



**Status Update on NRC's Environmental Review
of Uranium Recovery Applications
September 28 , 2011
Denver, Colorado**





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Division of Waste Management and Environmental Protection
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Decommissioning & Uranium
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Uranium Recovery Licensing
Branch (Bill VonTill - Chief)

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Materials Decommissioning
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Special Projects Branch

Environmental Protection & Performance
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Environmental Review Branch A
(Diana Diaz-Toro - Chief)

Environmental Review Branch B
(Kevin Hsueh - Chief)

Performance Assessment Branch

Low-Level Waste Branch



Status of UR Applications

➤ Completed

- 3 SEISs (Moore Ranch, Nichols Ranch, Lost Creek)
- Uranium One - Willow Creek EA

➤ In-progress

- Cameco - Crow Butte License Renewal EA
- Cameco - Crow Butte North Trend EA
- Powertech - Dewey-Burdock SEIS
- Strata Energy - Ross SEIS



Status of UR Applications (cont.)

➤ Expected Applications (within 12 months)

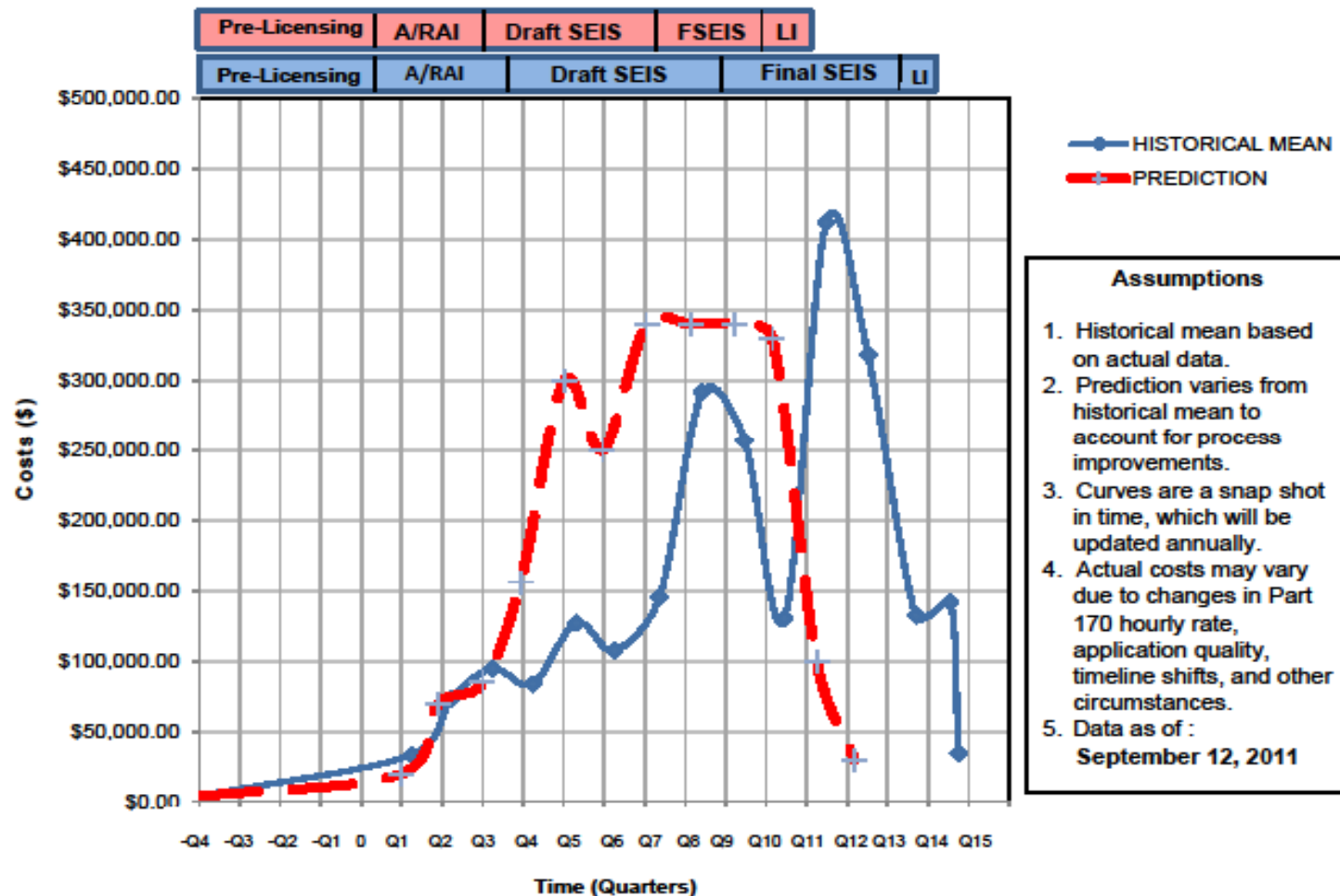
- Titan Sheep Mountain**
- Lost Creek Expansion**
- AUC LLC Reno Creek**
- Cameco Smith Ranch/Highland CPP**
- Cameco Smith Ranch/Highland License Renewal**
- Cameco Marsland**
- Uranium One Allemand-Ross**
- Uranium One Ludeman**



Ongoing Section 106 Activities

- **Cameco**
 - **Crow Butte**
 - **North Trend**
- **Powertech**
 - **Dewey-Burdock**
- **Strata Energy**
 - **Ross**

New Facility/Expansion Application Review Cost Estimate





Predicted Fee Graph Assumptions (red curve)

- Receiving a high-quality application
- Receiving adequate RAI responses within 30 days
- Supplements to the applications/new information may affect schedule
- A 45-day draft SEIS public comment period
- Issues identified in the NHPA Section 106/ ESA Section 7 process can be addressed within reasonable time frame

Major Uranium Recovery Licensing Applications							
Company	Site Under Consideration	Design	Estimated Application Date	Date Accepted	State	Status	Letter of Intent
Fiscal 2007 Applications							
Uranium One	Willow Creek	ISR - Restart	Received April 2007		WY	Completed 9/08	None
Cameco (Crow Butte Resources)	North Trend	ISR - Expansion	Received June 2007	08/28/2007	NE	Tech Review Ongoing	None
Cameco (Crow Butte Resources)	Plant Upgrade	ISR - Expansion	Received Oct 2006		NE	Completed 12/07	None
Fiscal 2008 Applications							
Lost Creek ISR, LLC	Lost Creek	ISR - New	Resubmitted Mar 2008	06/10/2008	WY	Completed 8/17/11	05/23/07
Uranerz Energy Corp.	Hank and Nichols	ISR - New	Received December 2007	04/14/2008	WY	Completed 7/19/11	06/27/07
Uranium One	Moore Ranch	ISR - New	Received October 2007	12/20/2007	WY	Completed 9/30/10	05/31/07
Uranium One	Jab and Antelope	ISR - New	Received July 2008	Mar-09	WY	Review Deferred	05/31/07
Fiscal 2009 Applications							
Powertech Uranium Corporation	Dewey Burdock	ISR - New	Resubmitted 8/09	Oct-09	SD	RAI Responses	01/26/07
Fiscal 2010 Applications							
Cameco (Crow Butte Resources)	Three Crow	ISR - Expansion	Rec. August 2010		NE	Review Deferred	01/11/10
Fiscal 2011 Applications							
Strata Energy, Inc.	Ross	ISR - New	Rec. January 2011	Jun-11	WY	Tech Review Ongoing	01/08/10
Fiscal 2012 Applications							
Lost Creek ISR, LLC	Lost Creek	ISR - Expansion	Oct-11		WY		01/06/10
Cameco (Crow Butte Resources)	Marsland	ISR - Expansion	Oct-11		NE		11/09/10
Cameco (Power Resources, Inc.)	Smith Ranch/Highland CPP	ISR - Expansion	Dec-11		WY		01/14/10
Uranium One	Allemand-Ross	ISR-Expansion	Dec-11		WY		10/08/10
AUC LLC	Reno Creek	ISR - New	Jan-12		WY	Pre-Sub Audit 11/11	11/03/10
Titan Uranium USA, Inc.	Sheep Mountain	Heap Leach - New	Jan-12		WY	Pre-Sub Audit 11/11	11/11/10
UR-Energy Corp.	Lost Soldier	ISR - Expansion	Mar-12		WY		11/01/10
Neutron Energy	Juan Tafoya	Conv. - New	Jun-12		NM		11/16/10
The Bootheel Project LLC	Bootheel	ISR-New (Satellite)	Jul-12		WY		08/09/10
Strathmore Minerals Corporation	Gas Hills	Conv. - New	Sep-12		WY		11/19/10
Strathmore Minerals Corporation	Roca Honda	Conv. - New	Sep-12		NM		11/19/10
Uranium Company of Nevada, LLC	Apex Mill	Conv. - New	Sep-12		NV		11/11/10
Rio Grande Resources	Mt. Taylor	Conv. - New	TBD		NM		11/10/10
Uranium One	Ludeman	ISR - New	Withdrawn, Resubmit 10/11		WY		10/08/10
Fiscal 2013 Applications							
Cameco (Power Resources, Inc.)	Ruby Ranch	ISR - Expansion	FY 2013		WY		01/14/10
Wildhorse Energy	West Alkali Creek	ISR - New	TBD		WY		01/07/10
Uranium Energy Corporation	Grants Ridge	Heap Leach - New	TBD		NM		01/15/10
Other Major Licensing Actions							
Cameco (Crow Butte Resources)	Crawford, NE	ISR - Lic. Renew.	Received Dec. 2007		NE	Draft License Issued	
Uranium One	Willow Creek	ISR - Lic. Renew.	Received May 2008		WY	Tech Review Ongoing	
Cameco (Power Resources, Inc.)	Smith Ranch/Highland	ISR - Lic. Renew.	Received 08/2010		WY	Pre-Sub Audit 09/11	
Hydro Resources, Inc.	Crownpoint	ISR - Lic. Renew.	Rec. 8/02, on hold until 2011		NM		
Cameco (Power Resources, Inc.)	North Butte	ISR - Ops Plan	Sep-11		WY		09/09/10
Cameco (Power Resources, Inc.)	Gas Hills	ISR - Ops Plan	Sep-11		WY		09/09/10
Cameco (Power Resources, Inc.)	Ruth	ISR - Ops Plan	Jun-13		WY		09/09/10
No. of New Facility Applications =						16	
No. of Restart/Expansion Applications =						11	
No. of Other Actions						7	
Total No. of Licensing Actions						34	

ISR = In Situ Recovery Facility
TBD = To Be Determined

Conv = Conventional Uranium Mill
FY = Fiscal Year



Additional Information

<http://www.nrc.gov>

<http://www.nrc.gov/materials/uranium-recovery.html>

Questions?



Photo taken of Mount Taylor, Grants, NM



**Key Lessons Learned from the First Three
Supplemental Environmental Impact Statements
for *In-Situ* Uranium Recovery Facilities
September 28, 2011
Denver, Colorado**



Kevin Hsueh

Branch Chief

Environmental Review Branch – B

Division of Waste Management and Environmental
Protection

Office of Federal and State Materials and Environmental
Management Programs

Outline

- A. What we have learned to streamline our review
- B. What we encourage applicants to do to facilitate our review
- C. What we plan to change



Topic

Speaker

- | | |
|-------------------------------|----------------|
| • NEPA Overview and GEIS/SEIS | Joan Olmstead |
| • SEIS Insights | Patti Swain |
| • Section 106 Lessons Learned | Jennifer Davis |
| • BLM Coordination | Alan Bjornsen |



The First Three SEISs Tiered from the GEIS

- Moore Ranch, Nichols Ranch and Lost Creek ISR applications received in 2007-08
- Final GEIS issued in May 2009
- Draft SEISs issued in December 2009
- Final SEISs issued in 2010-11

A. Streamlining our review

- **Enhance communication with EPA**
 - Hold periodic face-to-face meetings and teleconferences
 - Identify/address issues and concerns early



A. Streamlining our review (cont.)

➤ Initiate Section 106 consultation process early and actively follow through each step

- Proceed in parallel with development of NEPA documents
- Need to complete Section 106 process prior to making a licensing decision



A. Streamlining our review (cont.)

- **Continue to hold periodic management conference calls between NRC and applicants**
 - Project status updates
 - Discuss issues or concerns

A. Streamlining our review (cont.)

- **Hold pre-application audits and post-acceptance review meetings**
 - Open to public to observe / public meetings
 - Provide timely feedback
 - Improve quality of applications / reduce time to respond to RAIs



B. What we encourage applicants to do to facilitate our review

- **Prior to submitting a license application:**
 - Engage the State on permit applications
 - Be aware of issues raised from prior reviews
 - Review GEIS, SEISs, EAs, past RAIs and responses to the RAIs.
 - EPA and other Federal agency issues
 - Tribal issues



B. What we encourage applicants to do to facilitate our review (cont.)

- **For NRC and BLM to cooperate on a NEPA review:**
 - Submit Plan of Operation application to BLM and license application to NRC at the same time



B. What we encourage applicants to do to facilitate our review (cont.)

➤ Requests for Additional Information (RAIs)

- Respond to RAIs (both safety and environmental) in a timely manner
- Safety review including groundwater analyses informs the environmental review
- Inadequate RAI responses could result in schedule delays and additional costs

C. What We Plan to Change

- Schedule goal: ~28 months
 - Issue draft SEIS 8 months after we accept RAI responses
 - Issue final SEIS 8 months after the end of the draft SEIS public comment period

(28 months based on factors discussed earlier)

C. What we plan to change (cont.)

- **Update NUREG-1748 (environmental review guidance for materials licensees)**
 - Provide more specific guidance in preparing environmental reports (e.g., climate change/green house gases.)
 - Seek public comment on the draft

Summary

- Be aware of issues raised from prior reviews and submit high quality applications
- Submit adequate RAI responses in a timely manner
- Communicate Effectively
 - PM calls/Management calls/Meetings/Site visits
- Be Flexible

Any Questions?



Photo taken of Devils Tower, WY



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Protecting People and the Environment

NEPA Overview and ISR GEIS/SEIS

Joan Olmstead

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Objectives

- NEPA Basics
- NRC Regulatory Requirements
- Development of the ISR Generic Environmental Impact Statement (ISR GEIS)
- Using the GEIS for Site Specific Environmental Reviews (SEISs)

A Bit of History

- Legacy of Conservation in the 1950s and 1960's
- Increased public concern and awareness regarding protection of natural resources
- Versions of NEPA considered by House and Senate. Congressional approval in Dec. 1969. Signed by President Nixon Jan. 1, 1970.

NEPA's Purpose

“To declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment...” (42 USC 4321)



NEPA Implementation – Section 102

- All federal agencies shall include in every recommendation ... or other Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official ...”

NEPA Implementation – Section 102

- The statement should include:
 - (i) the **environmental impact**
 - (ii) any **adverse environmental effects** which cannot be avoided,
 - (iii) **alternatives** to the proposed action,
 - (iv) the relationship between local short-term uses ... and long-term productivity, and
 - (v) any **irreversible and irretrievable commitments of resources**



NEPA Implementation – Section 102

- Requires consultation and comments from federal agencies with jurisdiction by law or special expertise
- Copies of statement and comments from must be made available to the President, Council on Environmental Quality (CEQ) and the public

NEPA Basics

- Applies to all Federal Agencies
- Procedural statute conferring no additional regulatory authority, does not dictate outcome
- Public involvement and full disclosure
- EPA reviews Draft EIS and Final EIS
- Informs the decision maker



NRC Regulations

- NRC regulations implementing NEPA are in 10 CFR Part 51
- NRC regulations generally conform to CEQ regulations in 40 CFR Parts 1500-1508
 - As an independent regulatory agency: NRC is not bound CEQ regulations or guidance
 - NRC regulations incorporate several CEQ definitions and other regulatory provisions.

NRC Regulations

- 10 CFR 51.20 requires an EIS when:
 - The proposed action is a major federal action significantly affecting the quality of the human environment
 - The Commission exercises discretion and determines the action needs an EIS or
 - Regulation specifically requires EIS or SEIS
 - for issuance of a source material license for uranium milling

NRC Regulations (cont.)

- All other licensing actions require an Environmental Assessment (EA) unless it falls within the categorical exclusion criterion in 10 CFR 51.22.
 - ISR license renewals – an EA
 - License amendments – an EA unless it falls within a categorical exclusion



NRC Regulations (cont.)

- NRC offers an opportunity for hearing for all licensing proceedings (e.g. uranium milling proceedings)
 - Currently we have 3 hearings involving uranium milling facilities
 - Includes requests for license amendments and renewals

Development of the ISR GEIS

- Goal - streamline environmental reviews
- Programmatic EISs: prepared for a major program, plan or policy; often followed by site-specific EISs or EAs
 - NRC uses term - Generic Environmental Impact Statement (GEIS)
 - Tiering
 - Incorporation by reference

Development of the ISR GEIS

- Appropriate for ISR facilities because:
 - ISR technology fairly standardized across the industry
 - Geographic areas where NRC anticipated ISR licensing applications had similar characteristics
- NUREG-1910 “Generic Environmental Impact Statement for In-Situ Leach uranium Milling Facilities” (May 2009)

Proposed Federal Action

- The ISR GEIS proposed federal action is NRC's determination of whether to grant an application to obtain, renew, or amend a source material license for an ISR facility.
- The No-Action Alternative is NRC's decision to deny of the applicant's or licensee's request.

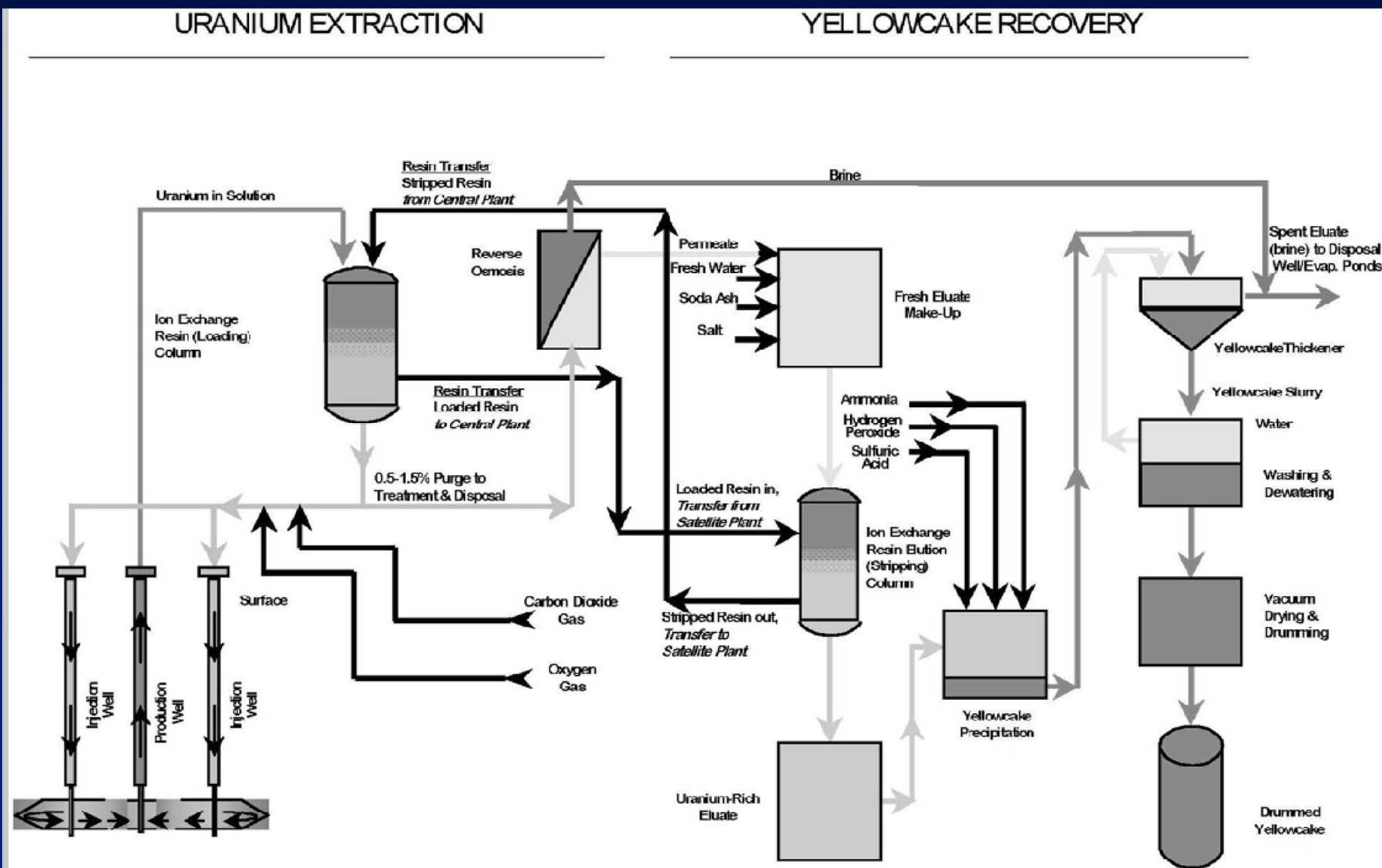
Alternatives Considered but Excluded

- The GEIS did not include a detailed analysis of alternative methods for uranium recovery including conventional mining/milling methods and heap leaching
 - Discussed in ISR GEIS Appendix C.
 - Analyzed in NUREG-0706 – GEIS on conventional milling (Sept. 1980)

Possible Reasonable Alternative for SEIS

- Conventional mining/milling and heap leach alternatives may be “reasonable alternatives” for site-specific reviews if:
 - ore is located near surface
 - high grade ore
 - ore is in unsaturated formation

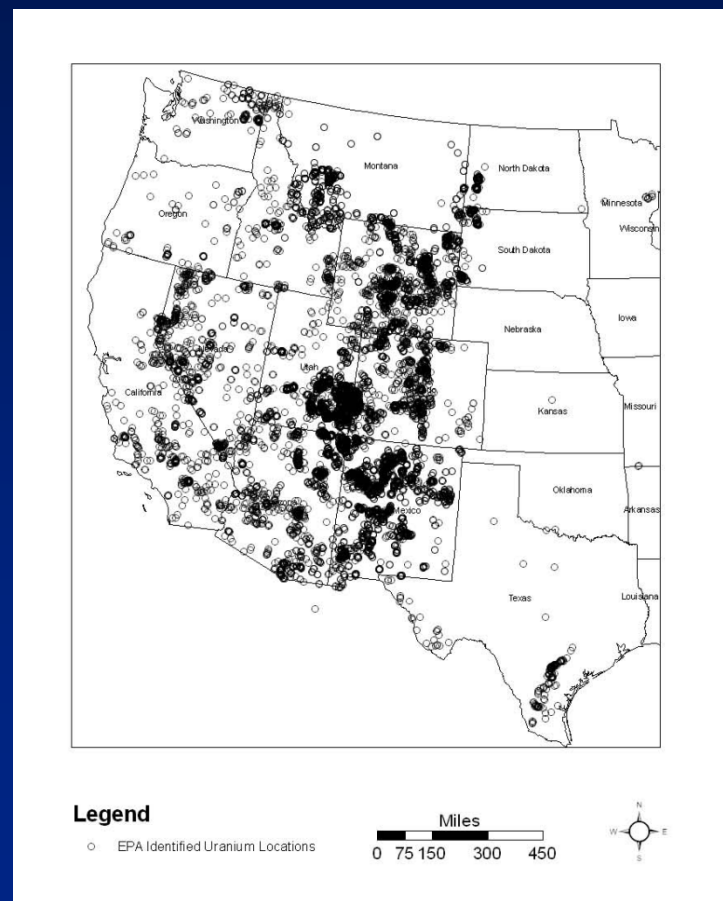
What the ISR GEIS Covers



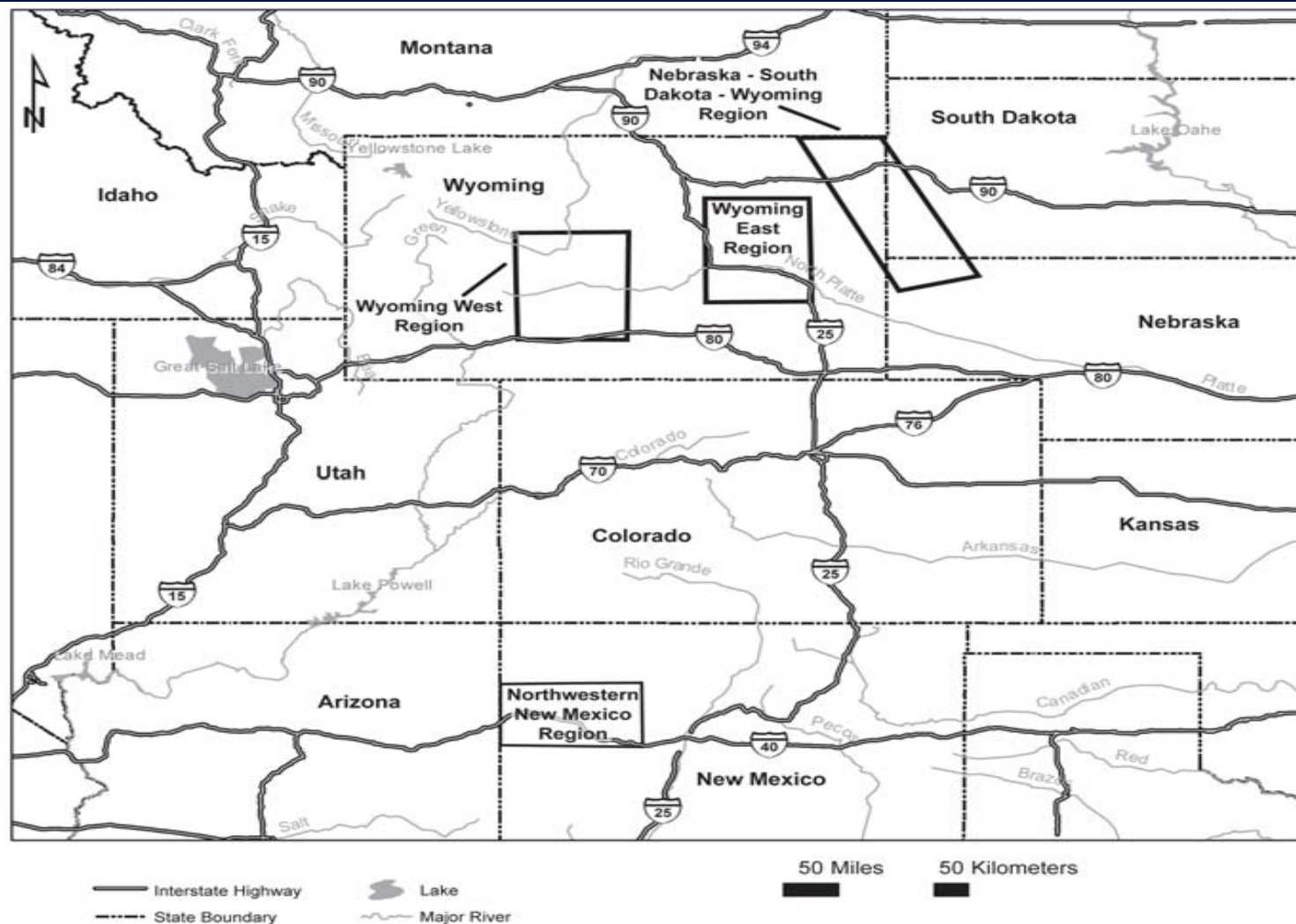
What the ISR GEIS Covers

- The GEIS analyzed the impacts for the four phases of the ISR facility lifecycle
 - Construction
 - Operation
 - Aquifer Restoration
 - Decommissioning

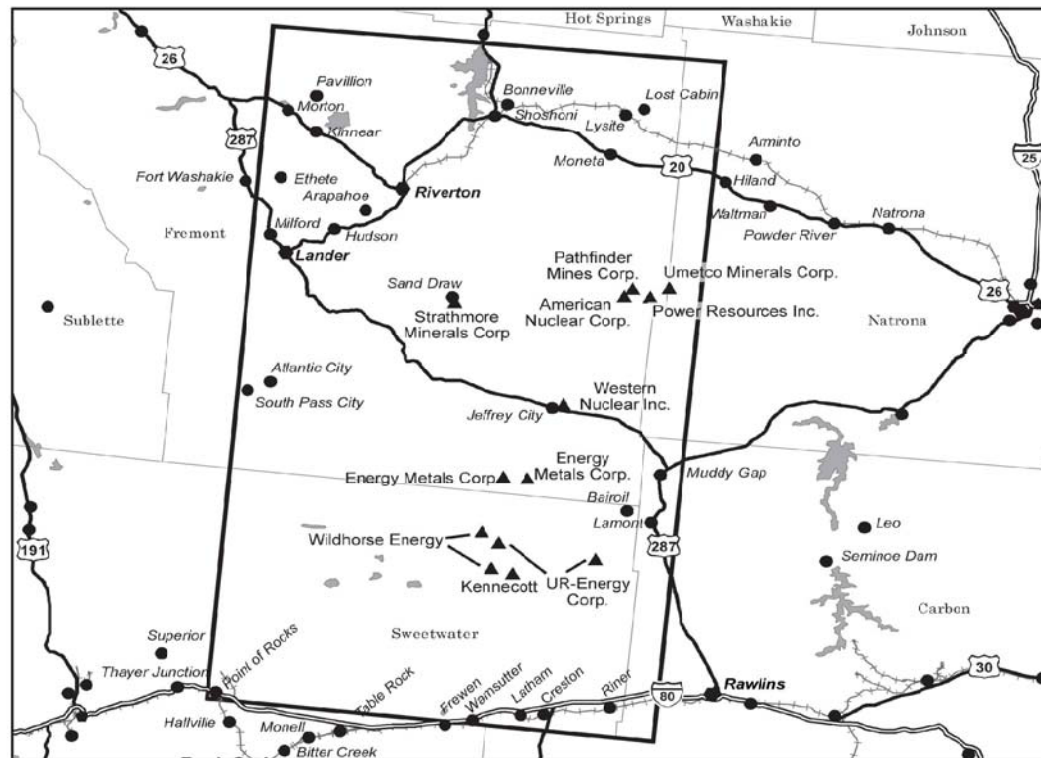
Major Uranium Reserves in the US



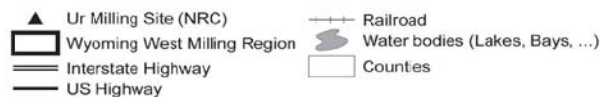
Four Geographic Regions



Wyoming West



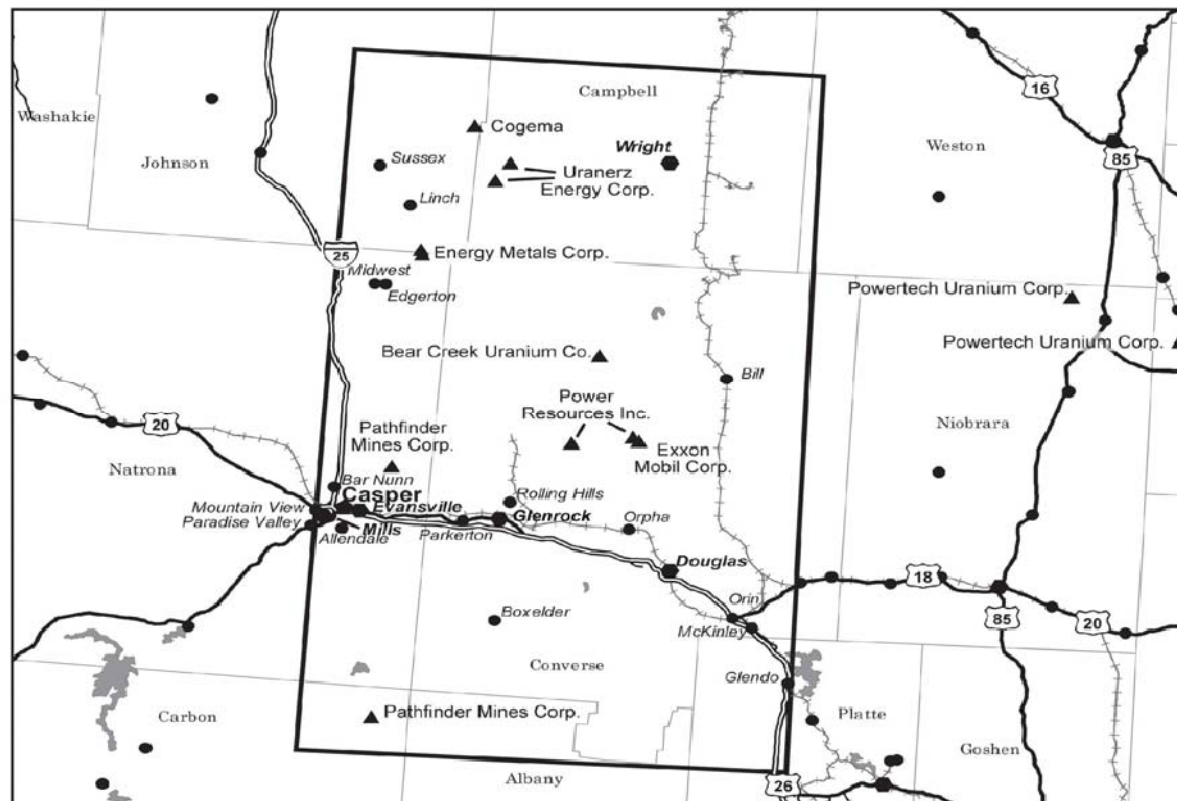
WYOMING WEST REGION



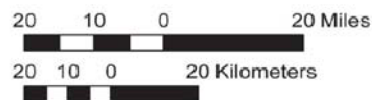
Cities by population



Wyoming East



WYOMING EAST REGION



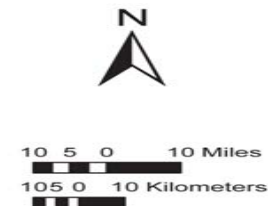
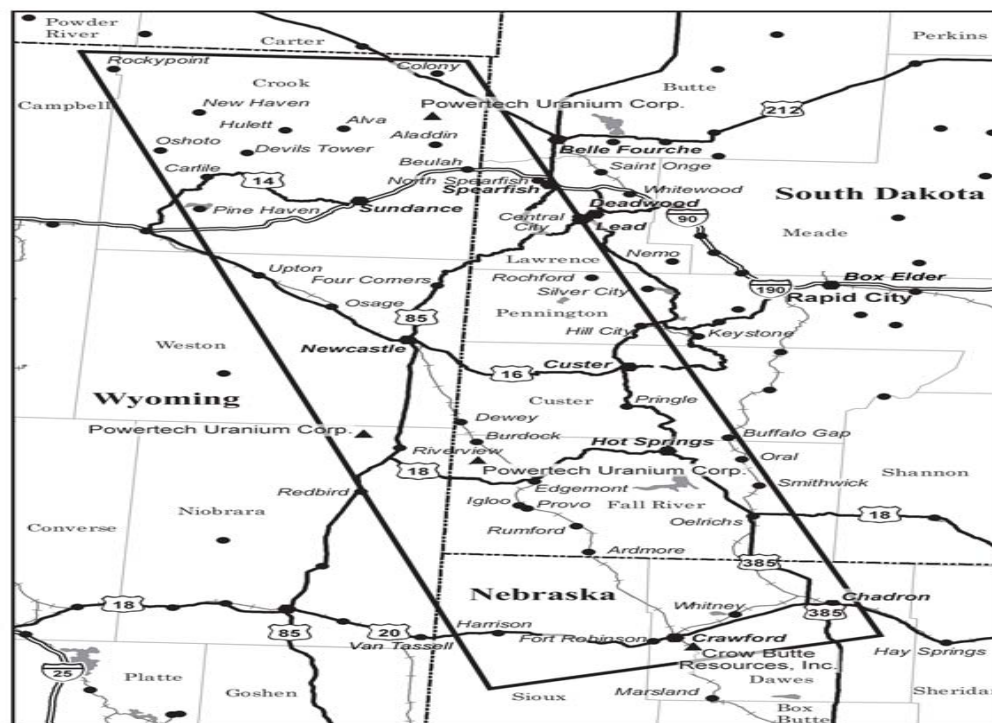
- ▲ Ur Milling Site (NRC)
- ▭ Wyoming East Milling Region
- ▬ Interstate Highway
- ▬ US Highway

- ▬ Railroad
- ▬ Water bodies (Lakes, Bays, ...)
- ▭ Counties

Cities by Population

- Over 50,000
- 10,001 - 50,000
- 1,000 - 10,000
- Less than 1,000

Nebraska – South Dakota - Wyoming



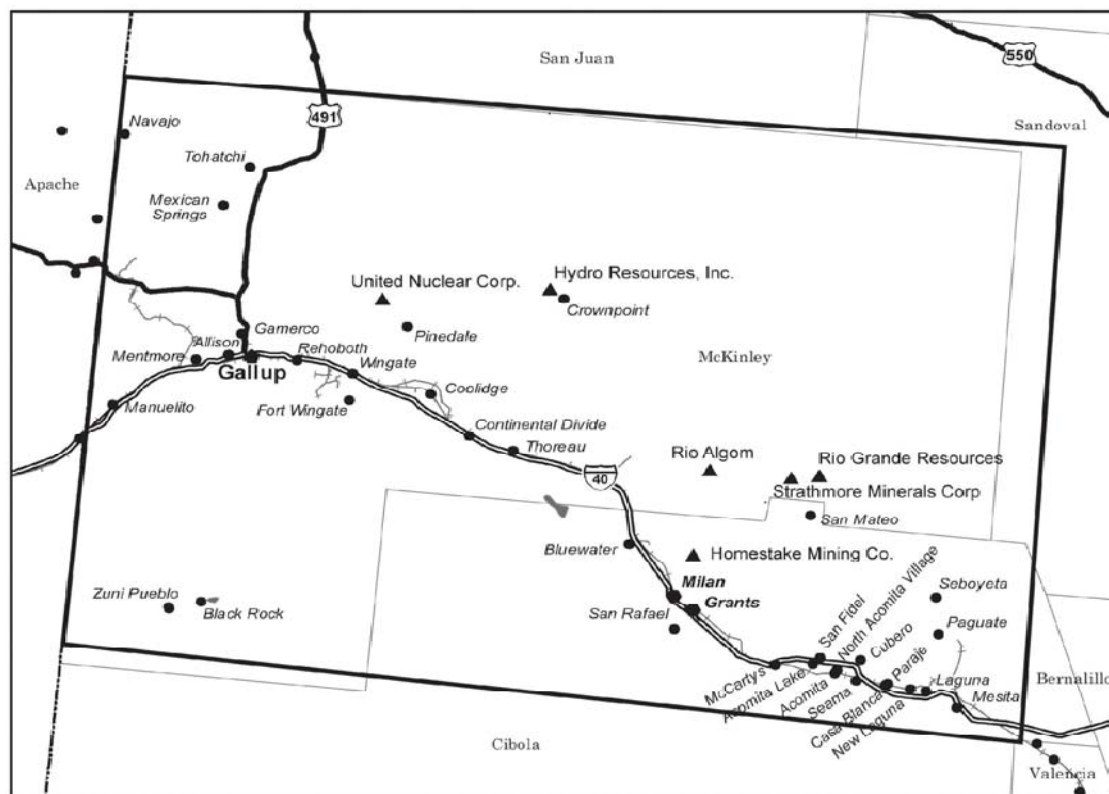
SOUTH DAKOTA - NEBRASKA REGION

- ▲ Ur milling Sites (NRC)
- ▭ South Dakota - Nebraska
- ▭ Milling Region
- Interstate Highway
- US Highway

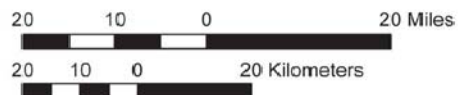
- Water bodies (Lakes, Bays, ...)
- State Boundary
- Counties
- Railroad

- Cities by Population**
- Over 50,000
 - 10,001 - 50,000
 - 1,000 - 10,000
 - Less than 1,000

New Mexico



NEW MEXICO REGION



- ▲ Ur Milling Site (NRC)
- New Mexico Milling Region
- Interstate Highway
- US Highway

- Water bodies (Lakes, Bays, ...)
- Railroad
- State Boundary
- Counties

Cities by Population

- Over 50,000
- 10,001 - 50,000
- 1,000 - 10,000
- Less than 1,000

Resource Areas



Three levels of impact

SMALL: Effect is not detectable, or so minor it will
neither destabilize nor 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.

Resource Areas – Specific Impacts

Resources areas - small impact for all phases of the ISR facility lifecycle.

- Geology and Soils
- Aquatic Ecology
- Air Quality
- Visual and Scenic
- Waste Management

Resource Areas – Range of Impacts

- Impact could vary depending on the phase of the ISR facility life cycle and site specific factors
 - Land Use
 - Transportation
 - Surface/Ground water
 - Terrestrial Ecology/Threatened and Endangered Species



Resource Areas – Range of Impacts

- Noise
- Historic and Cultural Resources
- Socioeconomic
- Public and Occupational Health and Safety

ISR GEIS included:

- Guidance for conducting site-specific analysis
 - cumulative effects
 - environmental justice analysis

ISR GEIS included:

- Summary of:
 - Best management practices, mitigation measures, and management actions to mitigate adverse environmental impacts
 - Environmental monitoring activities
 - Consultation requirements

SEIS Reviews using ISR GEIS

- Specific impact resource areas
 - Use site specific information to verify the site falls within the envelope that was used to support the impact conclusion in the ISR GEIS
- Range of impact resource areas
 - Use site specific information to determine the impact for that particular site.

Draft SEISs

- Three DSEISs were issued – Dec. 2009
 - Received approximately 1,800 comments
 - EPA Region 8 Review
 - NRC agreed to provide additional information in the SEISs
 - Air quality impacts
 - Ground water restoration targets and requests for Alternative Concentration Limits (ACLs)
 - Climate change/Greenhouse gas emissions
 - Waste water disposal

Waste water disposal analysis

- Applicant chooses their method(s) of waste water disposal
- NRC does a site-specific review of the waste water disposal methods in the license application
- NRC license condition requires licensee to obtain and comply with all legally required permits before operation

Waste water disposal analysis

- Applicants may also submit additional waste water disposal options in their license application
- If the applicant's selected waste disposal option (e.g. UIC class I wells) is denied, the environmental review is completed for other waste water disposal options.

Final SEISs

- We did not put revised draft SEISs out for public comment.
- EPA Region 8 stated that the Final SEISs were much improved as a result of our revisions.



Conclusion

- The ISR GEIS provides a framework for site specific environmental reviews and enables NRC to identify resource areas that require more site specific analysis for the SEISs
- The ISR GEIS analysis can also be used for EAs for license renewals or license amendments.

Questions





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Protecting People and the Environment

SEIS Insights

September 28, 2011
Denver, Colorado



Patricia Swain

Team Lead – Three SEISs

Environmental Review Branch – B
Division of Waste Management and Environmental
Protection

Office of Federal and State Materials and
Environmental Management Programs



Overview

- **Systematic review of SEIS chapters**
- **Applicant-provided information**
- **Facilitate NRC environmental review**



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Explanation

Actions an applicant could take, but is not required to, to facilitate NRC review

Chapter 1 - Introduction

➤ Roadmap for the balance of the document

- Keep NRC Project Manager abreast of permitting / application status
- Share related documents

Chapter 2 - Alternatives

- **Describe Alternatives**
- **Schedule**
- **Effluent Estimates**

- Feasibility Studies
- Current Schedule
- Current Waste Volume Estimates

Chapter 3 – Affected Environment

➤ Status Quo

- Provide land ownership map (surface and mineral rights)
- Provide infrastructure map
- Describe site-specific air quality
- Provide location of disposal sites

Chapter 4 - Impacts

- **Impact from the proposed action and alternatives**
- **Mitigation Measures**
- **GEIS Impact Criteria (see handout)**
 - Mitigation measures table
 - Awareness of GEIS impact criteria

Chapter 4 - Impacts (continued)

➤ Land Use

- Right-of-ways
- Livestock grazing?
- Recreational activities?

Chapter 4 - Impacts (continued)

➤ Transportation

- How many cars vs. trucks on the road?
- How many workers commuting on a daily basis?
- Where are workers coming from?
- How many supply shipments
- How long are the roads? Graveled?
- What is the likely or reasonable route?

Chapter 4 - Impacts (continued)

➤ Surface Water

- Water Quality
- Sedimentation

➤ Ecological Resources

- Licensed area vs. acreage disturbed
- Habitat loss
- Wooded habitat
- Threatened and endangered species

Chapter 4 - Impacts (continued)

➤ Air Quality

- Site-specific review required
- Comply with ambient air quality standards?
- Location with respect to Class I or Class II areas
- How many miles of unpaved road?
Will it be treated?

Chapter 4 - Impacts (continued)

➤ Historic and Cultural Resources

➤ Waste Management

- Projected waste volumes by phase
- Disposal locations
- Disposal capacity
- How many waste shipments?

Chapter 5

Cumulative Impacts

➤ Past, Present and Reasonably Foreseeable Actions

- Identify other “prospects”
- Other activities

Chapter 6 – Environmental Monitoring Program

➤ Environmental measurements and monitoring program for the proposed action

– Clearly distinguish between the baseline monitoring program and the proposed environmental monitoring programs

Consultation

➤ Appendix A – Consultation required under NEPA

- Provide related correspondence (e.g., letter from U.S. Army Corps of Engineers re: wetlands)

Logistical Items

➤ **Figures: NRC will publish in black and white**

- Create images in both black and white and color
- Images
 - * Original imaging files (1)
 - * Save PDF files in an editable format (2)
 - * JPEGs (3)

Logistical Items (continued)

➤ Provide Current Information

- Final permits
- Test results
- Revised designs
- Revised figures

Logistical Items (continued)

➤ Crosswalk between Environmental Report and Technical Report

- Identify where detailed information is contained in the Technical Report
- Include a table

Summary

- **Provide the needed information to facilitate the NRC review.**
- **Communicate new information to the NRC Project Manager promptly**
- **Crosswalk information in the environmental and safety reviews**



Questions?



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Protecting People and the Environment

Section 106 Lessons Learned

**September 28, 2011
Denver, Colorado**



Jennifer Davis **Sr. Project Manager**

Environmental Review Branch – B
Division of Waste Management and Environmental
Protection

Office of Federal and State Materials and
Environmental Management Programs

Objectives

- **Section 106 overview**
- **Emerging Issues**
- **Lessons learned**
- **How applicants can facilitate NRC's review**



National Historic Preservation Act of 1966

- The National Historic Preservation Act of 1966 (NHPA) sets forth national policy, a broad philosophy, and a framework for decision making
- Created the Advisory Council on Historic Preservation (ACHP)

NHPA Section 106

- NHPA directs federal agencies to:
 - Take into account the effects of their actions (undertakings) on historic properties
 - Provide the ACHP a reasonable opportunity to comment

NHPA Section 106

- Step 1: Initiate Section 106 process
- Step 2: Identify historic properties
- Step 3: Assess adverse effects
- Step 4: Resolve adverse effects

THE SECTION 106 PROCESS

CONSULTATION

1. INITIATE the process [800.3]

- Establish undertaking
- Notify SHPO/THPO
- Identify tribes and other consulting parties
- Plan to involve the public

*No undertaking/
potential to cause
effects*

2. IDENTIFY historic properties [800.4]

- Determine APE
- Identify historic properties
- Consult with SHPO/THPO, tribes, and other consulting parties
- Involve the public

*No historic properties
present/affected*

3. ASSESS adverse effects [800.5]

- Apply criteria of adverse effect
- Consult with SHPO/THPO, tribes, and other consulting parties
- Involve the public

*No historic properties
adversely affected*

4. RESOLVE adverse effects [800.6]

- Notify ACHP
- Avoid, minimize, or mitigate adverse effects
- Consult with SHPO/THPO, tribes, and other consulting parties
- Involve the public

*Memorandum of
Agreement*

FAILURE to agree [800.7] ⇒ Formal ACHP comments



Step 1: Initiate Section 106 Process

- Determine whether the project, activity, or program is an “undertaking”
- Determine whether the undertaking has the “potential to cause effects” to historic properties

Step 1: Initiate Section 106 Process (cont.)

- Notify State Historic Preservation Officer (SHPO)/Tribal Historic Preservation Officer (THPO)
- Identify consulting parties
- Involve the public

Step 2: Identify Historic Properties

- Define area of potential effects (APE)
 - *APE means the geographical area(s) within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist.*
 - There can be multiple APEs (e.g., visual and auditory)

Step 2: Identify Historic Properties (cont.)

- Federal agency is responsible for identifying historic properties
- Review existing information to determine if historic properties are present within the APE
- Seek information from and consult with SHPO/THPO, consulting parties, other Federal, State, and Local agencies, Tribal governments, and the public

Step 2: Identify Historic Properties (cont.)

- Regulations require Federal agencies to consult with SHPO/THPO, Federally-recognized Tribes, and Native Hawaiian Organizations that attach religious or cultural significance to identified properties
- NRC makes a determination whether sites are historic properties by applying the criteria in 36 CFR 60.4

Step 2: Identify Historic Properties (cont.)

- If no historic properties are affected or historic properties will not be affected by the proposed action
 - document the findings
 - send the results to the consulting parties
 - make the findings available to the public
- The SHPO/THPO has 30 days to review the findings. If no objections, NRC can complete the Section 106 process.

Step 3: Assess Adverse Effects

- Determine whether historic properties will be affected by the proposed action – by applying adverse effect criteria
- Seek information from all consulting parties to evaluate if there is an adverse effect
- Involve the public

Step 3: Assess Adverse Effects (cont.)

- NHPA requires agencies to consider all qualifying characteristics of a historic property
 - Including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register
- Adverse effects may include reasonably foreseeable effects caused by the undertaking
 - That may occur later in time
 - Be farther removed in distance or
 - Cumulative

Step 3: Assess Adverse Effects (cont.)

- If there are no adverse effects to the identified historic properties
 - Document the findings
 - Notify and send documentation of findings to all consulting parties
 - Maintain a record of the findings and provide information on the finding to the public
 - SHPO/THPO and consulting parties have 30 days to review findings
 - If no objections, NRC can complete 106

Step 4: Resolving Adverse Effects

- Notify ACHP of adverse effect finding and provide documentation
- Provide information to consulting parties
- Make information available to the public
- Provide opportunity to comment

Step 4: Resolving Adverse Effects

- Consult with SHPO/THPO, Tribes and other consulting parties to identify ways to avoid, minimize, or mitigate adverse effects
- Develop and execute a memorandum of agreement (MOA) or programmatic agreement (PA) to resolve adverse effects
- Agreements record the outcome of consultation and sets forth measures to avoid, minimize or mitigate adverse effects

Step 4: Resolving Adverse Effects

- MOAs are appropriate
 - To record agreed upon resolution for a specific undertaking
 - No unknowns (e.g., formalizing a treatment plan for data recovery)
- PAs are appropriate
 - Programmatic issues (e.g., FCC cell towers)
 - Multiple or complex undertakings (consisting of phases)
 - Undetermined effects

Emerging Issues

- NRC is communicating with ACHP, SHPO, and BLM to address emerging Section 106 issues
 - Government to government consultation with Native American Tribes
 - Confidentiality

Emerging Issues

- Tribes requesting Traditional Cultural Property (TCP) surveys
 - NRC needs to gather this information to make eligibility determinations on properties of religious and cultural significance to Tribes.



NRC Lessons Learned

- Early Coordination
 - Identify Tribes during pre-application phase
 - Establish points of contacts (SHPO, Federal, State, and Local agencies and Tribal governments) during pre-application phase
 - Notify Tribes regarding forthcoming application and receipt of application



NRC Lessons Learned

- Early Coordination (cont.)
 - Once an application is accepted for detailed technical review, send a letter to Tribes that includes invitation for government to government consultation
 - Arrange site visits and meetings



NRC Lessons Learned

- Ensure that information collected is shared with consulting parties prior to making our determinations.
- Evaluate consulting parties' comments prior to making our determinations earlier in the staff's review process and include our findings in the draft SEIS which will go out for public comment.



How Applicants Can Facilitate NRC's Review

- In order to gather information for your environmental reports, contact SHPO, Tribes and BLM as appropriate
 - While conducting initial surveys consider having qualified Tribal monitors participate and observe
 - Caveat – not all Tribes will engage with license applicants
- NRC is responsible for consulting with Tribes



How Applicants Can Facilitate NRC's Review (cont.)

- If possible, delineate all areas of proposed disturbance by the time of license application submittal.
- Larger APE provides more flexibility and would reduce the likelihood of unanticipated discoveries or having to conduct additional archaeological surveys.



Questions?



U.S.NRC

UNITED STATES NUCLEAR REGULATORY COMMISSION

Protecting People and the Environment

BLM Coordination

Alan B. Bjornsen

Environmental Project Manager

**Environmental Review Branch – B
Division of Waste Management and
Environmental Protection**

**Office of Federal and State Materials and
Environmental Management Programs**



Chronology

- The GEIS
- Early Interactions
- Need for Coordination
- Development of an MOU
- The 3 SEISs
- NRC/BLM Communication
- Subsequent SEISs

The GEIS

- Public Meetings for Draft Document
- Meetings with Wyoming BLM Field Offices (FOs)

Early Interactions

- Discovery
- Plan of Operations
- NRC License Application
- One NEPA Document (?)
- Develop an MOU

Need for Coordination

- Requirements
 - BLM Land
 - Simultaneous Applications
- Sharing Areas of Expertise
- Specific Resource Areas



Development of a MOU

- Purpose
- Agency Roles and Responsibilities
 - Coordination
 - Steering Committee
- Administration



The 3 SEISs

- Moore Ranch
- Nichols Ranch
- Lost Creek

The 3 SEISs (continued)

- Coordination/Cooperation
- Communication
- Sharing of Draft Documents



NRC/BLM Communication

- Quarterly Teleconferences
- Initially – Wyoming BLM
- Subsequently – Montana & South Dakota
- State and Field Offices



NRC/BLM Communication (continued)

- Status of Current Projects
- Proposed/Future Projects
- Other Information Pertinent to Uranium Recovery



Subsequent SEISs

- Applications Under Review
 - Dewey-Burdock (SEIS)
 - Ross (SEIS)
- Upcoming Applications
 - Sheep Mountain (EIS)
 - Lost Creek Expansion (EA)
 - Smith Ranch/Highland (EA)
 - Allemand-Ross (EA)

Subsequent SEISs (continued)

- Regular Communication
 - Ross
 - Dewey-Burdock
- Information Sharing
- Special Areas for Collaboration
 - Cultural Resources (Section 106)
 - Ecology