



## U.S. Department of Energy

Grand Junction Office  
2597 B<sup>3</sup>/<sub>4</sub> Road  
Grand Junction, CO 81503

JUN 29 2001

*WM-86*

Mr. Melvin Leach, Branch Chief  
U.S. Nuclear Regulatory Commission  
Fuel Cycle Licensing Branch, FCSS  
Mail Stop T8A33  
c/o Document Control Desk  
Washington, D.C. 20555-0001

Subject: Termination of Water Level Monitoring Within the Slick Rock, Colorado,  
Disposal Cell

Dear Mr. Leach:

Since 1997, the U.S. Department of Energy (DOE) has monitored water levels within the Uranium Mill Tailings Radiation Control Act Title I disposal cell at Slick Rock, Colorado. This monitoring was stipulated in the Long-Term Surveillance Plan (LTSP) for that site. The monitoring ensures that water in the cell will not rise high enough to enter a porous sandstone stringer and migrate downdip.

According to the LTSP, the monitoring will continue until a downward trend in water level is observed for 3 consecutive quarters. The water level has been trending downward for 7 consecutive quarters, as shown on the enclosed hydrographs. Water levels have remained below the bottom of the lower sandstone stringer (at 5,838 feet above sea level) for more than 2 years.

The outcrop area of the sandstone stringers has been inspected. No evidence of seepage or saturation, mineral encrustation, phreatophyte vegetation, or other indication of downdip migration or surface expression of water has been observed.

In accordance with the monitoring requirements stipulated in the LTSP (excerpt enclosed), DOE requests NRC concurrence in the decision to discontinue water level monitoring in the disposal cell and to decommission the two monitoring locations, standpipes MW-3 and MW-4. The DOE would appreciate expedited review and concurrence of this request so that the standpipes can be decommissioned before October 2001. Upon receiving NRC concurrence for this action, DOE will revise the LTSP for the Slick Rock site to incorporate the change.

Please call me at (970) 248-6037 if you have any questions concerning this request.

Sincerely,

A handwritten signature in cursive script that reads "Art Kleinrath".

Art Kleinrath  
Program Manager

Enclosure

*Amss02*

cc w/o enclosure:

W. Naugle, Colorado Department of Public Health and Environment

J. Gilmore, DOE-GJO

C. Jacobson, MACTEC-ERS

M. Widdop, MACTEC-ERS

cc w/enclosure:

File LSRK 1.1 (thru A. Garcia)

ask/standpipe letter to NRC.doc

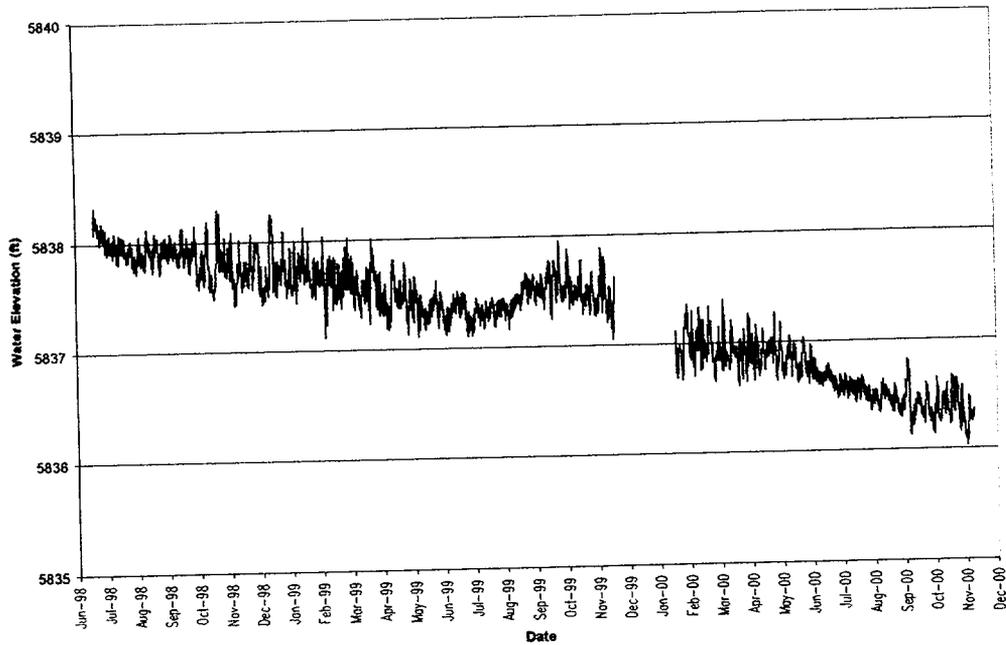


Figure SRK-2. Water Levels at MW-03 at the Slick Rock, Colorado, Disposal Cell

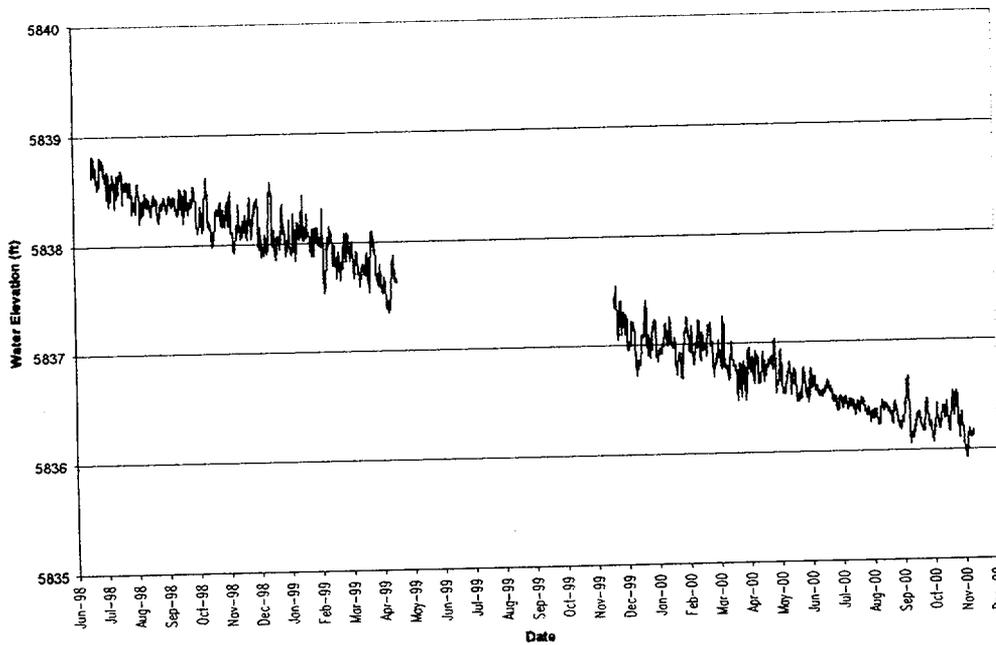


Figure SRK-3. Water Levels at MW-04 at the Slick Rock, Colorado, Disposal Cell

sandstone layer and 9 ft (2.7 m) below the basal elevation of the Kd-2. Calculation No. SRK-06-97-24-12-06-00 shows there is potential for lateral migration of transient drainage into the Kd-1 sandstone layer. However, this migration is not expected to result in a surface expression. There is no current potential for lateral migration into the Kd-2 sandstone layer.

## 2.5 GROUND WATER PROTECTION STRATEGY

To achieve compliance with the U.S. Environmental Protection Agency (EPA) ground water protection standards (40 CFR Part 192, Subpart A), the DOE applied supplemental standards for limited use ground water (40 CFR §192.2(g)). Supplemental standards are appropriate due to the low yield of ground water (less than 150 gallons per day [ $6.6 \times 10^{-3}$  liters per second]) in the upper-most aquifer (upper sandstone unit of the Burro Canyon Formation). Ground water in this aquifer is not a current or potential source of drinking water because of the low yield. Pursuant to 40 CFR §192.03, the DOE has determined that concentration limits and ground water monitoring in the uppermost aquifer at point of compliance wells at the Burro Canyon disposal site would not further protect human health and the environment (DOE, 1995).

## 2.6 DISPOSAL CELL PERFORMANCE MONITORING

To evaluate the performance of the disposal cell the DOE will monitor water levels in MW-3 and MW-4 by automatic data loggers (GeoGuard Model No. 54060). To provide accurate measurement of water levels in the disposal cell, two-inch diameter PVC pipe, with a ten-foot screened interval at the base, has been installed, and adequately sealed, in each of the two standpipes. Water levels are to be measured every four hours in order to define the diurnal changes, and to collect adequate data for trend analysis. The data will be downloaded quarterly and put into a spreadsheet program for plotting. A trend analysis will be performed by plotting a linear regression line through the data obtained from each measurement period. The water level elevation and trend will be determined at the midpoint of the measurement period.

Compliance monitoring also will include visual inspections such as looking for physical evidence of mineralization, phreatophyte vegetation, and saturated zones at Kd-1 sandstone outcrops. The Kd-1 sandstone layer crops out approximately 450 ft (137 m) northeast of the east corner of the cell, and is down dip from the northeast cell face. At the present time the Kd-1 sandstone layer appears to be essentially dry. If water levels rose to a point where lateral migration could occur in the Kd-2 sandstone layer, the Kd-2 outcrops would be monitored also. The Kd-2 sandstone layer crops out above the Kd-1 along bluffs surrounding the disposal cell within 300 to 1000 ft (90 to 300 m) except on the east side. Precipitation in the area collects in the Kd-2 sandstone layer and migrates to the outcrop areas, where some seepage potentially may occur. Some vegetation appears to be supported near the Kd-2 outcrop by the moisture in this sandstone layer.

When a downward trend is consistently observed for three consecutive quarters at both MW-3 and MW-4 and the water level is at or below the base of the Kd-1

sandstone layer (elevation 5838 ft [1779 m] above NGVD), water level monitoring and visual monitoring will be discontinued and the standpipes will be decommissioned (with NRC approval) (Figure 2.5).