

**Public Meeting on  
Draft Environmental Impact Statement  
for the Proposed Fluorine Extraction Process and  
Depleted Uranium De-conversion Plant  
in Lea County, New Mexico**

**February 2, 2012**



# The NRC Roles and Responsibilities

Kevin Hsueh, Chief  
Environmental Review Branch  
Office of Federal and State Materials and Environmental  
Management Programs

# Role of NRC

- Independent Federal government agency
- Ensuring protection of public health and safety, and the environment in the use of radioactive materials
- NRC does not build, operate, or promote nuclear facilities



# NRC Involvement

- International Isotopes Fluorine Products Inc. proposes to build an extraction and deconversion facility
- Proposed location west of Hobbs
- License required from NRC

# Environmental Review



- Part of NRC's decision regarding International Isotopes license
- Required by the National Environmental Policy Act of 1969, as amended (NEPA)
- Product is an Environmental Impact Statement (EIS)

# Meeting Purpose



- Present results of NRC Draft EIS
- Listen to your comments
- Comments will be addressed in Final EIS



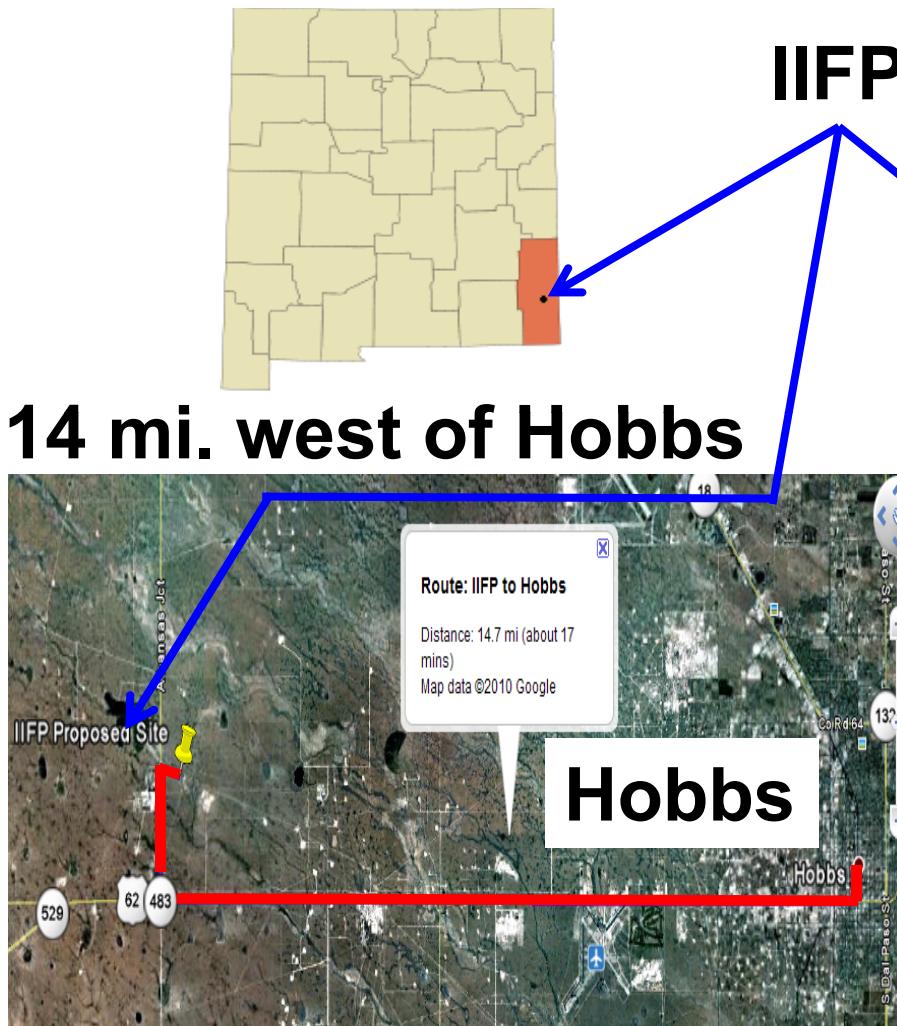
# Licensing Process for the Proposed International Isotopes Inc. Fluorine Products and De-conversion Facility

Maria Guardiola, NRC  
Project Manager  
Office of Nuclear Material Safety and  
Safeguards

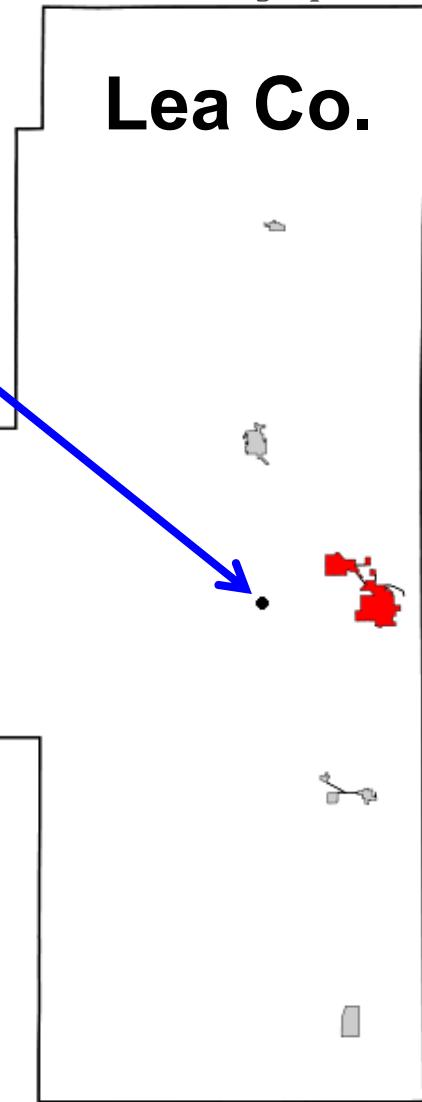
# Objectives

- **Summary of INIS proposed facility**
- **Overview of licensing process**

# Location: Lea County New Mexico



**14 mi. west of Hobbs**

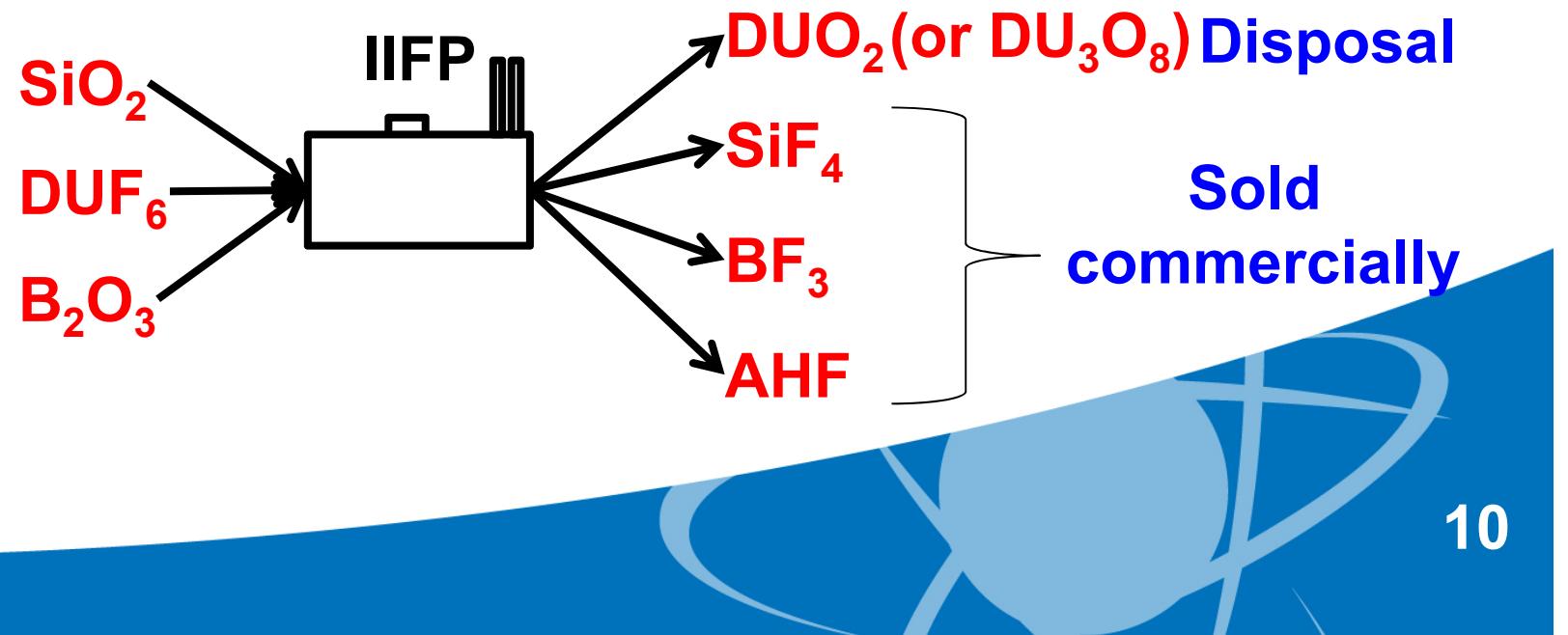


# INIS Process

**Receipt:** DUF<sub>6</sub> from enrichment facilities



**Processing:** Chemical Deconversion of DUF<sub>6</sub>





# NRC Review Schedule

**Application Received (December 30, 2009)**

**Draft Environmental Impact Statement (DEIS)  
(January 2012)**

**Safety Evaluation Report (February 2012)**

**Final EIS (Summer 2012)**

**If approved, issue license (Summer 2012)**

This schedule may change based on the quality of the applicant's license application, the responsiveness to requests for additional information, and unplanned higher priority operational safety work.

# NRC Licensing Process



## Safety Review

**Radiation, chemical, fire, emergency preparedness, environment, seismic, security, etc.**

## Integrated Safety Analysis Summary

**Identify and mitigate/prevent accidents**

## Outcome

**Publish Safety Evaluation Report (SER)**



# Opportunities for Involvement

## Contact NRC

**Licensing Review: Matthew Bartlett**  
**301.492.3119**

**[Matthew.Bartlett@nrc.gov](mailto:Matthew.Bartlett@nrc.gov)**

**Environmental Review: Asimios Malliakos**  
**301.415.6458**

**[Asimios.Malliakos@nrc.gov](mailto:Asimios.Malliakos@nrc.gov)**

## Two additional NRC public meetings

**Final EIS & SER**

**Inspection and Oversight**

# Additional Information

## NRC Website

- <http://www.nrc.gov>

## Fuel Cycle Facts

- <http://www.nrc.gov/materials/fuel-cycle-fac/ur-deconversion.html>
- <http://www.nrc.gov/materials/fuel-cycle-fac/inisfacility.html>

## E-mail Distribution or Questions

- [matthew.bartlett@nrc.gov](mailto:matthew.bartlett@nrc.gov)



# Draft Environmental Impact Statement for the Proposed Fluorine Extraction Process and Depleted Uranium De-Conversion Plant

Asimios Malliakos, NRC  
Environmental Project Manager  
Office of Federal and State Materials and  
Environmental Management Programs

# What is an EIS?

- NRC staff documented its environmental review in an Environmental Impact Statement (EIS)
- An EIS describes the potential environmental impacts of a proposed action and its alternatives
- An EIS provides information to the public and the agency decision makers

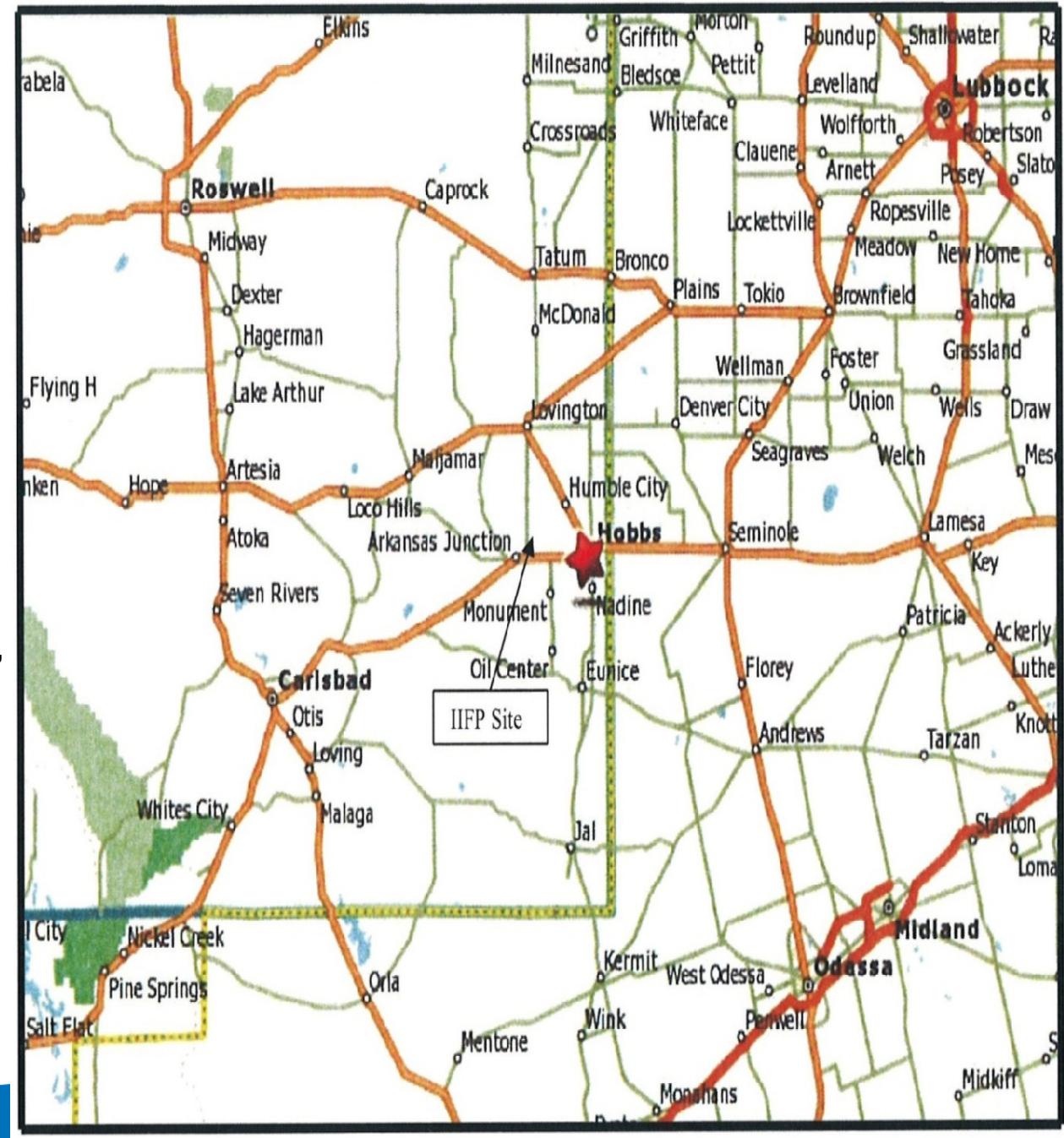
# Draft EIS Contents

1. Introduction (Proposed Action, Purpose & Need)
2. Alternatives
3. Affected Environment
4. Environmental Impacts
5. Mitigation
6. Environmental Measurement & Monitoring Programs
7. Benefit-Cost Analysis

# Where is the proposed site?

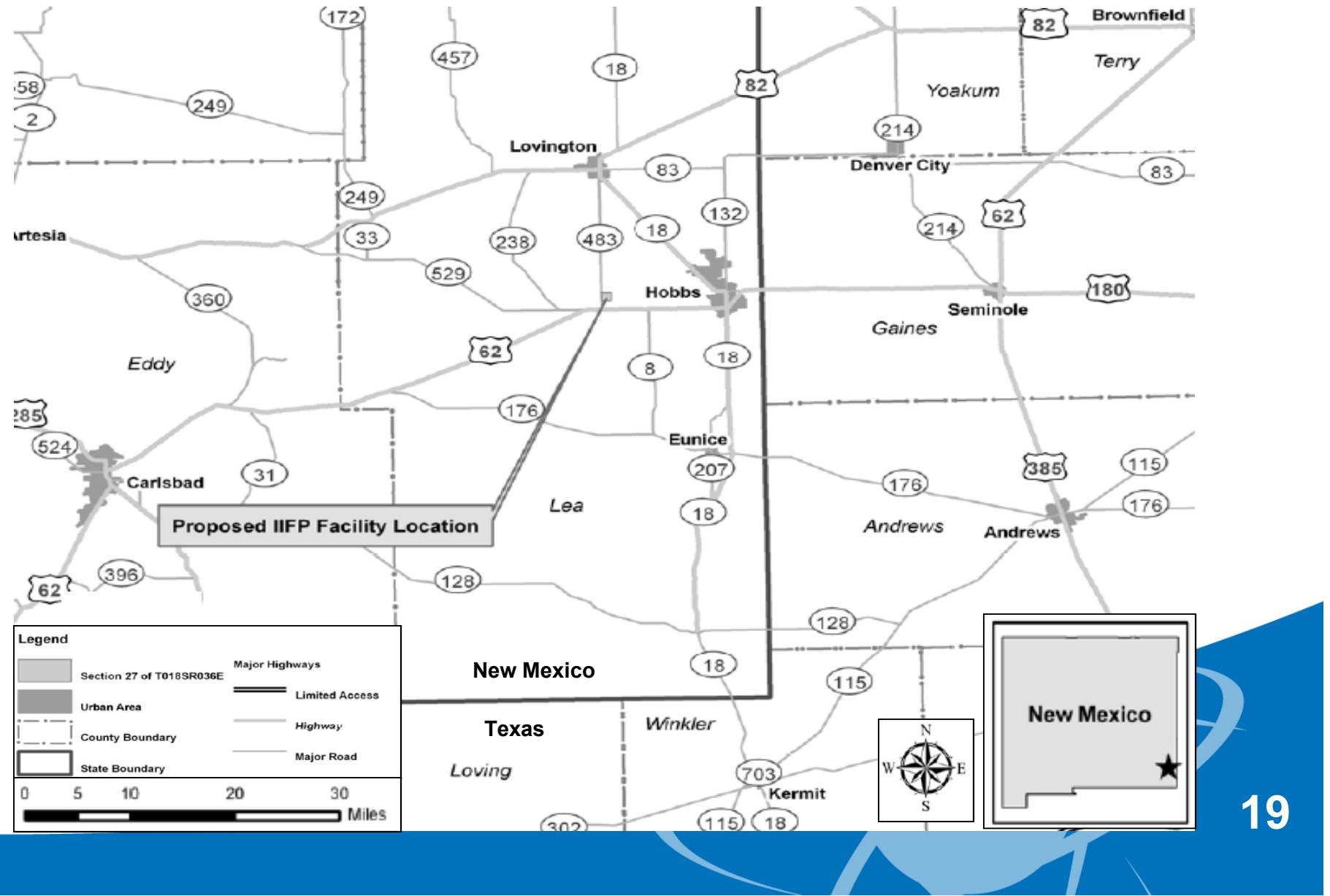
[International Isotopes Fluorine Products. Environmental Report for the Uranium Processing Plant, December 2009]

Accessible at:  
<http://www.nrc.gov/reading-rm/adams.html>  
Docket No. 40-9086

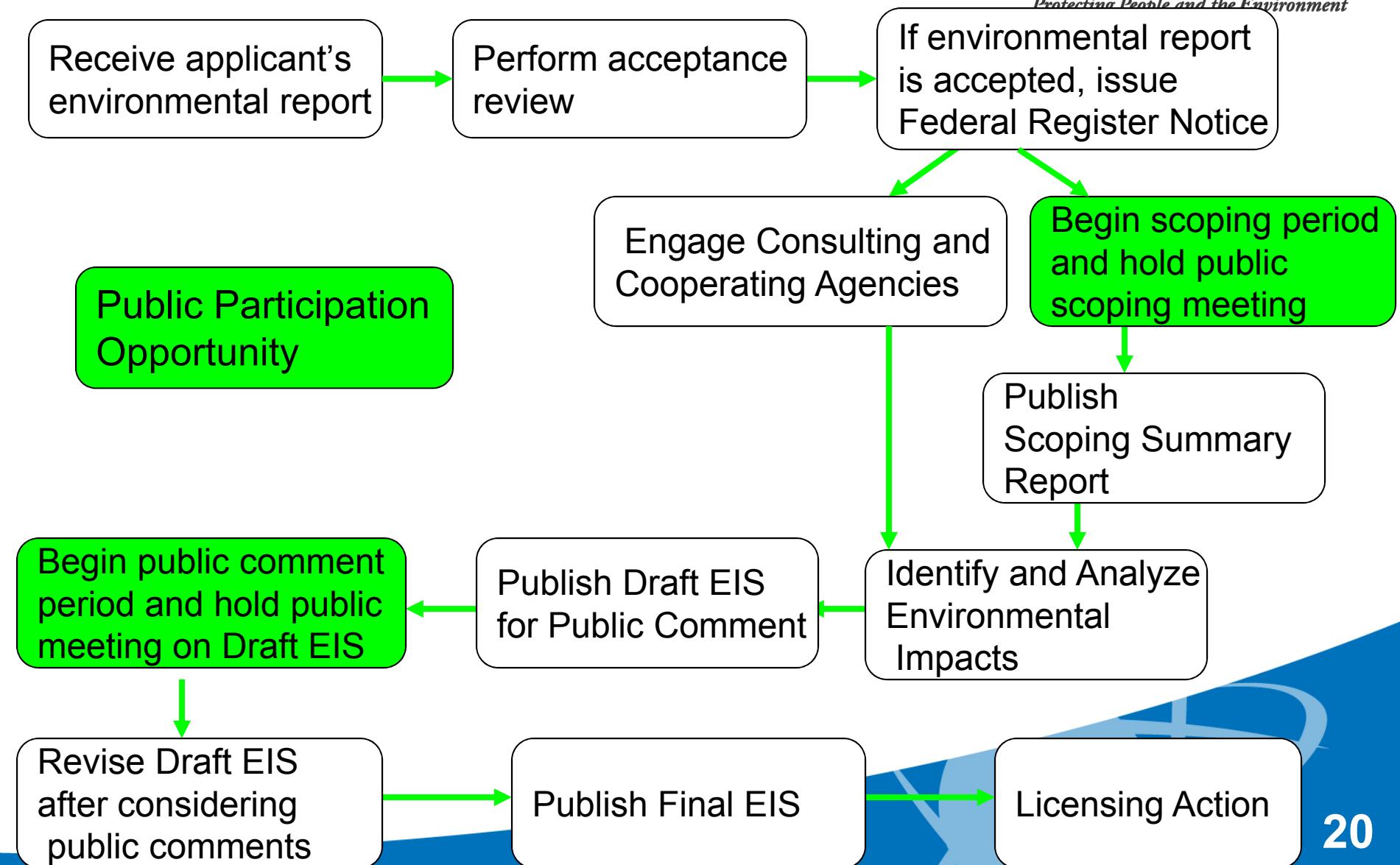


# Proposed IIFP Facility Location

## Lea County, New Mexico



# Environmental Review Process



# The Proposed Action

- Construct, operate, and decommission a facility to deconvert depleted uranium hexafluoride ( $DUF_6$ ) into depleted uranium oxides for disposal.
- Nuclear reactor fuel requires uranium with a higher proportion of the uranium-235 (U-235) isotope than is found in naturally occurring uranium (approximately 0.7 percent by weight).
- Fuel enrichment facilities use a fuel enrichment process to increase the portion of U-235 isotopes in the nuclear fuel.

# The Proposed Action (Continued)



- DUF<sub>6</sub> is a byproduct of the nuclear reactor fuel enrichment process.
- DUF<sub>6</sub> has a reduced concentration of U-235 and is primarily stored at the enrichment facilities.
- In addition to deconverting DUF<sub>6</sub> into depleted uranium oxides for disposal, the process at the proposed facility will recover fluoride products for commercial sale.

# The Proposed Action (Continued)



- If issued a license by NRC, the proposed facility, comprising 40 acres would be located within a 640-acres section in Lea County, approximately 14 miles west of Hobbs, New Mexico
- This 640-acres parcel of land contained open range land used for grazing as well as overhead transmission lines and underground petroleum pipelines.

# Purpose and Need

- The proposed action is intended to fulfill the need to deconvert DUF<sub>6</sub> produced at enrichment facilities to more chemically stable uranium oxide compounds that are generally suitable for disposal as low level waste.
  - Long-term storage of DU in the UF<sub>6</sub> form represents a potential chemical hazard if not properly managed, and conversion to more-stable DU oxides is preferable.
  - The proposed facility should be capable of deconverting approximately one-tenth of the DUF<sub>6</sub> projected to be produced annually in the United States by commercial enrichment facilities.

# Analysis of Alternatives to the Proposed Action



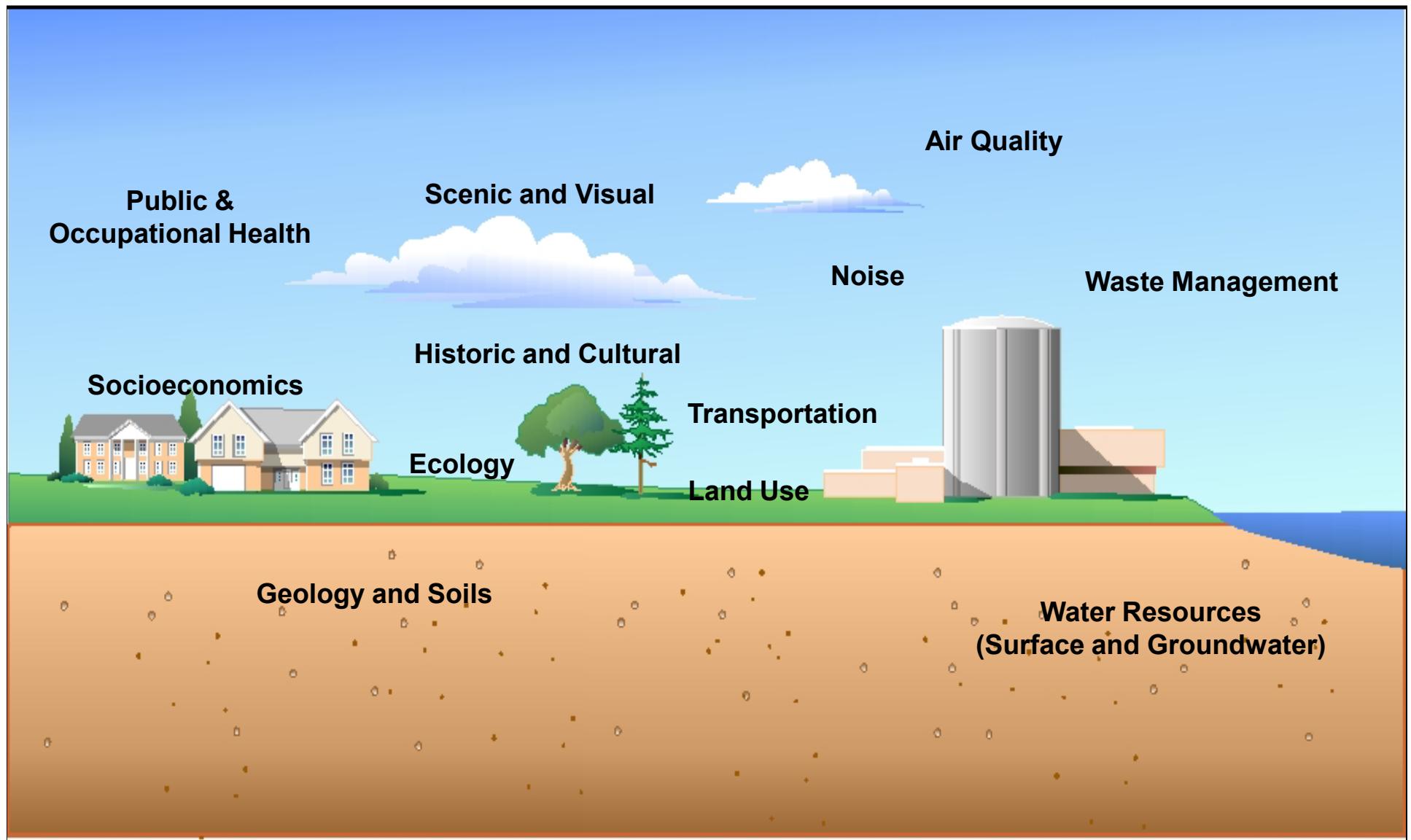
- Alternatives Considered, But Eliminated From Further Analysis:
  - Alternative sites
  - Alternative technologies
  - Deconversion of DUF<sub>6</sub> at DOE facilities
  - Overseas deconversion of DUF<sub>6</sub>
  - Indefinite storage of DUF<sub>6</sub> at the uranium enrichment facilities
  - Deconversion of DUF<sub>6</sub> at the uranium enrichment facilities
- No-Action Alternative

# Environmental Impacts

The NRC defines three impact levels:

- **SMALL**: *Environmental effects are not detectable or are so minor that they will neither destabilize nor noticeably alter any important attribute of the resource.*
- **MODERATE**: *Environmental effects are sufficient to alter noticeably, but not destabilize, important attributes of the resource.*
- **LARGE**: *Environmental effects are clearly noticeable and are sufficient to destabilize important attributes of the resource.*

# Resource Areas



# Summary of Draft Environmental Impacts

The NRC staff has preliminarily determined that the environmental impacts of the proposed project would be **SMALL**, with the exception of:

- **SMALL to MODERATE** impacts to air quality associated with vehicle emissions and fugitive dust emissions during the construction of the facility and nonradioactive emissions during the operation of the facility.

# Air Quality



- **Construction**
  - Emissions from construction equipment and commuter/delivery vehicles
  - Fugitive dust emissions (e.g., land clearing)
  - Mitigation measures
- **Operation**
  - Emissions from equipment (e.g., natural-gas fire boilers) and commuter/delivery vehicles
  - Gaseous effluents
  - Mitigation measures

# Basis for Recommendation



- The NRC staff has preliminarily concluded the overall benefits of the proposed facility outweigh the SMALL or SMALL to MODERATE environmental impacts, based on the consideration of the following:
  - The need to deconvert DUF<sub>6</sub> produced at enrichment facilities to more chemically stable uranium oxide compounds that are generally suitable for disposal as low level waste.
  - The potential environmental impacts from the proposed action are SMALL with the exception of SMALL to MODERATE for air quality.

# Preliminary Recommendation

- The NRC staff preliminarily recommends that, unless safety issues mandate otherwise, the proposed license be issued to INIS.

# Draft EIS Availability

- NRC's Public Document Room (PDR):  
One White Flint North, 11555 Rockville Pike (1<sup>st</sup> floor),  
Rockville, MD 20852 (Tel: 800-397-4209; Fax: 301-415-3548;  
[pdr.resource@nrc.gov](mailto:pdr.resource@nrc.gov))
- NRC's Agencywide Documents Access and Management System (ADAMS): <http://www.nrc.gov/reading-rm/adams.html>  
(Accession Number: ML12001A000)
- <http://www.nrc.gov/reading-rm/doc-collections/nuregs/docs4comment.html>, “NUREG-2113”
- Hobbs Public Library, 509 North Shipp, Hobbs, NM 88240 (Tel: 575-397-9328)

# Additional information?



- Project Website  
<http://www.nrc.gov/materials/fuel-cycle-fac/inisfacility.html>
- NRC's electronic reading room (Docket No.40-9086)  
<http://www.nrc.gov/reading-rm/adams.html>
- Federal Rulemaking Website (Docket ID: NRC-2010-0143):  
<http://www.regulations.gov>
- Contact NRC
  - Licensing Review: Matt Bartlett 301.492.3119  
[Matthew.Bartlett@nrc.gov](mailto:Matthew.Bartlett@nrc.gov)
  - Environmental Review: Asimios Malliakos 301.415.6458  
[Asimios.Malliakos@nrc.gov](mailto:Asimios.Malliakos@nrc.gov)

# How do I make a comment?

- Speaking at this meeting
- Filling out a yellow comment card at this meeting
- Write to NRC (Docket ID. NRC-2010-0143)

Chief, Rules, Announcements and Directives Branch (RADB)  
Mail Stop TWB 5B01M  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555–0001

- Fax to RADB at: (301) 492-3446
- Comment period ends **February 27, 2012.**