

0027



Norman H. Bangerter
Governor

Dee C. Hansen
Executive Director

Dianne R. Nielson, Ph.D.
Division Director

State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340

May 17, 1989

Mr. Chris Jones
Consolidation Coal Company
P. O. Box 527
Emery, Utah 84522

Dear Chris:

Re: Emery Mine Water Monitoring Program

Enclosed please find one copy of the Emery Mine Water Monitoring Program. This program table was sent to me by Richard Denning and was used in the Division review document dated March 29, 1989. It is my understanding that this is the current monitoring program that is being conducted. Also enclosed is one copy of my original review document. The last paragraph on page 2 of this document discusses the new sampling schedule. As I explained in our phone conversation yesterday, this schedule should be followed as closely as possible. However if sampling cannot be completed on the target dates you have the flexibility to adjust the schedule accordingly. The current approved plan requires biannual ground water samples for chemical analysis and quarterly measurements of ground water levels.

I have spoken to Susan Linner about the apparent communication problem and she has agreed to send you copies of future review documents. Hopefully this will prevent further confusion in the review process. If you have any additional questions please don't hesitate to call me.

Sincerely,

A handwritten signature in cursive script that reads "Mike DeWeese".

Mike DeWeese
Reclamation Hydrologist

c1
Enclosure
BT98/33



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Norman H. Bangertter
Governor
Dee C. Hansen
Executive Director
Dianne R. Nielson, Ph.D.
Division Director

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340

March 14, 1989

TO: Susan Linner, Permit Supervisor

FROM: Mike DeWeese, Reclamation Hydrologist *MD*

RE: Stipulation Response, Mid-Permit Term Review, Consolidation Coal Company, Emery Deep Mine, ACT/015/015, Folder #2, Emery County, Utah

SYNOPSIS:

The operator's mid-term stipulation response document received March 1, 1989 has been reviewed. This document is not considered technically adequate at this time. Comments regarding each stipulation are as follows.

ANALYSIS:

Stipulation UMC 817.49 - (1) - MMD

The operator has requested an extension of the March 1, 1989 deadline to May 1, 1989 to allow the surveys to be conducted under better field conditions. No as-built drawings or supporting calculations have been submitted to date, therefore this stipulation is considered to be outstanding.

Stipulation UMC 817.52 - (1) - MMD

- 1a. The operator has committed to submitting annual water quality reports including summary statistics and data.
- 1b. The operator has conducted baseline laboratory water quality analyses of the refuse disposal area wells on a quarterly basis since 1987. However Division records show that field measurements of water temperature, conductivity, and pH have been conducted only since the second quarter of 1988. These are unstable parameters which are critical to characterizing the actual field environment, thus ensuring the accurate evaluation of corresponding laboratory data. Therefore the operator must commit to continuing baseline

monitoring including complete field measurements according to the present schedule through the first quarter of 1990, at which time the proposed Monitoring Plan Prior to Slurry Cell Construction may be implemented as per parameters listed on table 1 of the mid-term submittal.

- 1c. An updated summary table of all monitoring wells in the approved permit area has been submitted.
- 1d. The operator has agreed to continue monitoring the Emria #2 well.

After slurry cell construction is completed the operator proposes to conduct quarterly water level measurements and water quality sampling for pH, TDS, Na, SO₄ and dissolved iron and manganese, and annual sampling for the proposed table 1 parameters. This plan must be revised to include:

1. sampling for table 1 parameters semiannually during May and November due to the relatively dynamic nature of the alluvial aquifer system, and;
2. specific conductance measurements in addition to the aforementioned quarterly parameters.

The hydrology section of the reorganized Mining and Reclamation Plan is scheduled for completion in March 1990. Since baseline monitoring must be continued until this date the operator may submit a revised Monitoring Plan After Slurry Cell Construction as part of the reorganized hydrology section.

A review of recent ground water monitoring data revealed that quarterly samples have not been taken regularly due to site inaccessability. The current approved sampling schedule specifies that sampling be conducted during March, May/June, September/October, and December. When sites were inaccessible in the past no samples were taken and data for that particular quarter was lost. In addition, the September/October sample period overlaps two separate quarters, therefore one sample during this period could qualify for the third or fourth quarter. Apparently some confusion existed regarding the specified dates overlapping quarterly periods in these cases. To simplify this schedule and prevent missing data in the future all quarterly ground water samples shall be collected

Page 3
Stipulation Response
Mid-Permit Term Review
Emery Deep Mine
ACT/015/015

in February, May, August, and November. When sites are inaccessible on specified sampling dates samples must be collected no later than the end of the following month or an adequate explanation of why the site was not sampled must be submitted with the quarterly report.

RECOMMENDATIONS:

The Division recommends that the mid-permit term stipulation response be denied final approval until such time as a commitment to continue baseline monitoring on the refuse disposal area wells and as-built information on pond 005 has been submitted.

cl
cc: B Team
BT98/15

EMERY MINE
WATER MONITORING PROGRAM

Rec'd 3/2/89
Current Program
(Richard Denning, personal comm.)
Water Samples

<u>Sample Location</u>	<u>Flow/Water Level</u>		<u>Frequency</u>	<u>Water Samples</u>	
	<u>Frequency</u>	<u>Timing</u>		<u>Timing</u>	<u>Parameters</u>
Surface Water Sites 1A, 2, 3, 4, 5, 8, 9, 10	Quarterly	Scheduled to monitor seasonal low and high flows.	Quarterly	Scheduled with flow measurement.	SW
Surface Water Sites 6, 7, 11	Continuous	---	Twice/Month	When flowing	NPDES
Wells & Springs Bryant EMRIA2 Kemmerer Lewis IU2 T1(B) TP(U) USGS1-2 ZZ SM1-1, 1-2, 1-3, 1-4 Christiansen Spring	Quarterly	During March, May/June, Sept./Oct. and Dec.	Twice/Year	During May/June and Sept./Oct.	GW
Wells RDA1, RDA2, RDA3 RDA4, RDA5, RDA6	Quarterly	During March, May/June, Sept./Oct. and Dec.	Annual	During May/June	GW
Wells AA(B),(U),(M),(L), H(B),(U),(M),(L) I(B),(M),(L) R2(B),(U),(M) R1 T1(U) T2(B),(U) Muddy 1, Muddy 2 EMRIA1, EMRIA3 FC346WW USGS3-1, USGS4-1 WW1	Quarterly	During March, May/June Sept./Oct. and Dec.	None	---	---
Springs Emery Co. #1, Emery Co. #2 Bryant #1, Bryant #2	Quarterly	During March, May/June, Sept./Oct. and Dec.	None	---	---

EMERY MINE
WATER MONITORING PROGRAM
ANALYTICAL PARAMETER SUITES

GW Parameters
Wells & Springs

Field Measurements

Water Levels
pH (Field)
Sp. Cond. (Field)
Water Temperature °C

Lab Measurements

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

SW Parameters
Surface Water Sites

Field Measurements

Flows
pH (Field)
Sp. Cond. (Field)
Water Temperature

Lab Measurements

Total Settling Solids
Total Suspended Solids
Total Dissolved Solids
Total Hardness (as CaCO_3)
Oil and Grease (Sites 1A and 4)
Acidity (CaCO_3)
Carbonate (CO_3^{-2})
Bicarbonate (HCO_3^-)
Calcium (Ca) Total & Dissolved
Chloride (Cl^-) Total & Dissolved
Iron (Fe) Total & Dissolved
Magnesium (Mg) Total & Dissolved
Manganese (Mn) Total & Dissolved
Potassium (K) Total & Dissolved
Sodium (Na) Total & Dissolved
Sulfate (SO_4^{-2}) Total & Dissolved

NPDES Parameters
Sedimentation Ponds

Field Measurements

Flows
pH (Field)

Lab Measurements

Total Suspended Solids
Total Dissolved Solids
Total Iron
Oil and Grease