May 17, 2017

Jason Burkey Oldcastle SW Group, Inc. 2273 River Road Grand Junction, CO 81502



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

1313 Sherman Street, Room 215 Denver, CO 80203

## RE: Sievers Pit, Permit No. M-1977-098, Reclamation Costs Update and Notice of Surety Increase (SI-5)

Dear Mr. Burkey:

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).

Division calculations estimate the cost to reclaim the above referenced site to be <u>\$432,580</u> rounded down from <u>\$432,581.40</u>. This is an increase of <u>\$137,408</u> over the <u>\$295,172.00</u> currently held by the Division. This estimate is based on conditions observed during the April 13, 2017 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, July 17, 2017. Please review the enclosed figures as soon as possible and contact our office if any calculation errors are noted.

Please make arrangements with Barbara Coria 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 Barbara Coria.

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 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

Ec: Russ Means, Senior EPS, Grand Junction DRMS Enc: Financial Warranty Cost Estimate



## COST SUMMARY WORK

<b>-</b>	Fask descrip	otion:	Bond recalc post	inspection (	04-2017		
Site:	Sievers P	it	Per	mit Action:	04-2017	Permit/Jol	o#: M1977098
<u>P</u>	ROJECT Task #: Date: User:	IDENTIFIC ACY 5/17/2017 ACY	CATION State: County:	Colorado Garfield		Abbreviation: Filename:	None M098-ACY

Agency or organization name: DRMS

## TASK LIST (DIRECT COSTS)

Task		Form	Fleet	Task	
Iask	Description	Used	Size	Hours	Cost
01a	Demo onsite structures	DEMOLISH	1	40.00	\$67,593.29
02a	Rip asphalt road and cement parking areas	RIPPER	2	3.53	\$1,750.00
02b	Removal/haulage of asphalt/cement to excavated	LOADER	2	9.36	\$2,460.00
	pit				
03a	Highwall reduction	DOZER	2	7.30	\$3,355.00
04a	Rip pit floor	RIPPER	2	46.75	\$23,135.00
05a	Transport topsoil from stockpiles	SCRAPER1	2	127.58	\$113,853.00
05b	Distribute topsoil/finish grading	DOZER	2	13.53	\$6,214.00
06a	Reveg. slopes-Phase B only site observations	REVEGE	] 1	16.00	\$13,092.00
06b	Reveg. pit floor (65ac. in stages A & B), staff	REVEGE	1	80.00	\$100,415.00
	estimates				
07a	Mobilize reclamation crew/equipment	MOBILIZE	1	2.68	\$6,714.00
		SUBTO	TALS:	346.73	\$338,581
		<u></u>			

## **INDIRECT COSTS**

## **OVERHEAD AND PROFIT:**

Liability insurance:	2.02	Total =	\$6,839.34
Performance bond:	1.05	Total =	\$3,555.10
Job superintendent:	173.37	Total =	\$12,664.31
Profit:	10.00	Total =	\$33,858.10
		TOTAL O & P =	\$56,916.85
		CONTRACT AMOUNT (direct + O & P) = $($	\$395,497.85

### LEGAL - ENGINEERING - PROJECT MANAGEMENT:

TOTAL DO		······································	¢ 422 591 40
	TOTAL IN	DIRECT COST =	\$94,000.40
CONTINGENCY:	0.00	Total =	\$0.00
Reclamation management and/or administration:	5.00		\$19,774.89
Engineering work and/or contract/bid preparation:	4.25	Total =	\$16,808.66
Financial warranty processing (legal/related costs):	500.00	Total =	500.00

TOTAL BOND AMOUNT (direct + indirect) = <u>\$432,581.40</u>

### **DEMOLITION WORK**

ask description:	Demo onsit	e structures				
Sievers Pit		Permit Action:	04-2017	Permit/J	ob#:	M1977098
T IDENTIFICATIO	<u>N</u>					
01A	State:	Colorado		Abbreviation:	None	2
5/17/2017	County:	Garfield		Filename:	M09	8-01a
ACY				-		
	ievers Pit <u> 01A 5/17/2017 ACY </u>	ievers Pit       01A     State:       5/17/2017     County:       ACY     State:	ievers Pit     Denio onsite structures       01A     State:       5/17/2017     County:       Garfield	ievers Pit     Permit Action:     04-2017       01A     State:     Colorado       5/17/2017     County:     Garfield	ievers Pit     Permit Action:     04-2017     Permit/J       01A     State:     Colorado     Abbreviation:       5/17/2017     County:     Garfield     Filename:	Sk description:       Deno onsite structures         ievers Pit       Permit Action:       04-2017       Permit/Job#:         IDENTIFICATION       Old       State:       Colorado       Abbreviation:       None         01A       State:       Colorado       Filename:       M09         5/17/2017       County:       Garfield       Filename:       M09

### UNIT COSTS

#### Structure or Item **Demolition Menu** Unit **Total Cost** Dimensions Quantity Unit Selection Description Cost Shop building 200'Lx50'Wx20'H Bldg. (SN) demo./on-site 200,000.00 CF \$37,800.00 \$0.19 disposal in excavated pit - Max. 50 ft. push Office building-1 Bldg. (SN) demo./on-site 48,000.00 CF \$0.19 \$9,072.00 80'Lx40'Wx15'H disposal in excavated pit - Max. 50 ft. push Shop Pad 200'Lx50'W Demo. and on-site 10,000.00 SF \$0.85 \$8,500.00 disposal in excavated pit, 8 in. thick - Max. 50 ft. push Office building-2 55'Wx75'Lx15'H Bldg. (SN) demo./on-site 61,875.00 CF \$0.17 \$10,766.25 disposal in existing pit or cut - Max. 50 ft. push

				<b>Total Cost</b>	
		Subtotal		(adjusted for	
Job Hours:	40.00	(unadjusted):	\$66,138.25	location):	\$67,593.29

### Location adjustment: 102.20 %

## BULLDOZER RIPPING WORK

	Task description	Rip asp	halt road and cement	parking areas	5			
Site	: Sievers Pit		Permit Action:	04-2017	P	ermit/Job#:	M197709	98
	PROJECT ID	ENTIFICATION	I					
	Task #: 02	A	State: Colorado		Abb	previation:	None	
	Date: 5/1	7/2017	County: Garfield			Filename:	M098-02a	a
	User: AC	CY						
	Agency	or organization nar	me: DRMS					
	HOURLY EQ	UIPMENT COS	<u>Γ</u>					
	Basic	Machine: Cat D9	9T - 9SU		Horsepower:		405	
	Ripper Att	achment: <u>3-Shan</u>	ık Ripper		Shift Basis:	1	per day	
					Data Source:	(	CRG)	
	Cost Breakdown	<u>.</u>						
					Utilization %			
		Ownership Cost/	Hour:	\$100.59	NA 100	_		
	Pinn	Operating Cost/	Hour:	\$87.23	100 NA	-		
	Rip	per Operating Cost/	Hour.	\$6.82	100	_		
	Kipj	Operator Cost/	Hour:	\$41.85	NA	-		
		Total Unit Cost/	Hour:	\$247.43		_		
		I otal Fleet Cost/	Hour: \$494	.85				
	MATERIAL (	<u>UANTITIES</u>	Sele	cted estimating	g method: Are	a		
	Alternate Method	<u>ls:</u>						
Seismic:	NΔ		Bank Volume	NΔ	BCV		NΔ	
Area:	3.79	acres	Rip Depth (ft):	0.50	Volume:	3.057		BCY or CCY
		Source of estimate	1  1  ( ) =	apphalt roads (	-	lying lot		
		Source of estimation	ed qualitity. <u>5.59ac a</u>	aspirait roads, c	.4 ac cement pai	King lot		
	HOURLY PR	<b>ODUCTION</b>						
	Seismic:							
		Seis	smic Velocity:	NA	feet/sec	cond		
	Area:							
		Average R	ipping Depth:	2.63	mph			
		Average R	ipping Width:	7.67	degrees	3		
		Average Ri	pping Length:	50.00	feet			
		Average	Dozer Speed:	88.00	feet			
		Production	per unit area:	0.25	leet	our		
				0.040		oui		
	Job Condition Co	orrection Factors						
	Ur	adjusted Hourly Un	it Production:	0.646	Acres/h	ır		
			Site Altitude:	6,020	feet			
			Altitude Adj:	1.00	(CAT I	HB)		
		J	ob Efficiency:	0.83	(1 shift	/day)		
		IN	et Correction:	0.83	multipl	ier		
		Adjusted Ho	urly Unit Production:	0.54	Acres/hr			
		Adjusted Hou	arly Fleet Production:	1.07	Acres/hr			
	JOB TIME AN	ND COST						
	Fleet size:	2 0	Grader(s)	Total job tim	ne:	3.54	Hou	ırs
	Unit cost:	\$461.738 P	er acre	Total job co	st:\$	61,750		

## WHEEL LOADER - LOAD AND CARRY WORK

	I	Permit Action:	04-2017		Permit/Job#:	M1977098
PROJECT IDENTII	FICATION					
Task #: 02B	State	e: Colorado		Ab	breviation:	None
Date: 5/17/2017	7 County	y: Garfield			Filename:	M098-02b
User: ACY						
Agency or orga	anization name:	DRMS				
HOURLY EQUIPM	ENT COST					
Basic Machine:	CAT 972H			Horsepower		287
Attachment 1:	ROPS Cab			Shift Basis:	1 p	er day
				Data Source:	(0	CRG)
Cost Breakdown:						
<u></u>			Utilization %			
Ownership Cost	t/Hour: \$4	43.47	NA			
Operating Cost	t/Hour: \$4	46.72	100			
Operator Cost	t/Hour: $\$^2$	11.20	NA			
Total Unit Cost	/Hour: \$1	31.39				
Total Fleet Cos	st/Hour: \$2	262.78				
Initial volume:		ICV				
Initial volume: Loose volume:	3,057	LC I	volume			
Loose volume: Loose volume: Source Source of e	<b>3,057</b> e of estimated volun estimated swell fact	ne: <u>Ripped v</u> or: <u>Cat Hanc</u>	olume Jbook			
Loose volume: Loose volume: Source Source of e HOURLY PRODUC	3,057 e of estimated volun estimated swell fact <u>CTION</u> Unadjusted Bas	ne: <u>Ripped v</u> or: <u>Cat Hand</u>	volume lbook (load, dump, mar	neuver):	0.525	minutes
Initial volume: Loose volume: Source Source of e <u>HOURLY PRODUC</u> Loader Cycle Time: Cycle Time Fact	3,057 e of estimated volun estimated swell fact CTION Unadjusted Bas tors	ne: <u>Ripped v</u> or: <u>Cat Hand</u>	volume dbook (load, dump, mar	neuver): Fact	0.525 tor (min.)	minutes Source
Initial volume: Loose volume: Source Source of e <u>HOURLY PRODUC</u> Loader Cycle Time: Cycle Time Fact	3,057 e of estimated volun estimated swell fact CTION Unadjusted Bas tors rial: Material 6"	ic Cycle Time	volume dbook (load, dump, man eter 0.03	neuver): Fact	0.525 tor (min.) 0.030	minutes Source (Cat HB)
Initial volume: Loose volume: Source Source of e HOURLY PRODUC Loader Cycle Time: Cycle Time Fact Mater Stockp	3,057 e of estimated volun estimated swell fact CTION Unadjusted Bas tors tial: Material 6" bile: Conveyor on	ine: <u>Ripped v</u> or: <u>Cat Hand</u> sic Cycle Time and over diame	volume dbook (load, dump, mar eter 0.03 ) ft. high or less 0.	neuver): Fact	0.525 tor (min.) 0.030 0.010	minutes Source (Cat HB) (Cat HB)
Initial volume: Loose volume: Source Source of e <u>HOURLY PRODUC</u> Loader Cycle Time: Cycle Time Fact Mater Stockp Truck Ownersh	3,057 e of estimated volum estimated swell fact CTION Unadjusted Bas tors rial: Material 6" bile: Conveyor of hip: Common ow	ine: <u>Ripped v</u> or: <u>Cat Hand</u> sic Cycle Time and over diame dozer piled 10 vnership of truc	volume dbook (load, dump, man eter 0.03 0 ft. high or less 0. cks and loaders -0	neuver): Fact .01 .04	0.525 tor (min.) 0.030 0.010 0.040 0.040	minutes Source (Cat HB) (Cat HB) (Cat HB) (Cat HB)
Initial volume: Loose volume: Source Source of e HOURLY PRODUC Loader Cycle Time: Cycle Time Fact Mater Stockp Truck Ownersh Operati Dump Targ	3,057 e of estimated volum estimated swell fact CTION Unadjusted Bastors tors trial: Material 6" bile: Conveyor on hip: Common ow ion: Constant op get: Nominal tar	ic Cycle Time and over diame dozer piled 10 vnership of truc eration -0.04 get 0.00	volume dbook (load, dump, man eter 0.03 ) ft. high or less 0. eks and loaders -0	neuver): Fact .01 .04	0.525 tor (min.) 0.030 0.010 0.040 0.040 0.040 0.000	minutes Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB)
Initial volume: Loose volume: Source Source of e HOURLY PRODUC Loader Cycle Time: Cycle Time Fact Mater Stockp Truck Ownersh Operati Dump Targ	3,057 e of estimated volun estimated swell fact CTION Unadjusted Bas tors tial: Material 6" bile: Conveyor on hip: Common ow ion: Constant op get: Nominal tar	ine: <u>Ripped v</u> or: <u>Cat Hand</u> sic Cycle Time and over diame dozer piled 10 vnership of truc eration -0.04 get 0.00 Net Cy	volume dbook (load, dump, mar eter 0.03 ) ft. high or less 0. eks and loaders -0 cle Time Adjustn	neuver): Fact .01 0.04 nent:	0.525 tor (min.) 0.030 0.010 0.040 0.040 0.000 0.000 0.040	minutes Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes
Initial volume: Loose volume: Source of e BOURLY PRODUC Loader Cycle Time: Cycle Time Fact Mater Stockp Truck Ownersh Operati Dump Targ	3,057 e of estimated volun estimated swell fact CTION Unadjusted Bas tors tors trial: Material 6" oile: Conveyor or hip: Common ow ion: Constant op get: Nominal tar	ne: <u>Ripped v</u> or: <u>Cat Hand</u> sic Cycle Time and over diame dozer piled 10 vnership of truc eration -0.04 get 0.00 Net Cy Adjust	volume dbook (load, dump, man eter 0.03 0 ft. high or less 0 eks and loaders -0 cle Time Adjustn red Basic Cycle T	neuver): Fact .01 0.04  nent:	0.525 tor (min.) 0.030 0.010 0.040 0.040 0.040 0.040 0.040 0.0485	minutes Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes
Initial volume: Loose volume: Source Source of e HOURLY PRODUC Loader Cycle Time: Cycle Time Fact Mater Stockp Truck Ownersh Operati Dump Tarş Rolling Resistance – Ro	3,057 e of estimated volun estimated swell fact CTION Unadjusted Bas tors tors trial: Material 6" oile: Conveyor on hip: Common ow ion: Constant op get: Nominal tar;	ine: <u>Ripped v</u> or: <u>Cat Hand</u> sic Cycle Time and over diame dozer piled 10 vnership of truc eration -0.04 get 0.00 Net Cy Adjust	volume dbook (load, dump, man eter 0.03 0 ft. high or less 0 cks and loaders -0 cle Time Adjustn red Basic Cycle T	neuver): Fact .01 0.04 nent: Time:	0.525 tor (min.) 0.030 0.010 0.040 0.040 0.040 0.040 0.040 0.040	minutes Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes
Initial volume: Loose volume: Source Source of e HOURLY PRODUC Loader Cycle Time: Cycle Time Fact Mater Stockp Truck Ownersh Operati Dump Tarş Rolling Resistance – Ro Haul	3,057 e of estimated volun estimated swell fact CTION Unadjusted Bas tors rial: Material 6" bile: Conveyor or hip: Common ow ion: Constant op get: Nominal tar; bad Conditions l: Rutted dirt, litt	ic Cycle Time and over diame dozer piled 10 vnership of truc eration -0.04 get 0.00 Net Cy Adjust	volume dbook (load, dump, man eter 0.03 ) ft. high or less 0. eks and loaders -0 cle Time Adjustn red Basic Cycle T e, no water, 2" tire	neuver): Fact .01 0.04  nent: Time: e penetration 5	0.525 tor (min.) 0.030 0.010 0.040 0.040 0.040 0.040 0.485	minutes Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes
Initial volume: Loose volume: Source Source of e HOURLY PRODUC Loader Cycle Time: Cycle Time Fact Mater Stockp Truck Ownersh Operati Dump Tars Rolling Resistance – Ro Haul Return	3,057 e of estimated volun estimated swell fact CTION Unadjusted Bas tors tors tial: Material 6" bile: Conveyor or hip: Common ow ion: Constant op get: Nominal tar; bad Conditions l: Rutted dirt, litt n: Rutted dirt, litt	ile maintenance	volume dbook (load, dump, man eter 0.03 ) ft. high or less 0. eks and loaders -0 cle Time Adjustn ted Basic Cycle T e, no water, 2" tire e, no water, 2" tire	neuver): Fact .01 0.04  nent: ``ime: e penetration 5 e penetration 5	0.525 tor (min.) 0.030 0.010 0.040 0.040 0.040 0.040 0.485 5.0 5.0	minutes Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes
Initial volume: Loose volume: Source Source of e <u>HOURLY PRODUC</u> Loader Cycle Time: Cycle Time Fact Mater Stockp Truck Ownersh Operati Dump Targ Rolling Resistance – Ro Haul Return	3,057 e of estimated volum estimated swell fact CTION Unadjusted Bas tors rial: Material 6" oile: Conveyor or hip: Common ow ion: Constant op get: Nominal tar; bad Conditions l: Rutted dirt, litt Rutted dirt, litt	ile maintenance	volume dbook (load, dump, man eter 0.03 ) ft. high or less 0. eks and loaders -0 cle Time Adjustn ted Basic Cycle T e, no water, 2" tire e, no water, 2" tire	neuver): Fact .01 .04 .04 .04 .04 .04 .04 .04 .04 .04 .04	0.525 tor (min.) 0.030 0.010 0.040 0.040 0.040 0.040 0.485 5.0 5.0	minutes Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes

(feet)         (%)         Res. (%)         (%)         (minutes)         Source           Haul Route:         600         0.00         5.00         5.00         0.5533         (Cat HI		Length	Grade Res.	Ronnig	Total Res.	Travel Time	Source
Haul Route:         600         0.00         5.00         5.00         0.5533         (Cat HI		(feet)	(%)	Res. (%)	(%)	(minutes)	Source
	Haul Route:	600	0.00	5.00	5.00	0.5533	(Cat HB)
Return Route: 600 0.00 5.00 5.00 0.4992 (Cat Hi	Return Route:	600	0.00	5.00	5.00	0.4992	(Cat HB)

			Total Travel Tir	ne: 1.0525	minutes
			Total Cycle Tir	ne: <b>1.5375</b>	minutes
Load Bucket Capacity					
Rated Capacit	ty: 5.60	LCY (heap	ped)		
Bucket Fill Facto	or: 0.900	Other - ce	mented materials	(85 - 95%) 0.900	
Adjusted Capacit	ty: <b>5.04</b>	LCY			
<u>Job Condition Correctio</u> Site Altitude: <u>6020</u> feet	n Factors				
		Source			
Altitude Adj:	1.00	(CAT HB	)		
Job Efficiency:	0.83	(1 shift/day	()		
Net Correction:	0.83	multiplier			
Ur	adjusted Hourly Un	it Production:	196.68	LCY/Hour	
	Adjusted Hourly Un	it Production:	163.25	LCY/Hour	
I	Adjusted Hourly Flee	et Production:	326.49	LCY/Hour	
JOB TIME AND CC	<u>)ST</u>				
Fleet size:	2 Loader(s	s)	Total job time:	9.36	Hours

Fleet size:	2	Loader(s)	Total job time:	9.36	Hour
Unit cost:	\$0.805	/LCY	Total job cost:	\$2,460	

Page 1 of 2

## BULLDOZER WORK

Sievers Pit	Pe	rmit Action:	04-2017	Permit/Job#:	M1977098
PROJECT IDENTI	FICATION				
Task #: 03A	State:	Colorado		Abbreviation:	None
Date: $5/17/2017$	County:	Garfield		Filename:	M098-03a
User: ACY					
Agency or org	anization name: D	RMS			
	ENT COST				
Pasia Mashina:	et DOT OSU				
Horsenower: 4	05				
Blade Type: S	emi-Universal				
Attachment: N	A				
Shift Basis: 1	per dav				
Data Source: (0	CRG)				
<u>_(</u>	)				
Cost Breakdown:			TT/11 /1 0/		
Ourmonshin Court/II		¢100 50	Utilization %		
Ownership Cost/Hour		\$100.39	INA 100		
Dipperating Cost/Hour	· · · · · · · · · · · · · · · · · · ·	\$87.23	100 NA		
Ripper own. Cost/Hour		\$0.00	NA 0		
Ripper op. Cost/Hour	·	\$0.00	0		
		C 11 0 E			
Operator Cost/Hour Total unit Cost/Hour: Total Fleet Cost/Hour:	\$229.67 <b>\$459.33</b>	\$41.85	NA		
Operator Cost/Hour Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN	\$229.67 \$459.33 TITIES	\$41.85	NA		
Operator Cost/Hour Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 12	\$229.67 \$459.33 TITIES 963	\$41.85	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <u>MATERIAL QUAN</u> Initial Volume: <u>12</u> Swell factor: <u>1.1</u>	\$229.67 \$459.33 TITIES 963 24	\$41.85 	NA		
Operator Cost/Hour Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 12 Swell factor: 1.1 Loose volume: 14	\$229.67 \$459.33 TITIES 963 24 565 LCY	\$41.85	NA		
Operator Cost/Hour Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 12 Swell factor: 1.1 Loose volume: 14 Source of estimated vol	\$229.67 \$459.33 TITIES 963 24 565 LCY ume: 2800 lft	\$41.85	NA		
Operator Cost/Hour Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 12 Swell factor: 1.1 Loose volume: 14 Source of estimated vol Source of estimated swe	\$229.67 \$459.33 TITIES 963 24 565 LCY ume: 2800 lft ell factor: Cat Han	\$41.85	NA 		
Operator Cost/Hour Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 12 Swell factor: 1.1 Loose volume: 14 Source of estimated vol Source of estimated swe	\$229.67 \$459.33 TITIES 963 24 565 LCY ume: 2800 lft ell factor: Cat Han	\$41.85	NA		
Operator Cost/Hour Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 12 Swell factor: 1.1 Loose volume: 14 Source of estimated vol Source of estimated swo HOURLY PRODUC	\$229.67         \$459.33         TITIES         963         24         565 LCY         ume:       2800 lft         cat Ham         CTION	\$41.85	NA al highwall 20'D		
Operator Cost/Hour Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 12 Swell factor: 1.1 Loose volume: 14 Source of estimated vol Source of estimated swo HOURLY PRODUC	\$229.67 \$459.33 TITIES 963 24 565 LCY ume: 2800 lft cat Han CTION 50 fast	\$41.85	al highwall 20'D		
Operator Cost/Hour Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 12 Swell factor: 1.1 Loose volume: 14 Source of estimated vol Source of estimated swe HOURLY PRODUC Average push distance: Unadianted hourly prod	\$229.67 \$459.33 TITIES 963 24 565 LCY ume: 2800 lft ell factor: Cat Han CTION 50 feet variant: 2110 5 LC	\$41.85	 al highwall 20'D		
Operator Cost/Hour Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 12 Swell factor: 1.1 Loose volume: 14 Source of estimated vol Source of estimated swo HOURLY PRODUC Average push distance: Unadjusted hourly prod	\$229.67 \$459.33 TITIES 963 24 565 LCY ume: 2800 lft Cat Han CTION uction: 50 feet 2,110.5 LC	\$41.85			
Operator Cost/Hour Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 12 Swell factor: 1.1 Loose volume: 14 Source of estimated vol Source of estimated vol Source of estimated swe HOURLY PRODUC Average push distance: Unadjusted hourly prod Materials consistency d	\$229.67         \$459.33         TITIES         963         24         565 LCY         ume:       2800 lft         cat Ham         CTION         uction:       50 feet         2,110.5 LC         escription:       Comp	\$41.85	NA al highwall 20'D		
Operator Cost/Hour Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 12 Swell factor: 1.1 Loose volume: 14 Source of estimated vol Source of estimated vol Source of estimated swo HOURLY PRODUC Average push distance: Unadjusted hourly prod Materials consistency d Average push gradient:	$\frac{\$229.67}{\$459.33}$ <b>TITIES</b> 963 24 565 LCY ume: 2800 lft ell factor: Cat Han <b>CTION</b> uction: 50 feet uction: 50 feet uction: Comp -15 %	\$41.85	al highwall 20'D		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 12 Swell factor: 1.1 Loose volume: 14 Source of estimated vol Source of estimated vol Source of estimated swo HOURLY PRODUC Average push distance: Unadjusted hourly prod Materials consistency d Average push gradient: Average site altitude:	\$229.67         \$459.33         TITIES         963         24         565 LCY         ume:       2800 lft         cat Han         CTION         uction:       50 feet         uction:       2,110.5 LC         escription:       Comp         -15 %       6,020 feet	\$41.85	al highwall 20'D		
Operator Cost/Hour Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 12 Swell factor: 1.1 Loose volume: 14 Source of estimated vol Source of estimated vol Source of estimated swo HOURLY PRODUC Average push distance: Unadjusted hourly prod Materials consistency d Average push gradient: Average site altitude: Material weight:	$\frac{\$229.67}{\$459.33}$ <b>TITIES</b> 963 24 565 LCY ume: 2800 lft ell factor: Cat Han <b>CTION</b> uction: 50 feet uction: 50 feet 2,110.5 LC escription: Comp $\frac{-15 \%}{6,020 \text{ feet}}$ 2,900 lbs/LCY	\$41.85	al highwall 20'D		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 12 Swell factor: 1.1 Loose volume: 14 Source of estimated vol Source of estimated vol Source of estimated vol Source of estimated swo HOURLY PRODUC Average push distance: Unadjusted hourly prod Materials consistency d Average push gradient: Average site altitude: Material weight: Weight description:	\$229.67         \$459.33         TITIES         963         24         565 LCY         ume:       2800 lft         ell factor:       Cat Han         CTION         uction:       50 feet         2,110.5 LC         escription:       Comp         -15 %       6,020 feet         2,900 lbs/LCY       Sand and gravel -	\$41.85	al highwall 20'D		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 12 Swell factor: 1.1 Loose volume: 14 Source of estimated vol Source of estimated vol Source of estimated swo HOURLY PRODUC Average push distance: Unadjusted hourly prod Materials consistency d Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction	$\frac{\$229.67}{\$459.33}$ <b>TITIES</b> 963 24 963 24 <b>565</b> LCY ume: <u>2800 lft</u> ell factor: <u>Cat Han</u> <b>CTION</b> uction: <u>2,110.5 LC</u> escription: <u>Comp</u> -15 % 6,020 feet 2,900 lbs/LCY Sand and gravel - on Factor	\$41.85	al highwall 20'D mbankment 0.9 Source		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 12 Swell factor: 1.1 Loose volume: 14 Source of estimated vol Source of estimated vol Source of estimated swo HOURLY PRODUC Average push distance: Unadjusted hourly prod Materials consistency d Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operato	$\frac{\$229.67}{\$459.33}$ $\overline{\text{TITIES}}$ 963 24 965 24 965 24 965 965 24 965 965 24 965 965 24 965 965 1CY une: 2800 lft Cat Han	\$41.85	al highwall 20'D mbankment 0.9		
Operator Cost/Hour Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 12 Swell factor: 1.1 Loose volume: 14 Source of estimated vol Source	$\frac{$229.67}{$459.33}$ <b>TITIES</b> 963 24 963 24 <b>565</b> LCY ume: 2800 lft ell factor: Cat Han <b>CTION</b> uction: 50 feet 2,110.5 LC escription: Comp $\frac{-15 \%}{6,020 \text{ feet}}$ 2,900 lbs/LCY Sand and gravel - on Factor r Skill: (0) stency: (0)	\$41.85	NA           al highwall 20'D		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN Initial Volume: 12 Swell factor: 1.1 Loose volume: 14 Source of estimated vol Source	$\frac{$229.67}{$459.33}$ <b>TITIES</b> 963 24 565 LCY ume: 2800 lft ell factor: Cat Han <b>CTION</b> uction: 50 feet uction: 2,110.5 LC escription: Comp $\frac{-15 \%}{6,020 \text{ feet}}$ 2,900 lbs/LCY Sand and gravel - on Factor r Skill: C stency: C ethod: 1	\$41.85	NA           al highwall 20'D		

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.329	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.4724	
Adjusted unit production: 99	97.00 LCY/hr	
Adjusted fleet production: 19	994 LCY/hr	

Fleet size:	2 Dozer(s)
Unit cost:	\$0.230/LCY

Total job time:	<b>7.30</b> Hours
Total job cost:	\$3,355

## BULLDOZER RIPPING WORK

	Task description:	Rip pit floor			
Site	: Sievers Pit	Permit Actio	on: 04-2017	Permit/Jo	ob#:
	PROJECT IDE	<b>NTIFICATION</b>			
	Task #:04A	State: Colora	ado	Abbreviatio	n: None
	Date: $5/1^2$ User: AC	7/2017 County: Garfie	ld	Filenam	ne: <u>M098-04a</u>
		or organization name: DRMS			
		UDMENT COST			
	HOUKLY EQU	<u>DIPMENT COST</u>			405
	Ripper Atta	ichment: 3-Shank Ripper		Shift Basis: Data Source:	405 1 per day (CRG)
	Cost Breakdown:				
				Utilization %	
		Ownership Cost/Hour:	\$100.59	<u>NA</u>	
	Rinne	r Ownership Cost/Hour:	\$10.94	 	
	Ripp	er Operating Cost/Hour:	\$6.82	100	
		Operator Cost/Hour:	\$41.85	NA	
		Total Unit Cost/Hour:	\$247.43		
		Total Fleet Cost/Hour:	\$494.85		
	MATERIAL O	UANTITIES	Salacted estimating	mathod: Araa	
	Alternate Mathod		Selected estimating	inctriod. <u>Aica</u>	
•	<u>Anternate Method</u>	<u>.</u> D.u.1 V.1	NTA	DOM	NT A
Smic:	NA 65.00	Bank Volum	$\frac{NA}{2.00}$	BCY Volume: 209.733	NA BCY of
neu.	05.00		$\frac{2.00}{100}$		ber o
		Source of estimated quantity: <u>Sta</u>	ige A+b fiat, staff es	sumates	
	HOURLY PRO	DUCTION			
	Seismic:	~			
		Seismic Velocity:	NA	feet/second	
	Area:				
		Average Ripping Depth:	2.63	mph	
		Average Ripping Width:	200.00	degrees	
		Average Dozer Speed	88.00	feet	
		Average Maneuver Time:	0.25	feet	
		Production per unit area:	0.838	acres/hour	
	Job Condition Co	rrection Factors			
	Una	adjusted Hourly Unit Production:	0.838	Acres/hr	
		Site Altitude:	6,020	feet	
		Altitude Adj:	1.00	(CAT HB)	
		Job Efficiency:	0.83	(1 shift/day)	
		Net Correction:	0.83	multiplier	
		Adjusted Hourly Unit Producti	ion: 0.70	Acres/hr	
		Adjusted Hourly Fleet Producti	ion: <b>1.39</b>	Acres/hr	
	<u>JOB TIME AN</u>	<u>D COST</u>			
	JOB TIME AN Fleet size:	D COST       2     Grader(s)	Total job tim	e: 46.75	Hours

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## SCRAPER TEAM WORK

Site: Sievers Pit	Per	mit Action:	04-2017	Pern	nit/Job#: <u>M1977</u>	7098
PROJECT IDENT	<b>IFICATION</b>					
Task #: 05A	State:	Colorado		Abbrev	iation: None	
Date: 5/17/201	7 County:	Garfield		File	ename: M098-0	)5a
User: ACY						
Agency or or	ganization name: DI	RMS				
HOURLY EQUIPM	<u>IENT</u>		COSTShi	ift basis: <u>1 per da</u>	ıy	
		Equipme	nt Description			
	-Scraper	r: Cat 657	G			
Support	-Dozer Equipment -Load Area	r: NA a: Cat D97	Γ - 95U			
Support	-Dump Area	a: NA	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
Road Mair	tenance – Motor Grade	r: NA				
	-Water Truck	K: NA				
Cost Breakdown:	Scraper Work Tea	m	Support Equip	ment	Maintenance	Equipme
	Scraper 1	Dozer	Load Area	Dump Area	Motor Grader	Water
%Utilization-machine:	100	NA	10	NA	NA	
Ownership cost/hour:	\$154.79	NA	\$100.59	NA	NA	
Operating cost/hour:	\$184.57	NA	\$8.72	NA	NA	
%Utilization-ripper:	NA	NA	NA	NA	NA	
Ripper own. cost/hour:	NA	NA	\$0.00	NA	NA	
Ripper op. cost/hour:	NA	NA	\$0.00	NA	NA	
Operator cost/hour:	\$31.26	NA	\$41.85	NA	NA	
Unit Subtotals:	\$370.62	NA	\$151.16	NA	NA	
Number of Units:	2	0	1	0	0	
Group Subtotals:	Work: \$	741.24	Support:	\$151.16	Maint:	\$0
Total work team cost/h	our: <u>\$892.40</u>					
MATEDIAL OUA	NTITIES					
Initial volume:	98 144	CCY	Swell facto	or: 1.000		
Loose volume:	98,144	LCY				
Source of	e of estimated volume: estimated swell factor:	73 ac. at Cat Hand	10" depth (stage A lbook	A+B), staff estima	tes	
HOURLY PRODU	<u>CTION</u>					
			Scraper Boy	wl (volume) Basi	<u>s:</u>	
Matarial waight	1 600 lbs/I CV		Struck V	olume: 32.00	L	CY
Material weight:	1,000 105/ LC 1		Bridek v	01411101 02100		

<u>1.00</u> Minutes

<u>0.60</u> Minutes

### Cycle Time:

Scraper Loading Time: Maneuver and Spread Time:

Job Condition Correction:

Site Altitude: 6020 feet

	Scraper	Push Dozer	Source
Altitude Adj:	1.000	NA	(CAT HB)
Job Efficiency:	0.830	NA	(CAT HB)
Net Correction:	0.830	NA	

### Travel Time:

Road Condition: Very soft, muddy, rutted, not maintained, 12" tire penetration 20

### Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1200.00	0.00	20.00	20.00	582	2.07

Haul Time: 2.07 minutes

### Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1200.00	0.00	20.00	20.00	1002	1.25
				Return Time:	<b>1.25</b> I	ninutes
			Total Scrape	er team cycle time:	4.92	minutes
			Adjusted	for job conditions:	384.63	LCY/Hour
			Selected Nu	umber of Scrapers:	1	Scraper(s)
	Adjuste	d single scra	per team (unit)	hourly production:	384.63	LCY/Hour
	Adjusted n	ultiple scrap	per team (fleet)	hourly production:	769.27	LCY/Hour
Optima	Unadjusted unit pro l Number of Scrapers pe	duction/hour	r: <u>463.41</u> r:	_ LCY/Hour		
<u>JOB TI</u>	ME AND COST					
Fleet	size: 2	Team(s)	Т	otal job time:	127.58	Hours

Unit cost: \$1.160 /LCY

Total job cost: \_\_\_\_\_\_\$113,853\_\_\_\_\_

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## BULLDOZER WORK

	Distribu	te topson/minsh grue	nng		
Sievers Pit		Permit Action:	04-2017	Permit/Job#:	M1977098
PROJECT IDEN	NTIFICATION				
Task #: 05B		State: Colorado		Abbreviation:	None
Date: 5/17/	2017 0	County: Garfield		Filename:	M098-05b
User: ACY		·		-	
Agency of	r organization nam	ne: DRMS			
HOURLY EQUI	IPMENT COST				
Basic Machine:	Cat D9T - 9SU	-			
Horsepower:	405				
Blade Type:	Semi-Universal	l			
Attachment:	NA				
Shift Basis:	1 per day				
Data Source:	(CRG)				
Cost Breakdown:					
_			Utilization %		
Ownership Cost/H	Hour:	\$100.59	NA		
Operating Cost/H	Hour:	\$87.23	100		
Ripper own. Cost/H	Hour:	\$0.00	NA		
Ripper op. Cost/F	lour:	\$0.00	0		
Operator Cost/H	Hour:	\$41.85	NA		
Total Fleet Cost/Ho	JANTITIES				
Total Fleet Cost/Hot MATERIAL QU Initial Volume: Swell factor:	JANTITIES           49,072           1.000				
MATERIAL QU Initial Volume: Swell factor: Loose volume:	JANTITIES           49,072           1.000           49,072 LCY				
Fotal Fleet Cost/Hot         MATERIAL QU         Initial Volume:         Swell factor:         Loose volume:         Source of estimated         Source of estimated         HOURLY PROI         Average push distat         Jnadjusted hourly	and the system       (a)	Half of transported vo Cat Handbook feet 10.5 LCY/hr	lume (97,144 cy)		
Fotal Fleet Cost/Hot         MATERIAL QU         Initial Volume:         Swell factor:         Loose volume:         Source of estimated         Source of estimated         HOURLY PROI         Average push dista         Jnadjusted hourly	a $$229.07$ bur: $$459.33$ JANTITIES         49,072         1.000         49,072 LCY         d volume:       1         d swell factor:       0         DUCTION         nce:       50         production:       2,1         acy description:	Half of transported vo Cat Handbook feet 10.5 LCY/hr Loose stockpile 1.2	lume (97,144 cy)		
Fotal Fleet Cost/Hot         MATERIAL QU         Initial Volume:         Swell factor:         Loose volume:         Source of estimated         Source of estimated         Source of estimated         HOURLY PROI         Average push distand         Jnadjusted hourly         Materials consisten         Average push gradi         Average site altitud	a) $3229.07$ bur: $$459.33$ JANTITIES         49,072         1.000         49,072 LCY         d volume:       1         d swell factor:       0         DUCTION         nce:       50         production:       2,1         acy description:         ient:       0 %         le:       6,020 feet	Half of transported vo Cat Handbook feet 10.5 LCY/hr Loose stockpile 1.2	lume (97,144 cy)		
Fotal Fleet Cost/Hot         MATERIAL OU         Initial Volume:         Swell factor:         Loose volume:         Source of estimated         Source of estimated         Average push distat         Jnadjusted hourly         Materials consisten         Average push gradi         Average site altitud         Material weight:	a) $3229.07$ your: $$$459.33$ JANTITIES         49,072         1.000         49,072 LCY         d volume:       1         d swell factor:       0         DUCTION         nce:       50         production:       2,1         acy description:         ient:       0 %         le:       6,020 feet         1,600 lbs/	Half of transported vo Cat Handbook feet 10.5 LCY/hr Loose stockpile 1.2 t LCY	lume (97,144 cy)		
Fotal Fleet Cost/Hot         Initial Volume:         Swell factor:         Loose volume:         Source of estimated         Source of estimated         Average push distat         Jnadjusted hourly         Materials consisten         Average push gradi         Average site altitud         Material weight:         Weight description	a) $3229.07$ yarr       \$459.33         JANTITIES         49,072         1.000         49,072 LCY         d volume:         1         swell factor:         0         DUCTION         nce:       50         production:       2,1         acy description:         ient:       0 %         le:       6,020 feet         1,600 lbs/         :       Top Soil	Half of transported vo Cat Handbook feet 10.5 LCY/hr Loose stockpile 1.2 t LCY	lume (97,144 cy)		
Fotal Fleet Cost/Hot         Fotal Fleet Cost/Hot         MATERIAL QU         Initial Volume:         Swell factor:         Loose volume:         Source of estimated         Source of estimated         Gource of estimated         HOURLY PROI         Average push distand         Jnadjusted hourly         Materials consisten         Average push gradi         Average site altitud         Material weight:         Weight description         ob Condition Corr	and the system $3229.07$ bur: $$459.33$ JANTITIES         49,072         1.000         49,072 LCY         d volume:       1         d swell factor:       0         DUCTION         nce:       50         production:       2,1         acy description:         ient:       0 %         le:       6,020 feet         1,600 lbs/         :       Top Soil	Half of transported vo Cat Handbook feet 10.5 LCY/hr Loose stockpile 1.2			
Fotal Fleet Cost/Hot         Fotal Fleet Cost/Hot         Initial Volume:         Swell factor:         Loose volume:         Source of estimated         Source of estimated         Average push dista         Jnadjusted hourly         Materials consisten         Average site altitud         Material weight:         Weight description         ob Condition Corr         Ope	and the system $3229.07$ your: $$459.33$ JANTITIES         49,072         1.000         49,072 LCY         d volume:       1         d swell factor:       0         DUCTION         nce:       50         production:       2,1         acy description:         ient:       0 %         le:       6,020 feet         1,600 lbs/         :       Top Soil         rection Factor         erator Skill:	Half of transported vo Cat Handbook feet 10.5 LCY/hr Loose stockpile 1.2 t LCY 0.750			
Fotal Fleet Cost/Hot         Fotal Fleet Cost/Hot         Initial Volume:         Swell factor:         Loose volume:         Source of estimated         Source of estimated         Average push dista         Jnadjusted hourly         Materials consisten         Average push gradi         Average site altitud         Material weight:         Weight description         Ope         Material c	an.       \$229.07         your:       \$459.33         JANTITIES         49,072         1.000         49,072 LCY         d volume:       1         d swell factor:       0         DUCTION         nce:       50         production:       2,1         acy description:         ient:       0 %         le:       6,020 feet         1,600 lbs/         :       Top Soil         rection Factor         erator Skill:         onsistency:	Half of transported vo Cat Handbook feet 10.5 LCY/hr Loose stockpile 1.2 t LCY 0.750 1.200			
Fotal Fleet Cost/Hot         Fotal Fleet Cost/Hot         Initial Volume:         Swell factor:         Loose volume:         Source of estimated         Source of estimated         Source of estimated         Average push distat         Inadjusted hourly         Materials consisten         Average push gradit         Average site altitud         Material weight:         Weight description         Ope         Material c	an. $$229.07$ pur: $$459.33$ JANTITIES         49,072         1.000         49,072 LCY         d volume:       1         d swell factor:       0         DUCTION         nce:       50         production:       2,1         acy description:         ient:       0 %         le:       6,020 feet         1,600 lbs/         :       Top Soil         rection Factor         erator Skill:         onsistency:         ng method:	Half of transported vo Cat Handbook feet 10.5 LCY/hr Loose stockpile 1.2 t /LCY 0.750 1.200 1.000	Jume (97,144 cy)		

Job efficience	cy: 0.830	(1 SHIFT/DAY)
Spoil pi	le: 0.800	(FND-RF)
Push gradie	nt: 1.000	(CAT HB)
Altitud	le: 1.000	(CAT HB)
Material Weig	ht: 1.438	(CAT HB)
Blade typ	be: 1.000	(PAT)
Net correction	on: 0.8593	
Adjusted unit production:	1,813.55 LCY/hr	
Adjusted fleet production:	3627.1 LCY/hr	

Fleet size:	2 Dozer(s)
Unit cost:	\$0.127/LCY

Total job time:	13.53 Hours
Total job cost:	\$6,214

## **REVEGETATION WORK**

Task description:		Reveg. slopes-Phase B onl	y site observations		
ite: Sievers Pit		Permit Action: 04-2017		Permit/Job#: M197709	
<b>PROJECT</b>	IDENTIFIC	CATION			
Task #:	06A	State: Colorado	0	Abbreviation:	None
Date:	5/17/2017	County: Garfield		Filename:	M098-06a
User <sup>.</sup>	ACY				

## **FERTILIZING**

### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
6-24-24, 10-20-10, 15-15-15	200.00	pound	\$0.27	\$54.00
			Total Fertilizer Materials Cost/Acre	\$54.00

### Application

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$144.62
	Total Fertilizer Application Cost/Acre	\$144.62

## **TILLING**

Description	Cost /Acre
Chisel plowing {DMG}	\$90.60
Total Tilling Cost/Acre	\$90.60

## **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Sand Dropseed	0.10	11.94	\$1.08
Smooth Brome - Manchar	2.00	6.66	\$8.50
Pubescent Wheatgrass - Luna	11.00	22.73	\$44.77
Streambank Wheatgrass - Sodar	11.00	35.86	\$66.99
Totals Seed Mix	24.10	77.18	\$121.34

# Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$232.00

### **Total Seed Application Cost/Acre**

\$232.00

### **MULCHING and MISCELLANEOUS**

#### Materials

	Units /			
Description	Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - Curtail @ 4.0 pt/ac	1.00	ACRE	\$7.16	\$7.16
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$261.00	\$522.00
Total Mulch Materials Cost/Acre				\$529.16

## Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$66.02
Weed spray, truck, non-aquatic area, nox. [DMG]		\$71.50
	Total Mulch Application Cost/Acre	\$137.52

## **NURSERY STOCK PLANTING**

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
		Totals	Nursery Stoc	k Cost / Acre	\$0.00

No. of Acres: Estimated Failure Rate: *Selected Replanting Work Items:	8 Cost /Acre: 25% Cost /Acre*: FERTILIZING,TILLING,SEEDING,MU LCHING	\$1,309.24 \$1,309.24
Initial Job Cost:       \$10,473.92         Reseeding Job Cost:       \$2,618.48         Total Job Cost:       \$13,092		

## **REVEGETATION WORK**

	Task description:		Reveg. pit floor (65ac. in stages A & B), staff estimates					
Site: Sievers Pit		Permit Action: 04-2017		04-2017	Permit/Job#: M197709			
PRO.	JECT	IDENTIFIC	CATION					
T	ask #:	06B	State:	Colorado		Abbreviation:	None	
	Date:	5/17/2017	County:	Garfield		Filename:	M098-06b	
	User:	ACY						

## **FERTILIZING**

### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
6-24-24, 10-20-10, 15-15-15	200.00	pound	\$0.27	\$54.00
			Total Fertilizer Materials Cost/Acre	\$54.00

### Application

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$144.62
	Total Fertilizer Application Cost/Acre	\$144.62

## **TILLING**

Description	Cost /Acre
Chisel plowing {DMG}	\$90.60
Total Tilling Cost/Acre	\$90.60

## **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Crested Wheatgrass - Fairway	1.00	4.59	\$3.34
Kentucky Bluegrass - Lato	0.10	4.94	\$0.29
Red Clover - Medium	0.20	1.24	\$2.67
Smooth Brome - Manchar	1.50	4.99	\$6.38
Western Wheatgrass - Native	5.00	12.63	\$35.00
Timothy - Climax	0.20	5.74	\$0.31
Totals Seed Mix	8.00	34.13	\$47.98

## Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$232.00
Total Seed Application	Cost/Acre \$232.00

## **MULCHING and MISCELLANEOUS**

### Materials

	Units /			
Description	Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - Curtail @ 4.0 pt/ac	1.00	ACRE	\$7.16	\$7.16
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$261.00	\$522.00
Total Mulch Materials Cost/Acre				\$529.16

## Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$66.02
Weed spray, truck, non-aquatic area, nox. [DMG]		\$71.50
	Total Mulch Application Cost/Acre	\$137.52

### **NURSERY STOCK PLANTING**

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

	No. of Acres:	65	Cost /Acre:	\$1,235.88
Estimate	ed Failure Rate:	25%	Cost /Acre*:	\$1,235.88
*Selected Replanti	ng Work Items:	FERTILIZING,TI	LLING,SEEDING,MU	
		LCHING		
Initial Job Cost:	\$80,332.20			
Reseeding Job Cost:	\$20,083.05			
Total Job Cost:	\$100,415			
Job Hours:	80.00			

## EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description:	Mo	bilize reclamation	n crew/equipm	ent			
e: Sievers Pit		Permit	Action: 04-20	)17	I	Permit/Job#:	M1977098
PROJECT IDE	NTIFICATI	<u>ON</u>					
Task #: 07/	4	State: Co	olorado		Abbre	viation: N	Jone
Date: $5/1$	7/2017	County: Ga	arfield		Fi	lename: N	/1098-07a
User: AC	Y						
Agency	or organization	n name: DRMS					
EQUIPMENT 1	<u> TRANSPOR</u>	<u>T RIG COST</u>			<b>61</b> • 6 • 1		
				(	Shift bas Cost Data Sour	sis: $1 p$ ce: CR(	er day G Data
Truck	Tractor Desc	ription: GENE	RIC ON-HIGH	WAY TRU	JCK TRACTC	0R, 6X4, DII	ESEL POWERED,
				400 HP	(2ND HALF,	2006)	
Truc	k Trailer Desc	ription: G	ENERIC FOLD	ING GOO	SENECK, DR	OP DECK H	EQUIPMENT
			1	<b>FRAILER</b>	(25T, 50T, AN	JD 100T)	
Cost Breakdown:							
Available Rig C	apacities	0-25 Tons	26-50 Tons	51+	- Tons		
Ownership	Cost/Hour:	\$16.63	\$18.37	\$2	22.33		
Operating	g Cost/Hour:	\$44.38	\$46.13	\$5	50.07		
Operator	r Cost/Hour:	\$27.66	\$27.66	\$2	27.66		
Helper	r Cost/Hour:	\$0.00	\$25.39	\$2	25.39		
Total Uni	t Cost/Hour:	\$88.67	\$117.55	\$1	25.45		
NON ROADAB	LE EQUIPN	MENT:					
Machine	Weight/	Owner ship	Haul Rig	Fleet	Haul Trip	Return Tri	p DOT Permit
Description	Unit	Cost/hr/ unit	Cost/hr/uni	Size	Cost/hr/	Cost/hr/ fle	eet Cost/ fleet
*	(TONS)		t		fleet		
Cat D9T - 9SU	66.13	\$111.53	\$125.45	2	\$473.96	\$250.90	\$500.00
CAT 972H	28.00	\$43.47	\$117.55	2	\$322.04	\$235.10	\$250.00
Cat 657G	78.88	\$154.79	\$125.45	2	\$560.48	\$250.90	\$500.00
Drill/Broadcast	25.00	\$12.22	\$88.67	1	\$100.89	\$88.67	\$250.00
Seeder with							
Tractor							

Subtotals: \$1,457.37 \$825.57 \$1,500.00

## **ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 1 T. Crew	\$47.41	1	\$47.41	\$47.41
		Subtotals:	\$47.41	\$47.41

## **EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region:	GLENWOOD SPRINGS	_
Total one-way travel distance:	6.00	miles
Average Travel Speed:	35.00	mph
Total Non-Roadable Mob/Demob Cost *	\$6,697.46	
Tatal Dandahla Mah (Damah Cast **		-
I otal Roadable Mod/Demod Cost	\$16.25	
** one round trip, no haul rig:		_

Transportation Cycle Time:

	Non-	
	Roadable	Roadable
	Equipment	Equipment
Haul Time (Hours):	0.17	0.17
Return Time (Hours):	0.17	0.17
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.34	0.34

## JOB TIME AND COST

Total job time: 2.69 Hours

Total job cost: \_\_\_\_\_\_\$6,714\_\_\_\_\_

March 15, 2017

Jason Burkey Oldcastle SW Group, Inc. 2273 River Road Grand Junction, CO 81502



**COLORADO** Division of Reclamation, Mining and Safety

Department of Natural Resources

1313 Sherman Street, Room 215 Denver, CO 80203

## RE: Sievers Pit, Permit No. M-1977-098, Reclamation Cost Estimate SI-5

Dear Mr. Burkey:

This reclamation cost update was in response to the site inspection conducted on April 13, 2017. There have been no surety increases since the permit issuance in 2011. 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 based on site conditions. 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.

Task	Form Used	Change	Justification
01a	Demo	+	Added the second office building (55'Wx75'Lx15'H)
02a	Ripper	+	Updated hard surfaces needing to be removed 2 ac->3.79 ac (3.39 ac asphalt roads + 0.4 ac cement parking lot). Larger dozer, 2 fleet-less job hrs.
02b	Loaders	+	Updated volume needing to be move into pit 710->3057 cy, decreased haul distances to closest part of pit 2000 ft>600 ft.
03a	Dozer	+	Updated highwall length exposed 1800 lft>2,800 lft. (8,333 cy -> 12,963 cy). Larger dozer, 2 fleet-less job hrs.
04a	Ripper	-	Updated active pit floor size 72 ac->65 ac. Larger dozer, 2 fleet- less job hrs.
05a	Scrapper	+	Updated volume of topsoil needing to be applied 72.35 ac - >73ac (97,271 cy->98,144 cy). Larger scrapper, 2 fleet-less job hrs.



05b	Dozer	-	Updated volume of topsoil needing to be worked, not half of transported volume 97,271 cy->49,072 cy. Larger dozer, 2 fleet-less job hrs.
06a	Reveg	-	Decreased total job hours
06b	Reveg	-	Updated ac to be seeded 72.35 ac->65 ac. Increased total job hours
	Project management	+	Added engineering work and/or contract/bid prep

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: Russ Means, Senior EPS, Grand Junction DRMS