

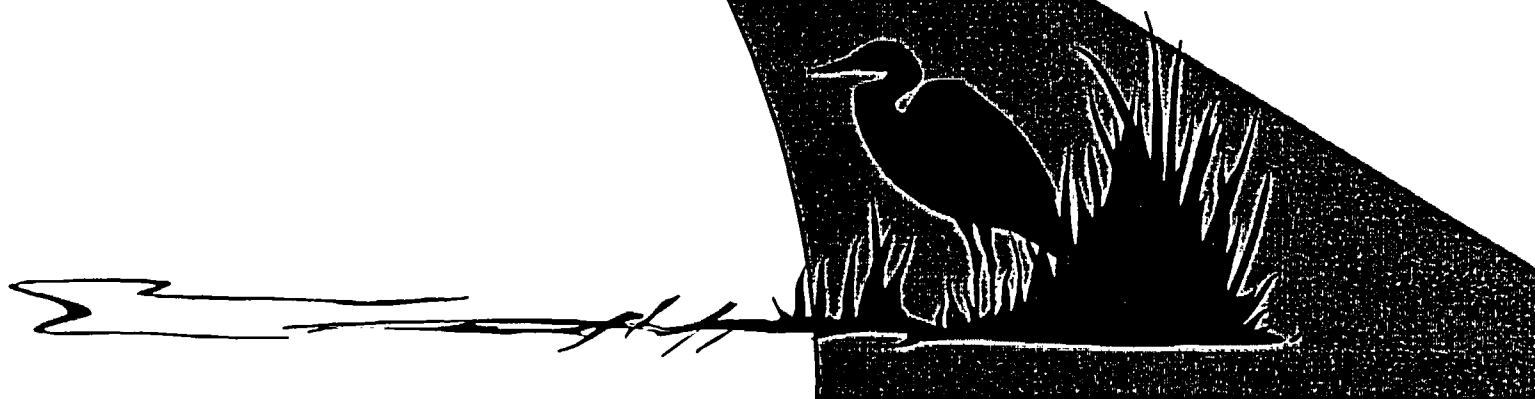


# Preliminary Results of Environmental Review Dresden Nuclear Power Station, Units 2 and 3

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Nuclear Regulatory Commission

January 14, 2004





# 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



# Dresden Nuclear Power Station, Units 2 and 3 License Renewal

- Operating licenses expire
  - December 2009 for Unit 2
  - January 2011 for Unit 3
- Application requests authorization to operate Dresden Nuclear Power Station, Units 2 and 3 for up to an additional 20 years

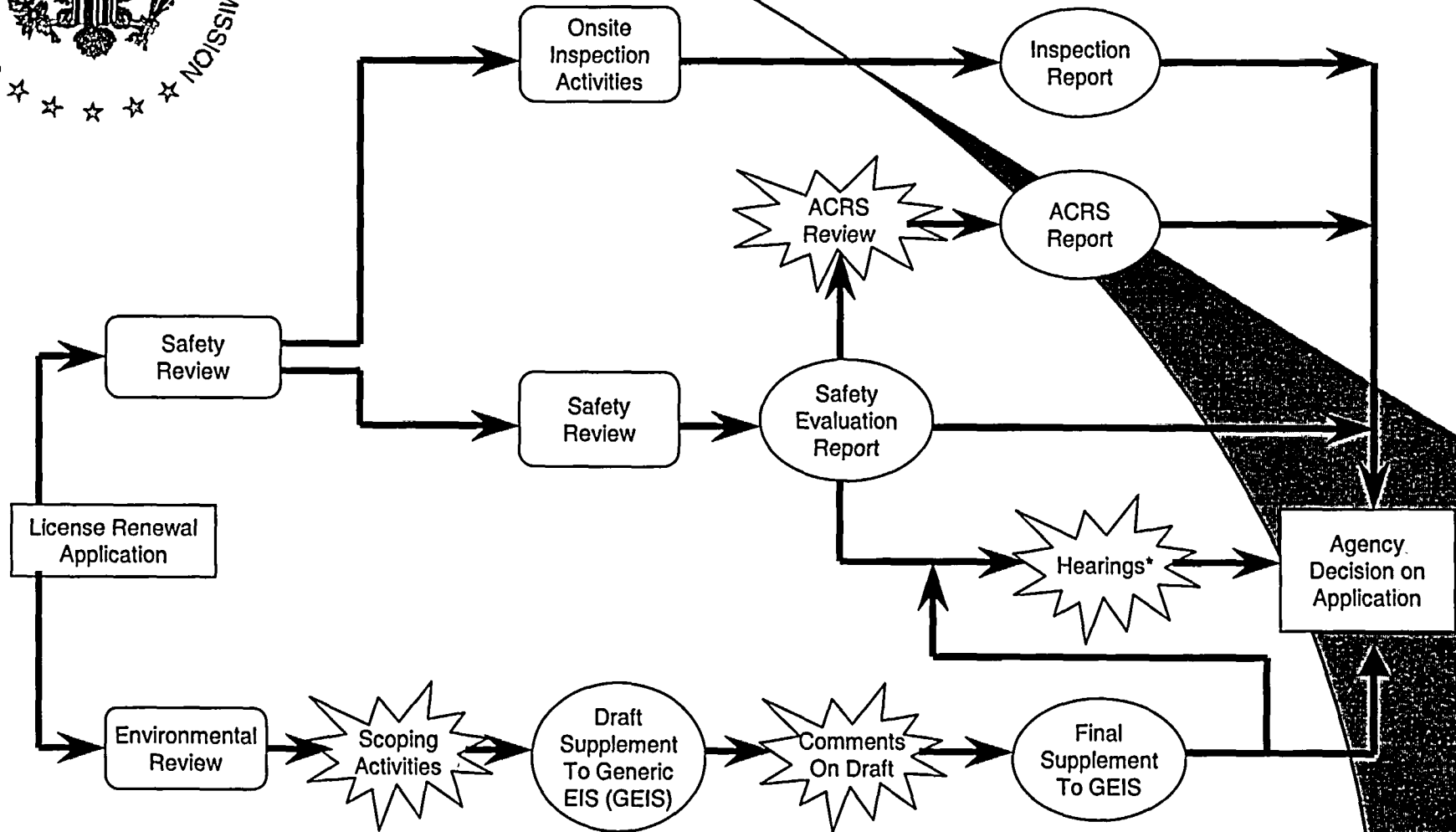


# NRC's License Renewal Review

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



# License Renewal Process



 Formal Public Participation

\*If a request for hearing is granted



# National Environmental Policy Act (NEPA)

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



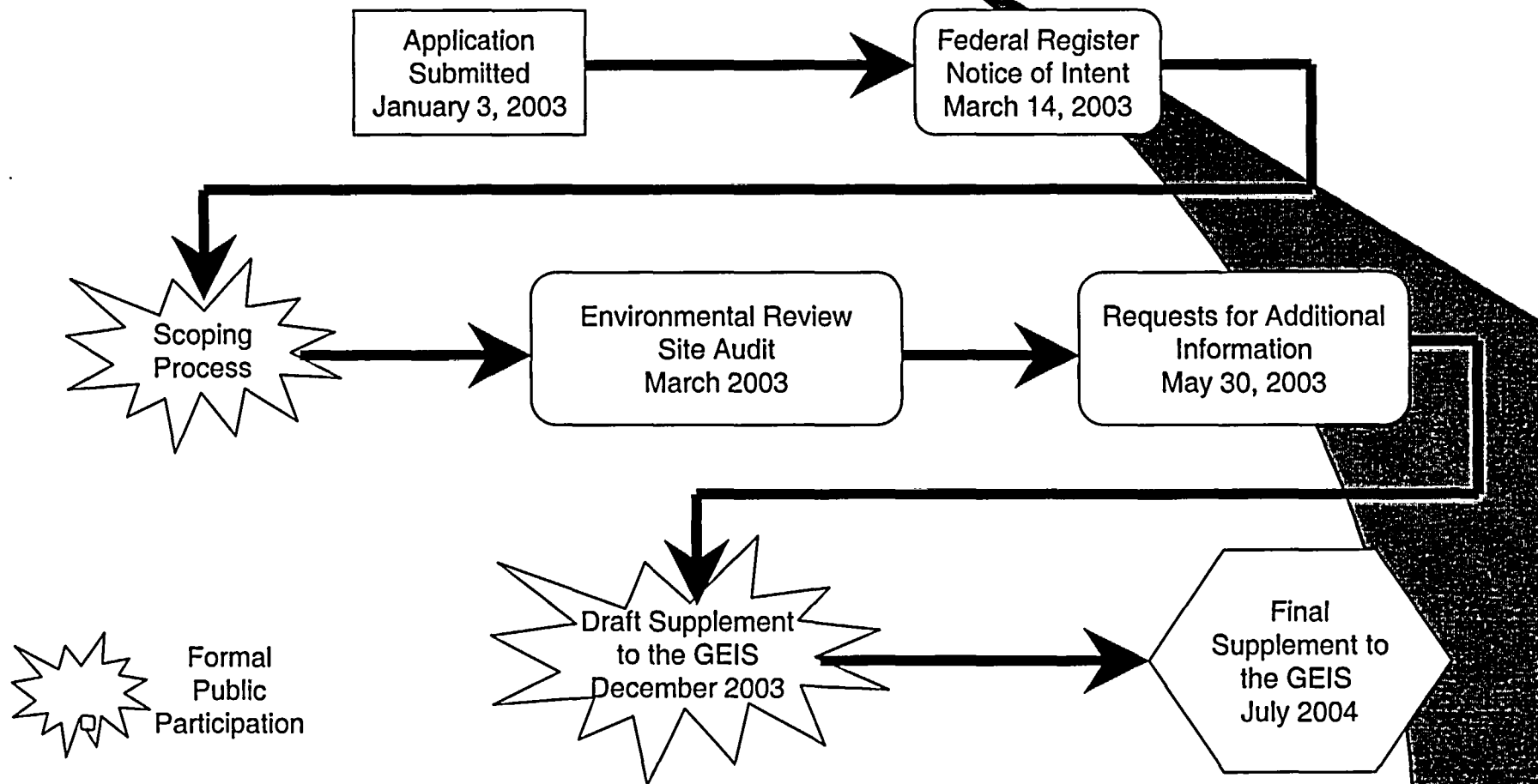
# Decision Standard for Environmental Review

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To determine whether or not the adverse environmental impacts of license renewal for Dresden Nuclear Power Station, Units 2 and 3 are so great that preserving the option of license renewal for energy planning decisionmakers would be unreasonable.



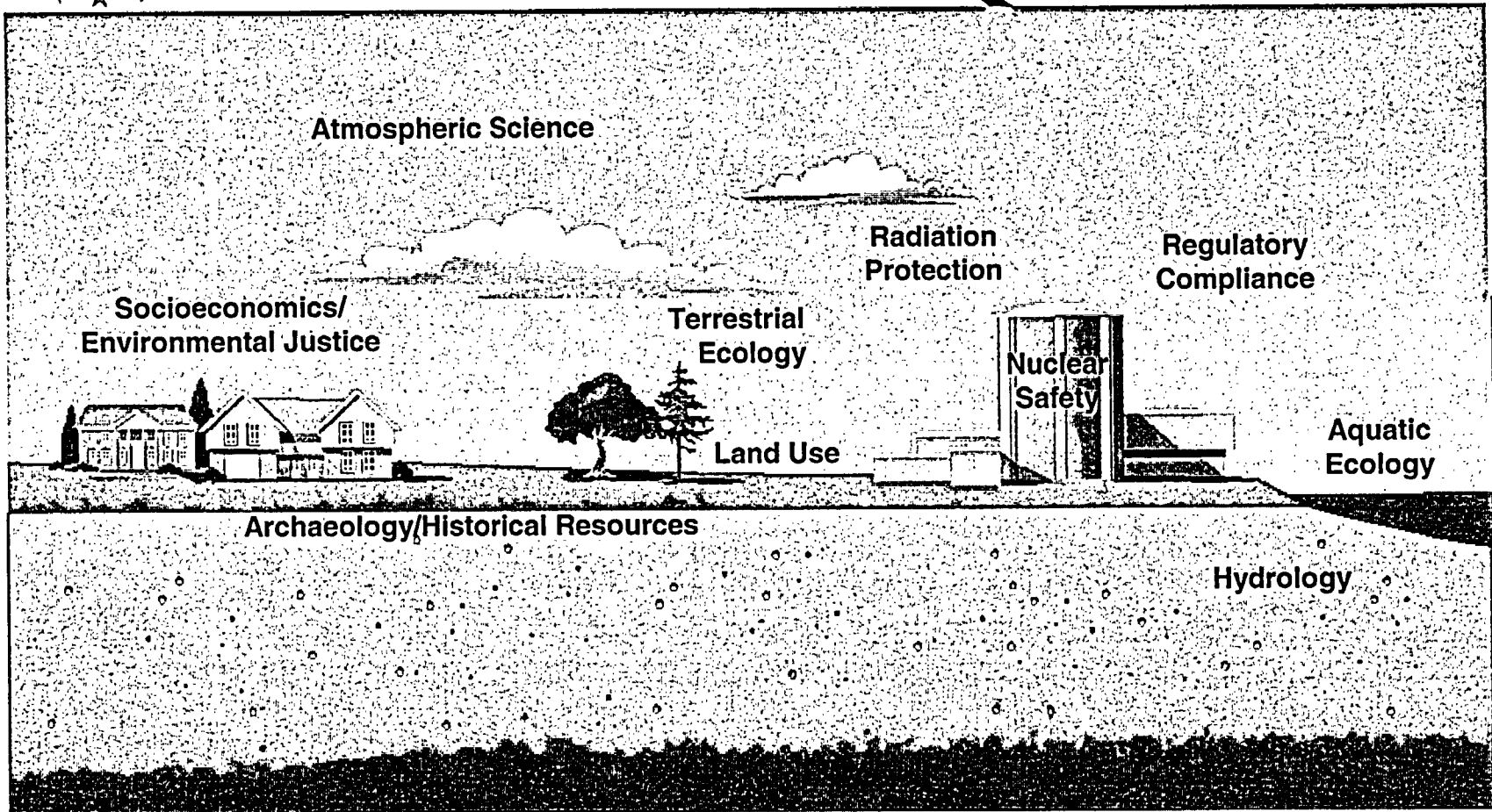
# Environmental License Renewal Process





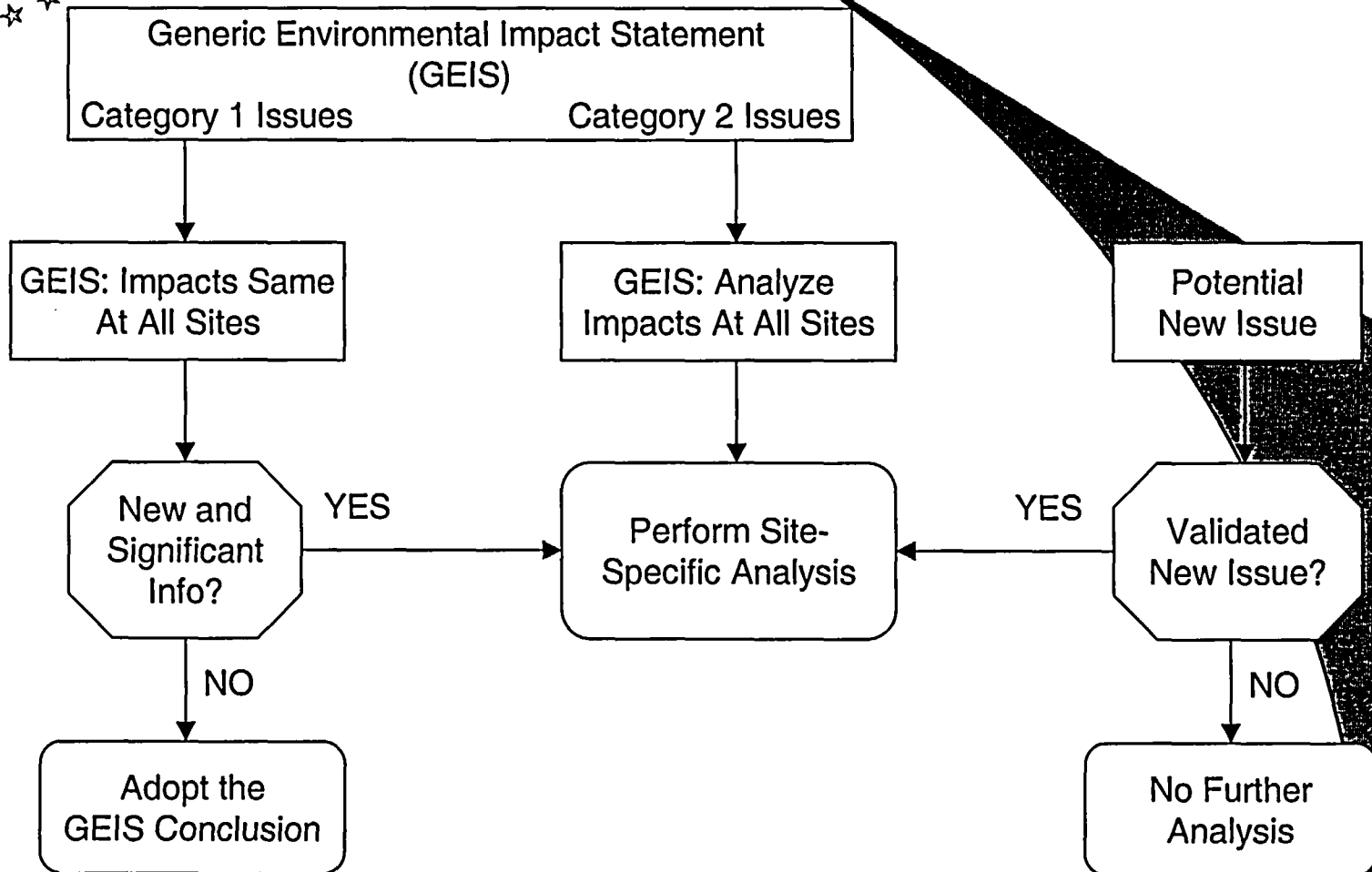


# Team Expertise





# Analysis Approach



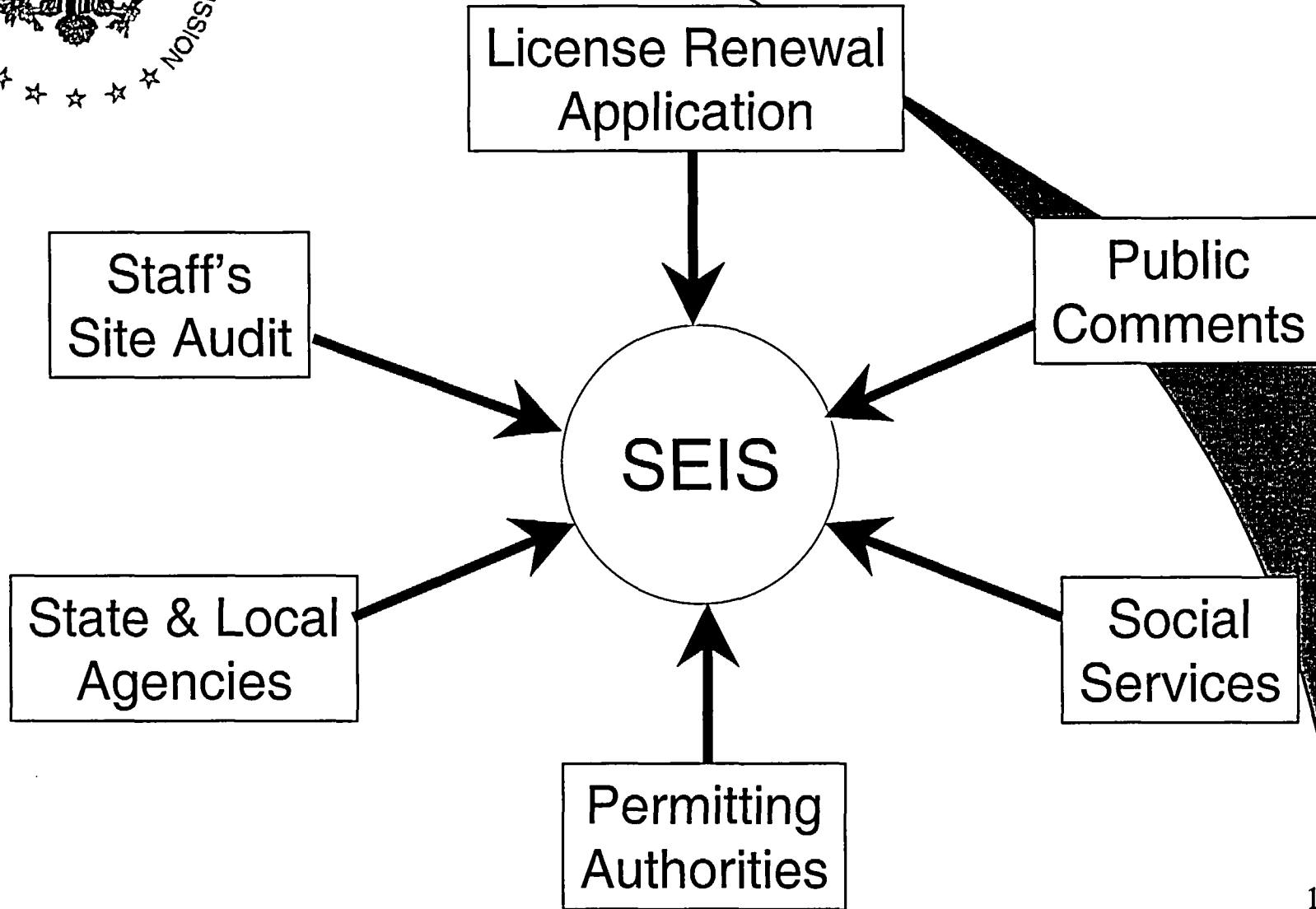


# How Impacts are Quantified

- 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



# Information Gathering





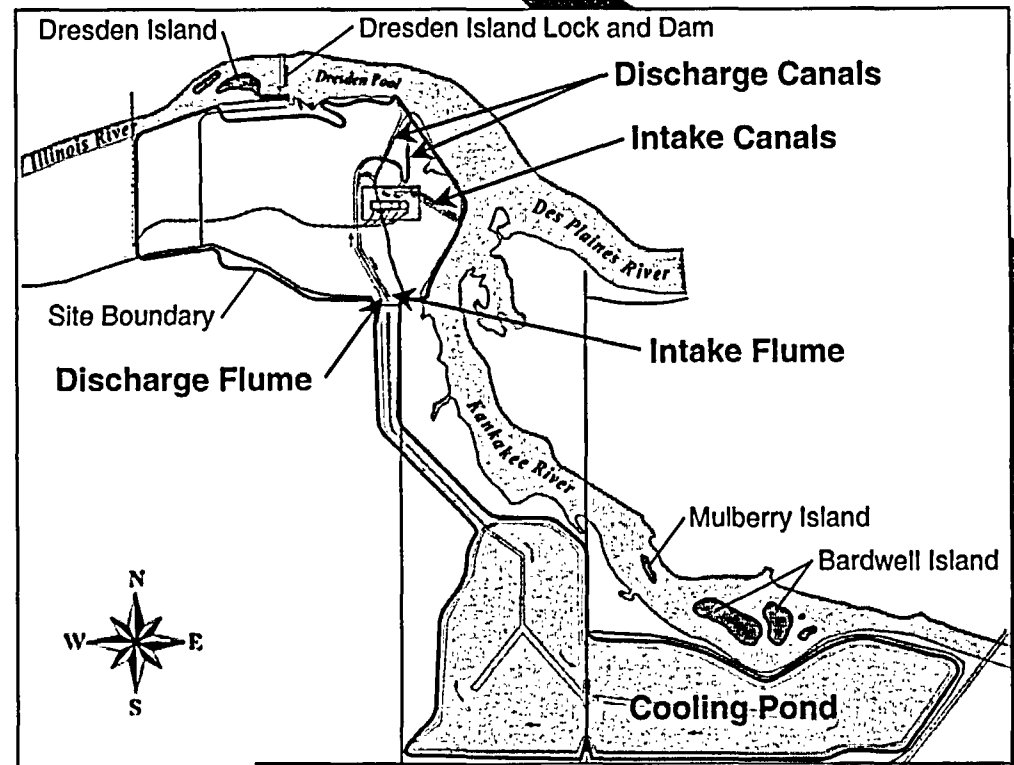
# Environmental Impacts of Continued Operation

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



# Cooling System Impacts

- Category 2 issues
  - Water Use Conflicts
  - Entrainment
  - Impingement
  - Heat Shock
  - Microbiological Organisms
- Preliminary findings
  - Impacts are SMALL
  - No additional mitigation required





# Radiological Impacts

- Category 1 issues
  - Radiation exposures to the public
  - Occupational radiation exposures
  
- Preliminary findings
  - No new and significant information identified
  - GEIS concluded impacts are SMALL



# Threatened or Endangered Species







# Cumulative Impacts of Operation

- Considered impacts of renewal term operations combined with other past, present, and reasonably foreseeable future actions
  - evaluated to end of 20-year renewal term
  - geographic boundaries dependent on resource
  
- No significant cumulative impacts



# Other Environmental Impacts Evaluated

- Uranium Fuel Cycle and Solid Waste Management
- Decommissioning

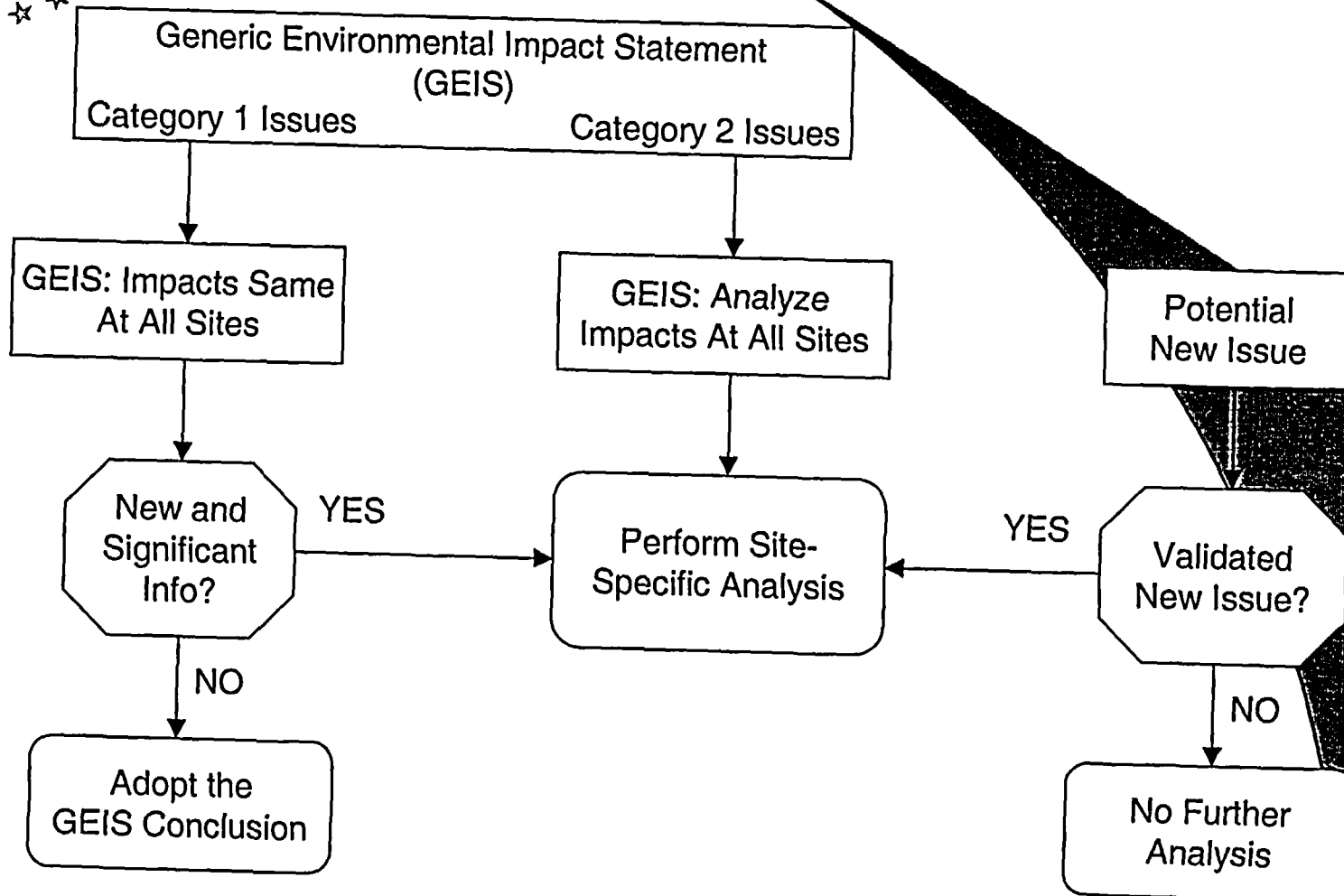


# Alternatives

- No-action
- Alternative energy sources
  - New generation (Coal, Natural Gas, Nuclear)
  - Purchased electrical power
  - Other alternatives (Oil, Wind, Solar, Conservation)
  - Combination of alternatives
- Environmental effects of alternatives in at least some impact categories reach MODERATE or LARGE significance



# Analysis Approach





# Preliminary Conclusions

- 
- GEIS Conclusions on Category 1 issues adopted.
  - Impacts resulting from Category 2 issues are of SMALL significance.
  - No new impacts identified.
  - Environmental effects of alternatives may reach MODERATE or LARGE significance.



# 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



# Preliminary Results of SAMA Evaluation

- 
- 265 candidate improvements considered.
  - Set of SAMAs reduced to 12 based on multi-step screening process.
  - Detailed cost/benefit analysis shows that none of the 12 candidates are cost beneficial.





# Preliminary Conclusions

- Impacts of license renewal are SMALL for all impact areas.
- Impacts of alternatives range from SMALL to LARGE.
- The staff's preliminary recommendation is that the adverse environmental impacts of license renewal for Dresden Nuclear Power Station, Units 2 and 3 are not so great that preserving the option of license renewal for energy planning decisionmakers would be unreasonable.



# Environmental Review Milestones

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- Draft EIS issued – 12/02/03
- Comment period – 12/12/03 to 02/24/04
- Issuance of Final EIS – July 2004



# Point of Contact and Reference Documents

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- NRC contact: Duke Wheeler  
(800) 368-5642, Ext. 1444
  
- Documents located at local libraries
  - Morris County Library
  - Coal City Public Library
  
- Draft SEIS can also be viewed at the NRC's Web site ([www.nrc.gov](http://www.nrc.gov)) at: [www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1437/supplement17/](http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1437/supplement17/)



# Submitting Comments

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

