

0014



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

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September 23, 1994

Robert Burnham
Sunnyside Coal Company
1113 Spruce Street
Boulder, Colorado 80302

Re: Findings Concerning Required Performance Bond

Dear Mr. Burnham:

Attached to this letter is the Division's Findings dated September 23, 1994, which support the Division's determination that the required bond for the Sunnyside Mine is \$8.6 million. Because the permittee is presently under the protection of the Bankruptcy Act, having filed for Chapter 11 relief in the Federal District Bankruptcy Court for the District of Colorado, the Division is not taking enforcement action to enforce this requirement at this time.

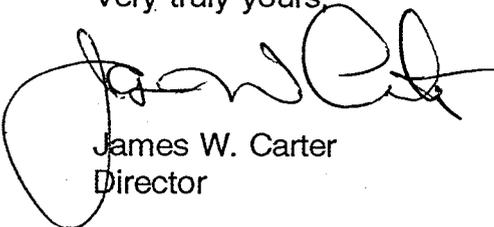
The Division believes that its appropriate relief in the first instance is to be found in the Bankruptcy Court. The Division is providing you with notice at this time of its bond Findings, and is providing these Findings to its attorneys to use in the proceedings before the Bankruptcy Court for the purpose of protecting its position as a creditor, as well as supporting its regulatory authority under the state statute. Subject to the approval of the Bankruptcy Court, the Division will enforce these Findings to the full extent provided by law.



Page 2
Robert Burnham
September 23, 1994

If you have any questions or concerns regarding the Division's Findings and determination of bond amount, please feel free to contact me at any time.

Very truly yours,

A handwritten signature in black ink, appearing to read "James W. Carter". The signature is fluid and cursive, with a large loop at the beginning and a horizontal line extending to the right.

James W. Carter
Director

Isj
Enclosure
FINDINGS.SSC

Analysis and Findings
Reclamation Bond Estimate
SUNNYSIDE COAL COMPANY
ACT/007/007
September 22, 1994

INTRODUCTION

These analysis and findings are made to determine the amount of the performance bond required for the Sunnyside Coal Mine, Sunnyside Coal Company (SCC), Permit ACT/007/007, in accordance with the requirements of R645-301-830.400 of the Utah coal mining rules. Evaluation of the bond amount required is necessary because the permittee has failed to meet regulatory requirements which can significantly affect the amount of performance bond required for reclamation. These deficiencies were enumerated in Division Order 94B which required the permittee to submit revised designs and plans for reclamation under the Utah Coal Regulatory Program.

In the findings section of this document, the bond amount required for the Sunnyside Coal Mine is found to be \$8,600,000.

ANALYSIS

Disturbed Area Boundary

The permittee has failed to incorporate portal highwalls and face-up areas associated with active mine openings within the disturbed and bonded permit area.. The permittee has failed to include cut and fill areas associated with pads and roads currently used by mining operations. These cut and fill structures are an integral part of the roads, pads and other facilities used during mining operations. Drainages and diversions which were affected by current and previous mining operations have been excluded by the permittee from the disturbed and bonded areas in the plan. Without incorporation of these areas into the bonded and disturbed area boundaries, the permittee cannot effectively reclaim the area to meet post mining land use or approximate original contour requirements.

In a draft reclamation cost estimate submitted by Sunnyside Coal Company to the Division as Table III-24, revised 2/7/94, a summary of the disturbed areas acreages for the permit area was provided. This table indicates that the total disturbed area for the site totals 181.6 acres. An evaluation of the maps and aerial photography of the permit area shows that the disturbed area boundaries do not correspond to the areas indicated on the maps and drawings. The disturbed area boundaries on the current maps correlate only to surfaces of the pads and roads. These boundaries do not include the cut and fill areas above and below these features.

Any interpretation of the maps and drawings provided in the reclamation plan produce a wide variation in the amount of acres measured due in part to an inappropriate map scale of

1"=500' and the lack of map details on the drawings. Evaluation of the maps yielded disturbed area acres ranging from 200 to over 400 acres. Reliance on the information presented on the maps in the plan generated a moderate figure of 285 acres of total disturbed area for the purpose of cost estimation for bonding. In comparison to the 181.6 acres currently presented in the plan, this represents an increase in the disturbed area acreage of 103.4 acres.

The adjusted disturbed area acreages are shown in Table 2 - Disturbed Area Acreages. These adjusted acreages are for the purposes of cost estimation only. A more detailed delineation of these boundaries was required of SCC by Division Order 94B.

Land Use

Much of the cost estimation information provided in the plan by the permittee is based on alternate post mining land uses which would allow for the retention of certain structures and facilities including, but not limited to; offices, shops, pad areas, railroad spurs, and roads. Alternate post mining land use must be approved in accordance with the requirements of R645-301-413. Information regarding alternate post mining land use has not been received or approved by the Division. Therefore, adequate bond must be provided to reclaim the land to the pre-mining land use.

Criteria used for determining reclamation costs must take into account the possibility that if a proposed alternate land use fails to meet reclamation success standards for bond release, the site can be reclaimed to the pre-mining land use. The reclamation bond amount is the cost required to return the land to the original pre-mining land use following the cessation of mining operations. Any reductions based on an alternate land use which would effectively reduce the bond amount can not be allowed until such time as the area meets all other regulatory requirements for bond release. Bonding costs are therefore based on the costs for removal of structures and facilities and reconfiguration of the land to its pre-mining land use.

Currently, the plan lacks any specificity to allow the Division to approve any alternate post mining land uses.¹ A detailed reclamation plan does not exist which would show costs

¹Land use and facilities including utility corridors, right-of-ways, and facilities must be adequately described in the plan. The description must explain the constraints regarding those areas especially in regard to their affect on reclamation requirements and demonstrate that such use constitutes a higher and better land use than the pre mining land use. Alternate post mining land use is subject to a significant revision of the permit, public notice, and written approval by the landowner accepting the alternate post mining land use.

or cost savings from retention of any post mining structures or facilities. Therefore, no consideration has been given to such facilities in this estimate for the required bond amount.

Demolition and Removal

Costs for demolition and removal are found in Table 3 - Demolition and Removal of Facilities. The quantity and type of work described in this table relies on information provided by the permittee. The unit costs are derived from Means Cost Data, 1994.²

A summary sheet in Table 3, entitled Summary of Demolition Cost Using Off-Site Disposal, shows cost considerations involving demolition and removal where all foundations, footings, and demolition materials would be removed and all demolition materials would be disposed of off-site. The total cost for demolition and removal based on off-site disposal was found to be \$4,077,576.

A second summary sheet in Table 3, entitled Summary of Demolition Cost Using On-Site Disposal and Burial, is also included to show cost savings that might be achieved if a specific reclamation plan were provided to address the final location and disposition of all foundations and demolition material. A significant reduction in the overall demolition cost is primarily due to the reduction of dump charges being reduced from \$37.00 per cubic yard for disposal off-site to a landfill to \$6.20 for burial of the materials on-site. A second possibility in lowering the demolition and removal cost is allowing 50% of the concrete footers and foundations to be buried in-place during backfilling operations reducing those costs by half. These two factors if proved feasible, reduce the overall demolition cost to \$2,180,308. Although the plan has not detailed the extent to which in-place abandonment and burial of foundations and footers will occur, such considerations are reasonable in determination of the bond amount required.

While salvage values for materials and equipment is normally not part of the evaluation of reclamation costs for the determining the bonding amount, salvage values for the demolition and removal of these structures were evaluated and are included in the Summary of Demolition Cost for On-Site Disposal and Burial. Salvage value was based on 25% of the demolition cost for all structures of varying composition as noted in the cost summary. While certain structures and facilities may have a higher individual salvage value, similarly lower values would apply to concrete and masonry structures. The total amount of salvage value derived from the demolition cost was found to be \$311,564. This amount however, cannot be incorporated as a reduction in the bond amount required for several

²Means Heavy Construction Cost Data, 1994, 8th Annual Edition, R.S. Means Company, Inc., Kingston, MA.

reasons including variations in fair market value for salvaged materials, program requirements which do not allow property and assets directly pertaining to mining and related activities to be posted as collateral for bonding, and liens or other claims attaching to equipment or materials which may be senior to any claims by the Division for their salvage value.

Costs used in determination of the bond amount will exclude any salvage value, but do allow for on-site disposal and burial of foundations in-place where practical. Therefore, the bond requirement for demolition is \$2,180,308 as shown in Table 3, Summary of Demolition Cost Using On-Site Disposal and Burial.

Mine Openings

A total of 42 mine openings exist within the permit area, 33 portals and 9 shafts. Some of these mine openings have been sealed to meet MSHA requirements, but have not been closed to meet requirements for permanent reclamation under the Coal Regulatory Program.³ For the purposes of the bond amount required, the cost of sealing and reclaiming all mine openings is used since no bond release for any of these mine openings has occurred.

Although the work required for each mine opening varies and specific designs for each mine opening needs to be developed, the following is assumed only for the purposes of this cost estimate. All portals are to be closed by backfilling at a unit cost of \$3,000 each. Shafts are found in primarily two different diameters, 16 feet and 7-8 feet in diameter. Shaft closure methods proposed in the current plan call for capping the shafts with a 6" concrete pad, which meets MSHA requirements but does not provide for a permanent type of closure method for final reclamation. Backfilling of these shafts, because of their depth, is considered impractical in that they average 1,600 feet in depth. A suitable closure method for these shafts requires the construction of a reinforced concrete bulkhead capable of sealing the mine opening and supporting backfilled material over the shaft during reclamation backfilling and grading. Construction of the reinforced concrete bulkheads for the shafts has been estimated at \$6,000 each for the 7-8' diameter shafts and \$12,750 each for the 16' diameter shafts.

A summary of the total cost estimate for sealing mine openings is found in Table 4 -

³SCC has ceased ventilation and dewatering of the mine workings. Incomplete and inadequate sealing of the mine openings at this time poses an immanent danger by allowing access into the mine openings. All openings should be at least temporarily closed as soon as possible to at least meet MSHA's requirements to minimize the hazards associated with access into the mine. Designs for reclamation in permanent closure of all mine openings is deficient in the current mining and reclamation plan and is a priority concern.

Closure of Mine Openings. The total cost for closure of the 42 mine openings is estimated at \$103,250.

Earthwork

Backfilling and grading plans for reclamation of the surface facilities and operations are inadequate for the following reasons. (Refer also to Division Order 94B) Contour information on the drawings does not clearly show the location and the extent of the current mining operations and provides no detail with regard to the design detail for reclamation. No cross sections have been prepared by the permittee to show that slopes will be regraded to approximate the original pre-mining surface configuration. All of these are minimum requirements as required under R645-301.521 of the state coal rules. Detailed design information including maps, cross sections and mass balance calculations have not been provided to show that suitable reclamation of the surface operations can be accomplished.

Consequently, there are no detailed earthwork calculations available for evaluation by the Division. Cost estimation for earthwork can only be based on a more generalized, unit cost estimate. The failure of the permittee to accurately delineate the disturbed area boundary also affects the ability of the Division to determine the extent to which reclamation treatments, including backfilling and grading can be accomplished with reasonably available spoil materials.

This information is important because the site consists primarily of pre-SMCRA disturbances where no topsoil materials were salvaged for redistribution. The costs used in determining the bond amount consider the use of existing materials within the disturbed area as substitute topsoil materials. No imported soil materials are factored into the cost estimation. Coal mine waste and refuse materials within the permit area can be incorporated into the fills for highwall elimination and other large fill areas or hauled to the refuse disposal facilities jointly permitted by Sunnyside Coal Company and Sunnyside Cogeneration Associates. Adequate cover materials are believed to exist within the Sunnyside Cogeneration for use as a permanent refuse disposal facility by the permittee although it is no longer controlled by the permittee. No additional borrow areas are likely to be required for the Sunnyside Coal Company operations because all permanent refuse disposal facilities occur within the permit area owned and controlled by Sunnyside Cogeneration Associates.

The cost of backfilling and grading is based on unit cost calculations which are summarized in Table 5 - Reclamation Costs for Backfilling and Grading. the unit costs used for Backfilling and Regrading is based on an average regrading depth of 3 feet and a unit cost of \$2.55 per cubic yard. The unit cost of \$2.55 per cubic yard is an averaged cost for excavation, haulage, dumping, spreading and compaction of materials throughout the site. Normally the cost for backfilling and grading is based on mass balance calculations,

equipment selection, and productivity calculations in order to determine earthmoving costs. Due to the lack of any of this information in the plan, a more general unit cost is required. For the estimated 285 acres of disturbed area, the calculations yielded 1,379,400 cubic yards of backfilling at a cost of approximately \$3,517,000.

Channel Reconstruction and Sediment Control

The plan indicates that no diversion structures are currently planned. Further, no plans requirements to re-establish the drainage areas affected by surface operations are found within the text of the plan.

Grassy Trail Creek has been channelized throughout most of the area affected by mining. Numerous operational disturbed area and undisturbed area diversions exist within the permit area which have altered natural drainage patterns. The permittee's failure to provide a comprehensive reclamation plan with designs and maps to show that drainage areas and permanent diversions are re-established as required by the rules is a subject of Division Order 94B.

For the purpose of determining the bond amount for the restoration of perennial stream channels such as Grassy Trail Creek and for ephemeral/intermittent channel reconstruction, it has been assumed that the elimination of operational diversions and channels which are no longer needed during reclamation are included in the costs for general backfilling and grading. The cost for perennial stream channel reconstruction is estimated at \$95 per lineal foot and for ephemeral/intermittent channel reconstruction at \$45 per lineal foot. These costs are associated with the cost of channel reconstruction itself and not with the cost for general grading and earthwork required for re-establishment of the drainage systems.

Sediment control structures are required during phased reclamation activity and involve construction of temporary sediment ponds, diversions and other sediment control structures to maintain adequate sediment control until such time as vegetative growth is established for erosion protection. The plan lacks designs and timing for the installation and removal of such sediment control facilities. In lieu of such designs, a unit cost per acre has been developed for the site for determination of the bond amount. This unit cost for sediment control has been estimated at \$350 per acre.

A summary of the cost estimates for channel construction and sediment control is found in Table 6 - Channel Reconstruction and Sediment Control Costs. The total amount estimated for this reclamation work is \$580,500.

Revegetation Costs

The cost of revegetation is determined on a per acre basis. Specific treatments and costs associated with seedbed preparation, soil amendments, seed mixture, mulch, and application of seed and mulch are normally used to determine the reclamation costs associated with revegetation. The cost of revegetation is also be dependent on the amount and type of other reclamation work involved on the site as well as the intended post mining land use. However, due to the lack of specific reclamation designs and treatments necessary to determine these costs, a per unit cost of \$500 per acre is adopted by the Division. A summary of the revegetation cost associated with the Sunnyside Mine is presented in Table 7 - Revegetation Costs. A total of \$142,500 has been estimated for the cost of revegetation.

Other Costs Used for Determination of the Bond Amount

In addition to the specific areas of reclamation described above, several other costs are associated with the determination of the bond amount. These costs include costs of administration, design and engineering, maintenance and monitoring, and escalation of the bond amount. The Division has derived these costs from other performance bonds in Utah and actual reclamation experience. These cost factors have been incorporated into Table 1 - Summary of Reclamation Costs.

Administrative, design and engineering costs are those costs which would be required to develop specific engineering plans and specification for bidding and construction as well as those costs required to inspect and manage the site administratively throughout reclamation construction. For the purposes of this bond estimate the administrative, design and engineering costs are set at 6% of the reclamation costs.

Maintenance and monitoring costs are costs necessary to maintain and monitor the site to meet and demonstrate compliance with the performance standards required for reclamation and for reclamation success. These costs include surface water monitoring, vegetation monitoring, repairs and additional treatments which may be necessary to meet reclamation success throughout the ten-year bond liability period. For the purposes of this cost estimate, maintenance and monitoring costs are set at 6% of the reclamation costs.

Contingency costs are generally based on the reliability of the design information, the cost estimate provided by the operator and additional not factored into other areas of reclamation. Based on the amount of information provided in the approved reclamation plan, a contingency factor of 50% is justified. However, cost estimates set forth in this document have, to some extent, already anticipated these contingencies. Nonetheless, the lack of specificity in the reclamation plan warrants a substantial contingency factor. For the purposes of this cost estimate, the contingency factor is set at 10% of the reclamation costs.

Means Cost Data information is the basis for determining the escalation factor used by

the Division for all coal bonds. For 1994, this escalation factor has been determined to be 2.01% per year. Bonds are escalated to allow for future costs which may be incurred over the permit term. Accordingly, bonds are normally escalated for a 5-year period to ensure adequate bond over the permit term. A memo showing the escalation factor has been attached to this document following the above referenced tables. Calculations used for projecting the escalation factor require compounding the amount at the escalation rate for four years only since the cost estimate allows for the cost in 1994 dollars.

Summary of Reclamation Costs

A summary of the reclamation costs used in determining the bond amount for the Sunnyside Coal Mine are provided in Table 1 - Summary of Reclamation Costs. Demolition and removal costs, closure of mine openings, backfilling and grading, channel reconstruction and sediment control, and revegetation costs constitute the reclamation costs for these specific reclamation treatments. The subtotal of the cost is \$6,524,028. In addition to these direct costs for reclamation other costs including administrative, design and engineering, maintenance and monitoring and contingency costs, which increase the amount required for the performance bond by an additional \$1,435,286. Escalation of the bond amount for the 5-year period associated with the permit term contributes an additional \$659,483 to the bond amount. The total bond amount required is rounded to the nearest \$100,000, and is \$8,600,000.

Other Cost Estimate Information

In addition to the Division's analysis and estimate of the bond amount, OSM has also conducted an evaluation of the bond amount required based on information collected by OSM and an evaluation of draft cost information provided in that analysis. A summary of this information can be found as an attachment following this analysis as a Memorandum from Karen F. Jass, Mining Engineer, OSM dated September 14, 1994. The consensus of both regulatory authorities is that a bond in the amount of \$8,600,000 is required.

The variation in the conditions and assumptions regarding the site work required due to the lack of specificity in the plan produced a wide range of possible bond calculations by both the Division and OSM ranging from \$4.8 to \$28.4 million. The most significant costs associated involved the possibility of the removal of contaminated soils and PCB transformers which varied from \$80,000 to \$5,000,000. Additionally, backfilling and grading costs involving the source of the materials to be used for backfilling and grading and topsoil caused the cost estimates to range from \$300,000 to over \$9,000,000 for regrading costs. This type of cost fluctuation can be expected due to the lack of information presented in the plan regarding reclamation designs. Without clear and specific designs demonstrating compliance with the coal program, a definitive cost estimate for actual reclamation cannot be readily

determined.

Determination of Bond Amount Required

Based on the estimate presented in these analysis, the bond amount is set at \$8,600,000. Although this amount is not the highest amount which may be justified, it does demonstrate a reasonable amount required for bonding. This bond amount could change if the permittee submitted a detailed and approvable reclamation plan with appropriate designs and cost information.

Bond Amount Required in Comparison to Actual Reclamation Costs

The determination of the bond amount required by the Division is not intended to be a prediction of the amount a permittee will spend to perform reclamation. Rather it is a determination the regulatory authority is required to make, which predicts what the state would spend if it was required to perform reclamation. While experience has shown that the amount of the performance bond is predictive of the magnitude of the reclamation obligation, in this case, it may understate the permittee's actual costs. This is true, because the state's reclamation costs under bond forfeiture do not reflect the more rigorous performance standards that a non-defaulting permittee is required to incur.

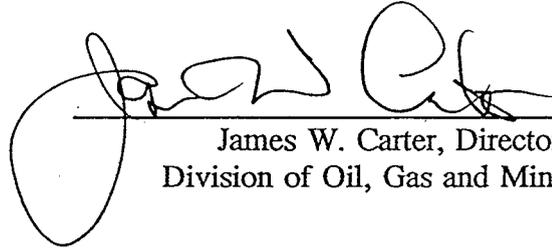
FINDINGS

The minimum bond amount required for the Sunnyside Coal Company is \$8,600,000. This bond amount is required to be posted by Sunnyside Coal Company. R645-301-830.400.

ORDER

Sunnyside Coal Company is in non-compliance with the Utah State Coal Program. As found at R645-301-830.400. In order to comply with the requirements of this section, Sunnyside Coal Company must provide a performance bond in the total amount of \$8.6 million.

Ordered this 22nd day of September, 1994, by the Division of Oil, Gas,
and Mining.

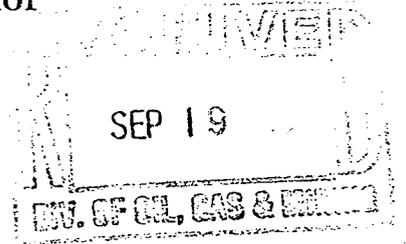
A handwritten signature in black ink, appearing to read "James W. Carter", written over a horizontal line.

James W. Carter, Director
Division of Oil, Gas and Mining



United States Department of the Interior

OFFICE OF SURFACE MINING
Reclamation and Enforcement
1999 Broadway, Suite 3320
Denver, Colorado 80202-5733



IN REPLY REFER TO:

September 14, 1994

TO: Randy Harden, Senior Reclamation Engineer
Utah Division of Oil, Gas and Mining

From: Karen F. Jass, Mining Engineer
Engineering Support Section

Through: Michael Rosenthal, Chief
Physical Sciences Branch 

Subject: Proposed Cost Estimate for Reclamation of Sunnyside
Coal Company, Sunnyside, Utah.

The recommended OSM estimate for the reclamation of the Sunnyside Coal Company is \$8,600,000.

As discussed during phone conversations with you, this estimate does not include the cost for removal of highly contaminated (PCB) soils. This estimate does assume all replacement soil material is available within the permit boundaries, and that 50% of foundations, demolished material, and footers are hauled to an on-site disposal area. These three costs are reasonable assumptions for most demolition operations, and the costs reflect the minimization of moving the materials.

Using the DOGM estimate as a base, I added a figure of \$139,029 for demolition and disposal of facilities shown on the map, but not addressed in the SCC or DOGM cost estimates. In addition, my estimate for engineering, design, and administration costs was \$362,400, replacing the DOGM figure of \$320,111. Using the DOG procedure for calculation of future costs (2.01%) the total estimate was \$8,565,233, or rounded to \$8,600,000.

If I can be of further assistance or if I can answer any questions, please contact me at (303) 672-5561.

DIRECT COSTS

Demolition/Removal of Facilities

| | | |
|----|----------------|-----------------------------|
| \$ | 2,058,476 | (DOG) |
| \$ | <u>139,029</u> | (additional costs from map) |
| \$ | 2,197,505 | Total |

Closure of Mine Openings

| | | |
|----|---------|--------|
| \$ | 103,250 | (DOGM) |
|----|---------|--------|

Backfilling and Grading (average 3 feet of material)

| | | |
|----|-----------|--------|
| \$ | 3,517,470 | (DOGM) |
|----|-----------|--------|

Channel Reconstruction and Sediment Control

| | | |
|----|---------|--------|
| \$ | 580,500 | (DOGM) |
|----|---------|--------|

Revegetation (285 AC at \$500/AC)

| | | |
|----|---------|--------|
| \$ | 142,500 | (DOGM) |
|----|---------|--------|

TOTAL DIRECT COSTS \$ 6,541,225

INDIRECT COSTS

Administrative/Design/Engineering

| | | |
|----|---------|--|
| \$ | 362,400 | |
|----|---------|--|

Maintenance/Monitoring (3%)

| | | |
|----|---------|--------|
| \$ | 196,237 | (DOGM) |
|----|---------|--------|

Contingency (10%)

| | | |
|----|---------|--------|
| \$ | 654,123 | (DOGM) |
|----|---------|--------|

TOTAL INDIRECT COSTS \$ 1,212,760

TOTAL DIRECT AND INDIRECT COSTS \$ 7,753,985

Escalation @ 2.01 over 4 years \$ 811,238

Overall Bond Estimate \$ 8,565,223

Assumptions for Engineering/Design/Administration Cost Estimate

1 Engineer X 40 hours/week X 24 weeks (6 months) X \$150/hour =
\$ 144,000

Surveying Crew - Initial

3 person crew X 40 hours/week X 4 weeks X \$40/hour =
\$ 19,200

Site Visit by Engineer

1 Engineer X 1 day/week X 4 weeks/month X 30 months X \$150/hour X
10 hours/day =
\$ 180,000

Surveying Crew - Final

3 person crew X 40 hours/week X 4 weeks X \$40/hour =
\$ 19,200

Total Assumed Cost \$ 362,400

TABLE 1 - SUMMARY OF RECLAMATION COSTS

This summary of reclamation costs for determination of the bond amount are based on those assumptions found in Tables 2 through 7 and as further explained in the analysis and findings.

| TABLE | DESCRIPTION | SUBTOTALS | BOND AMOUNT REQUIRED Until detail is provided for reclamation design |
|-------|--|-------------|--|
| 2 | Disturbed Area Acreage | 285.0 | |
| 3 | Demolition and Removal of Facilities | | |
| | Off-Site Disposal | \$3,805,165 | |
| | On-Site Disposal and Burial | \$2,180,308 | \$2,180,308 |
| | Salvage Value | (\$311,564) | |
| 4 | Closure of Mine Openings | \$103,250 | \$103,250 |
| 5 | Backfilling and Grading | \$3,517,470 | \$3,517,470 |
| 6 | Channel Reconstruction and Sediment Control | \$580,500 | \$580,500 |
| 7 | Revegetation | \$142,500 | \$142,500 |
| | Subtotal Reclamation Costs | | \$6,524,028 |
| | Other Costs | | |
| | Administrative, Design and Engineering @ 6% | | \$391,442 |
| | Maintenance and Monitoring @ 6% | | \$391,442 |
| | Contingency @ 10% | | \$652,403 |
| | Subtotal Other Costs | | \$1,435,286 |
| | Subtotal Escalation @ 2.01% per yr for 4 yrs | | \$659,483 |
| | Total Bond Amount Required (rounded to the nearest \$100,000) | | \$8,600,000 |

TABLE 2 - DISTURBED AREA ACREAGES

| AREA | DESCRIPTION | ACRES | ADJUSTED |
|------|------------------------------------|-------|----------|
| | | | ACRES |
| 1 | Surface Facilities Area | 65.0 | 90.0 |
| | Railroad Right-of-Way (Permanent) | 4.5 | 5.0 |
| | Permanent Road to No. 2 Canyon | 2.8 | 9.0 |
| | Subtotal | 72.3 | 104.0 |
| 2 | Fan Canyon - No. 2 Mine Fan Pad | 1.3 | 3.0 |
| | Fan Canyon Road | 2.0 | 6.0 |
| | Subtotal | 3.3 | 9.0 |
| 3 | Whitmore Fan Shaft Area | 6.3 | 8.0 |
| | Whitmore Return Shaft Area | 0.9 | 2.0 |
| | Subtotal | 7.2 | 10.0 |
| 4 | No. 2 Canyon Yard | 6.4 | 13.0 |
| | Permanent No. 2 Canyon Road | 6.2 | 15.0 |
| | No. 2 Canyon Fan Pad & Access Road | 1.5 | 5.0 |
| | Subtotal | 14.1 | 33.0 |
| 5 | Water Canyon Portals - No. 2 Mine | 2.2 | 4.0 |
| | Water Canyon Refuse Area | 3.7 | 4.0 |
| | Water Canyon Road | 5.4 | 15.0 |
| | Subtotal | 11.3 | 23.0 |
| 6 | Manshaft Substation Area | 5.7 | 6.0 |
| | Twinshaft Mine-Water Pond | 3.5 | 4.0 |
| | Permanent West Ridge Road | 1.3 | 4.0 |
| | Whitmore Canyon County Road | 1.1 | 2.0 |
| | Reclamation Test Plot | 0.1 | 1.0 |
| | Subtotal | 11.7 | 17.0 |

TABLE 2 - DISTURBED AREA ACREAGES

| AREA | DESCRIPTION | ACRES | ADJUSTED ACRES |
|------|-------------------------------------|--------------|----------------|
| 7 | Rail Loop Area Plate III-2 | 12.6 | 23.0 |
| | Plate III - 23 | 12.6 | 13.0 |
| | Railroad Right-of-Way (Permanent) | 1.1 | 2.0 |
| | Subtotal | 26.3 | 38.0 |
| 8 | Outcrop Fan Road | 6.4 | 10.0 |
| | Outcrop Power Line Corridor | 8.4 | 10.0 |
| | Outcrop Fan Pad - No. 1 Mine | 2.0 | 3.0 |
| | Subtotal | 16.8 | 23.0 |
| 9 | Pole Canyon Shaft Pad & Access Road | 1.3 | 5.0 |
| | Permanent Pole Canyon Road | 1.8 | 6.0 |
| | 002B Mine-Water Pond | 2.6 | 3.0 |
| | Manshaft - Twinshaft | 12.9 | 14.0 |
| | Subtotal | 18.6 | 28.0 |
| | TOTALS | 181.6 | 285.0 |

Acres provided in this table correspond to draft information regarding boning costs by Sunnyside Coal Company as Table III-24, revised 2/7/94. Adjusted acres shown in the table represent an estimated total disturbed area which incorporates additional areas into the disturbed area to offset discrepancies in the maps and plan information provided by SCC. These adjusted acres are for the purposes of cost estimation only until such time the SCC can provide detailed maps and cost information.

TABLE 3 - DEMOLITION AND REMOVAL OF FACILITIES

| DESCRIPTION | MATERIALS | UNIT COST | UNIT | QUANTITY | UNIT | TOTAL | COMMENT |
|--------------------------|---------------------------|-----------|------|----------|------|-------|---------|
| Main Changehouse | | | | | | | |
| Structure | Mixture of type, average | \$0.21 | CF | 285,775 | CF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 3,704 | CY | | |
| Foundation Demo. | 6" thick reinforced | \$4.64 | SF | 12,425 | SF | | |
| Foundation Disp. | Add for disposal, on site | \$6.20 | CY | 299 | CY | | |
| Footer Demo. | 1.5'x2' | \$12.70 | LF | 492 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 107 | CY | | |
| Training Building | | | | | | | |
| Structure | Mixture of type, average | \$0.21 | CF | 75,480 | CF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 978 | CY | | |
| Foundation Demo. | 6" thick reinforced | \$4.64 | SF | 4,440 | SF | | |
| Foundation Disp. | Add for disposal, on site | \$6.20 | CY | 107 | CY | | |
| Footer Demo. | 1.5'x2' | \$12.70 | LF | 314 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 68 | CY | | |
| Shop | | | | | | | |
| Structure | Mixture of type, average | \$0.21 | CF | 762,348 | CF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 9,882 | CY | | |
| Foundation Demo. | 6" thick reinforced | \$4.64 | SF | 20,604 | SF | | |
| Foundation Disp. | Add for disposal, on site | \$6.20 | CY | 496 | CY | | |
| Footer Demo. | 1.5'x2' | \$12.70 | LF | 608 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 132 | CY | | |
| Warehouse Annex | | | | | | | |
| Structure | Mixture of type, average | \$0.21 | CF | 82,620 | CF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 1,071 | CY | | |
| Foundation Demo. | 6" thick reinforced | \$4.64 | SF | 6,120 | SF | | |
| Foundation Disp. | Add for disposal, on site | \$6.20 | CY | 147 | CY | | |
| Footer Demo. | 1.5'x3' | \$15.90 | LF | 468 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 101 | CY | | |

TABLE 3 - DEMOLITION AND REMOVAL OF FACILITIES

| DESCRIPTION | MATERIALS | UNIT COST | UNIT | QUANTITY | UNIT | TOTAL | COMMENT |
|---------------------------|---------------------------|-----------|------|----------|------|-------|---------|
| Engineering Office | | | | | | | |
| Structure | Mixture of type, average | \$0.21 | CF | 28,431 | CF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 369 | CY | | |
| Foundation Demo. | 6" thick reinforced | \$4.64 | SF | 2,106 | SF | | |
| Foundation Disp. | Add for disposal, on site | \$6.20 | CY | 51 | CY | | |
| Footer Demo. | 1.5'x2' | \$12.70 | LF | 186 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 40 | CY | | |
| Backfill Building | | | | | | | |
| Structure | Concrete | \$0.29 | CF | 214,326 | CF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 2,778 | CY | | |
| Foundation Demo. | Mesh reinforcing | \$96.00 | CY | 221 | CY | | |
| Foundation Disp. | Add for disposal, on site | \$6.20 | CY | 287 | CY | | |
| Footer Demo. | 1.5'x3' | \$15.90 | LF | 260 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 56 | CY | | |
| Preparation Plant | | | | | | | |
| Structure | Concrete | \$0.29 | CF | 480,000 | CF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 6,222 | CY | | |
| Foundation Demo. | Mesh reinforcing | \$96.00 | CY | 1,067 | CY | | |
| Foundation Disp. | Add for disposal, on site | \$6.20 | CY | 1,387 | CY | | |
| Footer Demo. | 2'x3' | \$18.10 | LF | 400 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 87 | CY | | |
| Crusher | | | | | | | |
| Structure | Concrete | \$0.29 | CF | 70,200 | CF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 910 | CY | | |
| Foundation Demo. | Mesh reinforcing | \$96.00 | CY | 200 | CY | | |
| Foundation Disp. | Add for disposal, on site | \$6.20 | CY | 260 | CY | | |
| Footer Demo. | 2'x3' | \$18.10 | LF | 180 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 39 | CY | | |

TABLE 3 - DEMOLITION AND REMOVAL OF FACILITIES

| DESCRIPTION | MATERIALS | UNIT COST | UNIT | QUANTITY | UNIT | TOTAL | COMMENT |
|---------------------------|---------------------------|-----------|------|----------|------|-------|---------|
| Rotary Car Dump | | | | | | | |
| Structure | Concrete | \$0.29 | CF | 720 | CF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 9 | CY | | |
| Foundation Demo. | 6" thick reinforced | \$4.64 | SF | 100 | SF | | |
| Foundation Disp. | Add for disposal, on site | \$6.20 | CY | 2 | CY | | |
| Footer Demo. | 2'x3' | \$18.10 | LF | 40 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 9 | CY | | |
| | | | | | | | |
| Prep Plant Office | | | | | | | |
| Structure | Masonry | \$0.21 | CF | 2,848 | CF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 37 | CY | | |
| Foundation Demo. | 6" thick reinforced | \$4.64 | SF | 320 | SF | | |
| Foundation Disp. | Add for disposal, on site | \$6.20 | CY | 8 | CY | | |
| Footer Demo. | 1.5'x2'' | \$12.70 | LF | 72 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 16 | CY | | |
| | | | | | | | |
| Prep Plant Belt MCC Bldg | | | | | | | |
| Structure | Masonry | \$0.21 | CF | 3,658 | CF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 47 | CY | | |
| Foundation Demo. | 6" thick reinforced | \$4.64 | SF | 389 | SF | | |
| Foundation Disp. | Ad' for disposal, on site | \$6.20 | CY | 9 | CY | | |
| Footer Demo. | 1.5'x2' | \$12.70 | LF | 79 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 17 | CY | | |
| | | | | | | | |
| Material Foreman's Office | | | | | | | |
| Structure | Masonry | \$0.21 | CF | 2,592 | CF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 34 | CY | | |
| Foundation Demo. | 6" thick reinforced | \$4.64 | SF | 320 | SF | | |
| Foundation Disp. | Add for disposal, on site | \$6.20 | CY | 8 | CY | | |
| Footer Demo. | 1.5'x2' | \$12.70 | LF | 72 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 16 | CY | | |
| | | | | | | | |

TABLE 3 - DEMOLITION AND REMOVAL OF FACILITIES

| DESCRIPTION | MATERIALS | UNIT COST | UNIT | QUANTITY | UNIT | TOTAL | COMMENT |
|-----------------------|---------------------------|-----------|------|----------|------|-------|---------|
| Hoist House No.3 Mine | | | | | | | |
| Structure | Concrete | \$0.29 | CF | 38,016 | CF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 493 | CY | | |
| Foundation Demo. | Mesh reinforcing | \$96.00 | CY | 117 | CY | | |
| Foundation Disp. | Add for disposal, on site | \$6.20 | CY | 152 | CY | | |
| Footer Demo. | 2'x3' | \$18.10 | LF | 194 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 42 | CY | | |
| No.3 Slope Ramp Walls | | | | | | | |
| Wall Demo | 8" thick | \$1.70 | SF | 1,050 | SF | | |
| Wall Disp. | Add for disposal, on site | \$6.20 | CY | 51 | CY | | |
| Manshaft Bathhouse | | | | | | | |
| Structure | Mixture of type, average | \$0.21 | CF | 60,800 | CF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 788 | CY | | |
| Foundation Demo. | 6" thick reinforced | \$4.64 | SF | 4,000 | SF | | |
| Foundation Disp. | Add for disposal, on site | \$6.20 | CY | 96 | CY | | |
| Footer Demo. | 1.5'x2' | \$12.70 | LF | 280 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 61 | CY | | |
| Manshaft Bathhouse | | | | | | | |
| Structure | Masonry | \$0.21 | CF | 7,387 | CF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 96 | CY | | |
| Foundation Demo. | 6" thick reinforced | \$4.64 | SF | 648 | SF | | |
| Foundation Disp. | Add for disposal, on site | \$6.20 | CY | 16 | CY | | |
| Footer Demo. | 1.5'x2' | \$12.70 | LF | 102 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 22 | CY | | |
| Headframe Manshaft | | | | | | | |
| Structure | Mixture of type, average | \$0.21 | CF | 7,200 | CF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 93 | CY | | |
| Foundation Demo. | 6" thick reinforced | \$4.64 | SF | 180 | SF | | |
| Foundation Disp. | Add for disposal, on site | \$6.20 | CY | 4 | CY | | |
| Footer Demo. | 1.5'x2' | \$12.70 | LF | 54 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 12 | CY | | |

TABLE 3 - DEMOLITION AND REMOVAL OF FACILITIES

| DESCRIPTION | MATERIALS | UNIT COST | UNIT | QUANTITY | UNIT | TOTAL | COMMENT |
|-----------------------------------|---------------------------|-----------|------|----------|------|-------|---------|
| Bulk Rock Dust Tank | | | | | | | |
| Structure | Mixture of type, average | \$0.21 | CF | 1,507 | CF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 20 | CY | | |
| Foundation Demo. | 6" thick reinforced | \$4.64 | SF | 64 | SF | | |
| Foundation Disp. | Add for disposal, on site | \$6.20 | CY | 2 | CY | | |
| Footer Demo. | 1.5'x3' | \$15.90 | LF | 32 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 7 | CY | | |
| No 3 Mine Milk Building | | | | | | | |
| Structure | Mixture of type, average | \$0.21 | CF | 3,465 | CF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 45 | CY | | |
| Foundation Demo. | 6" thick reinforced | \$4.64 | SF | 398 | SF | | |
| Foundation Disp. | Add for disposal, on site | \$6.20 | CY | 10 | CY | | |
| Footer Demo. | 2'x3' | \$18.10 | LF | 80 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 17 | CY | | |
| Garage @ Mouth No. 2 Cyn | | | | | | | |
| Structure | Mixture of type, average | \$0.21 | CF | 6,048 | CF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 78 | CY | | |
| Foundation Demo. | 6" thick reinforced | \$4.64 | SF | 672 | SF | | |
| Foundation Disp. | Add for disposal, on site | \$6.20 | CY | 16 | CY | | |
| Footer Demo. | 1.5'x2' | \$12.70 | LF | 104 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 23 | CY | | |
| No. 2 Canyon Trestle Bldg. | | | | | | | |
| Structure | Concrete | \$0.29 | CF | 4,453 | CF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 58 | CY | | |
| Foundation Demo. | 6" thick reinforced | \$4.64 | SF | 405 | SF | | |
| Foundation Disp. | Add for disposal, on site | \$6.20 | CY | 10 | CY | | |
| Footer Demo. | 1.5'x3' | \$15.90 | LF | 83 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 18 | CY | | |

TABLE 3 - DEMOLITION AND REMOVAL OF FACILITIES

| DESCRIPTION | MATERIALS | UNIT COST | UNIT | QUANTITY | UNIT | TOTAL | COMMENT |
|-----------------------------------|---------------------------|-----------|------|----------|------|-------|---------|
| No.2 Canyon Repair Shop | | | | | | | |
| Structure | Mixture of type, average | \$0.21 | CF | 1,762 | CF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 23 | CY | | |
| Foundation Demo. | 6" thick reinforced | \$4.64 | SF | 198 | SF | | |
| Foundation Disp. | Add for disposal, on site | \$6.20 | CY | 5 | CY | | |
| Footer Demo. | 1.5'x3' | \$15.90 | LF | 57 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 12 | CY | | |
| No. 2 Canyon Material Shed | | | | | | | |
| Structure | Mixture of type, average | \$0.21 | CF | 22,698 | CF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 294 | CY | | |
| Foundation Demo. | 6" thick reinforced | \$4.64 | SF | 2,522 | SF | | |
| Foundation Disp. | Add for disposal, on site | \$6.20 | CY | 61 | CY | | |
| Footer Demo. | 1.5'x3' | \$15.90 | LF | 299 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 65 | CY | | |
| Manshaft Milk Building | | | | | | | |
| Structure | Mixture of type, average | \$0.21 | CF | 2,394 | CF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 31 | CY | | |
| Foundation Demo. | 6" thick reinforced | \$4.64 | SF | 252 | SF | | |
| Foundation Disp. | Add for disposal, on site | \$6.20 | CY | 6 | CY | | |
| Footer Demo. | 1.5'x3' | \$15.90 | LF | 64 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 14 | CY | | |
| Substation, Outcrop | | | | | | | |
| Structure | Mixture of type, average | \$0.21 | CF | 50,000 | CF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 648 | CY | | |
| Foundation Demo. | 6" thick reinforced | \$4.64 | SF | 2,500 | SF | | |
| Foundation Disp. | Add for disposal, on site | \$6.20 | CY | 60 | CY | | |
| Footer Demo. | 1.5'x2' | \$12.70 | LF | 200 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 43 | CY | | |
| Transformer | 750 KVA | \$735.00 | EA | 1 | EA | | |

TABLE 3 - DEMOLITION AND REMOVAL OF FACILITIES

| DESCRIPTION | MATERIALS | UNIT COST | UNIT | QUANTITY | UNIT | TOTAL | COMMENT |
|--------------------------|---------------------------|-----------|------|----------|------|-------|---------|
| Substation, Hillside | | | | | | | |
| Structure | Mixture of type, average | \$0.21 | CF | 50,000 | CF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 648 | CY | | |
| Foundation Demo. | 6" thick reinforced | \$4.64 | SF | 2,500 | SF | | |
| Foundation Disp. | Add for disposal, on site | \$6.20 | CY | 60 | CY | | |
| Footer Demo. | 1.5'x2' | \$12.70 | LF | 200 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 43 | CY | | |
| Transformer | 750 KVA | \$735.00 | EA | 1 | EA | | |
| Substation, Roadside | | | | | | | |
| Structure | Mixture of type, average | \$0.21 | CF | 50,000 | CF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 648 | CY | | |
| Foundation Demo. | 6" thick reinforced | \$4.64 | SF | 2,500 | SF | | |
| Foundation Disp. | Add for disposal, on site | \$6.20 | CY | 60 | CY | | |
| Footer Demo. | 1.5'x2' | \$12.70 | LF | 200 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 43 | CY | | |
| Transformer | 750 KVA | \$735.00 | EA | 1 | EA | | |
| Substation, Whitmore fan | | | | | | | |
| Structure | Mixture of type, average | \$0.21 | CF | 50,000 | CF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 648 | CY | | |
| Foundation Demo. | 6" thick reinforced | \$4.64 | SF | 2,500 | SF | | |
| Foundation Disp. | Add for disposal, on site | \$6.20 | CY | 60 | CY | | |
| Footer Demo. | 1.5'x2' | \$12.70 | LF | 200 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 43 | CY | | |
| Transformer | 750 KVA | \$735.00 | EA | 1 | EA | | |
| Substation, Manshaft | | | | | | | |
| Structure | Mixture of type, average | \$0.21 | CF | 50,000 | CF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 648 | CY | | |
| Foundation Demo. | 6" thick reinforced | \$4.64 | SF | 2,500 | SF | | |
| Foundation Disp. | Add for disposal, on site | \$6.20 | CY | 60 | CY | | |
| Footer Demo. | 1.5'x2' | \$12.70 | LF | 200 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 43 | CY | | |
| Transformer | 750 KVA | \$735.00 | EA | 1 | EA | | |

TABLE 3 - DEMOLITION AND REMOVAL OF FACILITIES

| DESCRIPTION | MATERIALS | UNIT COST | UNIT | QUANTITY | UNIT | TOTAL | COMMENT |
|-------------------------|---------------------------|-----------|------|----------|------|-------|---------|
| Power Magazine | | | | | | | |
| Structure | Concrete | \$0.29 | CF | 960 | CF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 12 | CY | | |
| Foundation Demo. | 6" thick reinforced | \$4.64 | SF | 120 | SF | | |
| Foundation Disp. | Add for disposal, on site | \$6.20 | CY | 3 | CY | | |
| Footer Demo. | 1.5'x2' | \$12.70 | LF | 44 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 10 | CY | | |
| Detonator Caps Magazine | | | | | | | |
| Structure | Concrete | \$0.29 | CF | 960 | CF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 12 | CY | | |
| Foundation Demo. | 6" thick reinforced | \$4.64 | SF | 120 | SF | | |
| Foundation Disp. | Add for disposal, on site | \$6.20 | CY | 3 | CY | | |
| Footer Demo. | 1.5'x2' | \$12.70 | LF | 44 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 10 | CY | | |
| Mine Water Tank (015) | | | | | | | |
| Structure | Mixture of type, average | \$0.21 | CF | 69,237 | CF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 898 | CY | | |
| Foundation Demo. | 6" thick reinforced | \$4.64 | SF | 3,847 | SF | | |
| Foundation Disp. | Add for disposal, on site | \$6.20 | CY | 93 | CY | | |
| Footer Demo. | 2'x3' | \$18.10 | LF | 140 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 30 | CY | | |
| Mine Water Tank (015) | | | | | | | |
| Structure | Mixture of type, average | \$0.21 | CF | 69,237 | CF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 898 | CY | | |
| Foundation Demo. | 6" thick reinforced | \$4.64 | SF | 3,847 | SF | | |
| Foundation Disp. | Add for disposal, on site | \$6.20 | CY | 93 | CY | | |
| Footer Demo. | 2'x3' | \$18.10 | LF | 140 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 30 | CY | | |

TABLE 3 - DEMOLITION AND REMOVAL OF FACILITIES

| DESCRIPTION | MATERIALS | UNIT COST | UNIT | QUANTITY | UNIT | TOTAL | COMMENT |
|--|---------------------------|-----------|------|----------|------|-------|---------|
| Other Facilities Show on Maps But Not Found in Estimate by Permittee | | | | | | | |
| | | | | | | | |
| No. 3 Slope Belt Building | | | | | | | |
| Structure | Mixture of type, average | \$0.21 | CF | 13,500 | CF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 500 | CY | | |
| Foundation Demo. | 6" thick reinforced | \$4.64 | SF | 1,200 | SF | | |
| Foundation Disp. | Add for disposal, on site | \$6.20 | CY | 600 | CY | | |
| Footer Demo. | 2'x3' | \$18.10 | LF | 150 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 16 | CY | | |
| | | | | | | | |
| Wood Retaining Walls, No. 2 Canyon | | | | | | | |
| Structure | Mixture of type, average | \$0.21 | CF | 5,860 | CF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 217 | CY | | |
| | | | | | | | |
| Boiler Foundation | | | | | | | |
| Foundation Demo. | Mesh reinforcing | \$96.00 | CY | 28 | CY | | |
| Foundation Disp. | Add for disposal, on site | \$6.20 | CY | 28 | CY | | |
| Footer Demo. | 2'x3' | \$18.10 | LF | 90 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 10 | CY | | |
| | | | | | | | |
| Diesel Fuel Storage Tanks | | | | | | | |
| Structure | Mixture of type, average | \$0.21 | CF | 4,000 | CF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 4 | CY | | |
| Footer Demo. | 2'x3' | \$18.10 | LF | 160 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 16 | CY | | |
| | | | | | | | |
| Bridge, No. 2 Canyon | | | | | | | |
| Structure | Mixture of type, average | \$0.21 | CF | 2,000 | CF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 74 | CY | | |
| | | | | | | | |
| Underground Railroad Tunnel at Loadout | | | | | | | |
| Structure | Mixture of type, average | \$0.21 | CF | 11,340 | CF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 420 | CY | | |
| Footer Demo. | 2'x3' | \$18.10 | LF | 500 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 122 | CY | | |
| | | | | | | | |

TABLE 3 - DEMOLITION AND REMOVAL OF FACILITIES

| DESCRIPTION | MATERIALS | UNIT COST | UNIT | QUANTITY | UNIT | TOTAL | COMMENT |
|--|---------------------------|-----------|------|----------|------|-------|---------|
| Thickener 120' dia. | | | | | | | |
| Footer Demo. | 2'x3' | \$18.10 | LF | 378 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 70 | CY | | |
| Fence Removal | | | | | | | |
| Chain Link Bence | Removal | \$0.71 | LF | 2,181 | LF | | |
| Barbed Wire Fence | Removal | \$1.55 | LF | 471 | LF | | |
| Guard Rails - Road | | | | | | | |
| Guard Rails | Dismantle | \$3.58 | LF | 3,800 | LF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 500 | CY | | |
| Bridge Engineering Building | | | | | | | |
| Structure | Mixture of type, average | \$0.21 | CF | 14,400 | CF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 533 | CY | | |
| Footer Demo. | 2'x3' | \$18.10 | LF | 60 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 14 | CY | | |
| Mantrip Underpass & Rockslope Tunnel No. 1 | | | | | | | |
| Structure | Mixture of type, average | \$0.21 | CF | 111 | CF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 4 | CY | | |
| Footer Demo. | 2'x3' | \$18.10 | LF | 80 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 8 | CY | | |
| Shop Fan | | | | | | | |
| Structure | Mixture of type, average | \$0.21 | CF | 4,000 | CF | | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 296 | CY | | |
| Foundation Demo. | 6" thick reinforced | \$4.64 | SF | 2,500 | SF | | |
| Foundation Disp. | Add for disposal, on site | \$6.20 | CY | 8 | CY | | |
| Footer Demo. | 2'x3' | \$18.10 | LF | 200 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 12 | CY | | |
| Concrete Retaining Wall - Bathhouse | | | | | | | |
| Wall Demo | 8" thick | \$1.70 | SF | 2,400 | SF | | |
| Wall Disp. | Add for disposal, on site | \$6.20 | CY | 64 | CY | | |
| Footer Demo. | 2'x3' | \$18.10 | LF | 300 | LF | | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 34 | CY | | |

TABLE 3 - DEMOLITION AND REMOVAL OF FACILITIES

| DESCRIPTION | MATERIALS | UNIT COST | UNIT | QUANTITY | UNIT | TOTAL | COMMENT |
|---|--|------------|------|-----------|------|--------------------|---------|
| SUMMARY OF DEMOLITION COST USING OFF-SITE DISPOSAL | | | | | | | |
| General Cleanup | General Cleanup | \$1,000.00 | AC | 285 | AC | \$285,000 | |
| PCB Removal | Oil Disposal | \$7.50 | GL | 2,500 | GL | \$18,750 | |
| Oil Contaminated Soils | Soil Disposal | \$45.00 | CY | 1,700 | CY | \$76,500 | |
| Remove Poles | Pole | \$100.00 | EA | 88 | EA | \$8,800 | |
| Remove Pipelines | Remove Pipe | \$1.87 | LF | 7,700 | LF | \$14,399 | |
| Remove Pavement | Pavement removal, bituminous, 3" thick | \$3.90 | SY | 11,400 | SY | \$44,460 | |
| Disp. of Pavement | Add for disposal, on site | \$6.20 | CY | 1,235 | CY | \$7,657 | |
| Track Removal | Remove ties and track | \$15.80 | LF | 5,400 | LF | \$85,320 | |
| Remove Ballast | Ballast | \$3.47 | CY | 2,400 | CY | \$8,328 | |
| Ballast Disp. | Add for disposal, on site | \$6.20 | CY | 2,400 | CY | \$14,880 | |
| Chain Link Fence | Removal | \$0.71 | LF | 2,181 | LF | \$1,549 | |
| Barbed Wire Fence | Removal | \$1.55 | LF | 471 | LF | \$730 | |
| Guard Rails | Dismantle | \$3.58 | LF | 3,800 | LF | \$13,604 | |
| Structure | Mixture of type, average | \$0.21 | CF | 2,295,544 | CF | \$482,064 | |
| Structure | Concrete | \$0.29 | CF | 1,147,735 | CF | \$332,843 | |
| Structure | Masonry | \$0.21 | CF | 16,485 | CF | \$3,462 | |
| Dump Charge | Demolition Materials | \$37.00 | CY | 46,357 | CY | \$1,715,209 | |
| Foundation Demo. | 6" thick reinforced | \$4.64 | SF | 111,269 | SF | \$516,288 | |
| Foundation Demo. | Mesh reinforcing | \$96.00 | CY | 2,258 | CY | \$216,768 | |
| Foundation Disp. | Add for disposal, on site | \$6.20 | CY | 6,126 | CY | \$37,981 | |
| Footer Demo. | 1.5'x2' | \$12.70 | LF | 3,653 | LF | \$46,393 | |
| Footer Demo. | 1.5'x3' | \$15.90 | LF | 2,485 | LF | \$39,512 | |
| Footer Demo. | 2'x3' | \$18.10 | LF | 3,842 | LF | \$69,540 | |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 2,010 | CY | \$12,462 | |
| Wall Demo | 8" thick | \$1.70 | SF | 3,450 | SF | \$5,865 | |
| Wall Disp. | Add for disposal, on site | \$6.20 | CY | 115 | CY | \$713 | |
| Conveyer | Conveyor Removal | \$15.04 | LF | 1,230 | LF | \$18,499 | |
| TOTAL - WORST CASE SCENARIO FOR DEMOLITION AND REMOVAL | | | | | | \$4,077,576 | |

TABLE 3 - DEMOLITION AND REMOVAL OF FACILITIES

| DESCRIPTION | MATERIALS | UNIT COST | UNIT | QUANTITY | UNIT | TOTAL | COMMENT |
|--|--|------------|------|-----------|------|--------------------|---------------------------------------|
| SUMMARY OF DEMOLITION COST USING ON-SITE DISPOSAL AND BURIAL. | | | | | | | |
| SALVAGE VALUES (BASED ON 25% OF DEMOLITION COSTS) SHOWN IN COMMENTS | | | | | | | |
| General Cleanup | General Cleanup | \$1,000.00 | AC | 285 | AC | \$285,000 | (\$71,250) |
| PCB Removal | Oil Disposal | \$7.50 | GL | 2,500 | GL | \$18,750 | NO SALVAGE VALUE |
| Oil Contaminated Soils | Soil Disposal | \$45.00 | CY | 1,700 | CY | \$76,500 | NO SALVAGE VALUE |
| Remove Poles | Pole | \$100.00 | EA | 88 | EA | \$8,800 | (\$2,200) |
| Remove Pipelines | Remove Pipe | \$1.87 | LF | 7,700 | LF | \$14,399 | (\$3,600) |
| Remove Pavement | Pavement removal, bituminous, 3" thick | \$3.90 | SY | 11,400 | SY | \$44,460 | NO SALVAGE VALUE |
| Disp. of Pavement | Add for disposal, on site | \$6.20 | CY | 1,235 | CY | \$7,657 | NO SALVAGE VALUE |
| Track Removal | Remove ties and track | \$15.80 | LF | 5,400 | LF | \$85,320 | (\$21,330) |
| Remove Ballast | Ballast | \$3.47 | CY | 2,400 | CY | \$8,328 | NO SALVAGE VALUE |
| Ballast Disp. | Add for disposal, on site | \$6.20 | CY | 2,400 | CY | \$14,880 | NO SALVAGE VALUE |
| Chain Link Fence | Removal | \$0.71 | LF | 2,181 | LF | \$1,549 | (\$387) |
| Barbed Wire Fence | Removal | \$1.55 | LF | 471 | LF | \$730 | (\$183) |
| Guard Rails | Dismantle | \$3.58 | LF | 3,800 | LF | \$13,604 | (\$3,401) |
| Structure | Mixture of type, average | \$0.21 | CF | 2,295,544 | CF | \$482,064 | (\$120,516) |
| Structure | Concrete | \$0.29 | CF | 1,147,735 | CF | \$332,843 | (\$83,211) |
| Structure | Masonry | \$0.21 | CF | 16,485 | CF | \$3,462 | (\$865) |
| Dump Charge | Demolition Materials | \$6.20 | CY | 46,357 | CY | \$287,413 | ON SITE DISPOSAL |
| Foundation Demo. | 6" thick reinforced | \$4.64 | SF | 111,269 | SF | \$258,144 | 50% Demolition 50% Buried in Place |
| Foundation Demo. | lesh reinforcing | \$96.00 | CY | 2,258 | CY | \$108,384 | 50% Demolition 50% Buried in Place |
| Foundation Disp. | Add for disposal, on site | \$6.20 | CY | 6,126 | CY | \$18,991 | 50% Demolition 50% Buried in Place |
| Footer Demo. | 1.5'x2' | \$12.70 | LF | 3,653 | LF | \$23,197 | 50% Demolition 50% Buried in Place |
| Footer Demo. | 1.5'x3' | \$15.90 | LF | 2,485 | LF | \$19,756 | 50% Demolition 50% Buried in Place |
| Footer Demo. | 2'x3' | \$18.10 | LF | 3,842 | LF | \$34,770 | 50% Demolition 50% Buried in Place |
| Footer Disp. | Add for disposal, on site | \$6.20 | CY | 2,010 | CY | \$6,231 | 50% Demolition 50% Buried in Place |
| Wall Demo | 8" thick | \$1.70 | SF | 3,450 | SF | \$5,865 | NO SALVAGE VALUE |
| Wall Disp. | Add for disposal, on site | \$6.20 | CY | 115 | CY | \$713 | NO SALVAGE VALUE |
| Conveyer | Conveyor Removal | \$15.04 | LF | 1,230 | LF | \$18,499 | (\$4,625) |
| TOTALS - DEMOLITION AND ON-SITE BURIAL AND SALVAGE VALUES | | | | | | \$2,180,308 | (\$311,564) |

TABLE 4 - CLOSURE OF MINE OPENINGS

The unit cost per mine opening assume an average cost per opening and is not specific to each individual opening for the purposes of determining bonding costs.

| AREA | DESCRIPTION | MINE OPENINGS | COST PER OPENING | AMOUNT |
|------|--|---------------|------------------|------------------|
| 1 | Surface Facilities Area Portals | 5 | \$3,000 | \$15,000 |
| | 16' dia shafts | 1 | \$12,750 | \$12,750 |
| 2 | Fan Canyon - No. 2 Mine Area Portals | 3 | \$500 | \$1,500 |
| 3 | Whitmore Fan Shaft Area Portals | 0 | \$500 | \$0 |
| | 16' dia shafts | 2 | \$12,750 | \$25,500 |
| 4 | No. 2 Canyon Yard Area | 3 | \$500 | \$1,500 |
| | 7-8' dia shafts | 1 | \$6,000 | \$6,000 |
| 5 | Water Canyon Portals - No. 2 Mine Area | 8 | \$500 | \$4,000 |
| 6 | Manshaft Substation Area | 0 | \$500 | \$0 |
| 7 | Rail Loop Area | 3 | \$500 | \$1,500 |
| 8 | Outcrop Fan Area | 10 | \$500 | \$5,000 |
| | 7-8' dia shafts | 1 | \$6,000 | \$6,000 |
| 9 | Pole Canyon Area | 1 | \$500 | \$500 |
| | 7-8' dia shafts | 4 | \$6,000 | \$24,000 |
| | TOTALS | 42 | | \$103,250 |

TABLE 5 - RECLAMATION COSTS FOR BACKFILLING AND GRADING

| AREA | DESCRIPTION | ACRES | BACKFILL AND REGRADING | |
|---------------|--|--------------|------------------------|--------------------|
| | | | YD3 | AMOUNT |
| 1 | Surface Facilities Area | 104.0 | 503,360 | \$1,283,568 |
| 2 | Fan Canyon - No. 2 Mine Area | 9.0 | 43,560 | \$111,078 |
| 3 | Whitmore Fan Shaft Area | 10.0 | 48,400 | \$123,420 |
| 4 | No. 2 Canyon Yard Area | 33.0 | 159,720 | \$407,286 |
| 5 | Water Canyon Portals - No. 2 Mine Area | 23.0 | 111,320 | \$283,866 |
| 6 | Manshaft Substation Area | 17.0 | 82,280 | \$209,814 |
| 7 | Rail Loop Area | 38.0 | 183,920 | \$468,996 |
| 8 | Outcrop Fan Area | 23.0 | 111,320 | \$283,866 |
| 9 | Pole Canyon Area | 28.0 | 135,520 | \$345,576 |
| TOTALS | | 285.0 | 1,379,400 | \$3,517,470 |

Backfilling and regrading is based on an average regrading depth of 3.0 feet. The unit cost for regrading includes an average cost for mixed earthmoving and earthwork activities, including dozing, load-haul-dump of fill material, grading and ripping. This unit cost has been estimated at \$2.55 per cubic yard based on similar earthmoving and sitework costs. These costs do not allow for or include any costs associated with importing material from off-site. Generally, more specific equipment and productivity costs are used for earthwork calculations but due to the lack of specific and detailed reclamation designs treatments, this more generalized method has been used to evaluate costs for bonding purposes only.

TABLE 6 - CHANNEL RECONSTRUCTION AND SEDIMENT CONTROL COSTS

The unit cost per acre for sediment control includes costs for sediment pond construction and maintenance or other sediment control measures as necessary including but not limited to straw bales, silt fences and temporary surface diversion. Channel construction is for the installation of permanent surface diversion to restore drainage areas to pre-mining conditions.

| AREA | DESCRIPTION | ACRES | COST PER ACRE/LF | AMOUNT |
|------|---|---------|------------------|------------------|
| 1 | Surface Facilities Area | 104.0 | \$350 | \$36,400 |
| | Perennial Channel Reconstruction - lineal feet | 3,000.0 | \$95 | \$285,000 |
| | Ephemeral/Intermittent Channel Reconstruction - lineal feet | 1,500.0 | \$45 | \$67,500 |
| 2 | Fan Canyon - No. 2 Mine Area | 9.0 | \$350 | \$3,150 |
| | Ephemeral/Intermittent Channel Reconstruction - lineal feet | 500.0 | \$45 | \$22,500 |
| 3 | Whitmore Fan Shaft Area | 10.0 | \$350 | \$3,500 |
| | Ephemeral/Intermittent Channel Reconstruction - lineal feet | 100.0 | \$45 | \$4,500 |
| 4 | No. 2 Canyon Yard Area | 33.0 | \$350 | \$11,550 |
| | Ephemeral/Intermittent Channel Reconstruction - lineal feet | 350.0 | \$45 | \$15,750 |
| 5 | Water Canyon Portals - No. 2 Mine Area | 23.0 | \$350 | \$8,050 |
| | Ephemeral/Intermittent Channel Reconstruction - lineal feet | 250.0 | \$45 | \$11,250 |
| 6 | Manshaft Substation Area | 17.0 | \$350 | \$5,950 |
| | Ephemeral/Intermittent Channel Reconstruction - lineal feet | 150.0 | \$45 | \$6,750 |
| 7 | Rail Loop Area | 38.0 | \$350 | \$13,300 |
| | Ephemeral/Intermittent Channel Reconstruction - lineal feet | 500.0 | \$45 | \$22,500 |
| 8 | Outcrop Fan Area | 23.0 | \$350 | \$8,050 |
| | Ephemeral/Intermittent Channel Reconstruction - lineal feet | 500.0 | \$45 | \$22,500 |
| 9 | Pole Canyon Area | 28.0 | \$350 | \$9,800 |
| | Ephemeral/Intermittent Channel Reconstruction - lineal feet | 500.0 | \$45 | \$22,500 |
| | TOTALS | | | \$580,500 |

TABLE 7 - REVEGETATION COSTS

The unit cost per acre for revegetation includes topsoil preparation (not placement), soil sampling and soil amendments, seed, mulch and application.

| AREA | DESCRIPTION | ACRES | COST PER ACRE | AMOUNT |
|------|--|--------------|---------------|------------------|
| 1 | Surface Facilities Area | 104.0 | \$500 | \$52,000 |
| 2 | Fan Canyon - No. 2 Mine Area | 9.0 | \$500 | \$4,500 |
| 3 | Whitmore Fan Shaft Area | 10.0 | \$500 | \$5,000 |
| 4 | No. 2 Canyon Yard Area | 33.0 | \$500 | \$16,500 |
| 5 | Water Canyon Portals - No. 2 Mine Area | 23.0 | \$500 | \$11,500 |
| 6 | Manshaft Substation Area | 17.0 | \$500 | \$8,500 |
| 7 | Rail Loop Area | 38.0 | \$500 | \$19,000 |
| 8 | Outcrop Fan Area | 23.0 | \$500 | \$11,500 |
| 9 | Pole Canyon Area | 28.0 | \$500 | \$14,000 |
| | TOTALS | 285.0 | | \$142,500 |



State of Utah
 DEPARTMENT OF NATURAL RESOURCES
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April 20, 1994

TO: Reclamation Bond Estimators: Wayne Hedberg, Tony Gallegos, Travis Jones, Randy Harden, Jesse Kelley, and Wayne Western

FROM: Pamela Grubaugh-Littig, Permit Supervisor *pgl*

RE: Means Historical Cost Index - 1994 - 2.01%

Following are the index numbers and escalation factor from the Means Historical Cost Index.

| YEAR | INDEX | ESCALATION (Actual) |
|------|-------|---------------------|
| 1977 | 104.2 | 8.70% |
| 1978 | 113.3 | 7.10% |
| 1979 | 121.4 | 8.6% |
| 1980 | 131.9 | 8.6% |
| 1981 | 143.3 | 9.91% |
| 1982 | 157.5 | 9.40% |
| 1983 | 172.3 | 1.04% |
| 1984 | 174.1 | 0.92% |
| 1985 | 175.7 | 2.90% |
| 1986 | 180.8 | 2.10% |
| 1987 | 184.6 | 1.95% |
| 1988 | 188.2 | 1.81% |
| 1989 | 191.6 | 1.77% |
| 1990 | 195.0 | 0.77% |
| 1991 | 196.5 | 1.27% |
| 1992 | 199.0 | 2.21% |
| 1993 | 203.4 | 2.54% |
| 1994 | 208.7 | |

The future escalation factor for 1994 bond estimating is 2.01 percent, average of the previous three years.

A:MEANS:HCI