



Utah Division of Oil, Gas & Mining
Utah Coal Program
1594 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City, UT 84114-5801

Attn: Daron Haddock
Permit Supervisor

Re: Lila Canyon Mine L15-002, Fan Installation on Ledge

Dear Mr. Haddock,

Attached you will find a permit minor amendment to Lila Canyon Mine Permit. The application is to install a new long-term fan on the North Breakout Portal and stabilize the slope above the fan.

Initially the Lila Canyon Permit allowed for a fan to be installed on one of the remote South Breakout portals. During the construction of Lila it was determined that temporary fans were required on the "0" portal and not at the remote South Breakout portals. As a result, the Lila permit was modified to move the fan approval from the South Breakouts to the "0" portal.

The temporary fans on "0" portal are inadequate for a large longwall mine. A new larger long-term fan is required. Engineering analysis has shown the most beneficial place for the fan is the North Breakouts.

After discussing the miner revision application with you it appears that Pete Hess in the Price Office would be the lead for the review process. I met with Pete and we discussed his concerns and requirements which are included in the application. I also discussed the project with Priscilla by Phone to get her input. The attached application addresses both Pete and Priscilla's suggestions. In addition, bonding has been addressed.

It seems like the coal operators are always in a hurry for an approval. The fan project is on our Critical Path and we do need an expedited approval.

This submittal is being submitted electronically to SLC with a courtesy copy being sent to Pete in the Price DOGM field office. C1, C2 forms as well as redline strike out copies are included.

If you have any questions, or need any additional information regarding this submittal, please contact me or Karin directly at 435-888-4000.

Sincerely,

R. Jay Marshall P.E.

Chief Engineer/Project Manager
Lila Canyon Mine

Lila Canyon Project
P. O. Box 910
East Carbon, Utah 84520

Phone: (435) 888-4000

(435) 650-3157

Fax: (435) 888-4002

C/007/0013
Received 3/19/15
Task ID #4818

March 20, 2015

APPLICATION FOR PERMIT PROCESSING

<input type="checkbox"/> Permit Change X	<input type="checkbox"/> New Permit	<input type="checkbox"/> Renewal	<input type="checkbox"/> Transfer	<input type="checkbox"/> Exploration	<input type="checkbox"/> Bond Release	Permit Number: ACT/007/013
Title of Proposal: Fan on Northern Breakout Portal (15-002)						Mine: Horse Canyon
						Permittee: UtahAmerican Energy, Inc.

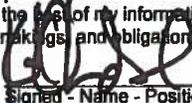
Description, include reason for application and timing required to implement.

Instructions: If you answer yes to any of the first 8 questions (gray), submit the application to the Salt Lake Office. Otherwise, you may submit it to your reclamation

<input type="checkbox"/> Yes	<input type="checkbox"/> No	1. Change in the size of the Permit Area? _____ acres Disturbed Area? _____ acres <input type="checkbox"/> increase <input type="checkbox"/> decrease.
<input type="checkbox"/> Yes	<input type="checkbox"/> No	2. Is the application submitted as a result of a Division Order? DO #
<input type="checkbox"/> Yes	<input type="checkbox"/> No	3. Does application include operations outside a previously identified Cumulative Hydrologic Impact Area?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	4. Does application include operations in hydrologic basins other than as currently approved?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	5. Does application result from cancellation, reduction or increase of insurance or reclamation bond?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	6. Does the application require or include public notice/publication?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	7. Does the application require or include ownership, control, right-of-entry, or compliance information?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	8. Is proposed activity within 100 feet of a public road or cemetery or 300 feet of an occupied dwelling?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	9. Is the application submitted as a result of a Violation? NOV #
<input type="checkbox"/> Yes	<input type="checkbox"/> No	10. Is the application submitted as a result of other laws or regulations or policies? Explain:
<input type="checkbox"/> Yes	<input type="checkbox"/> No	11. Does the application affect the surface landowner or change the post mining land use?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	12. Does the application require or include underground design or mine sequence and timing? (Modification of R2P2?)
<input type="checkbox"/> Yes	<input type="checkbox"/> No	13. Does the application require or include collection and reporting of any baseline information?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	14. Could the application have any effect on wildlife or vegetation outside the current disturbed area?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	15. Does application require or include soil removal, storage or placement?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	16. Does the application require or include vegetation monitoring, removal or revegetation activities?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	17. Does the application require or include construction, modification, or removal of surface facilities?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	18. Does the application require or include water monitoring, sediment or drainage control measures?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	19. Does the application require or include certified designs, maps, or calculations?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	20. Does the application require or include subsidence control or monitoring?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	21. Have reclamation costs for bonding been provided for?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	22. Does application involve a perennial stream, a stream buffer zone or discharges to a stream?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	23. Does the application affect permits issued by other agencies or permits issued to other entities?

X Attach 1 Digital complete copies of the application.

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.


 Signed - Name - Position - Date
 Linda Kerns ENGINEERING TECH 3.19.15

Subscribed and sworn to before me this 19th day of March, 2015.


 Notary Public
 My Commission Expires March 27, 2017, at
 STATE OF Utah
 COUNTY OF Carbon



Received by Oil, Gas & Mining

ASSIGNED TRACKING NUMBER

approximately 56,000 bank cubic yards. Removal of stones and boulders would be considered in volume estimates where they are part of the soil layer removed.

The stockpile has been sized to allow for bulking or swell of the soil as it is removed from the bank state to the loose state. A bulking number of 1.18 has been used. The area allowed for topsoil storage is 56,000 bank cubic yards x 1.18 which equals 66,000 loose cubic yards to be placed on the topsoil pile.

Boulders of approximately three feet in diameter and larger will be separated from the topsoil and piled or placed at appropriate locations such as adjacent to roads, pads etc. No attempt will be made to collect the large boulders into common piles. Boulders above ground level are in addition to topsoil volumes and may account for approximately 10,000 cubic yards.

UEI is not stockpiling large stones "boulders". Boulders will be pushed to the side and left during construction and then upon reclamation the boulders will be pushed back into the approximate location from which they came. Rocks of 36" or less will be stored in the topsoil pile with the soil and will be redistributed with the soil.

The approximate 66,000 loose cubic yards of topsoil will be stored in a topsoil pile as shown on Plate 5-2. This topsoil pile will be approximately 350' long and 250' wide with 2:1 slopes. The height of topsoil pile needed is approximately 31 feet. The pile as designed has the capability of storing well over the required 60,000 cubic yards. See Figure 1 for topsoil pile calculations.

Soil from the proposed ventilation break out sites near the coal outcrop will not be salvaged. **The slope above the north breakout fan is approximately 70%. Rock cover on the surface is approximately 60%.** As a result of the very limited ground disturbance, and lack of access, soil cannot **be reasonably be** salvaged. At these small isolated sites soil will not be salvaged or stored **(See R645-301-232.700 and 232.710).**

The sequence for topsoil removal in general, would be starting

232.720. No substitute soil materials will be needed.

233. Topsoil Substitutes and Supplements.

233.100. Soil inventories indicate that no substitute topsoil material will be necessary. Available soil material on the site is adequate for reclamation purposes.

233.200 Preliminary inventories show that no topsoil borrow area is needed.

233.300. This section is addressed in 233.400.

233.310. This section is addressed in 233.400.

233.320. This section is addressed in 233.400.

233.330. This section is addressed in 233.400.

233.340. This section is addressed in 233.400.

233.400 Soil Inventories show that no topsoil or topsoil substitute borrow area will be needed. Adequate amounts of suitable soil for plant growth are present based on root distribution and soil characteristics.

234. Topsoil Storage.

234.100. It will not be possible to redistribute the topsoil immediately. Therefore, the topsoil will be stockpiled for the purpose of final reclamation of the mine site. The rock storage areas are shown on Plate 5-2.

——— Access to the ventilation break outs will be from inside the mine. There will be **nominal** surface disturbance with the

approximately 56,000 bank cubic yards. Removal of stones and boulders would be considered in volume estimates where they are part of the soil layer removed.

The stockpile has been sized to allow for bulking or swell of the soil as it is removed from the bank state to the loose state. A bulking number of 1.18 has been used. The area allowed for topsoil storage is 56,000 bank cubic yards x 1.18 which equals 66,000 loose cubic yards to be placed on the topsoil pile.

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Soil from the proposed ventilation break out sites near the coal outcrop will not be salvaged. The slope above the north breakout fan is approximately 70%. Rock cover on the surface is approximately 60%. As a result of the very limited ground disturbance, and lack of access, soil cannot be reasonably salvaged. At these small isolated sites soil will not be salvaged or stored (See R645-301-232.700 and 232.710).

The sequence for topsoil removal in general, would be starting from the lower elevations of the site and working up slope.

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234. Topsoil Storage.

234.100. It will not be possible to redistribute the topsoil immediately. Therefore, the topsoil will be stockpiled for the purpose of final reclamation of the mine site. The rock storage areas are shown on Plate 5-2.

Access to the ventilation break outs will be from inside the mine. There will be minimal surface disturbance with the breakouts

The water treatment plant is located on the north-east side of the surface facility area. The plant will rest on a 15' by 15' slab. Process water will flow through the treatment plant at which time it will be treated and made suitable for potable water uses. The potable water will be stored in the potable water tank until it is used. The location of the water treatment plant can be found on Plate 5-2.

Potable Water Tank

Water treated by the water treatment plant and intended to be used as potable water will be stored in this 15' diameter by 20' high tank. The tank will set on a 15' by 15' concrete pad designed for adequate support of the tank. The location of the potable water tank can be found on Plate 5-2.

Process Water Tank

Process water, water to be used for mine use or to be treated for potable use, will be stored in this tank. The 15' diameter by 20' high process water tank will rest on a 15' by 15' concrete pad. Process water tank will be filled by using mine discharge water or may be hauled in from off site. The location of the process water tank can be found on Plate 5-2.

Sewer Tank

The sewer tank has been designed to facilitate 200 employees working on rotating shifts. The sewer tank will be located under the south end of the office and bathhouse parking area. The location of the sewer tank can be found on Plate 5-2. The design for the Sewer Tank can be found in Appendix 5-4.

Drain Field

The drain field has been designed to facilitate 200 employees working on rotating shifts. The drain field will be located at a lower elevation and south of the sewer tank. The location of the drain field can be found on Plate 5-2. The design for the drain field can be found in Appendix 5-4.

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chain-linked and shot-creted for stability. Prior to installing the chainlink fence, all trees will be cut off, and the vegetation material will be removed off the area and properly disposed. The location of the portal and fan is shown on Plate 5-2.

60-inch Conveyor from tunnels to Coal Stockpile(Main Conveyor)

The Run of Mine underground belt will provide for a means for coal to be conveyed from the working faces to the run of mine coal storage pile on the surface. The belt will provide capacity to convey to the surface, all coal mined in the underground workings. Preliminary design suggests that the conveyor that extends from the bottom of the rock slopes to the stacking tube at the coal storage area, shown on Plates 5-2 and 5-8, will have the following specifications: 60" wide, speed approximately 700 fpm with a length of approximately 810 feet long. Since the ground beneath the conveyor will not be disturbed due to the steepness and remoteness of the area, this conveyor will be completely contained within a tube type structure.

(ROM) Underground Belt from Stockpile to Crusher/ Screen

The Reclaim conveyor will provide for a means for coal to be conveyed from the coal stockpile to the crusher. The belt will provide capacity to convey to the screen and crusher at a suitable rate for crushing and screening. Preliminary design suggests that the reclaim conveyor, shown on Plates 5-2 and 5-8, will have the following specifications: 60" wide, speed approximately 700 fpm with a length of approximately 670 feet long. The portions of the conveyor running on the surface will be covered.

60-inch Conveyor from Crusher to Loadout Bin

The Loadout conveyor will provide for a means for coal to be conveyed from the crusher to the loadout bin. The belt will provide capacity to convey to the loadout at the same rate as the Reclaim conveyor. Preliminary design suggests that the Loadout conveyor, shown on Plates 5-2 and 5-8, will have the following specifications: 60" wide, speed approximately 500 fpm with a length of approximately 230 feet long. The portions of the

Alternate Sediment Control for Fan Site and Topsoil Storage Area

5.1 ASCA Areas

Sediment Control at the slope below water treatment area, and topsoil storage area sites will be accomplished with a combination of one or more of the following: berms, silt fences, and straw bales.

The ventilation breakouts are just punch outs and will have insignificant disturbance associated with them. (Plate 5-2) However, they are addressed as ASCA's and are addressed here even though there will be only insignificant surface disturbance. The ASCA's will be seeded upon final reclamation.

The topsoil collected from the topsoil storage area sites will be located downslope from the sites and will be used in the construction of the berm. The berm will be constructed a minimum of two feet high and have 2:1 side slopes. The berm will control the flow from a 10 year-24 hour precipitation event. Silt fence will be selectively placed to help control run-off. The berm will be stabilized with vegetation to prevent erosion. As much as practical, the vegetation techniques used on the main topsoil pile will be utilized on the fan topsoil berm.

The outside of the berm will be protected with a silt fence or gravel. The gravel, if used, would help augment the revegetation. Construction details of the silt fence/filter fence are shown in Figure 5.

The outslope of the portal access road, outslope of the water treatment pad, and ventilation break outs will have a silt fence located along the disturbed area boundary to treat the runoff from the slope. While some portions of this area will be disturbed as a result of the fill material placed for the pad and road construction, the major portion of this area is expected to remain undisturbed. As an added protection, the portions of the area that are disturbed by the fill placement will be covered with an erosion control mat to minimize the erosion from this slope and that area seeded to aid in the establishment of a vegetative cover.

The North Breakout pad where the new fan installation has been built is an already permitted ASCA which uses excelsior logs and gravity flow back into the Mine to treat intercepted precipitation.

Undisturbed sheet flow above this ASCA is naturally diverted around the North Breakouts by the tear drop shaped surface topography.

Due to lack of final engineering details, the exact location of the berms, silt fences, and subsequent erosion techniques will be determined in field with the approval of UDOGM. The final determination will be made prior to the start of topsoil removal.

-
- 553. The operator will comply with all regulations applicable to underground mining activities relative to backfilling and grading as required by R645 regulations.

Some minor cut slopes along the reclaimed road may be left after reclamation due to the difficulty and inability to reclaim all material pushed over the side while making the road cut. See plate 5-7B-2 cross section 16+00 for details. UEI will make reasonable efforts to minimize the cut slopes being left.

- 553.100.** Disturbed Areas. Disturbed areas will be backfilled and graded to:

- 553.110 The operator will obtain a post mining topography similar in form as what existed premining.

- 553.120 Since Lila Canyon is an underground operation, no spoil piles will be created. Minor highwalls may be created with the development of the rock slope portals. Upon completion of mining these entries will be seal as per Closure for Mine Openings Appendix 5-6 and all highwalls will be eliminated during the reclamation phase of the operation. Plate 5-9 shows the proposed portal plan. During reclamation, the fans will be dismantled and either salvaged or taken underground. The chainlink bolts will be cut off 6 inches below the surface and the shot-crete and mesh will be disposed of underground. The concrete will be burried during highwall reclamation and suitable material will be placed against the portals. This material will be shaped to eliminate the highwall and to bring the slope back to the approximate original contour.

- 553.130** All fill slope will have a static safety factor of 1.3 as shown in Appendix 5-5.

- 553.140** Erosion and water pollution will be minimized on

The water treatment plant is located on the north-east side of the surface facility area. The plant will rest on a 15' by 15' slab. Process water will flow through the treatment plant at which time it will be treated and made suitable for potable water uses. The potable water will be stored in the potable water tank until it is used. The location of the water treatment plant can be found on Plate 5-2.

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553.130 All fill slope will have a static safety factor of 1.3 as shown in Appendix 5-5.

553.140 Erosion and water pollution will be minimized on site by the use of drainage control structures (burms, channels and silt fence) and the use of small depression, soil tackifiers, mulch and sediment pond design. No water is anticipated leaving the reclaimed site prior to adequate

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Bonding Calculations
 Horse Canyon MineC/007/013
 Lila Canyon Section

Bond Summary

Direct Costs

Subtotal Demolition and Removal	\$571,647.93
Subtotal Backfilling and Grading	\$494,315.00
Subtotal Revegetation	\$238,309.00
Direct Costs	\$1,304,271.93

Indirect Costs

Mob/Demob	\$130,427.00	10.0%
Contingency	\$65,214.00	5.0%
Engineering Redesign	\$32,607.00	2.5%
Main Office Expense	\$88,690.00	6.8%
Project Mainagement Fee	\$32,607.00	2.5%
Subtotal Indirect Costs	\$349,545.00	26.8%

Total Cost \$1,653,816.93

Escalation factor for 2013 @1.5% 1.50%
 Number of years 5
 Escalation \$127,814.00

Reclamation Cost \$1,781,630.93

Bond Amount (rounded to nearest \$1,000) \$1,782,000.00
 2013 Dollars

Bond Posted Up to December 2010 \$1,807,000.00

Difference Between Cost Estimate and Bond \$25,000.00
 Percent Difference 1.38%

Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost	
Office Bathroom																				\$100,178
Shop Warehouse																				\$128,779
Security Shack																				\$893
Mine Substation																				\$11,185
Surface Power Lines																				\$2,432
Water Treatment Plant																				\$2,009
Portable Water Tank																				1374
Process Water Tank																				1374
Sewer Tank																				\$1,431
Drain Field																				left in place
Ventilation Fan																				\$48,625
Conveyor Tunnels to Coal Stockpile																				33336
Conveyor RCM Stockpile to Crusher																				12084
Conveyor Crusher to Loadout Bin																				\$9,475
Conveyor Loadout Bin Truck Loadout																				\$939
Reclaim Escape Tunnel Fan Fan House																				18981
ConveyorStoragePileSlakingTub																				11936
Crusher Screen Plant																				5037
Truck Scale to Loadout																				\$9,033
Coal Storage Bin																				\$4,134
Guard Rail																				4149.08
Underground Pipes																				left in place
Chain Link Fence																				\$5,115
Mine Facilities Rd Truck Loadout Rd																				\$32,900
Office Bathroom Warehouse Parking																				\$55,823
Mine Parking																				\$14,016
Fuel Tanks																				\$2,842
Powder and Cap Magazine																				\$2,440
Converts																				13594.35
Old Horse Canyon Fan Portals in Lila Canyon																				\$5,000
Lila Ventilation Portals North and South																				\$26,000
Pole Barn																				\$8,413
Rock Dust Silo																				\$2,201
Total																				\$571,948

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost	
	Surface Power Lines																				
	Structure's Demolition Cost	(8) wood poles and cross bars	024113800200	282.78	Foot													8	Each	2,262	
	Rubble's Demolition Cost	High Voltage Line	337139730820	144.97	Mile	2.058									3	Each		1.17	Miles	169	
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Non Steel Truck																				
	Disposal Cost Non Steel Drive																				
	Disposal Cost Non Steel																				
	Steel's Weight																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Steel Truck																				
	Transportation Cost Steel Truck Drive																				
	Disposal Cost Steel																				
	Subtotal																				
	Equipment's Disposal Cost																				
	Dismantling Cost																				
	Equipment's Vol. Demolished																				
	Loading Costs																				
	Transport Costs																				
	Disposal Costs																				
	Subtotal																				
	Concrete Demolition																				
	Demolition Cost																				
	Concrete's Vol. Demolished																				
	Loading Cost																				
	Transportation Cost																				
	Disposal Costs																				
	Subtotal																				
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	Concrete's Vol. Demolished																				
	Loading Cost																				
	Transportation Cost																				
	Disposal Costs																				
	Subtotal																				
	Total																				2,432

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost	
	Ventilation Fan																				
	Structure's Demolition Cost																				
	Structure's Vol. Demolished																				
	Rubble's Weight (exclude steel)																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Non Steel Truck																				
	Transportation Cost Non Steel Drive																				
	Disposal Cost Non Steel																				
	Steel's Weight																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Steel Truck																				
	Transportation Cost Steel Truck Drive																				
	Disposal Cost Steel																				
	Subtotal																				
	Equipment's Disposal Cost	Mechanical equipment heavy	15055 300 3800	641.85 /ton								10									38499
	Dismantling Cost																				
	Equipment's Vol. Demolished																				
	Loading Costs																				
	Transport Costs																				
	Disposal Costs																				
	Subtotal																				
	Equipment's Disposal Cost																				
	Dismantling Cost																				
	Equipment's Vol. Demolished																				
	Loading Costs																				
	Transport Costs																				
	Disposal Costs																				
	Subtotal																				
	Concrete Demolition																				
	Demolition Cost	Concrete demolition	024116170440	13.26 /BCY																	
	Concrete's Vol. Demolished																				
	Loading and Trucking Cost																				
	Transportation Cost																				
	Disposal Costs																				
	Subtotal																				
	Spot Crete	On site disposal	024116174200	9.54 /LCY																	
	Demolition Cost																				
	Concrete's Vol. Demolished																				
	Loading Cost																				
	Transportation Cost																				
	Disposal Costs																				
	Subtotal																				
	Total																				48625

Bonding Calculations
 Horse Canyon MineC/007/013
 Lila Canyon Section



Bond Summary

Direct Costs

Subtotal Demolition and Removal	\$572,615.00
Subtotal Backfilling and Grading	\$494,315.00
Subtotal Revegetation	\$238,309.00
Direct Costs	\$1,305,239.00

Indirect Costs

Mob/Demob	\$130,524.00	10.0%
Contingency	\$65,262.00	5.0%
Engineering Redesign	\$32,631.00	2.5%
Main Office Expense	\$88,756.00	6.8%
Project Maignement Fee	\$32,631.00	2.5%
Subtotal Indirect Costs	\$349,804.00	26.8%

Total Cost **\$1,655,043.00**

Escalation factor for 2013 @1.5% 1.50%
 Number of years 5
 Escalation \$127,908.00

Reclamation Cost \$1,782,951.00

Bond Amount (rounded to nearest \$1,000)
 2013 Dollars \$1,783,000.00

Bond Posted Up to December 2010 \$1,807,000.00

Difference Between Cost Estimate and Bond \$24,000.00
 Percent Difference 1.33%

Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost	
Office Bathhouse																				\$100,178
Shop Warehouse																				\$128,779
Security Shack																				\$993
Mine Substation																				\$11,165
Underground Power Lines																				left in place
Water Treatment Plant																				\$2,009
Portable Water Tank																				1374
Process Water Tank																				1374
Sewer Tank																				\$1,431
Drain Field																				left in place
Ventilation Fan																				\$52,024
Conveyor Tunnels to Coal Stockpile																				33336
Conveyor ROM Stockpile to Crusher																				12084
Conveyor Crusher to Loadout Bin																				\$8,475
Conveyor Loadout Bin Truck Loadout																				\$938
Reclaim Escape Tunnel Fan House																				18961
Conveyor Storage/Re-Stacking Tube																				11936
Crusher Screen Plant																				5037
Truck Scale to Loadout																				\$8,033
Coal Storage Bin																				\$4,134
Guard Rail																				4149.68
Underground Pipes																				Left in Place
Chain Link Fence																				\$5,115
Mine Facilities Rd Truck Loadout Rd																				\$32,900
Office Bathhouse Warehouse Parking																				\$55,923
Mine Parking																				\$14,016
Fuel Tanks																				\$2,842
Powder and Cap Magazine																				\$2,440
Culverts																				13534.35
Old Horse Canyon Fan Portals in Lila Canyon																				\$5,000
Lila Ventilation Portals North and South																				\$26,000
Pole Barn																				\$6,413
Rock Dust Silo																				\$2,201
Total																				\$572,816

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost	
	Underground Power Lines																				
	Structure's Demolition Cost																				
	Structure's Vol. Demolished																				
	Rubble's Weight (exclude steel)																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Non Steel Truck																				
	Transportation Cost Non Steel Drive																				
	Disposal Cost Non Steel																				
	Steel's Weight																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Steel Truck																				
	Transportation Cost Steel Truck Drive																				
	Disposal Cost Steel																				
	Subtotal																				
	Equipment's Disposal Cost																				
	Clearing Cost																				
	Equipment's Vol. Demolished																				
	Loading Costs																				
	Transport Costs																				
	Disposal Costs																				
	Subtotal																				
	Concrete Demolition																				
	Demolition Cost																				
	Concrete's Vol. Demolished																				
	Loading Cost																				
	Transportation Cost																				
	Disposal Costs																				
	Subtotal																				
	Concrete Demolition																				
	Demolition Cost																				
	Concrete's Vol. Demolished																				
	Loading Cost																				
	Transportation Cost																				
	Disposal Costs																				
	Subtotal																				
	Concrete Demolition																				
	Demolition Cost																				
	Concrete's Vol. Demolished																				
	Loading Cost																				
	Transportation Cost																				
	Disposal Costs																				
	Subtotal																				
	Total																				left in place

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost	
	Ventilation Fan																				
	Structure's Demolition Cost																				
	Structure's Vol. Demolished																				
	Rubble's Weight (exclude steel)																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Non Steel Truck																				
	Transportation Cost Non Steel Drive																				
	Disposal Cost Non Steel																				
	Steel's Weight																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Steel Truck																				
	Transportation Cost Steel Truck Drive																				
	Disposal Cost Steel																				
	Subtotal																				
	Equipment's Disposal Cost	Mechanical equipment heavy	15055 300 3600	641.65 /ton	ton																
	Dismantling Cost																				
	Equipment's Vol. Demolished																				
	Loading Costs																				
	Transport Costs																				
	Disposal Costs																				
	Subtotal																				
	Equipment's Disposal Cost																				
	Dismantling Cost																				
	Equipment's Vol. Demolished																				
	Loading Costs																				
	Transport Costs	Helicopter	15433603550	2600.5 /HR	HR									10		HR					260005
	Disposal Costs																				
	Subtotal																				
	Concrete Demolition	Concrete demolition	024116170440	13.26 /BCY	BCY	20	20	0.5													
	Demolition Cost																				
	Concrete's Vol. Demolished																				
	Loading and Trucking Cost	Loading and Trucking	024119193080	19.37 /LCY	LCY																
	Transportation Cost																				
	Disposal Costs	On site disposal	024116174200	9.54 /LCY	LCY																
	Subtotal																				
	Concrete Demolition																				
	Demolition Cost																				
	Concrete's Vol. Demolished																				
	Loading Cost																				
	Transportation Cost																				
	Disposal Costs																				
	Subtotal																				
	Total																				55024

