



J&T Consulting, Inc.

January 30, 2023

Mr. Eric Scott
Environmental Protection Specialist

Physical Address:

1313 Sherman Street, Room 215
Denver, CO 80203

Mailing Address:

Division of Reclamation, Mining and Safety, Room 215
1001 East 62nd Avenue
Denver, CO 80216

*RE: Broken Arrow Investments, LLC – Derr Pit – Technical Revision No. 8 Request
File No. M-2008-017*

Dear Mr. Scott,

Broken Arrow Investments, LLC requests a revision to their existing permit to address the following items:

1. Project Phasing to add Phase 7a: Revision of the existing permit to reflect surface mining for Phase 7a not exposing groundwater. Phase 7a will be mined along with Phase 5a concurrently with Phase 6a once this request is approved.

A detailed description of the revision is below:

Project Phasing to add Phase 7a: Revision of the existing permit to reflect surface mining for Phase 7a not exposing groundwater. Phase 7a will be mined along with Phase 5a concurrently with Phase 6a once this request is approved. The financial warranty will be increased per the attached updated bond calculations if they are approved with this request.

The approved permit has a Phase 5a and 6a for initial mining not exposing groundwater and Phase 6a has been bonded for. After reviewing the mine site layout and logistics to prepare for installation of a slurry wall; mining the surface without exposing groundwater is needed in order to provide a bench where the slurry wall can be constructed with conventional open trench excavation. The depth to bedrock without benching is too deep to do with a conventional open cut long reach excavator so the maximum depth must be reduced to where 80 feet of depth or less can be accommodated with a long reach excavator. Mining the surface of Phase 5a and Phase 7a will allow for this to occur. By increasing the bond to include Phase 5a and Phase 7a the current bond would be increased by \$289,763.00. Please refer to the attached revised bonding calculations for Phase 7a. We would request that current bond be increased. The current amount bonded of \$753,487.00 plus the increase of Phase 5a and 7a the total bond would be \$1,043,250.00 to cover the amount needed for Phases 1-4 and Phases 5a, 6a, and 7a.



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Broken Arrow Investments, LLC appreciates your consideration of this revision request and looks forward to your response.

Please feel free to contact me with any questions or comments.

Sincerely,



J.C. York, P.E.
J&T Consulting, Inc.

Attachments:

\$216 Check for Technical Revision review fee
Updated Exhibit L Bond Calculations
Updated Mining Plan Map

cc: Broken Arrow Investments, LLC
File





Summary of Unit Costs

Direct costs

Re-applying topsoil 6" thick	\$1,800.00	/ acre
Revegetating disturbed area	\$1,000.00	/ acre
Dewatering full pit	\$200.00	/ million gallons
Slurry Wall Cost (61 foot average depth @ \$4.80/ft)	\$293	/ linear foot
Perimeter Drain	\$20	/ linear foot
Scarifying Ground	\$200	/ acre
Mobilization	\$2,500	lump sum

Overhead and Profit Costs

Liability insurance	1.55%	of direct cost
Performance bond	1.05%	of direct cost
Profit	10.00%	of direct cost

Total Overhead Cost	12.60%	of direct cost
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Project Management

Engineering and bidding	4.25%	of direct cost
Management and administration	5.00%	of direct cost

Total Additional Cost	9.25%	of direct cost
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Reclamation Bond Quantities and Costs
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Phase 6a (11.67 acres plus 1.68 acres area around mining limit south to Phase 1 and 4)

Reclamation Operation	Quantity	Unit	Unit Cost	Cost
<u>Active Mining Area</u>				
Scarifying Disturbed Area	13.35	ac	\$200	\$2,670
Topsoil Placement Disturbed Area	13.35	ac	\$1,800	\$24,030
Revegetate Disturbed Area	13.35	ac	\$1,000	\$13,350
<u>Mobilization</u>	1.00	ls	\$2,500	\$2,500
Total Direct Cost				\$42,550
Overhead and Profit Cost (12.60%)				\$5,361
Contract Cost				\$47,911
Project Management (9.25%)				\$4,432

Additional Financial Warranty Required For Phase 6a	\$52,343
Cummulative Financial Warranty Required For Phases 1-4 and 6a	\$753,487

Phase 5a (13.94 acres plus 19.44 acres area around mining limit to permit boundary)

Reclamation Operation	Quantity	Unit	Unit Cost	Cost
<u>Active Mining Area</u>				
Scarifying Disturbed Area	33.38	ac	\$200	\$6,676
Topsoil Placement Disturbed Area	33.38	ac	\$1,800	\$60,084
Revegetate Disturbed Area	33.38	ac	\$1,000	\$33,380
<u>Mobilization</u>	1.00	ls	\$2,500	\$2,500
Total Direct Cost				\$102,640
Overhead and Profit Cost (12.60%)				\$12,933
Contract Cost				\$115,573
Project Management (9.25%)				\$10,690

Additional Financial Warranty Required For Phase 5a	\$126,263
Cummulative Financial Warranty Required For Phases 1-4, 5a and 6a	\$879,750

Phase 7a (17.75 acres plus 25.72 acres area around mining limit to permit boundary)

Reclamation Operation	Quantity	Unit	Unit Cost	Cost
<u>Active Mining Area</u>				
Scarifying Disturbed Area	43.47	ac	\$200	\$8,694
Topsoil Placement Disturbed Area	43.47	ac	\$1,800	\$78,246
Revegetate Disturbed Area	43.47	ac	\$1,000	\$43,470
<u>Mobilization</u>	1.00	ls	\$2,500	\$2,500
Total Direct Cost				\$132,910
Overhead and Profit Cost (12.60%)				\$16,747
Contract Cost				\$149,657
Project Management (9.25%)				\$13,843

Additional Financial Warranty Required For Phase 7	\$163,500
Cummulative Financial Warranty Required For Phases 1-4, 5a, 6a and 7a	\$1,043,250



Phase 5

Reclamation Operation	Quantity	Unit	Unit Cost	Cost
<u>Active Mining Area</u>				
Slurry Wall Required to Close Phases 5-7	8,964	If	\$293	\$2,626,452
Perimeter Drain	5,430	If	\$20	\$108,600
Dewatering of Phase 5 Area	150.9	Mil. Gal.	\$200	\$30,180
<u>Mobilization</u>	1.00	Is	\$2,500	\$2,500
Total Direct Cost				\$2,767,732
Overhead and Profit Cost (12.60%)				\$348,734
Contract Cost				\$3,116,466
Project Management (9.25%)				\$288,273
Additional Financial Warranty Required For Phase 5				\$3,404,739
Cummulative Financial Warranty Required For Phases 1-5, 6a and 7a				\$4,447,989

Phase 6

Reclamation Operation	Quantity	Unit	Unit Cost	Cost
<u>Active Mining Area</u>				
Dewatering of Phase 6 Area	140.7	Mil. Gal.	\$200	\$28,140
<u>Mobilization</u>	1.00	Is	\$2,500	\$2,500
Total Direct Cost				\$30,640
Overhead and Profit Cost (12.60%)				\$3,861
Contract Cost				\$34,501
Project Management (9.25%)				\$3,191
Additional Financial Warranty Required For Phase 6				\$37,692
Cummulative Financial Warranty Required For Phases 1-6, and 7a				\$4,485,681

Phase 7

Reclamation Operation	Quantity	Unit	Unit Cost	Cost
<u>Active Mining Area</u>				
Dewatering of Phase 7 Area	192.8	Mil. Gal.	\$200	\$38,560
<u>Mobilization</u>	1.00	Is	\$2,500	\$2,500
Total Direct Cost				\$41,060
Overhead and Profit Cost (12.60%)				\$5,174
Contract Cost				\$46,234
Project Management (9.25%)				\$4,277
Additional Financial Warranty Required For Phase 7				\$50,510
Cummulative Financial Warranty Required For Phases 1-7				\$4,536,191

