Climax Molybdenum
A Freeport-McMoRan Company

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March 28, 2024

Mr. Dustin Czapla
Environmental Protection Specialist
Division of Reclamation, Mining and Safety
Department of Natural Resources
1001 E 62nd Ave., Room 215
Denver, Colorado 80216

RE: Climax Mine, Permit No. M-1977-493, – 2024 Reclamation Cost Update

Dear Mr. Czapla,

Attached please find the 2024 Reclamation Cost Update for the Climax Mine (Permit M-1977-493).

- Reclamation Cost Model
- Reclamation Cost Narrative

Please note that the cost update materials are based in part on the reclamation plan (and proposed updates) being processed under TR-37, submitted separately. We appreciate your review of the attached materials and look forward to working with DRMS towards approval. Please contact Eric Detmer at (719) 486-7633 or me at (719) 486-7717 if you need additional information.

With kind regards,

Alex Ungers
Chief Environmental Engineer

Attachments

Climax Molybdenum Company – Climax Mine, CO
Permit M-1977-493
2024 Reclamation Cost Estimate Update

1 General Reclamation Update

There are many areas of the Climax property that have been disturbed during the past approximately 100 years of mining activities. This reclamation plan for the Climax Mine continues to outline specific reclamation strategies for all existing and anticipated new disturbances towards a focus of long-term water management and treatment. As agreed with DRMS, this update uses the interim 5-year mine plan as its basis (end of 2028).

This update to the Climax reclamation cost estimate approved by DRMS as AM-06 (2011) was developed in response to Climax's 5-year cost revision (2023). The following key elements have been evaluated for this update:

- 2028 projected facility limits for the North 40 Overburden Storage Facility (OSF), McNulty OSF and Mayflower Tailings Storage Facility (TSF).
- Conceptual regrade designs and stormwater channel layouts for the OSFs based upon the projected mine plan (see Exhibit F, Figures F-01 to F-07).
- Current plan for the proposed East Side Channel extension and East Side Pipeline alignments (see updated Exhibit G, Figure G-04).
- Updated construction approaches for Tenmile Tunnel, Roads and Revegetation.
- Updated unit rates, production calculations and correction factors using past Climax and Henderson project experience, specific industry quotes, CostMine (2023), the Caterpillar Handbook (2018), and RSMeans (2023).

2 Site-Specific Reclamation Planning

As specified in the permit amendment AM-06, specific reclamation strategies have been outlined for all areas of the mine. This narrative describes reclamation plans for all areas including the Open Pit, Robinson Lake, the mill area, the 4 tailing dams, the 2 OSFs, and the 3 TSFs. It also refers to the long-term strategy for site-wide water management and demolition of structures upon cessation of mining. Figures F-01 to F-07 in Exhibit F and Figures G-01 to G-09 in Exhibit G were utilized as the basis for the proposed final reclamation design and illustrate the final facility layout with respect to post-mine land use. Since the approval of the 2019 Reclamation Cost Estimate, five key Technical Revisions (TRs) have been approved (TR-31, TR-22, TR-33, TR-34 and TR-35) for which closure components have been referenced herein as part of this reclamation cost update.

Quantities used in the cost model are measured from AutoCAD files for the figures included in Attachment F and G. Table 1 presents a summary of the quantities used for each facility.

2.1 Storke Complex

Most of the Storke Complex has been reclaimed and the bond released. No costs are included in this update.

It is assumed that, with improvements to the interceptor channels, the drainage area that reports to the existing Storke Wastewater Pump Station (SWPS) could be reduced from the current 93 acres to about 30 acres (Exhibit G).

2.2 Open Pit

The open pit will not be revegetated due to accessibility and safety concerns. Thus, most of the open pit will be designated a talus community. The final slopes will likely remain at their existing configuration. Weathering, raveling, and ice action will cause natural reshaping of the benches and highwalls over time which will soften visual

impacts. Administrative controls will be maintained to control public access via approximately 40 “No Trespassing” signs which will be installed approximately every 300 feet around the perimeter, where access is reasonable.

It is assumed that the open pit would be allowed to fill with water to a level well below the top of the Mosquito Fault (11,113 feet), which provides containment of the impacted water. The water in the pit would be impacted and require treatment prior to release to Tenmile Creek. It is assumed that the elevation of the water level in the pit lake would be approximately 11,000 feet, which results in a water surface area of about 77 acres (Exhibit G).

Approximately 2,354,000 cubic yards (cy) from the overburden pile located south of the mill area along and below Ceresco Ridge in the Arkansas River basin will be excavated and hauled to the pit bottom.

On the margins of the pit, where slopes are less steep, some revegetation may be possible (per DRMS requirements). In these cases, up to an estimated 27,000 cy of reclamation cover will be hauled from the McNulty OSF stockpiles to the open pit periphery and revegetated with the alpine seed mixture.

The AM-06 cost for this project area included the installation of a 2,800 linear feet (lf) pipeline as part of a pit dewatering system. Climax will construct a pit dewatering system as part of production operations and it will remain in place after mining ceases (per TR-24), therefore, the post mining cost for this item has been eliminated.

2.3 Mine Mill Complex

Buildings, utilities, processing equipment, and other above-ground structures and materials no longer required during the post-reclamation period will be demolished. The Mine Mill Complex area will then be regraded and reclaimed. Demolished material that is not practicably recycled will be disposed by burial on site. Based on a new 5-year mine plan, footprints for the North 40 and McNulty OSFs have been revised. As such, approximately 117 acres with steep slopes will be regraded in the Mine Mill Complex at year end 2028 for a total of approximately 950,000 cy. This area and adjacent flat area (241 acres) will then be covered with a minimum of 24 inches reclamation cover and revegetated with the alpine seed mixture. Reclamation cover will be hauled from the Southeast and North McNulty topsoil stockpiles (Figure F-02). It is assumed that surface drainage from this reclaimed area would eventually be clean water (Exhibit G). Demolition costs for the structures in the Mine Mill Complex are addressed in Sections 2.23 and 2.24; revegetation costs are addressed in Section 2.18.

It is assumed that surface drainage from this reclaimed area would eventually be clean water. The regrading design includes drainage channels to collect the surface runoff and convey it to the East Side Channel (ESC). It is also assumed that subdrains will be required to collect impacted water that is expected to be present. The collection channel and subdrain configurations shown on the figure are conceptual. Impacted water would be conveyed to the East Side Pipeline and clean water would be conveyed to the East Side Channel (Exhibit F, Figure F-03).

The work involves the construction of approximately 10,100 lf of lined diversion channel using riprap. The impacted water from this system would be conveyed to the East Side Pipeline via 12,400 lf of impacted surface water channel. In addition, stormwater controls will include 11,500 lf of impacted water pipeline, and 4,800 lf of impacted water collection drains.

2.4 North 40 OSF

Climax expects the low-grade ore in the North 40 OSF will have been removed and processed prior to closure. However, the cost estimated conservatively assumes the material will remain at the end of mining and requires reclamation.

The North 40 OSF final reclamation will not be completed until the OSF is no longer required for production and will occur over a period of 5 years. By 2028, it is anticipated that the North 40 OSF may have reached its life of mine (LOM) limits. Regrading of the OSF for closure will be no steeper than 2H:1V interbench (per TR-22) with some areas considerably less steep, for a total of approximately 1,919,000 cy. Surface water channels will be constructed every 55 vertical feet on the benches to convey surface runoff to downdrains, resulting in 45,600 lf of vegetated bench channels.

A collection drain system will be installed on the south and north ends to collect impacted seepage from the facility. The impacted water from this system would be conveyed to the East Side Pipeline. In addition, stormwater controls will include 3,200 lf of impacted water pipeline, and 4,100 lf of impacted water collection drains.

Reclamation cover to be salvaged from the ultimate footprint of the McNulty OSF will be stockpiled at two stockpiles to the immediate north and northeast of the North 40 OSF. As such, approximately 235 acres will be covered at the North 40 OSF for a total of 760,000 cy of reclamation cover which will be hauled and placed over the regraded surface for a total of 24 inches of growth medium to be revegetated with the alpine seed mixture.

The work involves the construction of approximately 8,300 lf of lined diversion channel using riprap. The riprap unit cost is from RSMeans (2023) and adjusted for Western Colorado. An additional 4,500 lf of articulating concrete block (ACB)-lined down drains will be constructed on the reclaimed dump surface (per TR-25). The ACB (articulated concrete block) unit rate is based on actual costs for similarly constructed reclamation channels (Miami Mine, Arizona 2023). The unit rates are adjusted for local material costs and contractor rates.

2.5 McNulty OSF

Some portions of the McNulty OSF may be reclaimed concurrently with production, but final reclamation will not be completed until the OSF is no longer required for production. By 2028, it is anticipated that the McNulty OSF will be regraded in a similar manner as the North 40 OSF which includes 2H:1V interbench slopes (per TR-22) for a total of approximately 9,253,000 cy (see Exhibit F, Figure F-03). Approximately 132,400 lf of vegetated collection channels will be constructed on the benches at 55-foot vertical intervals.

Reclamation cover to be salvaged from the regraded footprint of the McNulty OSF will be stockpiled in one of four adjacent locations. According to the 2028 mine plan, approximately 683 acres will be covered at the McNulty OSF for a total of 2,206,000 cy of reclamation cover which will be hauled and placed over the regraded surface for a total of 24 inches of reclamation cover. After reclamation cover placement, all areas that received reclamation cover will be seeded with the alpine seed mixture.

Figure F-04 (Exhibit F) illustrates the final LOM configuration for the stormwater controls on the OSF to be constructed during the reclamation project. These include down drains, bench channels, and perimeter diversion channels, a portion of which will be needed under the 2028 closure plan scenario. Fresh water intercepted from above the McNulty OSF would be conveyed by open channel to the East Interceptor or the ESC (see Figure G-06).

The work involves the construction of approximately 16,100 lf of lined diversion channel using sized riprap, 7,300 lf of ACB-lined down drains, impacted water surface channels, 3,400 lf of impacted water collection drains and 1,300 lf of impacted water pipeline.

2.6 Tenmile TSF

Tenmile TSF will be reclaimed after it is no longer required for production operations. Tenmile TSF will be reclaimed with a dry cover. The majority of the surface will be capped. A small depression will remain in the southwest corner. The surface of the TSF will drain towards the southwest, where surface runoff will flow to the Tenmile Riser tunnel (Exhibit G, Figure G-08).

The dry tailings area will be capped with a minimum of 24 inches of reclamation cover material over 625 acres for a total of approximately 2,077,000 cy. Approximately 3 percent of the total TSF area will be capped with a minimum of 48 inches of reclamation cover material to promote tree growth. It is assumed that the surface runoff from Tenmile TSF will eventually be clean and discharge into the Tenmile Tunnel Extension (north).

The tunnel north portal is too low to discharge into the West Interceptor. Therefore, Figure G-08 shows a new pipeline/channel across 3 Dam to convey the clean runoff to the ESC. This system would also intercept clean surface water runoff from the reclaimed (or downstream) face of 3 Dam.

A surface flood emergency spillway (1,700 lf) will be required that would discharge to the east side of the valley into the ESC. A conceptual location of a spillway channel is shown on Figure G-08. The work involves the construction of approximately 13,500 lf of lined clean water diversion channel using sized riprap, and 7,000 lf of impacted water pipeline.

2.7 Tenmile Tunnel

The Tenmile Tunnel will be used as the operational water control and spillway off the TSF. It is assumed that the original Tenmile Tunnel (south) will be decommissioned and plugged with a concrete bulkhead (Exhibit G). It is assumed that the surface runoff from Tenmile TSF will eventually be clean and discharged into the Tenmile Tunnel Extension (north).

Closure costs for this facility have either come from the AM-06 estimate or from recent similar projects. Each bulkhead will be constructed with reinforced concrete keyed into the ribs and back.

2.8 3 Dam

3 Dam was reclaimed in its current configuration during the mid-1990s. Reclamation is partially complete on 3 Dam, and the bond has been released on those completed areas. The lower portion of Dam 3 will be inundated by expansion of the Mayflower TSF. The dam has been raised since the 1990s. Approximately 29 acres will be covered with 2 feet of reclamation cover material and revegetated with the standard upland seed mix.

The tunnel north portal is too low to discharge into the West Interceptor. Therefore, Figure F-05 shows a new channel (2,800 lf) across 3 Dam to convey the clean runoff to the ESC. This system would also intercept clean surface water runoff from the downstream face of 3 Dam.

2.9 Pond Shop

The Pond Shop itself will be demolished under a different task. However, some basic soil reclamation will still be required at the Pond Shop site. This will include a minor amount of regrading and import of just over 500 cy of cover material. The upland standard seed mixture will be applied to the cover material.

2.10 Mayflower TSF

A portion (701 acres) of Mayflower TSF will be reclaimed when it is no longer needed for production. However, the southwest portion of Mayflower TSF where the existing decant pool is located will be used for water treatment as long as it is necessary to provide detention storage for the water treatment system. A detention storage area and several sludge cells will remain on the surface of Mayflower TSF as the operation of the PDWTP continues into the post-closure period. The bonding estimate assumes that water treatment will continue for 10 years (see Section 2.22 Impacted Water Treatment), so the pool area and sludge cell will be reclaimed in year 10 post closure.

The Mayflower TSF will be reclaimed with a cover system similar to that constructed on Tenmile TSF. The cover areas will be capped with a minimum of 24 inches of cover material. Approximately 3 percent of the total TSF area

will be capped with a minimum of 48 inches of reclamation cover material to promote tree growth, resulting in an import of approximately 2,933,000 cy of material for the 5-year mine plan at year end 2028. Reclamation cover will come from the nearby stockpiles. The dry cover will be seeded with the upland seed mixture.

A clean water surface channel will be constructed on the TSF surface to convey runoff to an emergency spillway that will flow to the East Side channel extension. This could be the existing Mayflower Tunnel or a new surface spillway channel that would discharge to the east side of the valley into the ESC. Both systems are shown on Exhibit G, Figure G-09. For bonding, we have assumed the surface spillway will be constructed. The ESC will be extended resulting in 21,300 lf of clean water channel, 26,300 lf of impacted water pipeline and 2,200 lf of spillway.

2.11 East Side Channel

The East Side Channel system diverts un-impacted stormwater run-on along the east side of the affected areas from Camp (Mine Mill Complex) to Tenmile Creek below the Mayflower TSF Seepage Collection Ponds. The work involves the construction of an additional 14,800 lf of lined diversion channel using sized riprap. Costs for this channel are included in the Tenmile (5,100 lf) and Mayflower (9,700 lf) TSF estimates.

2.12 Mayflower Seepage Collection Ponds and Pumpback Building

The Mayflower Seepage Collection Ponds and Pumpback Building itself will be demolished under a different task. However, some basic soil reclamation will still be required at this building site. The upland standard seed mixture will be applied to the reclamation cover material. This closure task also includes backfilling and capping the Seepage Collection Ponds. In total, this will include approximately 34,000 cy of regrading and import of just over 2,700 cy of reclamation cover for the area.

2.13 Robinson TSF

Robinson TSF reclamation began in the 1980s and is ongoing. The majority of the surface has been capped with overburden rock and covered with a compost generated on site to attempt to create suitable growth media and most of that area has been revegetated. Climax ultimately intends to close Robinson TSF with a dry cover. It is currently estimated that approximately 457 acres will be covered with reclamation cover at 24 inches thick. Approximately 3 percent of the total TSF area will be capped with a minimum of 48 inches of reclamation cover material to promote tree growth, resulting in a total reclamation cover volume of 1,530,000 cy. However, portions of that 455 acres to be reclaimed will require additional soils cover to eliminate the low spot where the decant pool was situated for a thicker total cover, therefore, this cost update accounts for a total of 380,000 cy of fill material that will be sourced from reclamation cover stockpiles. This fill volume is separate from the 1,576,000 cy of reclamation cover placed on the finish grade surface of the TSF.

The existing pool area (approximately 60 acres) will be dried out, regraded, and covered appropriately. The surface would be sloped to drain east to the ESC to achieve a positive drainage configuration.

The compost production area is on the Robinson TSF and will be reclaimed once the existing composting operation is complete. In addition, there are several roads on the surface of the Robinson TSF that are still required for production and reclamation activities.

A clean water surface channel will be constricted on the TSF surface to covey runoff to the ESC. This will require in 9,700 lf of clean water channel and 8,200 lf of impacted water pipeline.

2.14 1 Dam

Reclamation on the remaining unreclaimed portions of the 1 Dam face requires a reclamation cover (24 inches) over a 127-acre area (410,000 cy) for revegetation.

It is assumed that 1 Dam will continue to generate impacted seepage for an extended period of time post closure. Therefore, the existing seepage collection system and Warren's Pump System would continue to be required at closure (Exhibit G). A clean water surface channel will be constructed as shown on Figure G-07 (Exhibit G). The open channel would intercept clean surface water runoff from the face of the dam and convey it around the seepage collection system. Approximately 5,900 lf will be constructed.

2.15 Roads

Roads not to be retained for post-mining land use will be reclaimed after they are no longer needed for mining and reclamation purposes. Roads which are not permanent will be regraded as necessary to blend with the adjacent terrain and to meet natural drainage patterns. Following regrading, reclamation cover will be applied and seed will be spread. The seed mixture will be the alpine mixture for roads east of State Highway 91 and upland seed mixture for roads west of State Highway 91. The entrances to reclaimed roads will be blocked by barriers of native rock or earthen berms to prevent vehicular access but allow wildlife access. The following roads are most likely to be reclaimed: switchbacks on Little Bartlett Mountain (which are scheduled for haul truck access improvements over the next few years); access roads at the toes of 1 Dam and 4 Dam; various roads between 3 Dam and Mayflower TSF; various roads northeast and southeast of 5 Dam; and various roads northwest of Mayflower TSF (Figure F-04 and F-05). Approximately 365,000 cy of cover material will be hauled to the road locations for reclamation purposes.

2.16 Robinson Lake

Robinson Lake is currently used for process water storage, but it will be reclaimed after it is no longer needed for mineral production operations and converted to a freshwater reservoir. Final reclamation will follow the methods utilized during 2008-2011 by various contractors, including removal of an estimated final 645,000 cy of impacted sediment and sludge to expose a native footprint around the margins of the lake to encourage development of hydric vegetation communities. These areas will also be seeded with the hydric seed mixture.

The AM-06 cost for this project area included some general work items such as mobilization and demobilization, and sediment and erosion control. This update includes these general costs grouped for all areas (see Sections 2.20 and 2.26). Unit rates for the 645,000 cy sludge cleanout for this unique project are partially based on activities during Skanska's successful sludge cleanout during summer and fall 2010. Waste rock will be hauled from the McNulty OSF to construct temporary haul road platforms. The 645,000 cy of sediment and soil will be excavated and hauled to the Robinson TSF.

Approximately 3,100 lf of clean water channel will be constructed between Robinson Lake and Eagle Park Reservoir and from Chalk Mountain Reservoir to Robinson Lake. Approximately 1,720 lf of impacted pipeline will be constructed between the toe of 1 Dam to Tim's Pond.

2.17 5 Dam

The lower benches of 5 Dam have been reclaimed and bond released. However, an increase in the height of 5 Dam during the course of the current production operations will require reclamation at the completion of the dam construction. 24 inches of reclamation cover will be applied to 61 acres of the dam face for a total of approximately 197,000 cy. After cover application, the upland standard seed mixture will be applied. A surface

water collection channel (2,800 lf) would convey clean water to the east for discharge into Tenmile Creek and the existing Mayflower seepage collection and pumping system would continue to operate. Impacted water will be conveyed directly to the PDWTP once converted to 2-stage treatment. Approximately 8,200 lf of impacted water pipeline will connect the existing Mayflower pipeline and the 5 Dam Seepwater Pump Station to the PDWTP.

2.18 Revegetation

Revegetation at Climax has included seeding with three seed mixtures, as well as direct transplanting of trees, shrubs, and herbaceous vegetation.

Revegetation activities which meet the approved approach provided in AM-06 will be followed. This cost includes seeding, mulching and crimping site wide, an area of approximately 3,200 acres or 5 square miles. For approximately 3 percent of the TSF reclaimed surfaced offset at minimum 200 feet from the dam crests, the cover material thickness will be 48 inches to promote tree growth. For cost estimating, planting 450 seedlings per acre has been assumed.

Unit rates are based on recent 2024 contractor bid rates, rates from RSMeans (2023) and seedling cost from CostMine (2023).

In accordance with a recent DRMS requirement, Climax has added a reseeding cost. Based on research and experience conducted by a Climax consultant, a reseeding rate of 10 percent is considered to be a reasonable and supported assumption for reseeding at the site.

2.19 Seal Underground Mine Openings

No. 3 Gallery is currently blocked off to prevent access. Upon cessation of mining operations, it would require further work to prevent long-term access. A 2-foot-thick concrete bulkhead is proposed for the No. 3 Gallery closure. Storke Portal currently has ventilation access to the 600 level of the underground workings. Similarly, upon cessation of mining operations, it would require further work to prevent long- term access. A 2-foot-thick concrete bulkhead is proposed for the Storke Portal closure.

The Phillipson Portal will be closed at cessation of by placing a 2-foot-thick concrete bulkhead.

2.20 Mobilize and Demobilize

Prior reclamation cost estimates included a minimal total cost for total project equipment mobilization and demobilization. For this cost estimate update, we have assumed mobilization cost will be 5 percent of total direct costs. The percentage is based on federal guidance (USFS 2014).

2.21 Buffer Zone

The concept for a reclamation Buffer Zone around impacted facilities is no longer being required by DRMS.

2.22 Impacted Water Treatment

Water management and site-wide water treatment will continue at Climax long after the cessation of production operations. The AM-06 reclamation cost estimate for hydrologic protection has been updated using actual costs from 2022-2023, which are reflective of a successfully operating downstream water treatment facility, the PDWTP. These baseline costs are based upon a current treatment footprint of approximately 10,000 acre-feet. The post-closure annual volume (currently 3,206 MG/year) is estimated to decrease by approximately 60 percent (1,282 MG/year [see Exhibit G]). Unit costs are based on actual 2022 costs. Estimated additional costs are based on predicted unit cost for the Molybdenum Removal Water Treatment Plant which will come online in 2025. Cost to haul PDWTP water treatment sludge to an approved landfill in Golden, Colorado, is

calculated based on a December 2023 estimate (RADPR) 2023). The bonding estimate provides for 10 years of water treatment plant operation post-closure.

2.23 Demolition – Former Mine

Asbestos-containing materials (ACMs) will be abated and other regulated materials (universal waste, fire extinguishers, etc.) will be removed prior to commencing demolition. Costs included to abate ACMs is based on a limited site-wide asbestos survey performed in 2018 and 2019. The majority of confirmed ACMs, such as window glaze, caulk, floor tile/mastic, will be abated via glovebag techniques. Surface material, including wall texture, will require a negative air enclosure. ACMs will be disposed off-site. A comprehensive regulated material survey has not been conducted previously and costs included for this are based on WSP USA Inc.'s (WSP) experience for similar facilities. Regulated materials will be removed, properly packaged, and disposed or recycled (as regulations apply) off site.

Above grade buildings, utilities, processing equipment, and other miscellaneous structures and materials no longer required during the post-reclamation period will be demolished. In accordance with AM-06, Exhibit E, Section E-11.5.2, concrete floors, walls, equipment pedestals, and foundations which are at or near grade will be pulverized in place and buried as part of the mass regrade work. Buried pipe, wire, etc. will be left in place during reclamation if it does not interfere with regrading activities and is non-toxic or not hazardous.

Salvageable materials within structures and facilities, such as equipment, will be retrieved and sold as market conditions allow. All remaining recyclable materials (unwanted equipment, structural steel, paneling, concrete, etc.) will be transported off site for recycling, though no salvage costs are included in this estimate. Material that is not practicably recyclable will be disposed of by on-site burial. Mass regrade will include 2 feet of cover material as discussed in the Mine Mill Complex reclamation of Section 2.3; revegetation is included as part of the site-wide effort in Section 2.18.

Several new structures constructed since the restart of production in 2012 will no longer be required during the post-reclamation period and will be demolished. These structures include the Mayflower Coherex Station constructed in 2014, the Supply Canal No. 2 Pipelines constructed in 2012, the Mayflower Flood Bypass Tunnel constructed in 2012-14 (see TR-21), and a portion of the Mill Return Pipeline in Searle Gulch constructed in 2013. A limited asbestos survey performed in 2018 and 2019 did not identify any ACMs of these features. Other regulated materials (universal waste, fire extinguishers, etc.) will be removed prior to commencing demolition. A regulated material survey has not been conducted previously and costs included for this are based on WSP's experience for similar facilities. Regulated materials will be removed, properly packaged, and disposed or recycled (as regulations apply) off site.

Similar to the former mine structures, above grade portions of the new structures will be demolished. In accordance with AM-06, Exhibit E, Section E-11.5.2, concrete slabs, equipment pedestals, and foundations which are at or near grade will be pulverized in place and buried as part of the mass regrade work. Buried pipe, wire, etc. will be left in place during reclamation if it does not interfere with regrading activities and is non-toxic or not hazardous.

Salvageable materials within structures and facilities, such as equipment, will be retrieved and sold as market conditions allow. All remaining recyclable materials, (unwanted equipment, structural steel, paneling, concrete, etc.) will be transported off site for recycling. Material that is not practicably recyclable will be disposed by on-site burial.

Mass regrade will include 2 feet of cover material as discussed in the Mine Mill Complex reclamation of Section 2.3; revegetation is included as part of the site-wide effort in Section 2.18.

The 4 Dam Seep Pump Station, Robinson Seep Pump Station, Storke Wastewater Treatment Plant, 5 Shaft Pumping System, and Warren's Pump Station, amongst others, will remain post closure for either continuation of water management. 3 Dam Pump Station is scheduled for demolition on or before 2026 as Mayflower TSF rises.

2.24 Demolition – Linear Facilities

Several linear facilities at Climax will not be needed following cessation of production operations. These include substations and powerlines, pipelines, and similar historic structures. A limited asbestos survey performed in 2018 and 2019 did not identify any ACMs of these features. Regulated materials, such as transformer oils, will be removed and recycled offsite prior to demolition.

Similar to the former mine structures, above grade portions of the features will be demolished. In accordance with AM-06, Exhibit E, Section E-11.5.2, concrete slabs, equipment pedestals, and foundations which are at or near grade will be pulverized in place and buried as part of the mass regrade work. Buried pipe, wire, etc. will be left in place during reclamation if it does not interfere with regrading activities and is non-toxic or not hazardous. Recyclable materials will be transported off site for recycling. Material that is not practicably recyclable will be disposed of by on-site burial.

2.25 Disposal of Reagents

TR-24 Section T-3.5 describes that all chemicals not to be used in the long-term water treatment operations "would be used or removed from the site. Mixed chemicals such as Nokes Reagent in solution would be used in the milling process until depletion of the supplies. The distributor [will] be contacted to assume possession of unmixed and uncontaminated chemicals, and the material [will] be transported off-site in the same manner that it was received at the site." Further, TR-28 presents a current list of reagents being used at the mine. Table T-A-1 provides chemical types, specific product names, storage container types and volumes. For the purposes of this cost estimate update, we have assumed that 100 percent of all chemicals would be used in the milling process until depletion of the supplies once closure has been announced.

2.26 Maintenance and Environmental Control

AM-06 provided for a significant amount of general maintenance and environmental control activity site-wide during the post-production 4-year reclamation process. This cost item remains unchanged even though some activities are included on a facility-specific basis for some of the other site reclamation projects. Costs are included for continued maintenance for 30 years.

2.27 Monitoring

Costs for water quality monitoring are included in this update. The annual cost $8,800 is based on Climax's current labor to collect samples analytical cost. Per DRMS guidance, the annual cost is escalated by approximately 4 percent per year to account for inflation. The inflation rate is based on the change in Consumer Price Index from December 2018 to December 2023.

The cost to abandon monitoring wells at the end of monitoring is included using unit costs from RSMeans (2023). Thirteen water quality wells will be abandoned with 4-inch polyvinyl chloride (PVC) casing for a total depth of 2,040 lf.

3 RECLAMATION COSTS

The estimated costs for the reclamation activities include the Direct Costs associated with each of the sites described above and the Indirect Costs as discussed below, most of which are a percentage of Direct Costs as required by DRMS. The estimated costs are detailed in the Excel file (Attachment 1).

3.1 Indirect Costs

Approved AM-06 Indirect Cost allocations for Insurances, Bonds, and Contractor Profits are fixed DRMS Direct Cost percentages at 2.02 percent, 1.05 percent, and 10 percent, respectively. The cost for a Job Superintendent "team" was calculated using the labor rates for a period of 3 years. The Financial Warranty Fee of $500 was a rate fixed by DRMS. The final two Indirect Cost categories for Engineering, Bidding, Contracts and Management, Administration have been set to 2 percent and 5 percent, respectively, of the total of Direct Costs, Overhead, and Profit, per DRMS requirements.

3.2 Repurposing

The Climax Mine does not currently propose to pursue the repurposing of select industrial facilities and buildings for use by other entities post closure. Although we anticipate that some building demolition material can be resold, we have conservatively included no credit for salvage value.

4 COST MODEL INSTRUCTIONS

This section describes the system of inputs required by this update to the Climax Mine reclamation cost model.

4.1 General Inputs

The first six worksheets require direct input of the model's operating assumptions. The majority of the cells which require modification have been shaded in green or yellow. Items which change include, but is not limited to:

- Indirect Cost percentage allocations for Insurances, Bonds, and Contractor Profits which are fixed DRMS Direct Cost percentages at 2.02 percent, 1.05 percent, and 10 percent, respectively.
- A 20 percent contingency allowance is included to cover unanticipated costs resulting from unexpected natural events and uncertainties associated with the assumptions that form the basis for the operation and reclamation plans and reclamation cost estimates.
- The cost for a Job Superintendent has been calculated using the labor rates and assuming an on-site presence of 4.5 years.
- The Financial Warranty Fee of $500 is a rate fixed by DRMS.
- The final two Indirect Cost categories for Engineering/Bidding/Contracts and Management/Administration have been set to 2 percent and 5 percent, respectively, of the total of Direct Costs, Overhead, and Profit, in accordance with DRMS requirements.
- Equipment unit rates are obtained from CostMine and RSMeans which obtains Colorado rental rates (generally Caterpillar models).
- The sources of the update to the Materials List are referenced in the table.
- Demolition unit rates are largely provided from the latest RSMeans' *Heavy Construction Cost Data* book, in this case published in 2023.

4.2 Project Inputs

On the Summary tab, the buttons at the top will automatically create new tabs or outputs, as follows:

- Add a GENERAL worksheet: adds a new worksheet for reclamation of a facility or area.
- Add a DEMOLITION worksheet: adds a new worksheet for demolition of a facility or building.

- GO TO Last Active SHEET: returns the user to the previous active worksheet.
- Create PDF copy: allows the user to select which tabs to print to an Adobe Acrobat file.

On the individual project tabs, the buttons at the top of each sheet will automatically create activities and line items, as follows:

- GO TO "SUMMARY" SHEET: returns the user to the Summary worksheet described above.
- Insert a new task HAUL/LOAD: adds new cost line items for a loader-haul truck fleet combination.
- Insert a new task SPREAD (CUYDS): adds a new cost line item for a motor grader (spreading of cover material).
- Insert a new task GRADING (ACRES): adds a new cost line item for a motor grader (grading of haul routes).
- Insert a new task WATER: adds a new cost line item for a water truck (dust control of haul routes).
- Insert a new task MATERIALS: adds a new line item for materials only.
- Add new equipment to look up: takes the user to the Equipment List tab to add a new piece of equipment.
- Add new material to look up: takes the user to the Materials List tab to add a new material.

At each of these prompts, green shaded cells typically indicate where user input is required. In some cases, a Production Table will automatically be created below the Calculations Table from which calculated data will be pulled back into the reclamation cost line item. However, the Production Table must be modified by the user with consideration for two production categories. First, Figure 1 should be consulted (in AutoCAD format) to calculate haulage distances and average road grades, if required. This data should then be taken into consideration for the calculation of haul times between the proposed borrow areas and the reclamation sites. Second, the Caterpillar Handbook, in this case Edition 48 dated June 2018, should be consulted to determine actual production factors for each fleet of equipment generated, including estimates for material swell factors, altitude deration factors (critical at the Climax Mine), average dozer pushes, time trial study methods, equipment operator efficiency ratings, blade correction factors, to name but a few. The green-shaded cells generally require research using the Caterpillar Handbook and sound engineering judgment for reclamation construction projects. Most unshaded cells are either calculated automatically or have been provided with direct input by the user in the Equipment List tab. Finally, the Production Table will indicate an appropriate number of haul units (articulated haul trucks) to be balanced against one loading unit (default for the Climax Mine model is a wheeler loader). This number of haul units should be considered carefully based on reclamation project experience and common sense given the haul distance, road configuration, mine elevation, seasonal impacts, and reasonableness given other site-specific constraints. This haul unit "gut check" should then be modified in the Calculations Table accordingly.

5 REFERENCES

CostMine. (See Infomine USA, Inc.).

Infomine USA, Inc. 2023. Equipment Cost Calculator, 2022 – 2023. https://calc2022.costs.infomine.com. Accessed December 2023.

Caterpillar, 2018. Caterpillar Performance Handbook, Ed. 48

Gordian, 2023, 2024. RSMeans online. https://www.rsmeansonline.com/SearchData. Accessed December 2023 and January 2024.

RS Means (see Gordian).

US Forest Service (USFS). 2020. Cost Estimating Guide for Road Construction. ESDA Forest Service Northern Region Engineering. September 8, 2020

US Department of Labor. 2023. Prevailing Wage Rates (Davis-Bacon). General Decision Number CO20230003. 12/22/2023.

Model Outputs

Attachment A

Requested Data Backup (provided separately)

Davis Bacon rates for Colorado – General Decision Number: CO20230003 09/01/2023

CostMine Equipment rental rates (2023)

RSMeans material and equipment rates (Gordian 2023)

Revegetation Unit rate – RS Means 2023

Table 1 Climax Cover and Grading Closure Quantities

CLIMAX COVER AND GRADING CLOSURE QUANTITIES ESTIMATE

Date	18-Jan-23	Made by:	MP
Project No.:	31404505.029	Checked by:	AJS
Subject:	Climax Closure Cover and Grading Quantities	Approved by:	RS

Item No.	Item Description	Units	Quantity
100	*Earthworks*		
101	*1 Dam*		
101.1	Closure Cover: Standard Vegetation (2 ft thick)	yd^3	410,000
101.2	Closure Cover Tree Islands (4 ft thick)	yd^3	0
101.3	Access Road Reclamation (Not Including Reclamation Cover)	ac	0
101.4	Fertilize Closure Cover	ac	127
101.5	Seed Closure Cover (Standard Mix, Steep slope)	ac	127
101.6	Mulch on Closure Cover	ac	127
101.7	Clean Water Surface Channel	ft	5,900
101.8	Clean Water Pipeline	ft	0
101.9	Impacted Water Surface Channel	ft	0
101.10	Impacted Water Pipeline	ft	0
101.11	Impacted Water Collection Drain	ft	0
102	*3 Dam*		
102.1	Closure Cover: Standard Vegetation (2 ft thick)	yd^3	94,000
102.2	Closure Cover Tree Islands (4 ft thick)	yd^3	0
102.3	Access Road Reclamation (Not Including Reclamation Cover)	ac	0
102.4	Fertilize Closure Cover	ac	29
102.5	Seed Closure Cover (Standard Mix, Steep slope)	ac	29
102.6	Mulch on Closure Cover	ac	29
102.7	Clean Water Surface Channel	ft	2,800
103	*5 Dam*		
103.1	Closure Cover: Standard Vegetation (2 ft thick)	yd^3	197,000
103.2	Closure Cover Tree Islands (4 ft thick)	yd^3	0
103.3	Access Road Reclamation (Not Including Reclamation Cover)	ac	0
103.4	Fertilize Closure Cover	ac	61
103.5	Seed Closure Cover (Standard Mix, Steep slope)	ac	61
103.6	Mulch on Closure Cover	ac	61
103.7	Clean Water Surface Channel	ft	2,900
103.8	Clean Water Pipeline	ft	0
103.9	Impacted Water Surface Channel	ft	0
103.10	Impacted Water Pipeline	ft	8,200
103.11	Impacted Water Collection Drain	ft	0
104	*Robinson TSF*		
104.1	Closure Cover: Standard Vegetation (2 ft thick)	yd^3	1,420,000
104.2	Closure Cover Tree Islands (4 ft thick)	yd^3	110,000
104.3	Access Road Reclamation (Not Including Reclamation Cover)	ac	6
104.4	Fertilize Closure Cover	ac	457
104.5	Seed Closure Cover (Standard seed Mix Flat Areas)	ac	457
104.6	Mulch on Closure Cover	ac	457
104.7	Imported Fill	yd^3	380,000
104.8	Clean Water Surface Channel	ft	9,700

CLIMAX COVER AND GRADING CLOSURE QUANTITIES ESTIMATE

Date 18-Jan-23 — Made by: MP
Project No.: 31404505.029 — Checked by: AJS
Subject: Climax Closure Cover and Grading Quantities — Approved by: RS

Item No.	Item Description	Units	Quantity
104.9	Clean Water Pipeline	ft	0
104.10	Impacted Water Surface Channel	ft	0
104.11	Impacted Water Pipeline	ft	8,200
104.12	Impacted Water Collection Drain	ft	0
105	*Tenmile TSF*		
105.1	Closure Cover: Standard Vegetaion (2 ft thick)	yd^3	1,959,000
105.2	Closure Cover Tree Islands (4 ft thick)	yd^3	118,000
105.3	Access Road Reclamation (Not Including Reclamation Cover)	ac	7
105.4	Fertilize Closure Cover	ac	625
105.5	Seed Closure Cover (Standard Seed Mix Flat Areas)	ac	625
105.6	Mulch on Closure Cover	ac	625
105.7	Clean Water Surface Channel	ft	13,500
105.8	Clean Water Pipeline	ft	0
105.9	Impacted Water Surface Channel	ft	0
105.10	Impacted Water Pipeline	ft	7,000
105.11	Impacted Water Collection Drain	ft	0
105.12	Decant Pool Spillways	ft	1,700

CLIMAX COVER AND GRADING CLOSURE QUANTITIES ESTIMATE

Date 18-Jan-23 — Made by: MP
Project No.: 31404505.029 — Checked by: AJS
Subject: Climax Closure Cover and Grading Quantities — Approved by: RS

Item No.	Item Description	Units	Quantity
106	*Mayflower TSF*		
106.1	Closure Cover: Standard Vegetation (2 ft thick)	yd^3	2,200,000
106.2	Closure Cover Tree Islands (4 ft thick)	yd^3	125,000
106.3	Sludge Cell Closure Cover: Standard Vegetation (2 ft thick)	yd^3	108,000
106.4	Sludge Cell Closure Cover: Tree Islands (4 ft thick)	yd^3	7,000
106.5	Pool Area Closure Cover: Standard Vegetation (2 ft thick)	yd^3	464,000
106.6	Pool Area Closure Cover: Tree Islands (4 ft thick)	yd^3	29,000
106.7	Access Road Reclamation (Not Including Reclamation Cover)	ac	29
106.8	Fertilize Closure Cover	ac	883
106.9	Seed Closure Cover (Standard Seed Mix Flat Areas)	ac	883
106.10	Mulch on Closure Cover	ac	883
106.11	Clean Water Surface Channel	ft	21,300
106.12	Clean Water Pipeline	ft	0
106.13	Impacted Water Surface Channel	ft	0
106.14	Impacted Water Pipeline	ft	26,300
106.15	Impacted Water Collection Drain	ft	0
106.16	Decant Pool Spillways	ft	2,200
107	*Robinson Lake Area*		
107.1	Closure Cover: Standard Vegetation (2 ft thick)	yd^3	138,000
107.2	Closure Cover Tree Islands (4 ft thick)	yd^3	0
107.3	Access Road Reclamation (Not Including Reclamation Cover)	ac	18
107.4	Fertilize Closure Cover	ac	43
107.5	Seed Closure Cover (Wetland Seed Mix)	ac	43
107.6	Mulch on Closure Cover	ac	43
107.7	Clean Water Surface Channel	ft	3,100
107.8	Clean Water Pipeline	ft	0
107.9	Impacted Water Surface Channel	ft	0
107.10	Impacted Water Pipeline	ft	1,720
107.11	Impacted Water Collection Drain	ft	0
108	*North OSF*		
108.1	Closure Cover: Standard Vegetation (2 ft thick)	yd^3	760,000
108.2	Closure Cover Tree Islands (4 ft thick)	yd^3	0
108.3	Access Road Reclamation (Not Including Reclamation Cover)	ac	0
108.4	Fertilize Closure Cover	ac	235
108.5	Seed Closure Cover (Alpine Seed Mix, Steep Slopes)	ac	235
108.6	Mulch on Closure Cover	ac	235
108.7	Cut/Fill for Regrading Slopes to 2H:1V Between Drainage Benches	yd^3	1,919,000
108.8	Clean Water Surface Channel	ft	8,300
108.9	Clean Water Pipeline	ft	0
108.10	Impacted Water Surface Channel	ft	0
108.11	Impacted Water Pipeline	ft	3,200
108.12	Impacted Water Collection Drain	ft	4,100

CLIMAX COVER AND GRADING CLOSURE QUANTITIES ESTIMATE

Date 18-Jan-23 — Made by: MP
Project No.: 31404505.029 — Checked by: AJS
Subject: Climax Closure Cover and Grading Quantities — Approved by: RS

Item No.	Item Description	Units	Quantity
108.13	Downdrops	ft	4,500
108.14	Bench Channels	ft	45,600
109	*McNulty OSF*		
109.1	Closure Cover: Standard Vegetation (2 ft thick)	yd^3	2,206,000
109.2	Closure Cover Tree Islands (4 ft thick)	yd^3	0
109.3	Access Road Reclamation (Not Including Reclamation Cover)	ac	51
109.4	Fertilize Closure Cover	ac	683
109.5	Alpine Seed Closure Cover	ac	683
109.6	Seed Closure Cover	ac	0
109.7	Mulch on Closure Cover	ac	683
109.8	Cut/Fill for Regrading Slopes to 2H:1V Between Drainage Benches	yd^3	9,253,000
109.9	Cut/Fill for Regrading Haul Road Area	yd^3	60,000
109.10	Clean Water Surface Channel	ft	16,100
109.11	Clean Water Pipeline	ft	0
109.12	Impacted Water Surface Channel	ft	0
109.13	Impacted Water Pipeline	ft	1,300
109.14	Impacted Water Collection Drain	ft	3,400
109.15	Downdrops	ft	7,300
109.16	Bench Channels	ft	132,400

CLIMAX COVER AND GRADING CLOSURE QUANTITIES ESTIMATE

Date	18-Jan-23	Made by:	MP
Project No.:	31404505.029	Checked by:	AJS
Subject:	Climax Closure Cover and Grading Quantities	Approved by:	RS

Item No.	Item Description	Units	Quantity
110	*Mill and Pit Areas*		
110.1	Closure Cover: Standard Vegetation (2 ft thick)	yd^3	778,000
110.2	Closure Cover Tree Islands (4 ft thick)	yd^3	0
110.3	Access Road Reclamation (Not Including Reclamation Cover)	ac	0
110.4	Fertilize Closure Cover	ac	241
110.5	Seed Closure Cover (Alpine Seed Mix, Flat Areas)	ac	241
110.6	Mulch on Closure Cover	ac	241
110.7	Cut/Fill for Mill Area Regrading (5 ft Depth over 117 acres)	yd^3	950,000
110.8	South Waste Rock Pile Removal to Pit Backfill	yd^3	2,354,000
110.9	Clean Water Surface Channel	ft	10,100
110.10	Clean Water Pipeline	ft	0
110.11	Impacted Water Surface Channel (Optional)	ft	12,400
110.12	Impacted Water Pipeline	ft	11,500
110.13	Impacted Water Collection Drain	ft	4,800
111	*Miscellaneous Roads*		
111.1	Closure Cover: Standard Vegetation (2 ft thick)	yd^3	365,000
111.2	Closure Cover Tree Islands (4 ft thick)	yd^3	0
111.3	Fertilize Closure Cover	ac	113
111.4	Seed Closure Cover	ac	113
111.5	Mulch on Closure Cover	ac	113

https://wsponline.sharepoint.com/sites/global-climaxosfeor/project files/6 deliverables/31404505.029-reclamation_plan_update/002-rpt-co_permit_update/rev1/31404505.029-002-rpt-1-co_permit_update_10-year_27mar24.docx

ATTACHMENT A

COST MODEL OUTPUT

Model Inputs for Reclamation Cost Model

Year of Cost Data		2023	Year of Cost Data (Dec-31)
Public Liability Insurance		2.02%	% of Direct
Bond		1.05%	% of Direct
Profit (10% of Direct)		10.00%	% of Direct
Contingency (20% of direct)		20.00%	
Financial Warranty Fee	$	500.00	Flat Fee in dollars
Engineering/Bidding/Contracts (2% of Direct, OH&P)		2.00%	% of Direct, OH&P
Management/Adminstration (3% of Direct, OH&P)		3.00%	% of Direct, OH&P
Sitewide Efficiency Correction Factor		0.83	0 to 1

Labor Inputs for Reclamation Cost Model

FICA, % of Base Rate =	7.65%	Source: www.ssa.gov/OACT/ProgData/TasRates.html
SIIS, % of Base Rate =	6.33%	Source: [Avg of Colorado Contractor's Assn. 1999 & 2001 Surveys + Previous Climax Cost Model Updates]
Unemployment, % of Base Rate =	3.80%	Source: www.coworkforce.com - Colorado Department of Labor and Employment
Workers Comp, % of Base Rate =	16.00%	Source: [Avg of Colorado Contractor's Assn. 1999 & 2001 Surveys + Previous Climax Cost Model Updates]
CPI Inflation Factor	1	Inflation Factor based on Consumer Price Index, assuming straight line increase, from inputs below:
Annual CPI as of 12/31/2023	231.675	Source: InflationData.com website; historical Consumer Price Index values from the Bureau of Labor Statistics.
Annual CPI for 2006 =	205.7	Base CPI = 100 in 1982. Therefore, a CPI of 205.7 indicates a 105.7% increase since 1982.
FICA, % of Base Rate	7.65%	
SIIS, % of Base Rate	6.33%	
Unemployment, % of Base Rate	3.80%	
Workers Comp, % of Base Rate	16.00%	

Worker Classification	Base Hourly Rate	Fringe %	Davis-Bacon Job Class
CHOOSE OPERATOR			
Dozer Operator	$ 26.78	33%	Power equipment operator: Bulldozer
Loader Operator	$ 25.88	27%	Power equipment operator: Loader (Front End)
Scraper Operator	$ 20.60	39%	Power equipment operator: Scraper
Grader Operator	$ 23.05	28%	Power equipment operator: Grader/blade
Backhoe Operator	$ 24.30	24%	Power equipment operator: Backhoe/Trackhoe
Water Truck Driver	$ 20.39	17%	Truck driver: Water Truck
Truck Driver	$ 15.27	35%	Truck driver: Dump Truck
Laborer	$ 12.44	28%	Laborer: Common or general
Mechanic/Welder	$ 23.31	17%	Mechanic
Foreman	$ 62.50	0%	RSMeans 2023 Q4, 01 31 1320 0200 adjusted for Summit County, CO
Crane Operator	$ 23.82	27%	Power equipment operator: Crane
Job Superintendent (DRMS factor)	$ 71.25	0%	RSMeans 2023 Q4, 01 31 1320 0260 adjusted for Summit County, CO
Concrete finisher	$ 15.55	18%	CEMENT MASON/CONCRETE FINISHER

Source of Base Rates and fringe: Davis Bacon Wage Rates, Heavy Construction for 2023 (Summit County) General Decision Number: CO20230003 09/01/2023

Financial Reporting Unit Rates

12/31/2023 Climax Reclamation Labor Rates

Table 1.0 - Financial Reporting Labor Unit Rates

Source of Base Rates: Davis Bacon Wage Rates for 2023 (Summit County) General Decision Number: CO20230003 09/01/2023

Worker Classification	Base Hourly Rate	Fringe %	FICA[2]	SIIS[3]	Unemploy[4]	Workers Comp[5]	Total-2023 Dollars	Inflation Factor[2]	**Labor 12/31/2023 Dollars**
Dozer Operator	$26.78	$8.72	$2.05	$1.70	$1.02	$4.28	$44.55	1.0000	**$44.55**
Loader Operator	$25.88	$6.99	$1.98	$1.64	$0.98	$4.14	$41.61	1.0000	**$41.61**
Scraper Operator	$20.60	$7.99	$1.58	$1.30	$0.78	$3.30	$35.55	1.0000	**$35.55**
Grader Operator	$23.05	$6.45	$1.76	$1.46	$0.88	$3.69	$37.29	1.0000	**$37.29**
Backhoe Operator	$24.30	$5.75	$1.86	$1.54	$0.92	$3.89	$38.26	1.0000	**$38.26**
Water Truck Driver	$20.39	$3.43	$1.56	$1.29	$0.77	$3.26	$30.70	1.0000	**$30.70**
Truck Driver	$15.27	$5.27	$1.17	$0.97	$0.58	$2.44	$25.70	1.0000	**$25.70**
Laborer	$12.44	$3.53	$0.95	$0.79	$0.47	$1.99	$20.18	1.0000	**$20.18**
Mechanic/Welder	$23.31	$3.94	$1.78	$1.48	$0.89	$3.73	$35.12	1.0000	**$35.12**
Foreman	$62.50	$0.00	$4.78	$3.96	$2.38	$10.00	$83.61	1.0000	**$83.61**
Crane Operator	$23.82	$6.46	$1.82	$1.51	$0.91	$3.81	$38.32	1.0000	**$38.32**
Job Superintendent (DRMS factor)	$71.25	$0.00	$5.45	$4.51	$2.71	$11.40	$95.32	1.0000	**$95.32**
Concrete finisher	$15.55	$2.85	$1.19	$0.98	$0.59	$2.49	$23.65	1.0000	**$23.65**

Source of Base Rates and fringe: Davis Bacon Wage Rates, Heavy Construction for 2023 (Summit County) General Decision Number: CO20230003 09/01/2023

[1]Fringes, % of Base Rate = Varies--> Davis Bacon Wage Rate Decision for Colorado "General Decision Number: CO20230003 09/01/2023]

[2]FICA, % of Base Rate = 7.65% Source: www.ssa.gov/OACT/ProgData/TasRates.html

[3]SIIS, % of Base Rate = 6.33% Source: [Avg of Colorado Contractor's Assn. 1999 & 2001 Surveys + Previous Climax Cost Model Updates]

[4]Unemployment, % of Base Rate = 3.80% Source: www.coworkforce.com - Colorado Department of Labor and Employment

[5]Workers Comp, % of Base Rate = 16.00% Source: [Avg of Colorado Contractor's Assn. 1999 & 2001 Surveys + Previous Climax Cost Model Updates]

1.0000 Inflation Factor based on Consumer Price Index, assuming straight line increase.

Equipment List for Reclamation Cost Model

Equipment	Operator Class	Cost/Unit Equip	Cost/Unit Labor	Units of Measure	Units	OPERATED Cost/Unit Equip	Effective Load Capacity (cu yds)	Average Push (LF)	Equipment Cost Source	line item
D6N LGP Dozer	Dozer Operator	$ 68.28	$ 44.55	cuyd	cuyd/hr	$ 112.83	235	150	RS Means 2023	01 54 33 20.4200
D7E Dozer	Dozer Operator	$ 121.74	$ 44.55	cuyd	cuyd/hr	$ 166.29	320	200	RS Means 2023	01 54 33 20.4260
D8T Dozer	Dozer Operator	$ 148.49	$ 44.55	cuyd	cuyd/hr	$ 193.04	320	250	RS Means 2023	01 54 33 20.4310
D9T Dozer	Dozer Operator	$ 221.36	$ 44.55	cuyd	cuyd/hr	$ 265.91	500	250	RS Means 2023	01 54 33 20.4360
938K Loader	Loader Operator	$ 104.30	$ 41.61	cuyd	cuyd/hr	$ 145.91	3.25		RS Means 2023	01 54 33 20.4760
740B Artic. Haul Truck	Truck Driver	$ 132.49	$ 25.70	cuyd	cuyd/hr	$ 158.19	25.8		RS Means 2023	01 54 33 20.5600
336 EL/FL 88K lb Excavator	Backhoe Operator	$ 137.39	$ 38.26	cuyd	cuyd/hr	$ 175.65	100		RS Means 2023	01 54 33 20.0320
4000G Water Truck, 4000 gal	Water Truck Driver	$ 62.06	$ 30.70	gallons	gal/hr	$ 92.76	4000		Cost Mine 2023	Page SU 46
621G Water Wagon, 8000 gal	Truck Driver	$ 127.58	$ 25.70	gallons	gal/hr	$ 153.28	8000		RS Means 2023	15 43 34 06.950
12M Grader AWD	Grader Operator	$ 71.83	$ 37.29	acres	acres/hr	$ 109.12			Cost Mine 2023	Page SU 19

Cost Mine - 2023. Mine & Mill Equipment Cost Guide
RS Means 2023

Material List for Reclamation Cost Model

Material	LOOKUP_CONCA	Cost/Unit Mate	Units of Measure	Source
Excavate diversion/spillway	Excavate diversion/spillwaycuyd	$ 2.76	cuyd	RSMeans 2023 / 31 23 16.13 5120
Drain rock	Drain rockcuyd	$ 71.00	cuyd	2023 Contractor rate
Perforated pipe	Perforated pipeLF	$ 12.86	LF	RSMeans 2023 / 33 41 16.35 0080
Geotextile	Geotextilesqyd	$ 1.98	sqyd	RSMeans 2023 / 33 41 23.19 0100
Signs	Signseach	$ 111.98	each	RSMeans 2023 / 10 14 53 20.0600, 1500
30" corrugated HDPE Installed	30" corrugated HDPE InstalledLF	$ 76.80	LF	RSMeans 2023 / 33 31 11.20 3160
Rip Rap Armoring	Rip Rap Armoringcuyd	$ 80.10	cuyd	RSMeans 2023 / 31 37 13.10 0100
42-48" HDPE pipe and bedding INSTALLED	42-48" HDPE pipe and bedding INSTALLEDLF	$ 116.58	LF	RSMeans 2023 / 33 42 11.50 1100
concrete-bulkhead	concrete-bulkheadcuyd	$ 1,378.00	cuyd	2023 estimate for similar project
Monuments	Monumentseach	$ 116.35	each	RSMeans 2023 / 02 21 13 13.0600
Seeding-Standard	Seeding-Standard acre	$ 956.58	acre	RSMeans 2023 / 32 92 19 14.0500
Seeding-Standard Steep (>2.5:1)	Seeding-Standard Steep (>2.5:1)acre	$ 3,702.00	acre	2023 Contractor rates Rocky Mountain Reclamation
Seeding-Alpine	Seeding-Alpineacre	$ 877.73	acre	RSMeans 2023 / 32 92 19 14.0500
Seeding-Alpine Steep (>2.5:1)	Seeding-Alpine Steep (>2.5:1)acre	$ 3,702.00	acre	2023 Contractor rates Rocky Mountain Reclamation
Seeding-Wetland	Seeding-Wetlandacre	$ 675.00	acre	previous estimate, flat surfaces
Geogrid	Geogridsqyd	$ 5.19	sqyd	previous estimate escalated to 2023 for inflation
ACB	ACBsqft	$ 61.22	sqft	2023 projects in NM and Arizona
Tree planting (450 per acre)	Tree planting (450 per acre)acre	$ 544.50	acre	RSMeans 2023/ 32 93 43 10.0140

DEMOLITION Material List for Reclamation Cost Model

Material	LOOKUP_CONCA	Cost/Unit Materials	Units	Source	Section
Steel	Steelcuft	$ 0.30	cuft	RSMeans 2023	02 41 16.13 0020
Concrete floor	Concrete floorsqft	$ 0.71	sqft	RSMeans 2023	02 41 16.17 0440
Concrete footing	Concrete footingLF	$ 18.64	LF	RSMeans 2023	02 41 16.17 1140
Asphalt	Asphaltsqyd	$ 2.81	sqyd	RSMeans 2023	02 41 13.17 5010
Tin	Tincuft	$ 0.31	cuft	previous 2019 estimate escalated to 2024 for inflation	
Wood	Woodcuft	$ 0.31	cuft	previous 2019 estimate escalated to 2024 for inflation	
Combination	Combinationcuft	$ 0.28	cuft	previous 2019 estimate escalated to 2024 for inflation	
Wood/wire	Wood/wireLF	$ 0.95	LF	previous 2019 estimate escalated to 2024 for inflation	
Pipe grouting	Pipe groutingcuft	$ 30.13	cuft	RSMeans 2023	31 73 13.10 0800

SUMMARY		REF	2024 CLMX	2019 DRMS	(under)/over	Percent Difference	
Directs	Storke Complex	A1	$ -	$ 19,741	$ (19,741)	-100%	Reclamation completed in 2019. Bond released
	Open Pit	A2	$ 11,930,550	$ 156,896	$ 11,773,654	7504%	Added haul/place overburden from Arkansas Basin to pit bottom
	Mine Mill Complex	A3	$ 7,080,547	$ 1,747,393	$ 5,333,154	305%	Cover depth increased to 2', regrade volume increased, water mgt. facilities added, area decreased 126 acres, riprap cost increased
	North 40 OSF	A4	$ 14,997,490	$ 1,946,440	$ 13,051,050	671%	Cover depth increased to 2', regrade volume increased, water mgt. facilities increased, area increased 155 acres, riprap cost increased
	McNulty OSF	A5	$ 31,814,408	$ 6,202,713	$ 25,611,695	413%	Cover depth increased to 2', regrade volume increased, water mgt. facilities increased, area increased 319 acres, riprap cost increased
	Tenmile TSF	A6	$ 13,953,356	$ 6,804,129	$ 7,149,227	105%	Cover depth increased to 2', water mgt. facilities added, area increased 179 acres, no wet Cover, geotextile cost removed
	Tenmile Tunnel	A7	$ 129,556	$ 821,953	$ (692,397)	-84%	Unit cost updated based on recent project, sludge backfill removed.
	3 Dam	A8	$ 1,001,959	$ 50,072	$ 951,887	1901%	Reclamation completed. Bond released.
	Pond Shop	A9	$ 5,408	$ 4,017	$ 1,391	35%	Updated unit rates per change in equipment fleet
	Mayflower TSF	A10	$ 18,058,872	$ 1,446,003	$ 16,612,869	1149%	Cover depth increased to 2', water mgt. facilities added, area increased 467 acres
	East Side Channel	A11	$ -	$ 4,816,717	$ (4,816,717)	-100%	Cost moved to Tenmile TSF and Mayflower TSF
	Mayflower Seepage Collection	A12	$ 47,746	$ 48,204	$ (458)	-1%	Updated unit rates per change in equipment fleet
	Robinson TSF	A13	$ 8,152,930	$ 290,869	$ 7,862,061	2703%	Cover depth increased to 2', water mgt. facilities added, area increased 400 acres
	1 Dam	A14	$ 3,222,932	$ 101,927	$ 3,121,005	3062%	Cover depth increased to 2', water mgt. facilities added, area increased 62 acres
	Roads	A15	$ 1,600,556	$ 351,607	$ 1,248,949	355%	Cover depth increased to 2', area increased 63 acres
	Robinson Lake	A16	$ 5,273,235	$ 2,333,570	$ 2,939,665	126%	Sediment volume increased. Water management facilities added.
	5 Dam	A17	$ 1,736,919	$ 162,879	$ 1,574,040	966%	Cover depth increased to 2', area increased 34 acres, surface water channels added.
	Revegetation	A18	$ -	$ 4,366,338	$ (4,366,338)	-100%	Updated unit rate, tree planting added, acres increased 475 acres. Cost moved to tabs for individual facilities.
	Seal Underground Mine Openings	A19	$ 38,990	$ 1,805	$ 37,185	2060%	Updated unit rate
	Impacted Water Treatment	A22	$ 37,123,901	$ 33,129,000	$ 3,994,901	12%	Updated using 2022 actual cost plus estimated unit cost for Molybdenum WTP to come on line 2025. Treatment volume reduced assuming 50% reduction. Added sludge disposal. Increased to 10 years.
	Mtnce & Environmental Control	A23	$ 11,222,418	$ 521,178	$ 10,701,240	2053%	Increased maintenance period to 30 years.
	Demolition 1 - Structures	A24	$ 7,615,447	$ 3,563,306	$ 4,052,141	114%	Unit cost updated. Decontamination for mill added. Asbestos abatement added. Some facilities will remain (e.g., MWTP)
	Demolition 2-linear facilities	A25	$ 104,062	$ 23,486	$ 80,576	343%	Unit cost updated.
	Demolition 3-new structures	A26	$ -	$ 3,801,386	$ (3,801,386)	-100%	Combined with Demolition 1
	Disposal of Reagents	A27	$ -	$ 162,201	$ (162,201)	-100%	Cost removed. Assumed reagents will be removed prior to closure.
	Monitoring	A28	$ 510,729	$ -	$ 510,729	0%	No monitoring included in 2019 estimate. Cost assumes 30 years.
Subtotal Directs			**$ 175,622,010**	**$ 72,873,830**	**$ 102,748,180**	**141%**	
Indirects	Public Liab. Ins. (2.02% of Direct)	A29	$ 3,547,565	$ 1,472,051	$ 2,075,513	141%	DRMS percentage allocation
	Bond (1.05% of Direct)	A30	$ 1,844,031	$ 765,175	$ 1,078,856	141%	DRMS percentage allocation
	Profit (10% of Direct)	A31	$ 17,562,201	$ 7,287,383	$ 10,274,818	141%	DRMS percentage allocation
	Contingency (20%)	A32	$ 35,124,402	$ -	$ 35,124,402	0%	Not considered in 2019.
	Job Superintendent (DRMS factor)	A33	$ 4,014,878	$ 1,517,270	$ 2,497,608	165%	Based on a 4.5 year construction schedule
	Mobilize demobilize (5% of direct cost)	A34	$ 8,781,101	$ 1,009,695	$ 7,771,406	770%	Increased direct cost and estimated cost based on standard guidance from USFS.
	Financial Warranty Fee	A36	$ 500	$ 500	$ -	0%	No change- DRMS number
	Engineering/Bidding/Contracts (2% of Direct, OH&P)	A37	$ 4,929,924	$ 1,701,147	$ 3,228,777	190%	Consistent w/ Henderson CCM
	Management/Adminstration (3% of Direct, OH&P)	A38	$ 7,394,886	$ 4,195,785	$ 3,199,100	76%	Consistent w/ Henderson CCM
Subtotal Indirects			**$ 83,199,487**	**$ 16,939,312**	**$ 66,260,175**	**391%**	
TOTAL			**$ 258,821,498**	**$ 89,813,142**	**$ 169,008,356**	**188%**	

SCHEULE

SUMMARY		REF	TOTAL	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071
Directs	Storke Complex	A1	$ -																													
	Open Pit	A2	$ 11,930,550		$ 2,386,110	$ 2,386,110	$ 2,386,110	$ 2,386,110	$ 2,386,110																								
	Mine Mill Complex	A3	$ 7,080,547		$ 3,540,273	$ 3,540,273																											
	North 40 OSF	A4	$ 14,997,490		$ 2,999,498	$ 2,999,498	$ 2,999,498	$ 2,999,498	$ 2,999,498																									
	McNulty OSF	A5	$ 31,814,408		$ 6,362,882	$ 6,362,882	$ 6,362,882	$ 6,362,882	$ 6,362,882																									
	Tenmile TSF	A6	$ 13,953,356					$ 6,976,678	$ 6,976,678																									
	Tenmile Tunnel	A7	$ 129,556						$ 129,556																									
	3 Dam	A8	$ 1,001,959						$ 1,001,959																									
	Pond Shop	A9	$ 5,408		$ 5,408																													
	Mayflower TSF	A10	$ 18,058,872					$ 8,201,175	$ 8,201,175					$ 1,656,522																				
	East Side Channel	A11	$ -																															
	Mayflower Seepage Collection	A12	$ 47,746		$ 47,746																													
	Robinson TSF	A13	$ 8,152,930					$ 4,076,465	$ 4,076,465																									
	1 Dam	A14	$ 3,222,932					$ 1,611,466	$ 1,611,466																									
	Roads	A15	$ 1,600,556		$ 320,111	$ 320,111	$ 320,111	$ 320,111	$ 320,111																									
	Robinson Lake	A16	$ 5,273,235				$ 2,636,618	$ 2,636,618																									
	5 Dam	A17	$ 1,736,919					$ 868,459	$ 868,459																									
	Revegetation	A18	$ -																															
	Seal Underground Mine Openings	A19	$ 38,990		$ 38,990																													
	Mobilize-Demobilize	A20	$ -																															
	Buffer Zone	A21	$ -																															
	Impacted Water Treatment	A22	$ 37,123,901		$ 3,712,390	$ 3,712,390	$ 3,712,390	$ 3,712,390	$ 3,712,390	$ 3,712,390	$ 3,712,390	$ 3,712,390	$ 3,712,390	$ 3,712,390																			
	Mtnce & Environmental Control	A23	$ 11,222,418		$ 709,520	$ 709,520	$ 709,520	$ 709,520	$ 709,520	$ 469,630	$ 469,630	$ 469,630	$ 469,630	$ 469,630	$ 321,778	$ 321,778	$ 321,778	$ 321,778	$ 321,778	$ 321,778	$ 321,778	$ 321,778	$ 321,778	$ 321,778	$ 321,778	$ 210,889	$ 210,889	$ 210,889	$ 210,889	$ 210,889	$ 210,889	$ 210,889	$ 210,889	$ 210,889
	Demolition 1 - Structures	A24	$ 7,615,447		$ 3,807,724	$ 3,807,724																											
	Demolition 2-linear facilities	A25	$ 104,062		$ 52,031	$ 52,031																											
	Demolition 3-new structures	A26	$ -																															
	Disposal of Reagents	A27	$ -																															
	Monitoring	A28	$ 510,729		$ 8,885	$ 9,245	$ 9,621	$ 10,011	$ 10,417	$ 10,840	$ 11,279	$ 11,737	$ 12,213	$ 12,709	$ 13,224	$ 13,761	$ 14,319	$ 14,900	$ 15,505	$ 16,134	$ 16,788	$ 17,470	$ 18,178	$ 18,916	$ 19,683	$ 20,482	$ 21,313	$ 22,178	$ 23,077	$ 24,014	$ 24,988	$ 26,002	$ 27,057	$ 35,784
Subtotal			**$ 175,622,010**		**$ 23,991,567**	**$ 23,899,784**	**$ 19,136,749**	**$ 40,871,382**	**$ 39,366,686**	**$ 4,192,860**	**$ 4,193,300**	**$ 4,193,757**	**$ 4,194,233**	**$ 5,851,251**	**$ 335,002**	**$ 335,539**	**$ 336,097**	**$ 336,678**	**$ 337,283**	**$ 337,912**	**$ 338,566**	**$ 339,248**	**$ 339,956**	**$ 340,694**	**$ 230,572**	**$ 231,371**	**$ 232,202**	**$ 233,067**	**$ 233,966**	**$ 234,903**	**$ 235,877**	**$ 236,891**	**$ 237,946**	**$ 246,673**
Indirects	Public Liab. Ins. (2.02% of Dire	A29	$ 3,547,565		$ 484,630	$ 482,776	$ 386,562	$ 825,602	$ 795,207	$ 84,696	$ 84,705	$ 84,714	$ 84,724	$ 118,195	$ 6,767	$ 6,778	$ 6,789	$ 6,801	$ 6,813	$ 6,826	$ 6,839	$ 6,853	$ 6,867	$ 6,882	$ 4,658	$ 4,674	$ 4,690	$ 4,708	$ 4,726	$ 4,745	$ 4,765	$ 4,785	$ 4,807	$ 4,983
	Bond (1.05% of Direct)	A30	$ 1,844,031		$ 251,911	$ 250,948	$ 200,936	$ 429,150	$ 413,350	$ 44,025	$ 44,030	$ 44,034	$ 44,039	$ 61,438	$ 3,518	$ 3,523	$ 3,529	$ 3,535	$ 3,541	$ 3,548	$ 3,555	$ 3,562	$ 3,570	$ 3,577	$ 2,421	$ 2,429	$ 2,438	$ 2,447	$ 2,457	$ 2,466	$ 2,477	$ 2,487	$ 2,498	$ 2,590
	Profit (10% of Direct)	A31	$ 17,562,201		$ 2,399,157	$ 2,389,978	$ 1,913,675	$ 4,087,138	$ 3,936,669	$ 419,286	$ 419,330	$ 419,376	$ 419,423	$ 585,125	$ 33,500	$ 33,554	$ 33,610	$ 33,668	$ 33,728	$ 33,791	$ 33,857	$ 33,925	$ 33,996	$ 34,069	$ 23,057	$ 23,137	$ 23,220	$ 23,307	$ 23,397	$ 23,490	$ 23,588	$ 23,689	$ 23,795	$ 24,667
	Contingency (20%)	A32	$ 35,124,402		$ 4,798,313	$ 4,779,957	$ 3,827,350	$ 8,174,276	$ 7,873,337	$ 838,572	$ 838,660	$ 838,751	$ 838,847	$ 1,170,250	$ 67,000	$ 67,108	$ 67,219	$ 67,336	$ 67,457	$ 67,582	$ 67,713	$ 67,850	$ 67,991	$ 68,139	$ 46,114	$ 46,274	$ 46,440	$ 46,613	$ 46,793	$ 46,981	$ 47,175	$ 47,378	$ 47,589	$ 49,335
	Job Superintendent (DRMS fac	A33	$ 4,014,878		$ 802,976	$ 802,976	$ 802,976	$ 802,976	$ 802,976																									
	Mobilize demobilize (5% of dire	A34	$ 8,781,101		$ 1,756,220	$ 1,756,220	$ 1,756,220	$ 1,756,220	$ 1,756,220																									
	Financial Warranty Fee	A36	$ 500	$ 500																													
	Engineering/Bidding/Contracts (2% of Direct, OH&P)	A37	$ 4,929,924	$ 4,929,924																													
	Management/Administration (3% of Direct, OH&P)	A38	$ 7,394,886		$ 1,034,543	$ 1,030,879	$ 840,734	$ 1,708,402	$ 1,648,333	$ 167,383	$ 167,401	$ 167,419	$ 167,438	$ 233,588	$ 13,374	$ 13,395	$ 13,417	$ 13,441	$ 13,465	$ 13,490	$ 13,516	$ 13,543	$ 13,571	$ 13,601	$ 9,205	$ 9,237	$ 9,270	$ 9,304	$ 9,340	$ 9,378	$ 9,416	$ 9,457	$ 9,499	$ 9,847
Subtotal			**$ 83,199,487**	**$ 4,930,424**	**$ 11,527,750**	**$ 11,493,733**	**$ 9,728,453**	**$ 17,783,764**	**$ 17,226,092**	**$ 1,553,962**	**$ 1,554,125**	**$ 1,554,294**	**$ 1,554,471**	**$ 2,168,596**	**$ 124,159**	**$ 124,358**	**$ 124,565**	**$ 124,780**	**$ 125,004**	**$ 125,237**	**$ 125,480**	**$ 125,732**	**$ 125,995**	**$ 126,268**	**$ 85,455**	**$ 85,751**	**$ 86,059**	**$ 86,379**	**$ 86,713**	**$ 87,060**	**$ 87,421**	**$ 87,797**	**$ 88,188**	**$ 91,422**
TOTAL			**$ 258,821,498**	**$ 4,930,424**	**$ 35,519,317**	**$ 35,393,517**	**$ 28,865,201**	**$ 58,655,147**	**$ 56,592,778**	**$ 5,746,822**	**$ 5,747,424**	**$ 5,748,052**	**$ 5,748,704**	**$ 8,019,847**	**$ 459,161**	**$ 459,897**	**$ 460,662**	**$ 461,458**	**$ 462,287**	**$ 463,149**	**$ 464,046**	**$ 464,980**	**$ 465,951**	**$ 466,962**	**$ 316,027**	**$ 317,122**	**$ 318,261**	**$ 319,446**	**$ 320,679**	**$ 321,962**	**$ 323,298**	**$ 324,687**	**$ 326,133**	**$ 338,095**

Financial Reporting Unit Rates

Storke Complex

Assumptions

Tasks
(1) Reclamation completed and bond released. No remaining tasks.

Timing
LOM
Total Costs
$0

Calculations

Specific Tasks	Work Type	Area	Equipment/Material	# of Equip	Initial Volume	Final Volume	Units of Measure	Production	Units	Hrs Req'd	Cost/Unit Equip	Total Equip Cost	Cost/Unit Labor	Total Labor Cost	Cost/Unit Materials	Total Material Cost	Total Cost	Comment
TOTAL COSTS												$ -		$ -		$ -	Total Cost $ -	

Notes: Storke Complex reclamation complete and bond released. Cost removed.

Financial Reporting Unit Rates

Open Pit

Assumptions

Tasks
(1) Grade west open pit periphery (DRMS estimate)
(2) Haul and spread cover material at west open pit perimeter (DRMS estimate)
(3) Install No-Trespassing signs approx. every 300-ft
(4) Haul overburden from Arkansas basin.

Timing
LOM

Total Costs
$11,930,550

Calculations

Specific Tasks	Work Type	Area	Equipment/Material	# of Equip	Initial Volume	Final Volume	Units of Measure	Production	Units	Hrs Req'd	Cost/Unit Equip	Total Equip Cost	Cost/Unit Labor	Total Labor Cost	Cost/Unit Materials	Total Material Cost	Total Cost
Haul overburden from Arkansas Basin	HAUL_LOAD	West Open Pit	740B Artic. Haul Truck	3	2,354,000	2,354,000	cuyd	66.55	cuyd/hr	35,371.9	$ 132.49	$ 4,686,423	$ 25.70	$ 909,058	$ -	$ -	$ 5,595,481
Load overburden	HAUL_LOAD	West Open Pit	938K Loader	1		-	cuyd		cuyd/hr	11,790.6	$ 104.30	$ 1,229,760	$ 41.61	$ 490,607	$ -	$ -	$ 1,720,366
Dozer support for loader	SPREAD	West Open Pit	D9T Dozer	1			cuyd		cuyd/hr	11,790.6	$ 221.36	$ 2,609,967	$ 44.55	$ 525,271	$ -	$ -	$ 3,135,238
Spread overburden at Open Pit	SPREAD	West Open Pit	D6N LGP Dozer	1		2,354,000	cuyd	528.75	cuyd/hr	4,452.0	$ 68.28	$ 303,983	$ 44.55	$ 198,337	$ -	$ -	$ 502,319
Haul cover material from SE stockpile	HAUL_LOAD	West Open Pit Cover	740B Artic. Haul Truck	7	27,000	27,000	cuyd	152.34	cuyd/hr	177.2	$ 132.49	$ 23,477	$ 25.70	$ 4,554	$ -	$ -	$ 28,031
Haul cover material from SE stockpile	HAUL_LOAD	West Open Pit Cover	938K Loader			-	cuyd		cuyd/hr	25.3	$ 104.30	$ 2,639	$ 41.61	$ 1,053	$ -	$ -	$ 3,692
Full time road grading	GRADING	West Open Pit	12M Grader AWD	1			acres	0.50	acres/hr	4,452.0	$ 71.83	$ 319,787	$ 37.29	$ 166,015	$ -	$ -	$ 485,802
Full time dust control	WATER	West Open Pit	4000G Water Truck, 4000 gal	1						4,452.0	$ 62.06	$ 276,291	$ 30.70	$ 136,676	$ -	$ -	$ 412,968
Grade west open pit periphery	SPREAD	West Open Pit	D8T Dozer	2	26,560	26,560	cuyd	240.00	cuyd/hr	110.7	$ 148.49	$ 16,438	$ 44.55	$ 4,932	$ -	$ -	$ 21,370
Install signs	MATERIALS	West Open Pit	Signs	1	41	41	each			41.0	$ 15.00	$ 615	$20.18	$ 827	$ 111.98	$ 4,591	$ 6,034
Spread cover material from SE stockpile	SPREAD	West Open Pit Cover	D6N LGP Dozer		27,000	27,000	cuyd	176.25	cuyd/hr	153.2	$ 68.28	$ 10,460	$ 44.55	$ 6,825	$ -	$ -	$ 17,286
Finish Grade	GRADING	West Open Pit	12M Grader AWD	1		9	acres	0.50	acres/hr	18.0	$ 71.83	$ 1,293	$ 37.29	$ 671	$ -	$ -	$ 1,964

																	Total Cost
TOTAL COSTS												**$ 9,481,133**		**$ 2,444,826**		**$ 4,591**	**$ 11,930,550**

Notes: Haul overburden material from Arkansas River basin.

Financial Reporting Unit Rates

Mine Mill Complex

Assumptions

Tasks
(1) Regrade 5' cut/fill across 2367 ac
(2) Finish grade Mine/Mill Complex
(3) Haul and spread 2' cover material over 236 acres

Timing
LOM
Total Costs
$7,080,547

Calculations

Specific Tasks	Work Type	Area	Equipment/Material	# of Equip	Initial Volume	Final Volume	Units of Measure	Production	Units	Hrs Req'd	Cost/Unit Equip	Total Equip Cost	Cost/Unit Labor	Total Labor Cost	Cost/Unit Materials	Total Material Cost	Total Cost
Haul cover material from McNulty stockpile	HAUL_LOAD	Mine/Mill Complex	740B Artic. Haul Truck	4	778,000	778,000	cuyd	93.08	cuyd/hr	8,358.4	$ 132.49	$ 1,107,404	$ 25.70	$ 214,811	$ -	$ -	$ 1,322,215
Load cover material at McNulty stockpile	HAUL_LOAD	Mine/Mill Complex	938K Loader	1		-	cuyd		cuyd/hr	2,089.6	$ 104.30	$ 217,945	$ 41.61	$ 86,948	$ -	$ -	$ 304,894
Spread cover material	SPREAD	Mine/Mill Complex	D7E Dozer	1		-	cuyd	236.80	cuyd/hr	2,089.6	$ 121.74	$ 254,388	$ 44.55	$ 93,092	$ -	$ -	$ 347,480
Full time road grading	GRADING	Mine/Mill Complex	12M Grader AWD	1		-	acres	0.50	acres/hr	2,089.6	$ 71.83	$ 150,096	$ 37.29	$ 77,921	$ -	$ -	$ 228,017
Full time dust control	WATER	Mine/Mill Complex	621G Water Wagon, 8000 gal	1						2,089.6	$ 127.58	$ 266,591	$ 25.70	$ 53,703	$ -	$ -	$ 320,294
Regrade 5' cut/fill across117 ac	SPREAD	Mine/Mill Complex	D9T Dozer	3	950,000	950,000	cuyd	300.00	cuyd/hr	3,166.7	$ 221.36	$ 700,981	$ 44.55	$ 141,076	$ -	$ -	$ 842,057
Finish grade Mine/Mill Complex	GRADING	Mine/Mill Complex	12M Grader AWD	1	236	236	acres	0.50	acres/hr	472.0	$ 71.83	$ 33,904	$ 37.29	$ 17,601	$ -	$ -	$ 51,505
CLEAN Water Surface Channel	MATERIALS	Mine/Mill Complex	Excavate diversion/spillway		26,840	26,840	cuyd								$ 2.76	$ 74,078	$ 74,078
Riprap	MATERIALS	Mine/Mill Complex	Rip Rap Armoring		12,021	12,021	cuyd								$ 80.10	$ 962,882	$ 962,882
Bedding for riprap placed	MATERIALS	Mine/Mill Complex Bedding	Drain rock		14,387	14,387	cuyd								$ 71.00	$ 1,021,477	$ 1,021,477
Haul riprap and bedding from stockpile	HAUL_LOAD	Mine/mill Complex Bedding	740B Artic. Haul Truck	8	26,408	26,408	cuyd	184.33	cuyd/hr	143.3	$ 132.49	$ 18,986	$ 25.70	$ 3,683	$ -	$ -	$ 22,669
Load riprap and bedding from stockpile	HAUL_LOAD	Mine/mill Complex Bedding	938K Loader	1		-	cuyd		cuyd/hr	17.9	$ 104.30	$ 1,867	$ 41.61	$ 745	$ -	$ -	$ 2,612
Revegetation	MATERIALS	Mine/Mill complex	Seeding-Alpine		241	241	acre								$ 877.73	$ 211,533	$ 211,533
Impacted Water Pipeline	MATERIALS	Mine/Mill Complex	30" corrugated HDPE Installed		11,500	11,500	LF								$ 76.80	$ 883,200	$ 883,200
Impacted Water collection Drain	MATERIALS	Mine/Mill Complex	Excavate diversion/spillway		4,800	4,800	cuyd								$ 2.76	$ 13,248	$ 13,248
Geotextile	MATERIALS	Mine/Mill Complex	Geotextile		16,755	16,755	sqyd								$ 1.98	$ 33,175	$ 33,175
Collection Drain Gravel	MATERIALS	Mine/Mill Complex	Drain rock		4,800	4,800	cuyd								$ 71.00	$ 340,800	$ 340,800
Collection Drain Pipe	MATERIALS	Mine/Mill Complex	Perforated pipe		4,800	4,800	LF								$ 12.86	$ 61,728	$ 61,728
Ripping compacted surfaces	GENERAL	Mine/Mill Complex	D7E Dozer		236	236	AC	1.07	AC/HR	220.6	$ 121.74	$ 26,855.84	$ 44.55	$ 9,827.73			$ 36,684

				Total Cost
TOTAL COSTS	**$ 2,779,018**	**$ 699,407**	**$ 3,602,121**	**$ 7,080,547**

Notes: Install 10,100' clean water surface channel, 11,500' impacted water pipeline, 4,800' impacted water collection drain,
Regrade 117 acres, haul cover material from McNulty Stockpile.
Place cover material and revegetate 236 acres.

Financial Reporting Unit Rates

North 40 OSF

Assumptions

Tasks
(1) Regrade remaining top surface to drain, slopes to 2:1 interbench
(2) Finish grade North 40 OSF
(3) Haul and spread 2' cover material
(4) Revegetate 235 acres

Timing
LOM

Total Costs
$14,997,490

Calculations

Specific Tasks	Work Type	Area	Equipment/Material	# of Equip	Initial Volume	Final Volume	Units of Measure	Production	Units	Hrs Req'd	Cost/Unit Equip	Total Equip Cost	Cost/Unit Labor	Total Labor Cost	Cost/Unit Materials	Total Material Cost	Total Cost
Haul cover material from southeast stockpile	HAUL_LOAD	North 40 SE TS	740B Artic. Haul Truck	6	686,000	686,000	cuyd	134.00	cuyd/hr	5,119.4	$ 132.49	$ 678,269	$ 25.70	$ 131,569	$ -	$ -	$ 809,838
Load cover material at southeast stockpile	HAUL_LOAD	North 40 SE TS	938K Loader	1		-	cuyd		cuyd/hr	853.2	$ 104.30	$ 88,989	$ 41.61	$ 35,502	$ -	$ -	$ 124,490
Cut/Fill for OSF North Area Regrading to 2H:1V Between	SPREAD	North 40 OSF	D9T Dozer		1,919,000												
Drainage Benches				3		1,919,000	cuyd	645.00	cuyd/hr	2,975.2	$ 221.36	$ 658,590	$ 44.55	$ 132,545	$ -	$ -	$ 791,135
Spread cover material	SPREAD	North 40 SE TSF	D7E Dozer	2	686,000	686,000	cuyd	377.60	cuyd/hr	1,816.7	$ 121.74	$ 221,165	$ 44.55	$ 80,934	$ -	$ -	$ 302,099
Full time dust control	HAUL_LOAD	North 40 OSF	621G Water Wagon, 8000 gal	1						937.1	$ 127.58	$ 119,555	$ 25.70	$ 24,083	$ -	$ -	$ 143,639
Full time road grading	HAUL_LOAD	North 40 OSF	12M Grader AWD	1						937.1	$ 71.83	$ 67,312	$ 37.29	$ 34,944	$ -	$ -	$ 102,256
Haul cover material from Area L stockpile	HAUL_LOAD	North 40 OSF	740B Artic. Haul Truck	6	74,000	74,000	cuyd	147.00	cuyd/hr	503.4	$ 132.49	$ 66,695	$ 25.70	$ 12,937	$ -	$ -	$ 79,633
Load cover material at Area L stockpile	HAUL_LOAD	North 40 OSF	938K Loader	1		-	cuyd		cuyd/hr	83.9	$ 104.30	$ 8,751	$ 41.61	$ 3,491	$ -	$ -	$ 12,242
Spread cover material	SPREAD	North 40 OSF	D7E Dozer	0	74,000	74,000	cuyd	384.00	cuyd/hr	192.7	$ 121.74	$ 23,459	$ 44.55	$ 8,585	$ -	$ -	$ 32,044
North 40 Clean Water Channel	MATERIALS	North 40	Excavate diversion/spillway		22,100	22,100	cuyd								$ 2.76	$ 60,996	$ 60,996
Riprap	MATERIALS	North 40	Rip Rap Armoring		9,900	9,900	cuyd								$ 80.10	$ 792,990	$ 792,990
Bedding for riprap placed	MATERIALS	North 40	Drain rock		11,900	11,900	cuyd								$ 71.00	$ 844,900	$ 844,900
Haul riprap and bedding from stockpile	HAUL_LOAD	North 40 Riprap	740B Artic. Haul Truck	12.00	21,800	21,800	cuyd	274.86	cuyd/hr	79.3	$ 132.49	$ 10,506	$ 25.70	$ 2,038	$ -	$ -	$ 12,544
Load riprap and bedding from stockpile	HAUL_LOAD	North 40 Riprap	938K Loader			-	cuyd		cuyd/hr	7.0	$ 104.30	$ 730	$ 41.61	$ 291	$ -	$ -	$ 1,021
Impacted Water Pipe	MATERIALS	North 40	30" corrugated HDPE Installed		3,200	3,200	LF								$ 76.80	$ 245,760	$ 245,760
Impacted Water Drain	MATERIALS	North 40	Excavate diversion/spillway		4,100	4,100	cuyd								$ 2.76	$ 11,316	$ 11,316
Drain gravel	MATERIALS	North 40	Drain rock		4,100	4,100	cuyd								$ 71.00	$ 291,100	$ 291,100
Geotextile	MATERIALS	North 40	Geotextile		14,312	14,312	sqyd								$ 1.98	$ 28,338	$ 28,338
Drain Pipe	MATERIALS	North 40	Perforated pipe		4,100	4,100	LF								$ 12.86	$ 52,726	$ 52,726
Downdrops	MATERIALS	North 40	Excavate diversion/spillway		9,500	9,500	cuyd								$ 2.76	$ 26,220	$ 26,220
ACB	MATERIALS	North 40	ACB		151,100	151,100	sqft								$ 61.22	$ 9,250,342	$ 9,250,342
Outslope Channels	MATERIALS	North 40	Excavate diversion/spillway		32,000	32,000	cuyd								$ 2.76	$ 88,320	$ 88,320
Finish Grading	GRADING	North 40	12M Grader AWD			108	acres	0.50	acres/hr	216.0	$ 71.83	$ 15,515	$ 37.29	$ 8,055	$ -	$ -	$ 23,570
Revegetation	MATERIALS	North 40	Seeding-Alpine Steep (>2.5:1)		235	235	acre								$ 3,702.00	$ 869,970	$ 869,970
TOTAL COSTS												**$ 1,959,538**		**$ 474,974**		**$ 12,562,978**	**Total Cost $ 14,997,490**

Notes: 235.5 acres, 760,000 yd3 soil. Install 4,500' downdrains, 8,300' clean water channel, 3,200' impacted water pipeline, 4,100' impacted water drain, 45,600' outslope channels.
Haul cover material from Southeast and L Stockpiles.

Financial Reporting Unit Rates

McNulty OSF

Assumptions

Tasks
(1) Regrade top surface to drain, slopes to 2:1 interbench - assume 677.8 ac
(2) Finish grade McNulty OSF
(3) Haul and spread 2' cover material
(4) Construct top surface runoff diversions, bench runoff channels, and runoff downdrains and perimeter channels, and runon diversions (TR-22)

Timing
LOM
Total Costs
$31,814,408

Calculations

Specific Tasks	Work Type	Area	Equipment/Material	# of Equip	Initial Volume	Final Volume	Units of Measure	Production	Units	Hrs Req'd	Cost/Unit Equip	Total Equip Cost	Cost/Unit Labor	Total Labor Cost	Cost/Unit Materials	Total Material Cost	Total Cost	Comment
Regrade top to drain, slopes to 2:1 i/b	SPREAD	McNulty	D9T Dozer	3	9,253,000	9,253,000	cuyd	470.00	cuyd/hr	19,687.2	$ 221.36	$ 4,357,959	$ 44.55	$ 877,065	$ -	$ -	$ 5,235,023	
Regrade Roads	SPREAD	McNulty Roads	D9T Dozer		60,000	60,000	cuyd	275.00	cuyd/hr	218.2	$ 221.36	$ 48,301	$ 44.55	$ 9,721	$ -	$ -	$ 58,022	
Finish grading	GRADING	McNulty	12M Grader AWD		678	678	acres	0.50	acres/hr	1,356.0	$ 71.83	$ 97,401	$ 37.29	$ 50,565	$ -	$ -	$ 147,967	
Haul cover material from McNulty stockpile	HAUL_LOAD	McNulty	740B Artic. Haul Truck	7	325,000	325,000	cuyd	151.78	cuyd/hr	2,141.3	$ 132.49	$ 283,701	$ 25.70	$ 55,031	$ -	$ -	$ 338,732	
Load cover material at McNulty stockpile	HAUL_LOAD	McNulty	938K Loader	1		325,000	cuyd		cuyd/hr	305.9	$ 104.30	$ 31,905	$ 41.61	$ 12,728	$ -	$ -	$ 44,634	
Spread cover material	SPREAD	McNulty	D8T Dozer	2	325,000	325,000	cuyd	339.20	cuyd/hr	958.1	$ 148.49	$ 142,268	$ 44.55	$ 42,683	$ -	$ -	$ 184,952	
Full time dust control	HAUL_LOAD	McNulty	621G Water Wagon, 8000 gal	1			cuyd		cuyd/hr	1,778.2	$ 127.58	$ 226,863	$ 25.70	$ 45,700	$ -	$ -	$ 272,562	
Full time road grading	HAUL_LOAD	McNulty	12M Grader AWD	1			cuyd	0.50	cuyd/hr	1,778.2	$ 71.83	$ 127,728	$ 37.29	$ 66,309	$ -	$ -	$ 194,037	
Outslope Channels	MATERIALS	McNulty	Excavate diversion/spillway	1	92,897	92,897	cuyd								$ 2.76	$ 256,396	$ 256,396	
Haul cover material from L stockpile	HAUL_LOAD	McNulty TS L	740B Artic. Haul Truck	8	692,277	692,277	cuyd	175.87	cuyd/hr	3,936.3	$ 132.49	$ 521,520	$ 25.70	$ 101,163	$ -	$ -	$ 622,683	
Load cover material at L stockpile	HAUL_LOAD	McNulty TS L	938K Loader			-	cuyd		cuyd/hr	492.0	$ 104.30	$ 51,316	$ 41.61	$ 20,472	$ -	$ -	$ 71,788	
Spread cover material	SPREAD	McNulty TS L	D8T Dozer		692,277	692,277	cuyd	236.80	cuyd/hr	2,923.5	$ 148.49	$ 434,111	$ 44.55	$ 130,242	$ -	$ -	$ 564,352	
Haul cover material from North stockpile	HAUL_LOAD	McNulty TS North	740B Artic. Haul Truck	7	1,169,723	1,169,723	cuyd	170.46	cuyd/hr	6,862.2	$ 132.49	$ 909,173	$ 25.70	$ 176,359	$ -	$ -	$ 1,085,531	
Load cover material at North stockpile	HAUL_LOAD	McNulty TS North	938K Loader			-	cuyd		cuyd/hr	980.3	$ 104.30	$ 102,245	$ 41.61	$ 40,790	$ -	$ -	$ 143,036	
Spread cover material	SPREAD	McNulty TS North	D8T Dozer		1,169,723	1,169,723	cuyd	236.80	cuyd/hr	4,939.7	$ 148.49	$ 733,496	$ 44.55	$ 220,064	$ -	$ -	$ 953,560	
Clean Water Surface Channel	MATERIALS	McNulty	Excavate diversion/spillway		42,784	42,784	cuyd								$ 2.76	$ 118,084	$ 118,084	
Riprap	MATERIALS	McNulty	Rip Rap Armoring		19,163	19,163	cuyd								$ 80.10	$ 1,534,956	$ 1,534,956	
Bedding for riprap placed	MATERIALS	McNulty	Drain rock		22,934	22,934	cuyd								$ 71.00	$ 1,628,314	$ 1,628,314	
Haul riprap and bedding from stockpile	HAUL_LOAD	McNulty Riprap	740B Artic. Haul Truck	3	42,096	42,096	cuyd	85.10	cuyd/hr	494.7	$ 132.49	$ 65,543	$ 25.70	$ 12,714	$ -	$ -	$ 78,257	
Load riprap and bedding from stockpile	HAUL_LOAD	McNulty Riprap	938K Loader			-	cuyd		cuyd/hr	164.9	$ 104.30	$ 17,199	$ 41.61	$ 6,861	$ -	$ -	$ 24,061	
Impacted Water Pipeline	MATERIALS	McNulty	30" corrugated HDPE Installed		1,300	1,300	LF								$ 76.80	$ 99,840	$ 99,840	
Impacted Water Collection Drain	MATERIALS	McNulty	Excavate diversion/spillway		3,400	3,400	cuyd								$ 2.76	$ 9,384	$ 9,384	
Geotextiles (furnish & install)	MATERIALS	McNulty	Geotextile		11,868	11,868	sqyd								$ 1.98	$ 23,499	$ 23,499	
Drain rock	MATERIALS	McNulty	Drain rock		3,400	3,400	cuyd								$ 71.00	$ 241,400	$ 241,400	
Impacted water drain pipe	MATERIALS	McNulty	Perforated pipe		3,400	3,400	LF								$ 12.86	$ 43,724	$ 43,724	
Downdrops	MATERIALS	McNulty	Excavate diversion/spillway		15,411	15,411	cuyd								$ 2.76	$ 42,534	$ 42,534	
ACB	MATERIALS	McNulty	ACB		245,088	245,088	sqft								$ 61.22	$ 15,004,287	$ 15,004,287	
Outslope Channels	MATERIALS	McNulty	Excavate diversion/spillway		92,897	92,897	cuyd								$ 2.76	$ 256,396	$ 256,396	
Revegetation	MATERIALS	McNulty	Seeding-Alpine Steep (>2.5:1)		683	683	acre								$ 3,702.00	$ 2,528,466	$ 2,528,466	
Rip Road Surfaces	GENERAL	Road Surfaces	D7E Dozer		51	51	AC	1.07	AC/HR	47.7	$ 121.74	$ 5,807	$ 44.55	$ 2,125			$ 7,932	
TOTAL COSTS												**$ 8,156,536**		**$ 1,870,593**		**$ 21,787,280**	**Total Cost $ 31,814,408**	

Notes: Downdrop channel dimensions assumed 10 foot botton width, 3 foot deep, 3:1 sideslopes, articulated concrete block liner.
Xsectional area 34 sqft/Lf
Install: 3,900' downdrains, 16,100' clean water channel, 1,300' impacted water pipeline, 3,400' impacted water drain.
Haul cover material from North and L TS Stockpiles.

Financial Reporting Unit Rates

Tenmile TSF

Assumptions

Tasks
(1) haul and place 2' cover material, 4% of area will receive 4' for tree islands
(2) Hauling and placement of 2' cover material from cover material stockpile 30
(3) Hauling and placement of 2' cover material from cover material stockpile 33
(4) Hauling and placement of 2' cover material from cover material stockpile 36

Timing
LOM

Total Costs
$13,953,356

Calculations

Specific Tasks	Work Type	Area	Equipment/Material	# of Equip	Initial Volume	Final Volume	Units of Measure	Production	Units	Hrs Req'd	Cost/Unit Equip	Total Equip Cost	Cost/Unit Labor	Total Labor Cost	Cost/Unit Materials	Total Material Cost	Total Cost
Haul cover material from cover material Stockpile 30	HAUL_LOAD	Dry cover TS 30	740B Artic. Haul Truck	7	499,109	499,109	cuyd	158.41	cuyd/hr	3,150.7	$ 132.49	$ 417,436	$ 25.70	$ 80,973	$ -	$ -	$ 498,409
Load cover material at cover material Stockpile 30	HAUL_LOAD	Dry cover	938K Loader	1		-	cuyd		cuyd/hr	450.1	$ 104.30	$ 46,945	$ 41.61	$ 18,729	$ -	$ -	$ 65,674
Spread cover material	SPREAD	Dry cover	D8T Dozer	1	499,109	499,109	cuyd	231.46	cuyd/hr	450.1	$ 148.49	$ 66,835	$ 44.55	$ 20,052	$ -	$ -	$ 86,887
Haul cover material from cover material Stockpile 36	HAUL_LOAD	Dry cover TS 36	740B Artic. Haul Truck	10	200,000	200,000	cuyd	219.61	cuyd/hr	910.7	$ 132.49	$ 120,659	$ 25.70	$ 23,405	$ -	$ -	$ 144,064
Load cover material at cover material Stockpile 36	HAUL_LOAD	Dry cover	938K Loader	1		-	cuyd		cuyd/hr	91.1	$ 104.30	$ 9,502	$ 41.61	$ 3,791	$ -	$ -	$ 13,292
Spread cover material	SPREAD	Dry cover	D8T Dozer	1	200,000		cuyd	231.46	cuyd/hr	91.1	$ 148.49	$ 13,527	$ 44.55	$ 4,059	$ -	$ -	$ 17,586
Haul cover material from Pond Shop Stockpile 33	HAUL_LOAD	Dry Cover TS 33	740B Artic. Haul Truck	4	1,056,955	1,056,955	cuyd	88.58	cuyd/hr	11,932.2	$ 132.49	$ 1,580,897	$ 25.70	$ 306,658	$ -	$ -	$ 1,887,555
Load cover material at cover material Stockpile 33	HAUL_LOAD	Dry cover	938K Loader	1		-	cuyd		cuyd/hr	2,983.1	$ 104.30	$ 311,137	$ 41.61	$ 124,127	$ -	$ -	$ 435,264
Spread cover material	SPREAD	Dry cover	D8T Dozer	1	1,056,955	1,056,955	cuyd	231.46	cuyd/hr	2,983.1	$ 148.49	$ 442,961	$ 44.55	$ 132,897	$ -	$ -	$ 575,858
Haul cover material from Pond Shop Stockpile 17	HAUL_LOAD	Dry Cover TS 17	740B Artic. Haul Truck	6	363,968	363,968	cuyd	143.50	cuyd/hr	2,536.4	$ 132.49	$ 336,048	$ 25.70	$ 65,185	$ -	$ -	$ 401,233
Load cover material at cover material Stockpile 17	HAUL_LOAD	Dry Cover TS 17	938K Loader			-	cuyd		cuyd/hr	422.7	$ 104.30	$ 44,088	$ 41.61	$ 17,589	$ -	$ -	$ 61,676
Spread cover material	SPREAD	Dry Cover TS 17	D8T Dozer		363,968	363,968	cuyd	198.40	cuyd/hr	1,834.5	$ 148.49	$ 272,405	$ 44.55	$ 81,727	$ -	$ -	$ 354,132
Haul cover material from Pond Shop Stockpile 25 26 2717	HAUL_LOAD	Dry cover TS 25 26 27	740B Artic. Haul Truck	4	1,000	1,000	cuyd	97.52	cuyd/hr	10.3	$ 132.49	$ 1,365	$ 25.70	$ 265	$ -	$ -	$ 1,629
Load cover material at cover material Stockpile 25 26 27	HAUL_LOAD	Dry cover TS 25 26 27	938K Loader			-	cuyd		cuyd/hr	2.6	$ 104.30	$ 271	$ 41.61	$ 108	$ -	$ -	$ 379
Spread cover material	SPREAD	Dry cover TS 25 26 27	D8T Dozer		1,000	1,000	cuyd	86.40	cuyd/hr	11.6	$ 148.49	$ 1,722	$ 44.55	$ 517	$ -	$ -	$ 2,239
Full time road grading	GRADING	Dry Cover TS 33	12M Grader AWD	1		-	acres	0.50	acres/hr	3,949.6	$ 71.83	$ 283,700	$ 37.29	$ 147,281	$ -	$ -	$ 430,980
Full time dust control	WATER	Dry Cover TS 33	621G Water Wagon, 8000 gal	1						3,949.6	$ 127.58	$ 503,890	$ 25.70	$ 101,505	$ -	$ -	$ 605,395
Clean Water Surface Channel	MATERIALS	Tenmile TSF	Excavate diversion/spillway		35,875	35,875	cuyd								$ 2.76	$ 99,015	$ 99,015
Riprap Placed	MATERIALS	Tenmile TSF	Rip Rap Armoring		16,068	16,068	cuyd								$ 80.10	$ 1,287,047	$ 1,287,047
Bedding for riprap placed	MATERIALS	Tenmile TSF	Drain rock		19,230	19,230	cuyd								$ 71.00	$ 1,365,330	$ 1,365,330
Haul riprap and bedding from stockpile	HAUL_LOAD	Tenmile TSF Riprap	740B Artic. Haul Truck	9	35,298	35,298	cuyd	196.23	cuyd/hr	179.9	$ 132.49	$ 23,835	$ 25.70	$ 4,623	$ -	$ -	$ 28,458
Load riprap and bedding from stockpile	HAUL_LOAD	Tenmile TSF Riprap	938K Loader		35,298	35,298	cuyd		cuyd/hr	20.0	$ 104.30	$ 2,086	$ 41.61	$ 832	$ -	$ -	$ 2,918
Impacted Water Pipeline	MATERIALS	Tenmile TSF	30" corrugated HDPE Installed		7,000	7,000	LF								$ 76.80	$ 537,600	$ 537,600
Decant Pool Spillways	MATERIALS	Tenmile TSF	Excavate diversion/spillway		7,052	7,052	cuyd								$ 2.76	$ 19,464	$ 19,464
ACB	MATERIALS	Tenmile TSF	ACB		72,231	72,231	sqft								$ 61.22	$ 4,421,982	$ 4,421,982
Rip Road Surfaces	GENERAL	Road Surfaces	D7E Dozer		7	7	AC	1.07	AC/HR	6.5	$ 121.74	$ 791	$ 44.55	$ 290			$ 1,081
Revegetation	MATERIALS	Tenmile TSF	Seeding-Standard		625	625	acre								$ 956.58	$ 597,863	$ 597,863
Planting tree seedlings	MATERIALS	Tenmile TSF	Tree planting (450 per acre)		19	19	acre								$ 544.50	$ 10,346	$ 10,346
TOTAL COSTS												**$ 4,480,100**		**$ 1,134,610**		**$ 8,338,645**	**Total Cost $ 13,953,356**

Notes: 6,69.1 acres. Updated from 2019 estimate. No longer any wet cover. 625 acres dry cover. Haul cover material from TS 30, 33 and 36,
Install 13,500' clean water surface channel, 7,000' impacted water pipeline, 1,700' decant pool spillway.

Financial Reporting Unit Rates

Tenmile Tunnel

Assumptions

Tasks
Tenmile Tunnel sealing and bulkhead construction

Timing
LOM
Total Costs
$129,556

Calculations

Specific Tasks	Work Type	Area	Equipment/ Material	# of Equip	Initial Volume	Final Volume	Units of Measure	Production	Units	Hrs Req'd	Cost/Unit Equip	Total Equip Cost	Cost/Unit Labor	Total Labor Cost	Cost/Unit Materials	Total Material Cost	Total Cost
Bulkhead Closure	GENERAL	Tenmile Tunnel				111	CY	70	CY/HR	NA	$ 866.00	$ 96,126	$ 300.98	$ 33,409	$ 210.94	$ 21	$ 129,556

																	Total Cost
TOTAL COSTS												**$ 96,126**		**$ 33,409**		**$ 21**	**$ 129,556**

Notes: Tenmile north tunnel will remain open. Tenmile south tunnel will be decommissioned by installing a reinforced concrete plug (15 lf) on each end.

10X10X15 = 1,500 cf X 2 = 3,000 cf, equal 111 CY of reinforced concrete.

Reference cost estimated for plug reinforced concrete plug and bulkhead in Washington state May 2023. Labor $300.98/CY, Equipment $866.00/CY, Material $211/CY.

Financial Reporting Unit Rates

3 Dam

Assumptions
Face of 3 Dam was reclaimed in 1995, current reclamation will be maintained at closure
Tasks
Cover future raise with 2' cover material over 29 acres

Timing
LOM
Total Costs
$1,001,959

Calculations

Specific Tasks	Work Type	Area	Equipment/Material	# of Equip	Initial Volume	Final Volume	Units of Measure	Production	Units	Hrs Req'd	Cost/Unit Equip	Total Equip Cost	Cost/Unit Labor	Total Labor Cost	Cost/Unit Materials	Total Material Cost	Total Cost
Haul cover material from Pond Shop Stockpile	HAUL_LOAD	Cover	740B Artic. Haul Truck	4	94,000	94,000	cuyd	93.30	cuyd/hr	1,007.5	$ 132.49	$ 133,484	$ 25.70	$ 25,893	$ -	$ -	$ 159,376
Load cover material at Pond Shop Stockpile	HAUL_LOAD	Cover	938K Loader	1		-	cuyd		cuyd/hr	251.9	$ 104.30	$ 26,273	$ 41.61	$ 10,482	$ -	$ -	$ 36,755
Spread cover material	SPREAD	Cover	D7E Dozer	1	94,000	94,000	cuyd	236.80	cuyd/hr	397.0	$ 121.74	$ 48,331	$ 44.55	$ 17,686	$ -	$ -	$ 66,017
Full time dust control	WATER	Cover	4000G Water Truck, 4000 gal	1						251.9	$ 62.06	$ 15,633	$ 30.70	$ 7,733	$ -	$ -	$ 23,366
Full time road grading	GRADING	Cover	12M Grader AWD	1		-	acres	0.50	acres/hr	251.9	$ 71.83	$ 18,094	$ 37.29	$ 9,393	$ -	$ -	$ 27,487
Revegetation	MATERIALS	3 Dam	Seeding-Standard Steep (>2.5:1)		29	29	acre								$ 3,702.00	$ 107,358	$ 107,358
Clean Water Surface Channel	MATERIALS	3 Dam	Excavate diversion/spillway		7,441	7,441	cuyd								$ 2.76	$ 20,537	$ 20,537
Riprap	MATERIALS	3 Dam	Rip Rap Armoring		3,333	3,333	cuyd								$ 80.10	$ 266,973	$ 266,973
Bedding for riprap placed	MATERIALS	3 Dam	Drain rock		3,988	3,988	cuyd								$ 71.00	$ 283,148	$ 283,148
Haul riprap and bedding from stockpile	HAUL_LOAD	3 Dam Riprap	740B Artic. Haul Truck	6	7,321	7,321	cuyd	123.61	cuyd/hr	59.2	$ 132.49	$ 7,843	$ 25.70	$ 1,521	$ -	$ -	$ 9,365
Load riprap and bedding from stockpile	HAUL_LOAD	3 Dam Riprap	938K Loader	2		-	cuyd		cuyd/hr	10.8	$ 104.30	$ 1,126	$ 41.61	$ 449	$ -	$ -	$ 1,576
TOTAL COSTS												**$ 250,784**		**$ 73,158**		**$ 678,016**	**Total Cost $ 1,001,959**

Notes:

Financial Reporting Unit Rates

Pond Shop

Assumptions

Tasks
Reclaim Pond Shop area

Timing
LOM
Total Costs
$5,408

Calculations

Specific Tasks	Work Type	Area	Equipment/Material	# of Equip	Initial Volume	Final Volume	Units of Measure	Production	Units	Hrs Req'd	Cost/Unit Equip	Total Equip Cost	Cost/Unit Labor	Total Labor Cost	Cost/Unit Materials	Total Material Cost	Total Cost
Haul cover material from Pond Shop Stockpile	HAUL_LOAD	Pond Shop cover material	740B Artic. Haul Truck	4	538	538	cuyd	85.88	cuyd/hr	6.3	$ 132.49	$ 835	$ 25.70	$ 162	$ -	$ -	$ 997
Load cover material at Pond Shop Stockpile	HAUL_LOAD	Pond Shop cover material	938K Loader	1		-	cuyd		cuyd/hr	1.6	$ 104.30	$ 167	$ 41.61	$ 67	$ -	$ -	$ 233
Spread cover material	SPREAD	Pond Shop cover material	D7E Dozer	1	538	538	cuyd	86.40	cuyd/hr	6.2	$ 121.74	$ 755	$ 44.55	$ 276	$ -	$ -	$ 1,031
Rough grading before capping	SPREAD	Pond Shop grading	D8T Dozer	1	1,613	1,613	cuyd	99.20	cuyd/hr	16.3	$ 148.49	$ 2,420	$ 44.55	$ 726	$ -	$ -	$ 3,147
Revegetation	MATERIALS	Pond Shop	Seeding-Standard			-	acre								$ 956.58	$ -	$ -
TOTAL COSTS												**$ 4,177**		**$ 1,231**		**$ -**	**Total Cost $ 5,408**

Notes:

Financial Reporting Unit Rates

Mayflower TSF

Assumptions

Sludge Cells remain for material deposition post-closure; until water treatment ends (Year 10)

Tasks
(1) Finish grade top surface of impoundment outside sludge cells 701 ac)
(2) Load, haul, and spread cover material (701 ac)
(3) Load, haul, and spread cover material, sludge cell and pool, Year 10, 182 ac)

Timing
LOM

Total Costs
$18,058,872

Calculations

Specific Tasks	Work Type	Area	Equipment/Material	# of Equip	Initial Volume	Final Volume	Units of Measure	Production	Units	Hrs Req'd	Cost/Unit Equip	Total Equip Cost	Cost/Unit Labor	Total Labor Cost	Cost/Unit Materials	Total Material Cost	Total Cost
Haul cover material from Mayflower area Stockpile	HAUL_LOAD	Mayflower TSF	740B Artic. Haul Truck	8	1,850,752	1,850,752	cuyd	171.52	cuyd/hr	10,790.3	$ 132.49	$ 1,429,607	$ 25.70	$ 277,311	$ -	$ -	$ 1,706,918
Load cover material at Mayflower Stockpile	HAUL_LOAD	Mayflower TSF	938K Loader	1		-	cuyd		cuyd/hr	1,348.8	$ 104.30	$ 140,680	$ 41.61	$ 56,124	$ -	$ -	$ 196,803
Spread cover material	SPREAD	Mayflower TSF	D8T Dozer	2	1,850,752	1,850,752	cuyd	198.40	cuyd/hr	1,348.8	$ 148.49	$ 200,283	$ 44.55	$ 60,089	$ -	$ -	$ 260,372
Full time road grading	GRADING	Mayflower TSF	12M Grader AWD	1		-	acres	0.50	acres/hr	1,561.8	$ 71.83	$ 112,184	$ 37.29	$ 58,240	$ -	$ -	$ 170,424
Full time dust control	WATER	Mayflower TSF	621G Water Wagon, 8000 ga	1						1,561.8	$ 127.58	$ 199,254	$ 25.70	$ 40,138	$ -	$ -	$ 239,393
Finish grade the top surface	GRADING	Mayflower TSF	12M Grader AWD	1		-	acres	1.00	acres/hr	839.0	$ 71.83	$ 60,265	$ 37.29	$ 31,286	$ -	$ -	$ 91,552
Haul cover material from Stockpile 33	HAUL_LOAD	Mayflower TSF TS 33	740B Artic. Haul Truck	6	188,225	188,225	cuyd	147.31	cuyd/hr	1,277.7	$ 132.49	$ 169,282	$ 25.70	$ 32,837	$ -	$ -	$ 202,119
Load cover material at Stockpile 33	HAUL_LOAD	Mayflower TSF TS 33	938K Loader	1		-	cuyd		cuyd/hr	213.0	$ 104.30	$ 22,216	$ 41.61	$ 8,863	$ -	$ -	$ 31,079
Spread cover material	SPREAD	Mayflower TSF TS 33	D8T Dozer	2	188,225	188,225	cuyd	240.00	cuyd/hr	784.3	$ 148.49	$ 116,461	$ 44.55	$ 34,941	$ -	$ -	$ 151,401
Haul cover material from Stockpile 30	HAUL_LOAD	Mayflower pool	740B Artic. Haul Truck	6	493,000	493,000	cuyd	136.62	cuyd/hr	3,608.5	$ 132.49	$ 478,090	$ 25.70	$ 92,738	$ -	$ -	$ 570,829
Load cover material at Stockpile 30	HAUL_LOAD	Mayflower pool	938K Loader			-	cuyd		cuyd/hr	601.4	$ 104.30	$ 62,726	$ 41.61	$ 25,024	$ -	$ -	$ 87,750
Spread cover material	SPREAD	Mayflower pool	D8T Dozer		493,000	493,000	cuyd	198.40	cuyd/hr	2,484.9	$ 148.49	$ 368,983	$ 44.55	$ 110,702	$ -	$ -	$ 479,685
Haul cover material from Stockpile 16	HAUL_LOAD	Mayflower TSF TS16	740B Artic. Haul Truck	9	336,864	336,864	cuyd	196.18	cuyd/hr	1,717.1	$ 132.49	$ 227,499	$ 25.70	$ 44,129	$ -	$ -	$ 271,628
Load cover material at Stockpile 16	HAUL_LOAD	Mayflower TSF TS16	938K Loader			-	cuyd		cuyd/hr	190.8	$ 104.30	$ 19,900	$ 41.61	$ 7,939	$ -	$ -	$ 27,840
Spread cover material	SPREAD	Mayflower TSF TS16	D8T Dozer		336,864	336,864	cuyd	198.40	cuyd/hr	1,697.9	$ 148.49	$ 252,121	$ 44.55	$ 75,641	$ -	$ -	$ 327,763
Haul cover material from Stockpile 30	HAUL_LOAD	Temp Sludge Cell	740B Artic. Haul Truck	4	115,000	115,000	cuyd	97.52	cuyd/hr	1,179.2	$ 132.49	$ 156,232	$ 25.70	$ 30,305	$ -	$ -	$ 186,538
Load cover material at Stockpile 30	HAUL_LOAD	Temp Sludge Cell	938K Loader			-	cuyd		cuyd/hr	294.8	$ 104.30	$ 30,748	$ 41.61	$ 12,267	$ -	$ -	$ 43,014
Spread cover material	SPREAD	Temp Sludge Cell	D8T Dozer		115,000	115,000	cuyd	198.40	cuyd/hr	579.6	$ 148.49	$ 86,065	$ 44.55	$ 25,821	$ -	$ -	$ 111,886
Riprap	MATERIALS	Mayflower TSF	Rip Rap Armoring		25,352	25,352	cuyd								$ 80.10	$ 2,030,695	$ 2,030,695
Bedding for riprap placed	MATERIALS	Mayflower TSF	Drain rock		30,341	30,341	cuyd								$ 71.00	$ 2,154,211	$ 2,154,211
Haul riprap and bedding from stockpile	HAUL_LOAD	Mayflower TSF Riprap	740B Artic. Haul Truck	5	55,693	55,693	cuyd	121.24	cuyd/hr	459.4	$ 132.49	$ 60,866	$ 25.70	$ 11,807	$ -	$ -	$ 72,672
Load riprap and bedding from stockpile	HAUL_LOAD	Mayflower TSF Riprap	938K Loader			-	cuyd		cuyd/hr	91.9	$ 104.30	$ 9,585	$ 41.61	$ 3,824	$ -	$ -	$ 13,409
Impacted Water Pipeline	MATERIALS	Mayflower TSF	30" corrugated HDPE Installed		26,300	26,300	LF								$ 76.80	$ 2,019,840	$ 2,019,840
Decant pool spillway	MATERIALS	Mayflower TSF	Excavate diversion/spillway		9,126	9,126	cuyd								$ 2.76	$ 25,188	$ 25,188
ACB	MATERIALS	Mayflower TSF	ACB		93,475	93,475	sqft								$ 61.22	$ 5,722,540	$ 5,722,540
Rip Road Surfaces	GENERAL	Road Surfaces	D7E Dozer		29	29	AC	1.07	AC/HR	27.1	$ 121.74	$ 3,299	$ 44.55	$ 1,207			$ 4,506
Revegetation	MATERIALS	Mayflower TSF	Seeding-Standard		701	701	acre								$ 956.58	$ 670,563	$ 670,563
Planting Tree Seedlings	MATERIALS	Mayflower TSF	Tree planting (450 per acre)		21	21	acre								$ 544.50	$ 11,435	$ 11,435
Revegetation Sludge Cell	MATERIALS	Temp Sludge Cell	Seeding-Standard		34	34	acre								$ 956.58	$ 32,524	$ 32,524
Planting Tree Seedlings Sludge Cell	MATERIALS	Temp Sludge Cell	Tree planting (450 per acre)		1	1	acre								$ 544.50	$ 545	$ 545
Revegetation Mayflower Pool	MATERIALS	Mayflower Pool	Seeding-Standard		148	148	acre								$ 956.58	$ 141,574	$ 141,574
Planting Tree Seedlings Mayflower Pool	MATERIALS	Mayflower Pool	Tree planting (450 per acre)		4	4	acre								$ 544.50	$ 2,178	$ 2,178
TOTAL COSTS												**$ 4,206,347**		**$ 1,041,234**		**$ 12,811,291**	**Total Cost $ 18,058,872**

Notes: Haul cover material from Mayflower area stockpile, Stockpile 16, 30, 33.
Install 21,300' clean water surface channel, 26,300' impacted water pipeline, 2,200' spillway.
Cover sludge cell and pool end of water treatment, assumed Year 30. Haul cover from stockpile 30
.

Financial Reporting Unit Rates

East Side Channel

Assumptions
See TR-21, TR-22

Tasks
(1) Construct channel extensions through Camp, Robinson, Tenmile, and Mayflower
(2) No new pipeline extensions through Camp, Robinson; re-purpose TDL through Tenmile and Mayflower

Timing
LOM

Total Costs
$0

Calculations

Specific Tasks	Work Type	Area	Equipment/Material	# of Equip	Initial Volume	Final Volume	Units of Measure	Production	Cost/Unit Equip	Total Equip Cost	Total Labor Cost	Cost/Unit Materials	Total Material Cost	Total Cost	Comment
TOTAL COSTS										$ -	$ -		$ -	Total Cost $ -	

Notes: Channel extensions included in Mayflower, Robinson and Tenmile TSF costs.

Financial Reporting Unit Rates

Mayflower Seepage Collection

Assumptions
Quantities from previous state based estimate

Tasks
(1) Finish grade general area before capping (approx. 3/4 ac); fill clear ponds via dozer push of local cut material etc.
(2) Load, haul, and spread 2' cover material from existing cover material stockpile at toe of 5-Dam

Timing
LOM

Total Costs
$47,746 32670

Calculations

Specific Tasks	Work Type	Area	Equipment/Material	# of Equip	Initial Volume	Final Volume	Units of Measure	Production	Units	Hrs Req'd	Cost/Unit Equip	Total Equip Cost	Cost/Unit Labor	Total Labor Cost	Cost/Unit Materials	Total Material Cost	Total Cost
Haul cover material from 5-Dam Stockpile	HAUL_LOAD	Mayflower Acid Plant	740B Artic. Haul Truck	3	2,690	2,690	cuyd	194.97	cuyd/hr	13.8	$ 132.49	$ 1,828	$ 25.70	$ 355	$ -	$ -	$ 2,183
Load cover material at 5-Dam Stockpile	HAUL_LOAD	Mayflower Acid Plant	938K Loader	1		-	cuyd		cuyd/hr	4.6	$ 104.30	$ 480	$ 41.61	$ 191	$ -	$ -	$ 671
Grade site	SPREAD	Mayflower Acid Plant	D8T Dozer	1	33,873	33,873	cuyd	155.00	cuyd/hr	218.5	$ 148.49	$ 32,445	$ 44.55	$ 9,734	$ -	$ -	$ 42,179
Spread cover material at site	SPREAD	Mayflower Acid Plant	D7E Dozer	1	2,690	2,690	cuyd	179.80	cuyd/hr	15.0	$ 121.74	$ 1,826	$ 44.55	$ 668	$ -	$ -	$ 2,494
Finish Grading	GRADING	Mayflower Acid Plant	12M Grader AWD		1	1	acres	0.50	acres/hr	2.0	$ 71.83	$ 144	$ 37.29	$ 75	$ -	$ -	$ 218
																	Total Cost
TOTAL COSTS												**$ 36,723**		**$ 11,023**		**$ -**	**$ 47,746**

Notes:

Financial Reporting Unit Rates

Robinson TSF

Assumptions

Tasks
(1) Load, haul, and spread 2' cover material (455 ac) from cover material stockpiles 21, 28, 30, 35.

Timing
LOM
Total Costs
$8,152,930

Calculations

Specific Tasks	Work Type	Area	Equipment/Material	# of Equip	Initial Volume	Final Volume	Units of Measure	Production	Units	Hrs Req'd	Cost/Unit Equip	Total Equip Cost	Cost/Unit Labor	Total Labor Cost	Cost/Unit Materials	Total Material Cost	Total Cost
Haul cover material to Robinson TSF TS 28	HAUL_LOAD	Robinson TSF	740B Artic. Haul Truck	4	324,328	324,328	cuyd	93.50	cuyd/hr	3,468.7	$ 132.49	$ 459,568	$ 25.70	$ 89,146	$ -	$ -	$ 548,714
Load cover material for Robinson TSF TS 28	HAUL_LOAD	Robinson TSF	938K Loader	1		-	cuyd		cuyd/hr	867.2	$ 104.30	$ 90,449	$ 41.61	$ 36,084	$ -	$ -	$ 126,533
Spread cover material at Robinson TSF	SPREAD	Robinson TSF	D6N LGP Dozer	2	324,328	324,328	cuyd	179.80	cuyd/hr	1,803.8	$ 68.28	$ 123,163	$ 44.55	$ 80,359	$ -	$ -	$ 203,523
Full time dust control	WATER	Robinson TSF	621G Water Wagon, 8000 gal	1						2,935.9	$ 127.58	$ 374,562	$ 25.70	$ 75,453	$ -	$ -	$ 450,015
Full time road grading	GRADING	Robinson TSF	12M Grader AWD	1		-	acres	0.50	acres/hr	2,935.9	$ 71.83	$ 210,886	$ 37.29	$ 109,480	$ -	$ -	$ 320,365
Haul cover material to Robinson TSF TS 30	HAUL_LOAD	Robinson TSF TS 30	740B Artic. Haul Truck	5	1,060,082	1,060,082	cuyd	115.81	cuyd/hr	9,153.6	$ 132.49	$ 1,212,760	$ 25.70	$ 235,248	$ -	$ -	$ 1,448,008
Load cover material for Robinson TSF TS 30	HAUL_LOAD	Robinson TSF TS 30	938K Loader	1		-	cuyd		cuyd/hr	1,830.7	$ 104.30	$ 190,942	$ 41.61	$ 76,175	$ -	$ -	$ 267,117
Spread cover material at Robinson TSF	SPREAD	Robinson TSF TS 30	D8T Dozer	2	1,060,082	1,060,082	cuyd	236.80	cuyd/hr	4,476.7	$ 148.49	$ 664,745	$ 44.55	$ 199,437	$ -	$ -	$ 864,182
Haul cover material to Robinson Pool TS35	HAUL_LOAD	Robinson TSF TS 35	740B Artic. Haul Truck	10	524,139	524,139	cuyd	220.25	cuyd/hr	2,379.7	$ 132.49	$ 315,286	$ 25.70	$ 61,158	$ -	$ -	$ 376,445
Load cover material for Robinson Pool TS 35	HAUL_LOAD	Robinson TSF TS 35	938K Loader	1		-	cuyd		cuyd/hr	238.0	$ 104.30	$ 24,823	$ 41.61	$ 9,903	$ -	$ -	$ 34,727
Spread cover material at Robinson Pool	SPREAD	Robinson TSF TS 35	D8T Dozer		524,139	524,139	cuyd	236.80	cuyd/hr	2,213.4	$ 148.49	$ 328,668	$ 44.55	$ 98,607	$ -	$ -	$ 427,275
Clean Water Surface Channel	MATERIALS	Robinson TSF	Excavate diversion/spillway		25,777	25,777	cuyd								$ 2.76	$ 71,145	$ 71,145
Riprap	MATERIALS	Robinson TSF	Rip Rap Armoring		11,545	11,545	cuyd								$ 80.10	$ 924,755	$ 924,755
Bedding for riprap placed	MATERIALS	Robinson TSF	Drain rock		13,817	13,817	cuyd								$ 71.00	$ 981,007	$ 981,007
Haul riprap and bedding from stockpile	HAUL_LOAD	Robinson TSF Riprap	740B Artic. Haul Truck	6	25,362	25,362	cuyd	137.53	cuyd/hr	184.4	$ 132.49	$ 24,431	$ 25.70	$ 4,739	$ -	$ -	$ 29,170
Load riprap and bedding from stockpile	HAUL_LOAD	Robinson TSF Riprap	938K Loader			-	cuyd		cuyd/hr	30.7	$ 104.30	$ 3,202	$ 41.61	$ 1,277	$ -	$ -	$ 4,479
Impacted Water Pipeline	MATERIALS	Robinson TSF	30" corrugated HDPE Installed		8,200	8,200	LF								$ 76.80	$ 629,760	$ 629,760
Revegetation	MATERIALS	Robinson TSF	Seeding-Standard		457	457	acre								$ 956.58	$ 437,157	$ 437,157
Planting Tree Seedlings	MATERIALS	Robinson TSF	Tree planting (450 per acre)		14	14	acre								$ 544.50	$ 7,623	$ 7,623
Rip Road Surfaces	GENERAL	Road Surfaces	D7E Dozer		6	6	AC	1.1	AC/HR	5.6	$ 121.74	$ 682	$ 44.55	$ 249			$ 931
																	Total Cost
TOTAL COSTS												**$ 4,024,168**		**$ 1,077,316**		**$ 3,051,446**	**$ 8,152,930**

Notes: 455 acres, haul cover material from TS 28, 30, and 35.
Install 9,700' clean water surface channel, 8,200' impacted water pipeline.

Financial Reporting Unit Rates

1 Dam

Assumptions
Bond release not yet obtained

Tasks
Cover with 2' cover materials over approx. 127 ac

Timing
LOM
Total Costs
$3,222,932

Calculations

Specific Tasks	Work Type	Area	Equipment/Material	# of Equip	Initial Volume	Final Volume	Units of Measure	Production	Units	Hrs Req'd	Cost/Unit Equip	Total Equip Cost	Cost/Unit Labor	Total Labor Cost	Cost/Unit Materials	Total Material Cost	Total Cost
Haul cover material to 1 Dam TS 22	HAUL_LOAD	1 Dam TS 22	740B Artic. Haul Truck	4	250	250	cuyd	218.96	cuyd/hr	1.1	$ 132.49	$ 146	$ 25.70	$ 28	$ -	$ -	$ 174
Load cover material at TS 22	HAUL_LOAD	1 Dam TS 22	938K Loader			-	cuyd		cuyd/hr	0.3	$ 104.30	$ 31	$ 41.61	$ 12	$ -	$ -	$ 44
Spread cover material	SPREAD	1 Dam TS 22	D8T Dozer		250	250	cuyd	160.00	cuyd/hr	1.6	$ 148.49	$ 238	$ 44.55	$ 71	$ -	$ -	$ 309
Full time dust control	WATER	1 Dam TS 22	4000G Water Truck, 4000 gal							971.4	$ 62.06	$ 60,285	$ 30.70	$ 29,822	$ -	$ -	$ 90,107
Full time road grading	GRADING	1 Dam TS 22	12M Grader AWD			-	acres	0.50	acres/hr	971.4	$ 71.83	$ 69,776	$ 37.29	$ 36,224	$ -	$ -	$ 105,999
Haul cover material to 1 Dam TS 24	HAUL_LOAD	1 Dam TS 24	740B Artic. Haul Truck	9	1,000	1,000	cuyd	193.01	cuyd/hr	5.2	$ 132.49	$ 689	$ 25.70	$ 134	$ -	$ -	$ 823
Load cover material at TS 24	HAUL_LOAD	1 Dam TS 24	938K Loader			-	cuyd		cuyd/hr	0.6	$ 104.30	$ 63	$ 41.61	$ 25	$ -	$ -	$ 88
Spread cover material	SPREAD	1 Dam TS 24	D8T Dozer		1,000	1,000	cuyd	137.60	cuyd/hr	7.3	$ 148.49	$ 1,084	$ 44.55	$ 325	$ -	$ -	$ 1,409
Haul cover material to 1 Dam TS 24	HAUL_LOAD	1 Dam TS 28	740B Artic. Haul Truck	4	407,801	407,801	cuyd	105.78	cuyd/hr	3,855.2	$ 132.49	$ 510,775	$ 25.70	$ 99,079	$ -	$ -	$ 609,854
Load cover material at TS 24	HAUL_LOAD	1 Dam TS 28	938K Loader			-	cuyd		cuyd/hr	963.8	$ 104.30	$ 100,524	$ 41.61	$ 40,104	$ -	$ -	$ 140,628
Spread cover material	SPREAD	1 Dam TS 28	D8T Dozer		407,801	407,801	cuyd	137.60	cuyd/hr	2,963.7	$ 148.49	$ 440,080	$ 44.55	$ 132,033	$ -	$ -	$ 572,113
Excavate Clean water Diversion	MATERIALS	1 Dam	Excavate diversion/spillway		15,679	15,679	cuyd								$ 2.76	$ 43,274	$ 43,274
Riprap	MATERIALS	1 Dam	Rip Rap Armoring		7,022	7,022	cuyd								$ 80.10	$ 562,462	$ 562,462
Bedding for riprap placed	MATERIALS	1 Dam Riprap	Drain rock		8,404	8,404	cuyd								$ 71.00	$ 596,684	$ 596,684
Haul riprap and bedding from stockpile	HAUL_LOAD	1 Dam Riprap	740B Artic. Haul Truck	4	15,427	15,427	cuyd	104.26	cuyd/hr	148.0	$ 132.49	$ 19,609	$ 25.70	$ 3,804	$ -	$ -	$ 23,412
Load riprap and bedding from stockpile	HAUL_LOAD	1 Dam Riprap	938K Loader			-	cuyd		cuyd/hr	37.0	$ 104.30	$ 3,859	$ 41.61	$ 1,540	$ -	$ -	$ 5,399
Revegetation	MATERIALS	1 Dam	eeding-Standard Steep (>2.5:1)		127	127	acre								$ 3,702.00	$ 470,154	$ 470,154
																	Total Cost
TOTAL COSTS												**$ 1,207,158**		**$ 343,200**		**$ 1,672,574**	**$ 3,222,932**

Notes: Haul cover material from TS 22, 24 and 28. 128 acres.
Install 5,900' clean water diversion.

Financial Reporting Unit Rates

Roads

Assumptions

Tasks

(1) Cover switchback access roads from McNulty OSF to Little Bartlett Mountain (approx 4540 ft upper road and 4900 ft lower road)
(2) Cover access roads at the base of 1 Dam and 4 Dam - approx 1.38 ac at 1 Dam and 2.07 ac at 4 Dam
(3) Cover various roads between 3 Dam and Mayflower (Mar 1994 letter to DMG by Stoller for description of segments) - approx 6 acres
(4) Cover various roads NE and SE of 5 Dam (Mar 1994 letter to DMG by Stoller for description of segments) - approx 4 acres
(5) Cover various roads NW of Mayflower TSF (Mar 1994 letter to DMG by Stoller for description of segments) - approx 2 acres

Timing

LOM

Total Costs	9855000	19710000	452.4793
$1,600,556	15.38		
	669952.8		
	14.70999151		

Calculations

Specific Tasks	Work Type	Area	Equipment/Material	# of Equip	Initial Volume	Final Volume	Units of Measure	Production	Units	Hrs Req'd	Cost/Unit Equip	Total Equip Cost	Cost/Unit Labor	Total Labor Cost	Cost/Unit Materials	Total Material Cost	Total Cost
Haul cover material from local stockpiles	HAUL_LOAD	Roads	740B Artic. Haul Truck	4	365,000	365,000	cuyd	85.88	cuyd/hr	4,250.1	$ 132.49	$ 563,096	$ 25.70	$ 109,228	$ -	$ -	$ 672,323
Load cover material at local stockpiles	HAUL_LOAD	Roads	938K Loader	1		-	cuyd		cuyd/hr	1,062.5	$ 104.30	$ 110,819	$ 41.61	$ 44,211	$ -	$ -	$ 155,029
Full time dust control	WATER	Roads	4000G Water Truck, 4000 gal							1,062.5	$ 62.06	$ 65,939	$ 30.70	$ 32,619	$ -	$ -	$ 98,558
Spread cover material at replacement areas	SPREAD	Roads	D7E Dozer	1	365,000	365,000	cuyd	236.80	cuyd/hr	1,541.4	$ 121.74	$ 187,650	$ 44.55	$ 68,669	$ -	$ -	$ 256,319
Revegetation	MATERIALS	Roads	Seeding-Standard Steep (>2.5:1)		113	113	acre								$ 3,702.00	$ 418,326	$ 418,326
TOTAL COSTS												**$ 927,503**		**$ 254,726**		**$ 418,326**	**Total Cost $ 1,600,556**

Notes: Roads to be closed shown in Figure F-01.

Financial Reporting Unit Rates

Robinson Lake

Assumptions

Tasks
645,000 cy of sediment and sludge removal from Robinson Lake

Timing
LOM
Total Costs
$ 5,273,235

Calculations

Specific Tasks	Work Type	Area	Equipment/Material	# of Equip	Initial Volume	Final Volume	Units of Measure	Production	Units	Hrs Req'd	Cost/Unit Equip	Total Equip Cost	Cost/Unit Labor	Total Labor Cost	Cost/Unit Materials	Total Material Cost	Total Cost
Pre-Excavation Work and Water Management	General	Robinson Lake															$ 519,326
Haul waste rock from McNulty	HAUL_LOAD	Robinson Lake Road	740B Artic. Haul Truck	4	30,000	30,000	cuyd	74.66	cuyd/hr	401.8	$ 132.49	$ 53,234	$ 25.70	$ 10,326	$ -	$ -	$ 63,561
Load waste rock from McNulty	HAUL_LOAD	Robinson Lake Road	938K Loader	1		-	cuyd		cuyd/hr	100.5	$ 104.30	$ 10,482	$ 41.61	$ 4,182	$ -	$ -	$ 14,664
Spread waste rock from McNulty	SPREAD	Robinson Lake Road	D6N LGP Dozer	2	30,000	30,000	cuyd	176.25	cuyd/hr	170.2	$ 68.28	$ 11,621	$ 44.55	$ 7,582	$ -	$ -	$ 19,204
Finish Work	GENERAL	Robinson Lake															$ 129,000
Impacted Water Pipeline	MATERIALS	Robinson Lake	30" corrugated HDPE Installed		1,720	1,720	LF								$ 76.80	$ 132,096	$ 132,096
Clean Water Surface Channel	MATERIALS	Robinson Lake	Excavate diversion/spillway		8,238	8,238	cuyd								$ 2.76	$ 22,737	$ 22,737
Riprap	MATERIALS	Robinson Lake	Rip Rap Armoring		3,690	3,690	cuyd								$ 80.10	$ 295,569	$ 295,569
Bedding for riprap placed	MATERIALS	Robinson Lake	Drain rock		4,416	4,416	cuyd								$ 71.00	$ 313,536	$ 313,536
Haul riprap and bedding from stockpile	HAUL_LOAD	Robinson Lake Riprap	740B Artic. Haul Truck		8,106	8,106	cuyd	80.56	cuyd/hr	100.6	$ 132.49	$ 13,328	$ 25.70	$ 2,585	$ -	$ -	$ 15,914
Load riprap and bedding from stockpile	HAUL_LOAD	Robinson Lake Riprap	938K Loader		8,106	8,106	cuyd		cuyd/hr	33.5	$ 104.30	$ 3,494	$ 41.61	$ 1,394	$ -	$ -	$ 4,888
Haul cover material from TS 28 Stockpile	HAUL_LOAD	Robinson Lake	740B Artic. Haul Truck	5	138,000	138,000	cuyd	116.32	cuyd/hr	1,186.4	$ 132.49	$ 157,186	$ 25.70	$ 30,490	$ -	$ -	$ 187,677
Load cover material at TS 28 Stockpile	HAUL_LOAD	Robinson Lake	938K Loader	1		-	cuyd		cuyd/hr	237.3	$ 104.30	$ 24,750	$ 41.61	$ 9,874	$ -	$ -	$ 34,624
Spread cover material	SPREAD	Robinson Lake	D8T Dozer	1	138,000	138,000	cuyd	240.00	cuyd/hr	237.3	$ 148.49	$ 35,237	$ 44.55	$ 10,572	$ -	$ -	$ 45,808
Haul Sludge/Soil to Robinson TSF	HAUL_LOAD	Robinson Lake Sludge	740B Artic. Haul Truck	5	645,333	645,333	cuyd	55.51	cuyd/hr	11,625.5	$ 132.49	$ 1,540,262	$ 25.70	$ 298,775	$ -	$ -	$ 1,839,038
Load Sludge/Soil to Robinson TSF	HAUL_LOAD	Robinson Lake Sludge	938K Loader			-	cuyd		cuyd/hr	2,325.1	$ 104.30	$ 242,508	$ 41.61	$ 96,747	$ -	$ -	$ 339,255
Spread Sludge/Soil to Robinson TSF	SPREAD	Robinson Lake Sludge	D8T Dozer		645,333	645,333	cuyd	99.20	cuyd/hr	6,505.4	$ 148.49	$ 965,987	$ 44.55	$ 289,816	$ -	$ -	$ 1,255,802
Rip Road Surfaces	GENERAL	Road Surfaces	D7E Dozer		18	18	AC	1.07	AC/HR	16.8	$ 121.74	$ 2,045	$ 44.55	$ 748			$ 2,794
Revegetation	MATERIALS	Robinson Lake	Seeding-Alpine		43	43	acre								$ 877.73	$ 37,742	$ 37,742
TOTAL COSTS												**$ 3,060,136**		**$ 763,093**		**$ 801,680**	**$ 5,273,235**

Notes: Diversion and dewatering cost based on actual 2010 cost inflated to 2024. Roadways/platforms on lake surface. Assume 30,000 CY hauled from McNulty OSF.

Road construction costs from RSMeans 01 55 23 50 0100 Temporary roads, gravel fill, 8" depth. Volume of sediment and contaminated soil to remove estimated by Climax. 200 acre feet sediment and 200 acre feet contaminated soil will be hauled to Robinson TSF.
Haul/load sludge productivity reduced 50% to account for wet material.
Haul soil from TS 28. 43 acres. Install 1,720' clean water surface channel, 1,720' impacted water pipeline.

Financial Reporting Unit Rates

5 Dam

Assumptions

Tasks
Cover future raise with 2' cover material across 87 acres

Timing
LOM
Total Costs
$1,736,919

Calculations

Specific Tasks	Work Type	Area	Equipment/Material	# of Equip	Initial Volume	Final Volume	Units of Measure	Production	Units	Hrs Req'd	Cost/Unit Equip	Total Equip Cost	Cost/Unit Labor	Total Labor Cost	Cost/Unit Materials	Total Material Cost	Total Cost
Haul cover material from Kokomo Stockpile	HAUL_LOAD	5 Dam	740B Artic. Haul Truck	7	196,170	196,170	cuyd	167.88	cuyd/hr	1,168.5	$ 132.49	$ 154,815	$ 25.70	$ 30,030	$ -	$ -	$ 184,845
Load cover material at Kokomo Stockpile	HAUL_LOAD	5 Dam	938K Loader	1		-	cuyd		cuyd/hr	166.9	$ 104.30	$ 17,408	$ 41.61	$ 6,945	$ -	$ -	$ 24,352
Spread cover material	SPREAD	5 Dam	D8T Dozer	1	196,170	196,170	cuyd	240.00	cuyd/hr	166.9	$ 148.49	$ 24,783	$ 44.55	$ 7,435	$ -	$ -	$ 32,218
Full time road grading	GRADING	5 Dam	12M Grader AWD	1		-	acres	0.50	acres/hr	166.9	$ 71.83	$ 11,988	$ 37.29	$ 6,224	$ -	$ -	$ 18,212
Full time dust control	WATER	5 Dam	4000G Water Truck, 4000 gal	1						166.9	$ 62.06	$ 10,358	$ 30.70	$ 5,124	$ -	$ -	$ 15,482
Clean Water Surface Channel	MATERIALS	5 Dam	Excavate diversion/spillway		7,706	7,706	cuyd								$ 2.76	$ 21,269	$ 21,269
Riprap	MATERIALS	5 Dam	Rip Rap Armoring		3,452	3,452	cuyd								$ 80.10	$ 276,505	$ 276,505
Bedding for riprap placed	MATERIALS	5 Dam Riprap	Drain rock		4,131	4,131	cuyd								$ 71.00	$ 293,301	$ 293,301
Haul riprap and bedding from stockpile	HAUL_LOAD	Dam 5 Riprap	740B Artic. Haul Truck	4	7,583	7,583	cuyd	97.52	cuyd/hr	77.8	$ 132.49	$ 10,308	$ 25.70	$ 1,999	$ -	$ -	$ 12,307
Load riprap and bedding from stockpile	HAUL_LOAD	Dam 5 Riprap	938K Loader			-	cuyd		cuyd/hr	19.5	$ 104.30	$ 2,034	$ 41.61	$ 811	$ -	$ -	$ 2,845
Impacted Water Pipeline	MATERIALS	5 Dam	30" corrugated HDPE Installed		8,200	8,200	LF								$ 76.80	$ 629,760	$ 629,760
Revegetation	MATERIALS	5 Dam	Seeding-Standard Steep (>2.5:1)			61	acre								$ 3,702.00	$ 225,822	$ 225,822
TOTAL COSTS												**$ 231,693**		**$ 58,569**		**$ 1,446,657**	**Total Cost $ 1,736,919**

Notes: 61 acres, haul soil from Kokomo TS.
Install 2,900' clean water surface channel, 8,200' impacted water pipeline.

Financial Reporting Unit Rates

Revegetation

Assumptions

Tasks
Seeding, mulching, and crimping site wide

Timing
LOM
Total Costs
$0

Calculations

Specific Tasks	Work Type	Area	Equipment/Material	# of Equip	Initial Volume	Final Volume	Units of Measure	Production	Units	Hrs Req'd	Cost/Unit Equip	Total Equip Cost	Cost/Unit Labor	Total Labor Cost	Cost/Unit Materials	Total Material Cost	Total Cost
TOTAL COSTS												$ -		$ -		$ -	Total Cost $ -

Notes: Revegetation moved included in tabs for individual facilities.

421 acres of McNulty OSF will receive alpine seed mix,
Steep slopes = roads 118 acres, 1 Dam 127 acres, 5 Dam 61 acres, total 306 acres
Wetland mix = Robinson Lake area 42 acres
Standard seeding = 2,468 acres
Tree planting 56 acres, assume 450 seedlings/acre = 25,170 seedlings.

Financial Reporting Unit Rates

Seal Underground Mine Openings

Assumptions

Tasks
Seal various underground openings with a 2 feet thick concrete bulkhead

Timing
LOM
Total Costs
$38,990

Calculations

Specific Tasks	Work Type	Area	Equipment/Material	# of Equip	Initial Volume	Final Volume	Units of Measure	Production	Units	Hrs Req'd	Cost/Unit Equip	Total Equip Cost	Cost/Unit Labor	Total Labor Cost	Cost/Unit Materials	Total Material Cost	Total Cost	Comment
Seal Storke Portal - 12'x14'	GENERAL	Storke portal				12.444	Cu. Yd.				$ 866.00	$ 10,777	$ 300.98	$ 3,746	$ 210.94	$ 2,625	$ 17,147	
Seal No. 3 Gallery - 8' x 8'	GENERAL	No. 3 gallery				4.741	Cu. Yd.				$ 866.00	$ 4,105	$ 300.98	$ 1,427	$ 210.94	$ 1,000	$ 6,532	
Seal Philipson Portal (10' X 15')	GENERAL					11.111	Cu. Yd.				$ 866.00	$ 9,622	$ 300.98	$ 3,344	$ 210.94	$ 2,344	$ 15,310	
																	Total Cost	
TOTAL COSTS												**$ 24,505**		**$ 8,517**		**$ 5,969**	**$ 38,990**	

Notes: Reference cost estimated for plug reinforced concrete plug and bulkhead in Washington state May 2023. Labor $300.98/CY, Equipment $866.00/CY, Material $211/CY.

Financial Reporting Unit Rates

Mobilize-Demobilize

Assumptions

Tasks
Costs to mobilize and demobilize

Timing
LOM
Total Costs
$0

Calculations

Specific Tasks	Work Type	Area	Equipment/Material	# of Equip	Initial Volume	Final Volume	Units of Measure	Production	Units	Hrs Req'd	Cost/Unit Equip	Total Equip Cost	Cost/Unit Labor	Total Labor Cost	Cost/Unit Materials	Total Material Cost	Total Cost	Comment
TOTAL COSTS												$ -		$ -		$ -	Total Cost $ -	

Notes: Mobilization/demobilization costs estimated as 5% of direct costs based on Office of Surface Mining Guidance *Handbook for Calculation of Reclamation Bond Amounts* (Office of Surface Mining, Department of the Interior, 2004)

This cost is considered an indirect cost and is included on the summary sheet.

Financial Reporting Unit Rates

Buffer Zone

Assumptions

Tasks
Reclaim the Buffer Zone (DRMS activity) No longer required.

Timing
LOM
Total Costs
$0

Calculations

Specific Tasks	Work Type	Area	Equipment/Material	# of Equip	Initial Volume	Final Volume	Units of Measure	Production	Units	Hrs Req'd	Cost/Unit Equip	Total Equip Cost	Cost/Unit Labor	Total Labor Cost	Cost/Unit Materials	Total Material Cost	Total Cost	Comment
Reclaim the Buffer Zone		Buffer Zone					550 acres					$ -		$ -	$ -	$ -	$ -	
TOTAL COSTS												**$ -**		**$ -**		**$ -**	**Total Cost $ -**	

Notes:

Financial Reporting Unit Rates

Impacted Water Treatment

Assumptions

Tasks
Extended cost estimate for Water treatment - 10 years

Timing
LOM
Total Costs
$37,123,901

Calculations

Specific Tasks	Final Volume	Units of Measure	Production Units	Hrs Req'd	Cost/Unit Equip	Total Equip Cost	Cost/Unit Labor	Total Labor Cost	Cost/Unit Materials	Total Material Cost	Total Cost	Comment
Existing WTP Annual Treatment cost (10 years)	12,820	Mgal				$ -		$ -	$ 730.00	$ 9,358,600	$ 9,358,600	Current 2022 cost = $2.34 million. 3,206 MG/Yr. Assume 60% reduction in volume post-closure.
Labor (water/maintenance/electrician) (8 FTE for 10 years)	80	FTE				$ -	$ 73,049.60	$ 5,843,968		$ -	$5,843,968	Assumes 8 water/maintenance operators on rotating shifts
Site Supervisor (1 FTE for 10 years)	10	FTE				$ -	$ 198,265.60	$ 1,982,656		$ -	$ 1,982,656	Assumes 1 Site Supervisor for the management of the crew and site
Lime 273 tons/year for 10 years)	2,730	tons				$ -		$ -	$ 206.00	$ 562,380	$ 562,380	Assumes consistent lime usage for treatment post mining
Sulfuric Acid (67,200 lbs each year for 10 years)	672,000	Lbs				$ -		$ -	$ 0.31	$ 208,320	$ 208,320	Assumes consistent acid usage for treatment post mining
Ferric sulfate (410 tons/year for 10 years)	4,100	tons				$ -		$ -	$ 0.31	$ 1,271	$ 1,271	Assumes consistent usage for treatment post mining
Other Reagents (polymer) (67k lbs per year for 10 years)	670,000	Lbs				$ -		$ -	$ 3.55	$ 2,378,500	$ 2,378,500	Assumes consistent polymer usage for treatment post mining
Power	10	year				$ -		$ -	$ 142,500.00	$ 1,425,000	$ 1,425,000	$0.285M per year currently- assume 50% post closure for treatment systems
Natural Gas	10	year				$ -		$ -	$ 76,500.00	$ 765,000	$ 765,000	$153K per year (2022)- assume 50% post closure for remaining buildings
Vehicles	10	units			$ 7,500	$ 75,000		$ -		$ -	$ 75,000	Pickups for access to remote water system check points
Loader (1 loader for 10 years)	10	year			$ 303,493	$ 3,034,930		$ -		$ -	$ 3,034,930	Loader for road maintenance, snow plowing and general maintenance
Outside Services	10	year					$ 359,560.00	$ 3,595,600			$ 3,595,600	$719K per year currently- assume 50% post closure
Sampling and maintenance	10	year			$ 660,500	$ 6,605,000		$ -		$ -	$ 6,605,000	Regular maintenance, service of installed pump sets and sampling 2022. assume 50% reduction.
Sludge disposal	10	year				$ -		$ -	$ 128,767.60	$ 1,287,676	$ 1,287,676	
											Total Cost	
TOTAL COSTS						**$ 9,714,930**		**$ 11,422,224**		**$ 15,986,747**	**$ 37,123,901**	

Notes: Cost per MG from actual 2022 Climax cost plus estimated unit cost for Molybdenum Water Treatment Plant.
Annual treatment volume (2022) 3,206 MG/year. Based on Wheeler 2023. Assume 50% reduction in flows post-closure.
Sludge disposal estimate December 2023 from RADPROS. Based on approximately 1 million gallons/year 2022 - 2023. Assume 40% post-closure.

Financial Reporting Unit Rates

Mtnce & Environmental Control

Assumptions

Tasks
General maintenance and environmental control tasks

Timing
When
Total Costs
$11,222,418

Calculations

Specific Tasks		Total Cost	Comment
Tailings stewardship	$	3,000,000	
Operations and Maintenance first 10-year period	$	3,696,300	
Operations and Maintenance second 10-year period	$	2,217,780	
Operations and Maintenance first 10-year period	$	1,108,890	
Reseeding (324 Acres)	$	1,199,448	
		Total Cost	
TOTAL COSTS	**$**	**11,222,418**	

Notes: Tailings stewardship annual cost based on similar sites for Freeport.

Assume 50 days per year, years 1 - 10; 30 days/year, years 11 - 20; 15 days/year, years 21- 30

Assume 10% of seeded area will require reseeding during first 5 years post-closure.

Financial Reporting Unit Rates

Demolition 1 - Structures

Assumptions

Tasks
Various demolition of former mine structures

Timing
LOM
Total Costs
$7,615,447

Calculations

Specific Tasks	Area	Material	Length	Width	Height	Volume	Units	Cost/Unit Materials	Total Cost	Comment
Demolish 6 CRUSHER SWCH HSE - SUPERSTRUCTURE	Mine mill	Steel	80.00	38.00	15.00	45,600	cuft	$ 0.30	$ 9,576	Deduct 30% for no interior walls per RSMeans
Demolish MILL LIME SILO - SUPERSTRUCTURE	Mine mill	Steel	60.00	16.00	16.00	15,360	cuft	$ 0.30	$ 4,608	
Demolish DOMESTIC WATER PLANT - SUPERSTRUCTURE	Mine mill	Steel	45.00	81.00	24.00	87,480	cuft	$ 0.30	$ 18,371	Deduct 30% for no interior walls per RSMeans
Demolish 3 MILL - SUPERSTRUCTURE	Mine mill	Steel	725.00	180.00	80.00	10,440,000	cuft	$ 0.30	$ 2,192,400	Deduct 30% for no interior walls per RSMeans
Demolish TAILING DIST HOUSE - SUPERSTRUCTURE	Mine mill	Steel	61.00	40.00	14.00	34,160	cuft	$ 0.30	$ 10,248	
Demolish MILL TANK VALVE HSE1- SUPERSTRUCTURE	Mine mill	Tin	21.00	29.00	10.00	6,090	cuft	$ 0.31	$ 1,888	
Demolish MILL TANK VALVE HSE2- SUPERSTRUCTURE	Mine mill	Tin	20.00	20.00	10.00	4,000	cuft	$ 0.31	$ 1,240	
Demolish 6 CRUSHER SECONDARY- SUPERSTRUCTURE	Mine mill	Steel	160.00	90.00	87.00	1,252,800	cuft	$ 0.30	$ 375,840	
Demolish 6 CRUSHER PRIMARY - SUPERSTRUCTURE	Mine mill	Steel	60.00	110.00	72.00	475,200	cuft	$ 0.30	$ 142,560	
Demolish 6 CRUSHER OFFICE - SUPERSTRUCTURE	Mine mill	Steel	30.00	72.00	16.00	34,560	cuft	$ 0.30	$ 10,368	
Demolish GATEHOUSE - SUPERSTRUCTURE	Mine mill	Combination	64.00	40.00	10.00	25,600	cuft	$ 0.28	$ 7,168	
Demolish COVERED STORAGE - SUPERSTRUCTURE	Mine mill	Tin	60.00	25.00	14.00	21,000	cuft	$ 0.31	$ 6,510	
Demolish NEW SCALE HOUSE - SUPERSTRUCTURE	Mine mill	Steel	80.00	16.00	16.00	20,480	cuft	$ 0.30	$ 4,301	Deduct 30% for no interior walls per RSMeans
Demolish PHLLPSN MAPP GAS HSE- SUPERSTRUCTURE	Mine mill	Tin	20.00	45.00	8.00	7,200	cuft	$ 0.31	$ 2,232	
Demolish OPEN PIT FUEL TANKS- SUPERSTRUCTURE	Mine mill	Steel	100.00	25.00	8.00	20,000	cuft	$ 0.30	$ 6,000	
Demolish DOMESTIC WATER TANK - SUPERSTRUCTURE	Mine mill	Steel	44.00	44.00	40.00	77,440	cuft	$ 0.30	$ 23,232	
Demolish OPEN PIT FUEL PUMP HSE- SUPERSTRUCTURE	Mine mill	Steel	40.00	20.00	12.00	9,600	cuft	$ 0.30	$ 2,880	
Demolish PHILLIPSON WAREHOUSE- SUPERSTRUCTURE	Mine mill	Steel	76.00	94.00	42.00	300,048	cuft	$ 0.30	$ 63,010	Deduct 30% for no interior walls per RSMeans
Demolish OPEN PIT PHASE 1 SHOP- SUPERSTRUCTURE	Mine mill	Steel	146.00	56.00	52.00	425,152	cuft	$ 0.30	$ 89,282	Deduct 30% for no interior walls per RSMeans
Demolish OPEN PIT OFFICES- SUPERSTRUCTURE	Mine mill	Combination	48.00	80.00	25.00	96,000	cuft	$ 0.28	$ 18,816	Deduct 30% for no interior walls per RSMeans
Demolish OPEN PIT PHASE 2 SHOP- SUPERSTRUCTURE	Mine mill	Steel	440.00	80.00	70.00	2,464,000	cuft	$ 0.30	$ 517,440	Deduct 30% for no interior walls per RSMeans
Demolish OPEN PIT WASH BAY- SUPERSTRUCTURE	Mine mill	Steel	90.00	105.00	60.00	567,000	cuft	$ 0.30	$ 119,070	Deduct 30% for no interior walls per RSMeans
Demolish TENMILE TUNNEL SHOP - SUPERSTRUCTURE	Various	Tin	34.00	26.00	16.00	14,144	cuft	$ 0.31	$ 3,069	Deduct 30% for no interior walls per RSMeans
Demolish TENMILE TUNL OFC - SUPERSTR. (trailer)	Various	Steel	50.00	20.00	12.00	12,000	cuft	$ 0.30	$ 3,600	
Demolish TENMILE TUNL CMP HSE- SUPERSTRUCTURE	Various	Steel	18.00	18.00	12.00	3,888	cuft	$ 0.30	$ 816	Deduct 30% for no interior walls per RSMeans
Demolish TENMILE TUNL DMP HSE- SUPERSTRUCTURE	Various	Steel	40.00	12.00	10.00	4,800	cuft	$ 0.30	$ 1,008	Deduct 30% for no interior walls per RSMeans
Demolish TENMILE BARGE - SUPERSTRUCTURE	Various	Tin	36.00	36.00	10.00	12,960	cuft	$ 0.31	$ 4,018	
Demolish POND SHOP - SUPERSTRUCTURE	Various	Steel	60.00	40.00	20.00	48,000	cuft	$ 0.30	$ 14,400	
Demolish POND SHOP DOCKS - SUPERSTRUCTURE	Various	Wood	200.00	20.00	3.00	12,000	cuft	$ 0.31	$ 2,604	Deduct 30% for no interior walls per RSMeans
Demolish TENMILE COHEREX STA- SUPERSTRUCTURE	Various	Steel	22.00	40.00	10.00	8,800	cuft	$ 0.30	$ 2,640	
Decommissioning	Mine mill								$ 250,000	Lump sum assumed
Abate Asbestos and Remove Regulated Materials	Mine mill								$ 450,000	Lump sum assumed
Explosives Shed (Powder Storage)	Open Pit	Steel	13	8.00	8.00	832	cuft	$ 0.30	$ 175	Deduct 30% for no interior walls per RS Means
New Mill Building	Mine Mill	Steel	1,105.00	805.00	13.00	11,563,825	cuft	$ 0.30	$ 2,428,403	Deduct 30% for no interior walls per RS Means
Train Shack at Ten Mile North Portal	3-Dam	Steel	50.00	20.00	14.00	14,000	cuft	$ 0.30	$ 2,940	Deduct 30% for no interior walls per RS Means
Mayflower Coherex Station	5-Dam	Steel	7.00	8.00	19.00	1,064	cuft	$ 0.30	$ 319	
Mayflower Coherex Station	5-Dam	Concrete floor	36.00	30.00	2.00	2,160	sqft	$ 0.71	$ 1,534	
Mayflower Coherex Station	5-Dam	Concrete floor	50.00	30.00	1.00	1,500	sqft	$ 0.71	$ 1,065	Bury remaining slab and footers with local cover materials
Supply Canal No. 2 Pipeline	3-Dam	Pipe grouting	5.00	3.00	N/A	565	cuft	$ 30.13	$ 17,023	Assume 4 end sections
Mill Return Pipeline	Searle Gulch	Pipe grouting	5.00	1.00	N/A	31	cuft	$ 30.13	$ 934	Assume 2 end sections (Searle Gulch W slope)
Supply Canal No. 2 Pipeline	3-Dam	Concrete footing	80.00	2.00	8.00	1,280	LF	$ 18.64	$ 23,859	Searle Gulch Diversion Structure
Mayflower Flood Bypass Tunnel	Mayflower TSF	Pipe grouting				1	LS	$ 530,000.00	$ 530,000	TR-21 response 5/24/12
Decommissioning	Various								$ 150,000	Lump sum assumed
Remove Regulated Materials	Various								$ 100,000	Lump sum assumed

	Total Cost	
TOTAL COSTS	**$ 7,615,447**	

Notes: Demolition includes above grade demolition only for buildings, equipment, piping, supports and other features.
Floor slabs and equipment pedestals will be pulverized in place and below grade foundations and piping that do not interfere with reclamation grading will remain.
Salvageable equipment will be resold as market conditions allow and recyclable materials (steel, paneling, concrete, etc.) will be recycled offsite. As a conservative assumption, no credit is included.
Non-recyclable materials that are not regulated will remain onsite.
Costs for abatement of asbestos-containing materials are based on the limited asbestos survey performed in 2018 and 2019, which includes above grade materials only.
The majority of confirmed ACMs (window glaze, caulk, floor tile/mastic) will be abated via glovebag techniques; surface material (wall texture) will require a negative air enclosure. ACMs will be disposed offsite.
A regulated material survey has not been performed previously. Costs for removal of regulated materials and offsite disposal or recycling (as regulations apply) are based on WSP's experience for similar facilities.
Decommissioning includes limited removal of residual materials prior to demolition. It is assumed the majority of process materials will be used/processed prior to cessation of operations.
Asbestos abatement assumes 18 person crew working 20 days.

Financial Reporting Unit Rates

Demolition 2-linear facilities

Assumptions

Tasks
Various demolition (continued from Demo 1)

Timing
LOM
Total Costs
$104,062

Calculations

Specific Tasks	Area	Material	Length	Width	Height	Volume	Units	Cost/Unit Materials	Total Cost	Comment
MAYFLOWER HLDNG TANK- SUPERSTRUCTURE	Water Control Structures	Steel	28	28	18	14,112	cuft	$ 0.30	$ 4,234	
CHALK MTN PUMP HOUSE- SUPERSTRUCTURE	Water Control Structures	Steel	25	25	20	12,500	cuft	$ 0.30	$ 3,750	
3 MILL SUBSTATION- SUPERSTRUCTURE	Substations and Utility Lines	Steel	155	30	15	69,750	cuft	$ 0.30	$ 20,925	
OPEN PIT SHOP SUB- SUPERSTRUCTURE	Substations and Utility Lines	Steel	25	25	15	9,375	cuft	$ 0.30	$ 2,813	
DOMESTIC WATER SUB- WOOD STRUCTURE	Substations and Utility Lines	Wood	20	20	8	3,200	cuft	$ 0.31	$ 992	
IRECO PLANT SUB- SUPERSTRUCTURE	Substations and Utility Lines	Wood	20	20	8	3,200	cuft	$ 0.31	$ 992	
OPEN PIT UTIL LINES- 21 POLES/237'AVG SPACING	Substations and Utility Lines	Wood/wire	1	1	4,977	4,977	LF	$ 0.95	$ 4,728	
TAILING UTILITY LINE- 25 POLES/237'AVG SPACING	Substations and Utility Lines	Wood/wire	1	1	5,925	5,925	LF	$ 0.95	$ 5,629	
Decommissioning	Water Control Structures								$ 30,000	Lump sum assumed
Remove Regulated Materials	Substations and Utility Lines								$ 30,000	Lump sum assumed

	Total Cost
TOTAL COSTS	**$ 104,062**

Notes: Decommissioning includes limited removal of residual materials prior to demolition. It is assumed the majority of materials will be used/processed prior to cessation of operations.
Regulated material removal includes removal and recycling (as non-PCB containing) of transformer oils only. A regulated material survey has not been performed previously.

Financial Reporting Unit Rates

Demolition 3-new structures

Assumptions

Tasks
Combined with Demolition 1

Timing
LOM
Total Costs
$0

Calculations

Specific Tasks	BLDG	Area	Material	Length	Width/Pipe Radius	Height	Volume	Units	Cost/Unit Materials	Total Cost

	Total Cost
TOTAL COSTS	**$ -**

Notes: Combined with Demolition 1

Financial Reporting Unit Rates

Disposal of Reagents

Assumptions
Reagents will be removed prior to closure.
Tasks
Disposal of reagents

Timing
LOM
Total Costs
$0

Calculations

Specific Tasks	Work Type	Area	Description	Quantity	Units	Cost/Unit	Total Cost	Comment

TOTAL COSTS	Total Cost
	$ -

Notes: Cost removed. Assumed reagents will be removed prior to closure.

Financial Reporting Unit Rates

Monitoring

Assumptions

Tasks

Water quality monitoring for 30 years and well abandonment at end of monitoring.

Timing

When

Total Costs

$510,729

Calculations

Specific Tasks	Work Type	Area	Equipment/ Material	# of Equip	Initial Volume	Final Volume	Units of Measure	Production	Units	Hrs Req'd	Cost/Unit Equip	Total Equip Cost	Cost/Unit Labor	Total Labor Cost	Cost/Unit Materials	Total Material Cost	Total Cost
Monitoring well abandonment	GENERAL	SITEWIDE			2040		LF					$ -		$ -	$3.74	$7,629.60	$7,629.60
WQ monitoring Year 1	GENERAL	SITEWIDE			1		LS					$ -		$ -	$8,885.00	$8,885.00	$8,885.00
WQ monitoring Year 2	GENERAL	SITEWIDE			1		LS					$ -		$ -	$9,245.48	$9,245.48	$9,245.48
WQ monitoring Year 3	GENERAL	SITEWIDE			1		LS					$ -		$ -	$9,620.58	$9,620.58	$9,620.58
WQ monitoring Year 4	GENERAL	SITEWIDE			1		LS					$ -		$ -	$10,010.90	$10,010.90	$10,010.90
WQ monitoring Year 5	GENERAL	SITEWIDE			1		LS					$ -		$ -	$10,417.06	$10,417.06	$10,417.06
WQ monitoring Year 6	GENERAL	SITEWIDE			1		LS					$ -		$ -	$10,839.70	$10,839.70	$10,839.70
WQ monitoring Year 7	GENERAL	SITEWIDE			1		LS					$ -		$ -	$11,279.48	$11,279.48	$11,279.48
WQ monitoring Year 8	GENERAL	SITEWIDE			1		LS					$ -		$ -	$11,737.11	$11,737.11	$11,737.11
WQ monitoring Year 9	GENERAL	SITEWIDE			1		LS					$ -		$ -	$12,213.30	$12,213.30	$12,213.30
WQ monitoring Year 10	GENERAL	SITEWIDE			1		LS					$ -		$ -	$12,708.82	$12,708.82	$12,708.82
WQ monitoring Year 11	GENERAL	SITEWIDE			1		LS					$ -		$ -	$13,224.43	$13,224.43	$13,224.43
WQ monitoring Year 12	GENERAL	SITEWIDE			1		LS					$ -		$ -	$13,760.97	$13,760.97	$13,760.97
WQ monitoring Year 13	GENERAL	SITEWIDE			1		LS					$ -		$ -	$14,319.27	$14,319.27	$14,319.27
WQ monitoring Year 14	GENERAL	SITEWIDE			1		LS					$ -		$ -	$14,900.23	$14,900.23	$14,900.23
WQ monitoring Year 15	GENERAL	SITEWIDE			1		LS					$ -		$ -	$15,504.76	$15,504.76	$15,504.76
WQ monitoring Year 16	GENERAL	SITEWIDE			1		LS					$ -		$ -	$16,133.81	$16,133.81	$16,133.81
WQ monitoring Year 17	GENERAL	SITEWIDE			1		LS					$ -		$ -	$16,788.38	$16,788.38	$16,788.38
WQ monitoring Year 18	GENERAL	SITEWIDE			1		LS					$ -		$ -	$17,469.52	$17,469.52	$17,469.52
WQ monitoring Year 19	GENERAL	SITEWIDE			1		LS					$ -		$ -	$18,178.28	$18,178.28	$18,178.28
WQ monitoring Year 20	GENERAL	SITEWIDE			1		LS					$ -		$ -	$18,915.80	$18,915.80	$18,915.80
WQ monitoring Year 21	GENERAL	SITEWIDE			1		LS					$ -		$ -	$19,683.25	$19,683.25	$19,683.25
WQ monitoring Year 22	GENERAL	SITEWIDE			1		LS					$ -		$ -	$20,481.83	$20,481.83	$20,481.83
WQ monitoring Year 23	GENERAL	SITEWIDE			1		LS					$ -		$ -	$21,312.81	$21,312.81	$21,312.81
WQ monitoring Year 24	GENERAL	SITEWIDE			1		LS					$ -		$ -	$22,177.50	$22,177.50	$22,177.50
WQ monitoring Year 25	GENERAL	SITEWIDE			1		LS					$ -		$ -	$23,077.28	$23,077.28	$23,077.28
WQ monitoring Year 26	GENERAL	SITEWIDE			1		LS					$ -		$ -	$24,013.56	$24,013.56	$24,013.56
WQ monitoring Year 27	GENERAL	SITEWIDE			1		LS					$ -		$ -	$24,987.83	$24,987.83	$24,987.83
WQ monitoring Year 28	GENERAL	SITEWIDE			1		LS					$ -		$ -	$26,001.63	$26,001.63	$26,001.63
WQ monitoring Year 29	GENERAL	SITEWIDE			1		LS					$ -		$ -	$27,056.55	$27,056.55	$27,056.55
WQ monitoring Year 30	GENERAL	SITEWIDE			1		LS					$ -		$ -	$28,154.28	$28,154.28	$28,154.28
																	Total Cost
TOTAL COSTS												**$ -**		**$ -**		**$ 510,729**	**$ 510,729**

Notes: 13 water quality wells abandoned. 4 inch PVC casing. total depth 2,040 LF.

2022 actual WQ monitoring cost (includes: sampling labor, laboratory analyses and truck) $8,885/year for 30 years.

Projects	Final Closure	Post Closure
Directs		
Storke Complex	2042-2046	
Open Pit	2042-2046	
Mine Mill Complex	2042-2043	
North 40 OSF	2042-2046	
McNulty OSF	2045-2046	
Tenmile TSF	2045-2046	
Tenmile Tunnel	2046	
3 Dam	2046	
Pond Shop	2042	
Mayflower TSF	2045-2046	2071
Mayflower Seepage Collection	2042	
Robinson TSF	2045-2046	
1 Dam	2045-2046	
Roads	2042-2046	
Robinson Lake	2044-2045	
5 Dam	2044-2045	
Seal Underground Mine Openings	2042	
Impacted Water Treatment	2042-2046	2047-2051
Mtnce & Environmental Control	2042-2046	2047-2071
Demolition 1 - Structures	2042-2043	
Demolition 2-linear facilities	2042-2043	
Monitoring	2042-2046	2047-2071
Indirects		
Public Liab. Ins. (2.02% of Direct)	2042-2046	2047-2071
Bond (1.05% of Direct)	2042-2046	2047-2071
Profit (10% of Direct)	2042-2046	2047-2071
Contingency (20%)	2042-2046	2047-2071
Job Superintendent (DRMS factor)	2042-2046	
Mobilize demobilize (5% of direct cost)	2042-2046	
Financial Warranty Fee	2041	
Engineering/Bidding/Contracts (2% of Direct, OH&P)	2041	
Management/Administration (3% of Direct, OH&P)	2042-2046	2047-2071