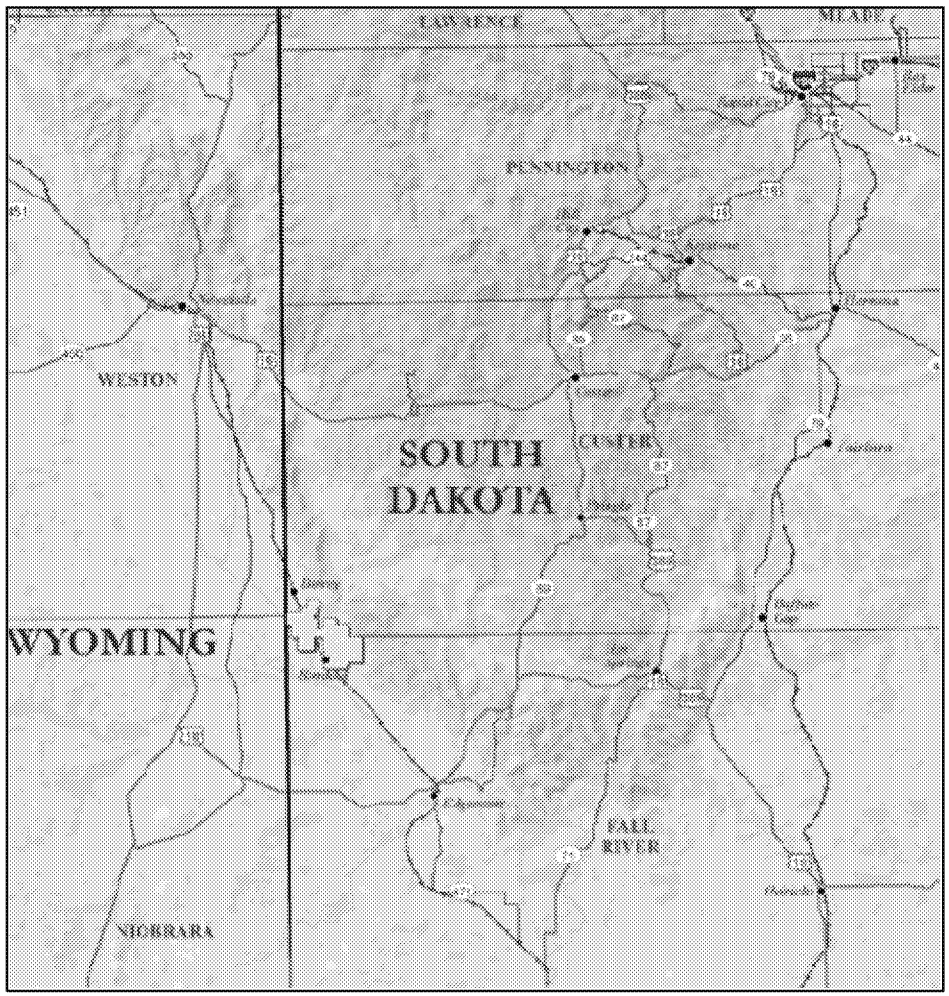
U.S. Environmental Protection Agency
Underground Injection Control Program

EPA Session:
Information on the Dewey-Burdock Uranium Site near Edgemont, South Dakota

Prepared for: Rocky Mountain Tribal Leaders Council Quarterly Meeting, August 13, 2015



Dewey-Burdock Site

Map Courtesy Powertech (Azarga Uranium) website*

**This map was not prepared by/for EPA and may not be an accurate representation of site boundaries. This map is included for demonstrative/illustrative purposes only and is not a legal representation of the project's boundaries*

EPA Dewey-Burdock Permit Process

- EPA's Role
  - UIC Program & Regulatory Mission
  - UIC Permits
- UIC Permitting Process
  - Technical Analysis
  - Tribal Consultation
  - Draft Permit
  - Public Comment
- Other Processes Required:
  - ESA
  - NHPA
  - EJ Analysis
  - Cumulative Effects Analysis
- EPA Outreach
  - Public Hearings in SD
  - Additional Tribal Community Outreach
  - Continuing Tribal Consultation

Tribal Official Opportunities

- Participate in reviewing permit and aquifer exemption decisions
- Attend Public Hearings
- Participate in informal and formal government-to-government consultation
  - Informal Opportunities:
    - Conf. Call – TBA
    - THPO Conference – September 2015
  - Formal Opportunities:
    - Tribes will receive a formal consultation notice; Tribe may respond and request formal consultation
- Engage Tribal Historic Preservation Office (or other relevant tribal government cultural/historic preservation office) to participate in consultation, review, and/or participate in Bismarck, ND Meeting in September 2015

EPA Dewey-Burdock Permit Process: Required Tribal Consultation

EPA's Policy is to consult on a government-to-government basis with federally recognized tribal governments when EPA actions and decisions may affect tribal interests.

The EPA views Consultation as a process of meaningful communication and coordination between EPA and tribal officials prior to EPA taking actions or implementing decisions that may affect tribes.

Current EPA Tribal Consultation Schedule:

- 8/10/15-9/30/15: Informational Meetings to all Tribes with Possible Interest in site
- Informational Conference call: TBD
- 10/1/15- ?: Formal Consultation with Tribes upon request

EPA Region 8
Underground Injection Control Program
Permit

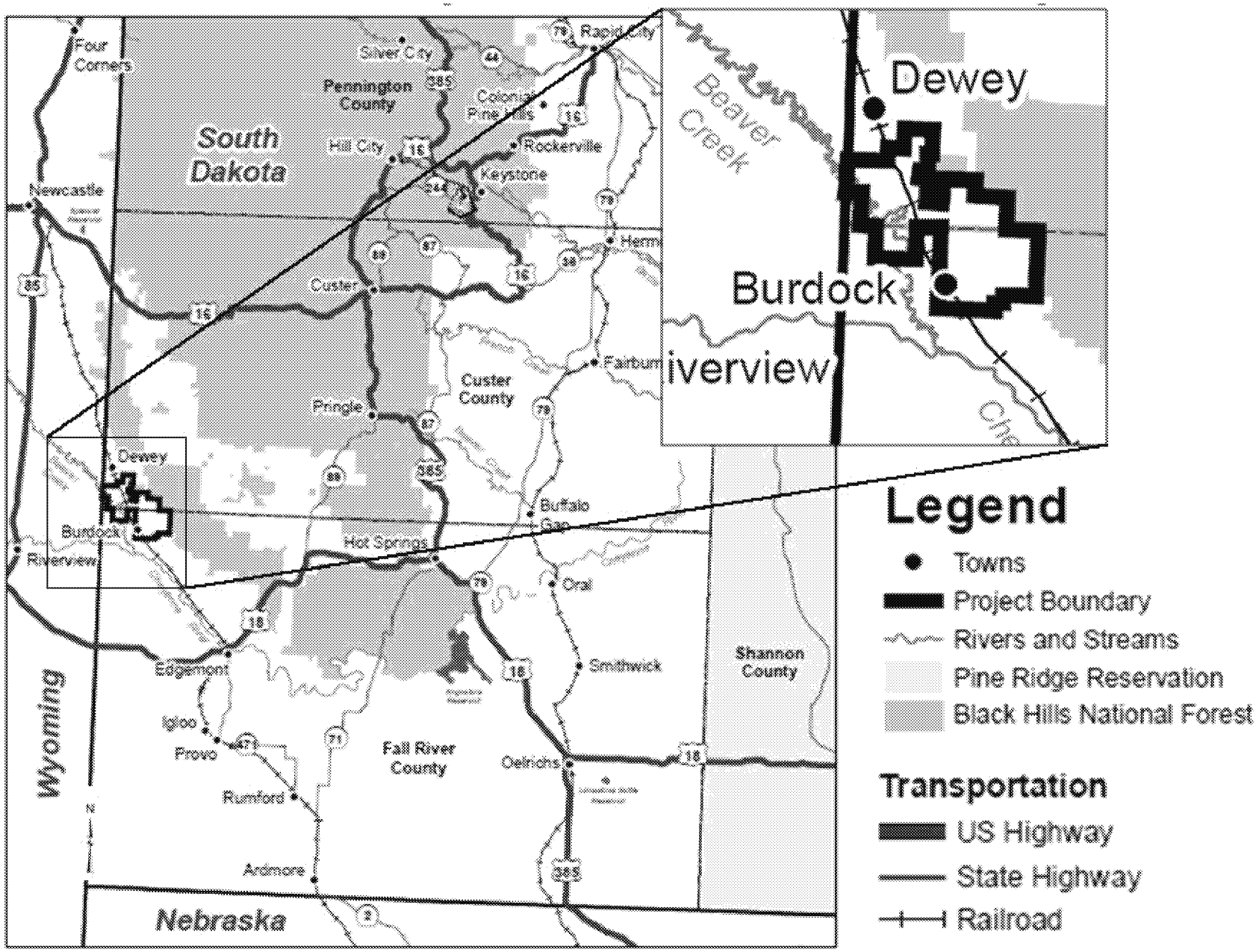
Applications for the Proposed
Dewey Burdock Uranium
In-Situ Recovery Site
near Edgemont, South Dakota

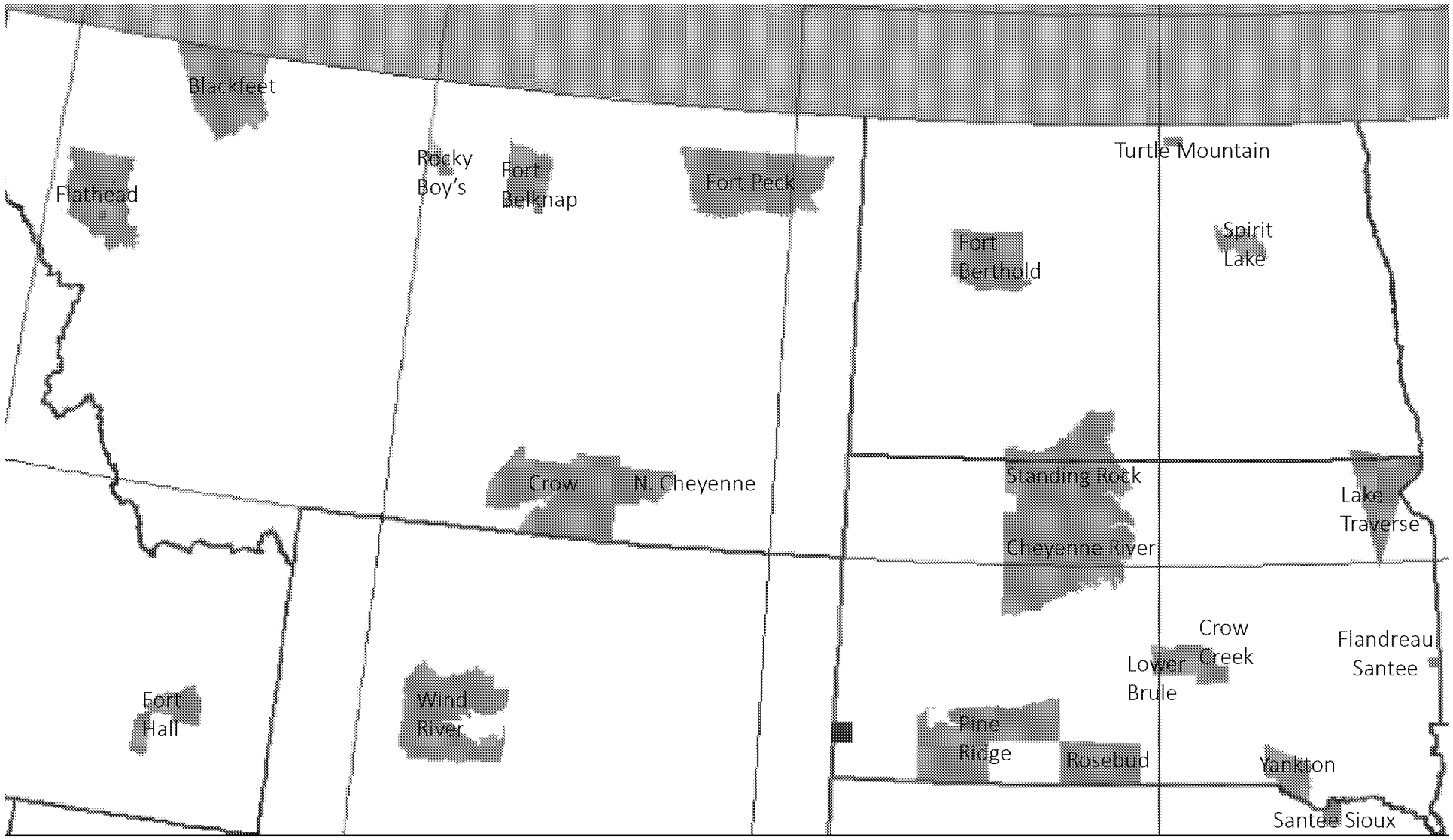
Valois Shea, MS, PG

EPA Region 8

Underground Injection Control Program

Dewey-Burdock Location Map





The Dewey Burdock Site Relative to the Reservations in MT, ND, SD, WY & nearest Reservations in NE & ID

■ **Dewey Burdock Site**

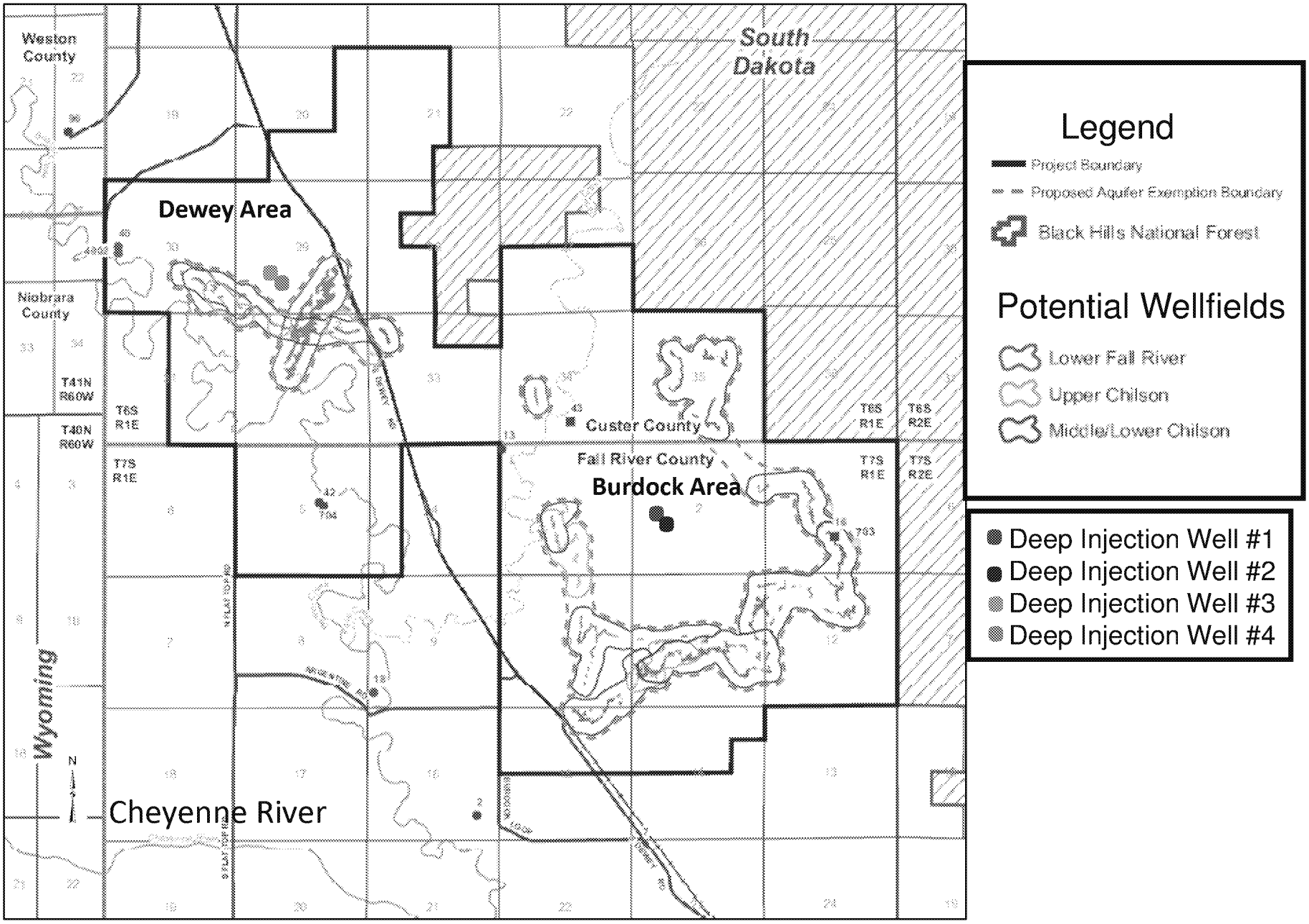
nationalatlas.gov

U.S. Department of the Interior
U.S. Geological Survey

The EPA Region 8 UIC Program Has Received Permit Applications for Two Types of Injection Wells

1. A Class III Permit Application for the injection of lixiviant to mobilize uranium in the ore bodies.
2. A Class V Permit Application for the disposal of ISR waste fluids into deep wells.

Dewey Burdock Proposed Class III UIC Wellfields



Regulatory Authority of the Underground Injection Control Program at the Dewey Burdock Site

The UIC Program is authorized under the Safe Drinking Water Act to protect *Underground Sources of Drinking Water* from contamination resulting from injection activities.

Underground source of drinking water (USDW) means an aquifer or part of an aquifer which supplies drinking water or contains fewer than 10,000 mg/l total dissolved solids.

Regulatory Authority of the Underground Injection Control Program at the Dewey Burdock

UIC Program regulations specify the following requirements for injection wells:

- construction,
- operation,
- monitoring,
- closure,
- financial assurance.

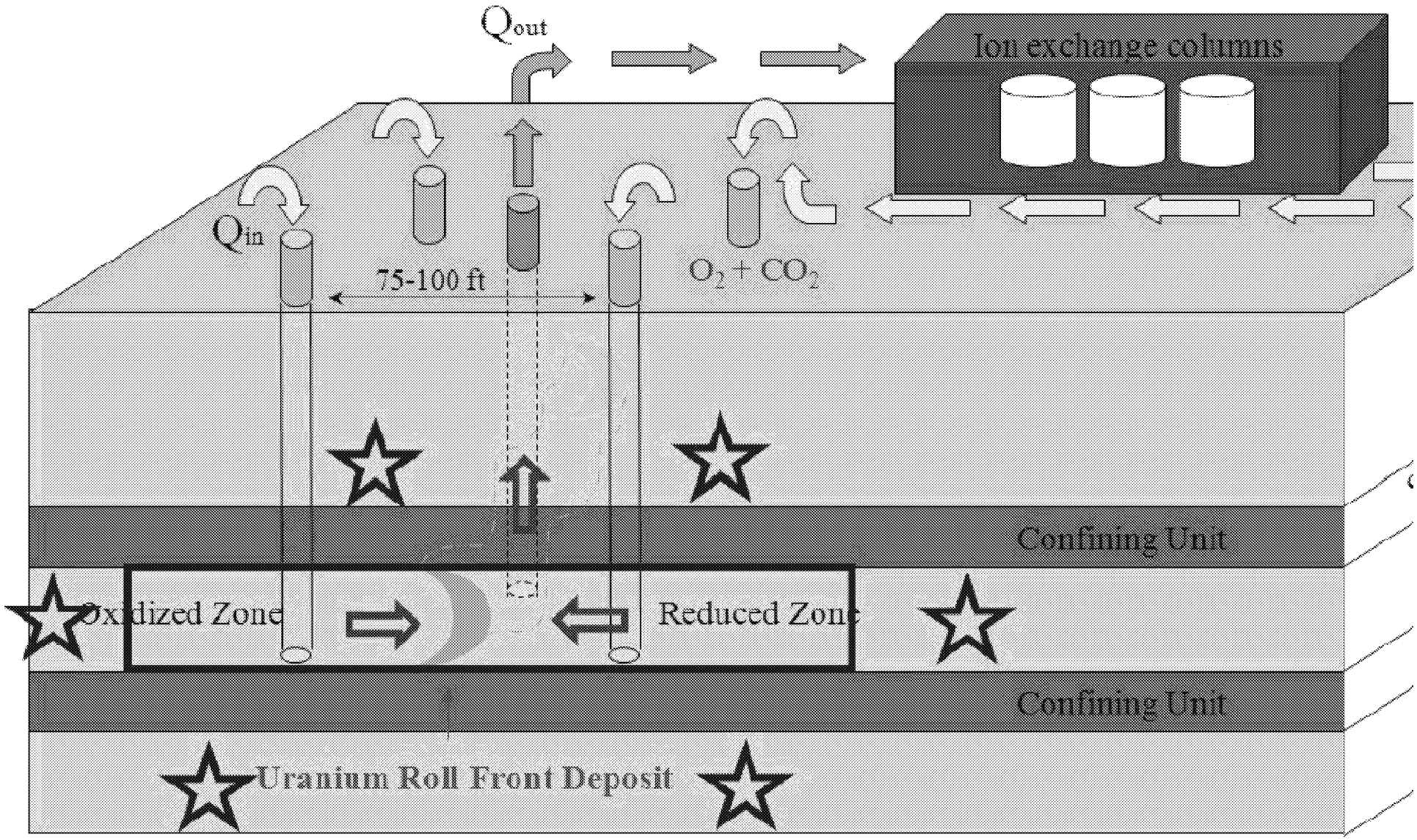
The EPA has been requested to Review an Aquifer Exemption

An Aquifer Exemption is required to inject into the Class III wells for uranium recovery.

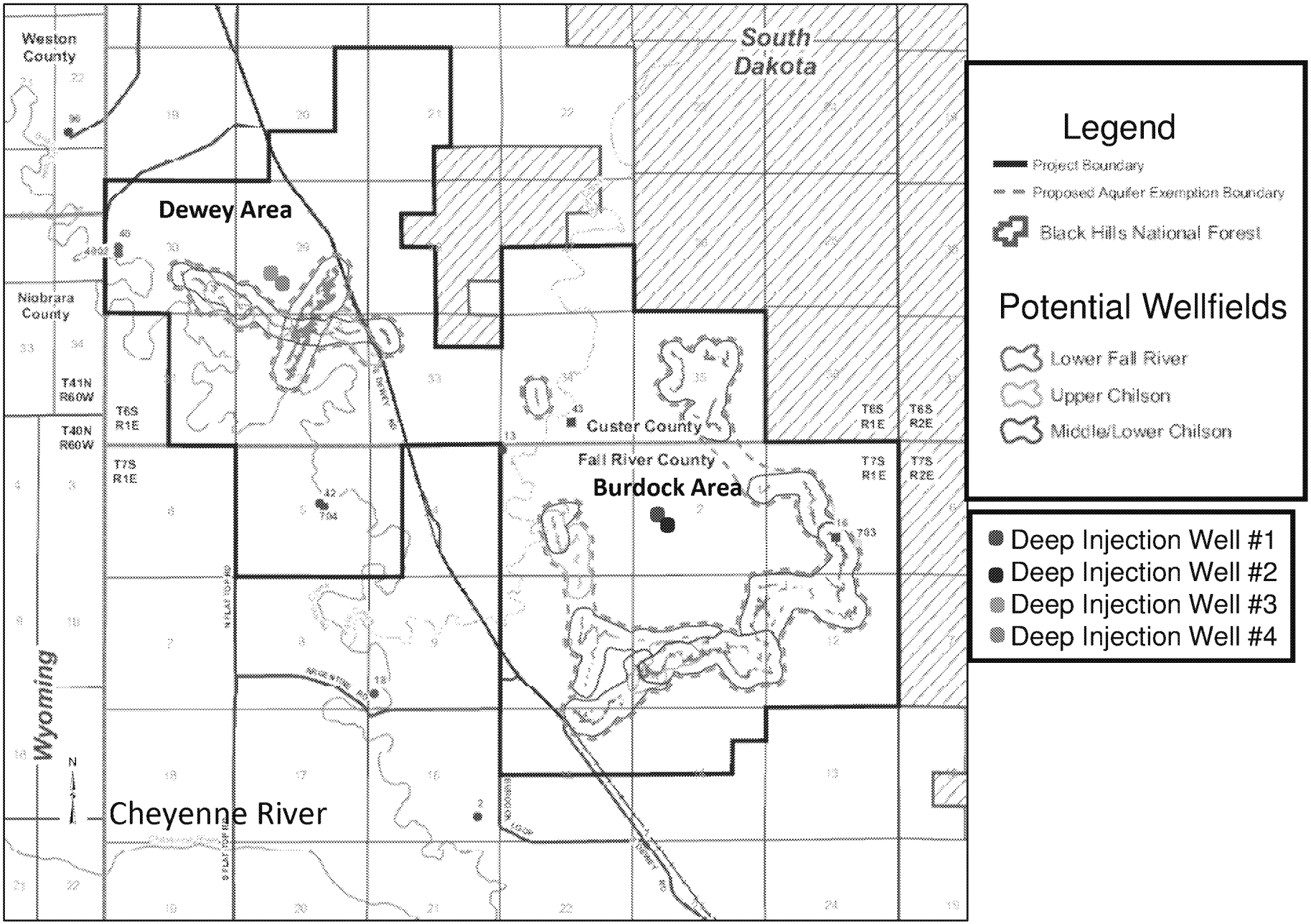
An Aquifer Exemption is allowed under UIC regulations IF the USDW

1. Does not currently serve as a source of drinking water and
2. Is mineral producing or can be demonstrated to contain commercially producible minerals.

Uranium In-Situ Recovery Process



Horizontal Extent of Proposed Aquifer Exemption Area



UIC Regulations

- UIC regulations require the permittee to conduct considerable testing to provide EPA hydrogeological and other data before any injection wells are authorized to operate.

- The data must demonstrate vertical confinement to prevent movement of fluids out of the injection zone so that no USDWs are contaminated.

- The data must also demonstrate that it is possible to contain injection zone fluids horizontally to prevent contaminant migration into USDWs.

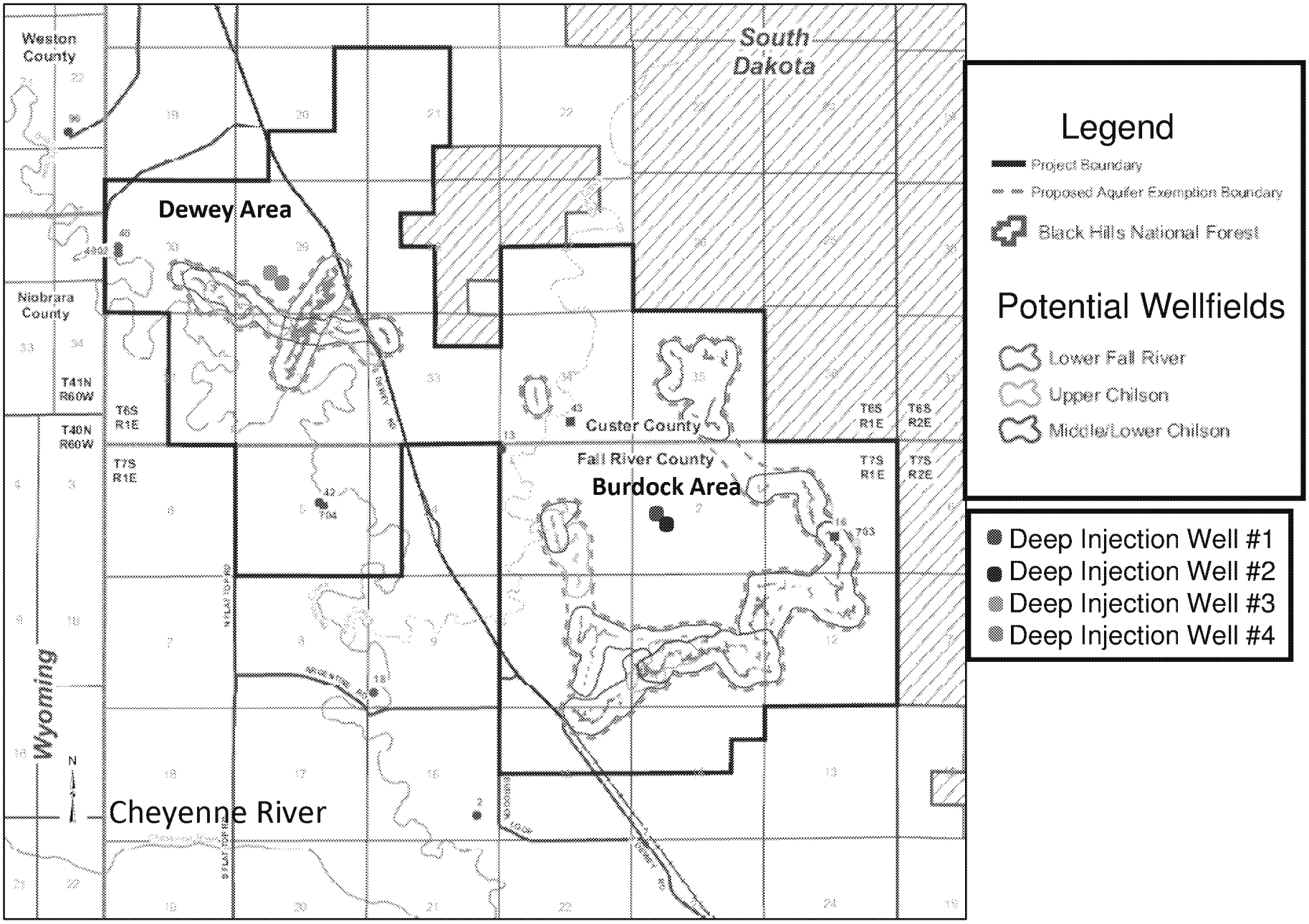
UIC Regulations

- UIC regulations require protection of USDWs around the AE area through extensive monitoring.
- UIC regulations require that no ISR process contaminants cross the aquifer exemption boundary during or after ISR operations.

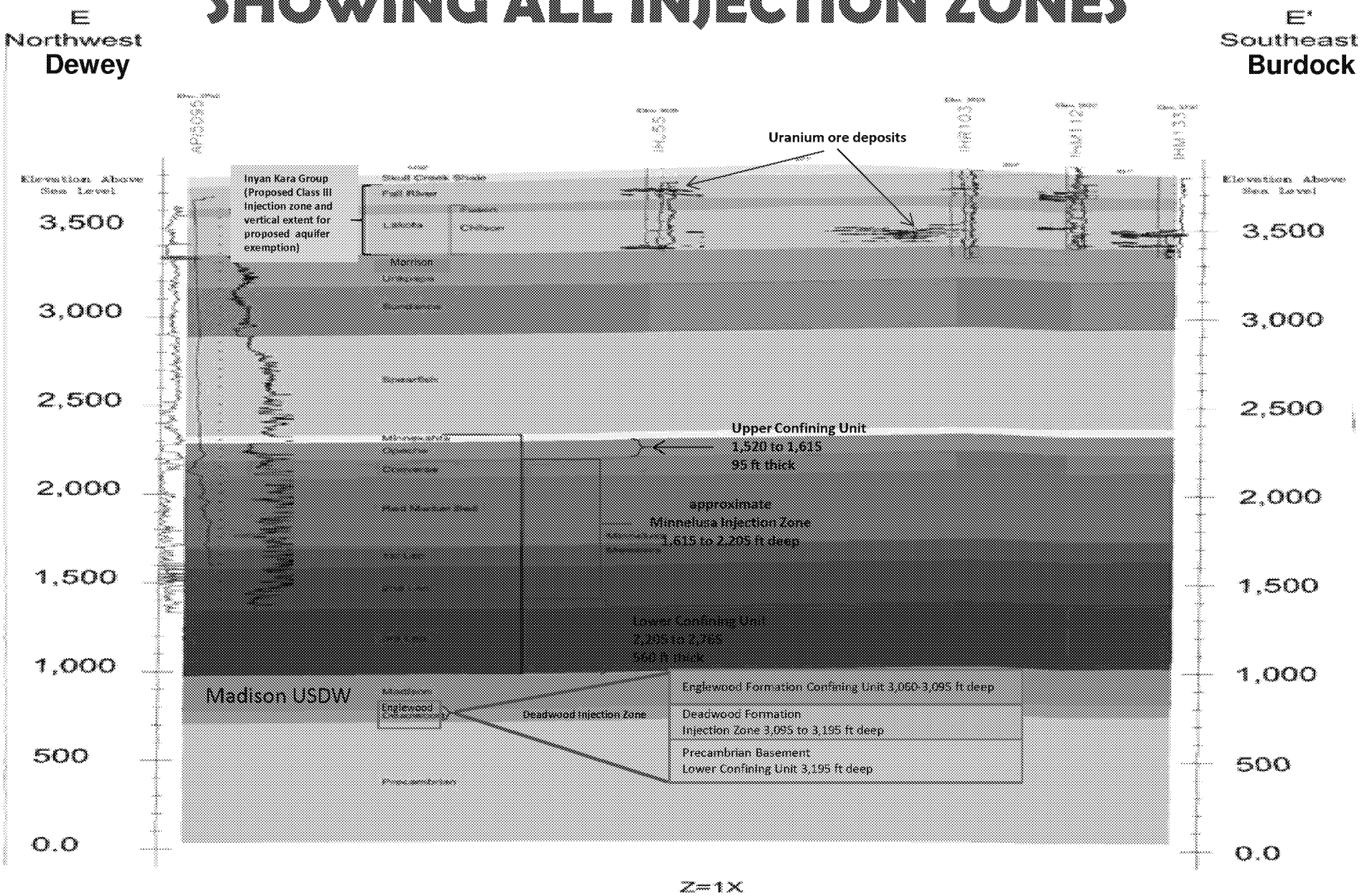
UIC Regulations

- UIC regulations authorize enforcement action when UIC regulations and/or permit conditions are violated.
- Enforcement actions can include requirements for groundwater remediation activities if appropriate.

LOCATIONS OF THE DEEP INJECTION WELLS



GEOLOGIC CROSS SECTION SHOWING ALL INJECTION ZONES



UIC Permitting Process

- Draft permit and aquifer exemption decisions will be issued, followed by a 60 day public review and comment period.
- Other reviews required in permitting process – *ESA, NHPA, EJ Analysis, Cumulative Effects of construction and operation of injection wells.*
- The EPA will hold at least two public hearings in South Dakota.
- The EPA will conduct additional outreach in Tribal communities upon request.

Ways in which Tribes Officials Can Be Involved in the UIC Permitting Process

- Participate in the review of the permit and aquifer exemption decisions.
- Attend public hearings.
- Participate in informal and formal government to government consultation.
- Request informational web conferences on topics of concern.

Other Regulatory Agencies at the Dewey-Burdock Site

- The Nuclear Regulatory Commission issued a License for the entire site

- The South Dakota Department of Environmental and Natural Resources has proposed issuance of a Large Mine Permit for the entire site.

Other Regulatory Agencies at the Dewey-Burdock Site

- The BLM approved a Plan of Operations for portions of the site on BLM land.

- The South Dakota Department of Environmental and Natural Resources has proposed issuance of a groundwater discharge permit for the land application of treated ISR waste fluids.

Other Regulatory Agencies at the Dewey-Burdock Site

- The EPA UIC Program regulates only the injections wells at the site.
- The EPA Air Program will review a design plan for ponds holding treated and untreated ISR waste fluids.
- The EPA NEPA program reviewed the Supplemental Environmental Impact Statement that the NRC prepared for the Dewey Burdock Site.

Questions & Discussion