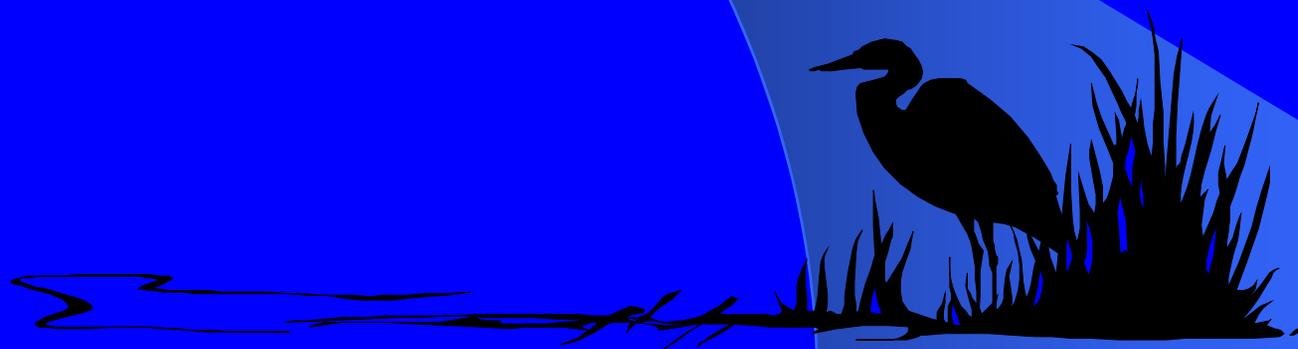




Preliminary Results of Environmental Review Virgil C. Summer Nuclear Station

Nuclear Regulatory Commission

August 26, 2003





Purpose of Today's Meeting

- Discuss NRC's license renewal process
- Describe the environmental review process
- Discuss the results of our review
- Provide the review schedule
- Accept any comments you may have today
- Describe how to submit comments



V.C. Summer License Renewal

- Operating license expires in August 2022
- Application requests authorization to operate V.C. Summer for an additional 20 years

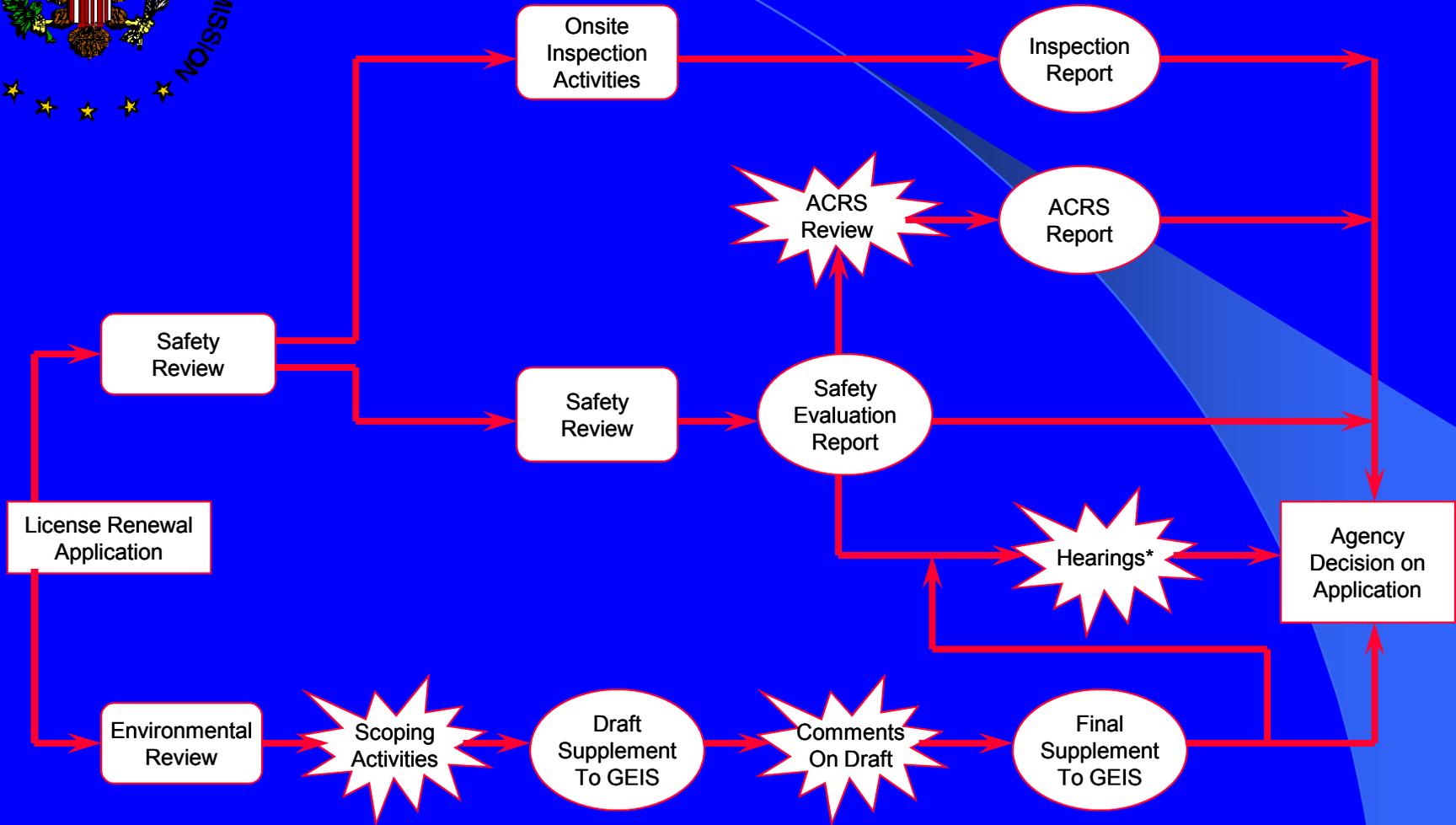


NRC's License Renewal Review

- Safety review
- Environmental review
- Plant inspections
- Advisory Committee on Reactor Safeguards (ACRS)



License Renewal Process



 Formal Public Participation

*If a request for hearing is granted



National Environmental Policy Act

- NEPA requires Federal agencies to use a systematic approach to consider environmental impacts
- Commission has determined that an environmental impact statement (EIS) will be prepared for a license renewal action

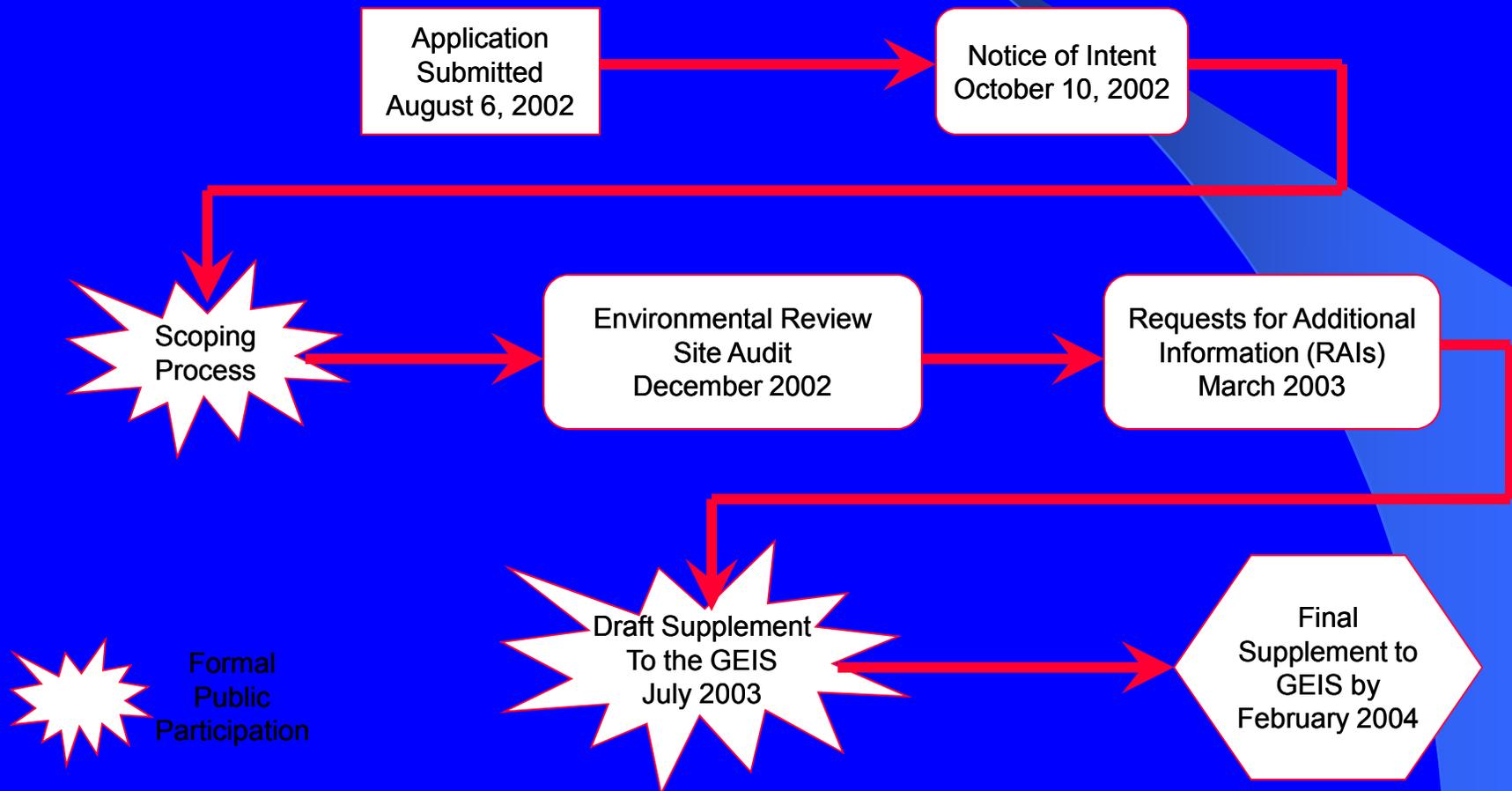


Decision Standard for Environmental Review

To determine whether or not the adverse environmental impacts of license renewal for V.C. Summer are so great that preserving the option of license renewal for energy planning decisionmakers would be unreasonable.

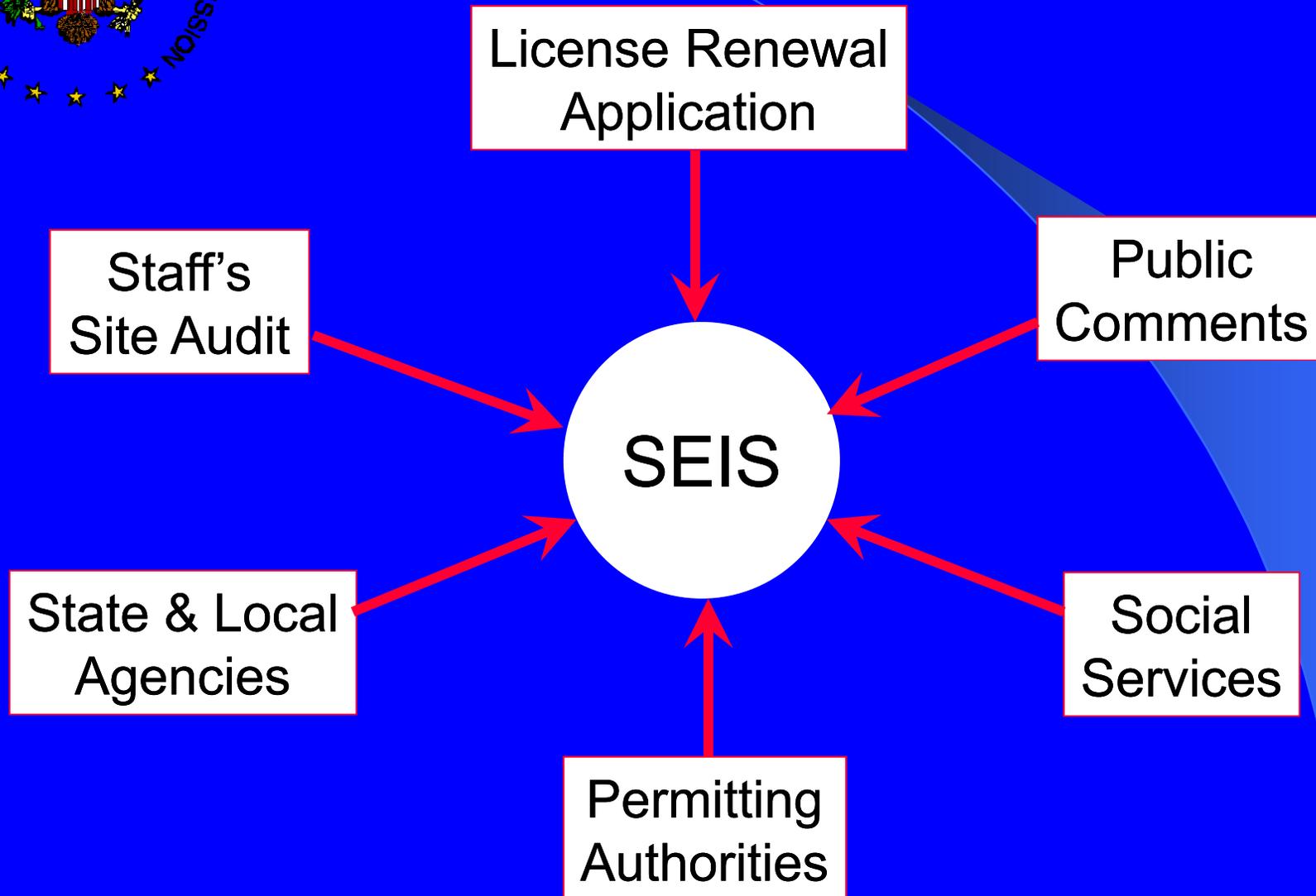


Environmental License Renewal Process



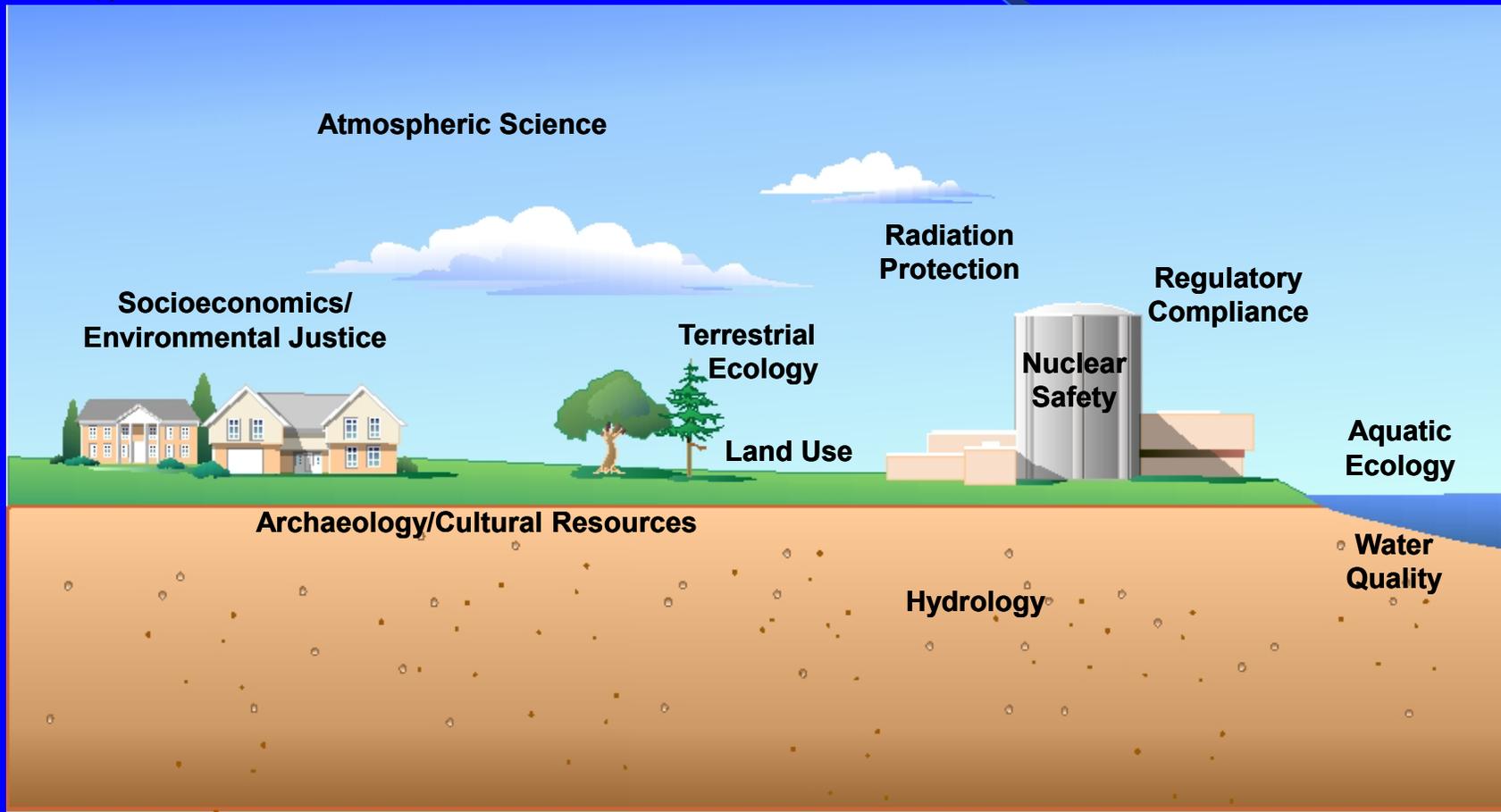


Information Gathering



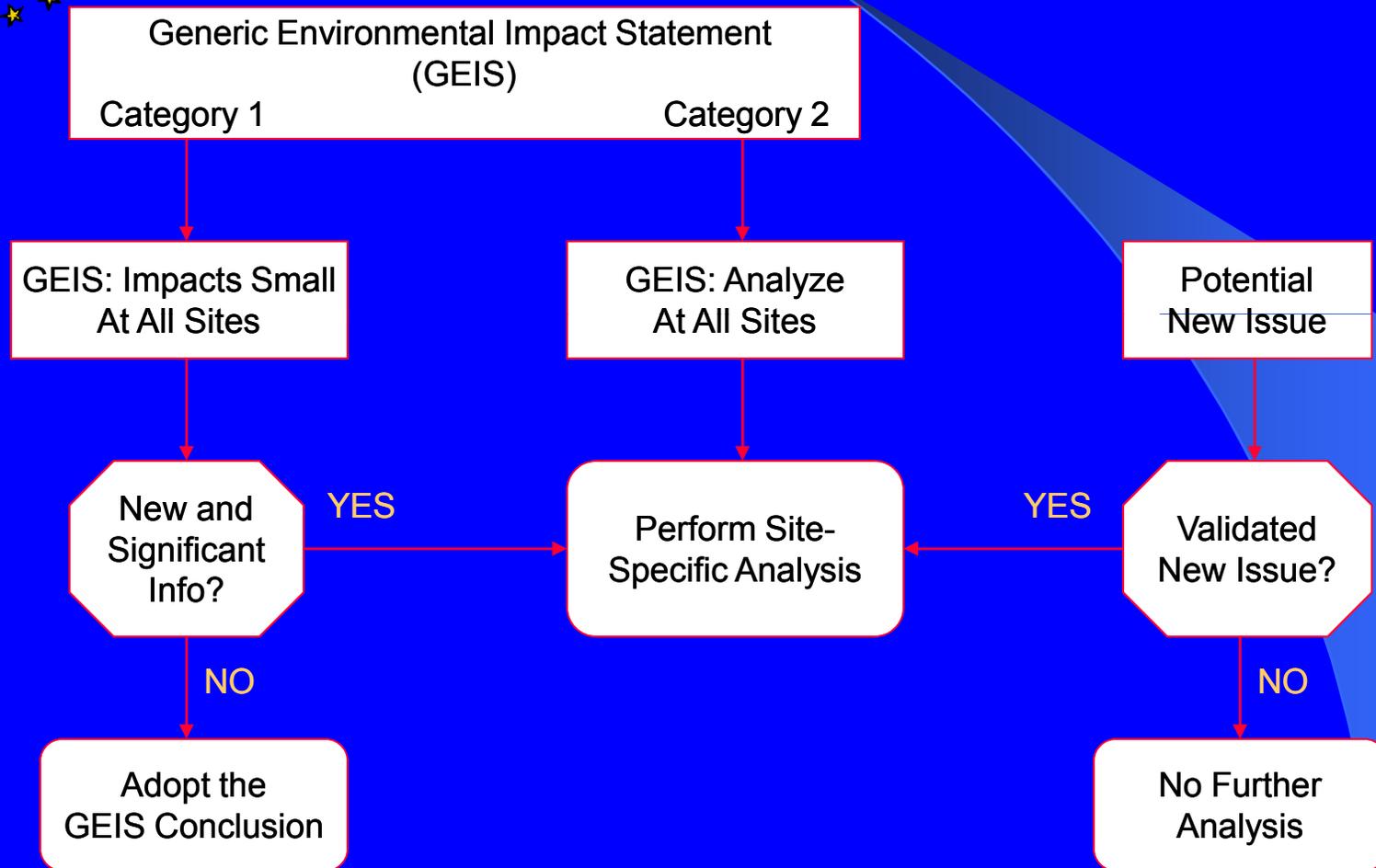


Team Expertise





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*
- Consistent with the Council on Environmental Quality guidance for NEPA analyses



Environmental Impacts of Operation

-
- Cooling System
 - Transmission Lines
 - Radiological
 - Socioeconomic
 - Groundwater Use and Quality
 - Threatened or Endangered Species



Cooling System Impacts

➤ Entrainment

➤ Losses from entrainment are compensated by the high reproductive success of the fish species

➤ Impingement

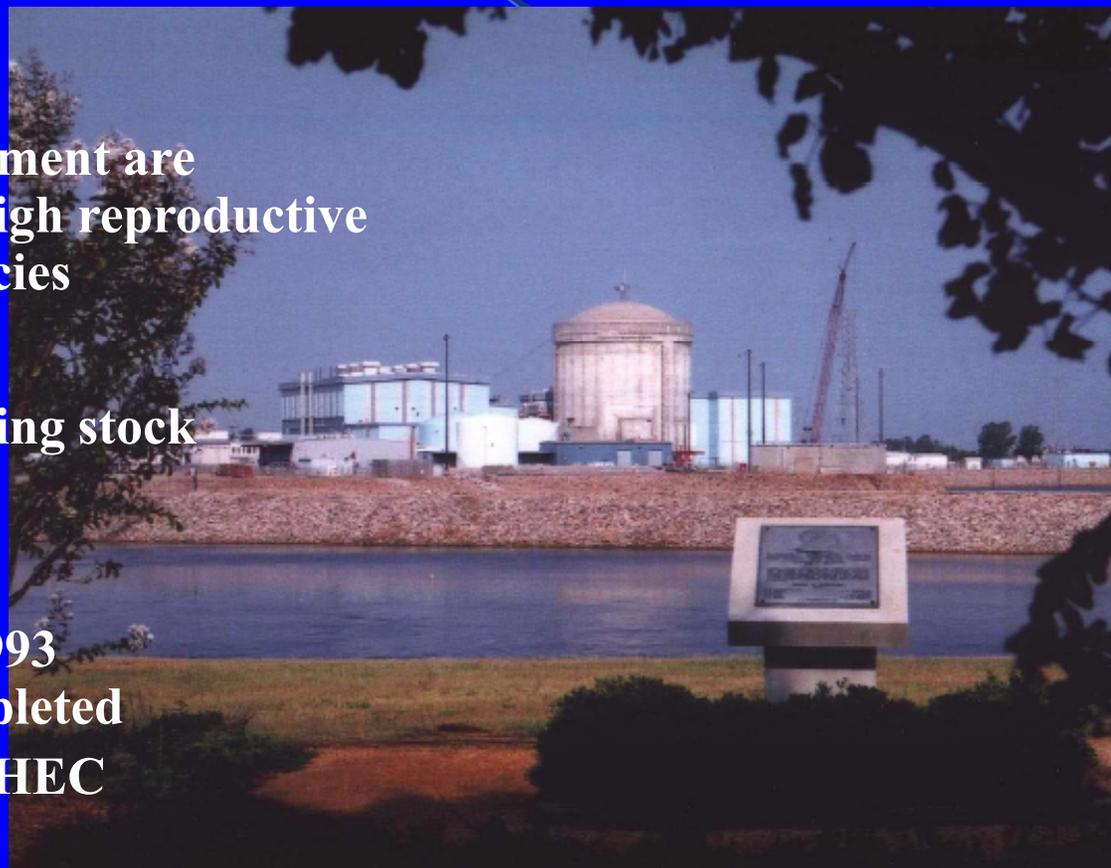
➤ 0.47% of fish standing stock impinged annually

➤ Heat Shock

➤ No fish kills since 1993 mitigations were completed

➤ Complies with SCDHEC NPDES permit

➤ ALL IMPACTS SMALL





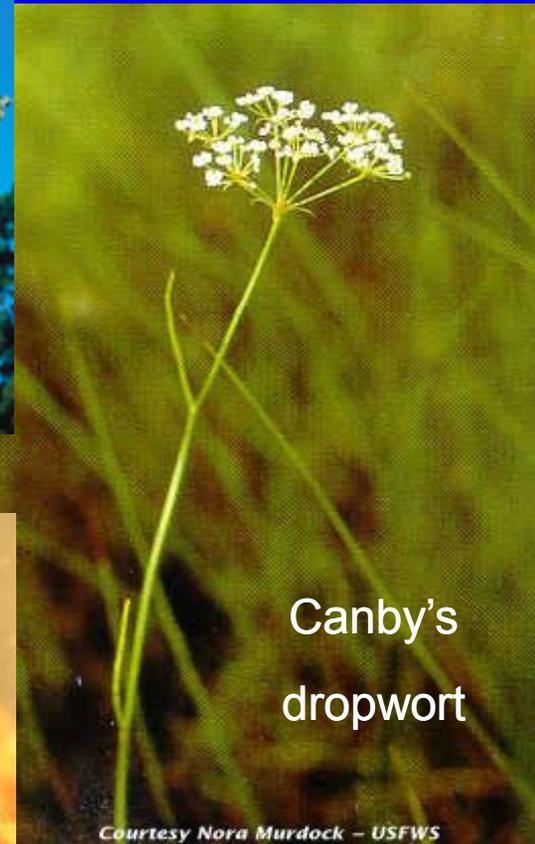
Radiological Impacts

- Addresses exposures to the public and to workers
- No Category 2 issues
- No new and significant information
- GEIS concluded impacts are SMALL



Threatened or Endangered Species

- Several Federal- and State-listed species potentially in vicinity
- Informal Consultation with FWS initiated
- IMPACTS ARE SMALL





Potential New and Significant Information

- No new and significant information identified:
 - during scoping
 - by the licensee
 - by the staff



Other Environmental Impacts Evaluated

- Uranium Fuel Cycle and Solid Waste Management
- Decommissioning



Alternatives

- No-action
- New generation
- Purchased electrical power
- Alternative technologies
- Combination of alternatives



Preliminary Conclusions for Alternatives

- Alternatives (including the no-action alternative) may have environmental effects in many impact categories that reach MODERATE or LARGE significance



Impacts of Postulated Accidents

- Design-Basis Accidents
- Severe Accidents
 - Severe Accident Mitigation Alternatives (SAMAs)



SAMA Evaluation Process

-
- Characterize overall plant risk
 - Identify potential improvements
 - Quantify risk reduction potential and implementation costs
 - Determine whether implementation of any of the improvements is required to support license renewal



Results of SAMA Evaluation

- 268 candidate improvements identified in ER
 - 236 eliminated during the initial, qualitative screening
 - Remaining 32 SAMAs reduced to 12 based on cost and risk reduction considerations
- Detailed cost/benefit analysis shows none of the 12 remaining candidates are cost beneficial



Results of SAMA Evaluation (continued)

- Overall conclusion:
 - Additional plant improvements to further mitigate severe accidents are not required at V.C. Summer as part of license renewal



Preliminary Conclusion

- Impacts of license renewal are **SMALL** for all impact areas
- Impacts of alternatives to license renewal range from **SMALL** to **LARGE**
- The staff's preliminary recommendation is that the adverse environmental impacts of license renewal for V.C. Summer are not so great that preserving the option of license renewal for energy planning decisionmakers would be unreasonable



Environmental Review Milestones

- Draft EIS issued – July 10, 2003
- Comment period – July 10 to October 3, 2003
- Final EIS issued on or before – February 27, 2004



Point of Contact

➤ Agency point of contact:

Gregory F. Suber

(800) 368-5642, Ext. 1124

- Documents are located at the Thomas Cooper Library, 1322 Greene Street, Columbia, South Carolina, and the Fairfield County Library, 300 Washington Street, Winnsboro, South Carolina, and can be viewed at the NRC's Web site (www.nrc.gov/reading-rm.html)
- Draft SEIS can also be viewed at: www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1437/supplement15/



NRC Addresses

Provide comments:

- By mail at: Chief, Rules and Directives Branch
Division of Administrative Services
Mailstop T-6D59
U.S. Nuclear Regulatory Commission
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- In person at: 11545 Rockville Pike
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- E-mail at: VCSummerEIS@nrc.gov
- On-line comment form with web version of draft

