STATE OF COLORADO

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C1983059, Terror Creek Loadout, MT-8 Findings and Reclamation Cost Estimate

Simmons - DNR, Leigh <leigh.simmons@state.co.us> Tue, Sep 7, 2021 at 4:47 PM
To: Doug Smith <Doug.Smith@oxbow.com>

Doug,

Please find attached a copy of the Mid-term Review No. 8 Findings and Reclamation Cost Estimate for the Terror Creek Loadout.

Feel free to contact me by phone or email if you have any questions.

Leigh Simmons
Environmental Protection Specialist

COLORADO
Division of Reclamation, Mining and Safety
Department of Natural Resources

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C1983059 MT8 Findings.pdf
1277K

COLORADO
Division of Reclamation, Mining and Safety
Department of Natural Resources

MIDTERM PERMIT REVIEW (MT- 8)
for
Oxbow Mining, LLC

Terror Creek Loadout

Permit No. C-1983-059

September 7, 2021

Virginia Brannon, Director

Prepared by

Leigh Simmons

In Fulfillment of C.R.S. 34-33-115 and the following
Regulations of the Colorado Mined Land Reclamation Board for Coal Mining:
Rules 2.08.3, 2.06.2, 2.06.3, 2.06.5, 2.06.7 and 3.02.2

Introduction

This document presents the results of the Midterm Review of the Terror Creek Loadout permit, conducted by the Colorado Division of Reclamation, Mining and Safety (Division). The Terror Creek Loadout is owned and operated by Oxbow Mining, LLC. This Midterm Review was conducted to fulfill the requirements of the Colorado Surface Coal Mining Reclamation Act (Act), and Rules 2.08.3, 2.06.2(9), 2.06.3(4), 2.06.5(3), 2.06.7(5), and 3.02.2(4) of the Rules and Regulations of the Colorado Mined Land Reclamation Board for Coal Mining (Rules), which were promulgated to implement the Act.

Rule 2.08.3 requires that the Division conduct a review of each permit issued not later than the middle of the permit term. Based on this review, for good cause shown, the Division may require reasonable revisions to, or modifications of, the permit provisions to ensure compliance with the Act and Regulations.

Rules 2.06.2, 2.06.3, 2.06.5, and 2.06.7 require that during the midterm review, where applicable, experimental practices, mountaintop removal variances, variances from approximate original contour (AOC), and variances from contemporaneous reclamation, respectively, be reviewed by the Division.

Rule 3.02.2(4) requires that the Division review the amount of performance bond liability and the terms of acceptance of the bond every 2½ years.

This Midterm Review consisted of a detailed review of the Terror Creek Loadout permit application package and previous Division findings of compliance to ensure that the proposed operation is in compliance with the Rules and Act. The Division also reviewed all subsequent revisions and stipulation responses to ensure that all permit commitments and conditions were being followed. Problems and observations from past Division inspection reports were also considered.

The document has seven sections.

- Section I contains a brief description of the mine history and the surrounding environment.
- Section II contains a summary of permit actions since the last Permit Renewal.
- Section III is a summary of the Division's review of the active stipulations attached to the permit.
- Section IV is a summary of the review of any previously approved experimental practices, mountaintop removal variances, variances from approximate original contour (AOC), and variances from contemporaneous reclamation.
- Section V summarizes any enforcement actions issued since the permit was last renewed, and the current status of any actions that were issued.
- Section VI is a summary of the review and a discussion of any problems identified as a result of this review that are required to be resolved.
- Section VII is a summary of the review of the reclamation cost estimate and the performance bond(s) held by the Division.

Section I - Mine History and the Environment

Mine Status and History

The Terror Creek Loadout was permitted and originally operated as an independent coal handling and train loadout facility and is located in Delta County, approximately four miles north of the town of Paonia, Colorado. The Terror Creek Loadout was permitted under the permanent state regulatory program in 1983. The loadout was originally permitted by the Terror Creek Company and through Minor Revision No. 25 the permittee changed to the current Terror Creek, LLC. The original 1983 permit has been renewed seven times.

Permit (C-1983-059)	**Date Issued**
Division issues Permit C-1983-059	August 23, 1983
Permit Renewal No. 1	September 26, 1988
Permit Renewal No. 2	August 23, 1993
Permit Renewal No. 3	August 23, 1998
Permit Renewal No. 4	August 23, 2003
Permit Renewal No. 5	July 10, 2008
Permit Renewal No. 6	February 28, 2015
Permit Renewal No. 7	February 29, 2020

Description of the Environment

The coal loadout facilities are located approximately four miles northeast of Paonia along State Highway No. 133. The 20.00 acre permit area is situated on a moderately steep colluvial deposit between State Highway No. 133 and the flood plain of the North Fork of the Gunnison River, at an approximate elevation of 5,900 feet. The permit area is located in portions of Sections 15 Township 13 South, Range 91 West of the 6th Principal Meridian.

The primary land uses in the general area are irrigated agriculture, underground coal mining, and wildlife habitat. Orchards and pasture lands are irrigated via the Fire Mountain Canal, which diverts water from the North Fork of the Gunnison, and the Deer Trail Ditch, which diverts water from Hubbard Creek. The pre-disturbance land use at the Loadout was for irrigated orchards.

Description of the Operation and Reclamation Plan

Although the Loadout is no longer being used to handle coal, and some reclamation work has taken place at the site, no bond release application has been submitted to the Division as of the date of these Findings.

Permitted facilities at the Terror Creek Loadout consist of a truck scale, raw, crushed, and sorted coal stockpiles, crushing and screening facilities, a train loadout facility, and an office, shop, bathhouse,

and storage facilities. The anticipated annual coal tonnage permitted to be handled at this facility is up to 500,000 tons.

Drainage and sedimentation control consists of a diversion ditch to direct undisturbed irrigation drainage and storm runoff around the site, a berm to prevent spillage of coal over the bench, and a sediment pond and dugout pond to retain disturbed drainage and allow for NPDES compliance prior to discharge.

Sediment will be periodically removed from the sedimentation ponds to ensure proper functioning of the ponds. If needed, the sediment removed from the ponds will be placed in the sediment storage pile. Annually, during the summer months, a portion or all of the sediment pile will be spread over the site to improve drainage and to keep the size of the pile at approximately 1,500 tons. Interim revegetation of road cuts, berms, and the topsoil stockpiles further minimize wind and water erosion.

Raw coal from haulage trucks or from the raw coal stockpile is approved to be dumped into an enclosed, underground feeder. The coal is then conveyed to appropriate screens for size separation and crushed if necessary. The product coal is then either loaded directly into rail cars or placed in an appropriate stockpile for later loading. Product coal includes lump, stoker, and fines. Limited coal crushing is performed at the loadout. Crushing, conveying and loadout operations are equipped with a water spray system to control dust.

Prior to the approval of Permit Revision No. 1 (PR-01), the reclamation plan specified the demolition and disposal of some facilities, grading to restore the site to the approximate original contour, topsoil replacement, and seeding with adapted pasture grasses. The site was to be reclaimed to a post-mining land use of irrigated hay “Cropland”. Details of the previously approved plan have been retained in section 2.05.4 of the Permit Application Package (PAP) for future reference.

With the approval of PR-01, the Division approved a change in the post-mining land use to “Industrial or Commercial”. The currently approved reclamation plan is described in section 2.05.5 of the PAP. The reclamation plan specifies that the facility pads will remain in the pads current configurations, which reflect the configurations during the active life of the loadout. Concrete walls and footers will be demolished and Loadout tunnels will be filled. The approved post-mining topography is shown on Map 10 of the PAP, which was revised with PR-01. Map 10 and section 2.05.5 both refer to Maps 12 and 13 of the PAP, which identify topographic sections. Maps 12 and 13 of the PAP were not revised with PR-01, however the text of section 2.05.5 and in the legend of Map 10 of the PAP clearly states that the “Present Configuration” shown in the topographic section drawings now represents the revised post-mining configuration.

Facilities approved to remain after reclamation include the office, garage, wooden building adjacent to the office, the paved haul road and all of the gravel access road. The siding track may remain if it is sold to the Union Pacific Railroad.

Section II - Revisions to the Permit

There have been no revisions to the permit since the issuance of Permit Renewal No. 7 (RN-7).

Section III - Status of Stipulations

The stipulation history for the Terror Creek Loadout was reviewed as part of the midterm review. The review included an investigation of any stipulations imposed since the last permit renewal, and any responses to existing stipulations received since the last permit renewal. Any stipulations associated with this permit and issued over the life of this operation which are not discussed in this midterm review have been complied with or terminated.

There are no active stipulations attached to the permit.

Section IV – Permit Variances and Specific Approvals

The Terror Creek Loadout permit does not include variances for any of the associated sub-sections identified under Section 2.06.

Section V - Enforcement Actions

No enforcement actions have been issued since the issuance of Permit Renewal No. 7 (RN-7).

Section VI - Identified Issues and Required Revisions

No issues have been identified requiring a revision to the permit, however the following issues were identified during the normal I&E (inspection and enforcement) program and will need to be addressed in order for the site to be eligible for bond release:

1. Coal containing material is clearly visible in the aerial images presented in the November aerial inspection report (dated 12/2/2020), and from the ground, around the location of the loadout facility and conveyor (as shown on Map 5). This coal-containing material must be removed prior to final bond release, regardless of the post-mining land use of the site.

2. All concrete structures (including a concrete foundation visible in the embankment, to the east of the recently backfilled area) must be broken up and buried or disposed of off-site.

3. All non-coal waste should be removed from the site.

4. Noxious weeds should be under control.

5. Additionally, for final bond release to be approved over the entire site, it will be necessary that the entire site support the approved post-mining land use, as described in section 2.05.5 of the PAP (RV/boat storage). If the existing railroad siding does not support that land use it should be reclaimed. In order to assess this, the Division will refer to the Delta County land use permit when considering a future bond release application, and specifically how the area covered by that permit compares with the boundary of the disturbance associated with the mining permit.

Section VII – Reclamation Liability and Performance Bonding

The Division estimates the reclamation liability for mining operations to be $215,014 (a copy of the revised site-wide Reclamation Cost Estimate is attached as Appendix 1). The Division currently holds a Corporate Surety in the amount of $290,000.00 for the Terror Creek Loadout. There is no need to post additional bond.

This concludes the 2021 Midterm Review of the Terror Creek Loadout.

Appendix 1: MT-8 Reclamation Cost Estimate

COST SUMMARY WORK

Task description: **Mid-term Review No. 8**

Site: **Terror Creek Loadout** Permit Action: MT8 Permit/Job#: C1983059

PROJECT IDENTIFICATION

Task #: 000 State: Colorado Abbreviation: None
Date: 8/30/2021 12:48:26 PM County: Delta Filename: C059-000
User: LDS

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01A	Remove Coal Material from Disturbed Area	DOZER	1	15.45	$4,771
03A	Move Sediment Storage Pile for On-Site Disposal	DOZER	1	3.98	$1,227
05A	Compact Coal Material in On-Site Disposal Area	COMPACT	1	9.45	$1,739
12A	Plug and Seal 3 Alluvial Monitoring Wells	BOREHOLE	1	8.00	$1,098
15A	Demolish and Remove All Structures	DEMOLISH	1	200.00	$145,332
18A	Mobilize/Demobilize Equipment for Reclamation	MOBILIZE	1	6.00	$6,705
		SUBTOTALS:		**242.88**	**$160,872**

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	$3,250
Performance bond:	1.05	Total =	$1,689
Job superintendent:	121.44	Total =	$8,747
Profit:	10.00	Total =	$16,087
		TOTAL O & P =	$29,773
		CONTRACT AMOUNT (direct + O & P) =	$190,645

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	$500	Total =	$500
Engineering work and/or contract/bid preparation:	7.22	Total =	$13,765
Reclamation management and/or administration:	5.30		$10,104
CONTINGENCY:	0.00	Total =	$0
		TOTAL INDIRECT COST =	$54,142
		TOTAL BOND AMOUNT (direct + indirect) =	**$215,014**

BULLDOZER WORK

Task description: **Remove Coal Material from Disturbed Area**

Site: **Terror Creek Loadout** Permit Action: MT8 Permit/Job#: C1983059

PROJECT IDENTIFICATION

Task #:	01A	State:	Colorado	Abbreviation:	None
Date:	8/30/2021 12:34:06 PM	County:	Delta	Filename:	05901A
User:	LDS				

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine:	Cat D9T - 9SU
Horsepower:	405
Blade Type:	Semi-Universal
Attachment:	NA
Shift Basis:	1 per day
Data Source:	(CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$126.01	NA
Operating Cost/Hour:	$141.41	100
Ripper own. Cost/Hour:	$0.00	NA
Ripper op. Cost/Hour:	$0.00	0
Operator Cost/Hour:	$41.30	NA

Total unit Cost/Hour: $308.72
Total Fleet Cost/Hour: **$308.72**

MATERIAL QUANTITIES

Initial Volume:	8,067
Swell factor:	1.185
Loose volume:	**9,559** LCY

Source of estimated volume: Division of Reclamation, Mining & Safety
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 200 feet
Unadjusted hourly production: 700.0 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 0 %
Average site altitude: 5,800 feet

Material weight: 1,400 lbs/LCY

Weight description: Coal - Bituminous, Washed

Job Condition Correction Factor		Source
Operator Skill:	0.900	(AB.AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.000	(GEN.)

Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.643	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8837

Adjusted unit production: 618.59 LCY/hr
Adjusted fleet production: **618.59** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: $0.499/LCY

Total job time: **15.45** Hours
Total job cost: **$4,771**

BULLDOZER WORK

Task description: **Move Sediment Storage Pile for On-Site Disposal**

Site: **Terror Creek Loadout** Permit Action: MT8 Permit/Job#: C1983059

PROJECT IDENTIFICATION

Task #:	03A	State:	Colorado	Abbreviation:	None
Date:	8/30/2021 12:36:23 PM	County:	Delta	Filename:	05903A
User:	LDS				

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine:	Cat D9T - 9SU
Horsepower:	405
Blade Type:	Semi-Universal
Attachment:	NA
Shift Basis:	1 per day
Data Source:	(CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$126.01	NA
Operating Cost/Hour:	$141.41	100
Ripper own. Cost/Hour:	$0.00	NA
Ripper op. Cost/Hour:	$0.00	0
Operator Cost/Hour:	$41.30	NA

Total unit Cost/Hour: $308.72
Total Fleet Cost/Hour: **$308.72**

MATERIAL QUANTITIES

Initial Volume:	1,500
Swell factor:	1.125
Loose volume:	**1,688** LCY

Source of estimated volume: Map 5; Page 2.05-3
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 200 feet
Unadjusted hourly production: 700.0 LCY/hr

Materials consistency description: Consolidated stockpile 1.0

Average push gradient: 0 %
Average site altitude: 5,800 feet

Material weight: 2,550 lbs/LCY

Weight description: Earth - Dry packed

Job Condition Correction Factor		Source
Operator Skill:	0.900	(AB.AVG.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.000	(GEN.)

Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.6064

Adjusted unit production: 424.48 LCY/hr
Adjusted fleet production: **424.48** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: $0.727/LCY

Total job time: **3.98** Hours
Total job cost: **$1,227**

COMPACTION WORK

Task description: **Compact Coal Material in On-Site Disposal Area**

Site: **Terror Creek Loadout** Permit Action: MT8 Permit/Job#: C1983059

PROJECT IDENTIFICATION

Task #:	05A	State:	Colorado	Abbreviation:	None
Date:	8/30/2021 12:37:33 PM	County:	Delta	Filename:	05905A
User:	LDS				

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine:	CAT 815F	Horsepower:	240
Compactor Type:	Soil - tamping foot	Shift Basis:	1 per day
		Data Source:	(CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$91.25	NA
Operating Cost/Hour:	$66.66	100
Operator Cost/Hour:	$26.02	NA
Total Unit Cost/Hour:	$183.93	
Total Fleet Cost/Hour:	**$183.93**	

MATERIAL QUANTITIES

Loose volume:	9,559	LCY	Shrinkage factor:	0.870
Compacted volume:	**8,316**	CCY		

Source of estimated volume: Map 5 - Assume 1' Over 5 Acres
Source of estimated shrinkage factor: Cat Handbook

HOURLY PRODUCTION

Unadjusted hourly production = (W x S x L x C) / P

Compacted width per pass (W):	6.50	feet
Average Compactor Speed (S):	5.00	mph
Compacted thickness of each lift (L):	10.00	inches
Conversion Constant (C):	16.3	(5,280ft./12in./27cu.ft.)
Required number of machine passes (P):	5	passes
Unadjusted Hourly Unit Production:	1,059.50	CCY/hour

Job Condition Correction Factors Site Altitude: 5,800 feet

		Source
Altitude Adj:	1.00	(CAT HB)
Job Efficiency:	0.83	(1 shift/day)
Net Correction:	0.8300	multiplier

Adjusted Hourly Unit Production:	879.39	CCY/Hour
Adjusted Hourly Fleet Production:	**879.39**	CCY/Hour

JOB TIME AND COST

Fleet size:	1	Compactor(s)	Total job time:	**9.46**	Hours
Unit cost:	$0.209	per CCY	Total job cost:	**$1,739**	

BOREHOLE SEALING WORK

Task description: **Plug and Seal 3 Alluvial Monitoring Wells**

Site: **Terror Creek Loadout** Permit Action: MT8 Permit/Job#: C1983059

PROJECT IDENTIFICATION

Task #: 12A State: Colorado Abbreviation: None
Date: 8/30/2021 12:39:27 PM County: Delta Filename: 05912A
User: LDS

Agency or organization name: DRMS

UNIT COSTS

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
Bottom Plug	PVC plug - 4 in. diameter borehole	4"	100'	3.00	EA	$33.98	$101.94
- Fill Holes with Cement	Portland cement grout (Bag, material cost only...94 lb. bag)	4"	100'	13.00	bag	$19.95	$259.35
- Cut Casing at Surface	Exposed casing removal - Calculate Circumference in Linear Feet	4"	100'	3.00	LF	$3.26	$9.78
- Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	3.00	EA	$37.50	$112.50
- Truck and Laborer	Flatbed Truck, 6x4, 45K GVW	NA	NA	8.00	EA	$76.83	$614.64

Job Hours: **8.00** **Total Cost**: **$1,098.00**

DEMOLITION WORK

Task description: **Demolish and Remove All Structures**

Site: **Terror Creek Loadout** Permit Action: MT8 Permit/Job#: C1983059

PROJECT IDENTIFICATION

Task #: 15A State: Colorado Abbreviation: None
Date: 8/4/2021 County: Delta Filename: 05915A
User: LDS

Agency or organization name: DRMS

UNIT COSTS **Location adjustment: 98.20 %**

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Control Tower	16'x14'x26'	Bldg. (MN) demo./on-site disposal in excavated pit - Max. 200 ft. push	5,824.00	CF	$0.24	$1,386.11
- Pad	16'x14'x6"	Demo. and on-site disposal in excavated pit, 6 in. thick - Max. 200 ft. push	288.00	SF	$1.05	$303.26
Substation	16'x24'x20'	Bldg. (MN) demo./on-site disposal in excavated pit - Max. 200 ft. push	7,680.00	CF	$0.24	$1,827.84
- Pad	12'x10'x8"	Demo. and on-site disposal in excavated pit, 8 in. thick - Max. 200 ft. push	120.00	SF	$1.40	$168.48
- Footing	1'x2'x44 LF	Demo. and on-site disposal in excavated pit, 1.0 ft. x 2 ft. - Max. 200 ft. push	44.00	LF	$4.21	$185.24
Secondary Substation	9'x4'x6'	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 200 ft. push	216.00	CF	$0.22	$47.09
- Pad	16'x6'x8"	Demo. and on-site disposal in existing pit, 8 in. thick - Max. 200 ft. push	96.00	SF	$1.34	$129.02
Storage Building	52'x12'x8'	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 200 ft. push	4,992.00	CF	$0.22	$1,088.26
- Pad	52'x12'x6"	Demo. and on-site disposal in excavated pit, 6 in. thick - Max. 200 ft. push	624.00	SF	$1.05	$657.07
Scale House	9'x8'x8'	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 200 ft. push	576.00	CF	$0.22	$125.57
- Pad	9'x8'x8"	Demo. and on-site disposal in existing pit, 8 in. thick - Max. 200 ft. push	72.00	SF	$1.34	$96.77

Trailer Near Garage	57'x10'x11x	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 200 ft. push	6,270.00	CF	$0.22	$1,366.86
Stoker Oil Shed	28'x10'x9'	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 200 ft. push	2,460.00	CF	$0.22	$536.28
- Floor	28'x10'x6"	Demo. and on-site disposal in excavated pit, 6 in. thick - Max. 200 ft. push	280.00	SF	$1.05	$294.84
- Footing	3'x1.5'x76 LF	Demo. and on-site disposal in excavated pit, 1.5 ft. x 3 ft. - Max. 200 ft. push	76.00	LF	$9.48	$720.48
Bath House	60'x10'x8'	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 200 ft. push	4,800.00	CF	$0.22	$1,046.40
Over-the-Track Coal Bin	14'x12'x34'	Bldg. (MN) demo./on-site disposal in excavated pit - Max. 200 ft. push	5,712.00	CF	$0.24	$1,359.46
- Footing	2'x2'x16 LF	Demo. and on-site disposal in excavated pit, 1.5 ft. x 3 ft. - Max. 200 ft. push	16.00	LF	$9.48	$151.68
Walkway and Stairway	240'x3.3'x3.5'	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 200 ft. push	2,772.00	CF	$0.22	$604.30
- Pads	5@4'x4'x6"	Demo. and on-site disposal in excavated pit, 6 in. thick - Max. 200 ft. push	80.00	SF	$1.05	$84.24
Rail Car Puller	8'x8'x4'	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 200 ft. push	256.00	CF	$0.22	$55.81
- Pad	10'x10'x12"	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push	100.00	SF	$1.11	$110.60
Primary Screener	36'x14'x14'	Bldg. (MN) demo./on-site disposal in excavated pit - Max. 200 ft. push	7,056.00	CF	$0.24	$1,679.33
- Pad	40'x18'x8"	Demo. and on-site disposal in excavated pit, 8 in. thick - Max. 200 ft. push	720.00	SF	$1.40	$1,010.88
Crusher	8'x8'x8'	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 200 ft. push	512.00	CF	$0.22	$111.62
- Pad	12'x10'x8"	Demo. and on-site disposal in excavated pit, 8 in. thick - Max.	120.00	SF	$1.40	$168.48

		200 ft. push				
Secondary Screener	36'x9'x14'	Bldg. (MN) demo./on-site disposal in excavated pit - Max. 200 ft. push	4,536.00	CF	$0.24	$1,079.57
- Pad	40'x14'x8"	Demo. and on-site disposal in excavated pit, 8 in. thick - Max. 200 ft. push	560.00	SF	$1.40	$786.24
Secondary Stacker to Reclaim	110'x3'x30'	Bldg. (MN) demo./on-site disposal in excavated pit - Max. 200 ft. push	9,900.00	CF	$0.24	$2,356.20
- Footing	1.5'x3'x50 LF	Demo. and on-site disposal in excavated pit, 1.5 ft. x 3 ft. - Max. 200 ft. push	50.00	LF	$9.48	$474.00
Secondary Stacker to Pile	100'x3'x10'	Bldg. (MN) demo./on-site disposal in excavated pit - Max. 200 ft. push	3,000.00	CF	$0.24	$714.00
- Footing	1.5'x3'x50 LF	Demo. and on-site disposal in excavated pit, 1.5 ft. x 3 ft. - Max. 200 ft. push	50.00	LF	$9.48	$474.00
Primary Stacker to Lump Pile	100'x3'x10'	Bldg. (MN) demo./on-site disposal in excavated pit - Max. 200 ft. push	3,000.00	CF	$0.24	$714.00
- Footing	1.5'x3'x50 LF	Demo. and on-site disposal in excavated pit, 1.5 ft. x 3 ft. - Max. 200 ft. push	50.00	LF	$9.48	$474.00
Truck Dump	24'x18'x14'	Bldg. (MN) demo./on-site disposal in excavated pit - Max. 200 ft. push	6,048.00	CF	$0.24	$1,439.42
CMP #2	12"x25 LF	Pipe, corrugated metal (CMP) - 12 in. diameter pipe	25.00	LF	$4.10	$102.43
CMP #3 and CMP #4	18"x95 LF	Pipe, corrugated metal (CMP) - 18 in. diameter pipe	95.00	LF	$5.57	$529.53
Principle Spillway at Sediment Pond	12"x80 LF	Pipe, corrugated metal (CMP) - 12 in. diameter pipe	80.00	LF	$4.10	$327.76
Truck Dump to Primary Conveyor	180 LF	Conveyor, Horizontal Belt 24" Belt, 61.5' Length	3.00	EA	$3,125.00	$9,375.00
Primary to Secondary Conveyor	80 LF	Conveyor, Horizontal Belt 24" Belt, 41.5' Length	2.00	EA	$2,350.00	$4,700.00
Primary to Transfer Conveyor	100 LF	Conveyor, Horizontal Belt 24" Belt, 61.5' Length	2.00	EA	$3,125.00	$6,250.00
Crusher to Secondary Conveyor	80 LF	Conveyor, Horizontal Belt 24" Belt, 41.5' Length	2.00	EA	$2,350.00	$4,700.00
Secondary to	46 LF	Conveyor, Horizontal	1.00	EA	$3,125.00	$3,125.00

Transfer Conveyor		Belt 24" Belt, 61.5' Length				
Reclaim Conveyor	60 LF	Conveyor, Horizontal Belt 24" Belt, 61.5' Length	1.00	EA	$3,125.00	$3,125.00
Reclaim to Transfer Conveyor	100 LF	Conveyor, Horizontal Belt 24" Belt, 61.5' Length	2.00	EA	$3,125.00	$6,250.00
Transfer to Loadout Conveyor	100 LF	Conveyor, Horizontal Belt 24" Belt, 61.5' Length	2.00	EA	$3,125.00	$6,250.00
- Conveyor Footings	2'x1'x14 LF	Demo. and on-site disposal in excavated pit, 1.0 ft. x 2 ft. - Max. 200 ft. push	14.00	LF	$4.21	$58.94
Railroad Track	1,650 LF	Railroad track - Ties and track	1,650.00	LF	$9.98	$16,467.00
- Ballast	1,100 CY	Railroad track - Ballast	1,100.00	CY	$4.90	$5,390.00
Substation Fencing	164 LF	Fencing, chain link, including posts and fabric - 8 ft. to 10 ft. high	164.00	LF	$3.08	$505.12
Retaining Wall	272'x7.5'x12"	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 200 ft. push	2,040.00	SF	$2.21	$4,508.40
- Footing	1'x2'x128 LF	Demo. and on-site disposal in excavated pit, 1.0 ft. x 2 ft. - Max. 200 ft. push	128.00	LF	$4.21	$538.88
Concrete Sump	36.5'x36.5'x6"	Demo. and on-site disposal in excavated pit, 6 in. thick - Max. 200 ft. push	1,332.00	SF	$1.05	$1,402.60
Powerlines and Poles	1,115 LF	Utility Poles, Wood 35' - 45' high (each pole)	6.00	EA	$292.00	$1,752.00
Coal Loadout Bin	10'x6'x12'	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 200 ft. push	720.00	CF	$0.22	$156.96
Road Pavement	300'x24'x6"	Pavement, bituminous, demolition only - 4 in. to 6 in. thick	800.00	SY	$7.66	$6,128.00
- Guard Rails	1,140 LF	Railing, roadside guiderail and posts (posts on 20 ft. centers)	1,140.00	LF	$2.85	$3,249.00
Stoker Oil Building Expansion	10'x10'x110'	Bldg. (SN) demo./on-site disposal in excavated pit - Max. 200 ft. push	1,000.00	CF	$0.22	$218.00
- Pad	10'x10'x4"	Demo. and on-site disposal in excavated pit, 4 in. thick - Max. 200 ft. push	100.00	SF	$0.70	$70.20
- Walls	10'x12'x4"	Demo. and on-site disposal in excavated pit, 4 in. thick - Max. 200 ft. push	120.00	SF	$0.74	$88.80
Reclaim Tunnel	60'x8'x8'	Bldg. (SN) demo./on-	3,840.00	CF	$0.22	$837.12

		site disposal in excavated pit - Max. 200 ft. push				
- Pad	60'x5'x6"	Demo. and on-site disposal in excavated pit, 6 in. thick - Max. 200 ft. push	300.00	SF	$1.05	$315.90
- Escapeway	36"x180 LF	Pipe, corrugated metal (CMP) - 36 in. diameter pipe	180.00	LF	$11.32	$2,037.24
Remove 5 Barrels of Hazardous Waste	5@55 Gallons	Hazardous waste removal - Drum solids/liquids, per drum, (1-6 drum job)	5.00	DRUM	$680.65	$3,403.25
6,000 Gallon Diesel Tank	6,000 Gallons	Comprehensive storage tank removal, non-leaking - 6,000 to 8,000 gal. tank	1.00	EA	$5,283.95	$5,283.95
4,000 Gallon Water Tank	4,000 Gallons	Haul tank to certified salvage dump - 3,000 to 5,000 gal. tank	1.00	EA	$760.00	$760.00
1,500 Gallon Anti-Freeze Tank	1,500 Gallons	Comprehensive storage tank removal, non-leaking - 3,000 to 5,000 gal. tank	1.00	EA	$3,455.40	$3,455.40
5,000 Gallon Stoker Oil Tank	5,000 Gallons	Comprehensive storage tank removal, non-leaking - 3,000 to 5,000 gal. tank	1.00	EA	$3,455.40	$3,455.40
350 Gallon Fuel Tanks (2)	2@350 Gallons	Comprehensive storage tank removal, non-leaking - 3,000 to 5,000 gal. tank	2.00	EA	$3,455.40	$6,910.80
7,000 Gallon Anti-Freeze Tank	7,000 Gallons	Comprehensive storage tank removal, non-leaking - 6,000 to 8,000 gal. tank	1.00	EA	$5,283.95	$5,283.95
500 Gallon Diesel Tanks (2)	2@500 Gallons	Comprehensive storage tank removal, non-leaking - 3,000 to 5,000 gal. tank	2.00	EA	$3,455.40	$6,910.80
Dispose of powerline material	1,115 LF	Disposal of utility pole and hardware surplus material	1,115.00	LF	$0.02	$22.30
Dispose of conveyor material	746 LF	Conveyor, demolition, on-site disposal, existing pit, 200 ft. push	746.00	CF	$0.30	$223.80

Job Hours: **200.00** **Subtotal (unadjusted)**: **$147,995.93** **Total Cost (adjusted for location)**: **$145,332.00**

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description: **Mobilize/Demobilize Equipment for Reclamation**

Site: **Terror Creek Loadout** Permit Action: MT8 Permit/Job#: C1983059

PROJECT IDENTIFICATION

Task #: 18A State: Colorado Abbreviation: None
Date: 8/30/2021 12:45:42 PM County: Delta Filename: 05918A
User: LDS

Agency or organization name: DRMS

EQUIPMENT TRANSPORT RIG COST

Shift basis: 1 per day
Cost Data Source: CRG Data

Truck Tractor Description: GENERIC ON-HIGHWAY TRUCK TRACTOR, 6X4, DIESEL POWERED, 400 HP (2ND HALF, 2006)

Truck Trailer Description: GENERIC FOLDING GOOSENECK, DROP DECK EQUIPMENT TRAILER (25T, 50T, AND 100T)

Cost Breakdown:

Available Rig Capacities	0-25 Tons	26-50 Tons	51+ Tons
Ownership Cost/Hour:	$21.28	$37.94	$47.67
Operating Cost/Hour:	$26.55	$50.48	$56.21
Operator Cost/Hour:	$20.54	$20.54	$20.54
Helper Cost/Hour:	$0.00	$23.53	$23.53
Total Unit Cost/Hour:	$68.37	$132.49	$147.95

NON ROADABLE EQUIPMENT:

Machine Description	Weight/ Unit (TONS)	Owner ship Cost/hr/ unit	Haul Rig Cost/hr/unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet	DOT Permit Cost/ fleet
Cat D9T - 9SU	60.01	$126.01	$147.95	1	$273.96	$147.95	$250.00
CAT 815F	22.88	$91.25	$68.37	1	$159.62	$68.37	$250.00
Cat 623G	41.35	$207.90	$132.49	1	$340.39	$132.49	$250.00
CAT 14M	23.57	$85.80	$68.37	1	$154.17	$68.37	$250.00
Subtotals:					**$928.14**	**$417.18**	**$1,000.00**

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Flatbed Truck, 6x4, 45K GVW	$49.15	1	$49.15	$49.15
Fuel Tanker, 4x2, 170 HP	$29.70	1	$29.70	$29.70
Subtotals:			**$78.85**	**$78.85**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	DELTA	
Total one-way travel distance:	40.00	miles
Average Travel Speed:	40.00	mph

Total Non-Roadable Mob/Demob Cost * '* two round trips with haul rig:	$6,546.92
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	$157.70

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	1.00	1.00
Return Time (Hours):	1.00	1.00
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	3.00	2.00

JOB TIME AND COST

Total job time:	**6.00**	Hours
Total job cost:	**$6,705**	