



Preliminary Results of Environmental Review Palisades Nuclear Plant

U.S. Nuclear Regulatory Commission

April 5, 2006





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



NRC's Regulatory Oversight

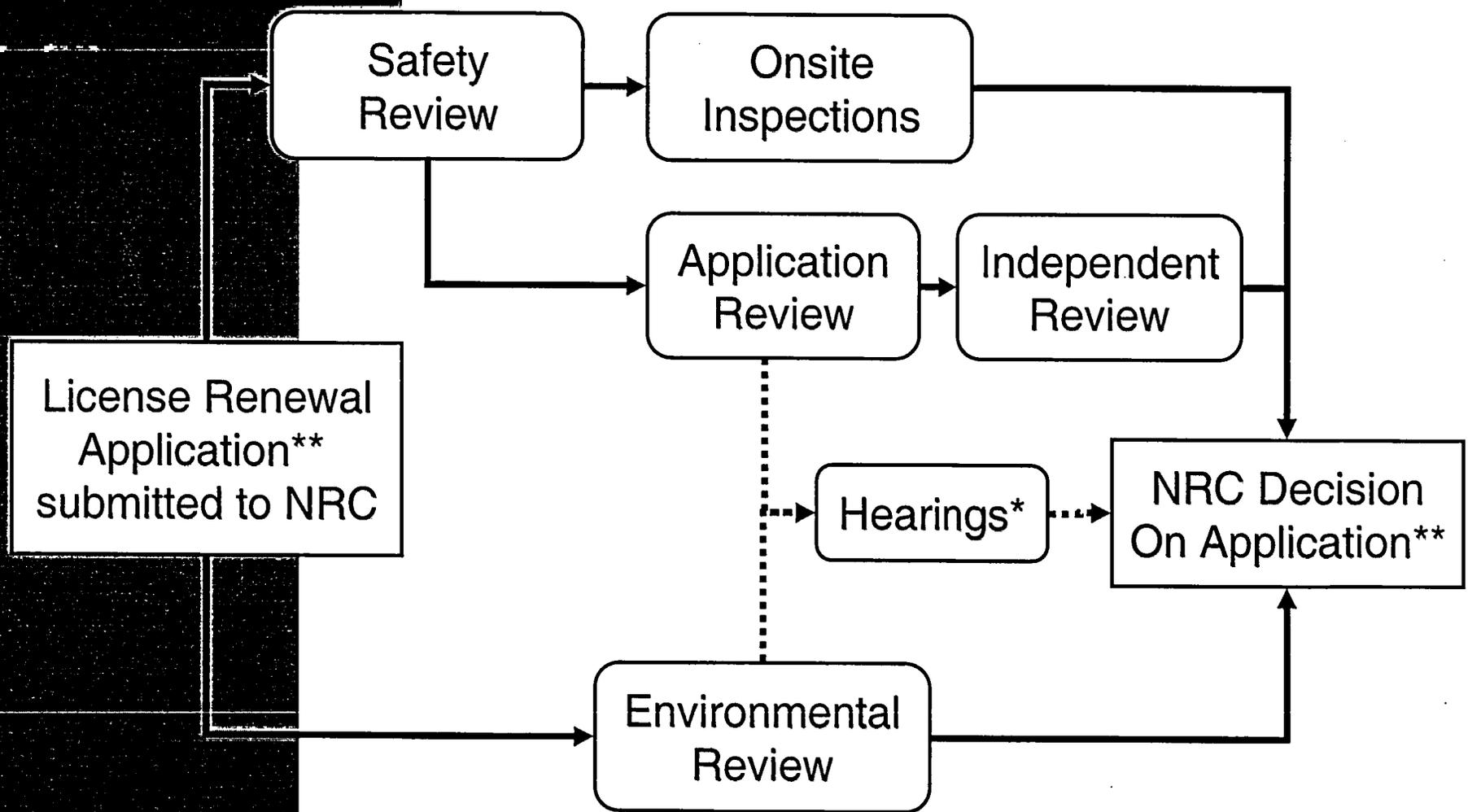
- Atomic Energy Act
 - Issue operating licenses
 - Regulate civilian use of nuclear materials
- NRC's Mission
- Title 10, Code of Federal Regulations



Palisades Nuclear Plant License Renewal

- Operating licenses expire
 - March 2011
- Application requests authorization to operate Palisades Nuclear Plant for an additional 20 years.

License Renewal Process



* If a Request for Hearing is Granted

** Available at www.nrc.gov



Scope of License Renewal Safety Review

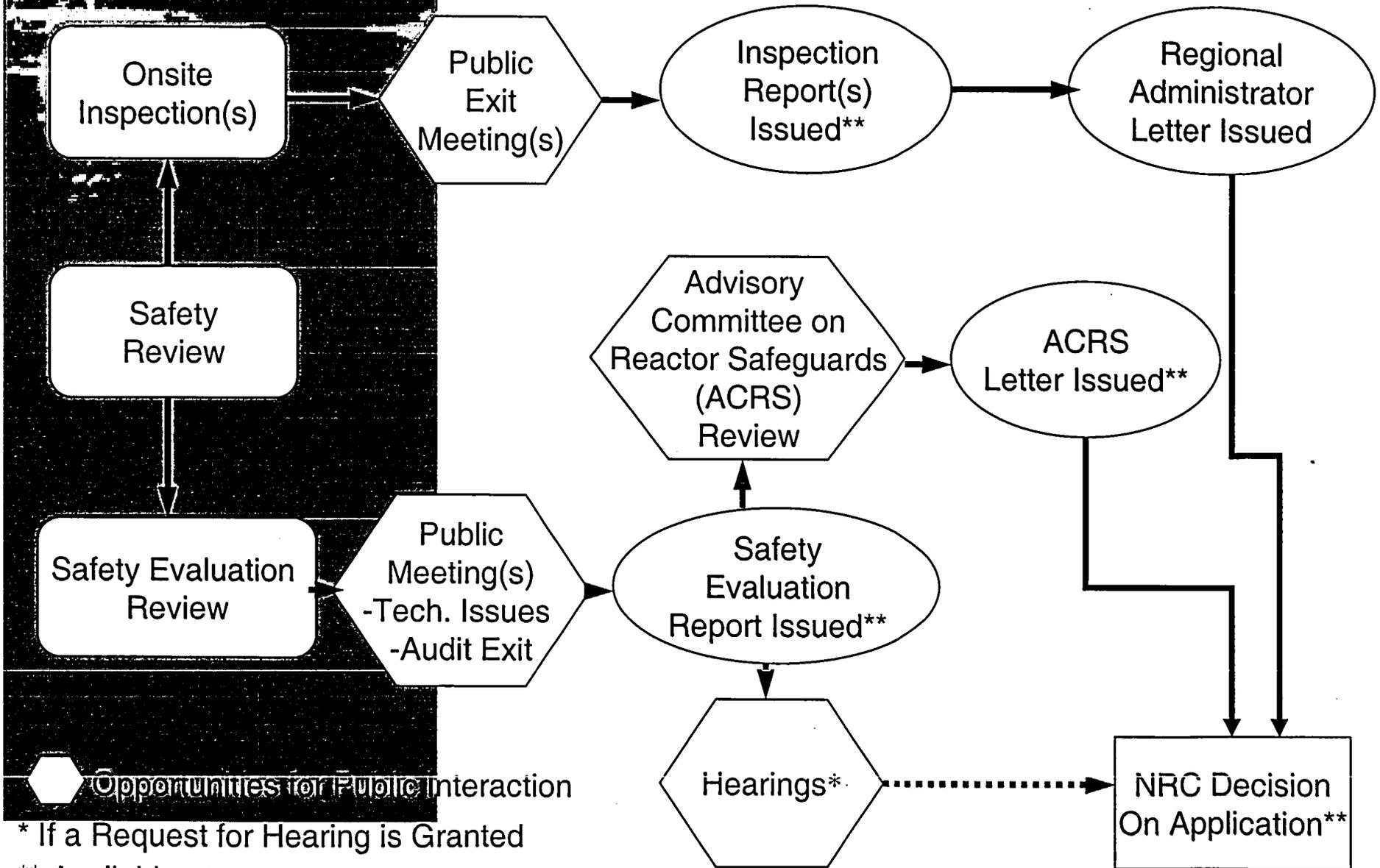
- Limited to Aging Management
 - Systems, structures and components important to safety
 - Determined by license renewal scoping criteria
- Not on Ongoing Oversight of Current Issues
 - Security
 - Emergency Planning
 - Safety Performance



Safety Review Process

- Safety Evaluation
 - Audits
 - Evaluation of technical information
- Plant inspections
- Independent Review
 - Advisory Committee on Reactor Safeguards (ACRS)

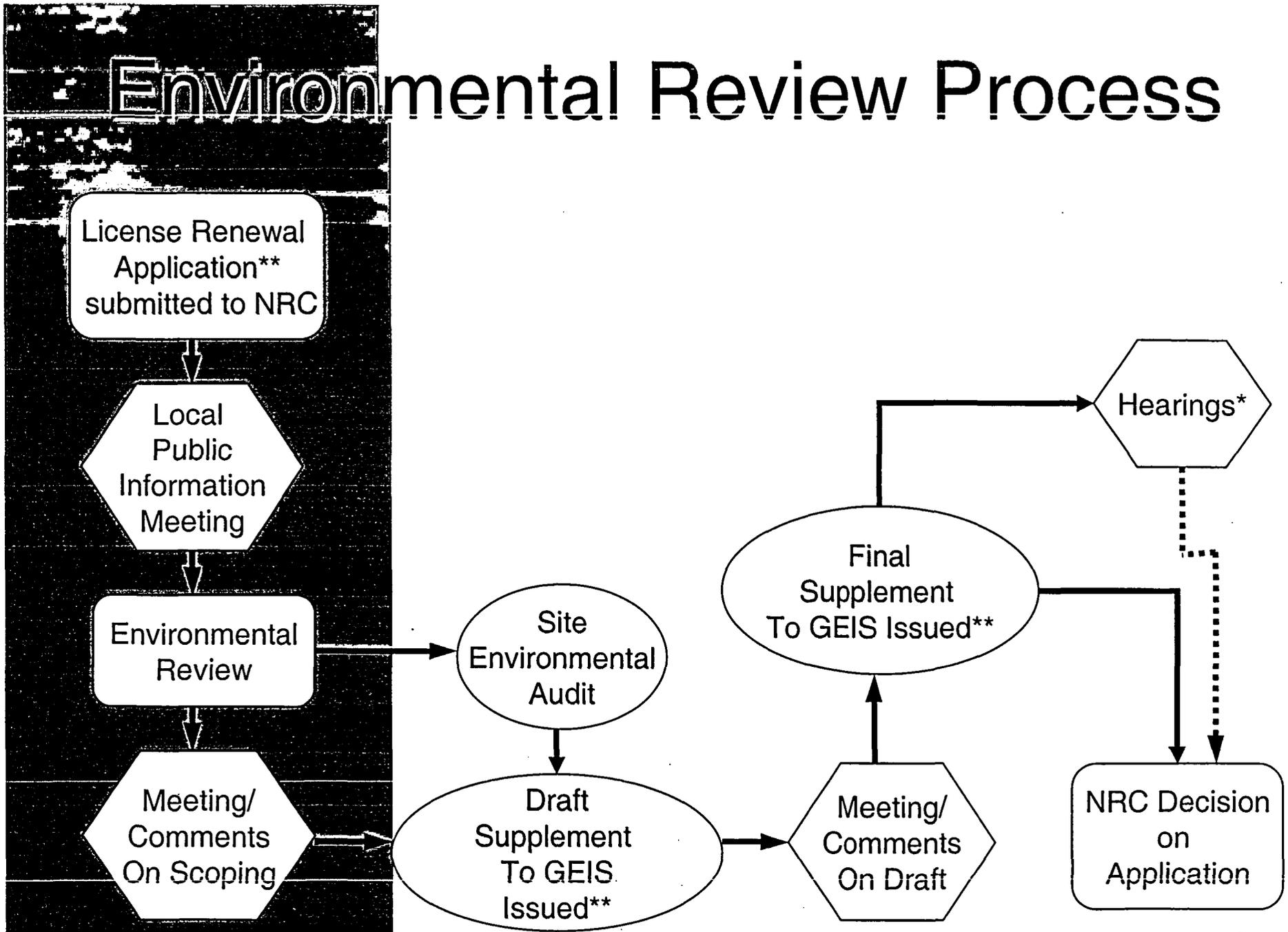
Safety Review Process



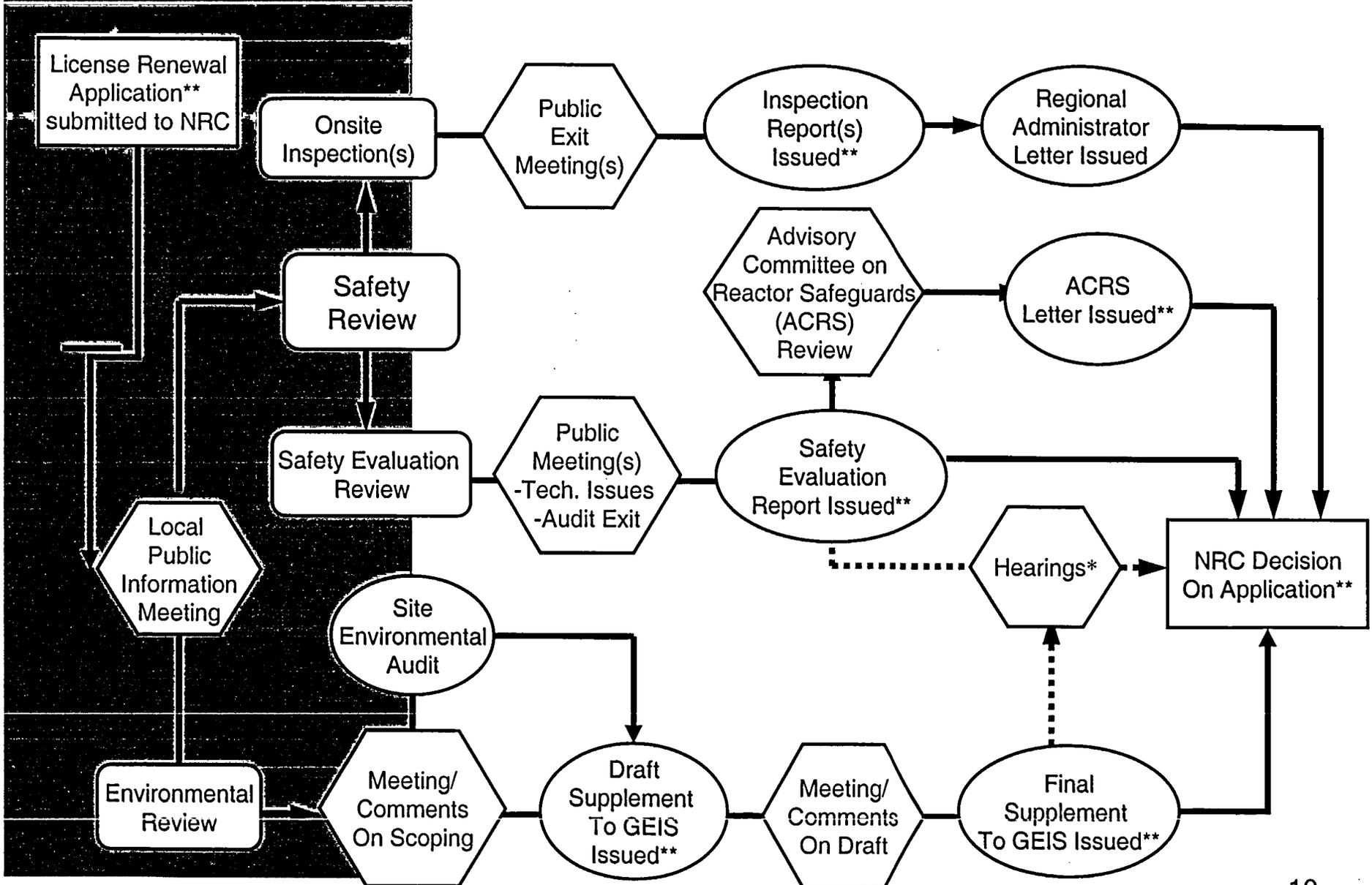
* If a Request for Hearing is Granted

** Available at www.nrc.gov

Environmental Review Process



License Renewal Process

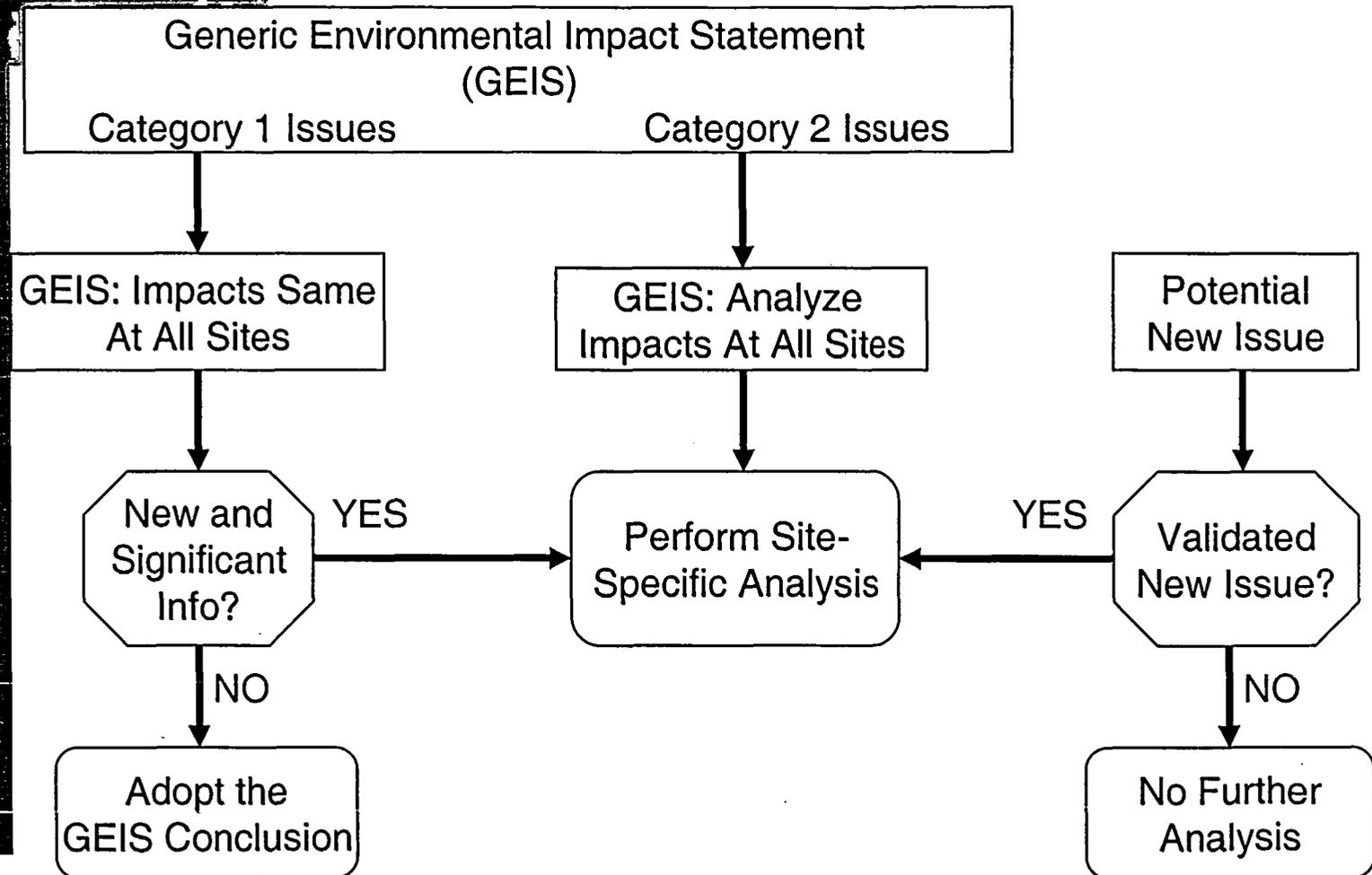




National Environmental Policy Act (NEPA)

- 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.
- Commission has determined that a supplement to the "Generic EIS for License Renewal of Nuclear Plants" will be prepared for a license renewal application.

Analysis Approach





Decision Standard for Environmental Review

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

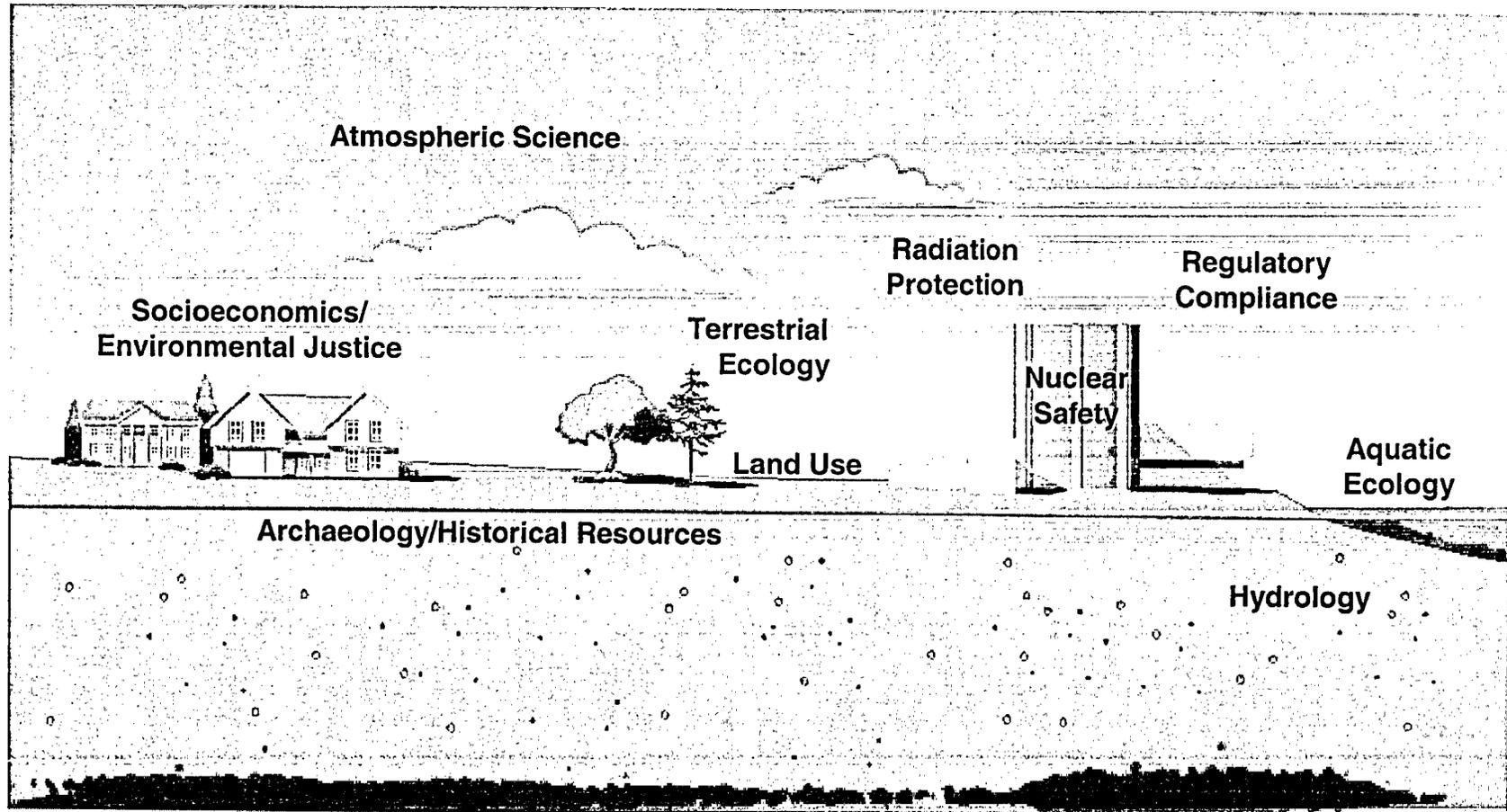


Environmental Review Milestones

Application Received	March 22, 2005
Notice of Intent	June 27, 2005
Scoping Public Meeting	July 28, 2005
Scoping Period Ended	August 22, 2005
Scoping Summary Report	December 14, 2005
Draft SEIS	February 14, 2006
Draft SEIS Public Meeting	April 5, 2006
Draft SEIS Comments Due	May 18, 2006
Final SEIS	October 2006



Team Expertise

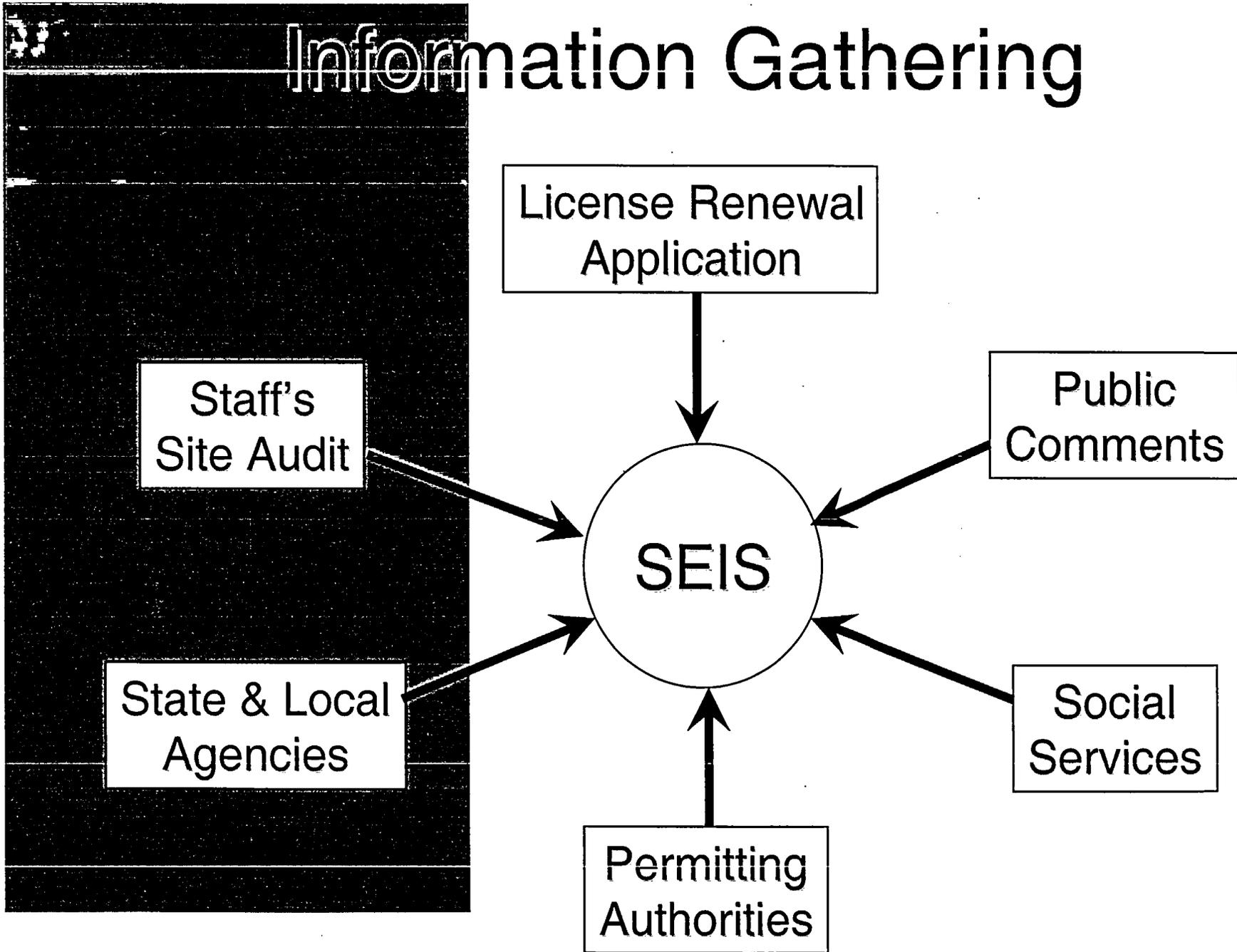




How Impacts are Quantified

- 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

- There are no Category 2 issues related to the closed- cycle cooling system operation at the Palisades Nuclear Plant.

- Preliminary findings
 - No new and significant information identified
 - GEIS concluded impacts are SMALL



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

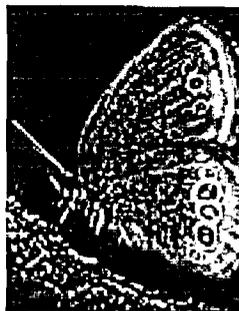


Threatened or Endangered Species

➤ Four terrestrial Federally listed species and one candidate species potentially in vicinity.

➤ U.S. Fish and Wildlife Service determined there is no need for a biological assessment.

➤ IMPACTS ARE SMALL





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



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

- 23 candidate improvements considered for Palisades.
- Set of SAMAs reduced to 8 based on multi-step screening process.
- Detailed cost/benefit analysis shows that several SAMAs could be potentially cost-beneficial at Palisades.



Preliminary Results of SAMA Evaluation

- None of the potentially cost-beneficial SAMAs relate to managing the effects of aging. Accordingly, none of the SAMAs are required to be implemented as part of license renewal
- Notwithstanding this, the licensee has committed to further evaluate the potentially cost-beneficial SAMAs for possible implementation
- Completion of the evaluations is being tracked in the licensee's plant change process



Preliminary Conclusions

- Impacts of license renewal are SMALL for all impact areas.
- Impacts of alternatives may reach MODERATE to LARGE.
- The staff's preliminary recommendation is that the adverse environmental impacts of license renewal for Palisades Nuclear Plant are not so great that preserving the option of license renewal for energy planning decisionmakers would be unreasonable.



Environmental Review Milestones

- Draft EIS issued – February 14, 2006
- Comment period ends – May 18, 2006
- Issuance of Final EIS – October 2006 (est.)



Additional Information

- NRC contact: Bo Pham (800) 368-5642, Ext. 8450
- Documents located at South Haven Memorial Library, 314 Broadway Street, South Haven, MI.
- Draft SEIS can also be viewed at the NRC's Web site (www.nrc.gov) at: www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1437/supplement27/



Submitting Comments

-
- By mail: Chief, Rules and Directives Branch
Division of Administrative Services
Mailstop T-6D59
U.S. Nuclear Regulatory Commission
Washington DC 20555

 - In person: 11545 Rockville Pike
Rockville, Maryland

 - By e-mail: PalisadesEIS@nrc.gov