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).
    - All earthwork quantities are neat line quantities and do not account for swelling, shrinking, or bulking. All earthwork material is from stockpiles that have been previously excavated and placed in stockpiles. Therefore, no swell is expected in the volumes provided.
    - Productivity factors minimally vary between facilities. The Cost Model Excel file (Attachment A) presents the factor for each facility for each facility.
    - For the vast majority of facilities, the following assumptions were used:
        - Load and haul material consistency factor: 1.0 (roughly equivalent to consolidated stockpile).
        - Dozer productivity spreading the cover material;1.2 (loose stockpile).
        - Regrading the mill complex: 0.8 (dry non-cohesive).

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 26,560 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). The post mining cost for this item is included.

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 2,187 ,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). Bulkhead dimensions are presented in Attachment A:

10 ft X 10 ft X 15 ft

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 1,530,000 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). Pre-excavation work includes installing diversions and dewatering ($519,326). Finish work includes final recontouring at Robinson Lake. The cost is a lump sum estimate based on actual contractor costs for similar work in 2010. The 2010 costs have been escalated to 2024 costs for inflation based on the increase in the CPI (37%). No detailed designs are available. A more detailed estimate will be prepared prior to the actual closure date.

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 quantity that will be hauled from McNulty OSF to Robinson Lake to construct access and work platforms is 30,000 CY. The cost to load, haul and place the waste rock back to McNulty OSF is included in the cost model. 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 (2,900 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. The concrete bulkheads are not hydrostatic. They are installed to prevent access by the public.

The dimensions of the openings are:

- Storke Portal: 12 feet X 14 feet
- No. 3 gallery: 8 feet X 8 feet
- Phillipson Portal: 10 feet X 15 feet

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 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 and 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 4.5 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-24	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	409,051
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	196,170
103.2	Closure Cover Tree Islands (4 ft thick)	yd^3	0
103.3	Closure Cover: Mayflower Seepage Collection (2 ft thick)	yd^4	2,690
103.4	Access Road Reclamation (Not Including Reclamation Cover)	ac	0
103.5	Fertilize Closure Cover	ac	61
103.6	Seed Closure Cover (Standard Mix, Steep slope)	ac	61
103.7	Mulch on Closure Cover	ac	61
103.8	Clean Water Surface Channel	ft	2,900
103.9	Clean Water Pipeline	ft	0
103.10	Impacted Water Surface Channel	ft	0
103.11	Impacted Water Pipeline	ft	8,200
103.12	Impacted Water Collection Drain	ft	0
104	*Robinson TSF*		
104.1	Closure Cover: Standard Vegetation (2 ft thick)	yd^3	1,418,633
104.2	Closure Cover Tree Islands (4 ft thick)	yd^3	109,916

CLIMAX COVER AND GRADING CLOSURE QUANTITIES ESTIMATE

Date	18-Jan-24	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
104.3	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
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	2,000,530
105.2	Closure Cover Tree Islands (4 ft thick)	yd^3	120,502
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
106	*Mayflower TSF*		
106.1	Closure Cover: Standard Vegetation (2 ft thick)	yd^3	2,248,108
106.2	Closure Cover Tree Islands (4 ft thick)	yd^3	127,733
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

CLIMAX COVER AND GRADING CLOSURE QUANTITIES ESTIMATE

Date	18-Jan-24	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
106.16	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
108.13	Downdrain	ft	4,500
108.14	Bench Channels	ft	45,600
109	*McNulty OSF*		
109.1	Closure Cover: Standard Vegetation (2 ft thick)	yd^3	2,187,000
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

CLIMAX COVER AND GRADING CLOSURE QUANTITIES ESTIMATE

Date	18-Jan-24	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
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	Downdrain	ft	7,300
109.16	Bench Channels	ft	132,400
110	*Mill Area*		
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	Clean Water Surface Channel	ft	10,100
110.9	Clean Water Pipeline	ft	0
110.10	Impacted Water Pipeline	ft	11,500
110.11	Impacted Water Collection Drain	ft	4,800
111	*Pit Area*		
111.1	Closure Cover: Standard Vegetation (2 ft thick)	yd^3	27,000
111.2	South Waste Rock Pile Removal to Pit Backfill	yd^3	2,354,000
111.3	Impacted Water Surface Channel (Optional)	ft	12,400
112	*Miscellaneous Roads*		
112.1	Closure Cover: Standard Vegetation (2 ft thick)	yd^3	365,000
112.2	Closure Cover Tree Islands (4 ft thick)	yd^3	0
112.3	Fertilize Closure Cover	ac	113
112.4	Seed Closure Cover	ac	113
112.5	Mulch on Closure Cover	ac	113

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	252	150	RS Means 2023	01 54 33 20.4200
D7E Dozer	Dozer Operator	$ 121.74	$ 44.55	cuyd	cuyd/hr	$ 166.29	340	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
966M Loader	Loader Operator	$ 104.30	$ 41.61	cuyd	cuyd/hr	$ 145.91	5.5		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
Dump truck 18 CY	Truck Driver	$ 78.75	$ 25.70	cuyd	cuyd	$ 104.45			RS Means 2024	01 54 33 20.5310

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 2024 / 31 23 16.13 5120 Per DRMS
Drain rock	Drain rockcuyd	$ 73.88	cuyd	2023 Contractor rate per DRMS
Perforated pipe	Perforated pipeLF	$ 15.87	LF	RSMeans 2024 / 33 41 16.35 0080 Per DRMS
Geotextile	Geotextilesqyd	$ 2.35	sqyd	RSMeans 2024 / 33 41 23.19 0100 Per DRMS
Signs	Signseach	$ 140.86	each	RSMeans 2024 / 10 14 53 20.0600, 1500 Pr DRMS
30" corrugated HDPE Installed	30" corrugated HDPE InstalledLF	$ 78.33	LF	RSMeans 2023 / 33 31 11.20 3160
Rip Rap Armoring	Rip Rap Armoringcuyd	$ 74.40	cuyd	RSMeans 2024 / 31 37 13.10 0100 Per DRMS
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	$ 63.70	sqft	2023 projects in NM and Arizona Per DRMS
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

Climax Molybdenum Company, Climax Mine, CO

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	$ 23,253,892	$ 156,896	$ 23,096,996	14721%	Added haul/place overburden from Arkansas Basin to pit bottom
	Mine Mill Complex	A3	$ 7,183,056	$ 1,747,393	$ 5,435,663	311%	Cover depth increased to 2', regrade volume increased, water mgt. facilities added, area decreased 126 acres, riprap cost increased
	North 40 OSF	A4	$ 15,801,324	$ 1,946,440	$ 13,854,884	712%	Cover depth increased to 2', regrade volume increased, water mgt. facilities increased, area increased 155 acres, riprap cost increased
	McNulty OSF	A5	$ 37,740,151	$ 6,202,713	$ 31,537,438	508%	Cover depth increased to 2', regrade volume increased, water mgt. facilities increased, area increased 319 acres, riprap cost increased
	Tenmile TSF	A6	$ 13,613,620	$ 6,804,129	$ 6,809,491	100%	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	$ 842,167	$ 50,072	$ 792,095	1582%	Reclamation completed. Bond released.
	Pond Shop	A9	$ 5,289	$ 4,017	$ 1,272	32%	Updated unit rates per change in equipment fleet
	Mayflower TSF	A10	$ 18,001,277	$ 1,446,003	$ 16,555,274	1145%	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	$ 75,336	$ 48,204	$ 27,132	56%	Updated unit rates per change in equipment fleet
	Robinson TSF	A13	$ 8,035,322	$ 290,869	$ 7,744,453	2663%	Cover depth increased to 2', water mgt. facilities added, area increased 400 acres
	1 Dam	A14	$ 2,775,243	$ 101,927	$ 2,673,316	2623%	Cover depth increased to 2', water mgt. facilities added, area increased 62 acres
	Roads	A15	$ 13,802	$ 351,607	$ (337,805)	-96%	Cover depth increased to 2', area increased 63 acres
	Robinson Lake	A16	$ 5,482,924	$ 2,333,570	$ 3,149,354	135%	Sediment volume increased. Water management facilities added.
	5 Dam	A17	$ 1,688,398	$ 162,879	$ 1,525,519	937%	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	$ 8,471,344	$ 3,563,306	$ 4,908,038	138%	Unit cost updated. Decontamination for mill added. Asbestos abatement added. Some facilities will remain (e.g., MWTP)
	Demolition 2-linear facilities	A25	$ 849,021	$ 23,486	$ 825,535	3515%	Unit cost updated.
	Demolition 3-new structures	A26	$ -	$ 3,801,386	$ (3,801,386)	-100%	Combined with Demolition 1
	Disposal of Reagents	A27	$ 91,459	$ 162,201	$ (70,742)	-44%	Cost estimated to return reagents to supplier.
	Monitoring	A28	$ 510,729	$ -	$ 510,729	0%	No monitoring included in 2019 estimate. Cost assumes 30 years.
Subtotal Directs			**$ 192,949,220**	**$ 72,873,830**	**$ 120,075,390**	**165%**	
Indirects	Public Liab. Ins. (2.02% of Direct)	A29	$ 3,897,574	$ 1,472,051	$ 2,425,523	165%	DRMS percentage allocation
	Bond (1.05% of Direct)	A30	$ 2,025,967	$ 765,175	$ 1,260,792	165%	DRMS percentage allocation
	Profit (10% of Direct)	A31	$ 19,294,922	$ 7,287,383	$ 12,007,539	165%	DRMS percentage allocation
	Contingency (20%)	A32	$ 38,589,844	$ -	$ 38,589,844	0%	Not considered in 2019.
	Job Superintendent (DRMS factor)	A33	$ 2,676,586	$ 1,517,270	$ 1,159,316	76%	Based on a 4.5 year construction schedule
	Mobilize demobilize (5% of direct cost)	A34	$ 9,647,461	$ 1,009,695	$ 8,637,766	855%	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	$ 5,381,631	$ 1,701,147	$ 3,680,484	216%	Consistent w/ Henderson CCM
	Management/Adminstration (3% of Direct, OH&P)	A38	$ 8,072,447	$ 4,195,785	$ 3,876,662	92%	Consistent w/ Henderson CCM
Subtotal Indirects			**$ 89,586,932**	**$ 16,939,312**	**$ 72,647,620**	**429%**	
TOTAL			**$ 282,536,152**	**$ 89,813,142**	**$ 192,723,010**	**215%**	

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	$ 23,253,892		$ 4,650,778	$ 4,650,778	$ 4,650,778	$ 4,650,778	$ 4,650,778																									
	Mine Mill Complex	A3	$ 7,183,056		$ 3,591,528	$ 3,591,528																												
	North 40 OSF	A4	$ 15,801,324		$ 3,160,265	$ 3,160,265	$ 3,160,265	$ 3,160,265	$ 3,160,265																									
	McNulty OSF	A5	$ 37,740,151		$ 7,548,030	$ 7,548,030	$ 7,548,030	$ 7,548,030	$ 7,548,030																									
	Tenmile TSF	A6	$ 13,613,620					$ 6,806,810	$ 6,806,810																									
	Tenmile Tunnel	A7	$ 129,556						$ 129,556																									
	3 Dam	A8	$ 842,167						$ 842,167																									
	Pond Shop	A9	$ 5,289		$ 5,289																													
	Mayflower TSF	A10	$ 18,001,277					$ 7,955,295	$ 7,955,295					$ 2,090,687																				
	East Side Channel	A11	$ -																															
	Mayflower Seepage Collection	A12	$ 75,336		$ 75,336																													
	Robinson TSF	A13	$ 8,035,322					$ 4,017,661	$ 4,017,661																									
	1 Dam	A14	$ 2,775,243					$ 1,387,621	$ 1,387,621																									
	Roads	A15	$ 13,802		$ 2,760	$ 2,760	$ 2,760	$ 2,760	$ 2,760																									
	Robinson Lake	A16	$ 5,482,924				$ 2,741,462	$ 2,741,462																										
	5 Dam	A17	$ 1,688,398					$ 844,199	$ 844,199																									
	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	$ 8,471,344		$ 4,235,672	$ 4,235,672																												
	Demolition 2-linear facilities	A25	$ 849,021		$ 424,510	$ 424,510																												
	Demolition 3-new structures	A26	$ -																															
	Disposal of Reagents	A27	$ 91,459																															
	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			**$ 192,949,220**		**$ 28,163,955**	**$ 28,044,700**	**$ 22,534,826**	**$ 43,546,803**	**$ 41,777,469**	**$ 4,192,860**	**$ 4,193,300**	**$ 4,193,757**	**$ 4,194,233**	**$ 6,285,416**	**$ 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 Direc	A29	$ 3,897,574		$ 568,912	$ 566,503	$ 455,203	$ 879,645	$ 843,905	$ 84,696	$ 84,705	$ 84,714	$ 84,724	$ 126,965	$ 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	$ 2,025,967		$ 295,722	$ 294,469	$ 236,616	$ 457,241	$ 438,663	$ 44,025	$ 44,030	$ 44,034	$ 44,039	$ 65,997	$ 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	$ 19,294,922		$ 2,816,395	$ 2,804,470	$ 2,253,483	$ 4,354,680	$ 4,177,747	$ 419,286	$ 419,330	$ 419,376	$ 419,423	$ 628,542	$ 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	$ 38,589,844		$ 5,632,791	$ 5,608,940	$ 4,506,965	$ 8,709,361	$ 8,355,494	$ 838,572	$ 838,660	$ 838,751	$ 838,847	$ 1,257,083	$ 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 fact	A33	$ 2,676,586		$ 535,317	$ 535,317	$ 535,317	$ 535,317	$ 535,317																									
	Mobilize demobilize (5% of direc	A34	$ 9,647,461		$ 1,929,492	$ 1,929,492	$ 1,929,492	$ 1,929,492	$ 1,929,492																									
	Financial Warranty Fee	A36	$ 500	$ 500																														
	Engineering/Bidding/Contracts (2% of Direct, OH&P)	A37	$ 5,381,631	$ 5,381,631																														
	Management/Administration (3% of Direct, OH&P)	A38	$ 8,072,447		$ 1,198,278	$ 1,193,517	$ 973,557	$ 1,812,376	$ 1,741,743	$ 167,383	$ 167,401	$ 167,419	$ 167,438	$ 250,920	$ 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			**$ 89,586,932**	**$ 5,382,131**	**$ 12,976,907**	**$ 12,932,708**	**$ 10,890,633**	**$ 18,678,113**	**$ 18,022,361**	**$ 1,553,962**	**$ 1,554,125**	**$ 1,554,294**	**$ 1,554,471**	**$ 2,329,507**	**$ 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			**$ 282,536,152**	**$ 5,382,131**	**$ 41,140,861**	**$ 40,977,408**	**$ 33,425,460**	**$ 62,224,916**	**$ 59,799,830**	**$ 5,746,822**	**$ 5,747,424**	**$ 5,748,052**	**$ 5,748,704**	**$ 8,614,923**	**$ 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) Haul and spread cover material at west open pit perimeter (DRMS estimate)
(2) Install No-Trespassing signs approx. every 300-ft
(3) Haul overburden from Arkansas basin.

Timing
LOM

Total Costs
$23,253,892

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	2	2,354,000	3,060,200	cuyd	69.90	cuyd/hr	43,779.7	$ 132.49	$ 5,800,372	$ 25.70	$ 1,125,138	$ -	$ -	$ 6,925,511
Load overburden	HAUL_LOAD	West Open Pit	966M Loader	1		-	cuyd		cuyd/hr	21,889.9	$ 104.30	$ 2,283,117	$ 41.61	$ 910,839	$ -	$ -	$ 3,193,955
Dozer support for loader	SPREAD	West Open Pit	D9T Dozer	1			cuyd		cuyd/hr	21,889.9	$ 221.36	$ 4,845,548	$ 44.55	$ 975,195	$ -	$ -	$ 5,820,743
Spread overburden at Open Pit	SPREAD	West Open Pit	D9T Dozer	1		3,060,200	cuyd	550.00	cuyd/hr	5,564.0	$ 221.36	$ 1,231,647	$ 44.55	$ 247,876	$ -	$ -	$ 1,479,523
Haul cover material from SE stockpile	HAUL_LOAD	West Open Pit Cover	740B Artic. Haul Truck	7	27,000	32,400	cuyd	164.56	cuyd/hr	196.9	$ 132.49	$ 26,087	$ 25.70	$ 5,060	$ -	$ -	$ 31,148
Haul cover material from SE stockpile	HAUL_LOAD	West Open Pit Cover	966M Loader			-	cuyd		cuyd/hr	28.1	$ 104.30	$ 2,931	$ 41.61	$ 1,169	$ -	$ -	$ 4,100
Full time road grading	GRADING	West Open Pit	12M Grader AWD	1			acres	0.50	acres/hr	27,482.0	$ 71.83	$ 1,974,032	$ 37.29	$ 1,024,804	$ -	$ -	$ 2,998,836
Full time dust control	WATER	West Open Pit	4000G Water Truck, 4000 gal	1						27,482.0	$ 62.06	$ 1,705,533	$ 30.70	$ 843,697	$ -	$ -	$ 2,549,230
Install signs	MATERIALS	West Open Pit	Signs	1	41	41	each			41.0	$ 15.00	$ 615	$20.18	$ 827	$ 140.86	$ 5,775	$ 7,218
Spread cover material from SE stockpile	SPREAD	West Open Pit Cover	D8T Dozer		27,000	32,400	cuyd	310.40	cuyd/hr	104.4	$ 148.49	$ 15,502	$ 44.55	$ 4,651	$ -	$ -	$ 20,153
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
Install 30" corrugated HDPE pipeline to ESC	MATERIALS	West Open Pit	30" corrugated HDPE Installed	1	2,800	2,800	LF			41.0	$ 15.00	$ 615	$38.32	$ 1,571	$ 78.33	$ 219,324	$ 221,510

																	Total Cost
TOTAL COSTS												**$ 17,887,293**		**$ 5,141,500**		**$ 225,099**	**$ 23,253,892**

Notes: Haul overburden material from Arkansas River basin. The material is hauled from the overburden pile located south of the mill area along and below Ceresco Ridge in the Arkansas River basin.
Overburden material type is broken granite 29800 lb/CY per CAT HAndbook

Financial Reporting Unit Rates

Mine Mill Complex

Assumptions

Tasks
(1) Regrade 5' cut/fill across 241 ac
(2) Finish grade Mine/Mill Complex
(3) Haul and spread 2' cover material over 241 acres

Timing
LOM
Total Costs
$7,183,056

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	933,600	cuyd	114.90	cuyd/hr	8,125.3	$ 132.49	$ 1,076,521	$ 25.70	$ 208,820	$ -	$ -	$ 1,285,341
Load cover material at McNulty stockpile	HAUL_LOAD	Mine/Mill Complex	966M Loader	1		-	cuyd		cuyd/hr	2,031.3	$ 104.30	$ 211,865	$ 41.61	$ 84,522	$ -	$ -	$ 296,387
Spread cover material	SPREAD	Mine/Mill Complex	D7E Dozer	1		-	cuyd	326.40	cuyd/hr	2,031.3	$ 121.74	$ 247,290	$ 44.55	$ 90,494	$ -	$ -	$ 337,785
Full time road grading	GRADING	Mine/Mill Complex	12M Grader AWD	1		-	acres	0.50	acres/hr	2,031.3	$ 71.83	$ 145,908	$ 37.29	$ 75,747	$ -	$ -	$ 221,655
Full time dust control	WATER	Mine/Mill Complex	621G Water Wagon, 8000 gal	1						2,031.3	$ 127.58	$ 259,153	$ 25.70	$ 52,204	$ -	$ -	$ 311,358
Regrade 5' cut/fill across117 ac	SPREAD	Mine/Mill Complex	D9T Dozer	3	950,000	1,235,000	cuyd	325.00	cuyd/hr	3,800.0	$ 221.36	$ 841,168	$ 44.55	$ 169,290	$ -	$ -	$ 1,010,458
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								$ 74.40	$ 894,362	$ 894,362
Bedding for riprap placed	MATERIALS	Mine/Mill Complex Bedding	Drain rock		14,387	14,387	cuyd								$ 73.88	$ 1,062,912	$ 1,062,912
Haul riprap and bedding from stockpile	HAUL_LOAD	Mine/mill Complex Bedding	740B Artic. Haul Truck	8	26,408	26,408	cuyd	198.50	cuyd/hr	133.0	$ 132.49	$ 17,621	$ 25.70	$ 3,418	$ -	$ -	$ 21,039
Load riprap and bedding from stockpile	HAUL_LOAD	Mine/mill Complex Bedding	966M Loader	1		-	cuyd		cuyd/hr	16.6	$ 104.30	$ 1,731	$ 41.61	$ 691	$ -	$ -	$ 2,422
Impacted Water Pipeline	MATERIALS	Mine/Mill Complex	30" corrugated HDPE Installed		11,500	11,500	LF								$ 78.33	$ 900,795	$ 900,795
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								$ 2.35	$ 39,374	$ 39,374
Collection Drain Gravel	MATERIALS	Mine/Mill Complex	Drain rock		4,800	4,800	cuyd								$ 73.88	$ 354,624	$ 354,624
Collection Drain Pipe	MATERIALS	Mine/Mill Complex	Perforated pipe		4,800	4,800	LF								$ 15.87	$ 76,176	$ 76,176
Ripping compacted surfaces	GENERAL	Mine/Mill Complex	D7E Dozer		241	241	AC	1.07	AC/HR	225.2	$ 121.74	$ 27,415.85	$ 44.55	$ 10,032.66			$ 37,449
Scarify cover	MATERIALS	Mine/Mill Complex	Scarify		241	241	acre								$ 47.04	$ 11,338	$ 11,338
Straw mulch	MATERIALS	Mine/Mill Complex	Straw mulch		241	241	acre								$ 400.00	$ 96,400	$ 96,400
Drill seed	MATERIALS	Mine/Mill Complex	Drill seed		241	241	acre								$ 350.00	$ 84,350	$ 84,350
																	Total Cost
TOTAL COSTS												**$ 2,862,578**		**$ 712,821**		**$ 3,607,657**	**$ 7,183,056**

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 241 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
$15,801,324

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	7	686,000	823,200	cuyd	175.09	cuyd/hr	4,701.6	$ 132.49	$ 622,915	$ 25.70	$ 120,831	$ -	$ -	$ 743,746
Load cover material at southeast stockpile	HAUL_LOAD	North 40 SE TS	966M Loader	1		-	cuyd		cuyd/hr	671.7	$ 104.30	$ 70,058	$ 41.61	$ 27,949	$ -	$ -	$ 98,008
Cut/Fill for OSF North Area Regrading to 2H:1V Between Drainage Benches	SPREAD	North 40 OSF	D9T Dozer		1,919,000												
				8		2,302,800	cuyd	435.00	cuyd/hr	5,293.8	$ 221.36	$ 1,171,836	$ 44.55	$ 235,839	$ -	$ -	$ 1,407,674
Spread cover material	SPREAD	North 40 SE TSF	D7E Dozer	2	686,000	823,200	cuyd	520.20	cuyd/hr	1,582.5	$ 121.74	$ 192,654	$ 44.55	$ 70,500	$ -	$ -	$ 263,154
Full time dust control	HAUL_LOAD	North 40 OSF	621G Water Wagon, 8000 gal	1						728.4	$ 127.58	$ 92,929	$ 25.70	$ 18,720	$ -	$ -	$ 111,649
Full time road grading	HAUL_LOAD	North 40 OSF	12M Grader AWD	1						728.4	$ 71.83	$ 52,321	$ 37.29	$ 27,162	$ -	$ -	$ 79,483
Haul cover material from Area L stockpile	HAUL_LOAD	North 40 OSF	740B Artic. Haul Truck	8	74,000	88,800	cuyd	195.71	cuyd/hr	453.7	$ 132.49	$ 60,111	$ 25.70	$ 11,660	$ -	$ -	$ 71,771
Load cover material at Area L stockpile	HAUL_LOAD	North 40 OSF	966M Loader	1		-	cuyd		cuyd/hr	56.7	$ 104.30	$ 5,914	$ 41.61	$ 2,359	$ -	$ -	$ 8,273
Spread cover material	SPREAD	North 40 OSF	D7E Dozer	0.4	74,000	88,800	cuyd	469.20	cuyd/hr	189.3	$ 121.74	$ 23,045	$ 44.55	$ 8,433	$ -	$ -	$ 31,479
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								$ 74.40	$ 736,560	$ 736,560
Bedding for riprap placed	MATERIALS	North 40	Drain rock		11,900	11,900	cuyd								$ 73.88	$ 879,172	$ 879,172
Haul riprap and bedding from stockpile	HAUL_LOAD	North 40 Riprap	740B Artic. Haul Truck	12.00	21,800	21,800	cuyd	293.42	cuyd/hr	74.3	$ 132.49	$ 9,844	$ 25.70	$ 1,910	$ -	$ -	$ 11,754
Load riprap and bedding from stockpile	HAUL_LOAD	North 40 Riprap	966M Loader			-	cuyd		cuyd/hr	6.0	$ 104.30	$ 626	$ 41.61	$ 250	$ -	$ -	$ 875
Impacted Water Pipe	MATERIALS	North 40	30" corrugated HDPE Installed		3,200	3,200	LF								$ 78.33	$ 250,656	$ 250,656
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								$ 73.88	$ 302,908	$ 302,908
Geotextile	MATERIALS	North 40	Geotextile		14,312	14,312	sqyd								$ 2.35	$ 33,633	$ 33,633
Drain Pipe	MATERIALS	North 40	Perforated pipe		4,100	4,100	LF								$ 15.87	$ 65,067	$ 65,067
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								$ 63.70	$ 9,625,070	$ 9,625,070
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 Cost
TOTAL COSTS												**$ 2,317,768**		**$ 533,668**		**$ 12,949,888**	**$ 15,801,324**

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 683 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

$37,740,151

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	12,028,900	cuyd	285.00	cuyd/hr	42,206.7	$ 221.36	$ 9,342,875	$ 44.55	$ 1,880,308	$ -	$ -	$ 11,223,184	
Regrade Roads	SPREAD	McNulty Roads	D9T Dozer		60,000	78,000	cuyd	135.00	cuyd/hr	577.8	$ 221.36	$ 127,902	$ 44.55	$ 25,741	$ -	$ -	$ 153,643	
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	8	325,000	390,000	cuyd	203.49	cuyd/hr	1,916.6	$ 132.49	$ 253,930	$ 25.70	$ 49,257	$ -	$ -	$ 303,187	
Load cover material at McNulty stockpile	HAUL_LOAD	McNulty	966M Loader	1		390,000	cuyd		cuyd/hr	239.6	$ 104.30	$ 24,990	$ 41.61	$ 9,970	$ -	$ -	$ 34,960	
Spread cover material	SPREAD	McNulty	D8T Dozer	2	325,000	390,000	cuyd	483.20	cuyd/hr	807.1	$ 148.49	$ 119,846	$ 44.55	$ 35,956	$ -	$ -	$ 155,803	
Full time dust control	HAUL_LOAD	McNulty	621G Water Wagon, 8000 gal	1			cuyd		cuyd/hr	1,176.9	$ 127.58	$ 150,149	$ 25.70	$ 30,246	$ -	$ -	$ 180,395	
Full time road grading	HAUL_LOAD	McNulty	12M Grader AWD	1			cuyd	0.50	cuyd/hr	1,176.9	$ 71.83	$ 84,537	$ 37.29	$ 43,887	$ -	$ -	$ 128,423	
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	10	692,277	830,732	cuyd	244.43	cuyd/hr	3,398.6	$ 132.49	$ 450,281	$ 25.70	$ 87,344	$ -	$ -	$ 537,625	
Load cover material at L stockpile	HAUL_LOAD	McNulty TS L	966M Loader			-	cuyd		cuyd/hr	339.9	$ 104.30	$ 35,452	$ 41.61	$ 14,143	$ -	$ -	$ 49,595	
Spread cover material	SPREAD	McNulty TS L	D8T Dozer		692,277	830,732	cuyd	489.60	cuyd/hr	1,696.8	$ 148.49	$ 251,958	$ 44.55	$ 75,592	$ -	$ -	$ 327,550	
Haul cover material from North stockpile	HAUL_LOAD	McNulty TS North	740B Artic. Haul Truck	10	1,169,723	1,403,668	cuyd	234.98	cuyd/hr	5,973.6	$ 132.49	$ 791,442	$ 25.70	$ 153,522	$ -	$ -	$ 944,964	
Load cover material at North stockpile	HAUL_LOAD	McNulty TS North	966M Loader			-	cuyd		cuyd/hr	597.4	$ 104.30	$ 62,309	$ 41.61	$ 24,858	$ -	$ -	$ 87,167	
Spread cover material	SPREAD	McNulty TS North	D8T Dozer		1,169,723	1,403,668	cuyd	272.00	cuyd/hr	5,160.5	$ 148.49	$ 766,283	$ 44.55	$ 229,900	$ -	$ -	$ 996,183	
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								$ 74.40	$ 1,425,727	$ 1,425,727	
Bedding for riprap placed	MATERIALS	McNulty	Drain rock		22,934	22,934	cuyd								$ 73.88	$ 1,694,364	$ 1,694,364	
Haul riprap and bedding from stockpile	HAUL_LOAD	McNulty Riprap	740B Artic. Haul Truck	4	42,096	42,096	cuyd	98.61	cuyd/hr	426.9	$ 132.49	$ 56,560	$ 25.70	$ 10,971	$ -	$ -	$ 67,531	
Load riprap and bedding from stockpile	HAUL_LOAD	McNulty Riprap	966M Loader			-	cuyd		cuyd/hr	106.7	$ 104.30	$ 11,129	$ 41.61	$ 4,440	$ -	$ -	$ 15,569	
Impacted Water Pipeline	MATERIALS	McNulty	30" corrugated HDPE Installed		1,300	1,300	LF								$ 78.33	$ 101,829	$ 101,829	
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								$ 2.35	$ 27,890	$ 27,890	
Drain rock	MATERIALS	McNulty	Drain rock		3,400	3,400	cuyd								$ 73.88	$ 251,192	$ 251,192	
Impacted water drain pipe	MATERIALS	McNulty	Perforated pipe		3,400	3,400	LF								$ 15.87	$ 53,958	$ 53,958	
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								$ 63.70	$ 15,612,106	$ 15,612,106	
Outslope Channels	MATERIALS	McNulty	Excavate diversion/spillway		92,897	92,897	cuyd								$ 2.76	$ 256,396	$ 256,396	
Rip Road Surfaces	GENERAL	Road Surfaces	D7E Dozer		52	52	AC	1.07	AC/HR	48.6	$ 121.74	$ 5,917	$ 44.55	$ 2,165			$ 8,082	
Scarify cover	MATERIALS	McNulty	Seeding-Alpine Steep (>2.5:1)		683	683	acre								$ 3,702.00	$ 2,528,466	$ 2,528,466	
TOTAL COSTS												**$ 12,632,960**		**$ 2,728,866**		**$ 22,378,325**	**$ 37,740,151**	

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 44032
LOM

Total Costs
$13,613,620

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	9	499,109	598,931	cuyd	214.46	cuyd/hr	2,792.7	$ 132.49	$ 370,005	$ 25.70	$ 71,772	$ -	$ -	$ 441,777
Load cover material at cover material Stockpile 30	HAUL_LOAD	Dry cover TS 30	966M Loader	1		-	cuyd		cuyd/hr	310.3	$ 104.30	$ 32,364	$ 41.61	$ 12,912	$ -	$ -	$ 45,276
Spread cover material	SPREAD	Dry cover TS 30	D8T Dozer	1	499,109	598,931	cuyd	299.36	cuyd/hr	310.3	$ 148.49	$ 46,076	$ 44.55	$ 13,824	$ -	$ -	$ 59,900
Haul cover material from cover material Stockpile 36	HAUL_LOAD	Dry cover TS 36	740B Artic. Haul Truck	13	200,000	240,000	cuyd	326.99	cuyd/hr	734.0	$ 132.49	$ 97,248	$ 25.70	$ 18,864	$ -	$ -	$ 116,111
Load cover material at cover material Stockpile 36	HAUL_LOAD	Dry cover TS 36	966M Loader	1		-	cuyd		cuyd/hr	56.5	$ 104.30	$ 5,893	$ 41.61	$ 2,351	$ -	$ -	$ 8,244
Spread cover material	SPREAD	Dry cover TS 36	D8T Dozer	1	200,000	240,000	cuyd	275.20	cuyd/hr	56.5	$ 148.49	$ 8,390	$ 44.55	$ 2,517	$ -	$ -	$ 10,907
Haul cover material from Pond Shop Stockpile 33	HAUL_LOAD	Dry Cover TS 33	740B Artic. Haul Truck	4	1,012,923	1,215,507	cuyd	108.67	cuyd/hr	11,185.3	$ 132.49	$ 1,481,940	$ 25.70	$ 287,462	$ -	$ -	$ 1,769,403
Load cover material at cover material Stockpile 33	HAUL_LOAD	Dry Cover TS 33	966M Loader	1		-	cuyd		cuyd/hr	2,796.3	$ 104.30	$ 291,654	$ 41.61	$ 116,354	$ -	$ -	$ 408,008
Spread cover material	SPREAD	Dry Cover TS 33	D8T Dozer	1	1,012,923	1,215,507	cuyd	275.20	cuyd/hr	2,796.3	$ 148.49	$ 415,223	$ 44.55	$ 124,575	$ -	$ -	$ 539,798
Haul cover material from Pond Shop Stockpile 17	HAUL_LOAD	Dry Cover TS 17	740B Artic. Haul Truck	6	363,968	436,762	cuyd	153.17	cuyd/hr	2,851.5	$ 132.49	$ 377,795	$ 25.70	$ 73,284	$ -	$ -	$ 451,079
Load cover material at cover material Stockpile 17	HAUL_LOAD	Dry Cover TS 17	966M Loader			-	cuyd		cuyd/hr	475.3	$ 104.30	$ 49,574	$ 41.61	$ 19,777	$ -	$ -	$ 69,351
Spread cover material	SPREAD	Dry Cover TS 17	D8T Dozer		363,968	436,762	cuyd	272.00	cuyd/hr	1,605.7	$ 148.49	$ 238,430	$ 44.55	$ 71,534	$ -	$ -	$ 309,964
Haul cover material from Pond Shop Stockpile 25 26 27	HAUL_LOAD	Dry cover TS 25 26 27	740B Artic. Haul Truck	4	1,000	1,200	cuyd	104.98	cuyd/hr	11.4	$ 132.49	$ 1,510	$ 25.70	$ 293	$ -	$ -	$ 1,803
Load cover material at cover material Stockpile 25 26 27	HAUL_LOAD	Dry cover TS 25 26 27	966M Loader			-	cuyd		cuyd/hr	2.9	$ 104.30	$ 302	$ 41.61	$ 121	$ -	$ -	$ 423
Spread cover material	SPREAD	Dry cover TS 25 26 27	D8T Dozer		1,000	1,200	cuyd	236.80	cuyd/hr	5.1	$ 148.49	$ 757	$ 44.55	$ 227	$ -	$ -	$ 985
Full time road grading	GRADING	Dry Cover TS 33	12M Grader AWD	1		-	acres	0.50	acres/hr	3,641.3	$ 71.83	$ 261,555	$ 37.29	$ 135,784	$ -	$ -	$ 397,339
Full time dust control	WATER	Dry Cover TS 33	621G Water Wagon, 8000 gal	1						3,641.3	$ 127.58	$ 464,557	$ 25.70	$ 93,581	$ -	$ -	$ 558,138
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								$ 74.40	$ 1,195,459	$ 1,195,459
Bedding for riprap placed	MATERIALS	Tenmile TSF	Drain rock		19,230	19,230	cuyd								$ 73.88	$ 1,420,712	$ 1,420,712
Haul riprap and bedding from stockpile	HAUL_LOAD	Tenmile TSF Riprap	740B Artic. Haul Truck	8	35,298	35,298	cuyd	198.02	cuyd/hr	178.3	$ 132.49	$ 23,623	$ 25.70	$ 4,582	$ -	$ -	$ 28,205
Load riprap and bedding from stockpile	HAUL_LOAD	Tenmile TSF Riprap	966M Loader		35,298	35,298	cuyd		cuyd/hr	22.3	$ 104.30	$ 2,326	$ 41.61	$ 928	$ -	$ -	$ 3,254
Impacted Water Pipeline	MATERIALS	Tenmile TSF	30" corrugated HDPE Installed		7,000	7,000	LF								$ 78.33	$ 548,310	$ 548,310
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								$ 63.70	$ 4,601,115	$ 4,601,115
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
Planting tree seedlings	MATERIALS	Tenmile TSF	Tree planting (450 per acre)		19	19	acre								$ 544.50	$ 10,346	$ 10,346
Scarify cover	MATERIALS	Scarify	Scarify		625	625	acre								$ 47.04	$ 29,403	$ 29,403
Straw mulch	MATERIALS	Straw Mulch	Straw mulch		625	625	acre								$ 400.00	$ 250,000	$ 250,000
Drill Seed	MATERIALS	Drill seed	Drill seed		625	625	acre								$ 350.00	$ 218,750	$ 218,750
TOTAL COSTS												**$ 4,170,014**		**$ 1,051,032**		**$ 8,392,573**	**Total Cost $ 13,613,620**

Notes: 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
$842,167

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	7	94,000	112,800	cuyd	186.77	cuyd/hr	604.0	$ 132.49	$ 80,024	$ 25.70	$ 15,523	$ -	$ -	$ 95,547
Load cover material at Pond Shop Stockpile	HAUL_LOAD	Cover	966M Loader	1		-	cuyd		cuyd/hr	86.3	$ 104.30	$ 9,001	$ 41.61	$ 3,591	$ -	$ -	$ 12,592
Spread cover material	SPREAD	Cover	D7E Dozer	1	94,000	112,800	cuyd	520.20	cuyd/hr	216.8	$ 121.74	$ 26,393	$ 44.55	$ 9,658	$ -	$ -	$ 36,052
Full time dust control	WATER	Cover	4000G Water Truck, 4000 gal	1						86.3	$ 62.06	$ 5,356	$ 30.70	$ 2,649	$ -	$ -	$ 8,005
Full time road grading	GRADING	Cover	12M Grader AWD	1		-	acres	0.50	acres/hr	86.3	$ 71.83	$ 6,199	$ 37.29	$ 3,218	$ -	$ -	$ 9,417
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								$ 74.40	$ 247,975	$ 247,975
Bedding for riprap placed	MATERIALS	3 Dam	Drain rock		3,988	3,988	cuyd								$ 73.88	$ 294,633	$ 294,633
Haul riprap and bedding from stockpile	HAUL_LOAD	3 Dam Riprap	740B Artic. Haul Truck	6	7,321	7,321	cuyd	134.67	cuyd/hr	54.4	$ 132.49	$ 7,207	$ 25.70	$ 1,398	$ -	$ -	$ 8,606
Load riprap and bedding from stockpile	HAUL_LOAD	3 Dam Riprap	966M Loader	2		-	cuyd		cuyd/hr	9.9	$ 104.30	$ 1,033	$ 41.61	$ 412	$ -	$ -	$ 1,445

																	Total Cost
TOTAL COSTS												**$ 135,213**		**$ 36,450**		**$ 670,504**	**$ 842,167**

Notes:

Financial Reporting Unit Rates

Pond Shop

Assumptions

Tasks
Reclaim Pond Shop area

Timing
LOM
Total Costs
$5,289

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	13	538	646	cuyd	317.27	cuyd/hr	2.0	$ 132.49	$ 265	$ 25.70	$ 51	$ -	$ -	$ 316
Load cover material at Pond Shop Stockpile	HAUL_LOAD	Pond Shop cover material	966M Loader	1		-	cuyd		cuyd/hr	0.2	$ 104.30	$ 21	$ 41.61	$ 8	$ -	$ -	$ 29
Spread cover material	SPREAD	Pond Shop cover material	D7E Dozer	1	538	646	cuyd	282.20	cuyd/hr	2.3	$ 121.74	$ 280	$ 44.55	$ 102	$ -	$ -	$ 382
Rough grading before capping	SPREAD	Pond Shop grading	D8T Dozer	1	1,613	1,936	cuyd	99.20	cuyd/hr	19.5	$ 148.49	$ 2,896	$ 44.55	$ 869	$ -	$ -	$ 3,764
Scarify	MATERIALS	Pond shop	Scarify		1	1.00	acre								$ 47	$ 47	$ 47
Straw mulch Pond Shop	MATERIALS	Straw mulch	Straw mulch		1	1	acre								$ 400.00	$ 400	$ 400
Drill seed Mayflower Pond Shop	MATERIALS	Drill seed	Drill seed		1	1	acre								$ 350.00	$ 350	$ 350
TOTAL COSTS												**$ 3,461**		**$ 1,031**		**$ 797**	**Total Cost $ 5,289**

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, 183 ac)

Timing
LOM

Total Costs
$18,001,277

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	10	1,850,752	2,220,902	cuyd	236.82	cuyd/hr	9,378.0	$ 132.49	$ 1,242,491	$ 25.70	$ 241,015	$ -	$ -	$ 1,483,506
Load cover material at Mayflower Stockpile	HAUL_LOAD	Mayflower TSF	966M Loader	1		-	cuyd		cuyd/hr	937.8	$ 104.30	$ 97,813	$ 41.61	$ 39,022	$ -	$ -	$ 136,834
Spread cover material	SPREAD	Mayflower TSF	D8T Dozer	2	1,850,752	2,220,902	cuyd	275.20	cuyd/hr	937.8	$ 148.49	$ 139,254	$ 44.55	$ 41,779	$ -	$ -	$ 181,033
Full time road grading	GRADING	Mayflower TSF	12M Grader AWD	1		-	acres	0.50	acres/hr	2,427.2	$ 71.83	$ 174,346	$ 37.29	$ 90,510	$ -	$ -	$ 264,856
Full time dust control	WATER	Mayflower TSF	621G Water Wagon, 8000 ga	1						2,427.2	$ 127.58	$ 309,662	$ 25.70	$ 62,379	$ -	$ -	$ 372,041
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	8	188,225	225,870	cuyd	196.22	cuyd/hr	1,151.1	$ 132.49	$ 152,509	$ 25.70	$ 29,583	$ -	$ -	$ 182,093
Load cover material at Stockpile 33	HAUL_LOAD	Mayflower TSF TS 33	966M Loader	1		-	cuyd		cuyd/hr	143.9	$ 104.30	$ 15,009	$ 41.61	$ 5,988	$ -	$ -	$ 20,996
Spread cover material	SPREAD	Mayflower TSF TS 33	D8T Dozer	2	188,225	225,870	cuyd	275.20	cuyd/hr	820.7	$ 148.49	$ 121,866	$ 44.55	$ 36,562	$ -	$ -	$ 158,428
Haul cover material from Stockpile 30	HAUL_LOAD	Mayflower pool	740B Artic. Haul Truck	6	493,000	591,600	cuyd	163.94	cuyd/hr	3,608.6	$ 132.49	$ 478,103	$ 25.70	$ 92,741	$ -	$ -	$ 570,844
Load cover material at Stockpile 30	HAUL_LOAD	Mayflower pool	966M 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	591,600	cuyd	272.00	cuyd/hr	2,175.0	$ 148.49	$ 322,966	$ 44.55	$ 96,896	$ -	$ -	$ 419,862
Haul cover material from Stockpile 16	HAUL_LOAD	Mayflower TSF TS16	740B Artic. Haul Truck	8	336,864	404,237	cuyd	207.38	cuyd/hr	1,949.3	$ 132.49	$ 258,263	$ 25.70	$ 50,097	$ -	$ -	$ 308,360
Load cover material at Stockpile 16	HAUL_LOAD	Mayflower TSF TS16	966M Loader			-	cuyd		cuyd/hr	243.7	$ 104.30	$ 25,418	$ 41.61	$ 10,140	$ -	$ -	$ 35,558
Spread cover material	SPREAD	Mayflower TSF TS16	D8T Dozer		336,864	404,237	cuyd	272.00	cuyd/hr	1,486.2	$ 148.49	$ 220,686	$ 44.55	$ 66,210	$ -	$ -	$ 286,896
Haul cover material from Stockpile 30	HAUL_LOAD	Temp Sludge Cell	740B Artic. Haul Truck	4	115,000	138,000	cuyd	76.14	cuyd/hr	1,812.5	$ 132.49	$ 240,138	$ 25.70	$ 46,581	$ -	$ -	$ 286,719
Load cover material at Stockpile 30	HAUL_LOAD	Temp Sludge Cell	966M Loader			-	cuyd		cuyd/hr	453.1	$ 104.30	$ 47,258	$ 41.61	$ 18,853	$ -	$ -	$ 66,112
Spread cover material	SPREAD	Temp Sludge Cell	D8T Dozer		115,000	138,000	cuyd	272.00	cuyd/hr	507.4	$ 148.49	$ 75,344	$ 44.55	$ 22,605	$ -	$ -	$ 97,948
Riprap	MATERIALS	Mayflower TSF	Rip Rap Armoring		25,352	25,352	cuyd								$ 74.40	$ 1,886,189	$ 1,886,189
Bedding for riprap placed	MATERIALS	Mayflower TSF	Drain rock		30,341	30,341	cuyd								$ 73.88	$ 2,241,593	$ 2,241,593
Haul riprap and bedding from stockpile	HAUL_LOAD	Mayflower TSF Riprap	740B Artic. Haul Truck	7	55,693	55,693	cuyd	168.38	cuyd/hr	330.8	$ 132.49	$ 43,828	$ 25.70	$ 8,502	$ -	$ -	$ 52,329
Load riprap and bedding from stockpile	HAUL_LOAD	Mayflower TSF Riprap	966M Loader			-	cuyd		cuyd/hr	47.3	$ 104.30	$ 4,933	$ 41.61	$ 1,968	$ -	$ -	$ 6,902
Impacted Water Pipeline	MATERIALS	Mayflower TSF	30" corrugated HDPE Installed		26,300	26,300	LF								$ 78.33	$ 2,060,079	$ 2,060,079
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								$ 63.70	$ 5,954,358	$ 5,954,358
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
Planting Tree Seedlings Mayflower TSF	MATERIALS	Mayflower TSF	Tree planting (450 per acre)		21	21	acre								$ 544.50	$ 11,435	$ 11,435
Scarify cover Mayflower TSF	MATERIALS	Scarify	Scarify		701	701	acre								$ 47.04	$ 32,978	$ 32,978
Straw mulch Mayflower TSF	MATERIALS	Straw mulch	Straw mulch		701	701	acre								$ 400.00	$ 280,400	$ 280,400
Drill seed Mayflower TSF	MATERIALS	Drill seed	Drill seed		701	701	acre								$ 350.00	$ 245,350	$ 245,350
Planting Tree Seedlings Mayflower Pool/Sludge Cell	MATERIALS	Mayflower Pool	Tree planting (450 per acre)		5	5	acre								$ 544.50	$ 2,723	$ 2,723
Scarify cover Mayflower Pool/Sludge Cell	MATERIALS	Scarify	Scarify		183	183	acre								$ 47.04	$ 8,609	$ 8,609
Straw mulch Mayflower Pool/Sludge Cell	MATERIALS	Straw mulch	Straw mulch		183	183	acre								$ 400.00	$ 73,200	$ 73,200
Drill seed Mayflower Pool/Sludge Cell	MATERIALS	Drill seed	Drill seed		183	183	acre								$ 350.00	$ 64,050	$ 64,050
TOTAL COSTS												**$ 4,096,177**		**$ 1,018,950**		**$ 12,886,151**	**Total Cost $ 18,001,277**

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
$75,336 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	3,228	cuyd	279.09	cuyd/hr	11.6	$ 132.49	$ 1,537	$ 25.70	$ 298	$ -	$ -	$ 1,835
Load cover material at 5-Dam Stockpile	HAUL_LOAD	Mayflower Acid Plant	966M Loader	1		-	cuyd		cuyd/hr	3.9	$ 104.30	$ 407	$ 41.61	$ 162	$ -	$ -	$ 569
Grade site	SPREAD	Mayflower Acid Plant	D8T Dozer	1	33,873	40,648	cuyd	112.00	cuyd/hr	362.9	$ 148.49	$ 53,887	$ 44.55	$ 16,167	$ -	$ -	$ 70,054
Spread cover material at site	SPREAD	Mayflower Acid Plant	D7E Dozer	1	2,690	3,228	cuyd	289.00	cuyd/hr	11.2	$ 121.74	$ 1,363	$ 44.55	$ 499	$ -	$ -	$ 1,862
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
Scarify cover	MATERIALS	Scarify	Scarify		1	1	acre								$ 47.04	$ 47	$ 47
Straw mulch	MATERIALS	Straw mulch	Straw mulch		1	1	acre								$ 400.00	$ 400	$ 400
Drill seed	MATERIALS	Drill seed	Drill seed		1	1	acre								$ 350.00	$ 350	$ 350
TOTAL COSTS												**$ 57,338**		**$ 17,201**		**$ 797**	**$ 75,336**

Notes:

Financial Reporting Unit Rates

Robinson TSF

Assumptions

Tasks

(1) Load, haul, and spread 2' cover material (457 ac) from cover material stockpiles 21, 28, 30, 35.

Timing

LOM

Total Costs

$8,035,322

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	389,193	cuyd	115.47	cuyd/hr	3,370.5	$ 132.49	$ 446,558	$ 25.70	$ 86,622	$ -	$ -	$ 533,179
Load cover material for Robinson TSF TS 28	HAUL_LOAD	Robinson TSF	966M Loader	1		-	cuyd		cuyd/hr	842.6	$ 104.30	$ 87,883	$ 41.61	$ 35,061	$ -	$ -	$ 122,944
Spread cover material at Robinson TSF	SPREAD	Robinson TSF	D8T Dozer	2	324,328	389,193	cuyd	150.40	cuyd/hr	2,587.7	$ 148.49	$ 384,248	$ 44.55	$ 115,282	$ -	$ -	$ 499,530
Full time dust control	WATER	Robinson TSF	621G Water Wagon, 8000 gal	1						2,427.6	$ 127.58	$ 309,713	$ 25.70	$ 62,389	$ -	$ -	$ 372,103
Full time road grading	GRADING	Robinson TSF	12M Grader AWD	1		-	acres	0.50	acres/hr	2,427.6	$ 71.83	$ 174,375	$ 37.29	$ 90,525	$ -	$ -	$ 264,900
Haul cover material to Robinson TSF TS 30	HAUL_LOAD	Robinson TSF TS 30	740B Artic. Haul Truck	6	1,060,082	1,272,099	cuyd	147.48	cuyd/hr	8,625.6	$ 132.49	$ 1,142,806	$ 25.70	$ 221,678	$ -	$ -	$ 1,364,484
Load cover material for Robinson TSF TS 30	HAUL_LOAD	Robinson TSF TS 30	966M Loader	1		-	cuyd		cuyd/hr	1,437.6	$ 104.30	$ 149,942	$ 41.61	$ 59,819	$ -	$ -	$ 209,760
Spread cover material at Robinson TSF	SPREAD	Robinson TSF TS 30	D8T Dozer	2	1,060,082	1,272,099	cuyd	272.00	cuyd/hr	4,676.8	$ 148.49	$ 694,458	$ 44.55	$ 208,351	$ -	$ -	$ 902,809
Haul cover material to Robinson Pool TS35	HAUL_LOAD	Robinson TSF TS 35	740B Artic. Haul Truck	13	524,139	628,967	cuyd	328.29	cuyd/hr	1,915.9	$ 132.49	$ 253,838	$ 25.70	$ 49,239	$ -	$ -	$ 303,076
Load cover material for Robinson Pool TS 35	HAUL_LOAD	Robinson TSF TS 35	966M Loader	1		-	cuyd		cuyd/hr	147.4	$ 104.30	$ 15,374	$ 41.61	$ 6,133	$ -	$ -	$ 21,507
Spread cover material at Robinson Pool	SPREAD	Robinson TSF TS 35	D8T Dozer		524,139	628,967	cuyd	272.00	cuyd/hr	2,312.4	$ 148.49	$ 343,368	$ 44.55	$ 103,017	$ -	$ -	$ 446,386
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								$ 74.40	$ 858,948	$ 858,948
Bedding for riprap placed	MATERIALS	Robinson TSF	Drain rock		13,817	13,817	cuyd								$ 73.88	$ 1,020,800	$ 1,020,800
Haul riprap and bedding from stockpile	HAUL_LOAD	Robinson TSF Riprap	740B Artic. Haul Truck	6	25,362	25,362	cuyd	161.63	cuyd/hr	156.9	$ 132.49	$ 20,788	$ 25.70	$ 4,032	$ -	$ -	$ 24,820
Load riprap and bedding from stockpile	HAUL_LOAD	Robinson TSF Riprap	966M Loader			-	cuyd		cuyd/hr	26.2	$ 104.30	$ 2,733	$ 41.61	$ 1,090	$ -	$ -	$ 3,823
Impacted Water Pipeline	MATERIALS	Robinson TSF	30" corrugated HDPE Installed		8,200	8,200	LF								$ 78.33	$ 642,306	$ 642,306
Scarify cover	MATERIALS	Scarify	Scarify		457	457	acre								$ 47.04	$ 21,499	$ 21,499
Straw Mulch	MATERIALS	Straw mulch	Straw mulch		457	457	acre								$ 400.00	$ 182,800	$ 182,800
Drill Seed	MATERIALS	Drill Seed	Drill seed		457	457	acre								$ 350.00	$ 159,950	$ 159,950
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												**$ 4,026,763**		**$ 1,043,488**		**$ 2,965,071**	**$ 8,035,322**

Notes: 457 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
$2,775,243

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
Haul cover material to 1 Dam TS 22	HAUL_LOAD	1 Dam TS 22	740B Artic. Haul Truck	4	250	300	cuyd	325.68	cuyd/hr	0.9	$ 132.49	$ 119	$ 25.70	$ 23	$ -	$ -	$ 142	
Load cover material at TS 22	HAUL_LOAD	1 Dam TS 22	966M Loader			-	cuyd		cuyd/hr	0.2	$ 104.30	$ 21	$ 41.61	$ 8	$ -	$ -	$ 29	
Spread cover material	SPREAD	1 Dam TS 22	D8T Dozer		250	300	cuyd	403.20	cuyd/hr	0.7	$ 148.49	$ 104	$ 44.55	$ 31	$ -	$ -	$ 135	
Full time dust control	WATER	1 Dam TS 22	4000G Water Truck, 4000 gal							740.1	$ 62.06	$ 45,931	$ 30.70	$ 22,721	$ -	$ -	$ 68,652	
Full time road grading	GRADING	1 Dam TS 22	12M Grader AWD			-	acres	0.50	acres/hr	740.1	$ 71.83	$ 53,161	$ 37.29	$ 27,598	$ -	$ -	$ 80,760	
Haul cover material to 1 Dam TS 24	HAUL_LOAD	1 Dam TS 24	740B Artic. Haul Truck	11	1,000	1,200	cuyd	275.44	cuyd/hr	4.4	$ 132.49	$ 583	$ 25.70	$ 113	$ -	$ -	$ 696	
Load cover material at TS 24	HAUL_LOAD	1 Dam TS 24	966M Loader			-	cuyd		cuyd/hr	0.4	$ 104.30	$ 42	$ 41.61	$ 17	$ -	$ -	$ 58	
Spread cover material	SPREAD	1 Dam TS 24	D8T Dozer		1,000	1,200	cuyd	377.60	cuyd/hr	3.2	$ 148.49	$ 475	$ 44.55	$ 143	$ -	$ -	$ 618	
Haul cover material to 1 Dam TS 28	HAUL_LOAD	1 Dam TS 28	740B Artic. Haul Truck	5	407,801	489,362	cuyd	132.85	cuyd/hr	3,683.6	$ 132.49	$ 488,040	$ 25.70	$ 94,669	$ -	$ -	$ 582,709	
Load cover material at TS 28	HAUL_LOAD	1 Dam TS 28	966M Loader			-	cuyd		cuyd/hr	736.7	$ 104.30	$ 76,838	$ 41.61	$ 30,654	$ -	$ -	$ 107,492	
Spread cover material	SPREAD	1 Dam TS 28	D8T Dozer		407,801	489,362	cuyd	377.60	cuyd/hr	1,296.0	$ 148.49	$ 192,443	$ 44.55	$ 57,737	$ -	$ -	$ 250,180	
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								$ 74.40	$ 522,437	$ 522,437	
Bedding for riprap placed	MATERIALS	1 Dam Riprap	Drain rock		8,404	8,404	cuyd								$ 73.88	$ 620,888	$ 620,888	
Haul riprap and bedding from stockpile	HAUL_LOAD	1 Dam Riprap	740B Artic. Haul Truck	4	15,427	15,427	cuyd	111.15	cuyd/hr	138.8	$ 132.49	$ 18,390	$ 25.70	$ 3,567	$ -	$ -	$ 21,957	
Load riprap and bedding from stockpile	HAUL_LOAD	1 Dam Riprap	966M Loader			-	cuyd		cuyd/hr	34.7	$ 104.30	$ 3,619	$ 41.61	$ 1,444	$ -	$ -	$ 5,063	
Revegetation	MATERIALS	1 Dam	Seeding-Standard Steep (>2.5:1)		127	127	acre								$ 3,702.00	$ 470,154	$ 470,154	

																	Total Cost	
TOTAL COSTS												**$ 879,766**		**$ 238,725**		**$ 1,656,752**	**$ 2,775,243**	

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 and revegetate access roads in Mayflower TSF area 29 acres
(2) Cover and revegetate access roads in Tenmile TSF area 7 acres
(3) Cover and revegetate access roads in Robinson TSF area 6 acres
(4) Cover and revegetate access roads in Robinson Lake area 18 acres
(5) Cover and revegetate access roads in McNulty OSF area 52 acres

Timing

LOM

Total Costs		2565000	5130000	117.7686
$	**876,282**	15.38		
		669952.8		
		3.828627927		

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 Mayflower	740B Artic. Haul Truck	3	95,000.00	114,000	cuyd	84.54	cuyd/hr	1,348.5	$ 132.49	$ 178,663	$ 25.70	$ 34,656	$ -	$ -	$ 213,319
Load cover material at local stockpiles	HAUL_LOAD	Roads Mayflower	966M Loader	1		-	cuyd		cuyd/hr	449.5	$ 104.30	$ 46,883	$ 41.61	$ 18,704	$ -	$ -	$ 65,587
Spread cover material at replacement areas	SPREAD	Roads Mayflower	D7E Dozer	1	95,000.00	114,000	cuyd	289.00	cuyd/hr	394.5	$ 121.74	$ 48,026	$ 44.55	$ 17,575	$ -	$ -	$ 65,601
Scarify	MATERIALS	Roads Mayflower	Scarify		29	29.40	acre								$ 47	$ 1,383	$ 1,383
Straw Mulch	MATERIALS	Roads Mayflower	Straw mulch		29	29.40	acre								$ 400	$ 11,760	$ 11,760
Drill Seed	MATERIALS	Roads Mayflower	Drill seed		29	29.40	acre								$ 350	$ 10,290	$ 10,290
Haul cover material from local stockpiles	HAUL_LOAD	Roads Tenmile	740B Artic. Haul Truck	4	24,000.00	28,800	cuyd	114.11	cuyd/hr	252.4	$ 132.49	$ 33,440	$ 25.70	$ 6,487	$ -	$ -	$ 39,927
Load cover material at local stockpiles	HAUL_LOAD	Roads Tenmile	966M Loader	1		-	cuyd		cuyd/hr	63.1	$ 104.30	$ 6,581	$ 41.61	$ 2,626	$ -	$ -	$ 9,207
Spread cover material at replacement areas	SPREAD	Roads Tenmile	D7E Dozer	1	24,000.00	28,800	cuyd	289.00	cuyd/hr	99.7	$ 121.74	$ 12,137	$ 44.55	$ 4,442	$ -	$ -	$ 16,579
Scarify	MATERIALS	Roads Tenmile	Scarify		7	7.30	acre								$ 47	$ 343	$ 343
Straw Mulch	MATERIALS	Roads Tenmile	Straw mulch		7	7.30	acre								$ 400	$ 2,920	$ 2,920
Drill Seed	MATERIALS	Roads Tenmile	Drill seed		7	7.30	acre								$ 350	$ 2,555	$ 2,555
Haul cover material from local stockpiles	HAUL_LOAD	Roads Robinson TSF	740B Artic. Haul Truck	4	20,000.00	24,000	cuyd	105.92	cuyd/hr	226.6	$ 132.49	$ 30,022	$ 25.70	$ 5,824	$ -	$ -	$ 35,846
Load cover material at local stockpiles	HAUL_LOAD	Roads Robinson TSF	966M Loader	1		-	cuyd		cuyd/hr	56.7	$ 104.30	$ 5,914	$ 41.61	$ 2,359	$ -	$ -	$ 8,273
Spread cover material at replacement areas	SPREAD	Roads Robinson TSF	D7E Dozer	1	20,000.00	24,000	cuyd	289.00	cuyd/hr	83.0	$ 121.74	$ 10,104	$ 44.55	$ 3,698	$ -	$ -	$ 13,802
Scarify	MATERIALS	Roads Robinson TSF	Scarify		6	6.20	acre								$ 47	$ 292	$ 292
Straw Mulch	MATERIALS	Roads Robinson TSF	Straw mulch		6	6.20	acre								$ 400	$ 2,480	$ 2,480
Drill Seed	MATERIALS	Roads Robinson TSF	Drill seed		6	6.20	acre								$ 350	$ 2,170	$ 2,170
Haul cover material from local stockpiles	HAUL_LOAD	Roads Robinson Lake	740B Artic. Haul Truck	4	60,000.00	72,000	cuyd	110.22	cuyd/hr	653.2	$ 132.49	$ 86,542	$ 25.70	$ 16,787	$ -	$ -	$ 103,330
Load cover material at local stockpiles	HAUL_LOAD	Roads Robinson Lake	966M Loader	1		-	cuyd		cuyd/hr	163.3	$ 104.30	$ 17,032	$ 41.61	$ 6,795	$ -	$ -	$ 23,827
Spread cover material at replacement areas	SPREAD	Roads Robinson Lake	D7E Dozer	1	60,000.00	72,000	cuyd	289.00	cuyd/hr	249.1	$ 121.74	$ 30,325	$ 44.55	$ 11,097	$ -	$ -	$ 41,423
Scarify	MATERIALS	Roads Robinson Lake	Scarify		18	18.40	acre								$ 47	$ 866	$ 866
Straw Mulch	MATERIALS	Roads Robinson Lake	Straw mulch		18	18.40	acre								$ 400	$ 7,360	$ 7,360
Seeding Wetland	MATERIALS	Roads Robinson Lake	Seeding-Wetland		18	18.40	acre								$ 675	$ 12,420	$ 12,420
Haul cover material from local stockpiles	HAUL_LOAD	Roads McNulty OSF	740B Artic. Haul Truck	6	166,000.00	199,200	cuyd	162.72	cuyd/hr	1,224.2	$ 132.49	$ 162,194	$ 25.70	$ 31,462	$ -	$ -	$ 193,656
Load cover material at local stockpiles	HAUL_LOAD	Roads McNulty OSF	966M Loader	1		-	cuyd		cuyd/hr	204.0	$ 104.30	$ 21,277	$ 41.61	$ 8,488	$ -	$ -	$ 29,766
Spread cover material at replacement areas	SPREAD	Roads McNulty OSF	D7E Dozer	1	166,000.00	199,200	cuyd	289.00	cuyd/hr	689.3	$ 121.74	$ 83,915	$ 44.55	$ 30,708	$ -	$ -	$ 114,624
Scarify	MATERIALS	Roads McNulty OSF	Scarify		52	51.60	acre								$ 47	$ 2,428	$ 2,428
Seeding Wetland	MATERIALS	Roads McNulty OSF	Seeding-Alpine Steep (>2.5:1)		52	51.60	acre								$ 3,702	$ 191,023	$ 191,023

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

Robinson Lake

Assumptions

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

Timing
LOM

Total Costs
$ 5,482,924

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	39,000	cuyd	89.91	cuyd/hr	433.8	$ 132.49	$ 57,474	$ 25.70	$ 11,149	$ -	$ -	$ 68,623
Load waste rock from McNulty	HAUL_LOAD	Robinson Lake Road	966M Loader	1		-	cuyd		cuyd/hr	108.5	$ 104.30	$ 11,317	$ 41.61	$ 4,515	$ -	$ -	$ 15,831
Spread waste rock from McNulty	SPREAD	Robinson Lake Road	D6N LGP Dozer	2	30,000	39,000	cuyd	138.60	cuyd/hr	281.4	$ 68.28	$ 19,214	$ 44.55	$ 12,536	$ -	$ -	$ 31,750
Finish Work	GENERAL	Robinson Lake															$ 129,000
Impacted Water Pipeline	MATERIALS	Robinson Lake	30" corrugated HDPE Installed		1,720	1,720	LF								$ 78.33	$ 134,728	$ 134,728
Clean Water Surface Channel 3,100 LF	MATERIALS	Robinson Lake	Excavate diversion/spillway		8,238	8,238	cuyd								$ 2.76	$ 22,737	$ 22,737
Channel Riprap	MATERIALS	Robinson Lake	Rip Rap Armoring		3,690	3,690	cuyd								$ 74.40	$ 274,536	$ 274,536
Channel Bedding for riprap placed	MATERIALS	Robinson Lake	Drain rock		4,416	4,416	cuyd								$ 73.88	$ 326,254	$ 326,254
Haul riprap and bedding from stockpile	HAUL_LOAD	Robinson Lake Riprap	740B Artic. Haul Truck		8,106	8,106	cuyd	96.82	cuyd/hr	83.7	$ 132.49	$ 11,089	$ 25.70	$ 2,151	$ -	$ -	$ 13,241
Load riprap and bedding from stockpile	HAUL_LOAD	Robinson Lake Riprap	966M Loader		8,106	8,106	cuyd		cuyd/hr	20.9	$ 104.30	$ 2,180	$ 41.61	$ 870	$ -	$ -	$ 3,050
Haul cover material from TS 28 Stockpile	HAUL_LOAD	Robinson Lake TS28	740B Artic. Haul Truck	6	138,000	165,600	cuyd	148.23	cuyd/hr	1,117.2	$ 132.49	$ 148,018	$ 25.70	$ 28,712	$ -	$ -	$ 176,730
Load cover material at TS 28 Stockpile	HAUL_LOAD	Robinson Lake TS28	966M Loader	1		-	cuyd		cuyd/hr	186.2	$ 104.30	$ 19,421	$ 41.61	$ 7,748	$ -	$ -	$ 27,168
Spread cover material	SPREAD	Robinson Lake TS28	D8T Dozer	1	138,000	165,600	cuyd	412.80	cuyd/hr	186.2	$ 148.49	$ 27,649	$ 44.55	$ 8,295	$ -	$ -	$ 35,944
Haul Sludge/Soil to Robinson TSF	HAUL_LOAD	Robinson Lake Sludge	740B Artic. Haul Truck	5	645,333	732,453	cuyd	110.07	cuyd/hr	6,654.4	$ 132.49	$ 881,641	$ 25.70	$ 171,018	$ -	$ -	$ 1,052,660
Load Sludge/Soil to Robinson TSF	HAUL_LOAD	Robinson Lake Sludge	966M Loader			-	cuyd		cuyd/hr	1,330.9	$ 104.30	$ 138,813	$ 41.61	$ 55,379	$ -	$ -	$ 194,192
Spread Sludge/Soil to Robinson TSF	SPREAD	Robinson Lake Sludge	D8T Dozer		645,333	732,453	cuyd	76.80	cuyd/hr	9,537.1	$ 148.49	$ 1,416,164	$ 44.55	$ 424,878	$ -	$ -	$ 1,841,042
Full time dust control	WATER	Robinson Lake Road	621G Water Wagon, 8000 gal	1						1,646.5	$ 127.58	$ 210,060	$ 25.70	$ 42,315	$ -	$ -	$ 252,376
Full time road grading	GRADING	Robinson Lake Road	12M Grader AWD	1		-	acres	0.50	acres/hr	1,646.5	$ 71.83	$ 118,268	$ 37.29	$ 61,398	$ -	$ -	$ 179,666
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-Wetland		43	43	acre								$ 675.00	$ 29,025	$ 29,025
Haul waste rock back to McNulty	HAUL_LOAD	McNulty OSF	740B Artic. Haul Truck	4	30,000	39,000	cuyd	61.75	cuyd/hr	631.6	$ 132.49	$ 83,681	$ 25.70	$ 16,232	$ -	$ -	$ 99,913
Load waste rockback to McNulty	HAUL_LOAD	McNulty OSF	966M Loader	1		-	cuyd		cuyd/hr	157.9	$ 104.30	$ 16,469	$ 41.61	$ 6,570	$ -	$ -	$ 23,039
Spread waste rock at McNulty	SPREAD	McNulty OSF	D6N LGP Dozer	2	30,000	36,000	cuyd	138.60	cuyd/hr	259.7	$ 68.28	$ 17,732	$ 44.55	$ 11,570	$ -	$ -	$ 29,302
TOTAL COSTS												**$ 3,181,235**		**$ 866,084**		**$ 787,280**	**$ 5,482,924**

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 and returned to McNulty OSF.

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 3,100' 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
$1,688,398

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	9	196,170	235,404	cuyd	230.53	cuyd/hr	1,021.1	$ 132.49	$ 135,286	$ 25.70	$ 26,242	$ -	$ -	$ 161,528
Load cover material at Kokomo Stockpile	HAUL_LOAD	5 Dam	966M Loader	1		-	cuyd		cuyd/hr	113.5	$ 104.30	$ 11,838	$ 41.61	$ 4,723	$ -	$ -	$ 16,561
Spread cover material	SPREAD	5 Dam	D8T Dozer	1	196,170	235,404	cuyd	550.40	cuyd/hr	113.5	$ 148.49	$ 16,854	$ 44.55	$ 5,056	$ -	$ -	$ 21,910
Full time road grading	GRADING	5 Dam	12M Grader AWD	1		-	acres	0.50	acres/hr	113.5	$ 71.83	$ 8,153	$ 37.29	$ 4,232	$ -	$ -	$ 12,385
Full time dust control	WATER	5 Dam	4000G Water Truck, 4000 gal	1						113.5	$ 62.06	$ 7,044	$ 30.70	$ 3,484	$ -	$ -	$ 10,528
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								$ 74.40	$ 256,829	$ 256,829
Bedding for riprap placed	MATERIALS	5 Dam Riprap	Drain rock		4,131	4,131	cuyd								$ 73.88	$ 305,198	$ 305,198
Haul riprap and bedding from stockpile	HAUL_LOAD	Dam 5 Riprap	740B Artic. Haul Truck	4	7,583	7,583	cuyd	104.98	cuyd/hr	72.2	$ 132.49	$ 9,566	$ 25.70	$ 1,856	$ -	$ -	$ 11,421
Load riprap and bedding from stockpile	HAUL_LOAD	Dam 5 Riprap	966M Loader			-	cuyd		cuyd/hr	18.1	$ 104.30	$ 1,888	$ 41.61	$ 753	$ -	$ -	$ 2,641
Impacted Water Pipeline	MATERIALS	5 Dam	30" corrugated HDPE Installed		8,200	8,200	LF								$ 78.33	$ 642,306	$ 642,306
Revegetation	MATERIALS	5 Dam	Seeding-Standard Steep (>2.5:1)			61	acre								$ 3,702.00	$ 225,822	$ 225,822
TOTAL COSTS												**$ 190,627**		**$ 46,347**		**$ 1,451,424**	**Total Cost $ 1,688,398**

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 60% 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

Demolition 1 - Structures

Assumptions

Tasks
Various demolition of former mine structures

Timing
LOM
Total Costs
$8,471,344

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 6 CRUSHER SWCH HSE - floor	Mine mill	Concrete floor	80.00	38.00	0.83	2,533	sqft	$ 0.71	$ 1,798	
Demolish 6 CRUSHER SWCH HSE - footing	Mine mill	Concrete footing				256	LF	$ 18.64	$ 4,772	
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 DOMESTIC WATER PLANT - floor	Mine mill	Concrete floor	45.00	81.00	1.00	3,645	sqft	$ 0.71	$ 1,812	
Demolish DOMESTIC WATER PLANT - footing	Mine mill	Concrete footing				252	LF	$ 18.64	$ 3,288	
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 3 MILL - floor	Mine mill	Concrete floor	725.00	180.00	1.00	130,500	sqft	$ 0.71	$ 92,655	
Demolish 3 MILL -footing	Mine mill	Concrete footing				1,810	LF	$ 18.64	$ 33,738	
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 SECONDARY- floor	Mine mill	Concrete floor	160.00	90.00	1.00	14,400	sqft	$ 0.71	$ 10,224	
Demolish 6 CRUSHER SECONDARY- footing	Mine mill	Concrete footing				500	LF	$ 18.64	$ 9,320	
Demolish 6 CRUSHER PRIMARY - SUPERSTRUCTURE	Mine mill	Steel	60.00	110.00	72.00	475,200	cuft	$ 0.30	$ 142,560	
Demolish 6 CRUSHER PRIMARY - Floor	Mine mill	Concrete floor	60.00	110.00	1.00	6,600	sqft	$ 0.71	$ 4,686	
Demolish 6 CRUSHER OFFICE - SUPERSTRUCTURE	Mine mill	Steel	30.00	72.00	16.00	34,560	cuft	$ 0.30	$ 10,368	
Demolish 6 CRUSHER OFFICE - floor	Mine mill	Concrete floor	30.00	72.00	1.00	2,160	sqft	$ 0.71	$ 1,534	
Demolish 6 CRUSHER OFFICE - footing	Mine mill	Concrete footing				204	LF	$ 18.64	$ 3,803	
Demolish GATEHOUSE - SUPERSTRUCTURE	Mine mill	Combination	64.00	40.00	10.00	25,600	cuft	$ 0.28	$ 7,168	
Demolish GATEHOUSE - floor	Mine mill	Concrete floor	64.00	40.00	1.00	2,560	sqft	$ 0.71	$ 1,818	
Demolish GATEHOUSE - footing	Mine mill	Concrete footing				206	LF	$ 18.64	$ 3,840	
Demolish COVERED STORAGE - SUPERSTRUCTURE	Mine mill	Tin	60.00	25.00	14.00	21,000	cuft	$ 0.31	$ 6,510	
Demolish COVERED STORAGE - Floor	Mine mill	Concrete floor	60.00	25.00	1.00	1,500	sqft	$ 0.71	$ 1,065	
Demolish COVERED STORAGE - Footing	Mine mill	Concrete footing				170	LF	$ 18.64	$ 3,169	
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 PHLLPSN MAPP GAS HSE-Floor	Mine mill	Concrete floor	20.00	45.00	1.00	900	sqft	$ 0.71	$ 639	
Demolish PHLLPSN MAPP GAS HSE- Footing	Mine mill	Concrete footing				130	LF	$ 18.64	$ 2,423	
Demolish OPEN PIT FUEL TANKS- SUPERSTRUCTURE	Mine mill	Steel	100.00	25.00	8.00	20,000	cuft	$ 0.30	$ 6,000	
Demolish OPEN PIT FUEL TANKS- floor	Mine mill	Concrete floor	100.00	25.00	1.00	2,500	sqft	$ 0.71	$ 1,775	
Demolish OPEN PIT FUEL TANKS- footing	Mine mill	Concrete footing				250	LF	$ 18.64	$ 4,660	
Demolish DOMESTIC WATER TANK - SUPERSTRUCTURE	Mine mill	Steel	44.00	44.00	40.00	77,440	cuft	$ 0.30	$ 23,232	
Demolish DOMESTIC WATER TANK - floor	Mine mill	Concrete floor	44.00	44.00	1.00	1,936	sqft	$ 0.71	$ 1,375	
Demolish DOMESTIC WATER TANK - footing	Mine mill	Concrete footing				176	LF	$ 18.64	$ 3,281	
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 PHILLIPSON WAREHOUSE- Floor	Mine mill	Concrete floor	76.00	94.00	1.00	7,144	sqft	$ 0.71	$ 5,072	
Demolish PHILLIPSON WAREHOUSE- Footing	Mine mill	Concrete footing				340	LF	$ 18.64	$ 6,338	
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 PHASE 1 SHOP- Floor	Mine mill	Concrete floor	146.00	56.00	1.00	8,176	sqft	$ 0.71	$ 5,805	
Demolish OPEN PIT PHASE 1 SHOP- Footing	Mine mill	Concrete footing				404	LF	$ 18.64	$ 7,531	
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 OFFICES- Floor	Mine mill	Concrete floor	48.00	80.00	1.00	3,840	sqft	$ 0.71	$ 2,726	
Demolish OPEN PIT OFFICES- Footing	Mine mill	Concrete footing				240	LF	$ 18.64	$ 4,474	
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 PHASE 2 SHOP- Floor	Mine mill	Concrete floor	440.00	80.00	1.00	35,200	sqft	$ 0.71	$ 17,494	
Demolish OPEN PIT PHASE 2 SHOP- Footing	Mine mill	Concrete footing				1,040	LF	$ 18.64	$ 13,570	
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 OPEN PIT WASH BAY- Floor	Mine mill	Concrete floor	90.00	105.00	1.00	9,450	sqft	$ 0.71	$ 6,710	
Demolish OPEN PIT WASH BAY- footing	Mine mill	Concrete footing				390	LF	$ 18.64	$ 7,270	
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 TUNNEL SHOP - Floor	Various	Concrete floor	34.00	26.00	1.00	884	sqft	$ 0.71	$ 628	
Demolish TENMILE TUNNEL SHOP - footing	Various	Concrete footing				120	LF	$ 18.64	$ 2,237	
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 CMP HSE- floor	Various	Concrete floor	18.00	18.00	1.00	324	sqft	$ 0.71	$ 230	
Demolish TENMILE TUNL CMP HSE- footing	Various	Concrete footing				72	LF	$ 18.64	$ 1,342	
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 - floor	Various	Concrete floor	60.00	40.00	1.00	2,400	sqft	$ 0.71	$ 1,704	
Demolish POND SHOP - footing	Various	Concrete footing				200	LF	$ 18.64	$ 3,728	
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	
Demolish TENMILE COHEREX STA- floor	Various	Concrete floor	22.00	40.00	1.00	880	sqft	$ 0.71	$ 625	
Demolish TENMILE COHEREX STA- footing	Various	Concrete footing				124	LF	$ 18.64	$ 2,311	
CHALK MOUNTAIN / ROBINSON LAKE SUB	Substations and Utility Lines	Wood	20.00	8.00	8.00	1,280	cuft	$ 0.31	$ 397	
Demolish TAILING DIST HOUSE - floor	Various	Concrete floor	61.00	40.00	1.00	2,440	sqft	$ 0.71	$ 1,732	
Demolish MILL TANK VALVE HSE1- floor	Various	Concrete floor	21.00	29.00	1.00	609	sqft	$ 0.71	$ 432	
Demolish MILL TANK VALVE HSE2- floor	Various	Concrete floor	20.00	20.00	1.00	400	sqft	$ 0.71	$ 284	
Demolish NEW SCALE HOUSE - floor	Mine mill	Concrete floor	80.00	16.00	1.00	1,280	sqft	$ 0.71	$ 909	
Demolish OPEN PIT FUEL PUMP HSE- floor	Mine mill	Concrete floor	40.00	20.00	1.00	800	sqft	$ 0.71	$ 568	
Demolish TENMILE TUNL OFC - floor. (trailer)	Various	Concrete floor	50.00	20.00	1.00	1,000	sqft	$ 0.71	$ 710	
Demolish TENMILE BARGE - floor	Various	Concrete floor	36.00	36.00	1.00	1,296	sqft	$ 0.71	$ 920	
Demolish POND SHOP DOCKS - floor	Various	Concrete floor	200.00	20.00	1.00	4,000	sqft	$ 0.71	$ 2,840	
4 Dam Seep Pump Shack	Various	Steel	15.50	12.00	13.00	2,418	cuft	$ 0.30	$ 725	
4 Dam Sep Pump Shack floor	Various	Concrete floor	15.50	12.00	1.00	186	sqft	$ 0.71	$ 132	
Robinson Lake Seep Pump Shack	Various	Steel	14.00	12.00	13.00	2,184	cuft	$ 0.30	$ 655	
Robinson Lake Seep Pump Shack floor	Various	Concrete floor	14.00	12.00	1.00	168	sqft	$ 0.71	$ 119	
3 Dam Pumpstation	3-Dam	Steel	63.00	30.00	30.00	56,700	cuft	$ 0.30	$ 11,907	Deduct 30% for no interior walls per RSMeans
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
Explosives Shed (Powder Storage) -dirt floor, no concrete	Open Pit	Concrete floor	13	8.00	0.00	-	sqft	$ 0.71	$ -	
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
New Mill Building - floor	Mine Mill	Concrete floor	1,105.00	805.00	1.25	1,111,906	sqft	$ 0.71	$ 552,617	
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
Train Shack at Ten Mile North Portal - floor	3-Dam	Concrete floor	50.00	20.00	0.50	500	sqft	$ 0.71	$ 248	
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	1.00	1,080	sqft	$ 0.71	$ 767	
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 COSTS	Total Cost
	$ 8,471,344

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
$849,021

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	
MAYFLOWER HLDNG TANK- floor	Water Control Structures	Concrete floor	28	28	5	3,920	sqft	$ 0.71	$ 2,783	
CHALK MTN PUMP HOUSE- SUPERSTRUCTURE	Water Control Structures	Steel	25	25	20	12,500	cuft	$ 0.30	$ 3,750	
CHALK MTN PUMP HOUSE- floor	Water Control Structures	Concrete floor	25	25	1	625	sqft	$ 0.71	$ 444	
CHALK MTN PUMP HOUSE- footing	Water Control Structures	Concrete footing				100	LF	$ 18.64	$ 1,864	
3 MILL SUBSTATION- SUPERSTRUCTURE	Substations and Utility Lines	Steel	155	30	15	69,750	cuft	$ 0.30	$ 20,925	
3 MILL SUBSTATION- floor	Substations and Utility Lines	Concrete floor	155	30	1	4,650	sqft	$ 0.71	$ 3,302	
OPEN PIT SHOP SUB- SUPERSTRUCTURE	Substations and Utility Lines	Steel	25	25	15	9,375	cuft	$ 0.30	$ 2,813	
OPEN PIT SHOP SUB- floor	Substations and Utility Lines	Concrete floor	25	25	1	625	sqft	$ 0.71	$ 444	
DOMESTIC WATER SUB- WOOD STRUCTURE	Substations and Utility Lines	Wood	20	20	8	3,200	cuft	$ 0.31	$ 992	
DOMESTIC WATER SUB- WOOD floor	Substations and Utility Lines	Concrete floor	8	4	1	32	sqft	$ 0.71	$ 23	
IRECO PLANT SUB- SUPERSTRUCTURE	Substations and Utility Lines	Wood	20	20	8	3,200	cuft	$ 0.31	$ 992	
IRECO PLANT SUB- floor	Substations and Utility Lines	Concrete floor	12	12	1	144	sqft	$ 0.71	$ 102	
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
Remove TDL pipe RCP 42"	TDL	concrete pipe 42 - 48"	12,808.00	1.00	1.00	12,808	LF	$ 42.98	$ 550,488	
Remove TDL pipe HDPE	TDL	Plastic pipe 20 - 36"	10,531.00	1.00	1.00	10,531	LF	$ 5.10	$ 53,708	
Haul TDL HDPE pipe to landfill	TDL	Haul to Landfill				3,753	CY	$ 30.17	$ 113,233	
CMP 18" culvert	Various roads	CMP Culvert 18"	215.00	1.00	1.00	215	LF	$ 2.41	$ 518	
CMP 24" culvert	Various roads	CMP Culvert 24"	205.00	1.00	1.00	205	LF	$ 12.11	$ 2,483	
CMP 36" culvert	Various roads	CMP Culvert 30-36"	170.00	1.00	1.00	170	LF	$ 14.56	$ 2,475	
CMP 42" culvert	Various roads	CMP Culvert 30-36"	25.00	1.00	1.00	25	LF	$ 14.56	$ 364	
Wood 34" culvert	Various roads	Box culvert, wood	120.00	1.00	1.00	120	LF	$ 13.62	$ 1,634	
Plastic 18" culvert	Various roads	Plastic culvert, 10-18"	552.00	1.00	1.00	552	LF	$ 3.40	$ 1,877	
Plastic 24" culvert	Various roads	Plastic culvert, 20-36"	230.00	1.00	1.00	230	LF	$ 5.10	$ 1,173	
Plastic 42" culvert	Various roads	Plastic culvert, 42-48"	811.00	1.00	1.00	811	LF	$ 5.67	$ 4,598	
Haul culverts to pit	Various roads					33.00	HR	$ 104.45	$ 3,447	

TOTAL COSTS	Total Cost
	$ 849,021

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.
Culverts present total length for each type. Locations are shown on figures in Exhibit F. See Table 2, Exhibit L for individual culvert detail.
One hour assumed to haul each culvert to pit.

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 COSTS	Total Cost
	$ -

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
$91,459

Calculations

Specific Tasks	Work Type	Area	Description	Quantity	Units	Cost/Unit	Total Cost	Comment
Hydrocal 60	Trucking			pounds	100,795	$ 0.02	$ 2,016	
Hydrocal 60	Restocking			lump sum	7,000	$ 1.00	$ 7,000	
Tergitol NP -4	Trucking			pounds	1,415	$ 0.02	$ 28	
Tergitol NP -4	Restocking			lump sum	98	$ 1.00	$ 98	
Froth Pro 509	Trucking			pounds	91,548	$ 0.02	$ 1,831	
Froth Pro 509	Restocking			lump sum	6,358	$ 1.00	$ 6,358	
CorsiTech FrothPro 327	Trucking			pounds	5,906	$ 0.02	$ 118	
CorsiTech FrothPro 327	Restocking			lump sum	410	$ 1.00	$ 410	
Orfom D8	Trucking			pounds	107,615	$ 0.02	$ 2,152	
Orfom D8	Restocking			lump sum	7,474	$ 1.00	$ 7,474	
Nokes	Trucking			pounds	205,720	$ 0.02	$ 4,114	
Nokes	Restocking			lump sum	14,287	$ 1.00	$ 14,287	
FloatSil™ (sodium silicate)	Trucking			pounds	45,724	$ 0.02	$ 914	
FloatSil™ (sodium silicate)	Restocking			lump sum	3,175	$ 1.00	$ 3,175	
Lime	Trucking			pounds	450000	$ 0.02	$ 9,000	
Lime	Restocking			lump sum	31,251	$ 1.00	$ 31,251	
Polymer Ventures DAF-30	Trucking			pounds	8250	$ 0.02	$ 165	
Polymer Ventures DAF-30	Restocking			lump sum	573	$ 1.00	$ 573	
Nalco 7561	Trucking			pounds	24,651	$ 0.02	$ 493	
Nalco 7561	Restocking			lump sum	1,712	$ 1.00	$ 1,712	

TOTAL COSTS	Total Cost
	$ 91,459

Notes: Quantities assumed from storage capacity Table T-A-1 TR 28. Gallons converted to pounds using specific gravity from SDS.
Disosal cost estimated based on email estimate of $0.02/pound trucking cost plus 25% restocking fee from Univar Solutions (July 29, 2024)

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