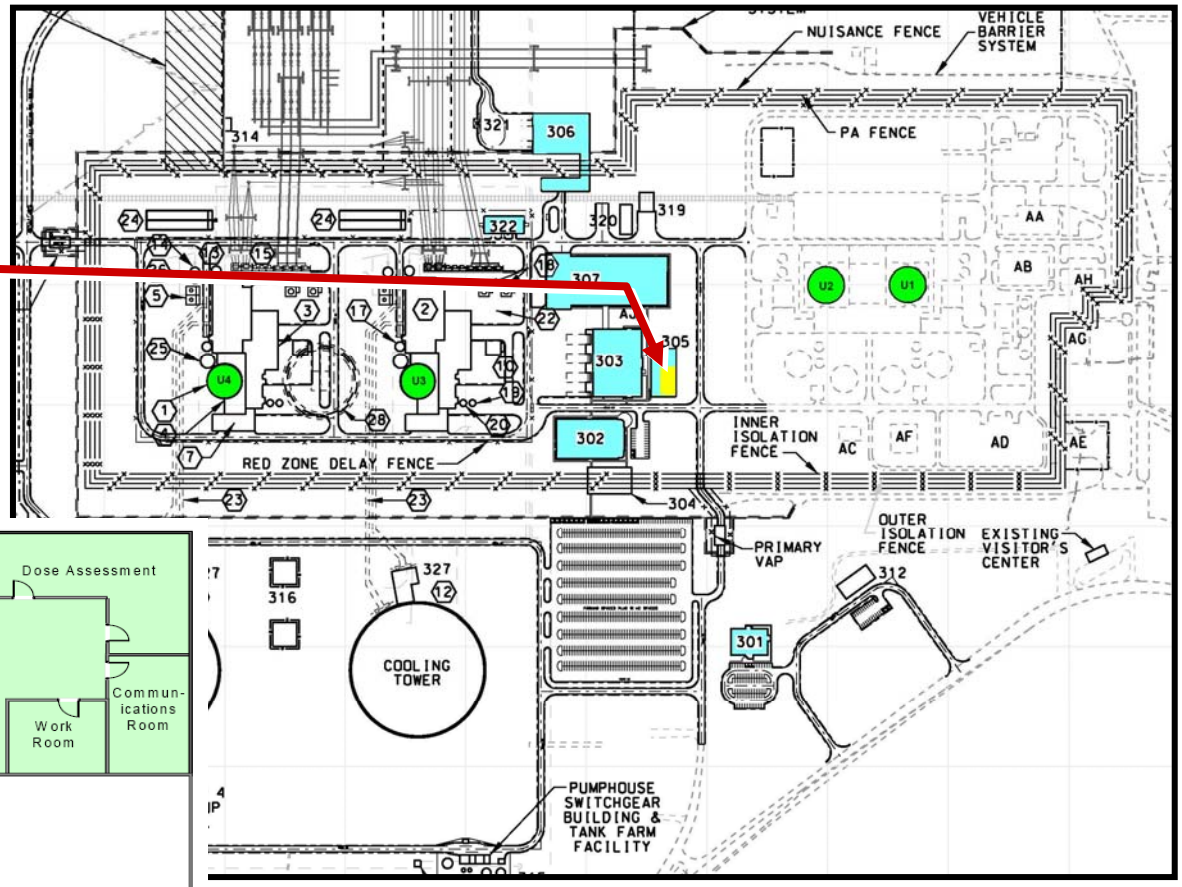
Facilities and Equipment

- TSC
  - Communication Support Center
- OSC
  - Control Support Area
- EOF
  - Existing Corporate Facility (Birmingham, AL)
    - Approved by NRC for all SNC licensed facilities in February 2005.

NUREG 0696
NUREG 0737 Sup 1
Exhibit SNC000090

EP Features – TSC

- **Common TSC**
- **Common PA**
- **TSC Location**
- **TSC Layout**



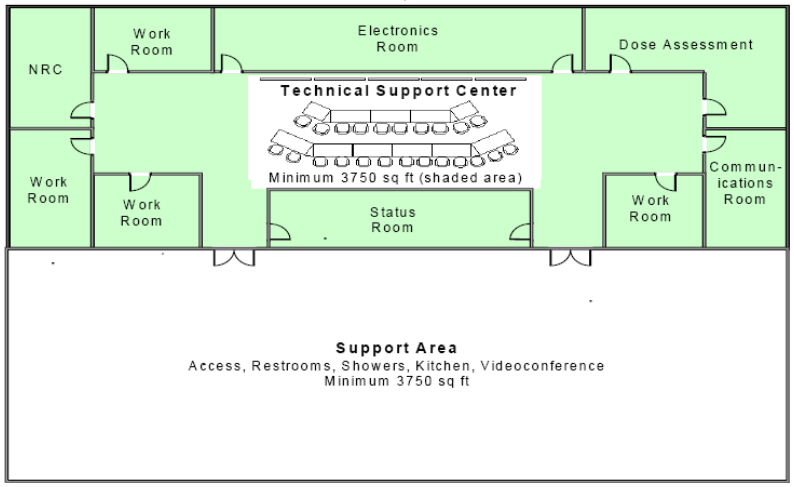


Exhibit SNC000089

Summary

- Regulatory Compliance
- Incorporation into Existing Plans
- Key Elements