Environmental Review Process for a Proposed Uranium Enrichment Facility near Wilmington, North Carolina

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May 19, 2009

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

Who is the NRC?

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United States Nuclear Regulatory Commission
Protecting People and the Environment

- NRC is an independent government agency responsible for ensuring protection of public and worker health and safety in the use of radioactive materials
- NRC does not build, operate, or promote nuclear facilities

Why are we here?

- The National Environmental Policy Act of 1969, as amended (NEPA), requires Federal agencies to consider the environmental impacts of certain actions

- NRC implements NEPA with Title 10, *Code of Federal Regulations* Part 51 (10 CFR 51)

Why are we here?

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- NRC is conducting an environmental review as one part of our decision about whether we can give General Electric—Hitachi (GEH) a license
- Your input is vital to our environmental review
- We are at the beginning of the environmental review and licensing processes. No decisions have been made

General Electric Hitachi Laser-Based Uranium Enrichment Facility Licensing

Tim Johnson, NRC Licensing Project Manager

May 19, 2009

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Objectives

- Provide brief summary of
  - Proposed General Electric-Hitachi (GEH) enrichment facility
  - U.S. Nuclear Regulatory Commission (NRC) licensing process

Project Background

- GEH is proposing to enrich uranium using a laser-based process at its site in Wilmington, NC
- Enriched uranium is needed for fuel for nuclear power plants
- After mining and initial processing of ores, uranium is converted into uranium hexafluoride. Uranium hexafluoride is then shipped to an enrichment plant.

Project Background

- The laser-based system separates the U-235 and U-238 isotopes and increases the U-235 content from 0.7 percent to up to 8 percent.
- These enrichment levels are well below that needed to make nuclear weapons.
- The enriched uranium is then shipped to a fuel fabricator that will produce fuel pellets and fuel assemblies for nuclear power plants.

Project Background

- In May 2008, NRC issued GEH a license to operate a laboratory-scale test loop to demonstrate the laser separation equipment at the Wilmington site.

- The test loop is currently under construction.

NRC Licensing Process

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- **NRC is an independent agency responsible for ensuring protection of public and worker health and safety in use of radioactive materials.**
- **NRC is not a promoter of proposed project.**
- **Enrichment facility construction under NRC jurisdiction cannot begin until a license for construction and operation is issued.**
- **Laser safety is regulated by State of North Carolina Department of Labor**

NRC Licensing Process

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- **GEH submitted an Environmental Report on January 30, 2009, and a license application is expected to be submitted in June 2009.**

- **NRC will perform a technical review of the application to ensure it meets NRC health and safety requirements (10 CFR Parts 40 and 70).**

- **NRC will prepare an Environmental Impact Statement.**

NRC Licensing Process

- NRC technical review is expected to take 18 months.
  - NRC will review application
  - Request additional information, if needed
  - Document safety review in a Safety Evaluation Report
- Hearing is required for uranium enrichment plants

NRC Licensing Process

- **Public will have several opportunities to provide input to the licensing process.**
  - **Opportunity to petition for a hearing will be offered shortly after application is submitted**
  - **Environmental review process**
    - **Scoping meeting**
    - **Draft EIS**

NRC Licensing Process

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- **Staff will conduct a public meeting to discuss results of the Final EIS and Safety Evaluation Report.**

- **If license is issued, staff will conduct a public meeting to discuss its inspection program for facility construction.**

NRC Licensing Process

- **NRC has Uranium Enrichment and GEH project web sites.**

- **http://www.nrc.gov/materials/fuel-cycle-fac/ur-enrichment.html**

- **http://www/nrc.gov/materials/fuel-cycle-fac/laser.html**

NRC Licensing Process

- **NRC Contacts:**
  - **Tim Johnson, Licensing Project Manager; 301-492-3121; Timothy.Johnson@nrc.gov**
  - **Christianne Ridge, Environmental Project Manager; 301-415-5673; Christianne.Ridge@nrc.gov**

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Christianne Ridge, NRC
Environmental Project Manager

May 19, 2009

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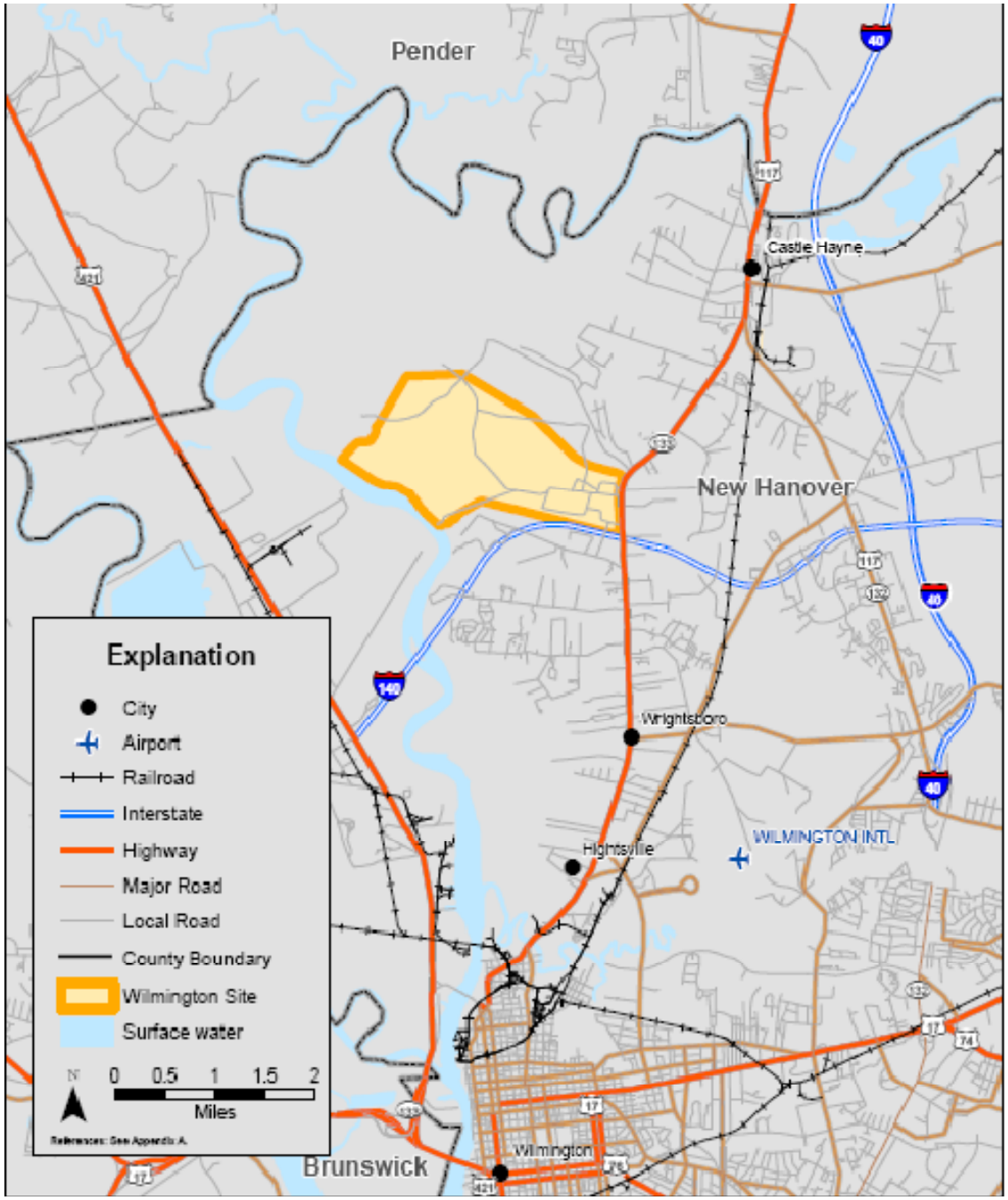
Where is the proposed site?



[GE-Hitachi Global Laser Enrichment, LLC. Environmental Report for the GLE Commercial Facility, January 2009]

Accessible at:
http://www.nrc.gov/reading-rm/adams.html
Accession number ML090910573

Why are we here?

- NRC is conducting an environmental review as one part of our decision about whether we can give General Electric—Hitachi (GEH) a license
- This review is required by the National Environmental Policy Act of 1969, as amended
- Your comments will be used to refine the scope of our environmental review

What the meeting goals?

- To ensure your concerns are identified early so they can be properly studied
- To identify alternatives to the proposed action
- To identify significant issues
- To eliminate unimportant issues from detailed study

What is an EIS?

- NRC staff will document its environmental review in an Environmental Impact Statement (EIS)
- An EIS describes the potential environmental impacts of a proposed action and alternatives to the proposed action
- An EIS provides information to the public and to those in the agency deciding whether to grant a license

What topics will an EIS address?

- An EIS addresses five main topics
  - The proposed action, including its purpose and the need it meets
  - Alternatives, including no action
  - The affected environment
  - Environmental impacts
  - Mitigative measures
- Impacts may be direct, indirect, or cumulative

What types of effects are considered?

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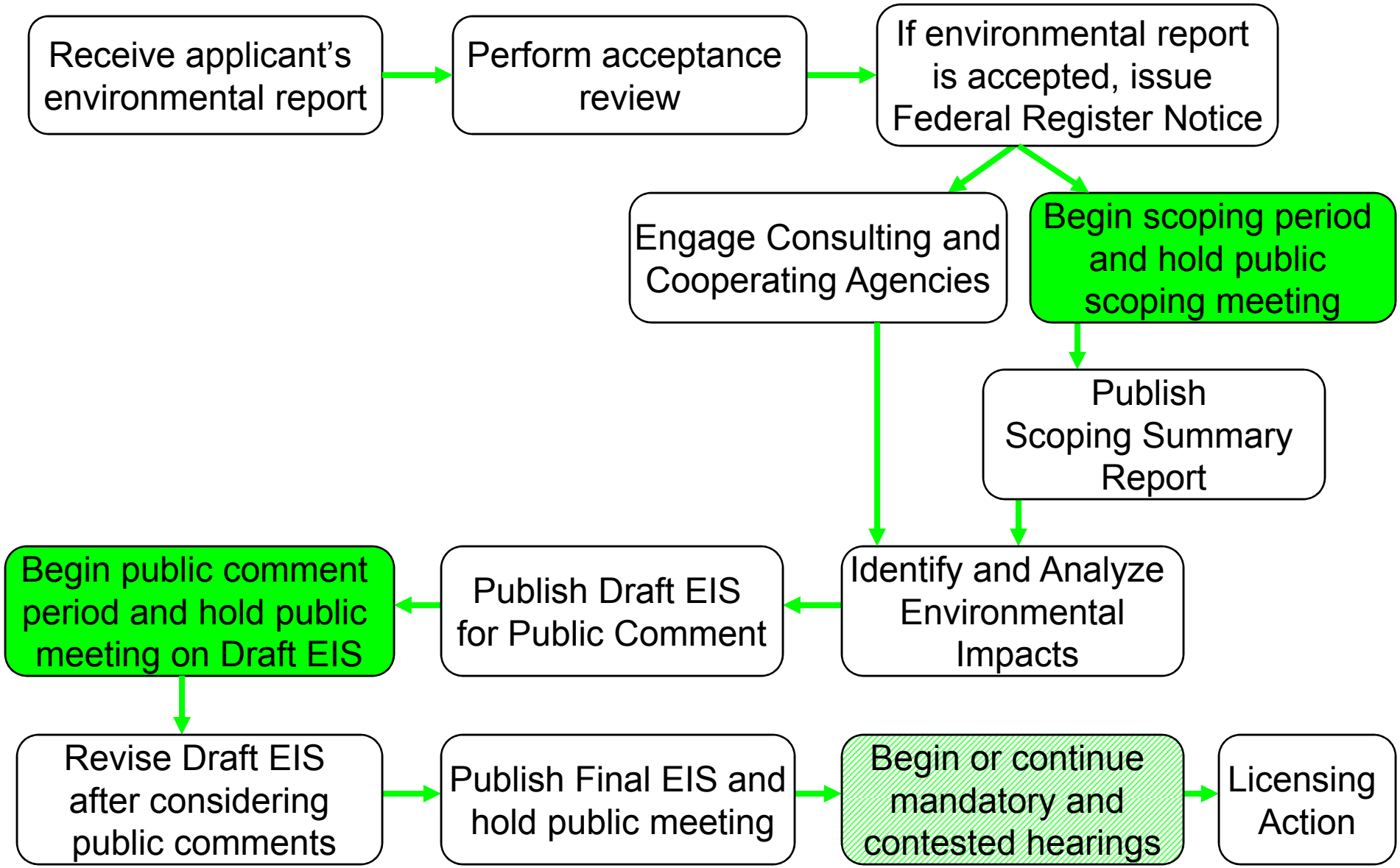
- The EIS will address the effects of facility construction, operation, and decommissioning
- Example review areas include effects on
  - Air, water, soils, plants, and animals
  - Public and worker health
  - Historic, archaeological, or architectural property and artifacts
  - Economic resources, cultural resources, and social services
  - Environmental justice

What happens next?



Where can I get more information?

- Project Website
  http://www.nrc.gov/materials/fuel-cycle-fac/laser.html (case sensitive)

- NRC's electronic reading room (Docket No.70-7016)
  http://www.nrc.gov/reading-rm/adams.html

- New Hanover County Library
  201 Chestnut Street, Wilmington

- Contact NRC
  - Licensing and Safety Review: Tim Johnson 301.492.3121
    Timothy.Johnson@nrc.gov
  - Environmental Review: Christianne Ridge 301.415.5673
    Christianne.Ridge@nrc.gov

How do I make a comment?

- Speaking at this meeting
- Filling out a comment form at this meeting
- Writing an email to GLE.EIS@nrc.gov
- Writing to NRC (note Docket No.70-7016)

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