

U.S. NRC

UNITED STATES NUCLEAR REGULATORY COMMISSION

Protecting People and the Environment

Public Meeting on the
Draft Supplemental Environmental Impact Statement
for the North Anna Power Station Unit 3
Combined License Application
February 3, 2009

Alicia Williamson, Environmental Project Manager, NRC

William Sandusky, Team Leader, Pacific Northwest National Laboratory

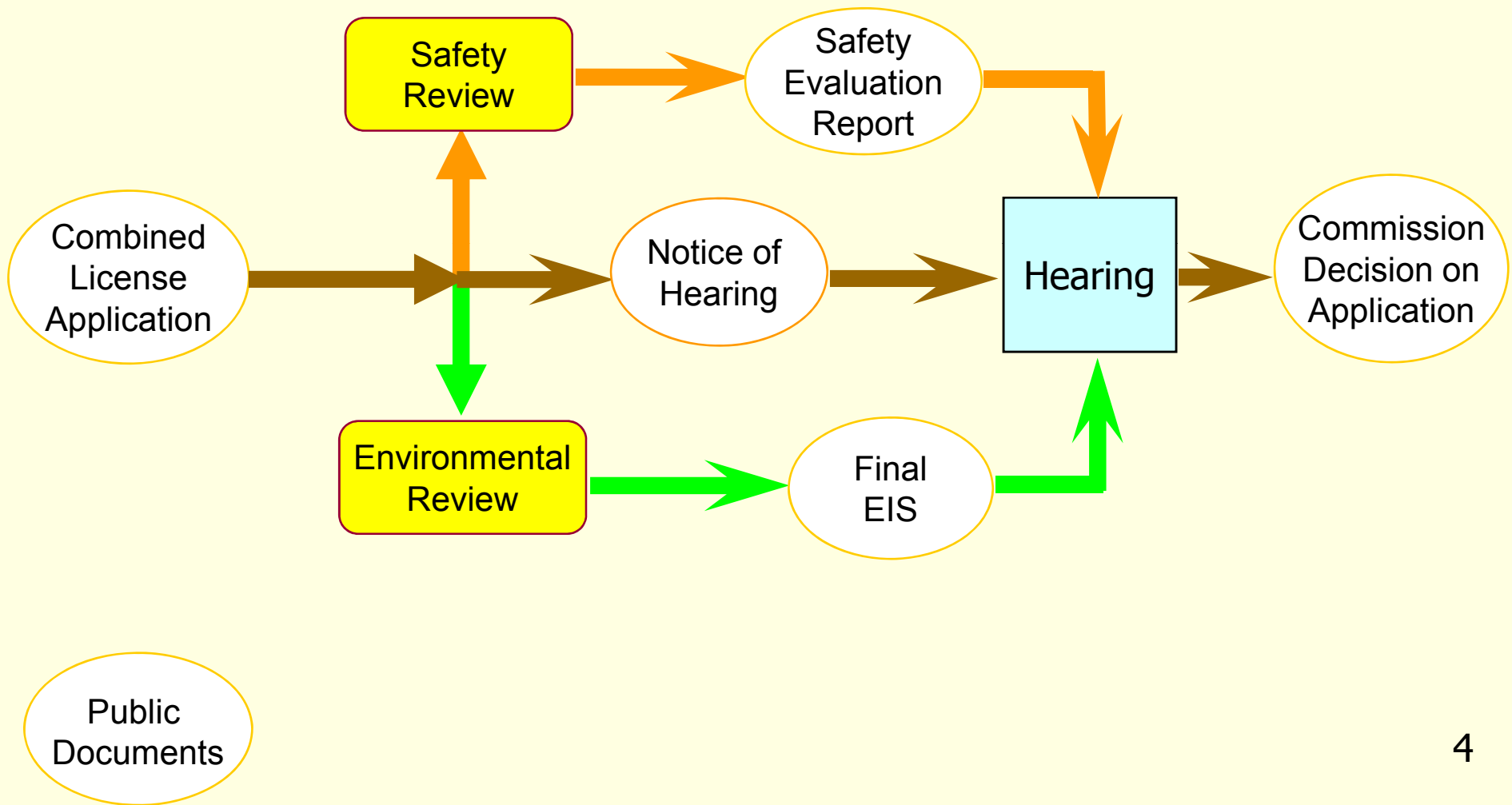
Purposes of this meeting

- ❖ Describe the environmental review process for a combined license application
- ❖ Discuss the preliminary results of the North Anna combined license environmental review
- ❖ Provide the environmental review schedule
- ❖ Describe how to submit comments
- ❖ Accept any comments you may have today

Combined License (COL)

- ❖ Authorization from the NRC to construct and operate a nuclear power plant at a specific site, with conditions, and in accordance with law and regulations
- ❖ Dominion submitted an application for a combined license for North Anna Power Station, Unit 3 in November 2007

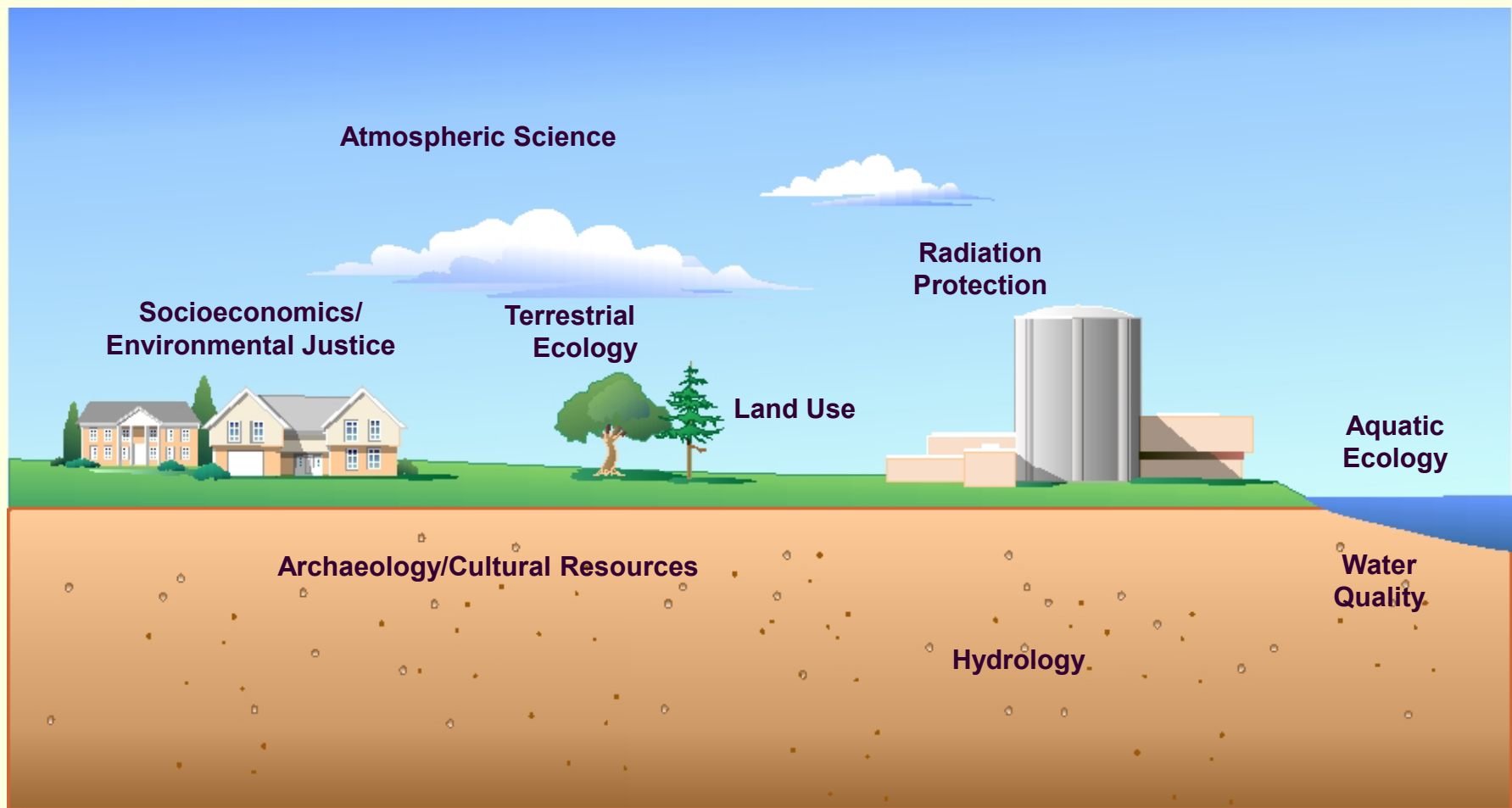
Combined License Application Review Process



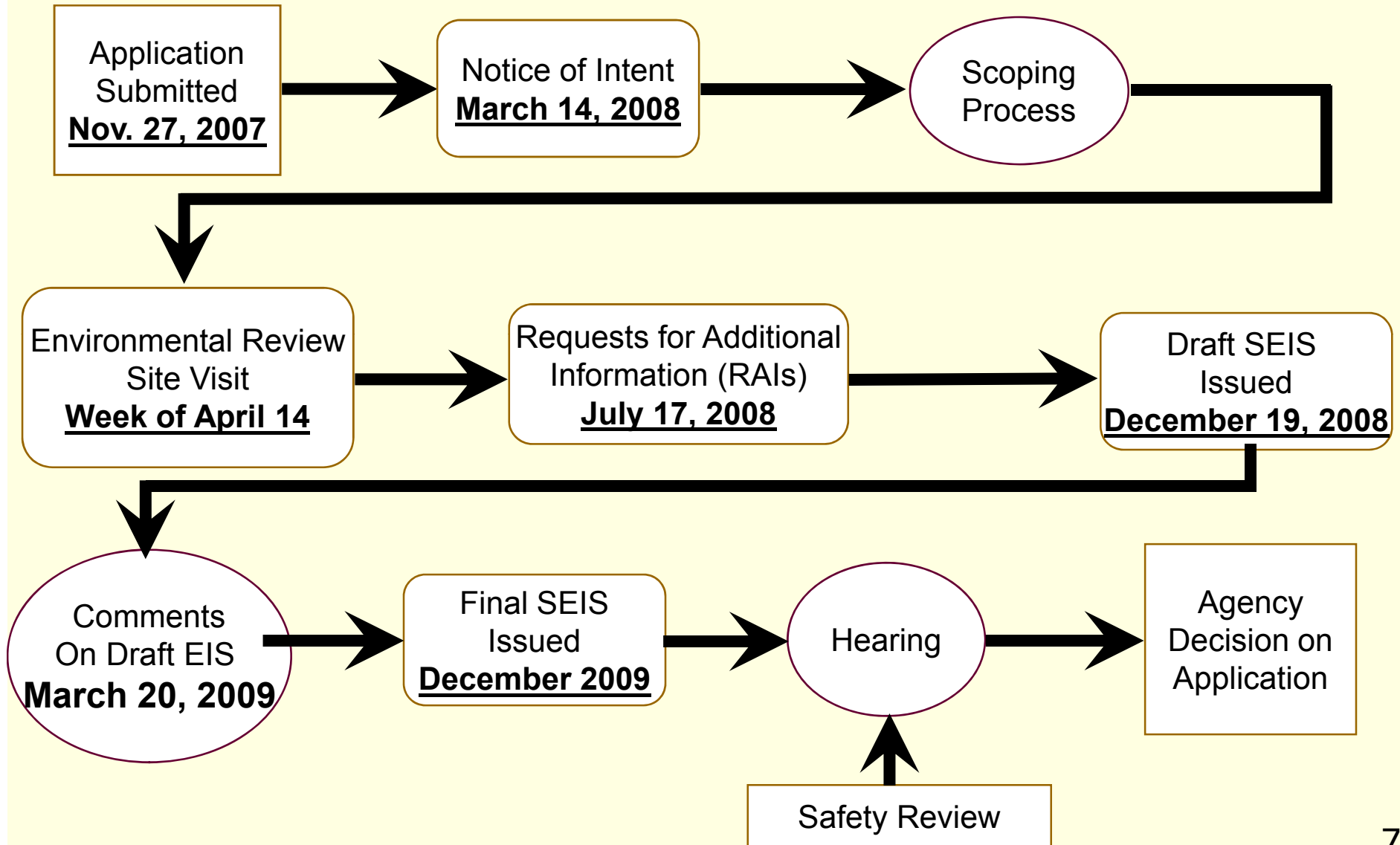
National Environmental Policy Act

- ❖ NEPA requires Federal agencies to use a systematic approach to consider environmental impacts
- ❖ NRC issued an Early Site Permit (ESP) for the North Anna ESP site, November 2007
- ❖ Commission has determined that combined license (COL) applications referencing an Early Site Permit (ESP) will require a supplement to the ESP Environmental Impact Statement (EIS)

Environmental Review Team Expertise



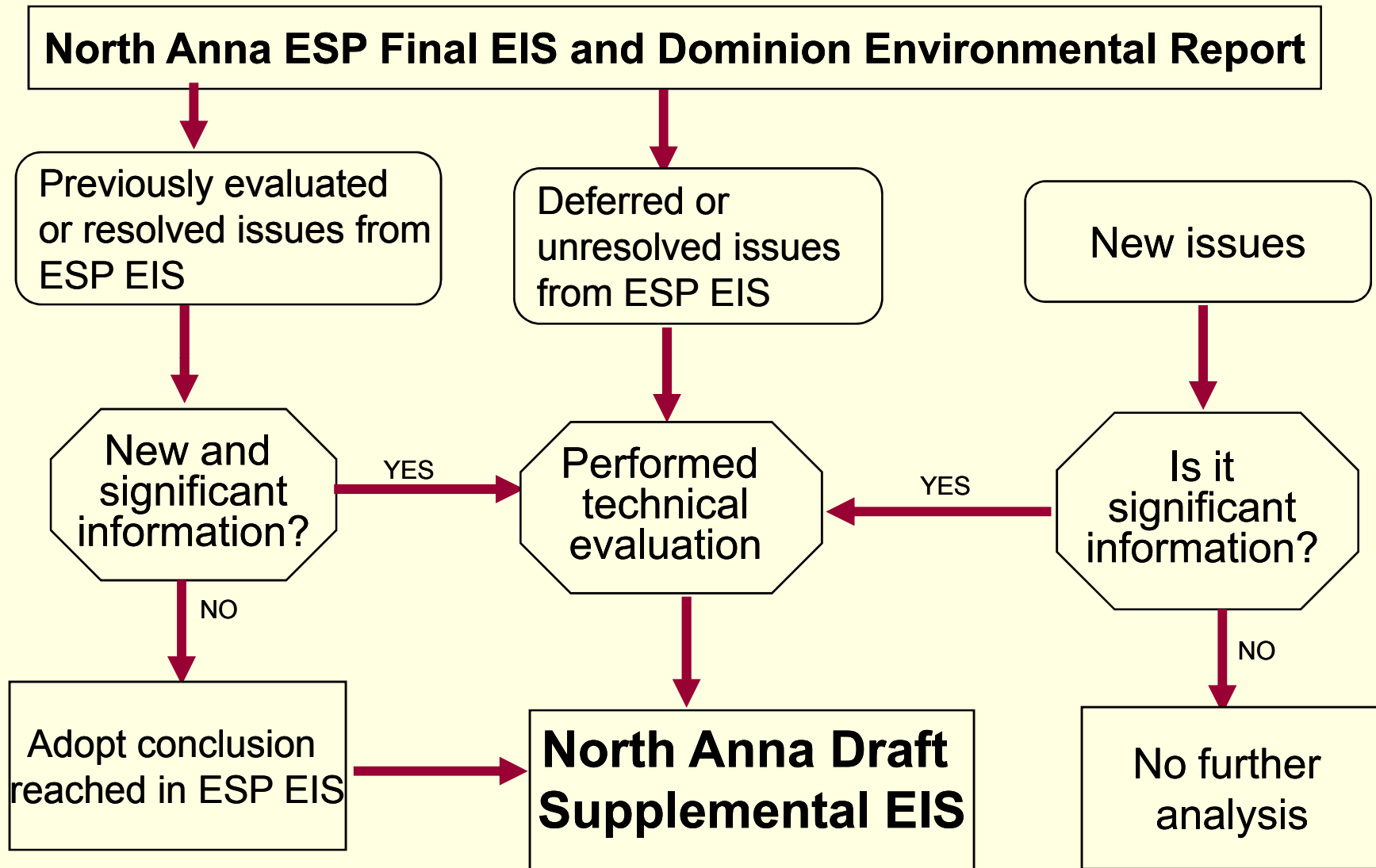
Environmental Review Process



North Anna Unit 3 Environmental Review

- ❖ Issued Supplemental Environmental Impact Statement (SEIS) for the North Anna, Unit 3 COL application, NUREG-1917, December 19, 2008.
- ❖ Draft SEIS Scope
 - Incorporated the analysis and results from the Final Environmental Impact Statement for North Anna Early Site Permit (ESP EIS), NUREG-1811, issued December 2006
 - Evaluated new and significant information for resolved ESP EIS issues.
 - Evaluated unresolved issues from the ESP EIS

Analysis Approach for North Anna Draft SEIS



Results of the Environmental Review for the North Anna Unit 3 Combined License Application

William “Bill” Sandusky

Team Leader

Pacific Northwest National Laboratory

Organization of the Draft SEIS

- ❖ Executive Summary - Cross-Walk Table
- ❖ Chapter 1 - Introduction
- ❖ Chapter 2 - Affected Environment
- ❖ Chapter 3 - Site Layout and Plant Design
- ❖ Chapter 4 - Environmental Impacts of Construction
- ❖ Chapter 5 - Environmental Impacts of Operation
- ❖ Chapter 6 - Fuel Cycle, Transportation, and Decommissioning Impacts
- ❖ Chapter 7 - Cumulative Impacts
- ❖ Chapter 8 - Need for Power
- ❖ Chapter 9 - Alternatives
- ❖ Chapter 10 - Conclusions and Recommendation
- ❖ Appendices A - M

How Impacts are Quantified

- ❖ NRC defined impact levels:
 - ❖ **SMALL:** Effect is not detectable or so minor it will neither 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
- ❖ Reflects Council on Environmental Quality regulations and guidance for NEPA analyses

Lake Anna Water Usage

- ❖ Lake Anna
 - ❖ Currently provides water for the cooling water system for North Anna Units 1 and 2
 - ❖ Proposed as source of cooling water for North Anna Unit 3 closed-cycle, combination wet and dry cooling system
- ❖ Other Major Uses of Lake Anna
 - ❖ Recreation and fishing
- ❖ Downstream Issues
 - ❖ Municipal water supplies
 - ❖ Aquatic environment
 - ❖ Recreation

Cooling System Impacts

❖ Evaluation Considered

- ❖ Consumptive use of water from all three Units
- ❖ Changes in Lake Anna elevation due to increased consumptive use
- ❖ Water quality to the lake due to an additional unit.

❖ Conclusions

- ❖ Impacts of water-use would remain SMALL in normal years and MODERATE in drought years.
- ❖ Impacts on water quality would be SMALL.

Ecological Impacts

- ❖ Approximately 126 acres of land be cleared, including 0.5 acres of wetlands.
- ❖ Most of the construction area is recent re-growth and forested habitat and contain no sensitive plant or animal species.
- ❖ Impacts to aquatic resources would be localized and temporary during construction but would remain SMALL. Impacts during operation would also remain SMALL.
- ❖ Installation of new transmission lines would be SMALL due to being placed in existing corridor.

Radiological Impacts

- ❖ Exposures to the public and to workers
 - Estimated doses to public well within regulatory design objectives and standards.
 - Occupational doses estimated slightly lower than those from current reactors.
- ❖ Impacts to biota evaluated and found to be acceptable.
- ❖ Conclusion – radiological impacts from construction and operation would remain **SMALL**.

Socioeconomic Impacts

- ❖ Construction: SMALL to MODERATE beneficial impacts to adjacent counties for economy and taxes. SMALL to MODERATE adverse impacts on transportation, recreation, housing, and education.
- ❖ Operation: SMALL to LARGE beneficial impacts to adjacent counties for economy and taxes. SMALL to MODERATE adverse impacts on aesthetics and recreation.
- ❖ Environmental Justice impacts would remain SMALL.

Need for Power

- ❖ Dominion is using the PJM Interconnection report which forecasted an additional need for base-load power generating capacity in the Dominion Zone.
- ❖ NRC reviewed this PJM report, determined that it provides adequate justification that the power produced by the new unit would be needed by the time the unit would come online.

Energy Alternatives

- ❖ Alternative energy sources considered
 - Purchased electrical power
 - New generation (coal, natural gas)
 - Other alternatives (wind, solar, geothermal)
 - Combination of alternatives
- ❖ Environmental effects of alternatives in at least some impact categories reach MODERATE or LARGE significance

Preliminary Conclusions and Recommendations

- ❖ Most of the environmental impacts are expected to be SMALL
- ❖ None of the feasible alternative energy evaluated are environmentally preferable
- ❖ The staff's preliminary recommendation to the Commission is that the COL be issued.

North Anna, Unit 3 Environmental Review Schedule

Draft SEIS Issued	December 19, 2008
Draft SEIS Public Meeting	February 3, 2009
Draft SEIS Comment Period Ends	March 20, 2009
Final SEIS Issued	December 2009
Hearing Decision	TBD
Commission Decision	TBD

Submitting Comments

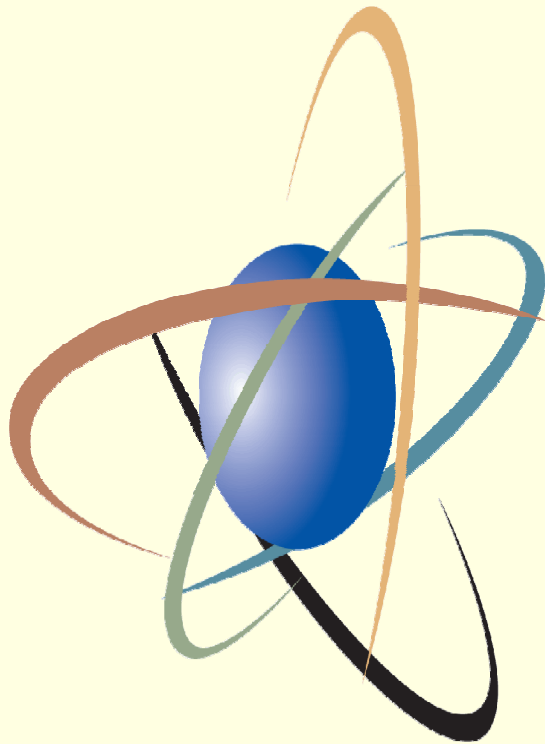
Provide Comments on Draft SEIS by **March 20, 2009**

By mail: Chief, Rules and Directives Branch
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Additional Information

- ❖ Agency Points of Contacts
 - Alicia Williamson, Environmental Project Manager
(800) 368-5642 ext. 1878
 - Thomas Kevern, Lead/Safety Project Manager
(800) 368-5642 ext. 0224
- ❖ Documents viewed at:
 - Jefferson-Madison Regional Library in Mineral, VA
 - Hanover Branch Library in Hanover, VA
 - Orange County Library in Orange, VA
 - Salem Church Library in Fredericksburg, VA
 - C. Melvin Snow Memorial Branch Library in Spotsylvania, VA
- ❖ NRC website: www.nrc.gov/reactors/new-licensing/col/north-anna.html



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