



**State of Utah**  
 DEPARTMENT OF NATURAL RESOURCES  
 DIVISION OF OIL, GAS AND MINING

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August 16, 1993

**TO:** File

**FROM:** Bill Malencik, Reclamation Specialist *BM*

**RE:** Inspection, Hidden Valley Coal Company, Hidden Valley Mine,  
 A011015/007, Folder 15, Emery County, Utah

**What:** Evaluation of Gully Erosion, DOGM Violation N91-26-8-2, 1 of 2, Issued November 22, 1991. More specifically made observations, erosion measurements to compare with prior observations, measurements (11/19/91 & 3/10/92) on five gullies, three that were cited in the aforementioned violation.

- Measurements are noted on Appendix IX attached hereto (Attachment I).
- Major observations that demonstrate accelerated erosion continues unabated are noted below.

**When:** August 11, 1993

**Who:** Tom Munson and Undersigned

**How:** Same method and techniques mentioned in Appendix IX attached hereto.

**Why:** To gather information and analyze what changes have taken place relative to the three cited gullies plus others that were and are a concern then and today.

**Summary:** Following conclusions were made when observing each gully, carefully walking and examining characteristics along each and remeasuring the gully at prior designated stations:



- Measurements earmarked as August 11, 1993 show accelerated gully erosion continues on each of the three gullies cited in the violation.
- Continual erosion channel expansion downward and outward in vulnerable segments. No changes in length, i.e., head or toe cutting at this time. Toe cutting no problem; however, potential for head cutting to increase.
- Tension cracks along the bank observed, particularly noteworthy on one gully (#2).
- Some large rocks in the channel show evidence of undercutting and continual soil loss beneath such rocks.
- Some gullies on some segments have vertical sides with exposed unprotected soil.

Other: The permittee performed minor maintenance work in the spring of 1992. Also in the fall of 1992.

Work consisted of:

Gully #1 - Additional rock to prevent further headwall cutting. Installed two rock energy dissipators in the erosion channel.

Gully #2 & #3 - Additional rock energy dissipators together with a 2' X 4' X 4' depression were installed on the former near level road above each gully.

# EXHIBIT IX

## ATTACHMENT I

HIDDEN VALLEY COAL COMPANY  
ACT/015/007

### I. NOTICE OF VIOLATION

A. N91-26-8-2, 1 of 2, 11/22/91

\*\*R614-301-742.312.1 FAILURE TO MAINTAIN DIVERSIONS TO BE STABLE.  
\*\*R614-301-742.113 FAILURE TO MINIMIZE EROSION TO EXTENT POSSIBLE.  
\*\*ABATEMENT: SUBMIT PLANS TO STABILIZE DIVERSIONS AND  
MINIMIZE EROSION.

B. N92-25-1-1, 1/21/92

\*\*R645-301-731.610 DISTURBING LAND WITHIN 100 FEET OF IVIE CREEK  
WITHOUT AUTHORIZATION FROM THE DIVISION.  
\*\*ABATEMENT: COMPLY WITH R645-301-731.611 AND 731.620.  
SUBMIT AMENDED PAP TO DEMONSTRATE COMPLIANCE.

### II. EROSION GULLIES AT HIDDEN VALLEY COAL COMPANY ADDITIONAL EXPLANATORY INFORMATION

\*\*ADDITIONAL  
MEASUREMENTS:

3 EROSION GULLIES CITED IN THE VIOLATION DATED  
NOVEMBER 22, 1991 AND MEASUREMENTS OF 2 OTHER GULLIES  
THAT WERE ORIGINALLY OBSERVED AND NOT CITED IN THE  
VIOLATION.

\*\*DATE:

3/10/92

\*\*MEASUREMENTS AND  
PHOTOS TAKEN BY:

TOM MUNSON AND BILL MALENCIK IN THE PRESENCE OF  
JOE JARVIS

\*\*EQUIPMENT:

100' STEEL TAPE MEASURE, 24' TAPE MEASURE AND 35MM  
CAMERA WITH COLOR SLIDE FILM

\*\*WHERE:

GULLY EROSION ON THE ROAD OUTSLOPE, 4 BELOW GATE AND 1  
ABOVE GATE AND THE DISTURBED ENCROACHMENT ON IVIE  
CREEK (STREAM BUFFER ZONE)

Handwritten measurements taken 8/11/93 - See Page 1 for additional details

MEASUREMENTS BELOW  
TAKEN ON 3/10/92

ORIGINAL MEASUREMENTS  
TAKEN ON 11/19/91

**GULLY A** TOTAL LENGTH - 19 FEET...CITED AS A VIOLATION  
CROSS SECTION

STATION	DEPTH	WIDTH	REMARKS
e3'	22" 28"	44" 47"	INSTABILITY ON BOTH BANKS.
e6'	36" 38"	60" 65"	TENSION CRACKS.
e13'	24" 30"	24" 30"	LOOSE SOIL IN THE BOTTOM OF THE GULLY. SOME RIP RAP AT THE HEADCUT.

GULLY #1  
ORIGINAL MEASUREMENTS  
DEPTH: 26"  
WIDTH: 58"  
length. 19'

**GULLY B** TOTAL LENGTH - 51 FEET...CITED AS A VIOLATION  
CROSS SECTION

STATION	DEPTH	WIDTH	REMARKS
e46'	60" 62"	7' 7"	SLOPE ESTIMATE 6:1
e38'	16" 18"	4' 5'	ALL RIVER ROCK RIP RAP
e30'	24" 30"	4' 5.5'	WASHED OUT OF THE
e17'	16" 24"	7' 9'	ERODED GULLY.

GULLY #2  
ORIGINAL MEASUREMENTS  
DEPTH: 57"  
WIDTH: 82"  
length 51'

\*large Tension Crack Vertical Raw Erosion cut. Area showing potential failure 6' x 5' x 2' that has potential to dislodge

**GULLY C** TOTAL LENGTH - 53 FEET...NOT CITED AS A VIOLATION  
CROSS SECTION

STATION	DEPTH	WIDTH	REMARKS
e49'	42" 48"	10' 12'	
e41'	36" 42"	14' 15'	ISLAND 3' WIDE   GULLY SPLITS
e30'	36" 38"	15' 15'	ISLAND 6' WIDE   INTO TWO
e25'	24" 30"	12' 13'	ISLAND 5' WIDE   WATERCOURSES
e20'	12" 16"	14' 15'	

OBSERVED AND  
NOT MEASURED

**GULLY D** TOTAL LENGTH - 53 FEET...CITED AS A VIOLATION  
CROSS SECTION

STATION	DEPTH	WIDTH	REMARKS
e47'	52" 60"	8' 12'	TENSION CRACKS PREPARATORY TO BANK FAILURE.
e33'	48" 50"	9' 11'	
e20'	20" 24"	6' 7'	RIVER ROCK RIP RAP REMOVED BY RUNOFF.
e9'	24" 24"	12' 12'	

GULLY #3  
ORIGINAL MEASUREMENTS  
DEPTH: 54"  
WIDTH: 79"  
length 53'

**GULLY E** TOTAL LENGTH - 83 FEET...NOT CITED AS A VIOLATION  
CROSS SECTION

STATION	DEPTH	WIDTH	REMARKS
e70'	36" 5'	8' 3'	
e62'	38" 5'	13' 13'	
e45'	34" 36"	14' 14'	
e10'	9" 4'	10' 10'	

OBSERVED AND  
NOT MEASURED

DISTURBED ENCROACHMENT ON IVIE CREEK

<u>STREAM SEAM ENCROACHMENT</u>	<u>TOP WIDTH</u>	<u>SLOPE MEASUREMENT</u>	<u>REMARKS</u>
A	255'	65'	ROCK AT THE BOTTOM. SOME SUITABLE AREAS FOR SEEDING.
B	132'	33'	ALL ROCK. NO AREAS SUITABLE FOR SEEDING.