

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

1313 Sherman St. Room 215 Denver, CO 80203

June 18, 2019

Mr. Greg Dangler RMR Aggregates, Inc. 4601 DTC Blvd. Suite 130 Denver, CO 80237

RE: Mid-Continent LST, Permit No. M-1982-121, Reclamation Costs Update and Notice of Surety Increase (SI-3)

Dear Mr. Dangler:

In an effort to ensure the Financial Warranty for the above referenced site adequately reflects the actual current costs of fulfilling the requirements of the approved reclamation plan, the Colorado Division of Reclamation, Mining and Safety (Division) has updated the reclamation cost estimate (copy enclosed).

Per the MOU with the BLM, additional financial warranties may be held to meet the requirements (sufficiency) of both agencies. The BLM has additional indirect cost requirements (see BLM's June 4, 2019 letter attached). On behalf of the BLM, DRMS is issuing one Notice of Surety Increase (SI-3) for the cumulative amount, rather than requiring BLM to issue a separate bond increase.

The cumulative agency estimate to reclaim the above referenced site is \$366,179. This is an increase of \$144,098 over the \$222,081 currently held by the Division. This estimate is based on conditions observed during the April 10, 2019 inspection. Therefore, pursuant to Section 34–32.5–117(4) of the Colorado Land Reclamation Act, adequate Financial Warranty must be submitted to the Division within 60 days of the mailing date of this letter. The additional amount needs to be accepted prior to Monday, August 19, 2019. Please review the enclosed figures as soon as possible and contact our office if any calculation errors are noted.

Please make arrangements with Gabriel Benvenuti at the Division of Reclamation, Mining and Safety Denver Office, phone no. 303.866.3567, ext. 8148 for submittal of the financial warranty. Any questions regarding completion, execution and/or submittal of financial warranty forms should also be directed to Gabriel Benvenuti.

If you require additional information, or have questions or concerns, please feel free to contact me. Amy Yeldell at the Division of Reclamation, Mining and Safety, 1313 Sherman St., Room 215, Denver, CO 80203. Direct contact can be made by phone at 303-866-3567 Ext. 8183 or via email at amy.yeldell@ state.co.us



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Sincerely,

Amy Geldell

Amy Yeldell Environmental Protection Specialist

Ec: Robert Wagner, RMR Aggregates, Inc. Travis Marshall, Senior EPS, Grand Junction DRMS Jessica Lopez Pearce, Colorado River Valley Field Office, BLM

COST SUMMARY WORK

Task description:		Post inspection updated 4-10-19, SI-3						
Site:	Site: Mid-Continent LST		Permit Action: 2019-04		2019-04	Permit/Job#: M1982121		
<u>P</u>]	ROJECT	<u>IDENTIFI(</u>	CATION					
	Task #:	ACY	State:	Colorado		Abbreviation:	None	
	Date:	5/1/2019	County:	Garfield		Filename:	M121-ACY	
	User:	ACY						

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01a	Demo/removal of onsite facilities and structures	DEMOLISH	1	80.00	\$146,280
02a	Place loose material against highwall/grade benches	EXCAVATE	1	39.04	\$5,706
02b	Placement of topsoil on benches	EXCAVATE	1	6.24	\$913
03a	Placement of backfill against process bench highwall	LOADER	3	36.83	\$15,043
03b	Finish grading of process bench highwall	DOZER	2	24.98	\$10,415
03c	Transport topsoil to processing bench	LOADER	3	6.30	\$2,577
03d	Distribute topsoil over processing bench	DOZER	2	2.31	\$964
04b	Grade and distribute backfill to 2H:1V Slope	DOZER	2	33.59	\$14,008
04c	Transport of topsoil	LOADER	3	1.40	\$574
04d	Spread topsoil over mill pad area	DOZER	2	2.74	\$1,141
05a	Rip upper and lower access roads	RIPPER	2	1.52	\$688
06a	Reveg disturbed areas	REVEGE	1	20.00	\$35,448
07a	Initial Mobilization	MOBILIZE	1	2.53	\$7,899
07b	Secondary Mobilization	MOBILIZE	1	0.26	\$32
		<u>SUBTO</u>	DTALS:	257.74	\$241,688

INDIRECT COSTS- DRMS

OVERHEAD AND PROFIT:			
Liability insurance: 2.02		Total =	\$4,882
Performance bond: 1.05		Total =	\$2,538
Job superintendent: 128.87		Total =	\$9,414
Profit: 10.00		Total =	\$24,169
		TOTAL O & P =	\$41,003
CONTR	ACT AMOUNT (direct + O & P) = $\frac{1}{2}$	\$282,691
LEGAL - ENGINEERING - PROJECT MANAGEMENT	: (added to contract	t amount)	
Financial warranty processing (legal/related costs):	\$500	Total =	\$500
Engineering work and/or contract/bid preparation:	7.22	Total =	\$20,410
Reclamation management and/or administration:	5.30		\$14,983
CONTINGENCY (direct cost):	3.00	Total =	\$7,251
T	OTAL INDIRECT	COST-DRMS =	\$84,146
TOTAL BOND AM	OUNT-DRMS (di	rect + indirect) =	\$325,834
INDIRECT COSTS- BLM Additional Requireme	nts to DRMS		
OVERHEAD AND PROFIT:			
Performance bond: 0.45		Total =	\$1,088
	DRMS	TOTAL O & P =	\$41,003
	BLM	TOTAL O & P =	\$1,088
CONTR	ACT AMOUNT (direct + O & P) = $($	\$283,779
LEGAL - ENGINEERING - PROJECT MANAGEMENT	: (added to contract	t amount)	
Reclamation management and/or administration:	4.7		\$13,286
BLM Indirect Cost of Rec Mgmt (\$28,269):	21.6%		\$6,106
CONTINGENCY(direct cost):	7.00	Total =	\$19,865

TOTAL INDIRECT COST-BLM =\$40,345TOTAL INDIRECT COST-DRMS =\$40,345\$84,146

TOTAL BOND AMOUNT-DRMS (direct + indirect) =\$325,834TOTAL BOND AMOUNT-BLM (direct + indirect) =\$366,179

DEMOLITION WORK

1	Task description:	Demo/remo	oval of onsite fac	ilities and structure	S	
Site:	Mid-Continent LST		Permit Action:	2019-04	Permit/J	ob#: <u>M1982121</u>
<u>PROJE</u>	CT IDENTIFICATION	N				
Task #: Date: User:	5/1/2019	State: County:	Colorado Garfield		Abbreviation: Filename:	None M121-01a
User.	Agency or organizat	tion name:	DRMS			

Quantity

Demolition Menu

Selection

Location adjustment: 95.50 %

Total Cost

Unit

Unit

UNIT COSTS

Structure or Item

Dimensions

Description Cost Mill Building 30'H x 50'W x Plant (3S) demo./off-site 187,500.00 CF \$117,187.50 \$0.63 disposal in approved 125'L landfill - Max. 15 mile haul Mill slab 50' x 125' x 10" Pavement, concrete, 192.00 CY \$122.50 \$23,520.00 demolition only, 7 in. to 24 in. thick - Reinforced Mill Slab-Hauling 192 CY Loading and 2 mile haul, 192.00 CY \$17.20 \$3,302.40 no salvage - Machine loading Mill Slab-Hauling Hauling only, per mile, 64.00 \$7.04 192 CY, 6 Mi MI \$450.56 12-18 CY truck - 30 mph Additional Mileage average speed CY Mill Slab-Disposal 192 CY Dump fees - Building 192.00 \$11.10 \$2,131.20 construction materials. Fee 30' H x 10' D Loading and 2 mile haul, 175.00 CY \$17.20 \$3.010.00 Silo (2x) no salvage - Machine each loading Silo-Hauling 175 CY, 6 Mi Hauling only, per mile, 59.00 MI \$7.04 \$415.36 12-18 CY truck - 30 mph Additional Mileage average speed 175 CY Dump fees - Building Silo-Disposal Fee 175.00 CY \$11.10 \$1,942.50 construction materials. CY Scale 30' L x 12' W Loading and 2 mile haul, 27.00 \$17.20 \$464.40 no salvage - Machine loading Scale-Hauling 27 CY, 6 Mi Hauling only, per mile, 12.00 MI \$7.04 \$84.48 Additional Mileage 12-18 CY truck - 30 mph average speed Scale-Disposal Fee 27 CY Dump fees - Building 27.00 CY \$11.10 \$299.70 construction materials. 40' L x 24" W Conveyor, demolition, 640.00 CF \$0.57 Conveyor \$364.80

				Total Cost	
		Subtotal		(adjusted for	
Job Hours:	80.00	(unadjusted):	\$153,172.90	location):	\$146,280.12

off-site disposal in approved landfill, 15

mile haul

HYDRAULIC EXCAVATOR WORK

Task description:	Place loose mater	ial against h	ighwall/grade b	enches	
: _ Mid-Continent LST	Pern	nit Action:	2019-04	Permit/Jol	b#: M1982121
PROJECT IDENTI	<u>FICATION</u>				
Task #: 02A Date: 5/10/2019 User: ACY	County:	Colorado Garfield		Abbreviation	
Agency or orga	anization name: DR	MS			
HOURLY EQUIPM	<u>ENT COST</u>				
Basic Machine: Attachment 1:	Cat 336D L 10'-6"; ROPS Cab	Stick	v	Horsepower: Veight (MT): Shift Basis: Data Source:	268 29.30 1 per day (CRG)
Cost Breakdown:		Ĩ	TT.'1' .' 0/		
Ownership Cost Operating Cost Operator Cost Total Unit Cost	/Hour: \$57.5 /Hour: \$37.7	3 9	Utilization % NA 100 NA	-	
Total Fleet Cos	t/Hour:\$146.	13			
Loose volume:	4,444 4,444 of estimated volume:	CCY LCY	Swell facto	or: <u>1.000</u>	
	estimated swell factor:	Cat Handl			
HOURLY PRODUC	load bucket, swing load	Basic Job Co	ondition Descripti	on: SEVERE on: SEVERE	minutes
Load Bucket Capacity				Bucket Size Class:	Medium
Rated Capacit Bucket Fill Facto Adjusted Capacit	or: 0.450	LCY (hea Rock - Po LCY	ped) orly blasted (40%	_	
Job Condition Correctio	n Factors		Site	Altitude: <u>6800</u> feet	
	1.00 0.83 0.83 adjusted Hourly Unit I Adjusted Hourly Fleet I	Production:		_ LCY/Hour _ LCY/Hour _ LCY/Hour	
JOB TIME AND CO	<u>)ST</u>				
Fleet size:	1 Excavato	r To	tal job time:	39.05	Hours
Unit cost: \$1	.284 /LCY		Total job cost:	\$5,706	

Highwall reduction - backfill



HYDRAULIC EXCAVATOR WORK

Task description:	Placement of tops	oil on benc	hes		
: Mid-Continent LST	Perm	it Action:	2019-04	Permit/Jo	ob#: <u>M1982121</u>
PROJECT IDENTIF	ICATION				
Task #: 02B Date: 5/10/2019 User: ACY	State: County:	Colorado Garfield		Abbreviatio Filenam	
Agency or orga	nization name: DRM	мS			
HOURLY EQUIPMI	ENT COST				
Basic Machine: Attachment 1:	Cat 336D L 10'-6" S ROPS Cab	tick	W	Iorsepower:	268 29.30 1 per day (CRG)
Cost Breakdown:		1	T		
Ownership Cost/ Operating Cost/ Operator Cost/ Total Unit Cost/	Hour: \$57.53 Hour: \$37.79	3	Utilization % NA 100 NA		
Total Fleet Cost	/Hour: \$146.1	3			
Loose volume: 1	,333 , 620	CCY LCY	Swell factor	: 1.215	
	of estimated volume: stimated swell factor:	Approx. 6 Cat Hand	5" on 2 benches (1.0 book	65 ac)	
HOURLY PRODUC	oad bucket, swing load	Basic Job C	ondition Descriptio	n: SEVERE n: SEVERE	minutes
Load Bucket Capacity					
Rated Capacit Bucket Fill Facto Adjusted Capacit	r: 1.025	LCY (hea Rock - Ea LCY		Bucket Size Class:	Medium
Job Condition Correction	<u>ı Factors</u>		Site A	ltitude: <u>6800</u> feet	
	1.00 0.83 0.83 adjusted Hourly Unit P Adjusted Hourly Unit P		y)	LCY/Hour LCY/Hour	
	djusted Hourly Fleet P		259.24	LCY/Hour	
JOB TIME AND CO	<u>ST</u>				
Fleet size:	1 Excavator	· To	otal job time:	6.25	Hours
Unit cost: \$0.	564 /LCY		Total job cost:	\$913	

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WHEEL LOADER - LOAD AND CARRY WORK

Mid-Continent LST	Permit Action:	2019-04	Permit/Job#	#: <u>M1982121</u>
PROJECT IDENTIFIC	ATION			
			Abbreviation:	None
Task #: 03A Date: 5/10/2019	State: Colorado County: Garfield		Filename:	M121-03a
User: ACY	County: <u>Garfield</u>		Thename.	W1121-03a
Agency or organiz	ation name: DRMS			
HOURLY EQUIPMEN	T COST			
Basic Machine: C.	AT 972H	Hors	sepower:	287
Attachment 1: R	OPS Cab	Shi	ft Basis: 1	per day
		Data	Source:	(CRG)
Cost Breakdown:				
Ownership Cost/Hot	ur: \$44.67	Utilization % NA		
Operating Cost/Hot		100		
Operator Cost/Hot		NA		
Total Unit Cost/Ho				
Total Fleet Cost/Ho		-		
	Jul. 9400.4J			
		-		
		-		
MATERIAL QUANTII	TIES	- Swell factor	1 345	
MATERIAL QUANTIT	T IES 178 CCY	Swell factor:	1.345	
MATERIAL QUANTIT Initial volume: 27,7 Loose volume:	TIES 78 CCY 37,361 LCY	-		
MATERIAL QUANTIT Initial volume: 27,7 Loose volume: Source of e	TIES 78 37,361 CCY LCY estimated volume: Previou	- sly accepted values TR-		
MATERIAL QUANTIT Initial volume: 27,7 Loose volume: Source of e	TIES 78 CCY 37,361 LCY	- sly accepted values TR-		
MATERIAL QUANTIT Initial volume: Loose volume: Source of e Source of estim	CIES 778 CCY 37,361 LCY estimated volume: Previou nated swell factor: Cat Har	- sly accepted values TR-		
MATERIAL QUANTIT Initial volume: Loose volume: Source of e Source of estim	CIES 778 CCY 37,361 LCY estimated volume: Previou nated swell factor: Cat Har	- sly accepted values TR-		
MATERIAL QUANTIT Initial volume: 27,7 Loose volume: Source of e Source of estim HOURLY PRODUCTIO	CIES 778 CCY 37,361 LCY estimated volume: Previou nated swell factor: Cat Har	sly accepted values TR- ndbook	4	minutes
MATERIAL QUANTIT	CIES 78 CCY 37,361 LCY estimated volume: Previou nated swell factor: Cat Har ON Unadjusted Basic Cycle Tim	nsly accepted values TR- ndbook e (load, dump, maneuve	4 r): 0.525 Factor (min.)	Source
MATERIAL QUANTIT Initial volume: Loose volume: Source of e Source of estim HOURLY PRODUCTIO Loader Cycle Time: Cycle Time Factors Material:	CIES 78 CCY 37,361 LCY estimated volume: Previou nated swell factor: Cat Har ON Unadjusted Basic Cycle Tim Bank or broken material 0	nsly accepted values TR- ndbook e (load, dump, maneuve	4 r): 0.525 Factor (min.) 0.040	Source (Cat HB)
MATERIAL QUANTIT Initial volume: Loose volume: Source of e Source of estim HOURLY PRODUCTIO Loader Cycle Time: Cycle Time Factors Material: Stockpile:	CIES 778 CCY 37,361 LCY estimated volume: Previou nated swell factor: Cat Har ON Unadjusted Basic Cycle Tim Bank or broken material 0 Dumped by truck 0.02	ndbook ndbook e (load, dump, maneuve	4 r): 0.525 Factor (min.) 0.040 0.020	Source (Cat HB) (Cat HB)
MATERIAL QUANTIT Initial volume: 27,7 Loose volume: Source of e Source of estim HOURLY PRODUCTIO Loader Cycle Time: Cycle Time Factors Material: Stockpile: Truck Ownership:	TIES 778 CCY 37,361 LCY estimated volume: Previou nated swell factor: Cat Har ON Unadjusted Basic Cycle Tim Bank or broken material 0 Dumped by truck 0.02 Common ownership of true	ndbook ndbook e (load, dump, maneuve	4 r): 0.525 Factor (min.) 0.040 0.020 -0.040	Source (Cat HB) (Cat HB) (Cat HB)
MATERIAL QUANTIT Initial volume: 27,7 Loose volume: Source of e Source of estim HOURLY PRODUCTIO Loader Cycle Time: Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	CIES 778 CCY 37,361 LCY estimated volume: Previou nated swell factor: Cat Har ON Unadjusted Basic Cycle Tim Bank or broken material 0 Dumped by truck 0.02 Common ownership of tru Constant operation -0.04	ndbook ndbook e (load, dump, maneuve	4 r): 0.525 Factor (min.) 0.040 0.020 -0.040 -0.040	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB)
MATERIAL QUANTIT Initial volume: 27,7 Loose volume: Source of e Source of estim HOURLY PRODUCTIO Loader Cycle Time: Cycle Time Factors Material: Stockpile: Truck Ownership:	CIES 78 CCY 37,361 LCY estimated volume: Previou nated swell factor: Cat Har ON Unadjusted Basic Cycle Tim Bank or broken material 0 Dumped by truck 0.02 Common ownership of tru Constant operation -0.04 Nominal target 0.00 No	- ndbook e (load, dump, maneuve 0.04 ucks and loaders -0.04	4 r): 0.525 Factor (min.) 0.040 0.020 -0.040 -0.040 0.000	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB)
MATERIAL QUANTIT Initial volume: 27,7 Loose volume: Source of e Source of estim HOURLY PRODUCTIO Loader Cycle Time: Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	CIES 78 CCY 37,361 LCY estimated volume: Previou nated swell factor: Cat Har ON Common data and the system of the syst	e (load, dump, maneuve 0.04 icks and loaders -0.04 ycle Time Adjustment:	4 r): 0.525 Factor (min.) 0.040 0.020 -0.040 0.000 -0.020	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes
MATERIAL QUANTIT Initial volume: 27,7 Loose volume: Source of e Source of estim HOURLY PRODUCTIO Loader Cycle Time: Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	CIES 78 CCY 37,361 LCY estimated volume: Previou nated swell factor: Cat Har ON Common data and the system of the syst	- ndbook e (load, dump, maneuve 0.04 ucks and loaders -0.04	4 r): 0.525 Factor (min.) 0.040 0.020 -0.040 -0.040 0.000	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB)
MATERIAL QUANTIT Initial volume: 27,7 Loose volume: Source of e Source of estim HOURLY PRODUCTIO Loader Cycle Time: Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	CIES 778 CCY 37,361 LCY estimated volume: Previou nated swell factor: Cat Har ON Common category Unadjusted Basic Cycle Tim Bank or broken material 0 Dumped by truck 0.02 Common ownership of tru Constant operation -0.04 Nominal target 0.00	e (load, dump, maneuve 0.04 icks and loaders -0.04 ycle Time Adjustment:	4 r): 0.525 Factor (min.) 0.040 0.020 -0.040 0.000 -0.020	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes
MATERIAL QUANTIT Initial volume: 27,7 Loose volume: Source of e Source of estim HOURLY PRODUCTIO Loader Cycle Time: Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target:	CIES 778 CCY 37,361 LCY estimated volume: Previou nated swell factor: Cat Har ON Common category Unadjusted Basic Cycle Tim Bank or broken material 0 Dumped by truck 0.02 Common ownership of tru Constant operation -0.04 Nominal target 0.00	e (load, dump, maneuver 0.04 icks and loaders -0.04 ycle Time Adjustment: sted Basic Cycle Time:	4 r): 0.525 Factor (min.) 0.040 0.020 -0.040 -0.040 0.000 -0.020 0.505	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes

	Length (feet)	Grade Res. (%)	Rolling Res. (%)	Total Res. (%)	Travel Time (minutes)	Source
Haul Route:	100	0.00	5.00	5.00	0.0922	(Cat HB)
Return Route:	100	0.00	5.00	5.00	0.0832	(Cat HB)

			Total Travel Ti Total Cycle Ti		minutes				
Load Bucket Capacity									
Rated Capacity:	5.60	LCY (heap	ped)						
Bucket Fill Factor:	0.825	Blasted ro	ck - avg. blasted	(75 - 90%) 0.825					
Adjusted Capacity:	4.62	LCY							
Job Condition Correction Site Altitude: <u>6800</u> feet	Factors								
		Source							
Altitude Adj:	1.00	(CAT HB)						
Job Efficiency:	0.83	(1 shift/day	/)						
Net Correction:	0.83	multiplier							
	ljusted Hourly Un ljusted Hourly Un		407.40 338.14	_ LCY/Hour LCY/Hour					
	justed Hourly Flee		1,014.42	LCY/Hour					
JOB TIME AND COS	JOB TIME AND COST								
Fleet size: 3	Loader(s	s)	Total job time:	36.83	Hours				

 Unit cost:
 \$0.403
 /LCY
 Total job cost:
 \$15,043

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BULLDOZER WORK

Task description:	Finish grading of	f process be	nch highwall		
Mid-Continent LST	Peri	mit Action:	2019-04	Permit/Job#:	M1982121
PROJECT IDENTIFI	ICATION				
Task #: 03B	State:	Colorado		Abbreviation:	None
Date: $5/10/2019$	County:	Garfield		Filename:	M121-03b
User: ACY					
Agency or organ	nization name: DR	MS			
HOURLY EQUIPME	<u>ENT COST</u>				
	D8T - 8SU				
Horsepower: 310					
· · ·	ni-Universal				
Attachment: NA			_		
Shift Basis: <u>1 pe</u> Data Source: (CR	er day RG)				
Cost Breakdown:					
		¢02.52	<u>Utilization %</u>		
Ownership Cost/Hour:		\$93.62	NA 100		
Operating Cost/Hour: Ripper own. Cost/Hour:		\$73.35 \$0.00	100 NA		
Ripper op. Cost/Hour:		\$0.00	<u> </u>		
Operator Cost/Hour:		\$41.52	NA		
MATERIAL QUANT Initial Volume: 10,00					
Swell factor: 1.00					
Source of estimated volur	me:Approx 1.		sly transported material		
Source of estimated swell	factor: Cat Hand	book			
HOURLY PRODUCT	<u>rion</u>				
Average push distance: Unadjusted hourly produc	tion: 100 feet 852.6 LCY/	hr			
Materials consistency des		vell ripped o	r blasted 0.8		
·		ven ripped o			
Average push gradient: Average site altitude:	15 % 6,800 feet				
Material weight:	2,600 lbs/LCY				
Weight description:	Limestone - Broke	n			
Job Condition Correction		750	Source		
Operator S Material consiste		750	(AVG.) (CAT HB)		
	now. 0				
Dozing may		800			
Dozing met Visib	thod: 1.	800 000 000	(CAT HB) (GEN.) (AVG.)		

Task # 03B

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	0.666	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.885	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:		
Adjusted unit production: 20	0.19 LCY/hr	
Adjusted fleet production: 40	0.38 LCY/hr	

JOB TIME AND COST

Fleet size:	2 Dozer(s)
Unit cost:	\$1.041/LCY

Total job time:	24.98 Hours
Total job cost:	\$10,415

WHEEL LOADER - LOAD AND CARRY WORK

Task description:	Transport topsoil to proces	ssing bench		
e: Mid-Continent LST	Permit Action	: _2019-04	Permit/Job#:	M1982121
PROJECT IDENTIE	ICATION			
Task #: 03C	State: Colorado	0	Abbreviation:	None
Date: 5/10/2019 User: ACY			Filename:	M121-03c
	anization name: DRMS			
HOURLY EQUIPM	ENT COST			
Basic Machine:	CAT 972H	Horse	power:	287
Attachment 1:	ROPS Cab		I	ber day
				CRG)
Cast Davidadesen				
Cost Breakdown:		Utilization %		
Ownership Cost/	'Hour: \$44.67	NA		
Operating Cost/		100		
Operator Cost	Hour: \$40.90	NA		
Total Unit Cost/	Hour: \$136.15			
Total Fleet Cost	/Hour: \$408.45	-		
MATERIAL QUAN	FITIFS			
Initial volume: Loose volume:	2,218 CCY 2,695 LCY	Swell factor:	1.215	
	,			
		W x 800' L) 2.75 ac. @ 6"	Thick	
Source of e	stimated swell factor: Cat Har	ndbook		
	TION			
HOURLY PRODUC	<u>110N</u>			
Loader Cycle Time:	Unadjusted Basic Cycle Tim	e (load, dump, maneuver)	: 0.525	minutes
Cycle Time Fact	ors	-	Factor (min.)	Source
Mater		neter -0.02	-0.020	(Cat HB)
Stockp			0.020	(Cat HB)
Truck Ownersh		ucks and loaders -0.04	-0.040	(Cat HB)
Operati	1 1		-0.040	(Cat HB)
Dump Targ	*		0.000	(Cat HB)
* *	Net C	Cycle Time Adjustment:	-0.080	minutes
	Adju	sted Basic Cycle Time:	0.445	minutes
Rolling Resistance – Ro	ad Conditions			
Haul	: Rutted dirt, little maintenand	ce, no water, 2" tire penet	ration 5.0	
Return				
	· · · · · · · · · ·	, , , , , , , , , , , , , , , , , , ,		
Haul and Return Time				
	Length Grade Res.	Rolling Total Res.	Travel Time	Source
		$\mathbf{D} = (0/1)$	(Source

Res. (%)

5.00

5.00

(%)

5.00

5.00

(feet)

500

500

Haul Route:

Return Route:

(%)

0.00

0.00

(Cat HB)

(Cat HB)

(minutes)

0.4611

0.4160

			Total Travel Tir Total Cycle Tir		minutes minutes
Load Bucket Capacity					
Rated Capacit Bucket Fill Factor	•	LCY (hea Rock - W	ped) ell blasted (60% -	75%) 0.675	
Adjusted Capacit	ty: 3.78	LCY			
Job Condition Correction Site Altitude: <u>6800</u> feet	on Factors				
		Source			
Altitude Adj:	1.00	(CAT HE	8)		
Job Efficiency:	0.83	(1 shift/da	y)		
Net Correction:	0.83	multiplier			
Ur	nadjusted Hourly Uni	it Production:	171.55	LCY/Hour	
	Adjusted Hourly Uni		142.38	LCY/Hour	
1	Adjusted Hourly Flee	et Production:	427.15	LCY/Hour	
JOB TIME AND CO	<u>DST</u>				
Fleet size:	3 Loader(s	3)	Total job time:	6.31	Hours

Unit cost:	\$0.956	/LCY	Total job cost:	\$2,577	

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BULLDOZER WORK

Task description:	Distribute topsoil over proce	ssing bench		
: Mid-Continent LST	Permit Action:	2019-04	Permit/Job#:	M1982121
PROJECT IDENTIFI	CATION			
Task #: 03D Date: 5/10/2019	State: <u>Colorado</u> County: Garfield		Abbreviation: Filename:	None M121-03d
User: ACY			Thename.	W121-03u
Agency or organ	ization name: DRMS			
HOURLY EQUIPME	NT COST			
	D8T - 8SU			
Horsepower: 310	ni-Universal			
Blade Type: Sem Attachment: NA	n-Oniversal			
	er day			
<u></u>	.U <i>)</i>			
Cost Breakdown:				
		Utilization %		
Ownership Cost/Hour:	\$93.62	NA		
Operating Cost/Hour:	\$73.35	100		
Ripper own. Cost/Hour:	\$0.00	NA		
Ripper op. Cost/Hour:	\$0.00	0		
	\$41.52	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour:	\$208.49 \$416.99			
Operator Cost/Hour: Total unit Cost/Hour:	\$208.49 \$416.99			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume:2,695	\$208.49 \$416.99 <u>ITIES</u> 5			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <u>MATERIAL QUANT</u> Initial Volume: 2,695 Swell factor: 1.000	\$208.49 \$416.99 <u>ITIES</u> 5)			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <u>MATERIAL QUANT</u> Initial Volume: 2,695 Swell factor: 1.000	\$208.49 \$416.99 <u>ITIES</u> 5			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 2,695 Swell factor: 1.000 Loose volume: 2,695	\$208.49 \$416.99 ITIES 5 0 5 LCY			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <u>MATERIAL QUANT</u> Initial Volume: 2,695 Swell factor: 1.000	\$208.49 \$416.99 ITIES 5 5 5 5 5 CY ne: Transported volume o			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 2,695 Swell factor: 1.000 Loose volume: 2,695 Source of estimated volum Source of estimated swell	\$208.49 \$416.99 ITIES 5 5 5 5 CY ne: Transported volume of factor: Cat Handbook			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 2,695 Swell factor: 1.000 Loose volume: 2,695 Source of estimated volum Source of estimated swell HOURLY PRODUCT	\$208.49 \$416.99 ITIES 5 5 5 5 CY ne: Transported volume o factor: Cat Handbook YION			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 2,695 Swell factor: 1.000 Loose volume: 2,695 Source of estimated volum Source of estimated swell	\$208.49 \$416.99 ITIES 5 5 5 5 CY me: Transported volume of factor: Cat Handbook TION 50 feet			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 2,695 Swell factor: 1.000 Loose volume: 2,695 Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance:	\$208.49 \$416.99 ITIES 5 0 5 LCY ne: Transported volume o factor: Cat Handbook YON 250 feet ction: 1,400.0 LCY/hr			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 2,695 Swell factor: 1.000 Loose volume: 2,695 Source of estimated volum Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly produc Materials consistency dese Average push gradient:	\$208.49 \$416.99 ITIES 5 5 5 5 5 5 5 5 5 6 7 6 7 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 8 7 7 7 7 7 7 7 8 8 8 8 8 8 8 8 9 8 9 9 9 9			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 2,695 Swell factor: 1.000 Loose volume: 2,695 Source of estimated volum Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly produc	\$208.49 \$416.99 ITIES 5 5 5 5 5 5 5 5 6 7 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 8 7 7 7 7 7 7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8			
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Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 2,695 Swell factor: 1.000 Loose volume: 2,695 Source of estimated volum Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly product Materials consistency dest Average push gradient: Average site altitude:	\$208.49 \$416.99 ITIES 5 5 5 5 5 5 5 5 5 6 7 7 7 8 9 6 6 800 feet	f 03c		
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Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 2,695 Swell factor: 1.000 Loose volume: 2,695 Source of estimated volum Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly product Materials consistency dese Average site altitude: Material weight: Weight description: Job Condition Correction	\$208.49 \$416.99 ITIES 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	f 03c		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 2,695 Swell factor: 1.000 Loose volume: 2,695 Source of estimated volum Source of estimated volum Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly product Materials consistency dese Average site altitude: Material weight: Weight description: Job Condition Correction Operator S	\$208.49 \$416.99 ITIES 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	 f 03c , 25% Earth (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:	0.697	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.4165	
Adjusted unit production: 58	33.10 LCY/hr	
Adjusted fleet production: 11	66.2 LCY/hr	

JOB TIME AND COST

Fleet size:	2 Dozer(s)
Unit cost:	\$0.358/LCY

Total job time:	2.31 Hours
Total job cost:	\$964

BULLDOZER WORK

Task description:	Grade and distri	Dute Dackin	1 to 211.1 v Slope		
Mid-Continent LST	Per	mit Action:	2019-04	Permit/Job#:	M1982121
PROJECT IDENTIF	ICATION				
Task #: 04B Date: 5/10/2019 User: ACY	State: County:	Colorado Garfield		Abbreviation: Filename:	None M121-04b
Agency or organ	nization name: DF	RMS			
HOURLY EQUIPME	<u>ENT COST</u>				
	D8T - 8SU				
Horsepower: 310					
• • • • • • • • • • • • • • • • • • • •	ni-Universal		_		
Attachment: NA					
	er day				
Data Source: (CF	RG)				
Cost Breakdown:					
_ _			Utilization %		
Ownership Cost/Hour:		\$93.62	NA		
Operating Cost/Hour:		\$73.35	100		
Ripper own. Cost/Hour:		\$0.00	NA		
Ripper op. Cost/Hour:		\$0.00	0		
		\$41.52	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour:	\$208.49 \$416.99	ψ11.32			
Operator Cost/Hour: Total unit Cost/Hour:	\$416.99	φτι.52			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume:10,00	\$416.99 TTIES 00	ψτ1.52			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 10,0 Swell factor: 1.34	\$416.99 TTIES 00 5				
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 10,00 Swell factor: 1.34 Loose volume: 13,4	\$416.99 TTIES 00 5 50 LCY				
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 10,00 Swell factor: 1.34 Loose volume: 13,4 Source of estimated volum	\$416.99 TTIES 00 5 50 LCY ne:	 mates			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 10,00 Swell factor: 1.34 Loose volume: 13,4	\$416.99 TTIES 00 5 50 LCY ne:	 mates			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 10,00 Swell factor: 1.34 Loose volume: 13,4 Source of estimated volum	\$416.99 TTIES 00 5 50 LCY ne: <u>Staff Esti</u> factor: <u>Cat Hand</u>	 mates			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 10,00 Swell factor: 1.34. Loose volume: 13,43 Source of estimated volur Source of estimated swell HOURLY PRODUCT	\$416.99 TTIES 00 5 50 LCY ne: Staff Esti 1 factor: Cat Hand FION	 mates			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 10,00 Swell factor: 1.34 Loose volume: 13,4 Source of estimated volur Source of estimated swell HOURLY PRODUCT Average push distance:	\$416.99 ITIES 00 5 50 LCY ne: Staff Esti 1 factor: Cat Hand ION 100 feet	mates lbook			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 10,00 Swell factor: 1.34. Loose volume: 13,43 Source of estimated volur Source of estimated swell HOURLY PRODUCT	\$416.99 TTIES 00 5 50 LCY ne: Staff Esti factor: Cat Hand EION ction: 100 feet ction: 852.6 LCY	mates lbook			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 10,00 Swell factor: 1.34. Loose volume: 13,4. Source of estimated volur Source of estimated volur Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly product	\$416.99 ITIES 00 5 50 LCY ne: Staff Esti factor: Cat Hand If factor: Cat Hand If factor: 100 feet ction: 852.6 LCY/ cription: Rock, v	mates lbook			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 10,00 Swell factor: 1.34 Loose volume: 13,4 Source of estimated volur Source of estimated volur Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly produc	\$416.99 TTIES 00 5 50 LCY ne: Staff Esti factor: Cat Hand EION ction: 100 feet ction: 852.6 LCY	mates lbook			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 10,00 Swell factor: 1.34, Loose volume: 13,43 Source of estimated volur Source of estimated volur Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly produc Materials consistency des Average push gradient:	\$416.99 ITIES 00 5 50 LCY ne: Staff Esti 1 factor: Cat Hand FION ction: 100 feet ction: 852.6 LCY/ ccription: Rock, w 15 %	mates lbook			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 10,00 Swell factor: 1.34, Loose volume: 13,43 Source of estimated volur Source of estimated volur Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly product Materials consistency des Average push gradient: Average site altitude:	\$416.99 ITIES 00 5 50 LCY ne: Staff Esti 1 factor: Cat Hand FION ction: 100 feet ction: 852.6 LCY/ cription: Rock, w 15 % 6,800 feet	mates lbook /hr well ripped or			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 10,00 Swell factor: 1.34 Loose volume: 13,4 Source of estimated volur Source of estimated volur Source of estimated swell HOURLY PRODUC1 Average push distance: Unadjusted hourly product Materials consistency des Average site altitude: Material weight:	\$416.99 ITIES 00 5 50 LCY ne: Staff Esti 1 factor: Cat Hand FION cription: 100 feet cription: Rock, w 15 % 6,800 feet 2,600 lbs/LCY Limestone - Broke	mates lbook /hr well ripped or			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 10,00 Swell factor: 1.34, Loose volume: 13,43 Source of estimated volur Source of estimated volur Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly product Materials consistency des Average push gradient: Average site altitude: Material weight: Weight description:	\$416.99 TTIES 00 5 50 LCY ne: Staff Esti 1 factor: Cat Hand FION ction: 100 feet ction: 852.6 LCY/ cription: Rock, w 15 % 6,800 feet 2,600 lbs/LCY Limestone - Broke Factor 100 feet	mates lbook /hr well ripped or			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 10,00 Swell factor: 1.34 Loose volume: 13,4 Source of estimated volur Source of estimated volur Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly product Materials consistency des Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator S Material consistency	\$416.99 TTIES 00 5 50 LCY ne: Staff Esti factor: Cat Hand TION ction: $\frac{100 \text{ feet}}{852.6 \text{ LCY/}}$ ccription: Rock, w $\frac{15 \%}{6,800 \text{ feet}}$ $2,600 \text{ lbs/LCY}$ Limestone - Broke Factor Skill: 0. ency: 0.	mates lbook /hr well ripped or en 250 			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 10,00 Swell factor: 1.34 Loose volume: 13,4 Source of estimated volur Source of estimated volur Source of estimated volur Source of estimated swell HOURLY PRODUCT Average push distance: Unadjusted hourly product Materials consistency des Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator S	\$416.99 TTIES 00 5 50 LCY ne: Staff Esti factor: Cat Hand TION ction: 100 feet ction: 852.6 LCY/ cription: Rock, v 15% 6,800 feet 2,600 lbs/LCY Limestone - Broke Factor Skill: 0. ency: 0. 1.	mates mates lbook /hr well ripped or en 2.750			

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	0.666	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.885	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.2348	
Adjusted unit production: 20	00.19 LCY/hr	
Adjusted fleet production: 40	00.38 LCY/hr	

JOB TIME AND COST

Fleet size:	2 Dozer(s)
Unit cost:	\$1.041/LCY

Total job time:	33.59 Hours
Total job cost:	\$14,008

WHEEL LOADER - LOAD AND CARRY WORK

	' I	Permit Action:	2019-04	Permit/Job#:	M1982121
PROJECT IDENTI	FICATION				
Task #: $04C$	State			Abbreviation:	None M121 04a
Date: <u>5/10/2019</u> User: <u>ACY</u>	Count	y: <u>Garfield</u>		Filename:	M121-04c
Agency or org	anization name:	DRMS			
HOURLY EQUIPM	ENT COST				
Basic Machine:	CAT 972H		Horse	epower:	287
Attachment 1:	ROPS Cab			-	ber day
				1	CRG)
Coat Draalsdown				,	,
Cost Breakdown:			Utilization %		
Ownership Cost	t/Hour: \$4	14.67	NA		
Operating Cost		50.58	100		
Operator Cost		40.90	NA		
Total Unit Cost	Hour: \$1	36.15			
Total Fleet Cos	st/Hour: \$4	408.45			
MATERIAL QUAN	TITIES				
Initial volume:	1,600	CCY	Swell factor:	1.215	
Loose volume:	1,944	LCY	Swell lactor.	1.215	
	,				
	of estimated volum				
Source of e	estimated swell fact	or: Cat Hand	1000K		
HAUDI V DDADUG	TION				
HOURLY PRODUC	<u>CTION</u>				
HOURLY PRODUC		sic Cycle Time	(load, dump, maneuver)	: 0.525	minutes
Loader Cycle Time:	Unadjusted Ba	sic Cycle Time	(load, dump, maneuver)		
Loader Cycle Time: Cycle Time Fact	Unadjusted Bas	·		Factor (min.)	Source
Loader Cycle Time: Cycle Time Fact Mater	Unadjusted Ba tors rial: Material 1/8	" to 3/4" diame		Factor (min.) -0.020	Source (Cat HB)
Loader Cycle Time: Cycle Time Fact	Unadjusted Bas tors rial: Material 1/8 bile: Dumped by	" to 3/4" diame truck 0.02		Factor (min.)	Source (Cat HB) (Cat HB)
Loader Cycle Time: Cycle Time Fact Mater Stockp	Unadjusted Bastors tors rial: Material 1/8 pile: Dumped by hip: Common ov	" to 3/4" diame truck 0.02	eter -0.02	Factor (min.) -0.020 0.020	Source (Cat HB)
Loader Cycle Time: Cycle Time Fact Mater Stockp Truck Ownersl	Unadjusted Bastors tors rial: Material 1/8 oile: Dumped by hip: Common ov ion: Constant op	" to 3/4" diame truck 0.02 vnership of truc eration -0.04	eter -0.02	Factor (min.) -0.020 0.020 -0.040	Source (Cat HB) (Cat HB) (Cat HB)
Loader Cycle Time: Cycle Time Fact Mater Stockp Truck Ownersł Operati	Unadjusted Bastors tors rial: Material 1/8 oile: Dumped by hip: Common ov ion: Constant op	" to 3/4" diame truck 0.02 vnership of truc eration -0.04 get 0.00	eter -0.02	Factor (min.) -0.020 0.020 -0.040 -0.040	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB)
Loader Cycle Time: Cycle Time Fact Mater Stockp Truck Ownerst Operati	Unadjusted Bastors tors rial: Material 1/8 oile: Dumped by hip: Common ov ion: Constant op	" to 3/4" diame truck 0.02 vnership of truc eration -0.04 get 0.00 Net Cyo	eter -0.02 eks and loaders -0.04	Factor (min.) -0.020 0.020 -0.040 -0.040 0.000	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB)
Loader Cycle Time: Cycle Time Fact Mater Stockp Truck Ownersl Operati Dump Targ	Unadjusted Bas tors rial: Material 1/8 pile: Dumped by hip: Common ov ion: Constant op get: Nominal tar	" to 3/4" diame truck 0.02 vnership of truc eration -0.04 get 0.00 Net Cyo	eter -0.02 eks and loaders -0.04 cle Time Adjustment:	Factor (min.) -0.020 0.020 -0.040 -0.040 0.000 -0.080	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes
Loader Cycle Time: Cycle Time Fact Mater Stockp Truck Ownersl Operati Dump Tary Rolling Resistance – Ro	Unadjusted Bas tors rial: Material 1/8 pile: Dumped by hip: Common ov ion: Constant op get: Nominal tar pad Conditions	" to 3/4" diame truck 0.02 vnership of truc eration -0.04 get 0.00 Net Cy Adjust	eter -0.02 eks and loaders -0.04 cle Time Adjustment: ed Basic Cycle Time:	Factor (min.) -0.020 0.020 -0.040 -0.040 -0.080 0.445	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes
Loader Cycle Time: Cycle Time Fact Mater Stockp Truck Ownersl Operati Dump Targ Rolling Resistance – Ro Haul	Unadjusted Bas tors rial: Material 1/8 pile: Dumped by hip: Common ov ion: Constant op get: Nominal tar pad Conditions 1:Rutted dirt, litt	" to 3/4" diame truck 0.02 vnership of truc eration -0.04 get 0.00 Net Cy Adjust tle maintenance	eter -0.02 eks and loaders -0.04 cle Time Adjustment: ed Basic Cycle Time:	Factor (min.) -0.020 0.020 -0.040 -0.040 0.000 -0.080 0.445	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes
Loader Cycle Time: Cycle Time Fact Mater Stockp Truck Ownersl Operati Dump Tary Rolling Resistance – Ro	Unadjusted Bas tors rial: Material 1/8 pile: Dumped by hip: Common ov ion: Constant op get: Nominal tar pad Conditions 1:Rutted dirt, litt	" to 3/4" diame truck 0.02 vnership of truc eration -0.04 get 0.00 Net Cy Adjust tle maintenance	eter -0.02 eks and loaders -0.04 cle Time Adjustment: ed Basic Cycle Time:	Factor (min.) -0.020 0.020 -0.040 -0.040 0.000 -0.080 0.445	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes
Loader Cycle Time: Cycle Time Fact Mater Stockp Truck Ownersl Operati Dump Tary Rolling Resistance – Ro Haul Returr	Unadjusted Bas tors rial: Material 1/8 pile: Dumped by hip: Common ov ion: Constant op get: Nominal tar pad Conditions 1:Rutted dirt, litt	" to 3/4" diame truck 0.02 vnership of truc eration -0.04 get 0.00 Net Cy Adjust tle maintenance	eter -0.02 eks and loaders -0.04 cle Time Adjustment: ed Basic Cycle Time:	Factor (min.) -0.020 0.020 -0.040 -0.040 0.000 -0.080 0.445	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes
Loader Cycle Time: Cycle Time Fact Mater Stockp Truck Ownersh Operati Dump Targ Rolling Resistance – Ro Haul	Unadjusted Bar tors rial: Material 1/8 bile: Dumped by hip: Common ov ion: Constant op get: Nominal tar bad Conditions 1: Rutted dirt, litt Rutted dirt, litt	" to 3/4" diame truck 0.02 vnership of truc eration -0.04 get 0.00 Net Cya Adjust tle maintenance tle maintenance	eter -0.02 eks and loaders -0.04 cle Time Adjustment: ed Basic Cycle Time:	Factor (min.) -0.020 0.020 -0.040 -0.040 -0.080 0.445	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes

100

100

Haul Route:

Return Route:

0.00

0.00

5.00

5.00

5.00

5.00

(Cat HB)

(Cat HB)

0.0922

0.0832

			Total Travel Time Total Cycle Time		minutes minutes
Load Bucket Capacity					
Rated Capaci	ty: 5.60	LCY (heape	d)		
Bucket Fill Fact	or: 1.025	Rock - Earth	n Mixture (100%-	105%) 1.025	
Adjusted Capaci	ty: 5.74	LCY			
Job Condition Correction Site Altitude: <u>6800</u> feet					
		Source			
Altitude Adj:	1.00	(CAT HB)			
Job Efficiency:	0.83	(1 shift/day)			
Net Correction:	0.83	multiplier			
	nadjusted Hourly Un Adjusted Hourly Un Adjusted Hourly Flee	it Production:	555.11 460.74 1,382.23	LCY/Hour LCY/Hour LCY/Hour	
JOB TIME AND CO Fleet size:	DST 3 Loader(s	с) Т	otal job time:	1.41	Hours

Total job cost: \$574

Unit cost: _____\$0.296 /LCY

Page 1 of 2

BULLDOZER WORK

Task description:		Spread topsoil o	ver mill pad	area		
Mid-Continent	LST	Per	mit Action:	2019-04	Permit/Job#	M1982121
PROJECT IDE	NTIFICA	ATION				
Task #: 04D		State:	Colorado		Abbreviation:	None
	2019	County:	Garfield		Filename:	M121-04d
User: ACY			Guilleta		T fieldanie.	
Agency	r organiza	tion name: DI	RMS			
HOURLY EQU	-					
Basic Machine: Horsepower:	310	8T - 8SU				
Blade Type:		Universal				
Attachment:	NA	o in versur				
Shift Basis:	1 per d	lay				
Data Source:	(CRG)					
Cost Breakdown:				Utilization %		
Ownership Cost/I	Jour.		\$93.62	NA		
Operating Cost/I			\$73.35	100		
Ripper own. Cost/l			\$0.00	NA		
Ripper op. Cost/l			\$0.00	0		
Operator Cost/I	Hour:		\$41.52	NA		
MATERIAL QU		<u>1E5</u>				
Initial Volume:	1,944					
Swell factor: Loose volume:	1.000 1,944 L	CV				
	,					
Source of estimate				on, Mining & Safety		
Source of estimate	l swell fac	ctor: Cat Hand	book			
	ПІСТІС					
HOURLY PRO						
Average push dista		100 feet				
Unadjusted hourly	productio	n: 852.6 LCY	/hr			
Materials consister	cy descrij	ption: Loose	stockpile 1.2			
Average push grad	ient: 0) %				
Average site altitud		5,800 feet				
-		<u>.</u>				
Material weight:	3	,300 lbs/LCY				
Weight description	: _[Decomposed rock	- 75% Rock	, 25% Earth		
Job Condition Corr	action Fa	ctor		Source		
On						
	erator Skil	ll: 0	.750	(AVG.)		
Material of	erator Skil	ll: 0. y: 1.	.200	(CAT HB))	
Material of	erator Skil	ll: 0 y: 1 d: 1		, ,)	

Task # 04D

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:	0.697	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.4165	
Adjusted unit production: 3	55.11 LCY/hr	
Adjusted fleet production: 7	10.22 LCY/hr	

JOB TIME AND COST

Fleet size:	2 Dozer(s)
Unit cost:	\$0.587/LCY

Total job time:	2.74 Hours
Total job cost:	\$1,141

BULLDOZER RIPPING WORK

	Task description	: Rip	upper and lower access r	oads			
Site	: Mid-Contine	nt LST	Permit Action:	2019-04	Permit/Jo	ob#: <u>M198212</u>	21
	PROJECT ID	ENTIFICATI	<u>ON</u>				
	Task #: 05. Date: 5/1 User: AC	0/2019	State:ColoradoCounty:Garfield		Abbreviatio		1
	Agency	or organization	name: DRMS				
	HOURLY EQ	UIPMENT C	OST				
		Machine: Ca	t D8T - 8SU Shank Ripper		Horsepower: Shift Basis: Data Source:	310 1 per day (CRG)	
	Cost Breakdown					(CKO)	
	Cost Bleakdown	<u>.</u>			Utilization %		
		Ownership C		\$93.62	NA		
	Diam	Operating C		\$73.35	100		
		er Ownership Coperating Coperatin		\$8.93 \$7.78	<u>NA</u> 100		
	Kipj	Operator C		\$41.52	NA		
		Total Unit C		\$225.20			
		Total Fleet C	ost/Hour: \$450	.40			
	MATERIAL (.1 1 4		
			Sele	cted estimating	method: Area		
	Alternate Method	<u>ds:</u>					
eismic:	NA		Bank Volume:	NA	BCY	NA	DOV
Area:	2.00	acres	Rip Depth (ft):	2.00	Volume: 6,453		BCY or CO
		Source of estin	mated quantity: Field E	stimates			
	HOURLY PR	ODUCTION					
	Seismic:						
			Seismic Velocity:	NA	feet/second		
	Area:						
			ge Ripping Depth:	2.56	feet/pass		
			e Ripping Width:	7.08	feet/pass		
			e Ripping Length:	250.00	feet/pass		
			age Dozer Speed: Maneuver Time:	88.00 0.25	feet/minute minutes/pass		
			tion per unit area:	0.789	acres/hour		
	Job Condition Co		·				
			² Unit Production:	0.789	Acres/hr		
	_	5 7	Site Altitude:	6,800	feet		
			Altitude Adj:	1.00	(CAT HB)		
			Job Efficiency:	0.83	(1 shift/day)		
			Net Correction:	0.83	multiplier		
			Hourly Unit Production: Hourly Fleet Production:	0.65	Acres/hr Acres/hr		
	JOB TIME AN	ND COST					
	Fleet size:	2	_ Grader(s)	Total job time	. 1.53	Ηοι	ırs
	Unit cost:	\$343.985	Per acre	Total job cost	: \$688		

REVEGETATION WORK

Т	ask descrip	otion:	Reveg disturbed areas			
Site:	Mid-Con	tinent LST	Permit Action:	2019-04	Permit/Job	o#: <u>M1982121</u>
<u>PI</u>	ROJECT	IDENTIFIC	CATION			
	Task #:	06A	State: Colorado		Abbreviation:	None
	Date:	5/10/2019	County: Garfield		Filename:	M121-06a
	User:	ACY				

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			Total Fertilizer Materials	
			Cost/Acre	\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$106.29
Total Tilling Cost/Acre	\$106.29

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Native	10.00	32.37	\$70.00
Mountain Brome - Bromar	10.00	16.07	\$44.50
Kentucky Bluegrass - Lato	10.00	493.57	\$29.40
Milk Vetch, Cicer - Lutana	10.00	33.29	\$84.00
Thurber's Fescue	10.00	103.31	\$629.00
Western Wheatgrass - Native	10.00	25.25	\$71.70
Totals Seed Mix	60.00	703.86	\$928.60

Application

Description		Cost /Acre
Hydro seeding (MEANS 32 92 19.14 0200)		\$919.12
	Total Seed Application Cost/Acre	\$919.12

MULCHING and MISCELLANEOUS

Materials

	Units /			
Description	Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	\$2.81	\$2.81
Hydromulch tackifier, >15 ac. {Materials Only}	1.00	ACRE	\$496.58	\$496.58
Total Mulch Materials Cost/Acre				\$499.39

Application

Description		Cost /Acre
Hydromulching (MEANS 32 92 19.13 1100)		\$629.20
Weed spray, truck, non-aquatic areas, ann. [DMG]		\$23.91
	Total Mulch Application Cost/Acre	\$653.11

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
Fir, Douglas	44	Tubling, 3 cu. in. container (MEANS)	\$1.17	\$2.40	\$51.48
Oak, Gambel's	50	Bare root seedling, 11-16 inch ht. (MEANS)	\$2.18	\$0.00	\$109.00
Serviceberry	50	Bare root seedling, 11-16 inch ht. (MEANS)	\$2.18	\$0.00	\$109.00
			Nurserv Stoo	ek Cost / Acre	\$269.48

JOB TIME AND COST

	No. of Acres:	8.4	Cost /Acre:	\$3,375.99
Estimate	ed Failure Rate:	25%	Cost /Acre*:	\$3,375.99
*Selected Replanti	ng Work Items:	TILLING,SEEDIN	G,NURSERY,MULC	
		HING		
Initial Job Cost:	\$28,358.32			
Reseeding Job Cost:	\$7,089.58			
Total Job Cost:	\$35,448			
Job Hours:	20.00			

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description:	Init	ial Mobilization					
e: Mid-Continent	LST	Permit	Action: _2019-	04		Permit/Job#: <u>M</u>	1982121
PROJECT IDEN	TIFICATI	<u>ON</u>					
Task #: 07A		State: Co	olorado		Abbre	eviation: None	
Date: 5/10/ User: ACY	2019		urfield		Fi	ilename: M121	-07a
Agency or	organizatior	name: DRMS					
EQUIPMENT TH	RANSPOR	T RIG COST					
					Shift ba	L	
				(Cost Data Sou	rce: CRG Da	ta
Truck	Fractor Desc	ription: GENE	RIC ON-HIGHV			DR, 6X4, DIESEL	POWERED,
Tanala	Trailar Daga	minitian.	ENEDIC EOLD		(2ND HALF,	2006) ROP DECK EQUI	DMENT
ITUCK	Trailer Desc	ription: G			(25T, 50T, A)		IPMENI
			1	KAILEK	(231, 301, Al	ND 1001)	
Cost Breakdown:							
Available Rig Ca	pacities	0-25 Tons	26-50 Tons	51-	- Tons		
Ownership (\$16.63	\$18.37	\$2	22.33		
Operating (\$44.38	\$46.13	\$5	50.07		
Operator (Cost/Hour:	\$27.66	\$27.66	\$2	27.66		
Helper (Cost/Hour:	\$0.00	\$25.39	\$2	25.39		
Total Unit C	Cost/Hour:	\$88.67	\$117.55	\$1	25.45		
NON ROADABL	E EQUIPN	<u>MENT:</u>					
Machine	Weight/	Owner ship	Haul Rig	Fleet	Haul Trip	Return Trip	DOT Permit
Machine Description	Unit	Owner ship Cost/hr/ unit	Haul Rig Cost/hr/uni	Fleet Size	Haul Trip Cost/hr/	Return Trip Cost/hr/ fleet	DOT Permit Cost/ fleet
Description		Cost/hr/ unit	Cost/hr/uni t	Size			Cost/ fleet
Description Cat 336D L 10'-6" Stick	Unit (TONS) 32.23	Cost/hr/ unit \$50.81	Cost/hr/uni		Cost/hr/ fleet \$168.36	Cost/hr/ fleet \$117.55	Cost/ fleet \$250.00
Description Cat 336D L 10'-6" Stick CAT 972H	Unit (TONS) 32.23 28.00	Cost/hr/ unit \$50.81 \$44.67	Cost/hr/uni t \$117.55 \$117.55	Size	Cost/hr/ fleet \$168.36 \$486.66	Cost/hr/ fleet \$117.55 \$352.65	Cost/ fleet
Description Cat 336D L 10'-6" Stick CAT 972H Cat D8T - 8SU	Unit (TONS) 32.23 28.00 53.08	Cost/hr/ unit \$50.81 \$44.67 \$102.55	Cost/hr/uni t \$117.55 \$117.55 \$125.45	Size 1 3 2	Cost/hr/ fleet \$168.36 \$486.66 \$456.00	Cost/hr/ fleet \$117.55 \$352.65 \$250.90	Cost/ fleet \$250.00 \$500.00 \$500.00
Description Cat 336D L 10'-6" Stick CAT 972H	Unit (TONS) 32.23 28.00	Cost/hr/ unit \$50.81 \$44.67	Cost/hr/uni t \$117.55 \$117.55	Size	Cost/hr/ fleet \$168.36 \$486.66	Cost/hr/ fleet \$117.55 \$352.65 \$250.90 \$88.67	Cost/ fleet \$250.00 \$500.00
Description Cat 336D L 10'-6" Stick CAT 972H Cat D8T - 8SU Broderson IC-200-	Unit (TONS) 32.23 28.00 53.08	Cost/hr/ unit \$50.81 \$44.67 \$102.55	Cost/hr/uni t \$117.55 \$117.55 \$125.45	Size 1 3 2	Cost/hr/ fleet \$168.36 \$486.66 \$456.00	Cost/hr/ fleet \$117.55 \$352.65 \$250.90	Cost/ fleet \$250.00 \$500.00 \$500.00

Subtotals: \$1,560.10 \$1,044.87 \$2,000.00

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Hydroseeder with Tractor	\$73.49	1	\$73.49	\$73.49
Light Duty Pickup, 4x4, 1 T. Crew	\$47.19	1	\$47.19	\$47.19
Generic 12-18 cy, 6x4	\$97.40	2	\$194.80	\$194.80
		Subtotals	\$315.48	\$315.48

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region: Total one-way travel distance: Average Travel Speed:	GLENWOOD SPRINGS 2.00 15.00	miles mph
Total Non-Roadable Mob/Demob Cost *	\$7,814.86	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	\$84.13	_

Transportation Cycle Time:

	Non-	
	Roadable	Roadable
	Equipment	Equipment
Haul Time (Hours):	0.13	0.13
Return Time (Hours):	0.13	0.13
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.27	0.27

JOB TIME AND COST

Total job time:	2.53	Hours
Total job cost:	\$7,899	_

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task #: 07B State: Colorado Abbreviation: None Date: 5/10/2019 County: Garfield Filename: M121-07b User: ACY Agency or organization name: DRMS EQUIPMENT TRANSPORT RIG COST 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: \$16.63 \$18.37 \$22.33 Operator Cost/Hour: \$21.66 \$27.66 \$27.66 Helper Cost/Hour: \$0.00 \$25.39 \$25.39 Total Unit Cost/Hour: \$88.67 \$117.55 \$125.45		Sec						
Date: 5/10/2019 County: Garfield Filename: M121-07b User: ACY Agency or organization name: DRMS Image: Cost Data Source: Image: Cost Data Source: Image: Cost Data Source: Image: Cost Data Source: CRG Data EQUIPMENT TRANSPORT RIG COST GENERIC ON-HIGHWAY TRUCK TRACTOR, 6X4, DIESEL POWERED 400 HP (2ND HALF, 2006) GENERIC FOLDING GOOSENECK, DROP DECK EQUIPMENT TRAILER (25T, 50T, AND 100T) Cost Breakdown: 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: \$16.63 \$18.37 \$22.33 Operator Cost/Hour: \$27.66 \$27.66 Helper Cost/Hour: \$88.67 \$117.55 \$125.45 NON ROADABLE EQUIPMENT: Machine Weight/ Owner ship Haul Rig Fleet Haul Trip Return Trip DOT Perm Machine Weight/ Owner ship Haul Rig Fleet Haul Trip Cost/hr/ fleet Cost/hr/ fleet	Mid-Contine	nt LST	Permit	Action: 2019-	04]	Permit/Job#:	M1982121
Date: 5/10/2019 County: Garfield Filename: M121-07b User: ACY Agency or organization name: DRMS Image: Cost Data Source: Image: Cost Data Source: Image: Cost Data Source: Image: Cost Data Source: CRG Data EQUIPMENT TRANSPORT RIG COST GENERIC ON-HIGHWAY TRUCK TRACTOR, 6X4, DIESEL POWERED 400 HP (2ND HALF, 2006) GENERIC FOLDING GOOSENECK, DROP DECK EQUIPMENT TRAILER (25T, 50T, AND 100T) Cost Breakdown: 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: \$16.63 \$18.37 \$22.33 Operator Cost/Hour: \$27.66 \$27.66 Helper Cost/Hour: \$88.67 \$117.55 \$125.45 NON ROADABLE EQUIPMENT: Machine Weight/ Owner ship Haul Rig Fleet Haul Trip Return Trip DOT Perm Machine Weight/ Owner ship Haul Rig Fleet Haul Trip Cost/hr/ fleet Cost/hr/ fleet	PROJECT IDE	NTIFICATI	<u>ON</u>					
User: ACY Agency or organization name: DRMS EQUIPMENT TRANSPORT RIG COST Shift basis: 1 per day Cost Data Source: 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: Generatives Available Rig Capacities 0-25 Tons 26-50 Tons Ownership Cost/Hour: \$16.63 \$18.37 Operator Cost/Hour: \$27.66 \$27.66 Helper Cost/Hour: \$0.00 \$25.39 Total Unit Cost/Hour: \$88.67 \$117.55 NON ROADABLE EQUIPMENT: Sale of Startor Size Machine Weight/ Unit (TONS) Owner ship Cost/hr/unit Fleet Cost/hr/Init Haul Trip Cost/hr/ Return Trip Cost/hr/ DOT Perm Cost/hr/	Task #: 07	В	State: Co	olorado		Abbre	eviation: No	ne
Agency or organization name: DRMS EQUIPMENT TRANSPORT RIG COST 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 (2ST, 50T, AND 100T) Cost Breakdown: Generating Cost/Hour: Available Rig Capacities 0-25 Tons Ownership Cost/Hour: \$16.63 \$16.63 \$18.37 Ownership Cost/Hour: \$27.66 Operator Cost/Hour: \$27.66 Helper Cost/Hour: \$0.00 \$25.39 \$25.39 Total Unit Cost/Hour: \$88.67 Stato \$117.55 Stato \$25.39 Total Unit Cost/Hour: \$88.67 Machine Weight/ Unit Owner ship Cost/hr/unit Machine Weight/ Unit Owner ship Cost/hr/unit Fleet Cost/hr/lini Haul Trip Cost/hr/line DOT Perm Cost/hr/leet	Date: 5/1	0/2019	County: Ga	urfield		Fi	ilename: M1	21-07b
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: \$16.63 \$18.37 \$22.33 Operating Cost/Hour: \$16.63 \$18.37 \$22.33 Operating Cost/Hour: \$44.38 \$46.13 \$50.07 Operator Cost/Hour: \$27.66 \$27.66 \$27.66 Helper Cost/Hour: \$0.00 \$25.39 \$25.39 Total Unit Cost/Hour: \$88.67 \$117.55 \$125.45 NON ROADABLE EQUIPMENT: Unit Machine Weight/ Unit Owner ship Cost/hr/ unit Fleet Cost/hr/unit Return Trip Cost/hr/ lieet DOT Perm Cost/hr/ fleet	User: AC	CY						
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Total Unit Cost/Hour:\$88.67\$117.55\$125.45NON ROADABLE EQUIPMENT:Machine DescriptionWeight/ Unit (TONS)Owner ship 	Available Rig O Ownershi	p Cost/Hour: g Cost/Hour:	\$16.63 \$44.38	\$18.37 \$46.13	\$2 \$5	2.33 0.07		
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Machine DescriptionWeight/ Unit (TONS)Owner ship Cost/hr/ unitHaul Rig Cost/hr/unitFleet SizeHaul Trip Cost/hr/ fleetReturn Trip Cost/hr/ fleetDOT Perm Cost/hr/ fleet	Available Rig O Ownership Operating Operato Helpe	p Cost/Hour: g Cost/Hour: r Cost/Hour: r Cost/Hour:	\$16.63 \$44.38 \$27.66 \$0.00	\$18.37 \$46.13 \$27.66 \$25.39	\$2 \$5 \$2 \$2 \$2	2.33 0.07 7.66 5.39		
Machine DescriptionWeight/ Unit (TONS)Owner ship Cost/hr/ unitHaul Rig Cost/hr/unitFleet SizeHaul Trip Cost/hr/ fleetReturn Trip Cost/hr/ fleetDOT Perm Cost/hr/ fleet	Available Rig O Ownership Operating Operato Helpe	p Cost/Hour: g Cost/Hour: r Cost/Hour: r Cost/Hour:	\$16.63 \$44.38 \$27.66 \$0.00	\$18.37 \$46.13 \$27.66 \$25.39	\$2 \$5 \$2 \$2 \$2	2.33 0.07 7.66 5.39		
Description Unit Cost/hr/ unit Cost/hr/ unit Cost/hr/ Size Cost/hr/ Cost/hr/ fleet Cost/ fleet Cost/ fleet	Available Rig C Ownership Operating Operato Helpe Total Uni	p Cost/Hour: g Cost/Hour: r Cost/Hour: r Cost/Hour: t Cost/Hour:	\$16.63 \$44.38 \$27.66 \$0.00 \$88.67	\$18.37 \$46.13 \$27.66 \$25.39	\$2 \$5 \$2 \$2 \$2	2.33 0.07 7.66 5.39		
Description Unit Cost/hr/ unit Cost/hr/ unit Cost/hr/ Size Cost/hr/ Cost/hr/ fleet Cost/ fleet Cost/ fleet	Available Rig C Ownership Operating Operato Helpe Total Uni	p Cost/Hour: g Cost/Hour: r Cost/Hour: r Cost/Hour: t Cost/Hour:	\$16.63 \$44.38 \$27.66 \$0.00 \$88.67	\$18.37 \$46.13 \$27.66 \$25.39	\$2 \$5 \$2 \$2 \$2	2.33 0.07 7.66 5.39		
t fleet	Available Rig O Ownership Operating Operato Helpe Total Uni	p Cost/Hour: g Cost/Hour: r Cost/Hour: r Cost/Hour: t Cost/Hour: BLE EQUIPN	\$16.63 \$44.38 \$27.66 \$0.00 \$88.67 IENT:	\$18.37 \$46.13 \$27.66 \$25.39 \$117.55	\$2 \$5 \$2 \$2 \$1 \$1	2.33 0.07 7.66 5.39 25.45	Return Trip	DOT Permit
Subtotals: \$0.00 \$0.00 \$0.00	Available Rig C Ownership Operating Operato Helpe Total Uni NON ROADAE Machine	p Cost/Hour: g Cost/Hour: r Cost/Hour: r Cost/Hour: t Cost/Hour: BLE EQUIPN Weight/	\$16.63 \$44.38 \$27.66 \$0.00 \$88.67 IENT: Owner ship	\$18.37 \$46.13 \$27.66 \$25.39 \$117.55 Haul Rig	\$2 \$5 \$2 \$2 \$1 \$1 Fleet	2.33 0.07 7.66 5.39 25.45 Haul Trip		
	Available Rig C Ownership Operating Operato Helpe Total Uni NON ROADAE Machine	p Cost/Hour: g Cost/Hour: r Cost/Hour: r Cost/Hour: t Cost/Hour: BLE EQUIPN Weight/ Unit	\$16.63 \$44.38 \$27.66 \$0.00 \$88.67 IENT: Owner ship	\$18.37 \$46.13 \$27.66 \$25.39 \$117.55 Haul Rig Cost/hr/uni	\$2 \$5 \$2 \$2 \$1 \$1 Fleet	2.33 0.07 7.66 5.39 25.45 Haul Trip Cost/hr/		
	Available Rig C Ownership Operating Operato Helpe Total Uni NON ROADAE Machine	p Cost/Hour: g Cost/Hour: r Cost/Hour: r Cost/Hour: t Cost/Hour: BLE EQUIPN Weight/ Unit	\$16.63 \$44.38 \$27.66 \$0.00 \$88.67 IENT: Owner ship	\$18.37 \$46.13 \$27.66 \$25.39 \$117.55 Haul Rig Cost/hr/uni t	\$2 \$5 \$2 \$2 \$12 \$12 Fleet Size	2.33 0.07 7.66 5.39 25.45 Haul Trip Cost/hr/ fleet	Cost/hr/ fleet	t Cost/ fleet
	Available Rig C Ownership Operating Operato Helpe Total Uni NON ROADAE Machine	p Cost/Hour: g Cost/Hour: r Cost/Hour: r Cost/Hour: t Cost/Hour: BLE EQUIPN Weight/ Unit	\$16.63 \$44.38 \$27.66 \$0.00 \$88.67 IENT: Owner ship	\$18.37 \$46.13 \$27.66 \$25.39 \$117.55 Haul Rig Cost/hr/uni t	\$2 \$5 \$2 \$2 \$12 \$12 Fleet Size	2.33 0.07 7.66 5.39 25.45 Haul Trip Cost/hr/ fleet	Cost/hr/ fleet	t Cost/ fleet

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Hydroseeder with Tractor	\$73.49	1	\$73.49	\$73.49
Light Duty Pickup, 4x4, 1 T.	\$47.19	1	\$47.19	\$47.19
Crew				
		Subtotals:	\$120.68	\$120.68

Subtotals: \$120.68 \$120.68

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region: Total one-way travel distance: Average Travel Speed:	GLENWOOD SPRINGS 2.00 15.00	miles mph
Total Non-Roadable Mob/Demob Cost *	\$0.00	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	\$32.18	_

Transportation Cycle Time:

Haul Time (Hours): Return Time (Hours): Loading Time (Hours):	Non- Roadable Equipment 0.13 0.13 0.50	Roadable Equipment 0.13 0.13 NA
Unloading Time (Hours):	0.50	NA NA
Subtotals:	1.27	0.27

JOB TIME AND COST

Total job time: 0.27 Hours

Total job cost: **\$32**



1313 Sherman Street, Room 215 Denver, CO 80203

June 17, 2019

RE: Mid-Continent LST, Permit No. M-1982-121, SI-3 Reclamation Cost Estimate

Dear Mr. Dangler:

This reclamation cost update was in response to the site inspection conducted on April 10, 2019. It is Division policy to periodically update its costs to ensure that the Financial Warranty adequately, reflects the actual current cost of fulfilling the requirements of the approved reclamation plan.

Below is a table summarizing input values that have been updated. This table does not account for price changes resulting from inflation or other RS Means cost changes. Bond calculations are based on a combination of field observations and worst case scenario based on the approved reclamation permit.

	Requirements	C 1	
Task	Form Used	Change	Justification
02a	Excavator	+	Updated highwall length 600 to 800 LF, 2 benches instead of 3.
02b	Excavator	-	Changed material from topsoil to Earth/Rock Mixture (more representative).
03a	Loader		No Changes
03b	Dozer		No Changes
03c	Loader	+	Updated processing bench dimensions 150' W x 800' L is 2.75ac. Changed material from topsoil to Earth/Rock Mixture (more representative).
03d	Dozer	+	Updated transported LCY volumes from 03c
04a	Loader	-	Removed need to transport backfill material
04b	Dozer	-	Minor grading of existing highwall

DRMS Requirements



04c	Loader	+	Changed material from topsoil to Earth/Rock Mixture (more representative).
04d	Dozer	+	Updated material type and LCY transported volume
05a	Ripper		No Changes
07a	Mob	+	Additional equipment to dismantle, load and haul structures
07b	Mob		No Changes
06a	Reveg	+	Updated acreages, larger processing bench 8 ac to 8.4 ac
TR-5	Borehole	-	Removed-Tasks completed
Indire	ct	+	3% Contingency added to help meet BLM requirements

Additional BLM Requirements

Task	Form Used	Change	Justification
01a	Demo	+	Per BLM on-site disposal of metal structures is not authorized on Federal Lands. Mill building, Silos, Scale, Convey and associated concrete slabs have been changed from on-site disposal in excavated pit to off-site disposal in approved landfill. Haul distance is approx. 8 miles to South Canyon Garfield County Landfill. Additional mileage and disposal fees have been included where CIRCES item is not inclusive.
	Demo	+	Additional Job Hours added for dismantling, loading and hauling of materials.
06a	Reveg	+	Per BLM added Fir planting requirement. 1 tree per 1000 sq ft (8.4 ac of reveg= 365,904 sq ft / 1000 sq ft = 365.9 trees / 8.4 ac = 43.56 trees per ac)
Indire	ct	+	10% Contingency required, DRMS holds 3%, add 7% per BLM
			10% Contractor Profit, DRMS requires 10% amount sufficient
			1.5% Contractor Liability, DRMS requires 2.02% amount sufficient
		+	10% Contract Administration (engineering bid-prep), DRMS requires 5.3%, add 4.7%

+	21.6% BLM Contract Administration, not required by DRMS, add 21.6% of reclamation management and/or administration cost for BLM
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Please feel free to contact me with any further questions. Amy Yeldell at the Division of Reclamation, Mining and Safety, 1313 Sherman St., Room 215, Denver, CO 80203. Direct contact can be made by phone at 970-254-8511 or via email at amy.yeldell@state.co.us

Sincerely,

Amy Geldell

Amy Yeldell Environmental Protection Specialist Department of Natural Resources Division of Reclamation, Mining and Safety Phone: (970) 254-8511 Fax: (970) 241-1516

Ec: Travis Marshall, Senior EPS, Grand Junction DRMS Jessica Lopez Pearce, BLM



United States Department of the Interior BUREAU OF LAND MANAGEMENT COLORADO RIVER VALLEY FIELD OFFICE 2300 River Frontage Road Silt, CO 81652 www.blm.gov



June 4, 2019

In Reply Refer To: COC-074205 (CON040)

Amy Yeldell Colorado Division of Reclamation, Mining and Safety 101 S. 3rd Street, Suite 301 Grand Junction, CO 81501

Dear Ms. Yeldell,

An administrative error was discovered with BLM's previous reclamation cost estimate indirect cost requirements after our May 23, 2019 letter to you. Please refer to the corrected indirect cost requirements below:

- 1. Per the BLM Solid Minerals Handbook H-3809-1, the following indirect costs are required in the reclamation cost estimate:
 - a. Engineering, design, and construction plan: 8% of estimated reclamation operation and maintenance costs
 - i. DRMS has documented 7.22% of the direct plus overhead and profit costs. While the agencies' percentage rates are different, the costs upon which the rates are calculated are different and the difference are minor. This is acceptable.
 - b. Contingency: 10% of estimated reclamation operation and maintenance costs
 - i. DRMS has documented 3% of direct costs. This figure must be increased to 10%.
 - c. Contractor Profit: 10% of estimated reclamation operation and maintenance costs
 i. DRMS has documented 10% of direct costs. This is acceptable.
 - d. Liability Insurance: 1.5% of the total labor costs

i. DRMS has documented 2.02% of total costs. This is acceptable.

- e. Performance and Payment Bond: 1.5% of the estimated contract cost
 - i. DRMS has documented 1.05% for a performance bond. This indirect rate must increased to 1.5% of the estimated contract cost.
- f. BLM Contract Administration: 10% of the estimated reclamation operation and maintenance costs
 - i. DRMS has documented 5.3% for reclamation management and/or administration. This indirect rate must be increased to 10%.
- g. BLM Indirect Cost: 21.6% of the BLM contract administration costs
 - i. DRMS does not have this documented in the reclamation cost estimate. Please include this indirect cost as 21.6% of the reclamation management and/or administration costs.

The addition of spruce or fir seedlings at a rate of ten (10) seedlings per 1,000 square feet of reclaimed bench remains a BLM requirement of the reclamation cost estimate.

If you have any questions or concerns, please contact Jessica Lopez Pearce, Geologist, at (970) 876-9018 or jlopezpearce@blm.gov.

Sincerely,

Larry W. Sandoval, Jr. Field Manager l