



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

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December 18, 1985

Mr. Allen P. Childs, Engineer
Trail Mountain Coal Company
P. O. Box 370
Orangeville, Utah 84537-0370

Dear Mr. Childs:

RE: MRP Amendment, Request for Change in Hydrological Monitoring Program, Trail Mountain Mine, ACT/O15/O09, #3 and #9, Emery County, Utah

As I indicated in our telephone conversation of December 12, 1985, the Division has recently adopted an updated set of surface and ground-water monitoring guidelines. These current guidelines identify three phases of hydrologic monitoring; baseline, operational and postmining. At this time, Trail Mountain Coal Compay (TMCC) has satisfied the Division's requirements for baseline monitoring and may now initiate the operational phase of the monitoring program.

Attachments I-III contain the water quality parameters and sampling frequencies recommended for use in operational monitoring. It is my hope that this information will be useful in developing a plan which is acceptable to both the Division and TMCC.

Again, I regret any inconvenience which the Division's delay in this matter may have caused. Should you have any questions or concerns, please feel free to contact me.

Sincerely,

David M. Wham
Reclamation Hydrologist

REVIEW CHRONOLOGY:

- | | |
|---------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| <p>A. Operator Submittals</p> <ol style="list-style-type: none"> 1. August 3, 1984 2. | <p>B. DOGM Responses</p> <ol style="list-style-type: none"> 1. September 21, 1984 2. December 18, 1985 |
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btb

Enclosures

cc: Lowell Braxton
Wayne Hedberg
John Whitehead

0505R-14

ATTACHMENT I

SURFACE WATER

Operational Water Quality
Parameter List

Field Measurements: Monthly samples for perennial streams, monthly samples during periods of flow for intermittent streams.

Discharge
pH
Specific Conductivity
Temperature (air and water)
Dissolved Oxygen (perennial streams only)

Laboratory Measurements: Quarterly samples for perennial streams, monthly samples during periods of flow for intermittent streams.

Total Settleable Solids
Total Suspended Solids
Total Dissolved Solids
Total Hardness (as CaCO_3)
Acidity (CaCO_3)
Carbonate (CO_3^{2-})
Bicarbonate (HCO_3^-)
Calcium (Ca)
Chloride (Cl^-)
Dissolved Iron (Fe)
Total Iron (Fe)
Magnesium (Mg)
Total Manganese (Mn)
Potassium (K)
Sodium (Na)
Sulfate (SO_4^{2-})
Oil and Grease
Cation-Anion Balance

ATTACHMENT II

SPRINGS

Operational Water Quality
Parameter List

Field Measurements: Four samples per annum at fixed monthly intervals.

Discharge
pH
Specific Conductivity
Temperature (air and water)

Laboratory Measurements: Four samples per annum at fixed monthly intervals.

Total Dissolved Solids
Total Hardness (as CaCO_3)
Carbonate (CO_3^{-2})
Bicarbonate (HCO_3^{-})
Calcium (Ca)
Chloride (Cl^{-})
Dissolved Iron (Fe)
Magnesium (Mg)
Manganese (Mn)
Potassium (K)
Sodium (Na)
Sulfate (SO_4^{-2})

ATTACHMENT III

GROUNDWATER

Operational Water Quality
Parameter List

Field Measurements: Quarterly samples for in-mine flows.

Discharge
pH
Specific Conductivity
Temperature (air and water)

Laboratory Measurements: Quarterly samples for in-mine flows.

Total Dissolved Solids
Total Hardness (as CaCO_3)
Carbonate (CO_3^{-2})
Bicarbonate (HCO_3^-)
Calcium (Ca)
Chloride (Cl^-)
Dissolved Iron (Fe)
Magnesium (Mg)
Manganese (Mn)
Potassium (K)
Sodium (Na)
Sulfate (SO_4^{-2})