

**VALLEY CAMP OF UTAH, INC.**Scofield Route  
Helper, Utah 84526

Act/001/001

8 January 1987

**RECEIVED**  
JAN 12 1987Mr. Lowell P. Braxton  
Division of Oil, Gas & Mining  
355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, UT 84180-1203DIVISION OF  
OIL, GAS & MINING  
**FILE COPY**Re: Condition No. 3, Belina Mine Complex  
Valley Camp of Utah, Inc. - Permit No. UT-0013

Dear Mr. Braxton:

As a result of the meeting held January 13, 1986, at the Division's offices with Valley Camp representatives, a revised in-mine water monitoring plan was required. The plan was to be the result of discussions between Division and Valley Camp personnel concerning water conditions in the Belina Mine.

Pursuant to such discussions and meetings, the in-mine ground water monitoring plan for the Belina Mine has been revised and is enclosed for your review.

This submittal is offered as compliance to Condition No. 3, as listed in Division correspondence dated January 28, 1986.

Should the enclosed be approved, it should be inserted into Section UMC 784.14 of Volume VI.

If you have questions or comments concerning the enclosed, please contact me.

Sincerely,


T. G. Whiteside  
Chief Engineer

Enclosure

## UMC 784.14/783.15 GROUND WATER MONITORING

The in-mine ground water monitoring program at Valley Camp, Inc. consists of: (1) monitoring ground water inflow to the Belina Mine from individual or collected sources which exceed five (5) gpm discharge for periods in excess of thirty (30) consecutive days; and (2) determining the consumption of ground water through evaporation, production and mine discharge.

Upon encountering new sources or areas of measurable flow (five [5] gpm or more), which continue for at least thirty (30) days, sampling will begin and continue on a quarterly basis. The first sample taken will have a full suite of analysis performed, as per Table 1, with subsequent quarterly samples being examined for field measurements only.

On a quarterly basis, a report will be submitted to the regulatory authority providing the analytical data, and a brief historical discussion describing any changes in source activity for each monitoring point. The quarterly report shall also include a map locating all measurable monitoring points, i.e. faults, roof drippers, sumps, etc., as well as indicating the suspected geologic source of the flow (channel sandstone, fault, fracture, lineament system, etc.).

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Quarterly monitoring will continue until source flows diminish to less than five (5) gpm, or until the regulatory authority approves discontinuance of the site.

An annual in-mine ground water monitoring report will be submitted within ninety (90) days after the end of the reporting year. This report will be a summary of the previous year's data, and an estimate of ground water consumption resulting from ventilation, evaporation, coal production and mine discharge.

TABLE 1  
IN-MINE GROUND WATER MONITORING  
WATER QUALITY PARAMETER LIST FOR  
OPERATIONAL MONITORING

Field Measurements

Flow  
PH  
Specific Conductance  
Temperature (C°)

Laboratory Measurements (Mg/L)

Total Dissolved Solids	Iron (FE)
Total Hardness (As Ca CO <sub>3</sub> )	Magnesium (Mg)
Bicarbonate (HCO <sub>3</sub> <sup>-</sup> )	Manganese (MN)
Calcium (Ca)	Potassium (K)
Chloride (CL <sup>-</sup> )	Sodium (Na)
	Sulfate (SO <sub>4</sub> <sup>-2</sup> )

NOTE: Major, minor ions and trace elements are to be analyzed in dissolved form only.

A cation/anion balance shall be calculated on all comprehensive analyses.