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DIVISION OF
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Mine file

ACT/015/032
#2

October 1, 1986 C-27

Mr. Lowell P. Braxton
Utah Division of Oil, Gas & Mining
355 West North Temple
3 Triad Center
Suite 350
Salt Lake City, Utah 84180-1203

Dear Lowell:

Enclosed at the request of Genwal Coal Company are 14 copies of the cost estimate for reclamation of the Crandall Canyon Mine. Please include these copies as Item 3-12 of the previously submitted Mining and Reclamation Plan.

Thank you for your assistance.

Sincerely,

Rich

Richard B. White, P.E.
Principal Hydrologist

Enclosure

cc: Andy King (Genwal)

7324 South 1300 East, Suite 100 Midvale, Utah 84047 (801) 561-1555

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ITEM 3-12

Reclamation Cost Estimate

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# COST ESTIMATE

PROJECT DESCRIPTION: Crandall Canyon Mine Reclamation Structure Removal PROJECT No.: C-27 ESTIMATOR: RBW DATE: 18 Sep 1986

| ITEM No. | DESCRIPTION | EQUIPMENT | UNIT | ESTIMATED QUANTITY | UNIT PRICE | TOTAL PRICE |
|---|---|---|---|---|---|---|
| 1 | Office demolition – Foundation (concrete, 6") | NA | $ft^2$ | 532 | 2.96 | 1,574.72 |
| | Walls, roof (steel or masonry) | | $ft^3$ | 10,640 | 0.17 | 1,808.80 |
| 2 | Bathouse dem. – Foundation (concrete, 6") | NA | $ft^2$ | 1,044 | 2.96 | 3,090.24 |
| | Walls, roof (steel or masonry) | | $ft^3$ | 20,880 | 0.17 | 3,549.60 |
| 3 | Generator/fuel storage – Foundation (concrete, 6") | NA | $ft^2$ | 500 | 2.96 | 1,480.00 |
| | Block wall | | $ft^3$ | 1,500 | 0.17 | 255.00 |
| 4 | Control bldg. – Foundation (concrete, 6") | NA | $ft^2$ | 96 | 2.96 | 284.16 |
| | Walls, roof (steel or masonry) | | $ft^3$ | 960 | 0.17 | 163.20 |
| 5 | Substation (potential) – Structure (steel) | NA | $ft^3$ | 9,000 | 0.17 | 1,530.00 |
| | Fence (chain link) | | lf | 120 | 1.19 | 142.80 |
| 6 | Water tank (potential) – Steel tank (10,000 gal) | NA | $ft^3$ | 1,330 | 0.17 | 226.10 |
| | Foundation (concrete, 6") | | $ft^2$ | 225 | 2.96 | 666.00 |
| 7 | Explosives storage bldgs (2 ea – concrete) | NA | $ft^3$ | 320 | 0.22 | 70.40 |
| 8 | Portals (3 ea) | NA | ea | 3 | 2,700.00* | 8,100.00 |
| 9 | Culverts – 42" CMP (UD-1) | NA | lf | 295 | 1.43 | 421.85 |
| 10 | Culverts – 24" CMP (C-2, C-3, C-4) | NA | lf | 195 | 1.54 | 300.30 |
| 11 | Culverts – 18" CMP (C-1, UD-3) | NA | lf | 495 | 1.54** | 762.30 |
| 12 | Culverts – 12" CMP (Sed. Trap Outlet, C-5) | NA | lf | 140 | 1.54** | 215.60 |
| 13 | Ventilation fan – Foundation (concrete, 6") | NA | $ft^2$ | 600 | 2.96 | 1,776.00 |
| | Structure (steel) | | $ft^3$ | 10,000 | 0.17 | 1,700.00 |

* AML cost data
** Assumed equal to 24" unit price due to steep slopes

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# COST ESTIMATE

PROJECT DESCRIPTION: Crandall Canyon Mine Reclamation Structure Removal PROJECT No.: C-27 ESTIMATOR: TBW DATE: 19 Sep 1986

| ITEM No. | DESCRIPTION | EQUIPMENT | UNIT | ESTIMATED QUANTITY | UNIT PRICE | TOTAL PRICE |
|---|---|---|---|---|---|---|
| 14 | Guard rail removal | NA | ft | 150 | 4.34 | 651.00 |
| 15 | Conveyor belt (surface)-steel & belting | NA | $ft^3$ | 1,200 | 0.17 | 204.00 |
| 16 | Sediment trap removal | NA | ea | 1 | 190.00 | 190.00 |
| 17 | Sediment pond riser spillway removal | NA | lf | 110 | 1.54 | 169.40 |
| | | | | | | |
| | TOTAL STRUCTURE REMOVAL COST | | | | | 29,331.47 |
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# COST ESTIMATE

PROJECT DESCRIPTION: Crandall Canyon Mine Rec. Cut and Fill PROJECT No.: C-27 ESTIMATOR: RBW DATE: 19 Sep 1986

| ITEM No. | DESCRIPTION | CREW ~~EQUIPMENT~~ | UNIT | ESTIMATED QUANTITY | UNIT PRICE | TOTAL PRICE |
|---|---|---|---|---|---|---|
| 1 | Substation pad, 150' haul, "common earth" | B-10B | $yd^3$ | 1370 | 0.94 | 1,287.80 |
| 2 | Admin. pad, 150' haul, "common earth" | " | $yd^3$ | 4800 | 0.94 | 4,512.00 |
| 3 | Portal pad, 150' haul, "common earth" | " | $yd^3$ | 7370 | 0.94 | 6,927.80 |
| 4 | Sediment pond, 50' haul, "common earth" | " | $yd^3$ | 2310 | 0.94 | 2,171.40 |
| | | | | | | |
| | TOTAL CUT AND FILL COST | | | | | 14,899.00 |
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# COST ESTIMATE

PROJECT DESCRIPTION: Crandall Canyon Mine Reclamation Topsoil Replacement / Reveg. PROJECT No.: C-27 ESTIMATOR: RBW DATE: 22 Sep 86

| ITEM No. | DESCRIPTION | EQUIPMENT | UNIT | ESTIMATED QUANTITY | UNIT PRICE | TOTAL PRICE |
|---|---|---|---|---|---|---|
| 1 | Topsoil loading & hauling, 1 mi RT | 5 CY loader Dump trailers | $yd^3$ | 7310 | 2.90 | 21,199.00 |
| 2 | Topsoil grading at dump location | Crew B-10B | $yd^3$ | 7310 | 1.03 | 7,529.30 |
| 3 | Scarification (0.5 ac/hr) | Farm tractor | hr | 10.3 | 39.00 | 401.70 |
| 4 | Fertilization | Crew B-66 | MSF | 224 | 4.03 | 902.72 |
| 5 | Soil testing | Sampler Lab subcontract | ls | 1 | 1000.00 | 1,000.00 |
| 6 | Seeding – slope ≤ 30% (Use Means "slope mix" for cost purposes) | Crew B-66 | MSF | 86 | 22.00 | 1,892.00 |
| 7 | Mulching – slope ≤ 30% | Crew B-66 | MSF | 86 | 24.00 | 2,064.00 |
| 8 | Seeding – slope > 30% (Use Means "slope mix" for cost purposes) | Crew B-66 | MSF | 101 | 22.00 | 2,222.00 |
| 9 | Mulching – slope > 30% | Crew B-65 | MSF | 101 | 25.00 | 2,525.00 |
| 10 | Seeding – wooded area (Use Means "slope mix" for cost est.) | Crew B-66 | MSF | 37 | 22.00 | 814.00 |
| 11 | Planting – wooded area (610 trees/ac Material costs) | NA | ea | 512 | 1.00 | 512.00 |
| 12 | Planting – wooded area (120 plants/hr Labor) | Common laborer | hr | 4.5 | 22.00 | 99.00 |
| 13 | Mulching – wooded area | Crew B-66 | MSF | 37 | 24.00 | 888.00 |

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# COST ESTIMATE

PROJECT DESCRIPTION: Crandall Canyon Mine Rec. Topsoil Replacement / Reveg. PROJECT No.: C-27 ESTIMATOR: TRW DATE: 22 Sep 86

| ITEM No. | DESCRIPTION | EQUIPMENT | UNIT | ESTIMATED QUANTITY | UNIT PRICE | TOTAL PRICE |
|---|---|---|---|---|---|---|
| 14 | Monitoring revegetation success | Inspector | yr | 10 | 2,000.00 | 20,000.00 |
| 15 | Reseeding (20%) | crew B-65 | ac | 1.03 | 500.00 | 515.00 |
| 16 | Repair rills and gullies | Farm tractor | hr | 20 | 39.00 | 780.00 |
| | | | | | | |
| | TOTAL TOPSOIL REPLACEMENT AND | REVEGETATION | | | | 63,343.72 |
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# COST ESTIMATE

PROJECT DESCRIPTION: Crandell Canyon Mine Rec. Landfill Reclamation PROJECT No.: C-27 ESTIMATOR: TBW DATE: 23 Sep 86

| ITEM No. | DESCRIPTION | EQUIPMENT | UNIT | ESTIMATED QUANTITY | UNIT PRICE | TOTAL PRICE |
|---|---|---|---|---|---|---|
| 1 | Backfill and grade | Crew B-10B | hr | 16 | 85.77 | 1,372.32 |
| 2 | Ditch construction | Crew B-6 | hr | 4 | 31.91 | 127.64 |
| | | | | | | |
| | TOTAL LANDFILL RECLAMATION | | | | | 1,499.96 |
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# COST ESTIMATE

PROJECT DESCRIPTION: Crandall Canyon Mine Rec. Cost Summary PROJECT No.: C-27 ESTIMATOR: TBW DATE: 10 Oct 1986

| ITEM No. | DESCRIPTION | EQUIPMENT | UNIT | ESTIMATED QUANTITY | UNIT PRICE | TOTAL PRICE |
|---|---|---|---|---|---|---|
| 1 | Structure removal | | | | | 29,331.47 |
| 2 | Cut and fill | | | | | 14,899.00 |
| 3 | Topsoil replacement and revegetation | | | | | 63,343.72 |
| 4 | Landfill reclamation | | | | | 1,499.96 |
| | SUBTOTAL | | | | | 109,074.15 |
| | 10% CONTINGENCY AND ENGINEERING COSTS | | | | | 10,907.42 |
| | TOTAL | | | | | 119,981.57 |
| | ROUNDED BOND REQUIREMENT | | | | | $120,000 - |
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