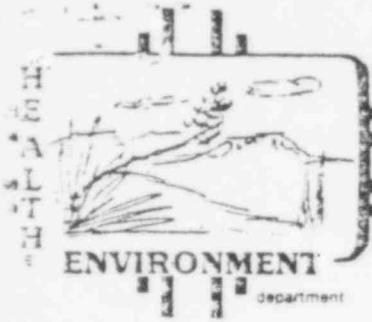


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STATE OF NEW MEXICO
ENVIRONMENTAL IMPROVEMENT DIVISION

Bruce King
GOVERNOR

George S. Goldstein, Ph.D.
SECRETARY

Larry J. Gordon, M.S., M.P.H.
DEPUTY SECRETARY

Thomas E. Baca, M.P.H., Director

June 25, 1979



Mr. Ross A. Scaroni, Chief
Uranium Mill Licensing Section
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Scaroni:

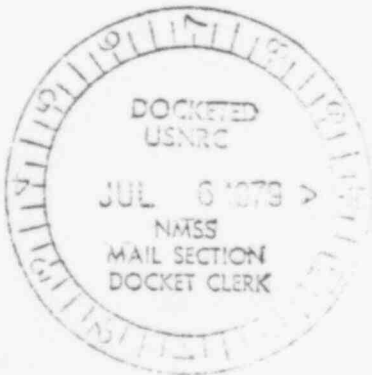
I enclose for your information a copy of my June 21, 1979, letter disapproving Bokum Resources Corporation's proposed discharge plan for the Marquez Uranium Mill.

Thank you, once again, for your assistance in evaluating this project.

Sincerely,

Thomas E. Baca
Director

TEB:thw



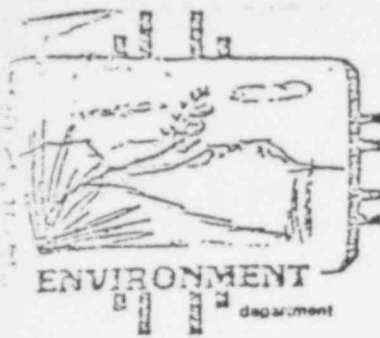
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STATE OF NEW MEXICO
ENVIRONMENTAL IMPROVEMENT DIVISION

P. O. Box 968
Santa Fe, NM 87503
Thomas E. Baca, M.P.H., Director

Bruce King
GOVERNOR

George S. Goldstein, Ph.D.
SECRETARY

Larry J. Gordon, M.S., M.P.H.
DEPUTY SECRETARY

June 21, 1979

Mr. Richard D. Bokum II
President
BOKUM RESOURCES CORPORATION
P. O. Box 1833
Santa Fe, NM 87501

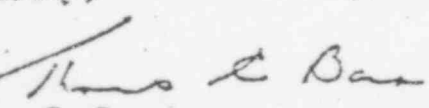
Dear Mr. Bokum:

The Environmental Improvement Division has completed its review of your proposed discharge plan (DP-43) and the record of the public hearing conducted on May 1 through May 6, 1979.

It is my duty as director to inform you that the plan is hereby disapproved. I am including a copy of my findings of reasons for disapproval for your information.

It is important to note that the disapproval extends only to the proposed plan. Should you desire to present an alternate proposal, the Division would be most happy to work with you on developing an approvable discharge plan.

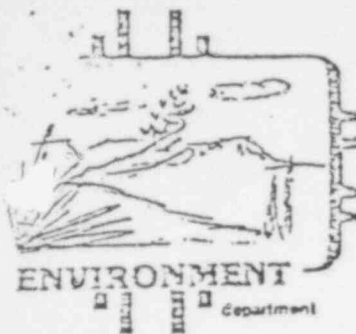
Sincerely,


Thomas E. Baca
Director

Enclosure

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STATE OF NEW MEXICO

ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 958, Santa Fe, New Mexico 87503
(505) 827-5271

Thomas E. Baca, M.P.H., Director

Bruce King
GOVERNOR

George S. Goldstein, Ph.D.
SECRETARY

Larry J. Gordon, M.S., M.P.H.
DEPUTY SECRETARY

June 20, 1979

IN THE MATTER OF)
BOKUM RESOURCES CORPORATION)
PROPOSED DISCHARGE PLAN, DP-43)

A hearing on the proposed discharge plan submitted by Bokum Resources Corporation (DP-43) was conducted by the Environmental Improvement Division of the New Mexico Health and Environment Department on May 1 through May 6, 1979 in response to numerous requests. I have reviewed the record of that hearing, and find it my duty to disapprove the proposed discharge plan (DP-43). I am in general agreement with the Summary Statements submitted by the Environmental Improvement Division, and where referenced in the findings with the Summary Statement submitted by Sandoval Environmental Action Community (SEAC). I have listed below my findings on which I base the disapproval of the proposed discharge plan (DP-43).

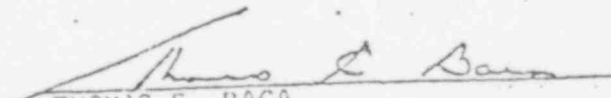
The Applicant, Bokum Resources Corporation, proposes that mill tailings effluent from its proposed uranium processing mill at Marquez, New Mexico, be deposited in a mill tailings containment area near Marquez. The Applicant proposes that the mill tailings containment area would be an essentially impervious basin. It is relying on a naturally occurring geologic formation, the Mancos Shale, to form the bottom and one side of the containment area. It is also relying on engineered structures to divert existing ground and surface water and retain the tailings in the containment area. The application fails on several points.

- a. The Applicant admits that it will cause useable ground water within the confines of the containment area to be polluted at levels far in excess of those prescribed by the New Mexico Water Quality Control Commission Regulations, Section 3-103. It has failed to provide adequate restrictions prohibiting water well drilling within the area after the land reverts to previous owners when operations are completed. (See: Summary Statement, Sandoval Environmental Action Community (SEAC), pp. 5-10; Environmental Improvement Division-Summary Statement, p. B-1, C-8).

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- b. The Applicant has proposed diverting high energy flood waters from the Canon de Marquez drainage system by a dam and channel structure. This diversion as proposed is inadequate to insure that tailings will not be released and contaminate ground water that is presently used or would be used in the reasonably foreseeable future. Processes which could lead to failure of the diversion channel include aggradation reducing channel freeboard, leading to overtopping by flood flows and likely erosion of the dam, primarily at the point of diversion as well as possible erosion of the diversion dam and channel sidewalls by piping and associated bank collapse. (See: Environmental Improvement Division-Summary Statement; pp. A-1, B-2, B-3, C-1, C-2, C-3; Witness Robinson's testimony; Transcript Vol. VII, pp. 1692-1696.)
- c. The integrity of the tailings and diversion systems depends upon continued post-operational surveillance and maintenance. Inadequate provisions have been made by the Applicant for such long-term activities. (See: Environmental Improvement Division-Summary Statement; p. C-4; Witness Robinson's testimony; Transcript Vol. VII, p. 1723.)
- d. The tailings dam must be equipped with a spillway upon cessation of operations by requirement of the State Engineer. The Applicant has failed to demonstrate how this requirement will be addressed in relation to final stabilization so as to prevent tailings escaping through the spillway and contaminating downstream ground waters. (See: Environmental Improvement Division-Summary Statement; Witness Runnells' testimony; Transcript Vol. VI, p. 1526.)
- e. The Applicant has failed to adequately demonstrate the absence of possible faults in the proposed containment area even though a previously unsuspected fault was found during excavation at the dam site. If faults exist, they could have a serious effect on the long-term stability of the diversion and tailings dams. (See: Environmental Improvement Division-Summary Statement; pp. A-2, B-2, C-6.)
- f. The Applicant has failed to adequately consider the implications of the potential for chemical interaction between the acidic liquid tailings and the calcareous Mancos Shale and tailings dam materials. The interaction may cause reduction of tailings dam stability due to generation of high pressure gas and reduction in storage capacity of the tailings pond due to swelling of underlying clays and shales. (See: Environmental Improvement Division-Summary Statement; pp. A-2, C-5.)
- g. The other deficiencies noted by the Environmental Improvement Division in its Summary Statement, on page A-2, also constitute reasons for this disapproval.


THOMAS E. BACA
DIRECTOR

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