

February 2, 2002

Ms. Donna Bergman-Tabbert, Manager  
U.S. Department of Energy  
Grand Junction Office  
2597 B3/4 Road  
Grand Junction, CO 81503

SUBJECT: REQUEST FOR INFORMATION - GROUND WATER COMPLIANCE ACTION  
PLAN FOR THE LAKEVIEW, OREGON, UMTRA PROJECT SITE

Dear Ms. Bergman-Tabbert:

By letter dated September 3, 1999, the U.S. Department of Energy (DOE) submitted the Ground Water Compliance Action Plan (GWCAP) for the Uranium Mill Tailings Remedial Action Project site at Lakeview, Oregon. The staff has reviewed the Lakeview GWCAP and finds that it needs additional information in order to complete its review. The information needed is identified in the enclosure.

If you have any questions regarding this letter, please contact Myron Fliegel, the Project Manager for the Lakeview site, at (301) 415-6629 or by e-mail to [mhf1@nrc.gov](mailto:mhf1@nrc.gov).

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/NRC/ADAMS/index.html> (the Public Electronic Reading Room).

Sincerely,

/RA/c/GSJ

Melvyn Leach, Chief  
Fuel Cycle Licensing Branch  
Division of Fuel Cycle Safety  
and Safeguards  
Office of Nuclear Material Safety  
and Safeguards

Encl: as stated

Docket No.: WM-64

cc: D. Metzler, DOE GJO

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See previous concurrences **OFFICIAL RECORD COPY**

**REQUEST FOR INFORMATION**  
**DEPARTMENT OF ENERGY GROUND WATER COMPLIANCE ACTION PLAN FOR THE**  
**LAKEVIEW, OREGON, UMTRA PROJECT SITE**

1. DOE is proposing to use supplemental standards detailed in 40 CFR Part 192.21 and 192.22. DOE has proposed that groundwater meets the criteria of *limited use groundwater* 40 CFR Part 192.11(e). The definition of *limited use groundwater*, per 40 CFR Part 192.11(e), is:

Groundwater that is **not a current or potential source of drinking water** because (1) the concentration of total dissolved solids is in excess of 10,000 mg/l, or (2) **widespread, ambient contamination not due to activities involving residual radioactive materials from a designated processing site exists that cannot be cleaned up using treatment methods reasonably employed in public water systems**, or (3) the quantity of water reasonably available for sustained continuous use is less than 150 gallons per day. The parameters for determining the quantity of water reasonably available shall be determined by the Secretary with the concurrence of the Commission. [emphasis added]

In addition, 10 CFR Part 192.22(d) states:

When 192.21(b), (f), or (g) [**limited use groundwater**] apply, implementing agencies shall apply any remedial actions for the restoration of contamination of groundwater by residual radioactive materials that is **required to assure, at a minimum, protection of human health and the environment**. In addition, when 192.21(g) applies, supplemental standards shall ensure that current and reasonably projected uses of the affected groundwater are preserved. [emphasis added]

The NRC staff has the following questions regarding the ability for DOE to satisfy the conditions under 40 CFR Part 192.11 and 192.22:

- It is not clear whether the aquifer proposed as *limited use groundwater* is presently being used as, or is a potential source of drinking water. For example, DOE states that “ground water is being used for domestic purposes such as drinking, bathing, cooking, and for agricultural uses” (BLRA page CS-1). Multiple private and municipal water wells are located to the south of the site. Are these well users using this water for drinking water? If so, do these wells tap into the proposed *limited use groundwater* or are they hydraulically connected to the proposed *limited use groundwater*? If these wells are being used for drinking water, do they have treatment systems and what are the costs of these systems? Please discuss the implications of your answers.
- Elevated levels of sulfate and other parameters have been detected in private water supply wells to the south of the site. For example, Page 3-28 (BLRA) “Four of five private wells due south of the site have elevated sulfate concentrations (locations 547, 548, 549, and 550), which could indicate constituents from the site have reached these wells”. Page CS-2 (BLRA) “Approximately 3000 feet (ft) (900 meters [m]) south of the site, several private wells contain some of the same constituents as the site-related contaminated ground water.” Please provide an assessment of whether site-derived

Enclosure

groundwater contamination has reached these private water supply wells. If the wells have been impacted, an assessment of the risk to these well users must be provided. In addition, clarify whether the proposed water line will include these residents and what controls will be implemented to prevent potential future exposure.

- The proposed extent of the specific aquifer (vertically and horizontally) that will include the *limited use groundwater* is unclear. In addition it is unclear as to what exactly is the “widespread, ambient contamination not due to activities involving residual radioactive materials”. Only some of the aquifer has been influenced by geothermal activities. Please provide more specificity in this area as it pertains to the regulations in 40 CFR Part 192.
- 2. More detail is needed with regard to the proposed water line and groundwater use restrictions. Specifically, identify current groundwater users and identify on a map, the area to be covered by the alternate water supply.
- 3. The extent of the site-derived groundwater contamination has not been adequately defined in the report. In addition, the groundwater flow conditions to the south of the site are not adequately defined; “Because of the lack of monitor well coverage between the site and the private wells, it has not been determined if these wells are crossgradient or downgradient” (BLRA page 2-11, 1996). No estimate of the future migration of site-derived groundwater contamination has been made and what the potential impacts downgradient of the site would be. Since multiple water supply wells are present to the south of the site, including state and county municipal water supply wells, this will be needed to adequately define future risk. Please provide this information.
- 4. After the extent of the proposed *limited use groundwater* has been established, provide more detail on any potential hydraulic connection to deeper drinking water aquifers.