



UNITED STATES  
**NUCLEAR REGULATORY COMMISSION**

REGION IV  
 URANIUM RECOVERY FIELD OFFICE  
 BOX 20225  
 DENVER, COLORADO 80228

OCT 2 1990

URFO:GRK  
 Docket No. WM-48

MEMORANDUM FOR: Docket File No. WM-48  
 FROM: Gary R. Konwinski  
 Project Manager  
 SUBJECT: MINUTES OF MEETINGS ON DURANGO GROUND-WATER COMPLIANCE  
 ISSUES  
 DATE: September 25, 1990

Participants: <u>Bureau of Reclamation</u>	<u>Nuclear Regulatory Commission</u>
Michael Gabaldon	Gary Konwinski
Pete Shaffner	
Jim Yahnke	<u>Colorado Dept. of Health</u>
Lynn Johnson	Wendy Naugle
Allen R. Gates	
Mike Deming	<u>Dept. of Energy &amp; Consultants</u>
Jim Gates	Steve Hamp
Bill Walsh	Russel Edge
	Kent Bostick
	Larry Coons

Summary of Discussions: A meeting was held at the DOE office in Albuquerque, New Mexico, on the morning of September 25, 1990. The purpose of the meeting was to discuss outstanding ground-water issues associated with ground-water compliance at the processing site.

The Bureau of Reclamation plans to construct a pumping station on the former raffinate pond site. This construction will require some dewatering of the site which will modify the ground-water flow.

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 REHall  
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The Bureau of Reclamation presented data on water quality and numerical modeling for the pumping station site. The data indicates that there is approximately 50 feet of saturated formation with a permeability of 0.2 ft/day. These values resulted in a transmissivity input, for modeling purposes, of 10 ft<sup>2</sup>/day. Given these values, inflow to the pumping station excavation would be approximately 10 gpm with the majority coming from the Animas River, a lesser amount will come from upgradient locations, and the smallest component will come from an adjacent fault zone. Based upon the limited amount of water available in the aquifer, as well as the quantity of water, supplemental standards will likely apply at the site. Due to this, Bureau of Reclamation construction techniques will not be designed to consider future DOE remediation techniques. Should the DOE find that remediation actions will be necessary, the pumping structure will not preclude such actions.

The State of Colorado will receive a final package, which will include the Restricted Use Permit, from the Bureau of Reclamation which will have as an attachment a technical support document addressing the ground water. This package will be distributed for agency review in October 1990.

Participants:	<u>Department of Energy and Consultants</u>	<u>State of Colorado</u>
	Steve Hamp	Wendy Naugle
	Russel Edge	
	Kent Bostick	<u>NRC</u>
	Larry Coons	
	Clark Poore	Gary Konwinski
	Bill Downs	
	Barbara Bridgeman	

Summary of Discussions: A meeting was held on the afternoon of September 25, 1990, to discuss ground-water compliance issues at the Durango disposal site.

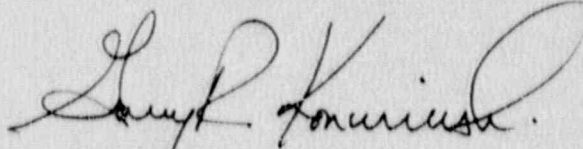
DOE contractors presented their hydrologic characterization of the site based upon geologic and stratigraphic data that have been collected. The field studies indicate that the alluvial materials are being dewatered; therefore, it will not be utilized as the compliance aquifer. The monitoring data indicate that arsenic, cadmium, molybdenum, radium-226 and 228, selenium, and uranium exceed background concentrations. Three downgradient wells, in the unit stratigraphically below the alluvium materials, will be utilized to determine ground-water compliance.

Geochemical studies show that all hazardous constituents exceeding background concentrations, with the exception of vanadium and uranium, will meet concentration limits due to dilution. Natural reducing conditions will sufficiently attenuate uranium, while vanadium will be loaded to soil particles at a rate of 0.03 µg/g of soil.

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The Cliff House/Menefee formations will be used as the uppermost aquifer due to the desaturation that is taking place in the alluvial materials. Aquifer tests indicate that the Cliff House/Menefee yield is roughly 0.6 gpm or 864 gallons per day.

DOE plans on submitting a preliminary final RAP for agency review on or before November 6, 1990. This document will contain a section that will discuss the ground-water compliance strategy. DOE's schedule will require comments by January 1991.



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