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United States Department of the Interior
 OFFICE OF SURFACE MINING
 Reclamation and Enforcement
 BROOKS TOWERS
 1020 15TH STREET
 DENVER, COLORADO 80202

OFFICE OF THE REGIONAL DIRECTOR

*File Copy
 Wilberg and
 Deer Creek Mines
 Rt to Jim/Tom*

015/018A

Den Gul

23 MAY 1980

*015/018B
 Wilberg*

RECEIVED
 MAY 27 1980

Mr. Ralph Jerman
 Utah Power and Light Company
 P. O. Box 899
 Salt Lake City, Utah 84110

DIVISION OF
 OIL, GAS & MINING

Dear Mr. Jerman:

The Office of Surface Mining (OSM), in coordination with the Manti LaSal National Forest, has reviewed the subsidence monitoring and the hydrologic monitoring plans for the Wilberg and Deer Creek Mines. UP&L submitted a hydrologic and subsidence monitoring plan in December, 1977. Approval for the subsidence monitoring plan has never been given. Deficiencies were addressed in my letter of August 31, 1979 to Ron Daniels. According to our files, no subsidence monitoring is presently being undertaken. Due to Mr. Crawford's concerns about possible impacts due to subsidence on his property, we feel that a subsidence monitoring plan should be implemented as soon as the snow is off the ground this season.

Both the Forest Service and OSM agree that an adequate subsidence monitoring plan must contain quantitative measurements of actual subsidence and an overview of the potential impacts due to subsidence. UP&L already has plans for aerial imagery; however, precise, quantitative, on-the-ground measurements of the magnitude of subsidence must also be made. Therefore, in addition to the aerial imagery, we are requiring implementation of a network of monuments as spelled out in the attached sheet. This does not relieve UP&L from their obligation to use aerial imagery. Instead, the two systems will compliment each other to determine both the site specific and the broad impacts of subsidence. Annual reports must be submitted to the regulatory authority.

Impacts on the hydrologic system due to subsidence (i.e., springs, streams, and ground water flow) cannot be monitored using aerial imagery alone. In order to evaluate these impacts, a thorough hydrologic monitoring program is needed. A review of the two years of data that UP&L has submitted based on your present hydrologic monitoring program does not give sufficient data to

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monitor the effects of subsidence on the hydrologic balance. Therefore, the the hydrologic monitoring programs for the Wilberg and the Deer Creek Mines must be revised. Springs, streams, and ground water must be located that may be impacted by mining. The two years of data that UP&L already has may be used to determine which monitoring stations must stay in the program and which ones need to be added or deleted. I am directing UP&L to work with the Forest Service, Utah Division of Oil, Gas, and Mining, OSM, and any concerned land owners to develop an adequate hydrologic monitoring program and to obtain the approval of the regulatory authority in order that the program may be in place and operating during this field season.

Sincerely,

DONALD A. CRANE

Attachment

cc: Christensen, Manti LaSal National Forest
Daniels, Utah DOGM
Yuhnke

Standard Subsidence Stipulation

To meet the approval of the Regional Director, certain standards for a subsidence monitoring plan must be stipulated, to wit:

A subsidence monitoring network shall be installed consisting of two permanent survey monuments located outside of the anticipated area of influence of subsidence, if it occurs, and a series of monitoring stations for each panel, of an individual design approved by OSM. (Use of a 9" diameter x 6' length concrete columns, embedded at least 5' below surface, with a No. 5 rebar pin, is suggested.) The monitoring stations shall be laid out in 2 or more lines, as straight as possible given surface conditions and with stations spaced at regular intervals of not more than 200 feet. One line of stations shall be installed, as possible, on the surface and along the centerline of a panel. One or more additional lines of stations shall be installed perpendicular to this centerline, above the active mining area and between the surface limits of expected subsidence. The northing, easting, and elevation coordinates, using the two base stations as reference stations, of all such stations shall be established by first order (1 in 10,000 maximum error) closed-traverse surveying prior to the start of panel retreat. These coordinates shall be re-determined at nominal 3-month intervals, (depending on weather conditions) to the same maximum error, except: those coordinates shall be re-determined, for any given stations, at nominal 1-month intervals while mining is taking place within 200 horizontal feet of those stations, and for a period of at least 1 year thereafter or longer if substantial subsidence continues to occur or threatens material damage or diminution in value or reasonably foreseeable use of renewable resources.

This stipulation is required to assure that the proposed subsidence monitoring plan will provide sufficient information, to an appropriate degree of precision and accuracy, and in an orientation and form suitable both for assessing past subsidence and predicting future subsidence.