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Powertech works to protect health, safety

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I have been responsible for reclaiming five in situ recovery, or ISR, uranium operations in accordance with federal and state regulations. I have Bachelor and Master of Science degrees in chemical engineering from the University of Texas, each with high honors, and I am a registered professional engineer. I have been a radiation and uranium environmental expert with the United Nations' International Atomic Energy Agency, or IAEA.

Lately, much has been written about ISR's impact on groundwater. There is a factual, scientific, data-based rationale for use of ISR. You might dismiss my opinion, but you should not dismiss the recent report published by the U.S. Nuclear Regulatory Commission. The NRC controls our nuclear industry and must "protect health and safety and minimize danger to life or property." Its report analyzes the data that assesses the environmental impact to groundwater from licensed ISR facilities. I commend the NRC staff for preparing a report and memo that are readily comprehensible by the public.

Three types of environmental impacts can occur: inadequate restoration in the production zone; migration of extraction fluids outside the production zone including to aquifers above or below the production zone (excursion); and well casing failures.

> Restoration: The report explains which parameters were restored to what level, but the conclusion speaks for itself. "The impacts to groundwater in the exempted aquifer met all regulatory standards for the state or EPA UIC program, met the quality designated for its class of use prior to ISR operations, have been shown to decrease in the future due to natural attenuation processes, and have been shown to meet drinking-water standards at the perimeter of the exempted aquifer. Therefore, the impacts to the exempted aquifer for each of the approved restorations do not pose a threat to human health or the environment."

> Excursions: According to the NRC, excursions are not necessarily environmental impacts but just indicators of the unintended movement of production fluids. Excursions do happen. However, "the data indicate that excursions have been controlled by the pumping and injection process." For even longer term excursions, "the impact did not pose a threat to human health or the environment."

> Well casing failure: The report concludes, "mechanical integrity testing programs provide early detection of well failures prior to impacts to the environment."

In addition, ISR facilities must also monitor for impacts to regional aquifers. To wit, "the staff is unaware of any situation indicating that: (1) the quality of groundwater at a nearby water supply well has been degraded; (2) the use of a water supply well has been discontinued; or, (3) a well has been relocated because of environmental impacts attributed to an ISR facility."

Since its inception in the 1970s, the safety of ISR has been monitored and reviewed by qualified expert regulators at the NRC, the EPA and numerous state regulatory agencies. These agencies are qualified to analyze the volumes of technical data necessary to discern actual impacts to groundwater.

Powertech supports rational, well-tailored rules to govern ISR in Colorado and suggest our regulators utilize the considerable experience and knowledge of the NRC. We also support the right of everyone

to express their concerns. We encourage all parties to become informed and rely on scientific data, as the NRC has done.
