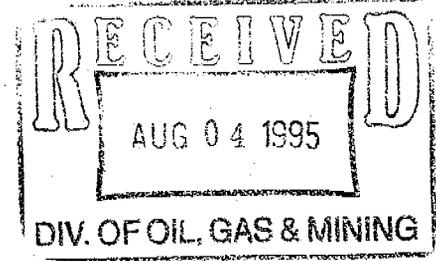


Bank One, Arizona, N.A.
International Trade Services
Location A209
PO Box 29529
Phoenix AZ 85038-9529

SWIFT: BOAZ US 55
TELEX: 6734869 BANK1 AZ

BANK ONE



AMENDMENT NUMBER: 4

IRREVOCABLE STANDBY LETTER OF CREDIT NO. 1055

TRANSACTION DATE: JULY 31, 1995

BENEFICIARY:
STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING
3 TRIAD CENTER, SUITE 350
355 WEST NORTH TEMPLE
SALT LAKE CITY, UT 84180-1203

ASG
*Original to
file prep
copy to #11
copy to [unclear]
ACT/US/005*

GENTLEMEN:

AT THE REQUEST OF: BANK ONE, UTAH, NA
COMMERCIAL LOAN CENTER
80 WEST BROADWAY, SUITE 330
SALT LAKE CITY, UT 84101
FORMERLY CAPITAL CITY BANK

AND C.W. MINING COMPANY, AKA CO-OP MINING COMPANY, 53 WEST ANGELO AVENUE, SALT LAKE CITY, UT 84115

WE AMEND LETTER OF CREDIT NUMBER 1055 AS FOLLOWS:

THIS LETTER OF CREDIT HAS BEEN INCREASED BY USD18,000.00 TO A NEW LETTER OF CREDIT AMOUNT OF USD525,000.00.

THIS AMENDMENT IS AN INTEGRAL PART OF THE ORIGINAL CREDIT. ALL OTHER TERMS AND CONDITIONS OF THE ORIGINAL CREDIT INSTRUMENT REMAIN UNCHANGED.

David Matthews

AUTHORIZED SIGNATURE

Silvia M. Nido

AUTHORIZED SIGNATURE

CO-OP MINING COMPANY

P.O. Box 1245
Huntington, Utah 84528



Office (801) 687-2450
FAX (801) 687-5238
Coal Sales (801) 687-5777

June 6, 1995

Pete Hess
Utah Division of Oil, Gas & Mining
C.E.U. Box 169, 451 East 400 North
Price, Utah 84501-2699

Mr. Hess,

File copy letter
957
#2

Re: Tipple Structure Ammendment, Bear Canyon Mine, ACT/015/025,
Emery County, Utah

Enclosed are three DRAFT copies of an ammendment to the Bear Canyon MRP to expand the existing Tipple structure. The ammendment also includes updated bond calculation information to correct discrepancies noted by Co-Op and to increase the bond to cover our next permit renewal through the year 2000.

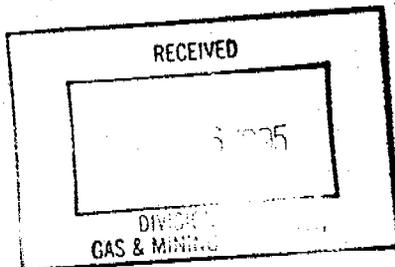
A revised bond will be forwarded to the Division upon the determination of the new bond. Upon approval, finalized copies will be sent to the division. If you have any questions, please call Charles Reynolds at (801) 687-2450.

Thank You,

Wendell Owen

Wendell Owen,
Resident Agent

Enclosure(s)
cr



APPLICATION FOR PERMIT CHANGE

Title of Change:

Tipple Structure Amendment and bond update

Permit Number: ACT 015 1 025

Mine: Bear Canyon

Permittee: Coal Mining Co

Description, include reason for change and timing required to implement:

Amendment is to expand existing tipple structure to allow for rebuilding of the old coal processing facilities and to allow for processing of Tank Seam coals. Bond calculation updated for permit renewal. Co. must begin construction July 1995

- Yes No 1. Change in the size of the Permit Area? _____ acres increase decrease.
- Yes No 2. Change in the size of the Disturbed Area? _____ acres increase decrease.
- Yes No 3. Will permit change include operations outside the Cumulative Hydrologic Impact Area?
- Yes No 4. Will permit change include operations in hydrologic basins other than currently approved?
- Yes No 5. Does permit change result from cancellation, reduction or increase of insurance or reclamation bond?
- Yes No 6. Does permit change require or include public notice publication?
- Yes No 7. Permit change as a result of a Violation? Violation # _____
- Yes No 8. Permit change as a result of a Division Order? D.O.# _____
- Yes No 9. Permit change as a result of other laws or regulations? Explain: _____
- Yes No 10. Does permit change require or include ownership, control, right-of-entry, or compliance information?
- Yes No 11. Does the permit change affect the surface landowner or change the post mining land use?
- Yes No 12. Does permit change require or include collection and reporting of any baseline information?
- Yes No 13. Could the permit change have any effect on wildlife or vegetation outside the current disturbed area?
- Yes No 14. Does permit change require or include soil removal, storage or placement?
- Yes No 15. Does permit change require or include vegetation monitoring, removal or revegetation activities?
- Yes No 16. Does permit change require or include construction, modification, or removal of surface facilities?
- Yes No 17. Does permit change require or include water monitoring, sediment or drainage control measures?
- Yes No 18. Does permit change require or include certified designs, maps, or calculations?
- Yes No 19. Does permit change require or include underground design or mine sequence and timing?
- Yes No 20. Does permit change require or include subsidence control or monitoring?
- Yes No 21. Have reclamation costs for bonding been provided or revised for any change in the reclamation plan?
- Yes No 22. Is permit change within 100 feet of a public road or perennial stream or 500 feet of an occupied dwelling?
- Yes No 23. Is this permit change coal exploration activity inside outside of the permit area?

Attach 3 complete copies of proposed permit change as it would be incorporated into the Mining and Reclamation Plan.

I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein.

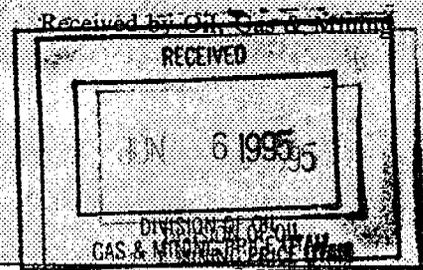
Nardell Oliver Res. Agent 5/31/95
Signed - Name - Position - Date

Subscribed and sworn to before me this 31 day of May, 19 95
Nardell Oliver
Notary Public

My Commission Expires: _____, 19____
Attest: STATE OF _____
COUNTY OF _____



Notary Public
LEANNE STONE
P.O. Box 300
Huntington, Utah 84528
My Commission Expires
June 18, 1997
State of Utah



ASSIGNED PERMIT CHANGE NUMBER

Application for Permit Change Detailed Schedule of Changes to the Permit

Title of Change:

Tipple Structure Amendment & Bond Update

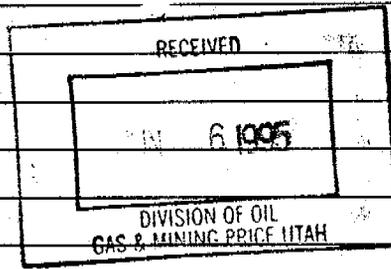
Permit Number: *ACT 1 015 1 025*

Mine: *Bear Canyon*

Permittee: *Co-op Mining Co.*

Provide a detailed listing of all changes to the mining and reclamation plan which will be required as a result of this proposed permit change. Individually list all maps and drawings which are to be added, replaced, or removed from the plan. Include changes of the table of contents, section of the plan, pages, or other information as needed to specifically locate, identify and revise the existing mining and reclamation plan. Include page, section and drawing numbers as part of the description.

			DESCRIPTION OF MAP, TEXT, OR MATERIALS TO BE CHANGED
<input type="checkbox"/> ADD	<input checked="" type="checkbox"/> REPLACE	<input type="checkbox"/> REMOVE	<i>3-83, 3-86; Bond & Reclamation timetable updated</i>
<input type="checkbox"/> ADD	<input checked="" type="checkbox"/> REPLACE	<input type="checkbox"/> REMOVE	<i>3-87; Typographical error removed</i>
<input type="checkbox"/> ADD	<input checked="" type="checkbox"/> REPLACE	<input type="checkbox"/> REMOVE	<i>3-88; Mobile Electric Trailer Removed, Tipple Calculations Updated</i>
<input type="checkbox"/> ADD	<input checked="" type="checkbox"/> REPLACE	<input type="checkbox"/> REMOVE	<i>3-94; Tank Seam Water Tank Bond updated</i>
<input type="checkbox"/> ADD	<input checked="" type="checkbox"/> REPLACE	<input type="checkbox"/> REMOVE	<i>3-96; Rock Crusher Conveyor Bond updated</i>
<input type="checkbox"/> ADD	<input type="checkbox"/> REPLACE	<input type="checkbox"/> REMOVE	<i>3-97; Structures Cost and time totals updated</i>
<input type="checkbox"/> ADD	<input checked="" type="checkbox"/> REPLACE	<input type="checkbox"/> REMOVE	<i>3-103; Typographical error corrected (erroneous line removed)</i>
<input type="checkbox"/> ADD	<input checked="" type="checkbox"/> REPLACE	<input type="checkbox"/> REMOVE	<i>3-105; Reclamation Supervision Costs updated</i>
<input type="checkbox"/> ADD	<input checked="" type="checkbox"/> REPLACE	<input type="checkbox"/> REMOVE	<i>3A-2, 3A-7, 3A-14; Mobile Electric Trailer Removed</i>
<input type="checkbox"/> ADD	<input checked="" type="checkbox"/> REPLACE	<input type="checkbox"/> REMOVE	<i>Plat 2-4C, 7-1C, 8-5C, 2-4E, 7-1E, 8-5E, 7-5;</i>
<input type="checkbox"/> ADD	<input type="checkbox"/> REPLACE	<input type="checkbox"/> REMOVE	<i>Tipple addition added, Tank Seam Water Tank</i>
<input type="checkbox"/> ADD	<input type="checkbox"/> REPLACE	<input type="checkbox"/> REMOVE	<i>added, Rock Crusher/Conveyor Added, Electric Trailer</i>
<input type="checkbox"/> ADD	<input type="checkbox"/> REPLACE	<input type="checkbox"/> REMOVE	<i>Removed.</i>
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Any other specific or special instructions required for insertion of this proposal into the Mining and Reclamation Plan?

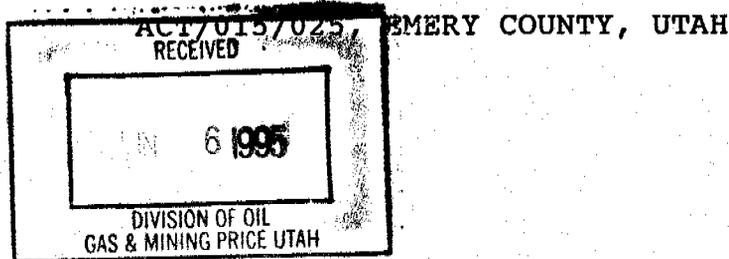
The Mobile Electric Trailer was eliminated from the minesite (Reclaimed) on May 15, 1995

3.6.8 Reclamation Bonding

BOND

CO-OP MINING COMPANY

BEAR CANYON MINE



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 - 7.98.3 weeks	9.49.8 weeks
c. Soil Replacement and Ripping - 78.6 weeks	16.418.4 weeks
d. Channel Restoration - 2.2 weeks	18.620.6 weeks
e. Revegetation - 1 week	20.121.6 weeks

The above reclamation tasks can, therefore, be completed within ~~20.221.6~~ weeks following the start of reclamation activities.

Summary of Reclamation Cost Estimate

a.	Seal Portals and Backfill	\$ 45,500.00
b.	Removal of Structures	\$ 62,025.00
		\$ 66,639.36
c.	Soil Placement and Ripping	\$ 76,398.32
d.	Channel Restoration	\$ 51,045.00
e.	Revegetation	\$ 44,119.78
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 (20-221.6 weeks)	\$ 14,285.44
		15,275.52
j.	Mobilization and Demobilization	\$ 2,500.00
		\$ 364,761.06
		\$ 370,365.50
	5.1% Reclamation Management Cost	\$ 18,602.81
		\$ 18,888.64
	10 pct contingency	\$ 36,476.11
		\$ 37,036.58
	(1990 dollars)	\$ 419,839.98
		\$ 426,290.69

<u>Escalated Values</u>		<u>Escalation Factor</u>
1991 -	\$425,172 431,705	1.27% (actual)
1992 -	\$434,568 441,245	2.21% (actual)
1993 -	\$445,606 452,453	2.54% (actual)
1994 -	\$454,563 461,547	2.01% (est)
1995 -	\$463,700 470,824	2.01% (est)
1996 -	\$473,020 480,288	2.01% (est)
1997 -	\$482,528 489,942	2.01% (est)
1998 -	\$492,227 499,789	2.01% (est)
1999 -	\$502,120 509,835	2.01% (est)
2000 -	\$520,083	2.01% (est)

Bond will be posted in accordance with R645-301-820.

DRAFT

Reclamation Costs

a. Seal and Backfill Portals

AMR Costs-\$3,500/seal including
backfill x 13 seals \$ 45,500.00

b. Removal Structures

All estimates with 10 digit numbers are from 1990 Means Site Work cost Data. Utah adjustment factor = 0.923. Most of the steel and equipment will be salvaged for scrap or reuse. M&P Enterprises in Huntington, Utah will pick up and pay \$40.00/ton for scrap iron & equipment if placed in 30 cu yd (8ft wide x 20 ft long x 5 ft high) dumpsters or loaded with crane on their trucks.

Sales-Receiving-Scale House Complex

020-604-0700 (Wood Building, includes disposal)
Volume = (40 ft)(80 ft)(20 ft) = 64,000 cu ft
Cost = (0.923)(0.16/cu ft)(64,000 cu ft) = \$9,451.52
Time = 64,000 cu ft/(14,800 cu ft) = 4.32 days

Cost Subtotal \$9,451.52
Time Subtotal 4.32 days

Shower House

020-604-0700 (Wood Portion, includes disposal)
Volume = (92 ft)(50 ft)(8 ft) = 36,800 cu ft
Cost = (0.923)(0.16/cu ft)(36,800 cu ft) = \$5,434.62
Time = 36,800 cu ft/(14,800 cu ft/day) = 2.49 days

020-604-0650 (Masonry Portion, includes disposal)
Volume = (92 ft)(50 ft)(8 ft) = 36,800 cu ft
Cost = (0.923)(0.16/cu ft)(36,800 cu ft) = \$5,434.62
Time = 36,800 cu ft/(14,800 cu ft/day) = 2.49 days

Cost Subtotal \$10,869.24
Time Subtotal 4.98 days

Shop

020-604-0500 (Steel Building, includes disposal)
Volume = (40 ft)(93 ft)(18 ft) = 66,960 cu ft
Cost = (0.923)(0.16/cu ft)(66,960 cu ft) = \$9,888.65
Time = 66,960 cu ft/(14,800 cu ft/day) = 4.52 days

Cost Subtotal \$9,888.65
Time Subtotal 4.52 days

Machine Shop

020-604-0500 (Steel Building, includes disposal)
Volume = (30 ft)(40 ft)(12 ft) = 14,400 cu ft
Cost = (0.923)(0.16/cu ft)(14,400 cu ft) = \$2,126.59
Time = 14,400 cu ft/(14,800 cu ft/day) = 0.97 days

Cost Subtotal \$2,126.59
Time Subtotal 0.97 days

Mobile Electric Trailer

~~Semi Trailer 40 ft x 8 ft x 8 ft
Hook up and haul off. Assume:
Truck (Tractor) = operator = (3 hrs)(\$47.11/hr) \$ 141.33~~

~~Cost Subtotal \$141.33
Time Subtotal 0.38 days~~

Coal Processing/Crusher Facility (Tipple)

27 ft x 52 ft Approx.
(25% is 25 ft high, 50% is 17 ft high, and 25% is 8 ft high.)
Secondary Structure = 20' X 30' X 51' high.

020-604-0500 (Steel Building, includes disposal)
Volume₁ = (27ft)(52ft)[(.25)(25ft)+(.50)(17ft)+(.25)(8ft)] = 23,517ft³
Volume₂ = (20 ft) (30 ft) (51 ft) = 30,600 ft³
Cost = (0.923)(0.16/cu ft)(23,517+30,600 cu ft) = \$3,472,997,992.00
Time = 23,517+30,600 cu ft/(14,800 cu ft/day) = 1.75382 days

020-604-0700 (Control House, Wood, includes disposal)
Volume = (12 ft)(20 ft)(10ft) = 2,400 cu ft
Cost = (0.923)(0.16/cu ft)(2,400 cu ft) = \$354.43
Time = 2,400 cu ft/(14,800 cu ft/day) = 0.16 days

Cost Subtotal \$3,827,428,346.43
Time Subtotal 1.75382 days

Water Tanks

Two tanks approx. 14 ft diam. x 10 ft high and one tank approx. 10 ft diam. x 20 ft high with average 3 in diam. x 1/2 in pipe top and bottom.

Cut pipes top & bottom, load on truck.

approx. cut length = (2 tanks)(2 pipes)(pi)(3 in) = 37.7 ft

020-730-0010 (Torch cutting, 1 in plate)

Equivalent length (for 1 in plate) = (0.25)(37.7 ft) = 9.4 ft

Cutting Cost = (0.923)(2.65/ft)(9.4 ft) = \$22.96

Cutting Time = 9.4 ft/(95 ft/day) = 0.099 days

Assume each tank takes 1 hr to load.

Labor = (2 men)(2 hrs)(\$15.83/hr) = \$ 63.32

Crane + operator = (2 hrs)(\$78.25/hr) = \$ 156.50

~~\$ 219.82~~ 329.73

Time = 0.2536 days

Cost Subtotal \$221.78

Time Subtotal 0.2639 days

Fuel Storage and Stoker Oil Tanks

(2) Tanks approx 13.5 ft diam. x 10 ft high

(1) Tank approx 11.5 ft diam. x 23 ft high

(2) Tanks approx 9 ft diam. x 19 ft high

(1) Tank approx 4 ft diam. x 11 ft long

(1) Tank approx 7 ft diam x 7 ft high w/9.5 ft diam x 5 ft high outer tank

(7) Tanks - Total

Similar to water tanks.

Approx pipe cutting length = (7 tanks)(2 pipes)(pi)(3 in) = 11 ft

020-730-0010 (Torch Cutting, 1 in Plate)

Equivalent length (for 1 in plate) = 0.25(11 ft) = 2.75 ft

Cutting Cost = (0.923)(2.65/ft)(2.75 ft) = \$6.73

Cutting Time = 2.75 ft/(95 ft/day) = 0.029 days

Assume each tank takes 1 hr to load.

Labor = (2 men)(7 tanks)(1 hr)(\$15.83/hr) = \$ 221.62

Crane + operator = (7 hrs)(\$78.25/hr) = \$ 547.75

\$ 769.37

Time = 0.88 days

Cost Subtotal \$776.10

Time Subtotal 0.91 days

DRAFT

Structures and Conveyors (Including Loadouts)

Below are approx average dimensions used to estimate all conveyors and support towers.

Typical conveyor truss approx 5 ft x 5 ft x 40 ft long sections with angles at corners and bar or angle cross members with 2 ft wide walkway.

Cut trusses into 40 ft lengths for reuse or salvage and load on truck.

Trusses:

Conveyor length = 1,600 ft

Number of cuts = 1,600 ft/40 ft = 40 cuts

For each cut, assume (10)(L4x4x $\frac{1}{2}$)(conservative)

Truss cut length = (10)(8 in)(40 cuts) = 26780 ft

(Truss) equivalent cut length for 1 in plate = ($\frac{1}{2}$)(26780 ft) = 13390 ft

140

Typical conveyor Tower.

(4) 8 in diam. x $\frac{1}{2}$ in pipe x 60 ft high legs (average) spaced 8 ft apart with 6 in diam. x $\frac{1}{2}$ in pipe cross members at approx 45° angle.

Cut towers into 20 ft lengths and load in dumpster.

Towers:

Number of towers = 12

Cut into 12 pieces/tower

Number of cuts/tower for 8 in pipe = 3 cuts(4 legs) = 12 cuts

Number of cuts/tower for 6 in pipe = 4 cuts(12 cross members) = 48 cuts

Length of cut for each 8 in pipe = pi(8 in) = 2.09 ft

Length of cut for each 6 in pipe = pi(6 in) = 1.57 ft

Tower cut length = (12 towers)[(12 cuts)(2.09ft)+(48 cuts)(1.57 ft)] = 1,165.0 ft

Equivalent cut length for 1 in plate = ($\frac{1}{2}$)(1,104.8 ft) = 291.2 ft

020-730-0010 (Torch Cutting, 1 in plate)

Equivalent cut length = 13390 ft + 291.2 ft = 13681.2 ft

Cost = (0.923)(2.65/ft)(13681.2 ft) = \$1,038.80

Time = 13681.2 ft/(95 ft/day) = 144.0 days/4 crews = 36.0 days

431.2

Assume each truss section takes 30 min. average and each tower piece 10 min. average to load.

Crane Time = (40 cuts)($\frac{1}{2}$ hr) + (12 pieces)(12 towers)(0.17 hr) = 445.5 hrs

Labor = (2 men)(445.5 hrs)(\$15.83/hr) \$1,408.87

Crane + operator = (445.5 hrs)(\$78.25) \$3,482.13

\$4,891.00

Time = 5.69 days

020-554-5200 (Reinforced Concrete)

Volume = (12 towers)(4)(3ft)(3ft)(1ft) = 432 cu ft/27 = 16.0 cu yd

Cost = (0.932)(86.00/cu yd)(16.0 cu yd) = \$1,282.43

Time = 16.0 cu yd/(25 cu yd/day) = 0.64 days

020-554-5550 (Concrete Disposal on Site)

Volume = 16.0 cu yd

Cost = (0.923)(4.64/cu yd)(16.0 cu yd) = \$68.52

Time = 16.0 cu yd/(232 cu yd/day) = 0.07 days

Cost Subtotal \$7,280.75 ~~406.55~~
Time Subtotal 7.4~~3~~ days

Building Enclosure for Tank Seam Belt Portal

020-604-0500 (Steel Building, includes disposal)
Volume = (12 ft)(12 ft)(12 ft) = 1,728 cu ft
Cost = (0.923)(0.16/cu ft)(1,728 cu ft) = \$255.19
Time = 1,728 cu ft/(14,800 cu ft/day) = 0.12 days

Cost Subtotal \$255.19
Time Subtotal 0.12 days

Remove Structures Cost Total = \$62,025.00 ~~66,639.36~~
Remove Structures Time Total = ~~39.58~~ 41.5 days

~~Time = 1.38 days~~

RCP Culverts:

020-554-5200 (Reinforced Concrete)

Volume = $\pi(5 \text{ ft})(4/12)(140 \text{ ft}) = 733 \text{ cu ft}/27 = 27.15 \text{ cu yd}$

Cost = $(0.923)(86.00/\text{cu yd})(27.15 \text{ cu yd}) = \$2,155.11$

Time = $27.15 \text{ cu yd}/(25 \text{ cu yd/day}) = 1.09 \text{ days}$

020-554-5550 (Concrete Disposal on Site)

Volume = 27.15 cu yd

Cost = $(0.923)(4.64/\text{cu yd})(27.15 \text{ cu yd}) = \116.28

Time = $27.15 \text{ cu yd}/(232 \text{ cu yd/day}) = 0.12 \text{ days}$

RIP RAP VOLUME SUMMARY

Reclaimed Channel	Reclaimed Length ¹ (ft)	Rip Rap Area ² (sq ft)	Rip Rap Volume (cu yd)
RC1	As built - adequate for reclamation		
RC2	640	50.5	1,197
RC3	1,030	50.5	1,926
RC4	160	32	190
RC5	165	28	171
RC6	25	32	30
RC7	30	13	14
RC8	120	13	58
RC9	190	30	211
RC10	190	165	<u>1,161</u>
Total			4,958

Notes: 1 See plates 7-8A, 7-8B.
2 See appendix 7-H.

e. Revegetation

Drill Seeding (Section 9.5) 16 acres x \$891.00/acre	\$14,256.00
Hydroseeding (Section 9.5) 9.7 acres x \$1,667.00/acre	\$16,169.90
Riparian Area Planting (Section 9.5) 1 acre x \$2,210.00/acre	\$ 2,210.00
Install Matting (Section 9.5) 3.7 acres x \$3,103.75/acre	<u>\$11,483.88</u>
Cost Total	\$44,119.78

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	<u>\$ 63.32</u>
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 @ \$1,000.00/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	<u>532.88/yr</u>
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	<u>2,456.44/yr</u>
Subtotal	\$2,963.00/yr
Cost Total	10 yrs x \$2,963.00 = \$29,630.00

i. Supervision - ~~20-221.6~~ weeks @ \$707.20/week

~~\$14,285.44~~
\$15,275.52

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.

EXISTING STRUCTURES

Table 3A-1 lists each structure and construction dates. Reclamation is expected in 2012.

Table 3A-1 Existing Structures

<u>Existing Structure</u>	<u>Construction Dates</u>		<u>Photo #</u>
	<u>Starting</u>	<u>Completion</u>	
Fuel Tanks	10/83	6/84	2
Truck Loading Facility	9/82	4/83	3
Shop - Bathhouse - Warehouse	10/83	9/84	4
Added Machine Shop	11/89	12/89	5
Oil Slack Loading Facility	4/83	7/83	3
Storage & Stacking Facility	6/80	4/84	3
Coal Processing Facility	4/80	12/85	6
Non-Coal Storage Yard	3/80	9/84	7
Transformer Sub-Station	4/80	6/80	8
Conveyor Structures	3/80	6/80	3
Cross Conveyor	7/89	9/89	9
Sales Receiving-Scale Office	6/84	10/87 (Phase I) 10/92 (Phase II)	Fig 3A-1 1
Coal Storage Bins	4/85	10/85	11
Powder Magazine	9/82	containerized	7
Lump Coal Facility	10/83	12/85	6
Electric Service Depot	Mobile Trailer		12
Water Tanks & System	8/82	11/82	13
Mine Fan	9/82	11/82	14
Lump Coal Storage Pad	8/92	10/92	15
Equipment Wash Pad	8/92	10/92	16
Shower House	under construction		17
Antifreeze Storage Tank	12/93	1/94	18
Tank Seam Fan	under construction		19
Tank Seam Borehole Structure	under construction		20

16. ~~Electric Service Depot. Storage for electric supplies~~ located in non-coal storage yard. See Photo #12. ~~Removed~~
17. Water Tanks. Surge tanks - part of bathhouse water supply system. See Photo #13.
18. Mine Fan. Mine Ventilation fan - MSHA approved has safety guards in place. See Photo #14.
19. Lump Coal Storage Pad. Consists of a concrete pad and misc. concrete retaining walls. See Photo #15
20. Equipment Wash Pad. Consists of a concrete pad with a grease and oil trap.
21. Shower House. Consists of a two story masonry block structure that houses employee showers, training classrooms and offices. See Photo #16. The waste disposal system is discussed in Appendix 3-J.
22. Antifreeze Storage Tank. Consists of 2,000 gal storage tank. Antifreeze solution is used to spray truck hoppers during periods of cold weather to prevent coal from freezing in transit. Tank is enclosed by a metal structure to hold entire capacity of tank in the event of a spillage.
23. Tank Seam Fan. Tank Seam Ventilation Fan - MSHA approved, has safety guards in place. See photo #18.
24. Tank Seam Borehole Structure. Metal structure fully enclosing borehole and conveyor - conveys coal from Tank Seam mine to the Blind Canyon Seam Mine. See photo #19.



Photo #11 Coal
Recovery Bin

~~Removed~~

Photo #12 ~~Electrical Service Depot~~

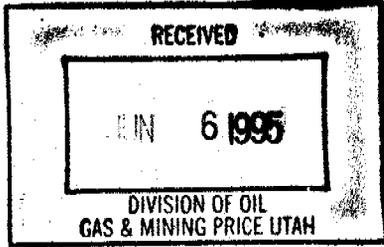
3.6.8 Reclamation Bonding

BOND

CO-OP MINING COMPANY

BEAR CANYON MINE

ACT/015/025, EMERY COUNTY, UTAH



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 - 7.98.3 weeks	9.49.8 weeks
c. Soil Replacement and Ripping - 78.6 weeks	16.418.4 weeks
d. Channel Restoration - 2.2 weeks	18.620.6 weeks
e. Revegetation - 1 week	20.121.6 weeks

The above reclamation tasks can, therefore, be completed within ~~20.221.6~~ weeks following the start of reclamation activities.

Summary of Reclamation Cost Estimate

a.	Seal Portals and Backfill	\$ 45,500.00
b.	Removal of Structures	\$ 62,025.00 \$ 66,639.36
c.	Soil Placement and Ripping	\$ 76,398.32
d.	Channel Restoration	\$ 51,045.00
e.	Revegetation	\$ 44,119.78
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 (20-221.6 weeks)	\$ 14,285.44 15,275.52
j.	Mobilization and Demobilization	\$ 2,500.00
		<u>\$ 364,761.06</u>
	5.1% Reclamation Management Cost	\$ 18,602.81 18,888.64
	10 pct contingency	\$ 36,476.11 37,036.55
	(1990 dollars)	<u>\$ 419,839.98</u> <u>\$ 426,290.69</u>

<u>Escalated Values</u>	<u>Escalation Factor</u>
1991 - \$425,172 431,705	1.27% (actual)
1992 - \$434,568 441,245	2.21% (actual)
1993 - \$445,606 452,453	2.54% (actual)
1994 - \$454,563 461,547	2.01% (est)
1995 - \$463,700 470,824	2.01% (est)
1996 - \$473,020 480,288	2.01% (est)
1997 - \$482,528 489,942	2.01% (est)
1998 - \$492,227 499,789	2.01% (est)
1999 - \$502,120 509,835	2.01% (est)
2000 - \$520,083	2.01% (est)

Bond will be posted in accordance with R645-301-820.

Reclamation Costs

a. Seal and Backfill Portals

AMR Costs-\$3,500/seal including
backfill x 13 seals \$ 45,500.00

b. Removal Structures

All estimates with 10 digit numbers are from 1990 Means Site Work cost Data. Utah adjustment factor = 0.923. Most of the steel and equipment will be salvaged for scrap or reuse. M&P Enterprises in Huntington, Utah will pick up and pay \$40.00/ton for scrap iron & equipment if placed in 30 cu yd (8ft wide x 20 ft long x 5 ft high) dumpsters or loaded with crane on their trucks.

Sales-Receiving-Scale House Complex

020-604-0700 (Wood Building, includes disposal)
Volume = (40 ft)(80 ft)(20 ft) = 64,000 cu ft
Cost = (0.923)(0.16/cu ft)(64,000 cu ft) = \$9,451.52
Time = 64,000 cu ft/(14,800 cu ft) = 4.32 days

Cost Subtotal \$9,451.52
Time Subtotal 4.32 days

Shower House

020-604-0700 (Wood Portion, includes disposal)
Volume = (92 ft)(50 ft)(8 ft) = 36,800 cu ft
Cost = (0.923)(0.16/cu ft)(36,800 cu ft) = \$5,434.62
Time = 36,800 cu ft/(14,800 cu ft/day) = 2.49 days

020-604-0650 (Masonry Portion, includes disposal)
Volume = (92 ft)(50 ft)(8 ft) = 36,800 cu ft
Cost = (0.923)(0.16/cu ft)(36,800 cu ft) = \$5,434.62
Time = 36,800 cu ft/(14,800 cu ft/day) = 2.49 days

Cost Subtotal \$10,869.24
Time Subtotal 4.98 days

Shop

020-604-0500 (Steel Building, includes disposal)
Volume = (40 ft)(93 ft)(18 ft) = 66,960 cu ft
Cost = (0.923)(0.16/cu ft)(66,960 cu ft) = \$9,888.65
Time = 66,960 cu ft/(14,800 cu ft/day) = 4.52 days

Cost Subtotal \$9,888.65
Time Subtotal 4.52 days

Machine Shop

020-604-0500 (Steel Building, includes disposal)
Volume = (30 ft)(40 ft)(12 ft) = 14,400 cu ft
Cost = (0.923)(0.16/cu ft)(14,400 cu ft) = \$2,126.59
Time = 14,400 cu ft/(14,800 cu ft/day) = 0.97 days

Cost Subtotal \$2,126.59
Time Subtotal 0.97 days

Mobile Electric Trailer

~~Semi-Trailer 40 ft x 6 ft x 8 ft
Hook up and haul off. Assume:
Truck (Tractor) - operator = (3 hrs)(\$47.11/hr) \$ 141.33~~

~~Cost Subtotal \$141.33
Time Subtotal 0.38 days~~

Coal Processing/Crusher Facility (Tipple)

27 ft x 52 ft Approx.
(25% is 25 ft high, 50% is 17 ft high, and 25% is 8 ft high.)
Secondary Structure = 20' X 30' X 51' high

020-604-0500 (Steel Building, includes disposal)
Volume₁ = (27ft)(52ft)[(.25)(25ft)+(.50)(17ft)+(.25)(8ft)] = 23,517ft³
Volume₂ = (20 ft) (30 ft) (51 ft) = 30,600 ft³
Cost = (0.923)(0.16/cu ft)(23,517+30,600 cu ft) = \$3,472,997.992.00
Time = 23,517+30,600 cu ft/(14,800 cu ft/day) = 1.593.66 days

020-604-0700 (Control House, Wood, includes disposal)
Volume = (12 ft)(20 ft)(10ft) = 2,400 cu ft
Cost = (0.923)(0.16/cu ft)(2,400 cu ft) = \$354.43
Time = 2,400 cu ft/(14,800 cu ft/day) = 0.16 days

Cost Subtotal \$3,827.428,346.43
Time Subtotal 1.753.82 days

Water Tanks

Two tanks approx. 14 ft diam. x 10 ft high and one tank approx. 10 ft diam. x 20 ft high with average 3 in diam. x 1/2 in pipe top and bottom.

Cut pipes top & bottom, load on truck.

approx. cut length = (2 tanks)(2 pipes)(pi)(3 in) = 3.14.7 ft

020-730-0010 (Torch cutting, 1 in plate)

Equivalent length (for 1 in plate) = (0.25)(3.14.7 ft) = 0.8 ft

Cutting Cost = (0.923)(2.65/ft)(0.81.2 ft) = \$12.963 1.2

Cutting Time = 0.81.2 ft/(95 ft/day) = 0.01 days

Assume each tank takes 1 hr to load.

Labor = (2 men)(2 tanks)(1 hr)(\$15.83/hr) = \$ 63.32 94.98

Crane + operator = (2 tanks)(1 hr)(\$78.25/hr) = \$ 156.50 234.75

\$ 219.82 329.73

Time = 0.2538 days

Cost Subtotal \$221.78 332.66

Time Subtotal 0.2639 days

Fuel Storage and Stoker Oil Tanks

(2) Tanks approx 13.5 ft diam. x 10 ft high

(1) Tank approx 11.5 ft diam. x 23 ft high

(2) Tanks approx 9 ft diam. x 19 ft high

(1) Tank approx 4 ft diam. x 11 ft long

(1) Tank approx 7 ft diam x 7 ft high w/9.5 ft diam x 5 ft high outer tank

(7) Tanks - Total

Similar to water tanks.

Approx pipe cutting length = (7 tanks)(2 pipes)(pi)(3 in) = 11 ft

020-730-0010 (Torch Cutting, 1 in Plate)

Equivalent length (for 1 in plate) = 0.25(11 ft) = 2.75 ft

Cutting Cost = (0.923)(2.65/ft)(2.75 ft) = \$6.73

Cutting Time = 2.75 ft/(95 ft/day) = 0.03 days

Assume each tank takes 1 hr to load.

Labor = (2 men)(7 tanks)(1 hr)(\$15.83/hr) = \$ 221.62

Crane + operator = (7 hrs)(\$78.25/hr) = \$ 547.75

\$ 769.37

Time = 0.88 days

Cost Subtotal \$776.10

Time Subtotal 0.91 days

Structures and Conveyors (Including Loadouts)

Below are approx average dimensions used to estimate all conveyors and support towers.

Typical conveyor truss approx 5 ft x 5 ft x 40 ft long sections with angles at corners and bar or angle cross members with 2 ft wide walkway.

Cut trusses into 40 ft lengths for reuse or salvage and load on truck.

Trusses:

Conveyor length = 1,600 ft
Number of cuts = 1,600 ft/40 ft = 40 cuts
For each cut, assume (10) (L4x4x1/2) (conservative)
Truss cut length = (10)(8 in)(40 cuts) = 26700 ft
(Truss) equivalent cut length for 1 in plate = (1/2)(26700 ft) = 13350 ft

Typical conveyor Tower.

(4) 8 in diam. x 1/2 in pipe x 60 ft high legs (average) spaced 8 ft apart with 6 in diam. x 1/2 in pipe cross members at approx 45° angle.

Cut towers into 20 ft lengths and load in dumpster.

Towers:

Number of towers = 12
Cut into 12 pieces/tower
Number of cuts/tower for 8 in pipe = 3 cuts(4 legs) = 12 cuts
Number of cuts/tower for 6 in pipe = 4 cuts(12 cross members) = 48 cuts
Length of cut for each 8 in pipe = pi(8 in) = 2.09 ft
Length of cut for each 6 in pipe = pi(6 in) = 1.57 ft
Tower cut length = (12 towers)[(12 cuts)(2.09ft)+(48 cuts)(1.57 ft)] = 1,165.0 ft
Equivalent cut length for 1 in plate = (1/2)(1,104.8 ft) = 291.2 ft

020-730-0010 (Torch Cutting, 1 in plate)

Equivalent cut length = 13350 ft + 291.2 ft = 424731.2 ft
Cost = (0.923)(2.65/ft)(424731.2 ft) = \$1,030,0054.69
Time = 424731.2 ft/(95 ft/day) = 4470.85 days/4 crews = 1117.71 days

Assume each truss section takes 30 min. average and each tower piece 10 min. average to load.

Crane Time = (40 trusses)(1/2 hr) + (12 pieces)(12 towers)(0.17 hr) = 445.5 hrs
Labor = (2 men)(445.5 hrs)(\$15.83/hr) \$1,400.87 40.53
Crane + operator = (445.5 hrs)(\$78.25) \$3,482.13 560.38
\$4,891.00 5,000.91

Time = 5.69 days

020-554-5200 (Reinforced Concrete)

Volume = (12 towers)(4)(3ft)(3ft)(1ft) = 432 cu ft/27 = 16.0 cu yd
Cost = (0.932)(86.00/cu yd)(16.0 cu yd) = \$1,282.43
Time = 16.0 cu yd/(25 cu yd/day) = 0.64 days

020-554-5550 (Concrete Disposal on Site)

Volume = 16.0 cu yd
Cost = (0.923)(4.64/cu yd)(16.0 cu yd) = \$68.52
Time = 16.0 cu yd/(232 cu yd/day) = 0.07 days

Cost Subtotal ~~\$7,280.75~~ 406.55
Time Subtotal 7.453 days

Building Enclosure for Tank Seam Belt Portal

020-604-0500 (Steel Building, includes disposal)
Volume = (12 ft)(12 ft)(12 ft) = 1,728 cu ft
Cost = (0.923)(0.16/cu ft)(1,728 cu ft) = \$255.19
Time = 1,728 cu ft/(14,800 cu ft/day) = 0.12 days

Cost Subtotal \$255.19
Time Subtotal 0.12 days

Remove Structures Cost Total = \$62,025.0066,639.36
Remove Structures Time Total = 39.5841.5 days

~~Time = 1.38 days~~

RCP Culverts:

020-554-5200 (Reinforced Concrete)

Volume = $\pi(5 \text{ ft})(4/12)(140 \text{ ft}) = 733 \text{ cu ft}/27 = 27.15 \text{ cu yd}$

Cost = $(0.923)(86.00/\text{cu yd})(27.15 \text{ cu yd}) = \$2,155.11$

Time = $27.15 \text{ cu yd}/(25 \text{ cu yd/day}) = 1.09 \text{ days}$

020-554-5550 (Concrete Disposal on Site)

Volume = 27.15 cu yd

Cost = $(0.923)(4.64/\text{cu yd})(27.15 \text{ cu yd}) = \116.28

Time = $27.15 \text{ cu yd}/(232 \text{ cu yd/day}) = 0.12 \text{ days}$

RIP RAP VOLUME SUMMARY

Reclaimed Channel	Reclaimed Length ¹ (ft)	Rip Rap Area ² (sq ft)	Rip Rap Volume (cu yd)
RC1	As built - adequate for reclamation		
RC2	640	50.5	1,197
RC3	1,030	50.5	1,926
RC4	160	32	190
RC5	165	28	171
RC6	25	32	30
RC7	30	13	14
RC8	120	13	58
RC9	190	30	211
RC10	190	165	<u>1,161</u>
Total			4,958

Notes: 1 See plates 7-8A, 7-8B.
 2 See appendix 7-H.

e. Revegetation

Drill Seeding (Section 9.5) 16 acres x \$891.00/acre	\$14,256.00
Hydroseeding (Section 9.5) 9.7 acres x \$1,667.00/acre	\$16,169.90
Riparian Area Planting (Section 9.5) 1 acre x \$2,210.00/acre	\$ 2,210.00
Install Matting (Section 9.5) 3.7 acres x \$3,103.75/acre	<u>\$11,483.88</u>
Cost Total	\$44,119.78

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	<u>\$ 63.32</u>
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 @ \$1,000.00/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	<u>532.88/yr</u>
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	<u>2,456.44/yr</u>
Subtotal	\$2,963.00/yr
Cost Total	10 yrs x \$2,963.00 = \$29,630.00

i. Supervision - 20-221.6 weeks @ \$707.20/week

\$14,285.44
<u>\$15,275.52</u>

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.

EXISTING STRUCTURES

Table 3A-1 lists each structure and construction dates. Reclamation is expected in 2012.

Table 3A-1 Existing Structures

<u>Existing Structure</u>	<u>Construction Dates</u>		<u>Photo #</u>
	<u>Starting</u>	<u>Completion</u>	
Fuel Tanks	10/83	6/84	2
Truck Loading Facility	9/82	4/83	3
Shop - Bathhouse - Warehouse	10/83	9/84	4
Added Machine Shop	11/89	12/89	5
Oil Slack Loading Facility	4/83	7/83	3
Storage & Stacking Facility	6/80	4/84	3
Coal Processing Facility	4/80	12/85	6
Non-Coal Storage Yard	3/80	9/84	7
Transformer Sub-Station	4/80	6/80	8
Conveyor Structures	3/80	6/80	3
Cross Conveyor	7/89	9/89	9
Sales Receiving-Scale Office	6/84	10/87 (Phase I) 10/92 (Phase II)	Fig. 3A-1 1
Coal Storage Bins	4/85	10/85	11
Powder Magazine	9/82	containerized	7
Lump Coal Facility	10/83	12/85	6
Electric Service Depot	Mobile Trailer		12
Water Tanks & System	8/82	11/82	13
Mine Fan	9/82	11/82	14
Lump Coal Storage Pad	8/92	10/92	15
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16. ~~Electric Service Depot.~~ ~~Storage for electric supplies~~ ~~located in non-coal storage yard.~~ ~~See Photo #12.~~ ~~Removed~~
17. Water Tanks. Surge tanks - part of bathhouse water supply system. See Photo #13.
18. Mine Fan. Mine Ventilation fan - MSHA approved has safety guards in place. See Photo #14.
19. Lump Coal Storage Pad. Consists of a concrete pad and misc. concrete retaining walls. See Photo #15
20. Equipment Wash Pad. Consists of a concrete pad with a grease and oil trap.
21. Shower House. Consists of a two story masonry block structure that houses employee showers, training classrooms and offices. See Photo #16. The waste disposal system is discussed in Appendix 3-J.
22. Antifreeze Storage Tank. Consists of 2,000 gal storage tank. Antifreeze solution is used to spray truck hoppers during periods of cold weather to prevent coal from freezing in transit. Tank is enclosed by a metal structure to hold entire capacity of tank in the event of a spillage.
23. Tank Seam Fan. Tank Seam Ventilation Fan - MSHA approved, has safety guards in place. See photo #18.
24. Tank Seam Borehole Structure. Metal structure fully enclosing borehole and conveyor - conveys coal from Tank Seam mine to the Blind Canyon Seam Mine. See photo #19.



Photo #11 Coal
Recovery Bin

~~Removed~~

Photo #12 ~~Electrical Service Depot~~