State of NM

New Mexico Health and Environment Department

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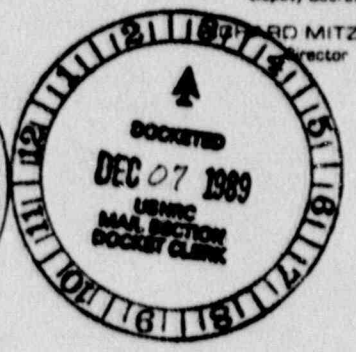
December 4, 1989



Pete Garcia
US Nuclear Regulatory Commission
P. O. Box 25325
Denver, CO 80225

Dear Mr. Garcia:

Thank you for giving me information over the telephone recently about the status of NRC licensing of uranium mills in New Mexico. I requested this information for use in New Mexico's biennial report to Congress "Water Quality and Water Pollution Control in New Mexico, 1990".

You told me that you would be willing to review what I wrote up about the New Mexico uranium mills to make sure I had not misunderstood what you told me. I enclose a copy of my draft of this section of the report for your comments.

I would appreciate having your comments as soon as possible. If it would be more convenient for you, I would be glad to have your comments by telephone. My number is (505) 827-2908.

Thank you very much for your input. It is important that this report be as accurate as we possibly can make it.

Sincerely,

Maxine S. Goad

Maxine S. Goad
Ground Water Bureau

Enclosure

90-0146

– ENVIRONMENTAL IMPROVEMENT DIVISION –
Herold Runnels Building
1190 St. Francis Dr.

PROGRAMS FOR GROUND WATER POLLUTION CONTROL

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FEDERAL PROGRAMS

(Draft of 12/4/89)

There are a number of Federal programs which contribute to ground water quality protection in New Mexico. Some of these, such as the hazardous waste, underground injection control, and underground storage tank programs, are being carried out by the State under authority of State legislation and are described above in the sections on the relevant State acts. Others, such as Superfund and programs under the Uranium Mill Tailings Radiation Control Act, are essentially Federal programs in which the State plays a role.

Superfund

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Inactive Uranium Mill Tailings Remedial Action Program

The Uranium Mill Tailings Radiation Control Act (UMTRCA) directs the U. S. Department of Energy (DOE) to do remedial work at sites listed in the Act. New Mexico has two inactive uranium mill tailings sites which are covered by the remedial action program under Title I of the Act: Shiprock and Ambrosia Lake.

The Shiprock site in San Juan County is adjacent to the San Juan River and was endangering both surface and ground water. Because this site is located on

the Navajo Indian Reservation, the entire cost of its remedial action was paid by the Federal government. The remedial action was done under a cooperative agreement between the DOE and the Navajo Tribe, with the State EID having the opportunity to review and comment. Ground breaking on the project was in 1984, construction was completed in 1986, and long term surveillance and maintenance activities are now under way.

Remedial action on the Ambrosia Lake UMTRCA Title I site in McKinley County will be carried out under a cooperative agreement between the State and the DOE, with the State bearing 10 percent of the costs and the Federal government bearing 90 percent. The State has concurred with the DOE on the concept of stabilization in place. Demolition activities had been completed and all nonradiological hazardous materials had been removed from the processing site by April 1989. Semimonthly maintenance inspections were initiated in May 1989 and will continue until work resumes at the site, which is anticipated in 1990. Stabilization of the main tailings pile, containing tailings plus contaminated debris from the building demolition, is scheduled to begin in FY 1991 pending availability of funding.

Uranium Mill and Mill Tailings Licensing and Regulation

The Federal Nuclear Regulatory Commission (NRC) has since 1986 had responsibility for licensing uranium mills and mill tailings in New Mexico. Previously the State licensed these facilities under State radiation protection regulations as described in the section on **Other State Programs** above.

NRC regulates and licenses uranium recovery activities in New Mexico, or extraction of uranium from the rock matrix by methods such as milling or in situ leaching with lixiviant. NRC does not regulate conventional mining activities. Most uranium recovery facilities in New Mexico are inactive due to the slump in the uranium industry nation-wide. However, regulated facilities must remain under licenses as long as a radiological hazard remains. For uranium mills this means that a license cannot be terminated until all three of the following steps applicable to that site are completed:

(1) Decommissioning of mill;

(2) Reclamation of tailings area; and

(3) Completion of ground water corrective action plan.

Most uranium facilities are also subject to ground water discharge plans required under the State water quality control commission regulations as described in the **Water Quality Act** section above.

The status of New Mexico uranium mills which are now or have recently been under NRC license, all in Cibola, McKinley and Sandoval Counties, is as follows:

Homestake Mining Company: The Homestake uranium mill is the only one in New Mexico still actively operating as of December 1989. It is tolling ore from the Chevron Mt. Taylor Mine. That mine may be closing down, and if so the Homestake Mill may also close down. Homestake has submitted a tailings reclamation plan to NRC for purposes of surety bonding, and this plan is currently under review by NRC. The ground water corrective action plan, which was first required under the State ground water regulations, is in operation

and has been since the 1970s. Ion Exchange (IX) facilities extract uranium from mine water, and the fluids from the IX are processed at the mill.

Rio Algom Mining Corp (mill previously operated by Kerr-McGee, then Quivira): This mill, which was sold to Rio Algom in 1989, has been on stand-by status since 1985. The mill is still authorized to receive wastes from the Kerr-McGee uranium hexafluoride processing plant at Sequoyah, Oklahoma. These wastes are not now being processed at the mill, but are being stored in a large thickener there. A mill tailings reclamation plan has been submitted to NRC for surety purposes. The ground water corrective action plan, which is coordinated with the ground water discharge plan required by the State, is being implemented. Uranium is being extracted from mine water, and the resulting fluid is being shipped by tanker truck for processing at the Sequoyah plant.

United Nuclear Corporation (UNC): The UNC mill, which is on the Superfund National Priorities List, has not operated since 1982. A tailings reclamation plan was submitted in 1987 and a mill decommissioning plan was submitted in 1989, but NRC has not yet approved either. The ground water corrective action plan is under way with NRC as lead agency under a Memorandum of Understanding with EPA signed in 1988. EPA obtains State input by consultation.

ARCO Coal Company (previously Anaconda): This mill is in the reclamation phase. In September 1989 NRC approved the decommissioning plan for the mill buildings, and the reclamation plan for the tailings areas is near approval. The ground water corrective action plan is in place and is operating in coordination with the State ground water discharge plan.

Sohio: Sohio's mill has been decommissioned, and the mill buildings were removed in 1987. The reclamation plan for the tailings area was approved in 1988 and implementation of it is almost completed as of December 1989. The ground water corrective action plan is under way in coordination with the State ground water discharge plan.

Bokum Resources Corporation: Bokum's mill was constructed but never operated, and therefore there is no need for decontamination. The State ground water discharge plan has already expired and the NRC license, which is not an operating license, will expire in 1990. Bokum is not currently pursuing a renewal and an operating license.

Chevron Mt. Taylor Mill (previously Gulf Mineral Resources): A license and an approved State ground water discharge plan were obtained for this mill, but the mill was not built. The State ground water discharge plan will expire in 1991. The NRC license expired in 1988 and Chevron did not apply to renew it.

In Situ Leaching Operations: The only in situ leaching project that has been operational in the State was Mobil's Section 9 Pilot Project near Crownpoint in McKinley County. Leaching for uranium production was ended and ground water reclamation was started in 1980. Ground water reclamation satisfying the requirements of both the State ground water discharge plan and the NRC license was completed in 1988, and the license was terminated.