COAL SYSTEMS, Inc.

CONSULTING ENGINEERS

P.O. BOX 17117
SALT LAKE CITY, UTAH 84117

L. G. MANWARING, P.E.
PRESIDENT

AREA CODE 801
261-4500

October 4, 1984

RECEIVED

OCT 05 1984

DIVISION OF OIL
GAS & MINING

#15

Ms. Sandy Pruitt
Mining Field Specialist
Division Oil, Gas and Mining
State of Utah - Natural Resources
Salt Lake City, Ut. 84114

Re: J. B. King Mine
ACT/015/002, Folder #7

Dear Ms. Pruitt:

Attached are two sets of items prepared for abatement of violation NOV N84-2-18-2 resulting from an inspection of the mine site August 30, 1984. Areas of concern, and actions taken are as follows:

1. Existing run-off control ditches along the northeast side of the access road (toe of refuse pile) were cleaned out prior to September 19 as instructed. The ditches were made considerably deeper than originally constructed; new ditch cross-sections are shown on accompanying Dwg. No. 4050-5-S.

   Debris was also cleaned out of the entrance to the 25 in. culvert leading to the sedimentation pond.

2. Two large catch basins have been installed at the in-flow and out-flow ends of the 30 in. culvert. Details are shown on Dwg. No. 4050-5-S. Note that these sumps have been lined with at least 18 in. of riprap to prevent their erosion and to assist in future clean-outs.

3. To assist in control of sheet flooding originating in the mine yard area, another diversion ditch has been installed along the southwest side of the access road. Its location and a typical cross-section are shown on Dwg. No. 4050-5-S. This ditch discharges into the outlet catch-basin at the end of the 30 in. culvert.

   Also noted on the drawing is a "proposed water diversion dip". This type of design would be effective in preventing flow from the yard area directly into the opening of the access road. As we discussed by phone, it was suggested that this structure be installed after mine start-up should a continuing problem exist.

4. The above improvements have been added to accompanying Dwg. No. 4050-5-13-R. In addition, survey station locations have been noted on the refuse pile drainage ditch and the southwest diversion ditch. This will provide for better coordination with Tables 1 and 2 of UMC 784.22 (DOC).

5. Several changes to the narrative portion of UMC 784.22 (DOC) have also been made. In addition, several minor errors were noted on Tables 1 and 2 and these, too, have been corrected. Copies of the new narrative and Tables are included for your use.

We hope you find this information satisfactory for the purpose of abating this violation. Please call should there be further questions.

Sincerely,

COAL SYSTEMS, Inc.

L. G. Manwaring, P.E.
President

LGM/blm

cc: D. Nelson, S. J. Groves & Sons Co., Lexington

Attachments with 2 maps

UMC 784.22 DIVERSIONS (Revised 10/4/84; noted thus *)

Southwest Boundary Diversion Ditch

An intercept ditch has been designed and constructed for the purpose of collecting and diverting surface runoff from the undisturbed area as well as a portion of the disturbed area. See Dwg. 4050-5-19-R (DOC 817.46)*. The ditch design complies with UMC 817.43 (a)(c)(f). Design criteria for a permanent diversion was used, although during reclamation, part of the diversion will be altered. Design details are as follows:

1. General Conditions

   - o A limited amount of poor quality watershed soil and vegetation in undisturbed watershed area
   - o High topographic relief between the head and toe of the undisturbed watershed area
   - o Low annual precipitation

2. Watershed Details

   - o Length (L) = 2200 ft (0.42 miles)(See Dwg. 4050-5-19-R)
   - o Difference in elevation (H) = 6600 - 6280 = 320 ft
   - o Delay time (t_c) (Ref. 1)

$$t_c(\text{hrs}) = \left[\frac{11.9\ L^3}{H}\right]^{0.385}$$

$$t_c = \left[\frac{11.9 \times 0.42^3}{320}\right]^{0.385}$$

$$t_c \simeq 6 \text{ min}$$

- o Rainfall intensity (i)

  (for 10-year, 24-hour precipitation event)

  using t = 6 min.

  i = 0.23 in. (Ref. 2)

- o Runoff coefficient C (Ref. 1)

  C = 0.7

- o Area (A) sum of areas II and III (See Dwg. 4050-5-19-R)

  A = 9 + 34.2

  A = 43.2 acres

3. Peak runoff for ditch design (Ref. 1)

- o Rational method to find peak flow rates

  Q = CiA (cfs)

  Q = (0.7)(.23)(43.2)

  Q = 7.0 cfs

4. Ditch Profile and Data

Detailed profiles of the diversion are illustrated in Dwgs. 4050-5-3K through 4050-5-30. The 0+00 station is located at the discharge end of the 30 in. culvert, as shown in Dwg. 4050-5-13-R.*

Table 1 at the end of this section, illustrates the maximum capacity, the depth of flow and velocity for the required capacity flow of each section of the ditch for the given ditch geometry and runoff conditions.

5. General Comments

Between station 0+00 and 1+00 the diversion ditch handles the watershed from the undisturbed area and a portion of the disturbed area, as well as the inflow from the diver-

Revised 10/4/84

COAL SYSTEMS, Inc.
LOWER 4050-5

STATION	SPECIFICATIONS			T REQUIRED CAPACITY Q = 1.5 cfs	
Beginning at crest	Dist. (ft)	Elev. (ft)	Slope (EI/Dist)	ocity fps) 0.04	Depth (in.)
0+00 - 1+00	100	15.9	0.159	.4	2.4
1+00 - 2+00	100	12.0	0.012	.9	6.2
2+00 - 3+00	100	5.3	0.053	.2	4.0
3+00 - 4+00	100	6.0	0.060	.4	4.1
4+00 - 5+00	100	3.4	0.034	.8	4.7
5+00 - 6+00	100	2.3	0.023	.4	5.2
6+00 - 7+00	100	3.2	0.032	.7	4.8
7+00 - 8+00	100	4.3	0.043	.0	4.3
8+00 - 9+00	100	4.5	0.045	.1	4.3

Revised 10/4/84

COAL SYSTEMS, Inc.
SOL 4050-5

STATION	SPECIFICATIONS			I REQUIRED CAPACITY Q = 7 cfs	
Beginning at 30 in. culvert	Dist. (ft)	Elev. (ft)	Slope (EI/Dist)	ocity fps) =0.04	Depth (in.)
0+00 - 1+00	100	-1.4	0.014	3.2	5
1+00 - 2+00	100	2.3	0.023	3.3	7
2+00 - 3+00	100	5.1	0.051	4.5	6
3+00 - 4+00	100	4.0	0.040	3.8	5
4+00 - 5+00	100	4.4	0.044	4.2	6
5+00 - 6+00	100	3.4	0.034	3.9	7
6+00 - 7+00	100	0.2	0.002	1.4	12
7+00 - 8+00	100	1.4	0.014	3.7	7
8+00 - 9+00	100	0.5	0.005	1.6	6
9+00 - 10+00	100	3.8	0.038	3.7	5
10+00 - 11+00	100	1.7	0.017	3.0	8
11+00 - 12+00	100	5.3	0.053	4.8	7
12+00 - 12+	300	50.0	0.167	5.2	4

STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Dianne R. Nielson, Ph.D., Division Director

September 5, 1984

CERTIFIED RETURN RECEIPT REQUESTED
P 402 457 398

Mr. Don Nelson
Western States Minerals Corporation
614 Charleston National Plaza
Charleston, West Virginia 25301

Dear Mr. Nelson:

RE: NOV #N84-2-18-2, J. B. King Mine, ACT/015/002, Folder #7

Enclosed are two Notices of Violation, group #N84-2-18-2, resulting from an inspection of the J. B. Kine Mine site on August 30, 1984. The violations observed were caused by inadequate maintenance of drainage ditches and culverts which convey disturbed area runoff into the sediment pond. The particular areas cited have had problems before and it is apparent that improvements to the drainage control structures are necessary. Therefore, the abatement of both violations requires the submittal of plans to improve the existing drainage culverts and ditches to minimize maintenance requirements.

Existing runoff control measures along the mine access road should be repaired as soon as possible, so that all disturbed area runoff is directed into the sediment pond to prevent offsite damage. Therefore, a two week deadline, until September 19, 1984, was set in NOV # 1 of 2 to reestablish drainage controls to the sediment pond as an interim measure. The sizing of the access road drainage ditch at a critical point at its junction with the ditch to the sediment pond should be modified to insure that a direct conveyance is provided and an overflow or bypass of the drainage system can not reoccur. Complete and adequate plans for these improvements to the runoff control measures should be submitted for review by the Division of Oil, Gas and Mining (DOGM) no later than October 5, 1984. These plans should be implemented immediately upon DOGM approval.

The culverts cited in violation #2 of 2 are continually obstructed or causing erosion. The catch basin and straw bales at the inlet to the refuse drainage culvert have not functioned as well as intended and may not be a solution to the problem. The installation (pitch and orientation) and possibly sizing of these culverts need to be modified to prevent plugging and erosion. Plans for DOGM review and approval prior to implementation are required for abatement of NOV #2 no later than October 5, 1984.

Please contact Joe Helfrich or myself if you have any questions regarding this enforcement action.

Sincerely,

Sandy Pruitt
Mining Field Specialist

re

cc: Donna Griffin, Office of Surface Mining
219 Central Ave., Albuquerque, New Mexico 80202
Mary Boucek
Joe Helfrich
Tom Wright
00540-1-2

STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Dianne R. Nielson, Ph.D., Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

September 25, 1984

CERTIFIED RETURN RECEIPT REQUESTED
P 402 457 388

Mr. Don Nelson
Western States Minerals Corporation
614 Charleston National Plaza
Charleston, West Virginia 25301

Dear Mr. Nelson:

Re: The Submittal of Plans in Abatement to NOV N84-2-18-2, J. B. King Mine, ACT/015/002, Folder #7, Emery County, Utah

This letter is in response to your inquiry over the phone yesterday, September 24, 1984, of whether the diversion ditch designs submitted in the Mining Reclamation Permit (MRP) application were sufficient for abatement of NOV N84-2-18-2. I have reviewed the material submitted up to June 29, 1984, and determined that sufficient detail has not yet been provided to address the runoff control problems cited in the Violations.

No diversion designs have been submitted for the drainage ditch along the southwest side of the access road to address abatement requirements of NOV #1 of 2. Therefore, the remedial action requirements in Step two must still be addressed no later than October 5, 1984. Runoff control plans for the plant and loading areas should be indicated in the designs submitted for the road drainage ditch as these areas are apparently the source of the runoff which flowed offsite because of the inadequate capacity of this drainage ditch. In regard to Step one of the remedial action requirements of NOV #1 of 2, the 30 inch cross culvert from the refuse area is plugged with coal fines to over three quarters of its capacity. This obstruction of coal fines should be entirely removed from the culvert for abatement of NOV #1 of 2 no later than October 5, 1984.

The submittal of drainage diversion designs relative to the 30 inch and 25 inch culverts cited in NOV #2 of 2 is necessary for abatement of the Violation. The improvements made to the southwest diversion ditch where it was widened relative to the sediment pond inlet and the placement of riprap at the 25 inch culvert should be indicated in the submittal to update the diversion designs in the MRP application. Improvements to the lower refuse pile diversion should also be indicated in the designs submitted for abatement of NOV #2 of 2. Specifically, the dimensions of the catch basin at the inlet to the 30 inch culvert and the placement and size of riprap in the catch basin and diversion ditch should be indicated.

My review of the diversion designs on the MRP application was hindered by a few deficiencies and inconsistencies in the June submittal; for example, the location of each station listed in Tables I and II of Section UMC 784.22 (DOC) is unclear. The narrative in Section UMC 784.22 indicates that station 0+00 of the southwest boundary ditch is located south of the 25 inch culvert but the Table I indicates Station 0+00 beginning at the 30 inch culvert. The location of each of the Stations listed in Tables I and II should be indicated on a map of similiar detail as drawing 40-50-5-13-R. I recommend that the plans submitted in abatement of NOV N84-2-18-2 address these deficiencies.

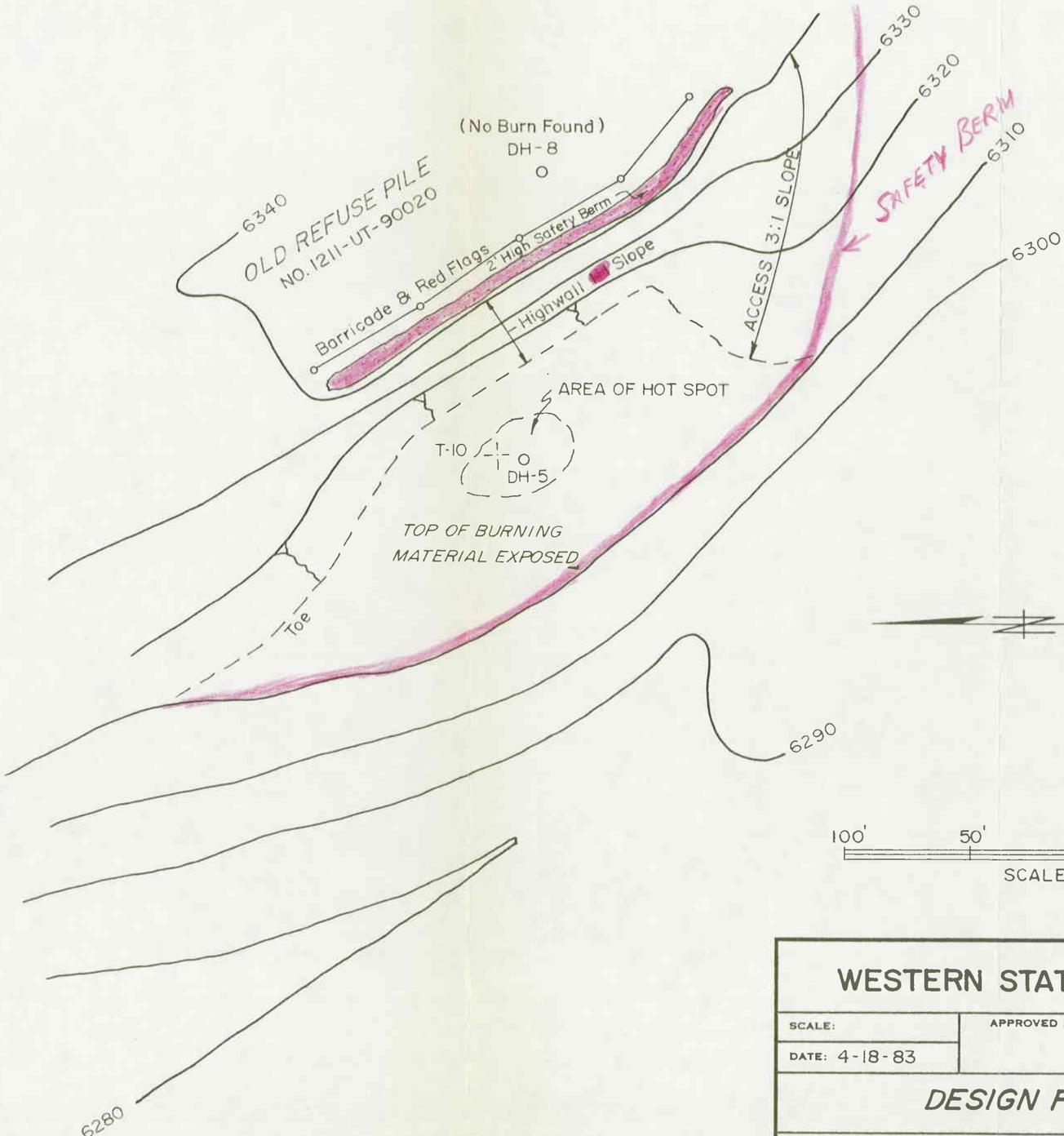
If you have any questions or problems in addressing these abatement requirements for NOV N84-2-18-2 by October 5, 1984, please do not hesitate to call me.

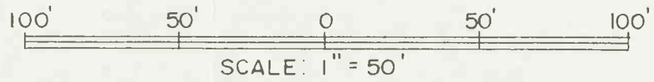
Sincerely,

Sandy Pruitt
Mining Field Specialist

re

cc: Mary Boucek
Joe Helfrich
Tom Munson
Tom Wright
00540-8-9





NOTE:
HIGHWALL SLOPE
1½'H to 1'V

WESTERN STATES MINERALS CORP.		
SCALE:	APPROVED BY: D.A.S.	DRAWN BY
DATE: 4-18-83		REVISED
DESIGN FOR EXCAVATION		
COAL SYSTEMS, INC. - S.L.C., UTAH		DRAWING NUMBER 4050-2