

0031



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

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October 30, 1997

TO: File

THRU: Daron Haddock, Permit Supervisor *DH*

FROM: Wayne H. Western, Senior Reclamation Specialist *WHW*

RE: Reclamation Cost Estimate Update, Co-Op Mining Company, Bear Canyon Mine, ACT/015/025, File #2, Emery County, Utah

97B

Summary:

On October 28, 1997, Pete Hess faxed the Division headquarters the reclamation costs for the proposed asphalt pavement at the scalehouse at the Bear Canyon Mine. The Division reviewed the cost estimate and determined that no additional bond is needed.

Analysis:

On October 28, 1997, Pete Hess called the Division headquarters about a minor amendment at the Bear Canyon Mine. The Permittee wants to place an asphalt pavement near the scalehouse. The Permittee supplied the Division with reclamation cost estimates for removing and disposing the asphalt. The Permittee's reclamation cost estimate was \$2,945.79.

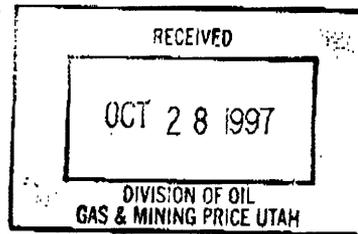
The Division reviewed the reclamation cost estimate and determined the direct reclamation cost for removing and disposing the asphalt to be \$6,184. The current bond is for \$525,000. An increase of \$6,184 in the current bond would amount to a 1.5% increase. The Division has an informal policy of increasing the bond only when there is a reclamation costs increase by more than 5%. Since the reclamation cost increase by only 1.5% the Division will not require an increase at this time.

Findings:

The Permittee has met the minimum requirements of R645-301-830.140.

3.6.8 Reclamation Bonding

BOND
CO-OP MINING COMPANY
BEAR CANYON MINE
ACT/015/025, EMERY COUNTY, UTAH



Post-It Fax Note	7671	Date	10/29/97	# of pages	4
To	Wayne Western	From	Pete Hess		
Co./Dept.		Co.			
Phone #		Phone #			
Fax #		Fax #			

3.6.8.1 Detailed Timetable for Completion of Major Reclamation Processes

The following schedule of reclamation is proposed to be initiated within 90 days (weather permitting) of final abandonment of the mining operation:

	<u>Accumulated Time</u>
a. Seal Portals - 1.5 weeks	1.5 weeks
b. Remove Structures - 7.7 9.6 weeks	9.2 10.1 weeks
c. Soil Replacement and Ripping - 8.6 weeks	17.8 18.7 weeks
d. Channel Restoration - 2.2 weeks	20.0 20.9 weeks
e. Revegetation - 1 week	21.0 21.9 weeks

The above reclamation tasks can, therefore, be completed within ~~21.0~~ 22 weeks following the start of reclamation activities.

Summary of Reclamation Cost Estimate

a.	Seal Portals and Backfill	\$ 45,500.00
b.	Removal of Structures	\$ 64,234.29 \$ 67,180.08
c.	Soil Placement and Ripping	\$ 72,343.93
d.	Channel Restoration	\$ 51,045.00
e.	Revegetation	\$ 50,276.53
f.	Monitor Well Plugging	\$ 114.32
g.	Maintenance and Monitoring of Subsidence, Vegetation and Erosion (10 yr bond liability Period)	\$ 39,143.20
h.	Hydrology Monitoring (10 yr bond liability period)	\$ 29,630.00
i.	Supervision (21.0 weeks)	\$ 14,851.20 \$ 15,558.40
j.	Mobilization and Demobilization	\$ 2,500.00 \$ 369,638.38 \$ 373,291.46
	5.1% Reclamation Management Cost	\$ 18,851.56 \$ 19,037.86
	10 pct contingency (1990 dollars)	\$ 37,329.15 \$ 36,264.84 \$ 425,454.78 \$ 429,658.47

<u>Escalated Values</u>	<u>Escalation Factor</u>
1991 - 430,858 435,115	1.27% (actual)
1992 - 440,380 444,731	2.21% (actual)
1993 - 451,566 456,027	2.54% (actual)
1994 - 460,642 465,193	2.01% (est)
1995 - 469,901 474,544	2.01% (est)
1996 - 479,346 484,083	2.01% (est)
1997 - 488,981 493,812	2.01% (est)
1998 - 498,809 503,730	2.01% (est)
1999 - 508,836 513,863	2.01% (est)
2000 - 519,063 524,192	2.01% (est)

A bond in the amount of \$525,000 was be posted on July 31, 1995.

Cost Subtotal \$7,406.55
 Time Subtotal 7.53 days

Building Enclosure for Tank Seam Belt Portal

020-604-0500 (Steel Building, includes disposal)

Volume = (12 ft)(12 ft) (8 ft) = 1,152 cu ft

Cost = (0.923) (0.16/cu ft) (1,152 cu ft) = \$170.13

Time = 1,152 cu ft/(14,800 cu ft/day) = 0.08 days

Cost Subtotal \$170.13
 Time Subtotal 0.08 days

Scalehouse Area Pavement

020-554-1710 (Pavement Removal)

Area = 800 square yards

Cost = (0.923) (\$2.68 / sq yd) (800 sq yd) = \$1,978.91

Time = (800 sq yd) / (690 sq yd/day) = 1.16 days

Disposal at landfill

Volume = 133 cubic yards. 20 yard truck. distance to haul approx. 140 miles round trip = 2 trips/day. time = (133 cu yd)/(40 cu yd/day) = 3.33 days

Truck load time = (4 cycles/load)/(106 cycles/hr) = 2.26 minutes/load

No. Loads = (133 cu yd)/(20 cu yd/load) = 7 loads

(2.26 min./load)(7 loads) = 15.82 minutes = 0.26 hours

980 Loader cost = (102.11/hr) (0.26 hrs) = \$26.55 (concurrent with soil placement)

Truck cost = (0.923)(\$7.66/cu yd)(133 yds) = \$940.33

Cost Subtotal \$2,945.79
 Time Subtotal 4.49 days

Remove Structures Cost Total =
 Remove Structures Time Total =

\$64,234.29 \$67,180.08
 38.6431 days

e. Revegetation**Drill Seeding (Section 9.5)**

16 acres x \$891.00/acre

\$14,256.00

Hydroseeding (Section 9.5)

12.09 acres x \$1,667.00/acre

\$20,154.03

Riparian Area Planting (Section 9.5)

1 acre x \$2,210.00/acre

\$ 2,210.00

Install Matting (Section 9.5)

4.4 acres x \$3,103.75/acre

\$13,656.50**Cost Total**

\$50,276.53

f. Monitor Well Plugging

Approx. 4 in diam x 40 ft deep

1 yds cement @ \$51.00/yd

\$ 51.00

4 hrs labor @ \$15.83/hr

\$ 63.32**Cost Total**

\$ 114.32

g. Maintenance and/or Monitoring for Vegetation, Erosion, and Subsidence

(Bond for 10-year bond liability period)

Vegetation - field survey, sampling, analysis and report

writing @ \$1,000.000/day + \$80.00/day vehicle

expense (Mt. Nebo Scientific), 3 days/yr

\$3,240.00/yr

Erosion - 1 day to field survey @ \$141.44/day

141.44/yr

Subsidence

2 day field survey @ \$141.44/day

1 day certified surveyor @ \$250/day

532.88/yr**Subtotal**

\$3,914.32/yr

Cost Total = 10 yrs x \$3,914.32 =

\$39,143.20

h. Hydrology Monitoring, Quarterly

Labor - 4 days annually @ \$126.64/day

\$ 506.56/yr

Laboratory work - per Commercial Testing and Engineering Co. Huntington,

Utah (\$87.73/sample)(7 samples) - \$614.11/quarter x 4

2,456.44/yr**Subtotal**

\$2,963.00/yr

Cost Total = 10 yrs x \$2,963.00 =

\$29,630.00

i. Supervision - ~~21-0~~ 22 weeks @ \$707.20/week~~\$14,851.20~~~~\$15,558.40~~**j. Mobilization and Demobilization of 5 pieces of equipment @ \$500 each**

\$ 2,500.00

The above listed costs include reclamation costs added between 1985 and the latest modification.