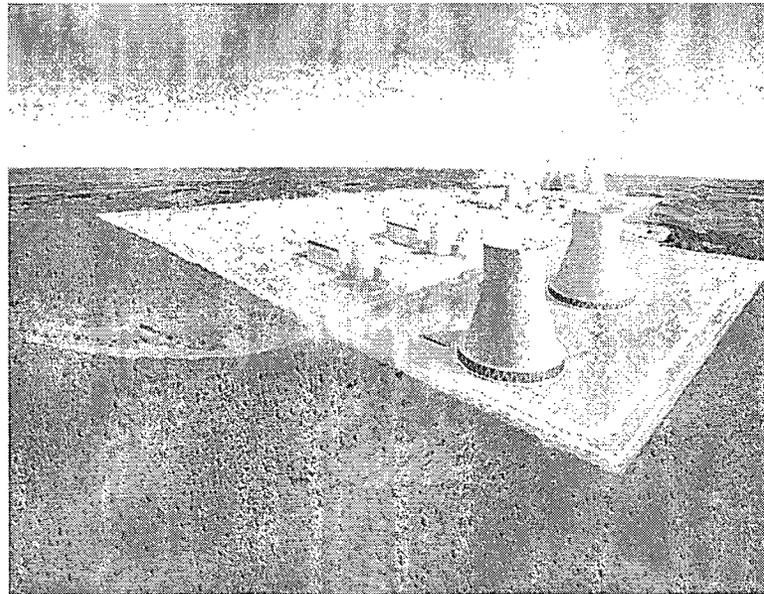


U.S. NRC

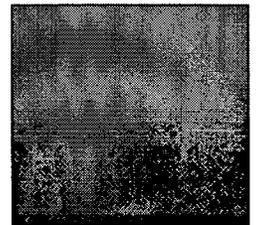
UNITED STATES NUCLEAR REGULATORY COMMISSION

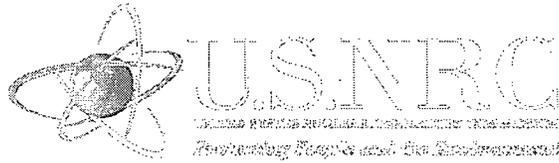
Protecting People and the Environment

**Public Meeting on Draft Environmental Impact Statement
for an Early Site Permit (ESP) at the
Vogtle Electric Generating Plant Site**



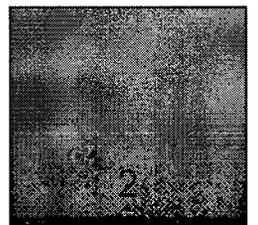
**U.S. Nuclear Regulatory Commission
October 4, 2007**

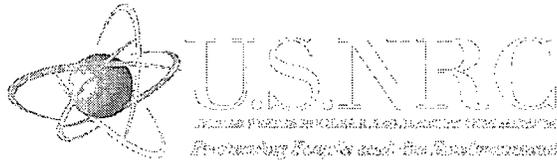




Introduction

- Describe NRC's Mission
- Discuss ESP permitting process
- Describe the environmental review process
- Discuss the results of our review
- Provide the review schedule
- Describe how to submit comments





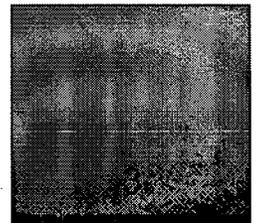
Who is the U.S. Nuclear Regulatory Commission?

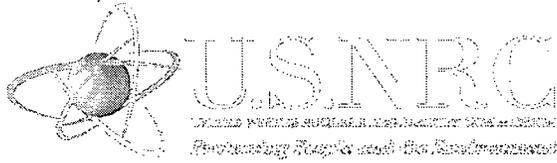
- Independent Federal agency
 - Five Commissioners
 - Professional staff

- Experienced regulator

- Mission: To protect public health and safety, promote common defense and security, and protect the environment

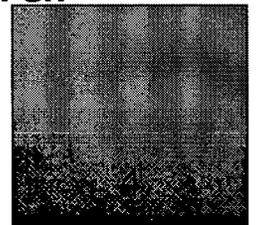
- Regulate commercial nuclear reactor activities

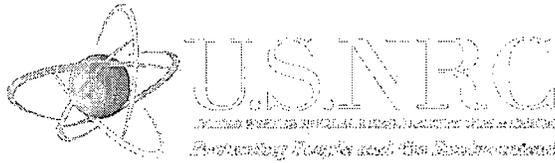




National Environmental Policy Act

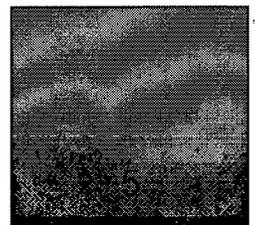
- NEPA requires Federal agencies to use a systematic approach to consider environmental impacts
- An environmental impact statement (EIS) is required for major Federal actions significantly affecting the quality of the human environment
- Issuing early site permit is considered a major Federal action

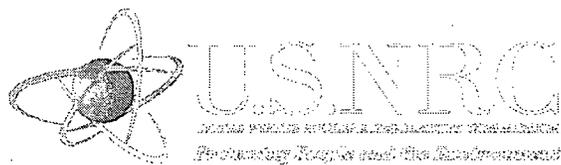




What is an Early Site Permit?

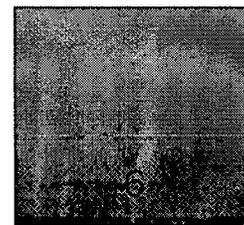
- An NRC decision that ensures that the proposed site is suitable for construction and operation of a nuclear power plant or plants
- The permit is not authorization or a decision to actually build and operate a plant
- Site preparation and limited construction activities allowed with an approved site redress plan

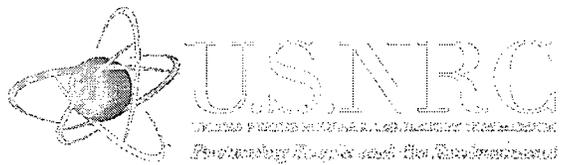




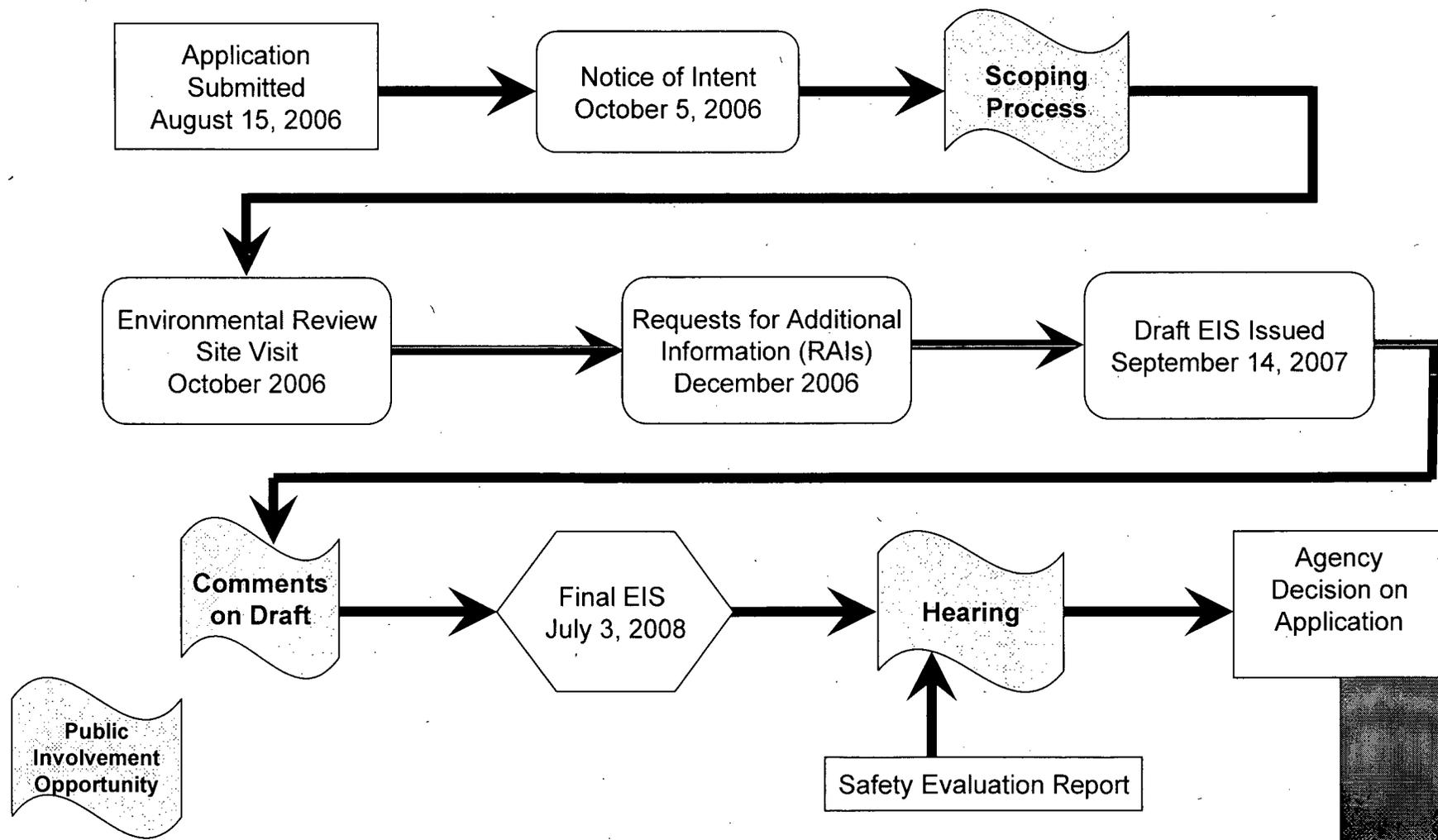
Why Does an Applicant Want an Early Site Permit?

- Allows an applicant to “bank” a site for up to 20 years
- Reduces licensing uncertainty
- Resolves siting issues before construction

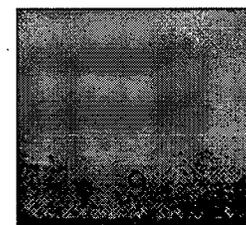
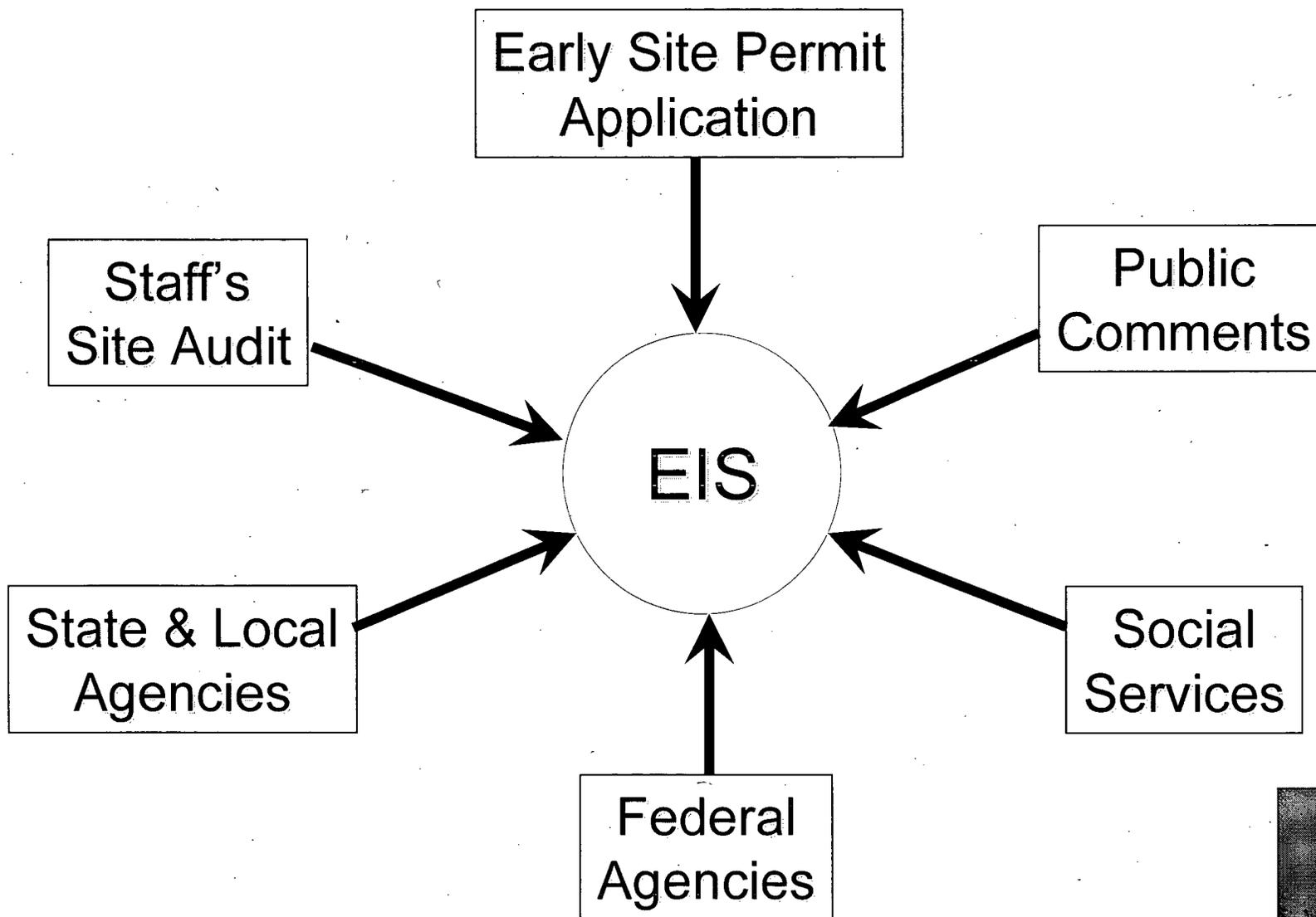


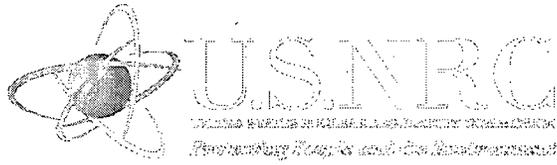


Environmental Review Process

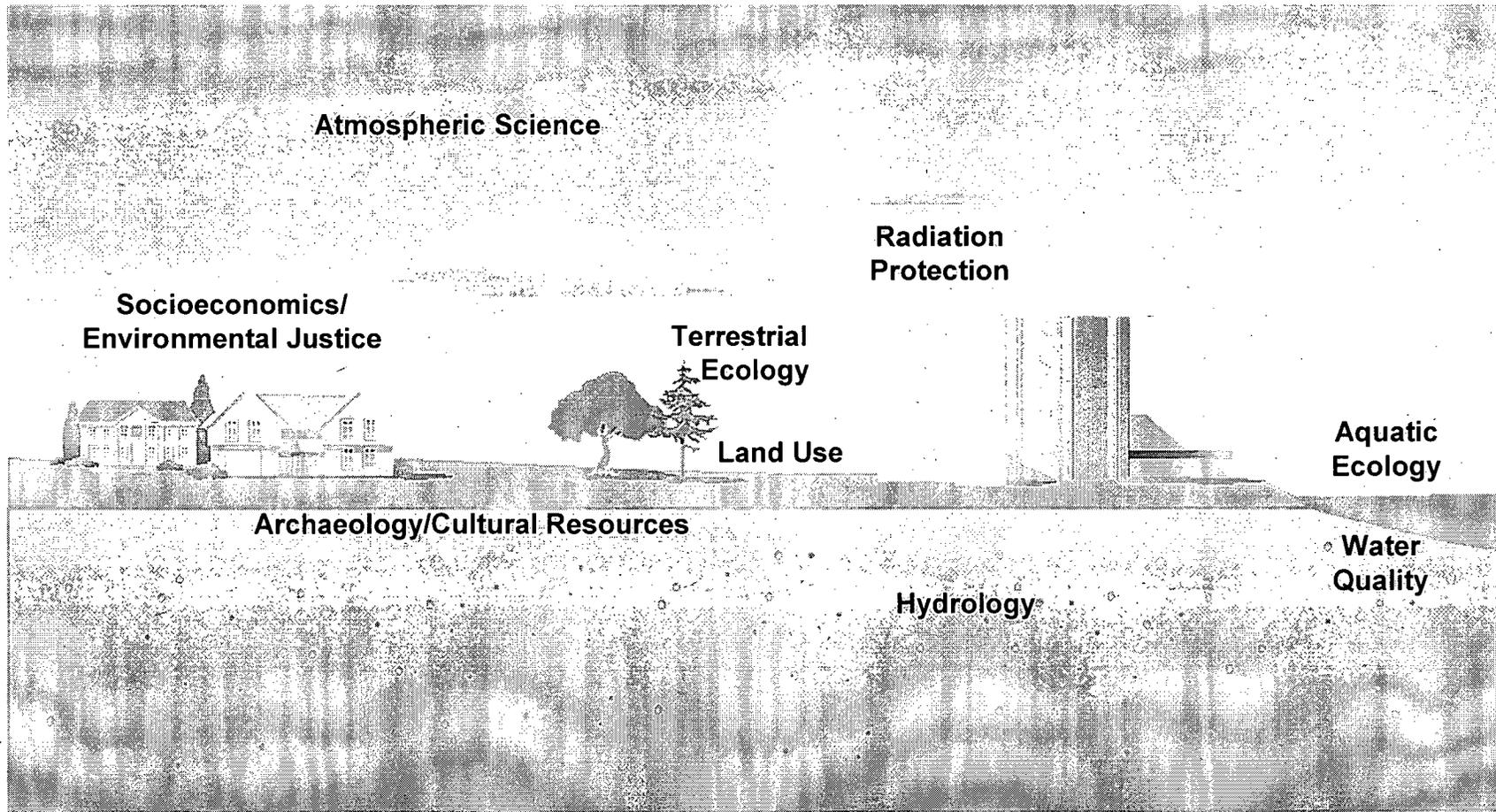


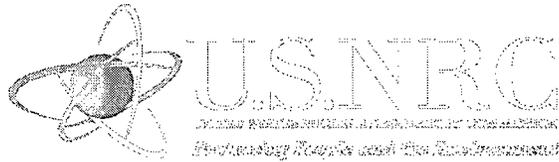
Information Gathering





Team Expertise



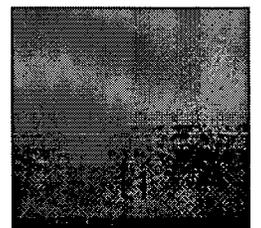


Results of the Environmental Review for the Early Site Permit at the Vogtle Electric Generating Plant Site

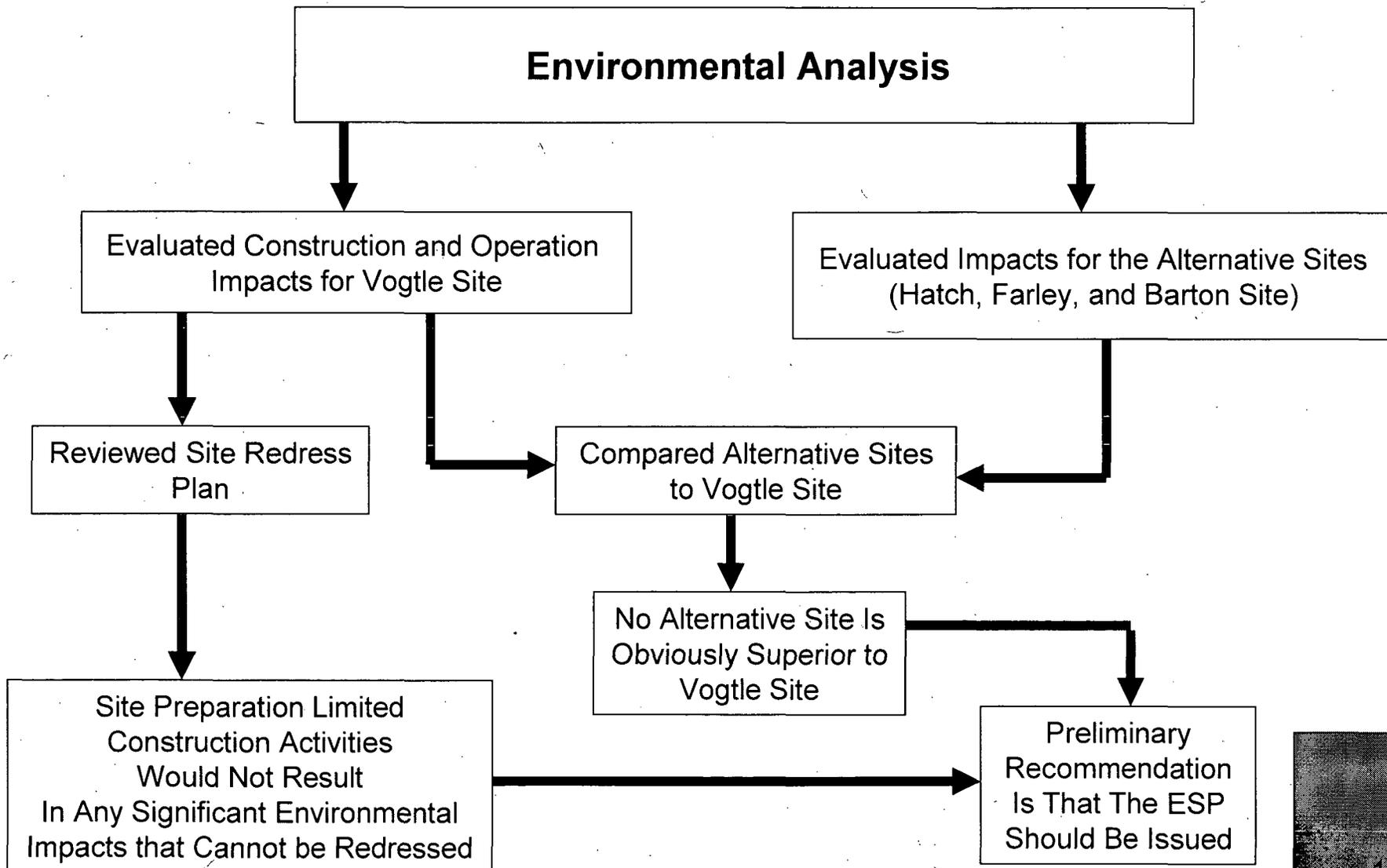
Michael Sackschewsky, Ph.D.

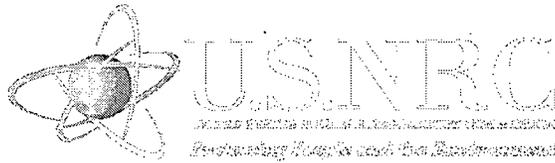
Team Leader

Pacific Northwest National Laboratory



Analysis Approach

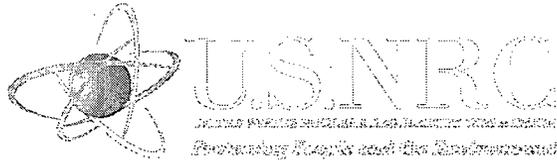




How Impacts are Quantified

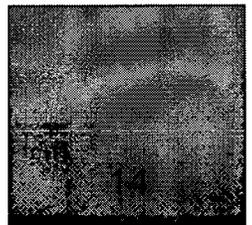
- NRC-defined impact levels:
 - **SMALL**: *Effect is not detectable or too small to destabilize or noticeably alter any important attribute of the resource*
 - **MODERATE**: *Effect is sufficient to alter noticeably, but not destabilize, important attributes of the resource*
 - **LARGE**: *Effect is clearly noticeable and sufficient to destabilize important attributes of the resource*
- Reflects Council on Environmental Quality regulations and guidance for NEPA analyses

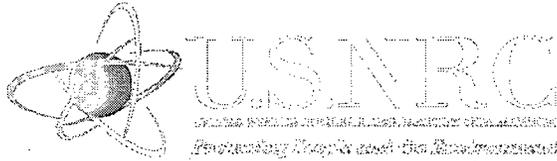




Organization of the Draft Environmental Impact Statement

- Chapter 2 - Environmental Baseline
- Chapter 3 - Plant Design and Site Layout
- Chapter 4 - Analysis of Construction Impacts
- Chapter 5 - Analysis of Operational Impacts
- Chapter 6 - Fuel Cycle, Transportation, and Decommissioning Impacts

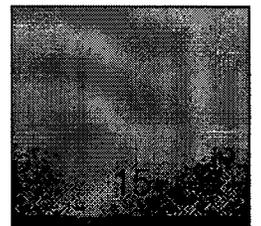


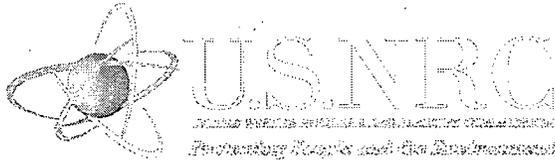


Savannah River Usage

- **Savannah River**
 - Currently provides water for the cooling water system (cooling towers) for Vogtle Units 1 and 2
 - Proposed as source of make-up water for cooling towers for Vogtle Units 3 and 4

- **Other Major Uses of Savannah River**
 - Recreation and fishing
 - Savannah River Site
 - Fort James Operating Company (Effingham County)
 - Georgia Power Company (Effingham County)

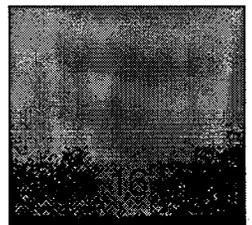


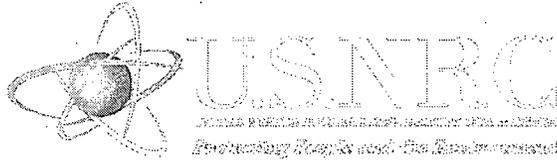


Cooling System Impacts

- **Evaluations Included Modeling of**
 - Consumptive use of water from cooling towers
 - Changes in Savannah River elevation due to increased consumptive use
 - Thermal Plume
 - Chemical Releases

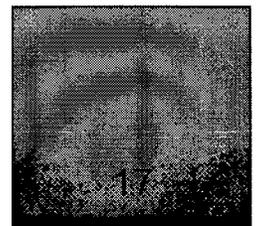
- **Conclusions**
 - Impacts on water quality and use would be **SMALL**

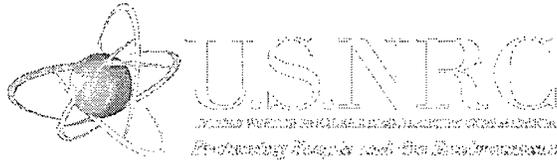




Ecological Impacts

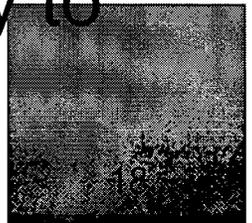
- Approximately 500 acres of land to be cleared, including about 23 acres of wetlands on-site.
- Most of the construction areas are planted pines or previously disturbed.
- Entrainment and impingement of aquatic biota would likely to be low.
- New transmission corridor could have additional wetland and habitat losses, impacts might be MODERATE.

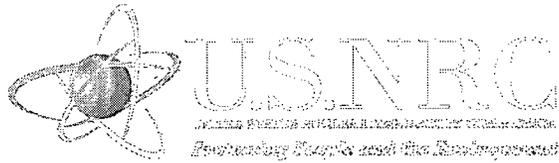




Threatened and Endangered Species

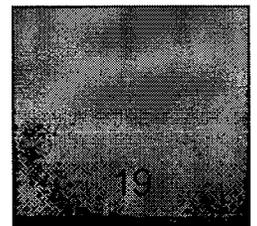
- Shortnose sturgeon and American alligator are the only federally listed species observed on or near the site.
- Wood storks would occasionally forage in area, but are not known to nest near the Vogtle site.
- Potential habitat present for several other species, but they have not been observed on or near the Vogtle site.
- No Threatened or Endangered Species likely to be adversely affected.

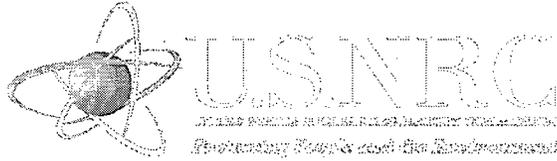




Socio-Economic Impacts

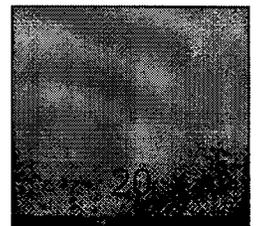
- Many of the socioeconomic impacts were found to be beneficial to Burke County.
- MODERATE aesthetic, transportation, and demographic impacts.
- Environmental Justice impacts found to be SMALL.

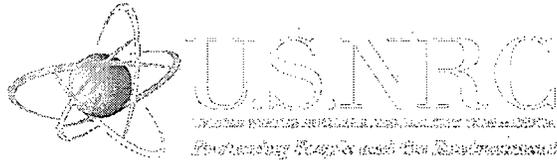




Cultural and Historic Resources

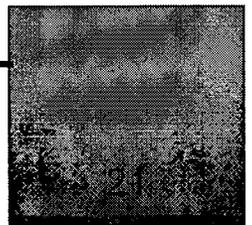
- Southern has been working with the Georgia State Historic Preservation Officer concerning potential impacts.
- Construction of water intake pipeline may result in some MODERATE impacts to some archaeological resources.

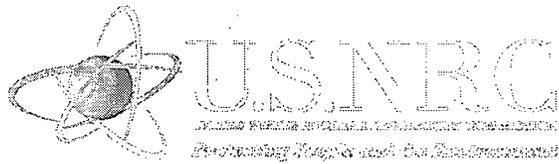




Radiological Impacts

- Exposures to the public and to workers
 - Estimated doses to public well within regulatory design objectives and standards
 - Occupational doses estimated slightly lower than those from current reactors
- Impacts to biota evaluated and found to be acceptable
- Conclusion – radiological impacts from construction and operation would be SMALL

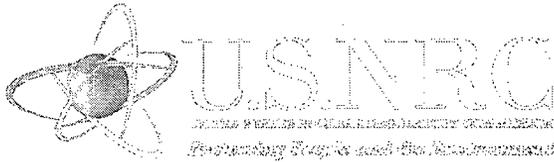




Cumulative Impacts

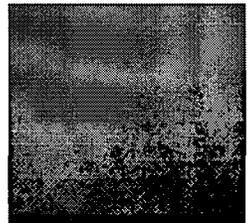
- Water Use and Quality
- Socioeconomics
- Radiological impacts

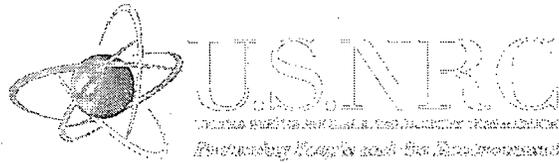




Need for Power

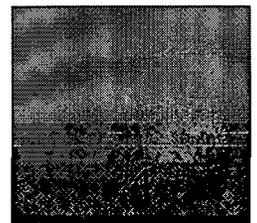
- Southern has an Integrated Resource Plan (IRP) filed with the State of Georgia - updated every 3 years
- The staff reviewed this IRP, determined that it provides ample justification that the power produced by the proposed new units would be needed by the time the units would come on line.

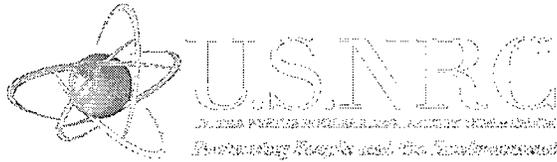




Alternatives

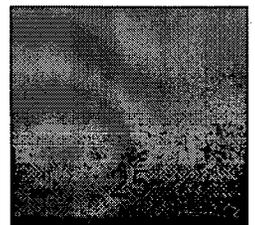
- Alternative Plant Cooling Technologies
- Alternative Energy Sources
- Alternative Sites

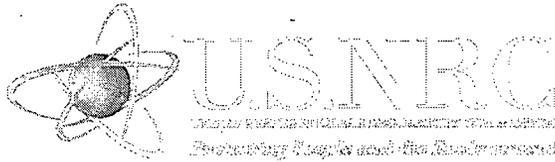




Alternatives

- Alternative Plant Cooling Technologies
 - Dry cooling towers
 - Hybrid wet/dry cooling towers
 - Once-through cooling





Alternatives

➤ Alternative Energy Sources

➤ Coal

➤ Natural Gas

➤ Wind

➤ Geothermal

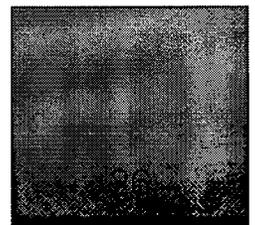
➤ Hydropower

➤ Solar

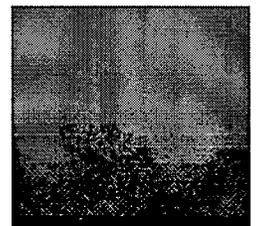
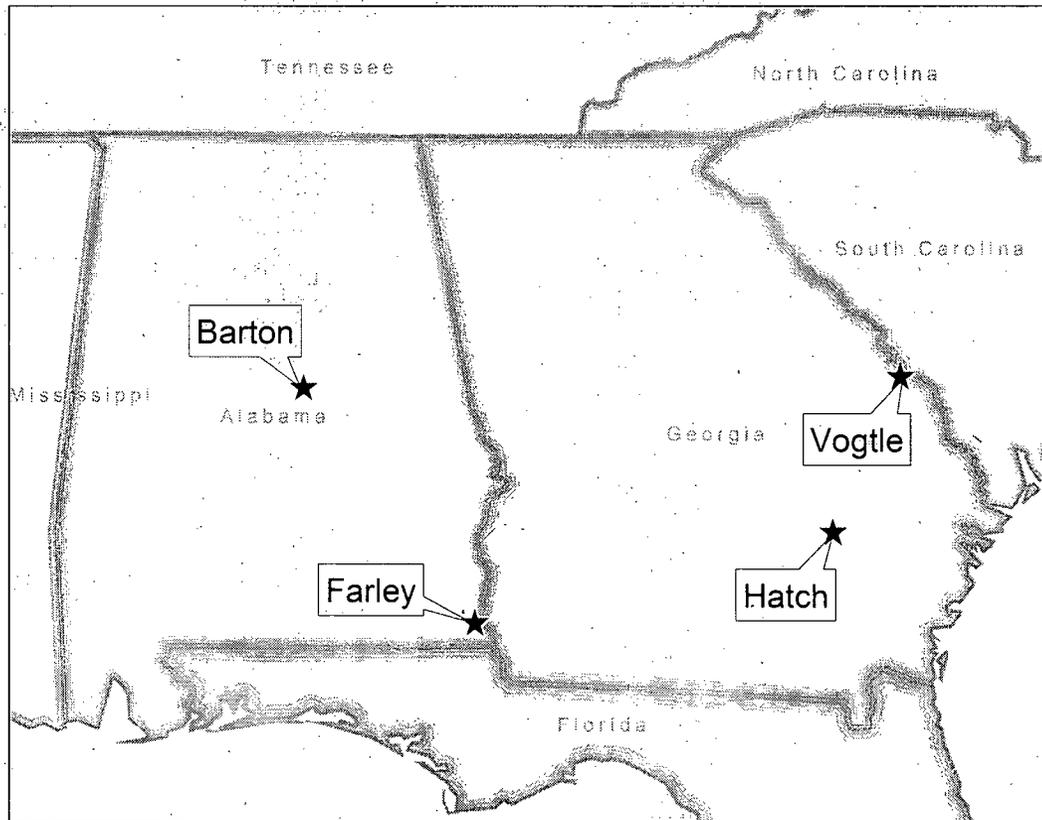
➤ Biomass Waste

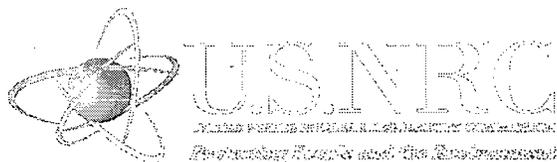
➤ Oil fired

➤ Combination of sources



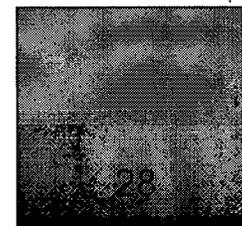
Alternative Sites

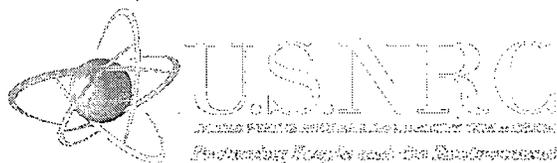




Preliminary Conclusions about Alternatives

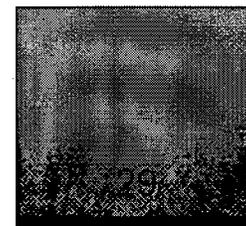
- None of the economically viable alternative energy-generating technologies is environmentally preferable
- None of the alternative plant designs would be preferable to the proposed plant design.
- There would be differences in environmental impacts of construction and operation at each site, but none make any of the alternative sites obviously superior to the Vogtle site

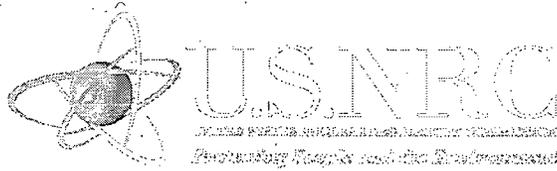




Preliminary Conclusions and Recommendation

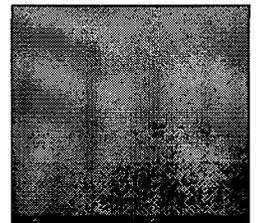
- Most of the environmental impacts are expected to be SMALL
- None of the alternatives evaluated are clearly environmentally preferable
- The staff's preliminary recommendation to the Commission is that the ESP be issued.

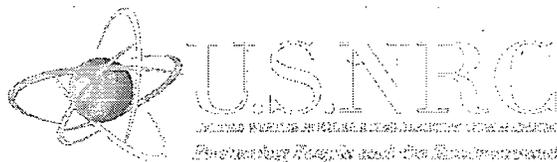




Environmental Review Milestones

- Draft EIS issued – September 14, 2007
- Comment period ends – November 28, 2007
- Final EIS issued – July 3, 2008
- Hearing – tentatively scheduled
for January 2009





Point of Contact for Environmental Review

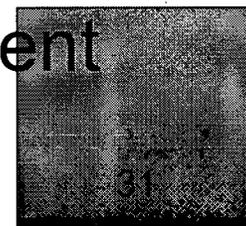
- Agency point of contact:

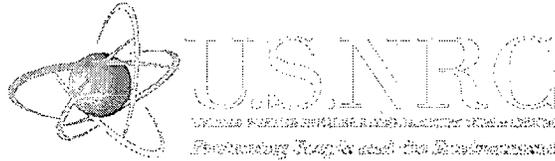
Mark Notich - (800) 368-5642, Ext. 3053

- Draft EIS can also be viewed at:

www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1872/index.html

- Draft EIS is available at the Burke County Public Library and the NRC's Public Document Room in Rockville, Maryland



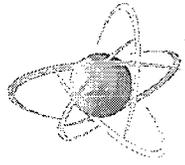


NRC Addresses

Provide comments on DEIS by November 28, 2007

- By mail at: Chief, Rules and Directives Branch
Division of Administrative Services
Mailstop T-6D59
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
- In person at: 11545 Rockville Pike
Rockville, Maryland 20852
- E-mail at: VOGTLE_EIS@nrc.gov





U.S. NRC
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Protecting People and the Environment

