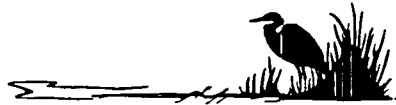




Preliminary Results of Environmental Review Monticello Nuclear Generating Plant

U.S. Nuclear Regulatory Commission
March 22, 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

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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

3



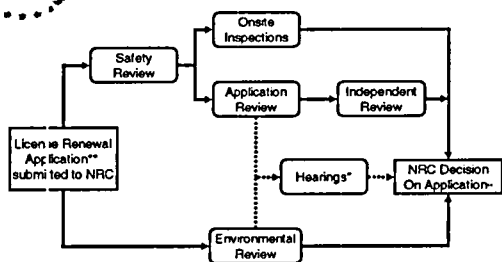
Monticello Nuclear Generating Plant License Renewal

- > Operating license expires
 - > September 8, 2010
 - > Application requests authorization to operate Monticello Nuclear Generating Plant for an additional 20 years.

4



License Renewal Process



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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

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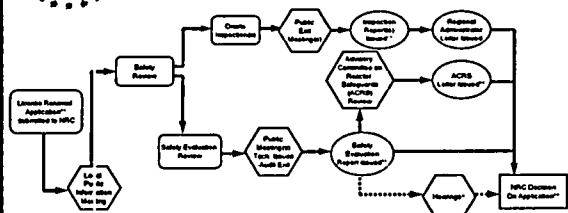
Safety Review Process

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

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Safety Review Process

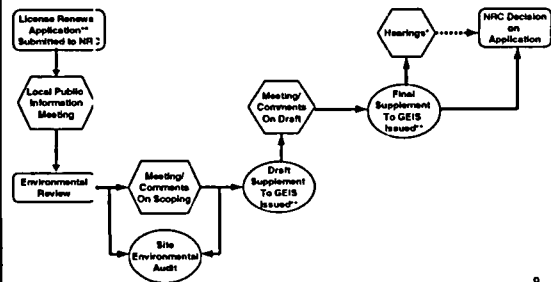


Opportunities for Public Involvement
 * If a request for hearing is granted
 ** Available at some sites

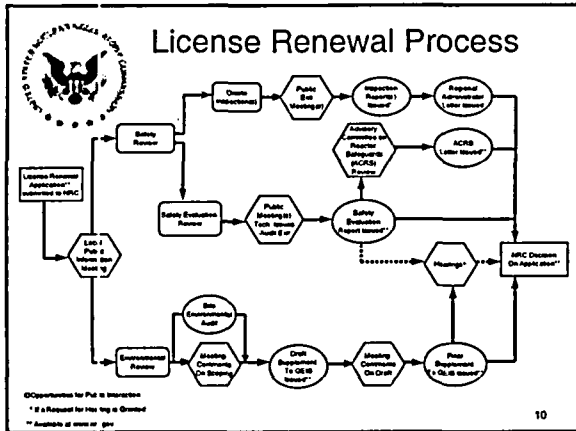
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Environmental Review Process

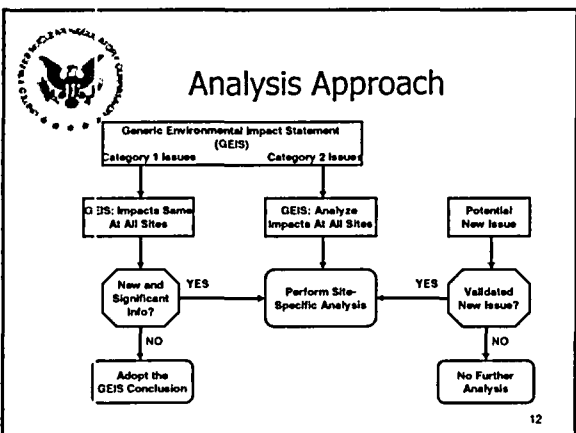


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National Environmental Policy Act (NEPA)

- > 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.





Decision Standard for Environmental Review

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

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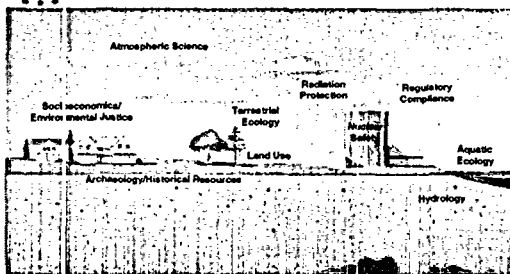
Environmental Review Milestones

Application Received	March 24, 2005
Notice of Intent	June 2, 2005
Scoping Public Meetings	June 30, 2005
Scoping Period Ended	August 2, 2005
Scoping Summary Report	October 7, 2005
Draft SEIS	January 23, 2006
Draft SEIS Public Meetings	March 22, 2006
Draft SEIS Comments Due	May 4, 2006
Final SEIS	September 2006

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Team Expertise



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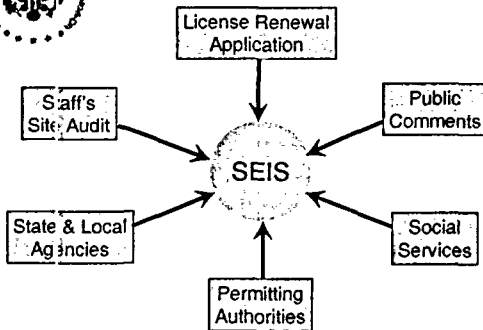
How Impacts are Quantified

- 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

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Information Gathering



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Environmental Impacts of Continued Operation

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

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Cooling System Impacts

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



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Radiological Impacts

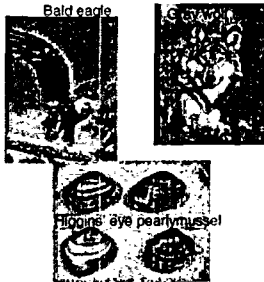
- > Category 1 issues
 - > Radiation exposures to the public
 - > Occupational radiation exposures
- > Preliminary findings
 - > No new and significant information identified
 - > GEIS concluded impacts are SMALL

20



Threatened or Endangered Species

- > Three Federally listed species potentially in vicinity.
- > A biological assessment was prepared.
- > IMPACTS ARE SMALL



Images: <http://images.fes.gov>, http://www.enviro-explorers.com/higgins_eyemussel

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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

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Other Environmental Impacts Evaluated

- Uranium Fuel Cycle and Solid Waste Management
- Decommissioning

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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

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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.

25



Postulated Accidents

- > Design-basis accidents
- > Severe accidents
- > Severe accident mitigation alternatives (SAMAs)

26



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

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Preliminary Results of SAMA Evaluation

- > 40 potential SAMA candidate improvements considered for Monticello
- > Set of SAMAs reduced to 16 based on multi-step screening process
- > Detailed cost/benefit analysis shows that 10 of these SAMAs could be cost beneficial (7 from baseline analysis; 3 additional from uncertainty analysis)

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Preliminary Results of SAMA Evaluation

- > NMC has subsequently implemented 6 of the SAMAs and reassessed the benefit of the remaining SAMAs.
- > Implementation of the six SAMAs reduces the benefit of the remaining SAMAs such that only one SAMA remains potentially cost beneficial.
- > This SAMA does not relate to managing the effects of aging. Accordingly, it is not required to be implemented as part of license renewal.
- > Notwithstanding this, NMC plans to further evaluate the potentially cost-beneficial SAMA for possible implementation.

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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 Monticello Nuclear Generating Plant 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 SEIS issued – **January 23, 2006**
- > Comment period ends – **May 4, 2006**
- > Issuance of Final SEIS – **September 2006**

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Additional Information

- > NRC contact: Ms. Jennifer A. Davis (800) 368-5642, Ext. 3835
- > Documents located at the Monticello Public Library (221 West 6th Street, Monticello, Minnesota 55362) and the Buffalo Public Library (18 Northwest Lake Boulevard, Buffalo, Minnesota 55313)
- > 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/supplement26/

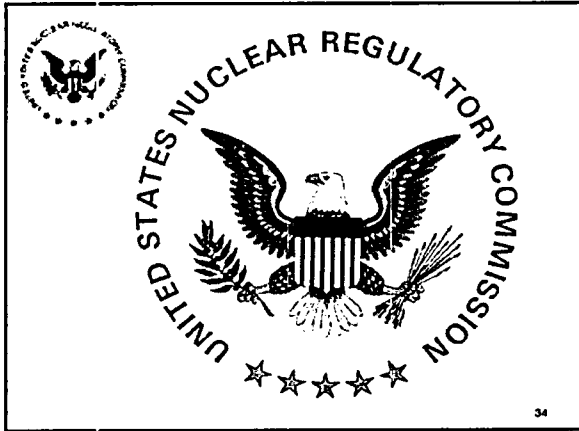
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Submitting Comments

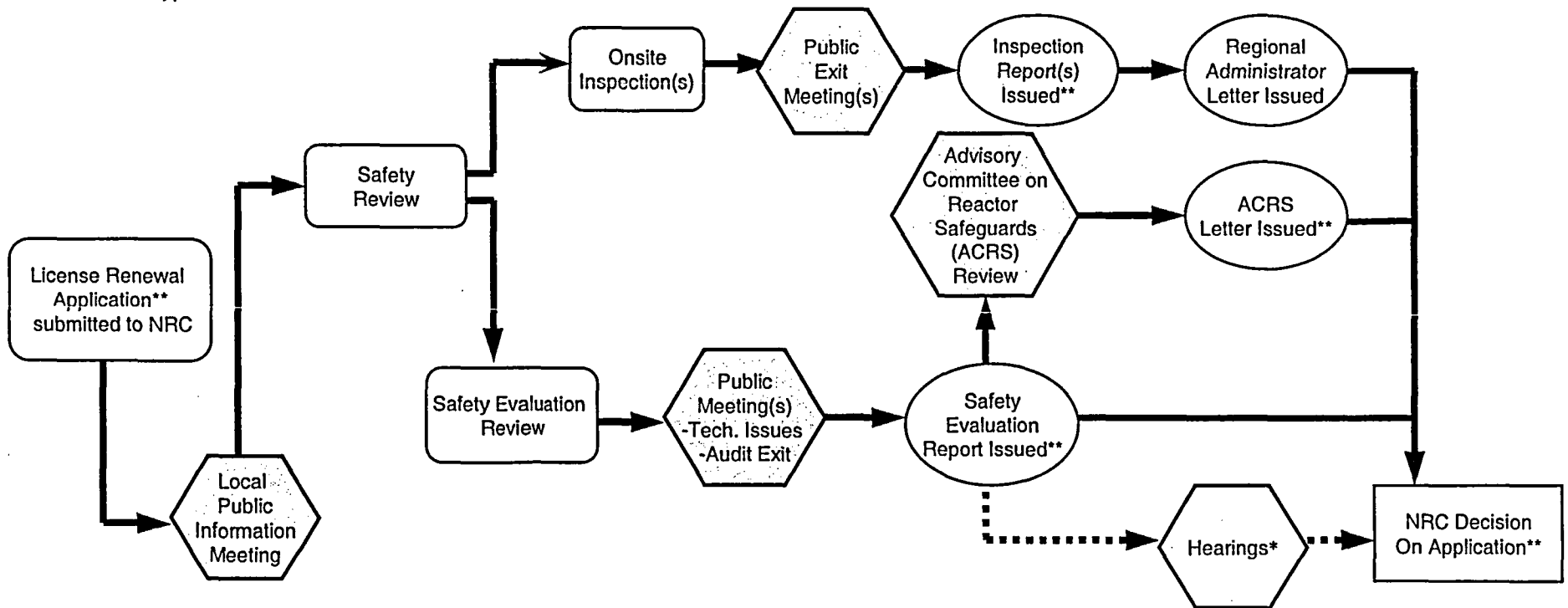
- > By mail: Chief, Rules and Directives Branch
Division of Administrative Services
Mailstop T-6D59
U.S. Nuclear Regulatory Commission
Washington DC 20555
- > In person: 11545 Rockville Pike
Rockville, Maryland
- > By e-mail: MonticelloEIS@nrc.gov

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Safety Review Process



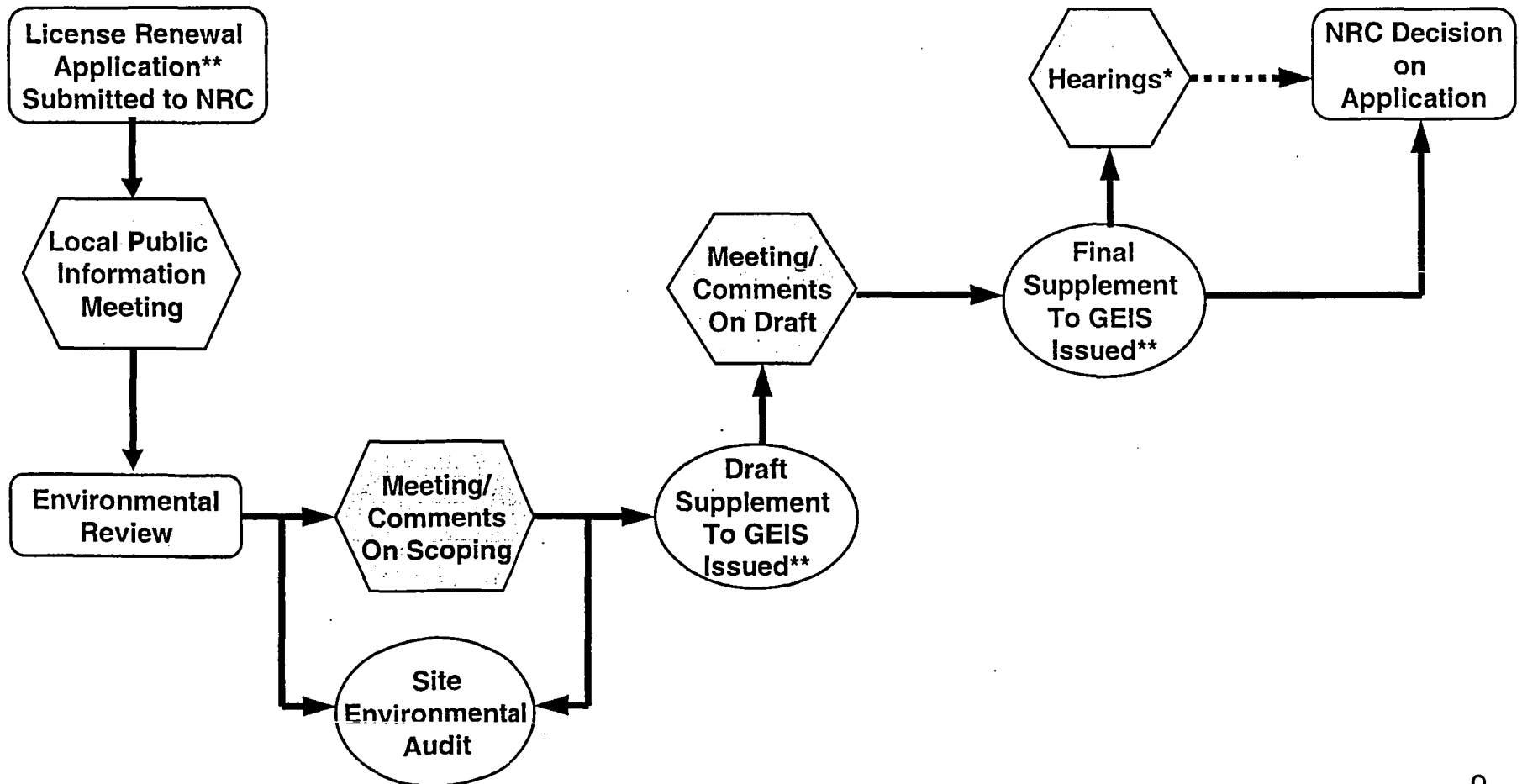
○ Opportunities for Public Interaction

* If a Request for Hearing is Granted

** Available at www.nrc.gov

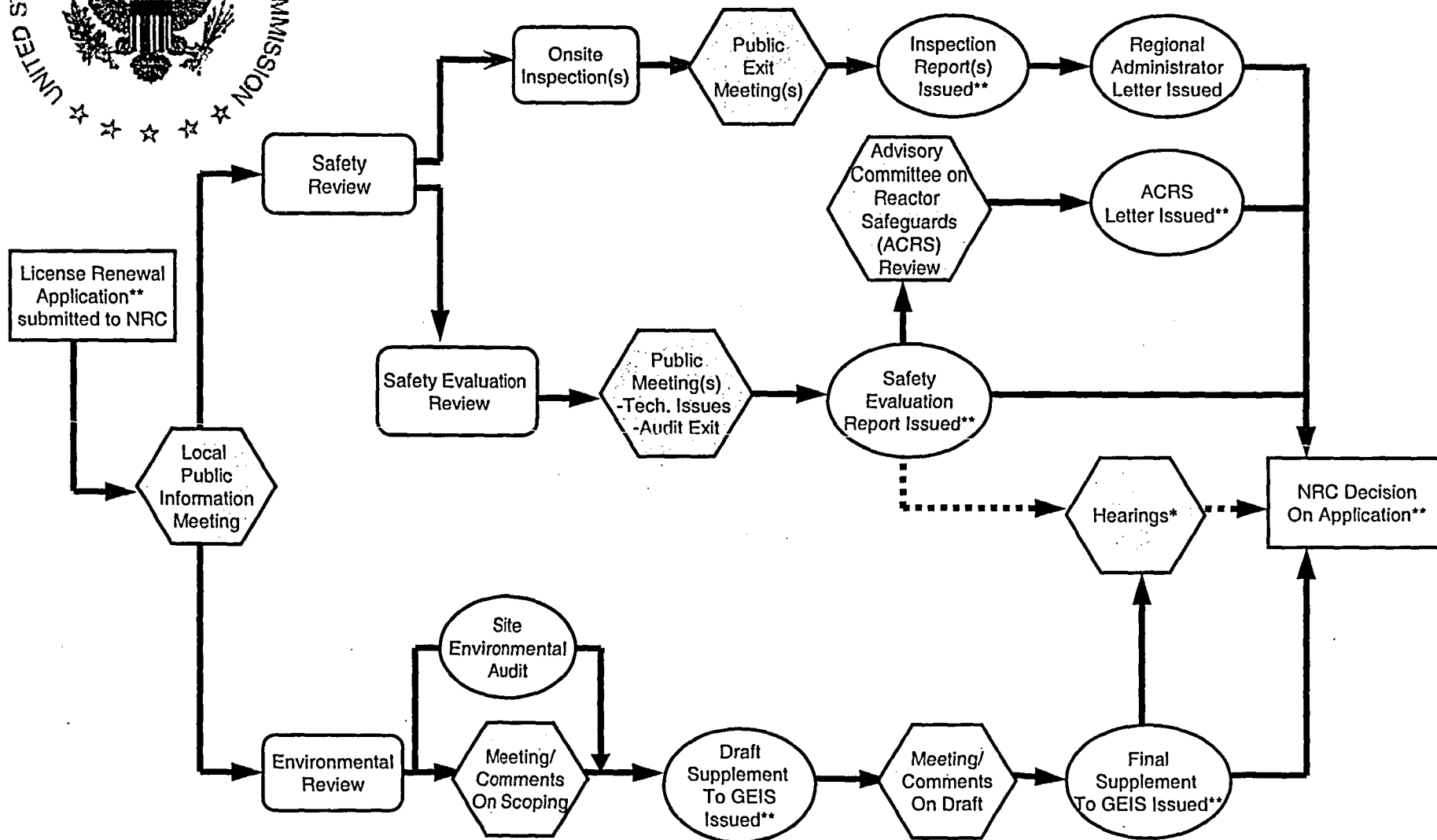


Environmental Review Process





License Renewal Process



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** Available at www.nrc.gov