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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

July 31, 1984

Mr. Randy Watts
U. S. Steel Mining Company, Inc.
P. O. Box AE
Paonia, Colorado 81428

Dear Mr. Watts:

RE: Notice of Violation N84-2-12-1, Wellington Coal Cleaning Plant,
ACT/007/012, #2, Carbon County, Utah

The Division has reviewed information outlined in U. S. Steel Mining Company's Technical Revision #1 and NOV N84-2-12-1 Response pertaining to the use of grouted riprap in the permanent diversion ditch northwest of the upper refuse pond. The Division finds that velocities within the ditch are controlled with or without the use of the grouted riprap and that the grouted riprap will provide extra stability to the permanent diversion channel.

The Division hereby grants approval to retain the grouted riprap in place after cessation of mining operations in accordance with UMC 817.43(b) since no adverse impacts would occur to the channel or downstream environment even if the riprap was to erode away.

Thank you for your response. If we can be of any further assistance, please contact us anytime.

Sincerely,

A handwritten signature in cursive script that reads "D. Wayne Hedberg".
D. Wayne Hedberg
Permit Supervisor
Reclamation Hydrologist

DWH/DWD:btb

cc: Allen Klein, OSM, Denver
Robert Hagen, OSM, Albuquerque
Jim Smith, DOGM
Joe Helfrich, DOGM
Sue Linner, DOGM
Sandy Pruitt, DOGM

97200



STATE OF UTAH
NATURAL RESOURCES
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Scott M. Matheson, Governor
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4241 State Office Building - Salt Lake City, UT 84114 • 801-533-5771

June 28, 1984

P 402 457 320
Certified Receipt Requested

Mr. Randy Watts
U. S. Steel Corporation
P. O. Box AE
Paonia, Colorado 81428

Dear Mr. Watts:

RE: NOV #N84-2-12-1, Wellington Plant, ACT/007/012, Carbon County,
Utah

The use of grouted riprap in the East Diversion was not proposed in the modification plans approved October 18, 1983. Because the East Diversion is a permanent diversion there is a concern about degradation of the grout over time after the plant closes. Please address this concern in responding to the enclosed Notice of Violation with the required modification plans no later than July 13, 1984. If you have any questions and wish to discuss this issue feel free to call Rick Summers or Wayne Hedberg.

If you have additional comments or problems meeting the abatement requirements, please do not hesitate to call me.

Sincerely,



Sandy Pruitt
Mining Field Specialist

SP:re

Enclosure

cc: Jodie Merriman, OSM
Joe Helfrich, DOGM
Sue Linner, DOGM
~~Wayne Hedberg, DOGM~~
Rick Summers, DOGM
92700-24

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS & MINING

1588 West North Temple
Salt Lake City, Utah 84116
Telephone: (801) 533-5771

NOTICE OF VIOLATION NO. N

84-2-12-1

From the STATE OF UTAH
To the Following Permittee or Operator:

NAME US Steel Corp.
 MINE Wilcoxton Plant SURFACE UNDERGROUND OTHER
 CATEGORY OF OWNERSHIP: STATE FEDERAL FEE MIXED
 OSM MINE NO. _____ STATE PERMIT NO. ACT/007/012 MSHA I.D. NO. _____
 COUNTY AND STATE Calwell UT TELEPHONE 637-0120
 MAILING ADDRESS: PO Box AE Paonia CO 81428
 DATE OF INSPECTION 5/9, 19 84
 TIME OF INSPECTION: FROM 8:30 a.m. to 1:30 a.m. p.m.
 NAME OF OPERATOR (if other than permittee) _____
 MAILING ADDRESS: _____

Under the authority of the Utah Coal Mining and Reclamation Act of 1979 (Sec. 40-10-1 et seq., Utah Code Annotated, 1953), the undersigned authorized representative of the Director and the Division of Oil, Gas & Mining has conducted an inspection of the above mine on the above date and has found violation(s) of the Act, the regulations or required permit condition(s) listed in the attachment(s). This Notice constitutes a separate Notice of Violation for each violation listed.

You must abate each of these violations within the designated abatement time. You are responsible for doing all work in a safe and workmanlike manner.

The undersigned representative finds that cessation of mining is is not expressly or in practical effect required by this Notice. For this purpose "Mining" means extracting coal from the earth or a waste pile and transporting it within or from the minesite.

This Notice shall remain in effect until it expires as provided on the reverse or is modified, terminated or vacated by written notice of an authorized representative of the Director of the Division of Oil, Gas & Mining. The time for abatement may be extended by the authorized representative for good cause, if a request is made within a reasonable time before the end of the abatement period.

Date of Service June 28, 1984
 Time of Service 5:00 a.m. p.m.
 Person Served with Notice Randy Watts by certified mail
 Signature _____
 SIGNATURE OF AUTHORIZED REPRESENTATIVE [Signature]
 NAME AND I. D. NO. Randy Watts #2
 PRINT NAME AND TITLE _____
 P 402 457 320

IMPORTANT — PLEASE READ REVERSE OF THIS PAGE



STATE OF UTAH

Notice of Violation No. N 84-2-12-1

Violation No. 1 of 1

Nature of the Violation

Channel lining in sections of the permanent diversion are not approved by the Division.

Provision(s) of the Regulations, Act, or Permit Violated

UMC 817.44(b)(1)
UMC 771.19

Portion of the Operation to which Notice Applies

Grout around rip rap in sections of the East diversion ditch.

Remedial Action Required (including interim steps, if any)

Submit plans presenting details of the modification which also address final reclamation.

Time for Abatement (including time for interim steps, if any)

Two weeks or no later than July 13, 1984.

RECEIVED



**U. S. Steel
Mining Co., Inc.**

a Subsidiary of United States Steel Corporation

P.O. BOX AE
PAONIA, COLORADO 81428
303/527-4816

July 11, 1984

JUL 16 1984

DIVISION OF OIL
GAS & MINING

WESTERN DISTRICT

State of Utah
Department of Natural Resources
Division of Oil, Gas & Mining
4241 State Office Building
Salt Lake City, Utah 84114

Attn: Wayne Hedberg

Re: NOV N84-2-12-1
Wellington Coal Cleaning Plant
ACT/007/012

Dear Mr. Hedberg:

Approved plans for the permanent diversion ditch provided that riprap be installed at certain locations as shown on Map E9-3427. U.S. Steel Mining Co.'s contractor obtained riprap which contained a higher percentage of fine material than was specified. Cement grout was used to stabilize the smaller sized material while still leaving the larger sized material exposed to control velocities.

Riprap was installed as follows (refer to Map E9-3427-Technical Revision No. 1):

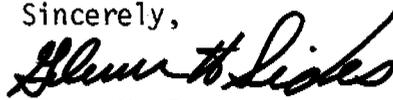
<u>Location</u>	<u>Description</u>
0 + 00 to 1 + 30	Grouted riprap on one side of channel similar to Section A-A Map E9-3427
2 + 00 to 2 + 18	Grouted riprap weir on both sides and bottom of channel - similar to Section B-B Map E9-3427
10 + 60	Grouted riprap weir (12 ft. long) where the permanent diversion ditch intersects the Siaperas Ditch.
West Side of Diversion	Riprap was installed on the west side of the diversion ditch to control surface run off erosion of the ditch bank.
East Side of Diversion	Riprap was installed on the east side of the diversion ditch (except for curve at section D-D) to control surface run off erosion of ditch banks.

Note: All riprap used was - 6 inch + 1½ inch clean rock.

The permanent diversion ditch is designed to divert flow in two ephemeral drainages east of the Upper Refuse Pond. (Reach 1 and Reach 2). The hydrograph calculations in Technical Revision No. 1 (Appendix B) show that the peak flow for a 100 year, 24 hour storm is 53.12 cfs (copy attached). The attached calculation sheet shows that the peak velocity in the diversion would be 4.6 ft/sec., which is less than 5 ft. per sec. (non-erosive). Therefore, no riprap is required. Since the riprap has been installed over and above any clear requirement for riprap, the channel should be stable during permanent reclamation, even with a complete breakdown of the cement grout, without any further modifications.

The Operator proposed installing riprap to minimize or eliminate any future need for stream channel maintenance. The riprap was grouted to stabilize any material smaller than the 4 inches submitted to the Division in Technical Revision No. 1.

Sincerely,



Glenn H. Sides
General Superintendent

w1

cc: Sandy Pruitt-DOGM
B. A. Filas
L. King
V. R. Watts
E C File

Subject UNIT HYDROGRAPH ANALYSIS

CALCULATOR NOTES

By M.O.A.

SUMMATION OF ORDINATES

Checked _____

Reach 1+2 - Upper Reservoir Pond

Acc't _____

STORM DURATION: 24 HOURS

4-25-1983

Sheet No. 21 of 22 Sheets

TIME INCR. HRS.	ORDINATES OF UNIT HYDROGRAPH CFS	10-24	25-24	100-24	TIME INCREMENT HOURS	ORDINATES OF UNIT HYDROGRAPH CFS	10-24	25-24	100-24
0 →	1"				Q =	1"			
0	1	0	0	0	60		0.152	0.203	0.345
2		1.27	1.78	2.97	62		0.11	0.16	0.26
4		4.17	5.85	9.72	64		0.07	0.10	0.17
6		8.29	11.63	19.32	66		0.05	0.06	0.11
8		14.17	19.89	33.03	68		0.02	0.03	0.05
10		19.30	27.08	44.98	70		0	0	0
12		22.34	31.31	52.01					
14		22.92	31.97	53.12	CFS HRS.		421.639	590.355	980.929
16		22.04	30.85	51.26	AG. FT.		34.844	48.787	81.063
18		19.59	27.42	45.56					
20		16.78	23.46	39.00					
22		13.08	18.28	30.39					
24		9.78	13.67	22.74					
26		7.90	10.90	18.10					
28		6.18	8.64	14.36					
30		4.89	6.83	11.36					
32		3.91	5.47	9.09					
34		3.08	4.30	7.16					
36		2.42	3.38	5.62					
38		1.92	2.68	4.46					
40		1.52	2.12	3.31					
42		1.18	1.66	2.76					
44		0.95	1.33	2.21					
46		0.72	1.00	1.66					
48		0.61	0.84	1.39					
50		0.48	0.67	1.11					
52		0.37	0.51	0.85					
54		0.29	0.40	0.67					
56		0.23	0.31	0.52					
58		0.183	0.26	0.42					

CALCULATION NOTES

By B. A. Fikes

Checked VRW

Acc't _____

July 6

1984

Sheet No. 1 of Sheets

Subject _____

Wellington Coal Cleaning Plant

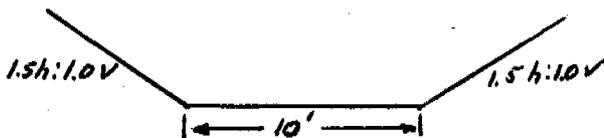
Permanent Diversion Ditch

Reach 1 & 2 - Refuse Area

Riprap Calculations

Reach 1+2 Peak Flow = 53.12 cfs (ref. Technical Revision No 1
Appendix A) - See Attached Sheet

Channel Dimensions:



Manning Equation: $Q = \frac{1.486}{n} A R^{2/3} S^{1/2}$

Where: A = Area

R = Hydraulic Radius ?

S = Slope = 0.008

n = Roughness Factor = 0.025

$A = 10d + 1.5d^2$

$R = \frac{A}{10 + 2(1.5d) \sqrt{(1.5d)^2 + d^2}}$

$R = \frac{10d + 1.5d^2}{10 + 2(1.5d) \sqrt{(1.5d)^2 + d^2}}$

$Q = \frac{1.486}{0.025} (10d + 1.5d^2) \left(\frac{10d + 1.5d^2}{10 + 2(1.5d) \sqrt{(1.5d)^2 + d^2}} \right)^{2/3} 0.008^{1/2}$

DDGM CALC'S
53.1
6.11

At Q = 53.12 cfs d = 0.9834 ⇒ use d = 1.0 ft maximum depth

$V = \frac{Q}{A} = \frac{53.12}{10d + 1.5d^2} = \frac{53.12}{10(1) + 1.5(1)^2} = 4.62 \text{ ft/sec } (< 5 \text{ ft. per sec.})$

Velocity is non-erosive