**MWD**

METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

August 3, 1993

To: Board of Directors (Water Problems Committee--Information)
From: General Manager
Subject: Ward Valley Low-Level Radioactive Waste Site

Report

This letter is intended to provide your Board an update on activities related to the proposed Ward Valley Low-Level Radioactive Waste (LLRW) Site. A site in Ward Valley, California, about 20 miles east of the Colorado River at the City of Needles, is proposed for a LLRW storage facility (see attached map). A private company would develop and operate the facility, under regulation of the California Department of Health Services (DHS), which would eventually become caretaker of the facility. The site would serve the four member states (California, Arizona, North Dakota, and South Dakota) of the Southwest Low-Level Radioactive Waste Disposal Compact, established under federal law.

LLRW would be stored in specially constructed containers, which would be buried in unlined trenches ranging from 42 to 60 feet deep in a remote desert environment. The deposited material would be about 600 feet above the groundwater table. Proponents and opponents of the site argue the potential for groundwater contamination and, ultimately, the potential for contamination of the Colorado River.

Subsequently, Metropolitan's consultant, Geoscience, prepared a draft report evaluating the potential of this facility to contaminate the Colorado River. The consultant acquired and reviewed over 8,900 pages of documentation contained in the Final EIR/S, License Application, Draft License, and supporting documents. DHS indicates that additional, unindexed information exists in: 2,000 pages of license hearing minutes; 5,000 pages of technical questions and answers between DHS and the proposed facility operator; and 4,000 pages of computer model output and information. Based on the findings in the draft report the following conclusions may be drawn:

1. There does not appear to be a threat to the Colorado River Aqueduct structure.
2. There does not appear to be a short-term threat (less than 250 years) to Colorado River water quality.
3. The long-term implications (greater than 250 years) for Colorado River water quality are unclear, therefore additional technical analyses and operational commitments are needed.

The concerns raised in the draft report will be provided to DHS for review and comment before finalizing, and the draft report will be available for your review from the Executive Secretary's Office. Table 1 (attached) outlines the action items for each issue to be requested of DHS, which involve additional scientific analyses and commitments.

The hydrogeology between the site and the Colorado River is not well characterized. Uncertainty exists now, and will continue to exist, even if the additional recommended studies are successfully completed. Hence, there will always be some unknowns, and a conservative approach including comprehensive, sustained monitoring is warranted. Although, the present proposal includes a considerable unsaturated zone monitoring system, the use of only four groundwater monitoring wells appears inadequate.

A recent Court of Appeal ruling concluded that adjudicatory hearings are not required before DHS issues final approval for the license. However, the California Supreme Court has been asked to review that ruling. In view of the need for additional information and commitments identified by the draft report, the General Counsel has submitted a letter to the Supreme Court supporting the request for review of the ruling. That letter is similar to a friend-of-the-court brief Metropolitan filed with the Court of Appeal last year noting the value of an adjudicatory hearing for resolving public concerns. In addition, Secretary of the Interior Babbitt is likely to soon announce that any transfer of federal lands to the State of California would be conditional upon holding hearings in accordance with the public interest standard of the Federal Land Policy and Management Act. Further developments will be reported to your Board.

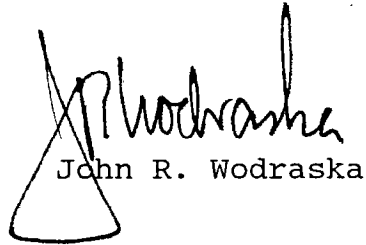
Staff will forward the issues raised to DHS for their response.

Board Committee Assignment

This letter is referred for information to the Water Problems Committee because of its authority to study, advise, and make recommendations on the policies, sources, and means of importing water required by Metropolitan pursuant to Administrative Code Section 2481(a).

Recommendation

For information only.



John R. Wodraska

LA:bvf

Attachments

Table 1 Outline of Actions Requested of DHS*

Risk Analyses Regarding Colorado River

Conduct risk analyses for probability and activity regarding:

- Container leakage
- Contamination reaching the Colorado River by vertical migration to groundwater and by north or south pathways

Vertical Migration From Trench to Groundwater

Reevaluate tritium concentrations to more accurately determine vertical travel rates from trench to groundwater, with:

- Soil sampling
- Reevaluation of previous computer simulation
- Possible simulation with revised model

Potential Ward Valley - Piute Valley Pathway (North)

Reevaluate and determine potential horizontal travel time via groundwater north and then east to Colorado River:

- Install groundwater monitoring wells to determine hydraulic gradients north of the site
- Model impacts of potential future groundwater development in Piute Valley on hydraulic gradients near Ward Valley site

Potential Ward Valley - Rice Valley Pathway (South)

Reevaluate and determine potential horizontal travel time via groundwater south and then east to Colorado River:

- Install groundwater monitoring wells to determine if Ward and Rice Valleys are connected
- Model hydrogeologic conditions from Ward Valley through Rice and Vidal Valleys

Local Hydrogeology

Carry out additional aquifer tests to adequately characterize local hydrogeology

Groundwater Monitoring System

- Establish a more comprehensive network of groundwater monitoring wells
- Commit to maintaining and operating monitoring systems for the expected radioactive life of the stored elements which is on the scale of hundreds to thousands of years

Volume and Radioactivity of Waste

State maximum limits for both, and if they differ from published values:

- Prepare supplemental EIR/S and revised Draft License
- Include appropriate public review

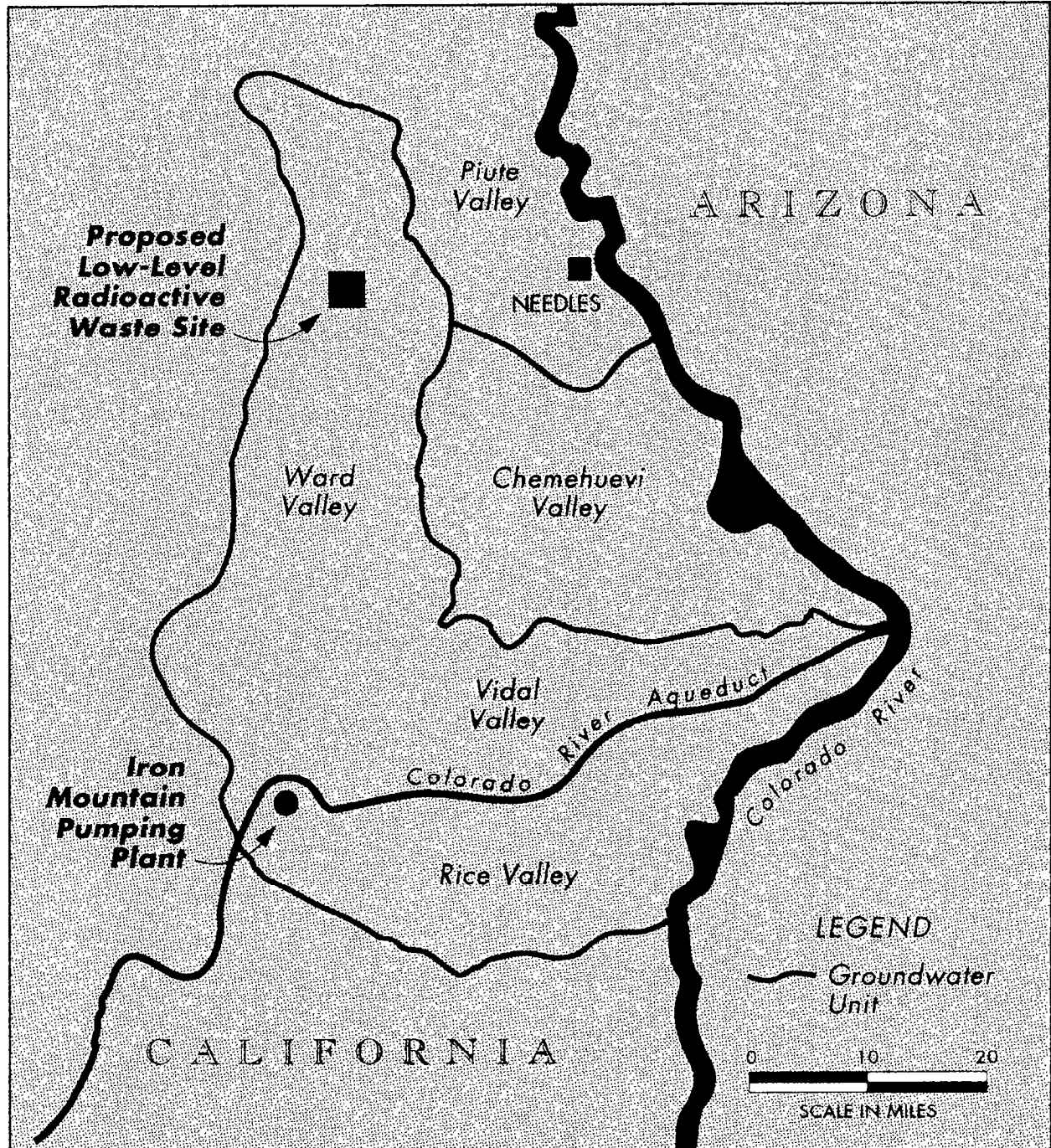
Seismic Hazards

Conduct additional study in light of the recent Landers earthquake, evaluating:

- Possible ground fissuring
- Affect on computer modeling

*

The actions are presented with further technical details in the draft report.



Ward Valley LLRW Site Location Map

Source of Groundwater Unit Boundary: USGS Professional Paper 1370-E, 1989