



## U.S. Department of Energy

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

MAR 21 2002

Mr. Kenneth Hooks  
U.S. Nuclear Regulatory Commission  
Fuel Cycle Licensing Branch  
Division of Fuel Cycle Safety & Safeguards  
Mail Stop T7C6  
Washington, D.C. 20555-0001

Subject: Shiprock, New Mexico, UMTRA Ground Water Remediation Project Disposal Site  
Area-Infrastructure

Dear Mr. Hooks:

When the U.S. Department of Energy (DOE) completed the Shiprock (Figure 1) remedial action of surface and near-surface contamination in 1986, contaminated materials were stabilized on-site in the UMTRA disposal cell. However, contaminated ground water exists within the terrace material and weathered bedrock south of the San Juan River as well as within an alluvial aquifer in the floodplain below. The Grand Junction Office (GJO) is performing remediation under the UMTRA Ground Water Project.

I wish to inform you of the impending infrastructure construction on or near to the UMTRA disposal site. Construction will include the extension to the UMTRA disposal cell outflow drainage channel, the Bob Lee Wash drain, and the Navajo Engineering and Construction Authority (NECA) fence area repairs. Enclosed is a drawing (Figure 2) identifying this infrastructure.

**Drainage Collection Channel:** The existing UMTRA disposal cell outflow channel is an energy dissipation area. A 750-foot long extension channel will be constructed to divert runoff to an armored outlet structure at Bob Lee Wash. By collecting runoff from the disposal cell and allowing it to flow away from the cell, water percolating into the terrace subsurface will be minimized.

**Bob Lee Wash Drain:** A ground water drain will be constructed in Bob Lee Wash to intercept contaminated ground water before it surfaces in the wash. The interceptor drain will range in depth from 4 feet to 10 feet and will be 616 feet long. The drain will collect the water and direct it to a sump where it will be pumped through a buried 5,780-foot pipeline to an evaporation pond. The evaporation pond will be located southwest of the UMTRA disposal cell.

The pipeline will be sized to transport the potential, future floodplain well field flows. A ground water extraction well, Number 1074, will be placed in the north corner of the NECA gravel pit and connected to the pipeline.

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Last summer, the floodplain access road that parallels the northwest side of Bob Lee Wash experienced extensive erosion damage from high storm water runoff. The eroded areas will be repaired by placing a gabion wall along the northwest side of Bob Lee Wash to repair the roadway shoulder and protect it from future storm water erosion. The gabion wall will be 3 feet to 9 feet high and 150 feet long. Gabions will be used because of the lack of suitable large-diameter riprap in the Shiprock area.

**NECA Fence Area Repairs:** The northwest fence between the disposal site and NECA area experienced extensive erosion damage from the storm. A gabion wall, 3 feet high and 120 feet long, will be installed 15 feet north of the fence to allow a roadway to parallel the fence. The area between the gabion wall and fence will be backfilled with compacted pit run, and other eroded areas will be repaired.

The construction of the ground water remediation system is scheduled to commence in July 2002 and extend through December 2002. If you have any questions or need any additional information, please call me at (970) 248-7612.

Sincerely,



Donald R. Metzler  
Program Manager

Enclosures

cc w/enclosures:

A. Kleinrath, DOE-GJO  
C. Jacobson, MACTEC-ERS  
C. Goodknight, MACTEC-ERS  
M. Madril, MACTEC-ERS  
LSHP 6.8 (A. Garcia)  
GWSHP 20.1 (K. Sutton)

avk/SHP Ground Water1.doc

Figure 1



