



Preliminary Results of Environmental Review Catawba Units 1 and 2

Nuclear Regulatory Commission
June 27, 2023



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



Catawba Units 1 and 2 License Renewal

- > Operating licenses expire in 2024 (Unit 1) and 2026 (Unit 2)
- > Application requests authorization to operate units for up to an additional 20 years



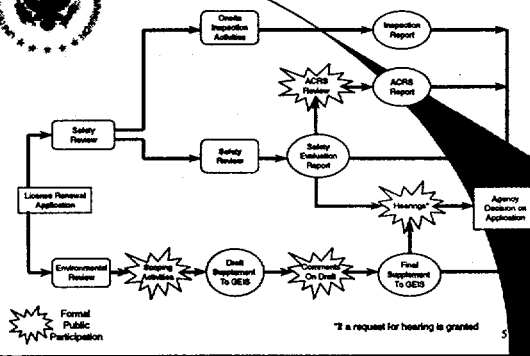
NRC's License Renewal Review

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

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License Renewal Process



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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

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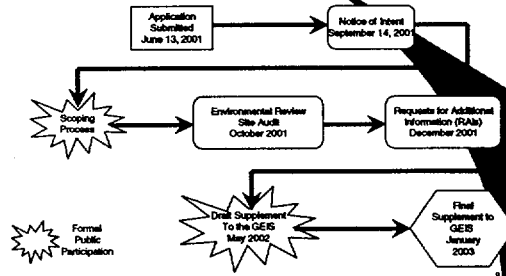


Decision Standard for Environmental Review

To determine whether or not the adverse environmental impacts of license renewal for Catawba Units 1 and 2, are so great that preserving the option of license renewal for energy planning decisionmakers would be unreasonable.

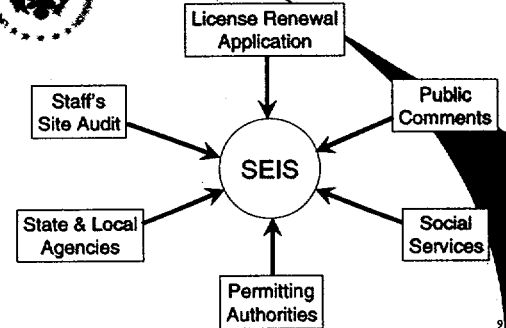



Environmental License Renewal Process






Information Gathering

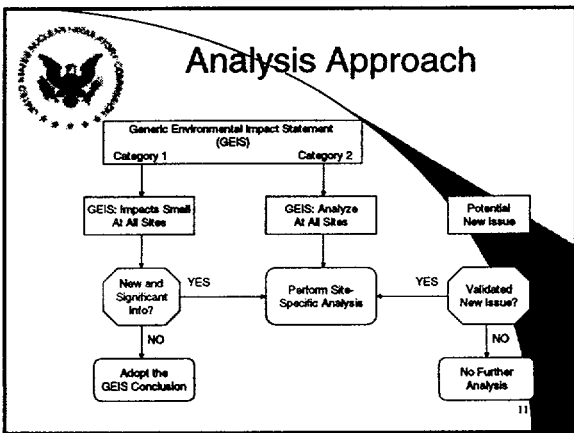





Team Expertise



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How Impacts are Quantified

- > NRC-defined impact levels:
 - > **SMALL:** Effect is not detectable or too small to destabilize 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

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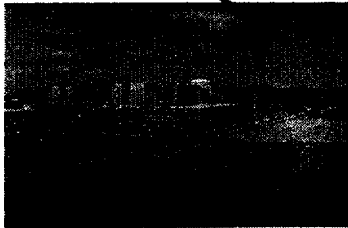
Environmental Impacts of Operation

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

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Cooling System Impacts

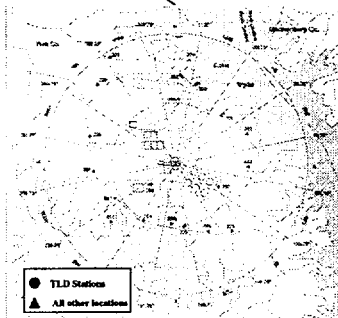


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Radiological Impacts



Catawba Near-Site and On-Site Radiological Monitoring Locations



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Threatened or Endangered Species

<http://nc-es.fws.gov/plant/dtheart.html>
 <http://nc-es.fws.gov/mussel/carolheel.html>

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Potential New and Significant Information

➤ No new and significant information identified

- during scoping
- by the licensee
- by the staff

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Other Environmental Impacts Evaluated

- Uranium Fuel Cycle and Solid Waste Management
- Decommissioning

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Alternatives

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

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Preliminary Conclusions for Alternatives

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

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Preliminary Results of Analysis

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

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Preliminary Results of SAMA Evaluation

- > 14 candidate improvements evaluated
 - > 6 related to reducing core damage frequency
 - > 8 related to improving containment performance
- > Two SAMAs found to be cost beneficial, but do not relate to mitigation of the effects of aging
 - > Providing backup power to hydrogen igniters
 - > Installing watertight wall around transformer
 - > NRC is evaluating the need for these enhancements as current operating license issues
- > None of the remaining candidates were found to be cost beneficial

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Preliminary Results of SAMA Evaluation (continued)

- > Overall Conclusion:
- > Additional plant improvements to further mitigate the risk of severe accidents are not required at Catawba Units 1 and 2 as part of license renewal pursuant to 10 CFR Part 54
- > Improvements to hydrogen control and installation of watertight wall being further evaluated as current operating license issues


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Conclusion

- > Impacts of license renewal are SMALL in 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 Catawba Units 1 and 2 are not so great that preserving the option of license renewal for energy planning decisionmakers would be unreasonable


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Environmental Review Milestones

- Draft EIS issued – 5/13/02
- Comment period – 5/21/02 to 8/9/02
- Final EIS issued – 1/03


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Point of Contact

- Agency point of contact:
James H. Wilson
(800) 368-5642, Ext. 1108
- Documents located at the York County Public Library, Rock Hill, SC, and can be viewed at the NRC's Web site (www.nrc.gov)
- Draft SEIS can also be viewed at:
www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1437/supplement9/

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NRC Addresses

- Provide comments:
 - By mail at: Chief, Rules and Directives Branch
Division of Administrative Services
Mailstop T-6D59
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555
 - In person at: 11545 Rockville Pike
Rockville, Maryland
 - E-mail at: CatawbaEIS@nrc.gov
 - On-line comment form with web version of draft

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