

0019

**AMAX COAL WEST, INC.**

A Subsidiary of AMAX Coal Industries, Inc.

*Sharon, Review & discuss with me then  
Route to file*



**RECEIVED**

SEP 20 1993

DIVISION OF  
OIL, GAS & MINING

September 17, 1993

CERTIFIED MAIL: P 238 558 498

Mr. Daron Haddock  
Utah Division of Oil, Gas & Mining  
3 Triad Center, Suite 350  
Salt Lake City, UT 84180-1203

RE: NOV. 92-39-30-1 Construction Certification

Dear Daron:

Enclosed is the certification for the refuse pile ditch CGD-7 (Lower) as required by R645-301-742.324. I have also included supporting documentation which I evaluated for the certification as attachments.

Please send the form which vacates the violation as soon as possible so that our records are complete for this NOV.

Sincerely,

Richard H. Allison, Jr., P.E.  
Project Supervisor

RHA:njt

Enclosure

## CERTIFICATION OF CASTLE GATE DIVERSION DITCH CDG-7 (LOWER)

### History

The Castle Gate Refuse Pile Ditch CDG-7 was constructed during July and August of 1993 to abate NOV 92-39-7-1. The abatement was based on plans submitted to the DOGM on November 10, 1992 and approved by DOGM on July 20, 1993. The construction was substantially complete on August 31, 1993 at 5:15 p.m.

### Design

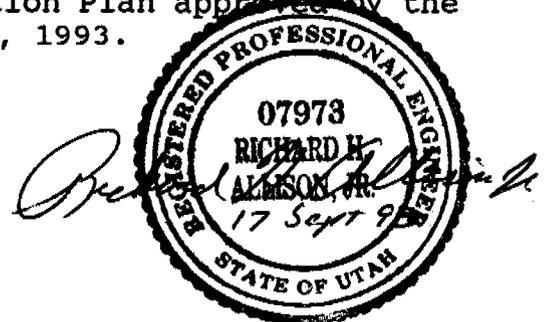
The plans located in Section 3.4 of the Castle Gate MRP show a trapezoidal ditch with a five foot bottom and 3h to 1v side slopes, 20.5" deep. The ditch is lined with filter blanket, target  $d_{50}$  size of 3/4 " and riprap with a  $d_{50}$  size of 21" (See Attachment 1). The filter blanket thickness is 13" and the riprap thickness is 26". The design flow is based on a 100 year 6 hour storm event which yields a Q of 44.9 CFS and flow depth of .71 feet. The design work was performed by Earthfax Engineering in Salt Lake City, Utah.

### Analysis of Construction

I examined the ditch during various phases of construction, such as excavation, filter blanket placement and riprap placement. Measurements taken during construction verified that the filter blanket depth meets the minimum thickness requirement of 13". Sieve analysis from samples of the filter blanket material, taken at the site, reveal that the gradation is acceptable (see Attachments 2, 3, and 4). The riprap material was inspected and certified by Blackhawk Engineering. Their analysis concluded that the riprap had a  $d_{50}$  size of 24" (Attachment 5). My measurements during construction revealed that the riprap thickness exceeds the design requirements of 26". Earthfax Engineering performed a hydraulic analysis of the as built ditch based on a survey by Blackhawk Engineering (Attachment 6). The results of the computer model show that the ditch will convey the 44.9 CFS with a maximum depth flow of .52 feet and a minimum freeboard of .9 feet. I conclude that the ditch was constructed substantially according to the design and will convey the design storm event with adequate freeboard and minimum erosion.

### Utah Regulation R645-301-742-324 Certification of Construction

I, Richard H. Allison, Jr., hereby certify as a qualified registered professional engineer in the State of Utah that the construction of ditch CGD-7/CGRD-3A meets the performance standards of the Utah R645-301 regulations and the design as shown in Section 3.4 of the Castle Gate Mining and Reclamation Plan approved by the Division of Oil Gas and Mining on July 20, 1993.



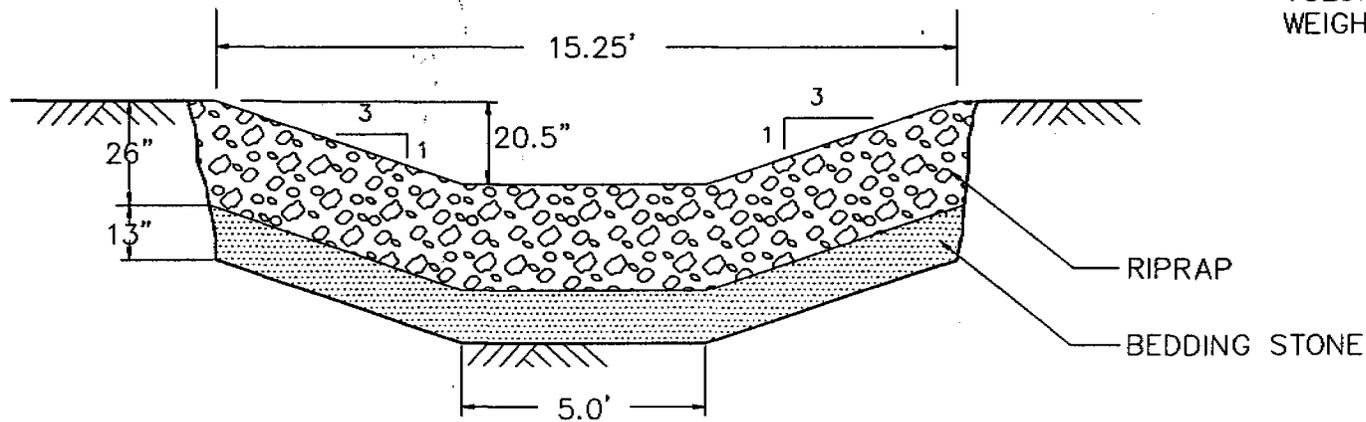
DIVERSION CGRD-3A BELOW GROUTED SECTION  
FINAL OPERATION/RECLAMATION DESIGN

SCHOOL HOUSE CANYON REFUSE AREA  
CASTLE GATE COAL MINE  
CARBON COUNTY, UTAH

SPECIFICATIONS

RIPRAP

$D_{50}$  = 21 INCHES  
THICKNESS = 26 INCHES  
WIDTH = 16 FEET  
LENGTH = 450 FEET  
VOLUME = 15,600 FT<sup>3</sup>  
WEIGHT = 1,100 TONS



BEDDING STONE

$D_{50}$  = 3/4 INCH  
THICKNESS = 13 INCHES  
WIDTH = 16 FEET  
LENGTH = 450 FEET  
VOLUME = 7,800 FT<sup>3</sup>  
WEIGHT = 510 TONS

NOTE: THIS RIPRAP AND BEDDING STONE  
MAY ALSO BE USED IN THE 15'  
TRANSITION SECTION IMMEDIATELY  
BELOW THE GROUTED SECTION.



FEET

JUNE 1993



STEEP SLOPE RIPRAP AND FILTER BLANKET DESIGN: CASTLE GATE CGRD-3A

	D10 (MM)	D15 (MM)	D50 (MM)	D85 (MM)	D100 (MM)
DEFINE BASE MATERIAL	-	0.40	6.5	24.0	50.0
DEFINE RIPRAP D50			533		
CALCULATED RIPRAP	178	213		640	666
IS A FILTER BLANKET REQUIRED? YES					
SINCE D50(RIPRAP) / D50(BASE) = 82.0 > 40					
CALCULATED FILTER BLANKET RANGE					
MINIMUM		5	13	43	86
MAXIMUM		16	260	297	333
AVERAGE		11	137	170	209

NOTE: VALUES ARE PARTICLE SIZES IN MILLIMETERS  
 D15 REFERS TO THE PARTICLE SIZE (IN MM) FOR WHICH  
 15% OF THE MATERIAL IS FINER.

RIPRAP GRADATION

PARTICLE SIZE (MM)	PARTICLE SIZE (IN)	% PASSING (TARGET)	% PASSING MIN MAX	
666	26	100	90	100
640	25	85	75	95
533	21	50	40	60
213	8	15	5	25
178	4.2	0	0	10

FILTER BLANKET GRADATION

(INPUT SCREEN SIZE IN INCHES AND MAXIMUM PERCENT FINER FROM GRADATION PLOT)

SCREEN (INCHES)	SCREEN (MM)	MAXIMUM % FINER	MINIMUM % FINER	TARGET % FINER
13	330	100	100	100
4	102	100	80	90
1	25	72	52	62
0.5	13	45	25	35
#4	0	15	0	7.5

filename: FILT-OSM.WK1

**COMMERCIAL TESTING & ENGINEERING CO.**

GENERAL OFFICES: 1919 SOUTH HIGHLAND AVE., SUITE 210-B, LOMBARD, ILLINOIS 60148 • TEL: 708-953-9300 FAX: 708-953-9306

SINCE 1908

Member of the SGS Group (Société Générale de Surveillance)

PLEASE ADDRESS ALL CORRESPONDENCE TO:  
P.O. BOX 1020, HUNTINGTON, UT 84528  
TEL: (801) 653-2311  
FAX: (801) 653-2436

August 31, 1993

AMAX COAL WEST  
165 SO. UNION BLVD. SUITE 1000  
P.O. BOX 280219  
LAKEWOOD, COLORADO 80228Sample identification by  
AMAX COAL WESTKind of sample Gravel  
reported to usCastle Gate  
50.0 lbs.

Sample taken at

Sample taken by AMAX

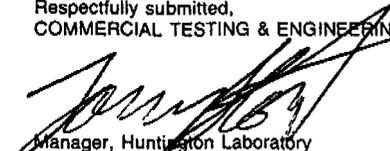
Date sampled August 27, 1993

Date received August 27, 1993

Analysis Report No. 59-163170

SIEVE ANALYSIS

<u>Passing</u>	<u>Retained On</u>	<u>% Weight</u>	<u>CUMULATIVE RESULTS</u>	
			<u>% Retained</u>	<u>% Passing</u>
-----	+2" RD	10.40	10.40	89.60
+2" RD	1" RD	26.24	36.64	63.36
1" RD	3/4" RD	6.93	43.57	56.43
3/4" RD	1/2" RD	11.88	55.45	44.55
1/2" RD	4 Mesh	19.31	74.76	25.24
4 Mesh	16 Mesh	8.91	83.67	16.33
16 Mesh	0	16.33	100.00	0.00

Respectfully submitted,  
COMMERCIAL TESTING & ENGINEERING CO.  
Manager, Huntington Laboratory

**COMMERCIAL TESTING & ENGINEERING CO.**

GENERAL OFFICES: 1919 SOUTH HIGHLAND AVE., SUITE 210-B, LOMBARD, ILLINOIS 60148 • TEL: 708-953-9300 FAX: 708-953-9306

SINCE 1908

Member of the SGS Group (Société Générale de Surveillance)

September 2, 1993

SEP 13 1993

PLEASE ADDRESS ALL CORRESPONDENCE TO:  
P.O. BOX 1020, HUNTINGTON, UT 84528  
TEL: (801) 653-2311  
FAX: (801) 653-2436AMAX COAL WEST  
165 SO. UNION BLVD. SUITE 1000  
P.O. BOX 280219  
LAKEWOOD, COLORADO 80228Sample identification by  
AMAX COAL WESTKind of sample Gravel  
reported to usGravel Sample  
47.25 lbs.

Sample taken at

Sample taken by AMAX

Date sampled August 30, 1993

Date received August 31, 1993

Analysis Report No. 59-163211

SIEVE ANALYSIS

<u>Passing</u>	<u>Retained On</u>	<u>% Weight</u>	<u>CUMULATIVE RESULTS</u>	
			<u>% Retained</u>	<u>% Passing</u>
-----	+2" RD	6.35	6.35	93.65
+2" RD	1" RD	8.99	15.34	84.66
1" RD	3/4" RD	5.29	20.63	79.37
3/4" RD	1/2" RD	20.64	41.27	58.73
1/2" RD	4 Mesh	25.40	66.67	33.33
4 Mesh	16 Mesh	12.17	78.84	21.16
16 Mesh	0	21.16	100.00	0.00

Respectfully submitted,  
COMMERCIAL TESTING & ENGINEERING CO.  
Manager, Huntington Laboratory

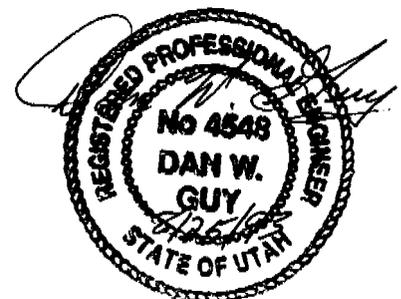
**RIP-RAP CERTIFICATION****SOUTH DITCH BELOW CASTLE GATE REFUSE PILE**

**Methodology** - The proposed rip-rap was visually examined and evaluated for the  $D_{50}$  of 24". Due to the extreme size, segregation and weighing was not feasible; therefore, the size distribution was visually estimated.

**Results of Visual Examination** - The proposed rip-rap is a coarse, native sandstone. The rock is extremely angular and hard, showing a strong resistance to breakage and no evidence of slaking or other deterioration from exposure to the weather. The top size of the rock is estimated at 36" - 42" and the bottom size is 2" - 4". The estimated  $D_{50}$  of the rip-rap is approximately 24".

It should be noted that the visual estimate of sizing was compared to the "Suggested Size Distribution of Rip-Rap", Figure 3.17, p.195, "Applied Hydrology and Sedimentology for Disturbed Areas", Barfield, Warner and Haan, 1983. The proposed rip-rap appears to meet the suggested criteria, except for bottom size material (2"-4" as opposed to 5"); however, due to the large size of the  $D_{50}$ , it is felt that a greater number of smaller rocks are more desirable to help fill the large voids between rocks and to help prevent piping and scouring of the filter bed beneath. The proposed material is therefore considered to be an adequate 24"  $D_{50}$  rip-rap, and should work quite well on the steep hillside.

**Certification** - I hereby certify that the proposed rip-rap for the South Ditch below the Refuse Pile at Castle Gate was checked by me on this date, and based on visual observation, is assumed to be adequate as a 24"  $D_{50}$  rip-rap.



**EarthFax**

**EarthFax**  
**Engineering Inc.**  
Engineers/Scientists  
7324 So. Union Park Ave.  
Suite 100  
Midvale, Utah 84047  
Telephone 801-561-1555  
Fax 801-561-1861

SEP 17 1993

September 16, 1993

Mr. Richard Allison, Jr., P.E.  
AMAX Coal West, Inc.  
165 South Union Blvd.  
Suite 1000  
Lakewood, CO. 80228-0219

**SUBJECT: Diversion CGD-7 (lower) capacity calculations, Refuse Pile, Castle Gate Mine, Carbon County, Utah**

Dear Richard:

Pursuant to your request, I have evaluated the as-built survey information prepared by Mr. Dan Guy of Blackhawk Engineering, Inc. and have completed a flow capacity analysis of drainage diversion CGD-7(lower) located on the Refuse Pile. Mr. Guy's survey notes are enclosed as Attachment 1. Please note that although the cross-sections of the diversion have been drawn to approximate a trapezoidal channel, the channels are actually somewhat parabolic in shape, according to Mr. Guy. However, Mr. Guy informed me that a five foot long board was laid on the bottom of the diversion in selected critical locations and diversion depth measurements were made from the bottom of the board. Therefore, Mr. Guy's measurements are apparently conservative, since the attached cross-sections do not account for the flow area beneath the assumed planer bottom of the diversion. Correspondingly, my analysis yielded conservative flow-depth results.

To complete the analysis, the slope of each side of each critical section of the channel was calculated from Mr. Guy's survey data. Geometric data and hydrologic parameters were input into Flowmaster I (Haestad Methods, Inc., Version 3.2, 1990), an open channel hydraulic analysis computer software program, for each of the four distinct reaches of the diversion. The program calculated the expected flow depth and flow velocity for each reach. The expected flow depth was compared to the minimum channel depth for each reach to determine the available freeboard. The analysis indicates that the channel, as constructed, will contain the design flow from a 100-year 6-hour event; the smallest calculated freeboard is approximately 0.9 feet. The computer output and calculations are contained within Attachment 2.

If you any questions concerning this evaluation, please do not hesitate to call.

Sincerely,

William S. Hendrickson, P.E.  
Civil Engineer

## Enclosures

- Attachment A (Survey information from Dan Guy, P.E.)
- Attachment B (Hydraulic calculations)

Mr. Richard Allison  
Refuse Pile diversion as-built calcs  
September 16, 1993

**ATTACHMENT 1**

**AS-BUILT SURVEY DATA  
PREPARED BY BLACKHAWK ENGINEERING, INC.  
REFUSE PILE DIVERSION CGD-7(LOWER)  
CASTLE GATE MINE, CARBON COUNTY, UTAH**

Subject

DITCH BELOW REFUSE PILE

Page No

1

Of

2

File

AMAX - CASTLE GATE  
(DITCH PROFILE)

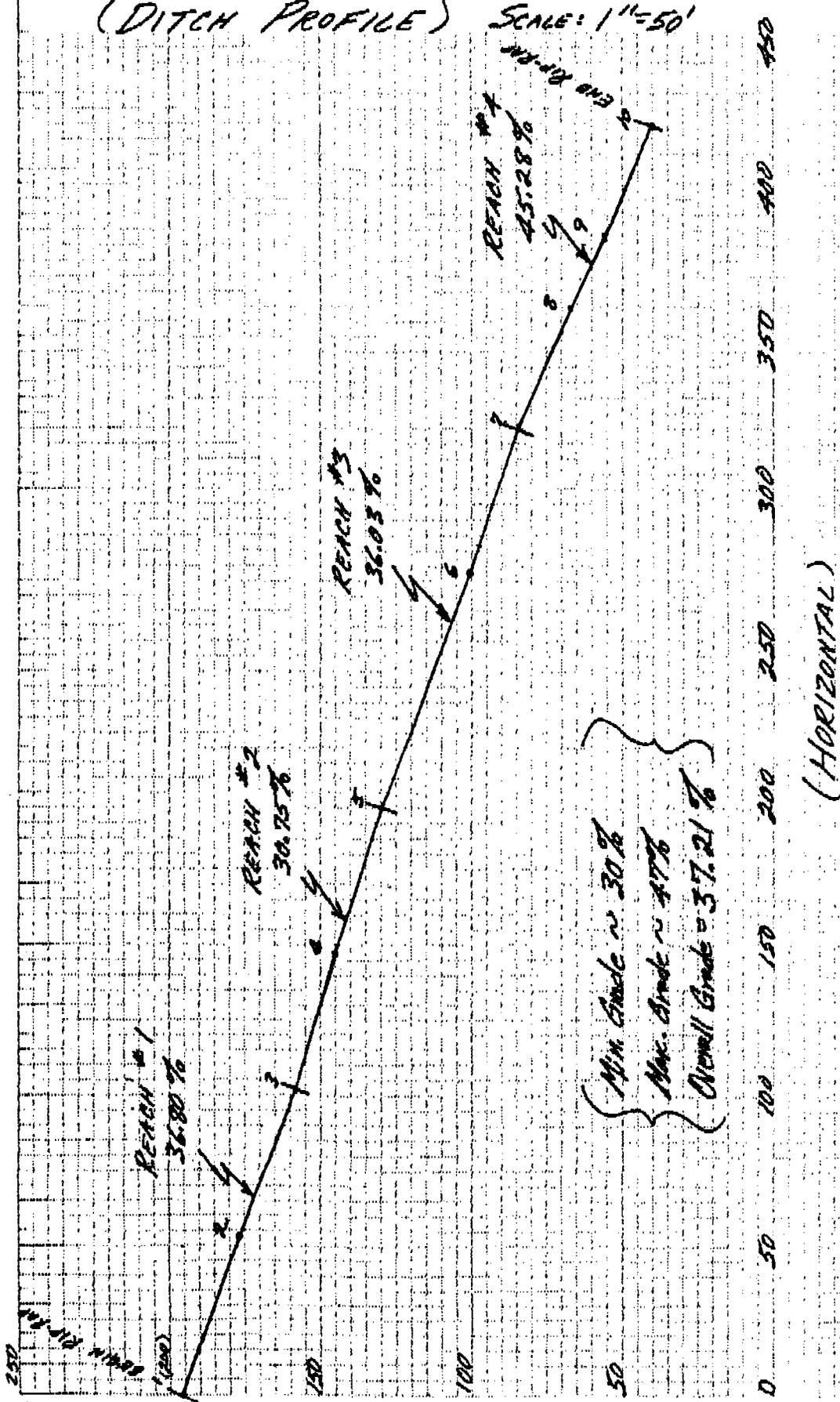
By

DAN GUY

Date

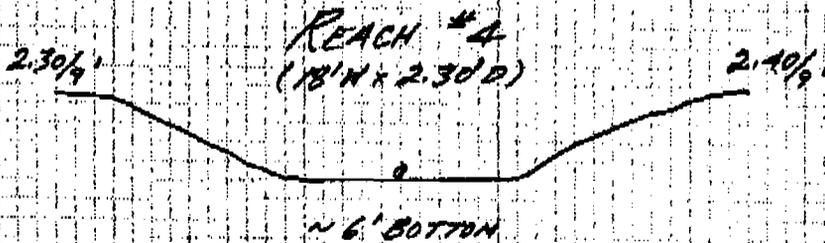
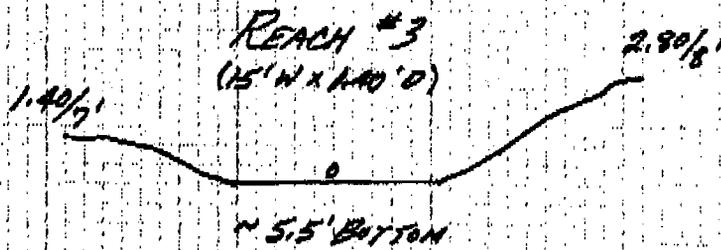
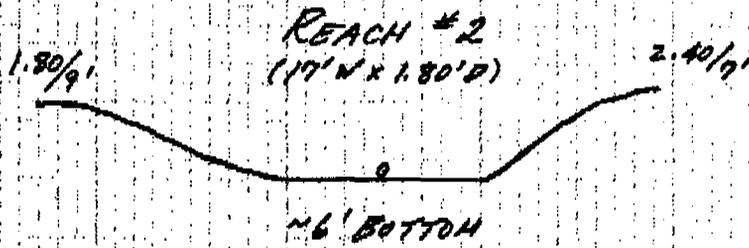
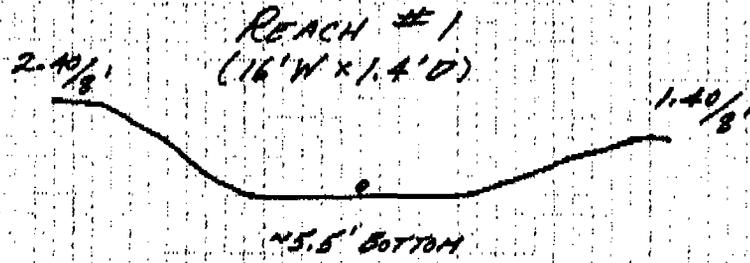
9/2/93

SCALE: 1" = 50'



NOTE: Elevations are relative!

Subject	DITCH BELOW REFUSE PILE		Page No	2	Of	2
File	AMAX - CASTLE GATE		By	DAN GUY	Date	9/14/93
(CRITICAL DITCH CROSS-SECTIONS)			SCALE: 1" = 5'			



Mr. Richard Allison  
Refuse Pile diversion as-built calcs  
September 16, 1993

**ATTACHMENT 2**

**HYDRAULIC CALCULATIONS  
REFUSE PILE DIVERSION CGD-7(LOWER)  
CASTLE GATE MINE, CARBON COUNTY, UTAH**

CASTLE GATE MINE  
CARBON COUNTY, UTAH  
REFUSE TIRE HYDROLOGY  
AS-BUILT CAPACITY OF DIVERSION CGD-7 (LOWER)

TASK: VERIFY CAPACITY OF DIVERSION CGD-7 (LOWER) ON THE REFUSE TIRE BASED ON SURVEY DATA COMPILED BY DAN GUY OF BLACKHAWK ENGINEERING ON SEPT 14, 1993. DIVERSION WAS RECENTLY REBUILT BY SIAPRES CONSTRUCTION.

REFERENCE 2 ATTACHED SHEETS OF PROFILE & CROSS-SECTION DATA PREPARED BY DAN GUY DATED 9/14/93

HYDRAULIC ANALYSIS

$n = 0.04$  ( $D_{50} > 1.0$  FT)

$Q = 44.85$  CFS (100-YEAR 6-HOUR STORM)

REACH	SLOPE FT/FT	BOTTOM WIDTH (FT)	SIDE SLOPES <sup>(a)</sup> L, R H:1V	FLOW DEPTH (FT)	VELOCITY (FPS)	ACTUAL DEPTH (FT)
1	.368	5.5	2.2, 3.8	0.51	12.47	1.40
2	.308	6.0	3.3, 1.7	0.52	11.77	1.80
3	.360	5.5	3.0, 1.9	0.52	12.66	1.40 <sup>(b)</sup>
4	.453	6.0	2.6, 2.5	0.47	13.39	2.30

- (a) ASSUME X-SECTIONS ARE TAKEN LOOKING DOWN-STREAM  
(b) MINIMUM FREEBOARD =  $1.9 - 0.52 = 0.88$  FT

2

Trapezoidal Channel Analysis & Design  
Open Channel - Uniform flow

Worksheet Name: CASTLE GATE COAL #1

Comment: REFUSE PILE AS-BUILT DIV. CGD-7L: REACH #1

Solve For Depth

Given Input Data:

Bottom Width.....	5.50 ft
Left Side Slope..	2.20:1 (H:V)
Right Side Slope.	3.80:1 (H:V)
Manning's n.....	0.040
Channel Slope....	0.3680 ft/ft
Discharge.....	44.85 cfs

Computed Results:

Depth.....	0.51 ft
Velocity.....	12.47 fps
Flow Area.....	3.60 sf
Flow Top Width...	8.57 ft
Wetted Perimeter.	8.75 ft
Critical Depth...	1.05 ft
Critical Slope...	0.0265 ft/ft
Froude Number....	3.39 (flow is Supercritical)

Trapezoidal Channel Analysis & Design  
Open Channel - Uniform flow

Worksheet Name: CASTLE GATE COAL #2

Comment: REFUSE FILE AS-BUILT DIV. CGD-7L: REACH #2

Solve For Depth

Given Input Data:

Bottom Width.....	6.00 ft
Left Side Slope..	3.30:1 (H:V)
Right Side Slope.	1.70:1 (H:V)
Manning's n.....	0.040
Channel Slope....	0.3080 ft/ft
Discharge.....	44.85 cfs

Computed Results:

Depth.....	0.52 ft
Velocity.....	11.77 fps
Flow Area.....	3.81 sf
Flow Top Width...	8.61 ft
Wetted Perimeter.	8.83 ft
Critical Depth...	1.03 ft
Critical Slope...	0.0265 ft/ft
Froude Number....	3.12 (flow is Supercritical)

Trapezoidal Channel Analysis & Design  
Open Channel - Uniform flow

Worksheet Name: CASTLE GATE COAL #3

Comment: REFUSE PILE AS-BUILT DIV. CGD-7L: REACH #3

Solve For Depth

Given Input Data:

Bottom Width.....	5.50 ft
Left Side Slope..	3.00:1 (H:V)
Right Side Slope.	1.90:1 (H:V)
Manning's n.....	0.040
Channel Slope....	0.3600 ft/ft
Discharge.....	44.85 cfs

Computed Results:

Depth.....	0.52 ft
Velocity.....	12.66 fps
Flow Area.....	3.54 sf
Flow Top Width...	8.06 ft
Wetted Perimeter.	8.27 ft
Critical Depth...	1.08 ft
Critical Slope...	0.0264 ft/ft
Froude Number....	3.37 (flow is Supercritical)

Trapezoidal Channel Analysis & Design  
Open Channel - Uniform flow

Worksheet Name: CASTLE GATE COAL #4

Comment: REFUSE PILE AS-BUILT DIV. CGD-7L: REACH #4

Solve For Depth

Given Input Data:

Bottom Width.....	6.00 ft
Left Side Slope..	2.60:1 (H:V)
Right Side Slope.	2.50:1 (H:V)
Manning's n.....	0.040
Channel Slope....	0.4530 ft/ft
Discharge.....	44.85 cfs

Computed Results:

Depth.....	0.47 ft
Velocity.....	13.39 fps
Flow Area.....	3.35 sf
Flow Top Width...	8.38 ft
Wetted Perimeter.	8.55 ft
Critical Depth...	1.03 ft
Critical Slope...	0.0264 ft/ft
Froude Number....	3.73 (flow is Supercritical)

# AMAX COAL COMPANY

A Subsidiary of AMAX Coal Industries, Inc.

Paul  
Dutton route to file  
ACT/007/004  
Annual Report  
File



January 12, 1993

BELLE AYR MINE

Mr. William Holgate  
District Manager  
Mine Safety and Health Administration  
P.O. Box 25367 DFC  
Denver, Co 80225

RE: Refuse Pile Annual Report, I.D. No. 1221-UT-9-42-00165-1

Dear Mr. Holgate:

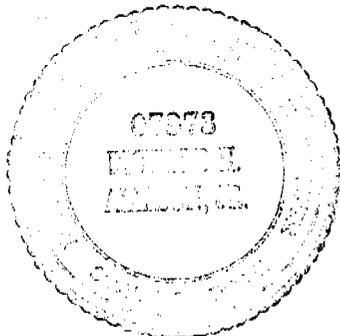
The following information is being furnished to you pursuant to Part 77.215-2 (c) Refuse Piles Annual Report. Castle Gate Mine was idle during 1992, therefore no refuse from the plant was placed on the pile. The topographic maps in your file that depict the present extent of the refuse pile and the maximum extent of the refuse pile are essentially the same as last years maps. Therefore, I have not resubmitted these maps.

- 1) The refuse pile is not burning nor has any spontaneous combustion occurred in the previous twelve months.
- 2) The pile was graded once in 1992 in order to prevent water from impounding on the refuse pile.
- 3) Piezometers on the pile have been checked quarterly and have no water in them.
- 4) Cross sections of the pile, which are in your file, show the original ground surface, the present configuration, and the proposed maximum extent of the refuse pile.

The attached Refuse Pile Monitoring Report is being submitted for your information. New monuments were placed on the face of the refuse pile in 1992 and will be surveyed annually to detect any movement in the pile until the pile is abandoned.

Sincerely,

Richard H. Allison, Jr. P.E.  
Project Supervisor



RHA/pc  
cg043

Certified Receipt P 114 441 154

Attachments

cc: Lowell Braxton, DOGM - w/o enclosures  
Pete Ferguson - Castle Gate Environmental Book  
Phil Dinsmoor  
George Womack

RECEIVED

JAN 15 1993

DIVISION OF  
OIL GAS & MINING

# AMAX COAL COMPANY

A Subsidiary of AMAX Coal Industries, Inc.



January 12, 1993

BELLE AYR MINE

Mr. William Holgate  
District Manager  
Mine Safety and Health Administration  
P.O. Box 25367 DFC  
Denver, CO 80225

RE: MSHA Impoundment Castle Gate Mine Report

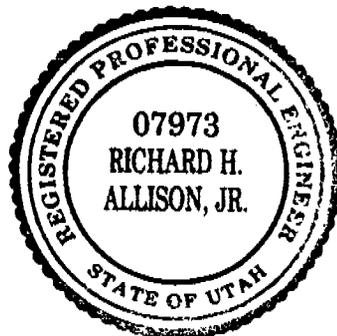
Dear Mr. Holgate,

Pursuant to Part 77.216-4, Reporting Requirements for Sediment Impoundments, I am submitting the following information:

Structure Name:	Schoolhouse Canyon Sediment Pond #13
MSHA I.D. No.	42-00165-2
Owner:	AMAX Coal Co.
Address:	c/o Belle Ayr Mine P.O. Box 3005 Gillette, WY 82717-3005

The above-named pond has been inspected by Mr. Dan Guy, P.E.; attached is his certified report. No modifications to the pond have been made within the last twelve months.

Sincerely,



*Richard H. Allison, Jr.*  
Richard H. Allison, Jr. P.E.  
Project Supervisor

RHA/pc  
cg044

Attachment

cc: Lowell Braxton - DOGM  
Pete Ferguson - Castle Gate Mine, Environmental Book  
Phil Dinsmoor  
George Womack

RECEIVED

JAN 15 1993

DIVISION OF  
OIL GAS & MINING

CASTLE GATE COAL COMPANY

1992 ANNUAL POND INSPECTION REPORT

POND: Refuse Pond 013

LOCATION: Castle Gate

IMPOUNDMENTS

- |                                 |  |
|---------------------------------|--|
| (1) Stability                   | <u>Slopes Stable/Mostly Incised.</u>                       |
| (2) Structural Weakness/Erosion | <u>None Noted.</u>   |
| (3) Potential Safety Hazards    | <u>None Noted.</u>   |
| (4) Depth of Impounded Water    | <u>N/A - Dry</u>   |
| (5) Existing Storage Capacity   | <u>8.57 acre feet.</u>                                     |
| (6) Monitoring Procedures       | <u>Weekly Inspection per M.S.H.A.</u><br><u>U.P.D.E.S.</u> |

SEDIMENT PONDS ONLY

- |  |                        |
|--|------------------------|
| (7) Sediment Accumulation (Elev.)                | <u>6235.2</u>          |
| (8) Sediment Cleanout Level (Elev.)              | <u>6245.5</u>          |
| (9) Principle Spillway (Elev.)                   | <u>6255.0</u>          |
| (10) Emergency Spillway (Elev.)                  | <u>6255.0</u>          |
| (11) Existing Sediment Capacity<br>(To Cleanout) | <u>3.03 acre feet.</u> |

GENERAL

- |                               |  |
|-------------------------------|--|
| (12) Comments/Recommendations | <u>No Discharge. Open Channel Spillway.</u><br><u>M.S.H.A. Pond ID-1211-UT-09-00-165-02.</u> |
|-------------------------------|--|

STATEMENT

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and, that inspections and inspection reports are made by myself and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

*Dan W. Guy*  
(Signature)

10-16-92  
(Date)

RECEIVED

JAN 15 1993

DIVISION OF  
OIL, GAS & MINING

