



U.S. Department of Energy

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Grand Junction, CO 81503

JUN 22 2004

WM-60

Mr. Don Aragon, Executive Director
Wind River Environmental Quality Commission
Shoshone-Arapaho Tribes
P. O. Box 217
Fort Washakie, WY 82514

Subject: Institutional Controls

Dear Mr. Aragon:

The purpose of this letter is to continue our discussion and efforts to obtain viable and enforceable institution controls (IC) at the Riverton site. As discussed at our last meeting on June 2, 2004, DOE was tasked with developing draft restrictions within the IC boundary. The following are the proposed restrictions, rationale, and monitoring requirements for your review. As agreed, we will discuss comments via the conference call scheduled for June 29, 2004.

The Groundwater Compliance Action Plan (GCAP) was used as guidance to develop the proposed restrictions within the IC boundary. In accordance with the GCAP, the uppermost aquifer is where compliance is assessed and where control of inappropriate use of ground water is required. The uppermost aquifer is defined as the unconfined surficial alluvial aquifer and the underlying semiconfined sandstone. The confined aquifer underlies the semiconfined aquifer and is not addressed in the GCAP. Monitoring results to date indicate the potable wells completed in the confined aquifer have not been impacted by site-related contaminants.

Well Drilling Moratorium

DOE proposes a moratorium on all new wells within the IC boundary. The moratorium will be accomplished through a memorandum of understanding between DOE, the State of Wyoming, WREQC, and the Water Resources Control Board. Although DOE contends that a new well drilled into the confined aquifer is not likely to be contaminated because of confining layers between the surficial and confined aquifers, restricting new wells in this aquifer will eliminate potential for cross contamination during drilling or from inadequate well construction. Any new users within the IC boundary would be required to connect to the alternate water supply system for their water needs.

Existing Ground Water Sources within the IC Boundary

There will be ground water sources (wells, ponds that receive ground water discharge) remaining within the IC boundary. DOE will attempt to persuade well owners within the IC boundary to

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connect to the alternate water supply system; however, one landowner has already refused and there is potential for additional refusals. DOE cannot force landowners to connect to the system, decommission existing wells, or fill existing ponds. These ground water sources fall into the following categories:

- (1) Residential wells completed in the confined aquifer and used as a potable source.
- (2) Residential wells completed in the confined aquifer and not currently used as a potable water source because the residence is connected to the alternate water supply system.
- (3) Wells completed in the surficial aquifer used for agriculture and stock watering.
- (4) One well known to be cross-screened between the confined and surficial aquifer used for agricultural purposes.
- (5) Commercial wells used for industrial/business uses.
- (6) Gravel pit ponds, oxbow lake, wetlands.

DOE proposes the following actions for existing ground water sources within the IC boundary.

- (1) Residential wells used as a potable water source will be sampled in DOE's long-term monitoring program. Historical monitoring has shown these wells are not impacted by site-related contaminants. Future monitoring will provide verification that the well has not been impacted or provide an early warning of vertical contaminant migration thereby protecting human health.
- (2) Residential wells that are completed in the confined aquifer and are not currently used as a potable water source will not be sampled, but will be included in the IC monitoring portion of DOE's long-term monitoring plan. These wells will be inspected to verify use. If use changes to a potable water source, then the well will be added to DOE's long-term sampling network. (If the seal in these wells deteriorates over time, cross contamination of aquifers is not likely because of the upward vertical gradient between the confined and surficial aquifers.)
- (3) Wells completed in the surficial aquifer used for agriculture and stock watering will not be sampled, but will be included in the IC monitoring portion of DOE's long-term monitoring plan. These wells will be inspected to verify use. If use changes to a potable water source, then the well will be added to the long-term sampling network.
- (4) Well 441 (Westlake windmill well) will be sampled in the DOE's long-term monitoring program. (Even though this well is known to be cross-screened, cross contamination of aquifers is not likely because of the upward vertical gradient between the confined and surficial aquifers.)
- (5) Commercial wells at St. Stevens Mission (436), Peak Sulfur (460), and Bingo (789) will be sampled in DOE's long-term monitoring program.
- (6) Gravel ponds, the oxbow lake, and wetlands areas will be sampled in DOE's long-term monitoring program.

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Land Restrictions

Any land use that exposes ground water (i.e. gravel mining operations) will be restricted within the IC area. Both the State of Wyoming (fee lands) and Bureau of Indian Affairs (BIA) (tribal lands) control gravel operations through a permitting process. Gravel mining operations within the IC area will be restricted via a Memorandum of Understanding between DOE, State of Wyoming, BIA, Water Resources Control Board, and WREQC. Periodic inspection of the land use within the IC boundary will be included in DOE's long-term monitoring program.

Sincerely,



Tracy Plessinger
Site Manager

cc:

J. Arum, Ziontz, Chestnut, Varnell, Berley, and Slonim
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