

## STATE OF WYOMING PUBLIC NOTICE

THE PURPOSE OF THIS NOTICE IS TO INDICATE THE STATE OF WYOMING'S INTENTION TO ISSUE AN UNDERGROUND INJECTION CONTROL PERMIT AND TO CLASSIFY THE RECEIVING GROUNDWATER OF THE STATE IN THE VICINITY OF THE PERMITTED INJECTION WELLS UNDER THE WYOMING ENVIRONMENTAL QUALITY ACT (35-11-101 ET. SEQ. WYOMING STATUTES 1957, CUMULATIVE SUPPLEMENT 1973), AND DEPARTMENT OF ENVIRONMENTAL QUALITY, WATER QUALITY RULES AND REGULATIONS CHAPTERS 8 AND 13. IT IS THE STATE OF WYOMING'S INTENTION TO ISSUE AN UNDERGROUND INJECTION CONTROL PERMIT FOR THE DISPOSAL OF NON-HAZARDOUS INDUSTRIAL WASTEWATER AS DEFINED IN CHAPTER 2, SECTION 1(c), WYOMING HAZARDOUS WASTE RULES AND REGULATIONS.

PERMITTEE: Lost Creek ISR, LLC (a subsidiary of Ur Energy); 5880 Enterprise Drive, #200; Casper, WY 82609; (307) 265-2373

PERMIT NUMBER: 09-586

PERMIT TYPE: Underground Injection Control, Non-hazardous Class I Well

DURATION: The permit will be valid for 10 years from the date of issuance.

FACILITY NAME: Lost Creek Project, Lost Creek Disposal Wellfield, Facility No. WYS-037-00122

LOCATION: There are 5 proposed wells, all in Sweetwater County, Wyoming -  
LC DW No. 1 (drilled for test purposes but not completed) in Section 25, T25N, R93W,  
LC DW No. 2 in Section 19, T25N, R92W,  
LC DW No. 3 in Section 13, T25N, R93W,  
LC DW No. 4 in Section 18, T25N, R92W, and  
LC DW No. 5 in Section 17, T25N, R92W.

AUTHORIZED WASTE: The waste water stream includes the following components related to the processing of uranium: production "bleed" (excess of extracted over injected water to maintain an inward hydraulic gradient in the production well field), filter and ion exchange wash water, reverse osmosis brine, yellowcake wash water, laboratory waste water, plant washdown water, and groundwater sweep water to flush the mined aquifer and restore it to pre-mining conditions.

The waste water is characterized by high concentrations of the following constituents: 4,000 to 15,000 milligrams/liter total dissolved solids, 200 to 4,000 mg/L chloride, 1,500 to 4,000 mg/L bicarbonate, 80 to 2,000 mg/L sulfate, 1 to 13 mg/L uranium, and 300 to 3,000 picroCuries/liter radium (isotope 226).

The waste is considered byproduct material of uranium mining by the Atomic Energy Act and is excluded from the definition of hazardous waste under section 261.4(a)4 of Title 40 of the Code of Federal Regulations.

**INJECTION ZONE:** The wells will inject into the Fort Union Formation at depths of 6,300 to 9,600 feet in the northeastern part of the Great Divide Basin, south of the Wind River thrust.

**OPERATIONS:** The surface injection pressure will be limited to 344 to 385 pounds per square inch gage pressure (depending on well) until the actual formation fracture pressure is determined by testing and will be limited to less than the actual fracture pressure thereafter. Each well will be allowed to inject at instantaneous rates up to 1,714 barrels(oil)/day (50 gallons/minute). The injection rates and pressures may vary widely over the course of a year.

**MONITORING:** The proposed permit requires that the permittee monitor injection rates and pressures continuously. The pressure in the casing – tubing annulus will also be monitored continuously to check for leaks in casing, tubing, or packer. These pressures and analyses of the discharge will be reported quarterly. The proposed permit requires pressure fall-off tests annually and mechanical integrity tests every 5 years. This permit will be reviewed by Department of Environmental Quality staff every 5 years.

**GROUNDWATER CLASSIFICATION:** The water in the injection intervals within the Lost Creek mine permit boundary (Permit to Mine TFN 4 6/268) is classified according to Water Quality Rules and Regulations, Chapter 8, Section 4.(d)ix as Class VI (unsuitable for use) because it occurs at a depth and location that make use of the water economically and technologically impractical. Water in the injection interval of LC DW No. 1 has a total dissolved solids concentration of more than 10,000 milligrams/liter; is located on federal land in an uninhabited part of the Great Divide Basin where current water demand consists of 1 to 5 stock wells per township; and is overlain by the Battle Spring – Wasatch aquifer system which has better quality water at shallower depths and would be more prolific.

**BONDING:** Financial assurance is required for this facility and it will be posted prior to the completion of LC DW No. 1 or construction of the other wells.

**PUBLIC COMMENTS** on the proposed operation, the proposed groundwater classification, and the State's intent, are invited on or before April 26, 2010. Comments should be in writing and addressed to the UIC Program, Water Quality Division; Wyoming Department of Environmental Quality; Herschler Building - 4W; 122 West 25th Street; Cheyenne, Wyoming, 82002. Additional information on this case may be obtained by calling George Langstaff, (307) 777-2960, sending email to [glang@wyo.gov](mailto:glang@wyo.gov), or by writing to the above address.

Any person may request that a public hearing be held but must do so in writing prior to the end of the public comment period. Requests should indicate the name and full mailing address of the individual requesting a hearing, the interest that individual has in the project, and the grounds for holding a public hearing.

If a hearing is not warranted and no comments are received, the final permit will be issued at the end of the public comment period.

Public Notice 09-586

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