



Dave Heineman
Governor

STATE OF NEBRASKA

DEPARTMENT OF ENVIRONMENTAL QUALITY
Michael J. Linder

Director
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MAY 05 2011

Ron Burrows
United States Nuclear Regulatory Commission
11154 Rockville Pike
Rockville, Maryland 20850

Re: Crow Butte Resources, Inc.
Class III Permit – North Trend Expansion Area
NDEQ ID: 91136, Program ID: UIC NE0210740

Dear Mr. Burrows,

The Nebraska Department of Environmental Quality is proposing to issue a permit for Class III injection wells associated with the proposed North Trend Expansion Area in-situ mining activities. The permit contains requirements and limitations on well construction and operation, as well as monitoring requirements. Enclosed is a copy of the Public Notice for your review.

If you have any questions or comments concerning this matter, please contact me at (402) 471-4290.

Sincerely,

Jennifer L. Coughlin
UIC Program Coordinator
Groundwater Unit
Water Quality Division

ENCLOSURE

PUBLIC NOTICE OF PERMIT ISSUANCE
Nebraska Department of Environmental Quality
Water Quality Division

Notice is hereby given, pursuant to Title 122, Rules and Regulations for Underground Injection and Mineral Production Wells, Chapters 32 and 33, that an application has been filed by Crow Butte Resources, Inc. for a Class III Underground Injection Control Permit. The legal description of the area to be permitted is: Township 32 North, Range 52 West, Section 21, portions of the E ½ of the SE ¼, and portions of the SE ¼ of the NE ¼; Township 32 North, Range 52 West, Section 22, SW ¼, portions of the W ½ of the SE ¼, and the S ½ of the S ½ of the NW ¼; Township 32 North, Range 52 West, Section 27, W ½, and the W ½ of the E ½; Township 32 North, Range 52 West, Section 28, portions of the NE ¼ of the NE ¼, portions of the E ½ of the SE ¼ of the NE ¼, portions of the E ½ of the NE ¼ of the SE ¼; Township 32 North, Range 52 West, Section 34, portions of the NW ¼, portions of the SW ¼, and portions of the W ½ of the NE ¼. The department has made the preliminary decision to issue the Class III permit. The aerial extent of the proposed Class III permitted area is approximately 1,165 acres.

The production zone associated with the proposed Class III permit would be the basal member of the Chadron Formation. The top of the basal member of the Chadron Formation ranges from an approximate depth of 350 feet below ground surface at the northern and southern permit boundary to 700 feet below ground surface in the center of the permit boundary. Elevations range from approximately 3,750 feet to 3,630 feet above mean sea level. Excess water withdrawal (lixiviant bleed) would provide control of leachate movement. Monitoring wells would provide horizontal and vertical surveillance of groundwater quality thereby demonstrating confinement. The proposed mining would consist of injection of a sodium carbonate/bicarbonate solution along with an oxidant (oxygen or peroxide) to the uranium-bearing formation through a pattern of injection wells. The uranium would be solubilized by the lixiviant and this solution would be pumped from the recovery wells to the satellite plant where the uranium would be extracted by ion exchange. The lixiviant at the satellite facility would then be reconstituted with leaching agents and recycled to the well field for reinjection. Ion exchange would be used in the satellite facility, and the loaded resin from the ion exchange process would be transported to the main processing plant south of Crawford for extracting, drying and packaging of the uranium.

Persons may request a fact sheet, may comment upon, or object to the proposed Class III permit by writing to Michael J. Linder, Director, Nebraska Department of Environmental Quality, P.O. Box 98922, Lincoln, Nebraska 68509-8922, prior to June 23, 2011. Public comments should be submitted as early as possible. A public hearing regarding the preliminary decision to issue the Class III permit has been scheduled to be held in Crawford, Nebraska beginning at 7:00 pm, June 22, 2011 in the auditorium at the Crawford Public High School and continuing as necessary. The public hearing will be conducted in accordance with Chapter 5, Title 115 – Rules of Practice and Procedure.

STATE OF NEBRASKA

DEPARTMENT OF ENVIRONMENTAL QUALITY
P.O. Box 98922
Lincoln, Nebraska 68509-8922

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FIRST CLASS**



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**Ron Burrows
United States Nuclear Regulatory Commission
11154 Rockville Pike
Rockville, MD 20850**

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