

Gagnon - DNR, Nikie <nikie.gagnon@state.co.us>

Tucson South Inspection Report and Cost Estimate

1 message

Gagnon - DNR, Nikie <nikie.gagnon@state.co.us> To: Wyatt Webster <wyatt.webster@holcim.com> Fri, Dec 13, 2024 at 8:14 PM

Hi Wyatt.

Please see the attached report for the October 30, 2024 inspection of the Tucson South mine site. As you know, part of our process is recalculating the bond after an inspection. In this case, the reclamation estimate increased since it was last calculated in 2021. Please review the estimate and reach out to me by January 6, 2025 if you have any questions about the revised bond estimate.

Best regards,

Nikie Gagnon

Nikie Gagnon Environmental Protection Specialist



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

Cell: 720.527.1640 Physical: 1313 Sherman Street, Room 215, Denver, CO 80203 Address for FedEx, UPS, or hand delivery: DRMS Room 215, 1001 E 62nd Ave, Denver, CO 80216 nikie.gagnon@state.co.us | https://www.drms.colorado.gov

2 attachments

INSP-REPORT_M2004044_Tucson South_2024.pdf

M2004044_Tucson South_2024 Cost Estimate_summary.pdf 374K



MINERALS PROGRAM INSPECTION REPORT PHONE: (303) 866-3567

The Division of Reclamation, Mining and Safety has conducted an inspection of the mining operation noted below. This report documents observations concerning compliance with the terms of the permit and applicable rules and regulations of the Mined Land Reclamation Board.

MINE NAME:		MINE/PROSPECTING ID#:	MINERAL:	COUNTY:
Tucson South Resource		M-2004-044	Sand and gravel	Adams
INSPECTION TYPE:		WEATHER: Clear	INSP. DATE:	INSP. TIME:
Monitoring			October 30, 2024	08:30
OPERATOR:		OPERATOR REPRESENTATIVE:	TYPE OF OPERA	ΓION:
Holcim - WCR, Inc.		Wyatt Webster	112c - Construction	Regular Operation
REASON FOR INSPECTION:		BOND CALCULATION TYPE:	BOND AMOUNT:	
Normal I&E Program		Complete Bond	\$834,000.00	
DATE OF COMPLAINT:		POST INSP. CONTACTS:	JOINT INSP. AGENCY:	
NA		None	None	
INSPECTOR(S):	INSPE	CTOR'S SIGNATURE:	SIGNATURE DAT	E:
Nikie Gagnon			December 13, 2024	
	Ai	Kie Bagnon		

The following inspection topics were identified as having Problems or Possible Violations. OPERATORS SHOULD READ THE FOLLOWING PAGES CAREFULLY IN ORDER TO ASSURE COMPLIANCE WITH THE TERMS OF THE PERMIT AND APPLICABLE RULES AND REGULATIONS. If a Possible Violation is indicated, you will be notified under separate cover as to when the Mined Land Reclamation Board will consider possible enforcement action.

INSPECTION TOPIC: Financial Warranty

PROBLEM: The financial warranty is not adequate to reclaim the site in accordance with the approved reclamation plan. This is a failure to maintain the proper financial warranty amount to complete reclamation of the affected lands pursuant to C.R.S. 34-32.5-117(4)(b) of the Act.

CORRECTIVE ACTIONS: The Division's reclamation cost estimate is enclosed with this report for the Operator's review. The Division requests that any questions or concerns regarding the estimated liability level be forwarded to the Division by January 6, 2025. The Division may issue a surety increase revision after January 6, 2025. In accordance with Rule 4.2.1(2), Holcim -WCR will have 60 days from the date on the surety increase notice to post the additional financial warranty.

CORRECTIVE ACTION DUE DATE: 1/06/25

OBSERVATIONS

The Tucson South Resource mine was inspected by Nikie Gagnon representing the Division of Reclamation, Mining and Safety (Division) as part of the Division's normal monitoring inspection program. Wyatt Webster representing Holcim-WCR, Inc. accompanied the Division during the inspection. The site is located approximately 1 mine west of the City of Brighton on E. 106th/CO Hwy 7. The operation permitted to affect 287.60 acres. The post-mine land use is developed water resources and pasture.

Gen. Compliance With Mine Plan:

Mining will occur in two phases in the west and east mining areas. The two areas are separated by Tucson Street, which runs north/south between the two mining areas. In the summer of 2022, slurry walls were installed in both mining areas to allow the site to be used for developed water resources upon closure (Reservoir A and B). According to the Operator, mining in the west side is nearing completion and reclamation work should be complete by the end of 2025. During this inspection, the Division observed active mining in the west area. An excavator was noted loading material into a haul trucks. Stockpiles of mined material are stored in the pit along with overburden. The Division observed an operator grading the south perimeter of the mined area to 3h:1V slope.

The east mining area was observed during this inspection. In preparation for mining, the operator started clearing vegetation and removed trees on the east side in 2023, outside the raptor nesting season. During the inspection, the Division observed an eagle roosting in a tree near the office and another flying around the east mining area.

Screening berms are well vegetated and line the south end of the east and west mining areas, along Highway 7. Trees have been planted in front of the topsoil berms for aesthetics and visual mitigation along Highway 7.

Material from the mine site is transported via a 0.7-mile conveyor to the Wattenberg Pit north of Tucson South, where the material is processed. The conveyor system was not operating during this inspection. Silt fences were observed installed along the conveyor route protecting the adjacent agriculture field from erosion. Area K located on the west side of the permit area, is included in the permit boundary, however, according to the operator, this area will not be disturbed or mined. No disturbance was observed in this area.

The operator continues to monitor air quality to ensure to compliance with the Adams County Conditional Use Permit. During the inspection, the Division observed a wind sensor in the southwest corner of the west mining area. The winds were calm, and dust was not observed blowing around the site.

Hydrologic Balance:

When encountered, groundwater in the west mining area is pumped to a settling pond located in the northeast corner of the east mining area. The ponds discharge to the South Platte River. During this inspection, except for a small amount of water in dewatering trenches along the east side of the active mining area, the west mining area was dry. A small pool of water was observed near the sump in the west mining area. The pump was not operating. The Division observed the settling pond in the east mining area. No water was observed in the pond or discharging to the river. Holcim has an approved Substitute Water Supply Plan (WDID 0202565) which allows for an exposed surface area of up to 3.0 acres. Depletions covered include evaporation, aggregate production, slurry wall construction, landscape irrigation and dust control.

The Operator has an active groundwater monitoring plan which includes collecting monthly water levels and submitting the data to the Division with the annual report. During this inspection, the Division observed groundwater monitoring wells installed around the exterior of the two mining areas.

Signs and Markers:

Mine signs were posted at the entrances to the east and west mining area as required by Rule 3.1.12(1). A barbed wire fence was installed around the two mining areas. A silt fence and posts mark the boundary between the east mining area and the adjacent private land. White plastic posts mark the edge of the slurry wall around each reservoir. Along the conveyor, the permit boundary was marked by t-posts and a silt fence. <u>Financial Warranty:</u>

The Division holds an \$834,000.00 bond for the site. After this inspection, the Division estimated the reclamation liability at the site to be \$924,944.00 which is \$90,944.00 more than the currently held financial warranty. **The Division's reclamation cost estimate is enclosed with this report for the Operator's review. The Division requests that any questions or concerns regarding the estimated liability level be forwarded to the Division by January 6, 2025.** The Division may issue a surety increase revision after January 6, 2025. In accordance with Rule 4.2.1(2), Holcim -WCR will have sixty (60) days from the date of the notice of surety increase to provide the additional financial warranty.

This concludes the Division's Inspection Report; a subset of photographs taken during the time of the inspection are included below. If you need additional information or have any questions, please contact me at Division of Reclamation, Mining and Safety, 1313 Sherman Street, Room 215, Denver, CO 80203, by telephone at 720-527-1640 or by email at <u>nikie.gagnon@state.co.us</u>.

GENERAL INSPECTION TOPICS

This list identifies the environmental and permit parameters inspected and gives a categorical evaluation of each. No problems or possible violations were noted during the inspection. The mine operation was found to be in full compliance with Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for the Extraction of Construction Materials and/or for Hard Rock, Metal and Designated Mining Operations. Any person engaged in any mining operation shall notify the office of any failure or imminent failure, as soon as reasonably practicable after such person has knowledge of such condition or of any impoundment, embankment, or slope that poses a reasonable potential for danger to any persons or property or to the environment; or any environmental protection facility designed to contain or control chemicals or waste which are acid or toxic-forming, as identified in the permit.

(AR) RECORDS <u>Y</u>	(FN) FINANCIAL WARRANTY PB	(RD) ROADS <u>N</u>
(HB) HYDROLOGIC BALANCE <u>Y</u>	(BG) BACKFILL & GRADING <u>Y</u>	(EX) EXPLOSIVES <u>N</u>
(PW) PROCESSING WASTE/TAILING <u>N</u>	(SF) PROCESSING FACILITIES <u>N</u>	(TS) TOPSOIL <u>Y</u>
(MP) GENL MINE PLAN COMPLIANCE- <u>Y</u>	(FW) FISH & WILDLIFE <u>N</u>	(RV) REVEGETATION <u>N</u>
(SM) SIGNS AND MARKERS <u>Y</u>	(SP) STORM WATER MGT PLAN <u>N</u>	(RS) RECL PLAN/COMP- <u>N</u>
(ES) OVERBURDEN/DEV. WASTE <u>N</u>	(SC) EROSION/SEDIMENTATION <u>N</u>	(ST) STIPULATIONS <u>N</u>
(AT) ACID OR TOXIC MATERIALS <u>N</u>	(OD) OFF-SITE DAMAGE <u>N</u>	

Y = Inspected / N = Not inspected / NA = Not applicable to this operation / PB = Problem cited / PV = Possible violation cited

PERMIT #: M-2004-044 INSPECTOR'S INITIALS: NCG INSPECTION DATE: October 30, 2024

PHOTOGRAPHS



Photo 1: Looking south from the entrance at the mined slopes along the eastern boundary of the west mining area.



Photo 2: Looking across the west mining area from the north end near the conveyor.



Photo 3: Excavator observed loading a haul truck in the west mining area.



Photo 4: Groundwater sump in the northeast corner of the west mining area. Pump not operating.



Photo 5: Groundwater trenches moving water to the sump area in the northeast corner of the west mining area.



Photo 6: Double walled fuel tank adjacent to the office in the west mining area.



Photo 7: Equipment storage area in the west mining area, near the office.



Photo 8: Southeast corner of the west mining area. Screening berm placed around the mining area noted by arrow, and trees planted by operator.



Photo 9: Air quality monitor in the southwest corner of the permit area.



Photo 10: Looking north across the east permit area from Highway 7.



Photo 11: Looking south across the east permit area where vegetation clearing is occurring, and trees were removed in 2023.



Photo 12: Looking at monitoring well 8 in the southeast corner of the permit area.

PERMIT #: M-2004-044 INSPECTOR'S INITIALS: NCG INSPECTION DATE: October 30, 2024



Photo 13: Groundwater monitoring well #17 in the southwest corner of the west permit area.



Photo 14: Groundwater monitoring well #9 in the east mining area.



Photo 15: Discharge structure to the South Platte on the east side of the permit area.



Photo 16: Settling pond east side of the permit area. Discharge pipeline indicated by arrow.

Inspection Contact Address

Wyatt Webster Holcim - WCR, Inc. 1687 Cole Blvd., Suite 300 Golden, CO 80401

Enclosure: 2024 Reclamation Cost Estimate

CC: Jared Ebert, Senior EPS, DRMS

COST SUMMARY WORK

1	ask descrip	otion:	Reclama	ation Co	st Estimate				
Site:	Tucson S	outh Resourc	e	Per	mit Action:	2024 Inspection	Permit/Jol	o#: <u>M2004044</u>	
<u>P1</u>	ROJECT Task #: Date: User:	IDENTIFIC 000 12/13/2024 NCG	<u>ATION</u>	State: County:	Colorado Adams		Abbreviation: Filename:	None M044-000	

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task		Form	Fleet	Task	
1 455	Description	Used	Size	Hours	Cost
001	Backfill remaining East Cell mining face and slide	LOADER	2	78.41	\$41,234
	slopes				
002	Rough grade disturbed area in East Cell (85' x 2300')	GRADER	1	1.95	\$715
003	Replace topsoil on backfilled mining cell area above HWL	SCRAPER1	1	45.69	\$70,483
004	Final grade East Cell (85' x 2300') + (800'+100')	GRADER	1	2.76	\$1,010
005	Replace topsoil on internal haul roads and main	SCRAPER1	1	1.82	\$2,805
	site ent.				
006	Replace topsoil on conveyor route	SCRAPER1	1	9.54	\$14,716
007	Replace topsoil on stockpile areas	SCRAPER1	1	3.03	\$4,674
008	Scarify internal haul roads and conveyor route	GRADER	1	3.62	\$1,325
009	Final grade all miscellaneous areas (8.3 acres x .5')	GRADER	1	3.62	\$1,312
010	East Slurry Wall Contingency	NA	1	0.00	\$145,800
011	Remove Tucson St Crossing	NA	1	0.00	\$41,954
012	Remove 168th Crossing	NA	1	0.00	\$37,005
013	Remove WCR 23.75 Crossing	NA	1	0.00	\$21,816
014	Remove Aurora Crossing	NA	1	0.00	\$15,000
015	Remove Struck Crossing	NA	1	0.00	\$15,000
016	Remove Remaining Conveyor	DEMOLISH	1	80.00	\$148,297
017	Revegetation of Affected Land	REVEGE	1	80.00	\$154,253
018	Mobilization	MOBILIZE	1	8.76	\$38,922
		<u>SUBTO</u>	TALS:	319.2	\$756,321

INDIRECT COSTS

OVERHEAD AND PROFIT:			
Liability insurance:	2.02	Total =	\$15,278
Performance bond:	1.05	Total =	\$7,941
Job superintendent:	159.60	Total =	\$12,651
Profit:	10.00	Total =	\$75,632
		TOTAL O & P =	\$111,503
		CONTRACT AMOUNT (direct + O & P) =	\$867,824

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): ____\$500

1	ф1 <i>С ЕПЕ</i>
1	\$16,575
0 Total =	\$22,690
	0

TOTAL INDIRECT COST = ____\$168,624

TOTAL BOND AMOUNT (direct + indirect) = _____\$924,945

WHEEL LOADER - LOAD AND CARRY WORK

Tusson South F	060HP00	Domnit A a	tion: 2024 Ima	action	Domait/Ial	-#· M2004044
Tucson South F	lesource	Permit Ac	uon: <u>2024 Insp</u>	bection	Permit/Jot	D#: <u>M2004044</u>
PROJECT IDE	NTIFICATION					
Teal: # 001		Stata, Cala	mada		Abbuotistion	Nona
Date: $12/1^2$	2/2024	State: Cold	mado		Filename	$\frac{10010}{1000}$
User: NCC	72024 V	Jounty. <u>Aua</u>			Filename	101044-001
Agency o	r organization nan	ne: DRMS				
HOURLY EQU	IPMENT COST	[
Basic Mach	ine: CAT 990H	-		Horse	power:	621
Attachmer	t 1: ROPS Cab	-		Shift	Basis:	1 per day
				Data S	Source:	(CRG)
Cost Breakdown						
_ 300 21 value (111)			Utilizatio	on %		
Ownership	Cost/Hour:	<u>\$1</u> 15.73	NA			
Operating	Cost/Hour:	\$130.33	100			
Operator	Cost/Hour:	\$56.84	NA			
Total Unit	Cost/Hour:	\$302.90				
Total Flee	t Cost/Hour:	\$605.80				
<u>MATERIAL QU</u>	JANTITIES					
Initial volume	e: 93,150	CC	SY Sw	ell factor:	1.000	
Loose volume	e: 93,15	0 LC	Y			
S	ource of estimated	volume' Exl	nibit L			
Sourc	e of estimated swe	Il factor: Cat	Handbook			
HOURLY PRO	DUCTION					
Loader Cycle Time	: Unadiust	ed Basic Cycle	Time (load, dum	p. maneuver)	: 0.600	minutes
Courle Time	 E			P,	E	
	Asterial: Mixed	material 0.02				(Cat HB)
1	ocknile: Conve	vor or dozer pi	ed 10 ft high an	d up 0 00	0.020	(Cat HB)
Truck Ow	mership: Comm	on ownership o	of trucks and load	lers -0.04	-0.040	(Cat HB)
01	peration: Const	ant operation -0	.04		-0.040	(Cat HB)
Dum	Target: Nomin	nal target 0.00			0.000	(Cat HB)
		N	et Cycle Time A	djustment:	-0.060	minutes
		A	djusted Basic C	ycle Time:	0.540	minutes
Rolling Resistance	- Road Condition	<u>s</u>				
	Haul: Rutted d	irt little mainte	nance no water	2" tire penetr	ration 5.0	
R	eturn: Rutted d	irt, little mainte	nance, no water.	2" tire penetr	ation 5.0	
		,	,	F	- *	
Haul and Return T	ime					
	Length	Grade Res.	Rolling	Total Res.	Travel Time	Source
	(feet)	(%)	Res. (%)	(%)	(minutes)	Source
Haul Route	2: 300	0.00	5.00	5.00	0.2493	(Cat HB)
	200	0.00	5 00	5 00	0 2492	$(C \rightarrow IID)$

Total Travel Time:	0.4976	minutes
Total Cycle Time:	1.0376	minutes

Load Bucket Capacity

Rated Capacity:	11.25	LCY (heaped)	
Bucket Fill Factor:	1.100	Other - rock/dirt mixtures	(100-120%) 1.100
Adjusted Capacity:	12.38	LCY	

Job Condition Correction Factors Site Altitude: <u>4960</u> feet

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

Unadjusted Hourly Unit Production:	715.58	LCY/Hour
Adjusted Hourly Unit Production:	593.93	LCY/Hour
Adjusted Hourly Fleet Production:	1,187.86	LCY/Hour

JOB TIME AND COST

Fleet size:	2	Loader(s)	Total job time:	78.42	Hours
Unit cost:	\$0.510	/LCY	Total job cost:	\$47,506	

Task description:	Rough grade disturbed area	in East Cell (85	5' x 2300')		
Tucson South Resourc	e Permit Action:	2024 Inspectio	n Pe	ermit/Job#	: <u>M2004044</u>
PROJECT IDENTIFI	<u>CATION</u>				
Task #: 002	State: Colorado		Abbr	eviation:	None
Date: 12/13/2024	County: Adams		F	ilename:	M044-002
User: NCG					
A gency or organ	ization name: DRMS				
Agency of organi					
HOURLY EQUIPMEN	<u>NT COST</u>				
Basic Machine:	CAT 16M		Horsepower:		297
Ripper Attachment:	Multi-Shank Ripper		Shift Basis:	11	per day
			Data Source:	(CRG)
Cost Breakdown:					
			Utilization %		
Owner	ship Cost/Hour:	\$179.39	NA		
Opera	ting Cost/Hour:	\$119.64	100		
Ripper Owner	ship Cost/Hour:	\$5.75	NA		
Ripper Opera	ting Cost/Hour:	\$4.18	<u>100</u>		
Oper	alor Cost/Hour:	\$26.70	INA		
Iotal	Unit Cost/Hour:	\$365.66			
Total Area to Source	o be graded or ripped: <u>4.48</u> of estimated acreage: Exhibit	t L			acres
HOURI V PRODUCT	ION				
<u>HOUKLI I KODUCI</u>	Average Grader Speed	1 50	mnh		
	Selected Application:	1.50 Rin	$\underline{\text{mpn}}$	1 50	
	Selected Blade Angle:	0	degrees	1.50	
	Effective Blade Length:	16.00	feet		
Width or	f blade overlap per pass:	2.00	feet		
Net grading or	r ripping width per pass:	14.00	feet		
Unadjusted	Hourly Unit Production:	2.5455	acres/ho	ur	
Job Condition Correction	Factors	Sit	e Altitude: <u>4960</u>	feet	
	Source				
Altitude Adj:	1.00 (CAT HE	3)			
Job Efficiency:	0.90 (1sh/d, fav	v.)			
Net Correction:	0.9000 multiplier				
Δc	liusted Hourly Unit Production	2 2909	acres/Hour		
Ad	justed Hourly Fleet Production:	2.2909	acres/Hour		
114	,				
JOB TIME AND COS	<u>T</u>				
Fleet size: 1	Grader(s)	Total job time:	1.96		Hours
Unit cost: \$159	61 per acre	Total iob cost	\$715	5	
	1		<i></i>		-

Task description:	Final grade East Cell (85'	x 2300') + (800'+	100')	
Tucson South Resourc	e Permit Action	n: 2024 Inspectio	n Permi	t/Job#: <u>M2004044</u>
PROJECT IDENTIFI	CATION			
Task #: 004	State: Colorad	lo	Abbrevia	tion: None
Date: 12/13/2024	County: Adams		Filen	ame: M044-004
User: NCG				
Agency or organ	ization name: DRMS			
HOURLY EQUIPME	NT COST			
Basic Machine:	CAT 16M		Horsepower:	297
Ripper Attachment:	Multi-Shank Ripper		Shift Basis:	1 per day
11			Data Source:	(CRG)
Cost Breakdown:				
			Utilization %	
Owner	ship Cost/Hour:	\$179.39	NA	
Opera	ting Cost/Hour:	\$119.64	100	
Ripper Owner	ship Cost/Hour:	\$5.75	NA	
Kipper Opera	ting Cost/Hour:	\$4.18	100 NA	
Oper		\$36.70	NA	
lotal	Unit Cost/Hour:	\$365.66		
Total H	leet Cost/Hour: \$	365.66		
Total Area t	be graded or ripped: <u>6.33</u>			acres
Source	of estimated acreage: <u>Exh</u>	ibit L		
HOURLY PRODUCT	<u>ION</u>			
	Average Grader Speed:	1.50	mph	х.
	Selected Application:	Rıpı	ping (0-3 mph) - 1.50)
	Effective Blade Length:	16.00	degrees	
Width o	f blade overlan per pass:	2 00	feet	
Net grading o	r ripping width per pass:	14.00	feet	
Unadjusted	Hourly Unit Production:	2.5455	acres/hour	
Job Condition Correction	Factors	Sit	e Altitude: <u>4960</u> feet	
	Sou	ce		
Altitude Adi:	1.00 (CAT	HB)		
Job Efficiency:	0.90 (1sh/d,	fav.)		
Net Correction:	0.9000 multipl	ier		
A	iusted Hourly Unit Productio	n: 2 2000	acres/Uour	
AC Ad	justed Hourly Fleet Productio	m. 2.2909	acres/Hour	
Au		<u> </u>	acros/11001	
JOB TIME AND COS	<u>T</u>			
Fleet size: 1	Grader(s)	Total job time:	2.76	Hours
Unit cost \$150	61 per acre	Total job cost	\$1 A1A	
om cost. \$139	per acte	10121 100 0081.		

Task description:	Scarify internal haul roads	and conveyor ro	ute	
e: <u>Tucson South Reso</u>	Permit Action:	2024 Inspection	n Perm	it/Job#: <u>M2004044</u>
PROJECT IDENTI	FICATION			
Task #: 008	State: Colorado		Abbrevi	ation: None
Date: 12/13/202	24 County: Adams		File	name: M044-008
User: NCG				
Agency or org	ganization name: <u>DRMS</u>			
HOURLY EQUIPM	<u>IENT COST</u>			
Basic Machi	ne: CAT 16M		Horsepower:	297
Ripper Attachme	ent: Multi-Shank Ripper		Shift Basis:	1 per day
			Data Source:	(CRG)
Cost Breakdown:		1		
			Utilization %	
Ow	nership Cost/Hour:	\$179.39	NA	
Op	erating Cost/Hour:	\$119.64	100 NA	
Ripper Ow	nersnip Cost/Hour:	\$3./3 ¢1 10	<u>INA</u>	
Kipper Op	perator Cost/Hour:	\$56.70	 NA	
Tot	al Unit Cost/Hour:	\$365.66	INA	
100		\$303.00		
Tota	al Fleet Cost/Hour: \$30	65.66		
Total Are	ea to be graded or ripped: 8.30			acres
Sou	rce of estimated acreage: <u>Exhib</u>	oit L		
HOURLY PRODUC	CTION			
	Average Grader Speed:	1.50	mph	
	Selected Application:	Ripp	oing (0-3 mph) - 1.5	0
	Effective Blade Length:	16.00	degrees	
Widt	h of blade overlap per pass:	2.00	feet	
Net gradin	g or ripping width per pass:	14.00	feet	
Unadjust	ed Hourly Unit Production:	2.5455	acres/hour	
Job Condition Correction	on Factors	Site	e Altitude: <u>4960</u> fee	t
	Source	e		
Altitude Adi:	1.00 (CAT H	(B)		
Job Efficiency:	0.90 (1sh/d, fa	av.)		
Net Correction:	0.9000 multiplie	er		
	Adjusted Hourly Unit Production	. 2 2909	acres/Hour	
	Adjusted Hourly Fleet Production	: <u>2.2909</u>	acres/Hour	
JOB TIME AND CO	OST			
Fleet size:	1 Grader(s)	Total ioh time:	3.62	Hours
Unit cost: \$1	59.61 per acre	Total job cost:	\$1,325	

Task description:	Final grade all miscellaneou	is areas (8.3 acre	es x .5')	
e: <u>Tucson South Reso</u>	urce Permit Action:	2024 Inspection	n Perm	nit/Job#: <u>M2004044</u>
PROJECT IDENTI	FICATION			
Task #: 009	State: Colorado		Abbrev	iation: None
Date: 12/13/20	24 County: Adams		File	mame: M2004044
User: NCG	•			
A				
Agency or org	ganization name: <u>DRMS</u>			
HOURLY EQUIPM	<u>IENT COST</u>			
Basic Machi	ne: CAT 16M		Horsepower:	297
Ripper Attachme	ent: Multi-Shank Ripper		Shift Basis:	1 per day
			Data Source:	(CRG)
Cost Breakdown:				
			Utilization %	
Ow	nership Cost/Hour:	\$179.39	NA	
Op	erating Cost/Hour:	\$119.64	100	
Ripper Ow	nership Cost/Hour:	\$5.75	NA	
Ripper Op	erating Cost/Hour:	\$0.00	0	
O	perator Cost/Hour:	\$57.29	NA	
To	tal Unit Cost/Hour:	\$362.07		
Tot	al Fleet Cost/Hour: \$36	52.07		
MATERIAL QUAN	<u>TITIES</u>			
Total Are	ea to be graded or ripped: 8.30			acres
Sou	rce of estimated acreage: Exhib	it I		
500	The of estimated acreage. <u>Exino</u>			
HOURLY PRODU	CTION			
	Average Grader Speed:	1.50	mph	
	Selected Application:	Finish g	grading (0-2.5 mph)	- 1.5
	Selected Blade Angle:	0	degrees	
	Effective Blade Length:	16.00	feet	
Widt	h of blade overlap per pass:	2.00	feet	
Net gradin	g or ripping width per pass:	14.00	feet	
Unadjust	ea Hourly Unit Production:	2.5455	acres/hour	
Job Condition Correcti	on Factors	Sit	e Altitude: <u>4960</u> fee	et
	Source	e		
Altitude Adj:	1.00 (CAT H	B)		
Job Efficiency:	0.90 (1sh/d, fa	av.)		
Net Correction:	0.9000 multiplie	r		
	Adjusted Hourly Unit Production	2.2909	acres/Hour	
	Adjusted Hourly Fleet Production:	2.2909	acres/Hour	
	,			
JOB TIME AND C	<u>OST</u>			
Fleet size:	1 Grader(s)	Total job time:	3.62	Hours
Unit cost: \$1	58.05 per acre	Total job cost:	\$1.312	
···· •	1	5	÷-;= -=	

Task # 003

Page 1 of 2

SCRAPER TEAM WORK

Site: <u>Tucson South Res</u>	ource	Permit Action:	2024 Inspection	Perr	mit/Job#: <u>M2004</u>	4044
PROJECT IDENT Task #: 003 Date: 12/13/2 User: NCG Agency or compared	CIFICATION Sta 024 Cour organization name:	ate: <u>Colorado</u> nty: <u>Adams</u> DRMS		Abbrev Fil	viation: <u>None</u> ename: <u>M044-</u> (003
HOURLY EQUIP	MENT_		COSTSI	nift basis: <u>1 per d</u>	ay	
		Equipme	ent Description			
	-Sc	raper: Cat 637	G w/push-pull			
Suppor	-L rt Equipment -Load	Area: NA	1 - 980			
	-Dump	Area: NA				
Road Mai	intenance – Motor G	rader: CAT 16	5M	1		
	-water I	ruck: water	Tanker, 10,000 Ga			
Cost Breakdown:	Scraper Work	Team	Support Equip	oment	Maintenance	Equipment
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Tr
%Utilization-machine:	100	100	NA	NA	25	
Ownership cost/hour:	\$281.32	\$253.16	NA	NA	\$179.39	\$11
Operating cost/hour:	\$319.35	\$164.35	NA	NA	\$29.91	\$2
%Utilization-ripper:	NA	0	NA	NA	0	
Ripper own. cost/hour:	NA	\$18.79	NA	NA	\$5.75	§
Ripper op. cost/hour:	NA	\$0.00	NA	NA	\$0.00	§
Operator cost/hour:	\$57.52	\$40.04	NA	NA	\$56.70	\$3
Unit Subtotals:	\$658.19	\$476.34	NA	NA	\$271.75	\$18
Number of Units:	2	1	0	0	1	
Group Subtotals:	Work:	\$1,792.72	Support:	\$0.00	Maint:	\$451.9
Total work team cost <u>MATERIAL QUA</u> Initial volume: Loose volume: Sour	Anour: <u>\$2,244.66</u> <u>NTITIES</u> <u>49,610</u> <u>49,610</u> rce of estimated volu	CCY LCY ume: Exhibit I	Swell fact	or: <u>1.000</u>		
Source of HOURLY PRODU	f estimated swell fa J <u>CTION</u>	ctor: <u>Cat Hand</u>	dbook			
			<u>Scraper Bo</u>	owl (volume) Basi	<u>15:</u>	
Material weight: Material description:	1,600 lbs/LCY Top Soil		Struck Theaped	Volume: 24.00 Volume: 34.00		CY CY CV
Kaled Pavload:	or,000 pounds		Average	volume. 29.00		CI

Cycle Time:

Scraper Loading Time: Maneuver and Spread Time: <u>1.00</u> Minutes <u>0.60</u> Minutes

Job Condition Correction:

Site Altitude: 4960 feet

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

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	0.00	3.00	3.00	2800	0.57

Haul Time: 0.57 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	0.00	3.00	3.00	2949	0.49
				Return Time:	0.49 1	ninutes
			Total Scrape	r team cycle time:	2.66	minutes
		1,085.86	LCY/Hour			
			Selected Ni	umber of Scrapers:	2	Scraper(s)
	Adjuste	d single scra	per team (unit)	nourly production:	1,085.86	LCY/Hour
	Adjusted n	nultiple scrap	per team (fleet)	hourly production:	1,085.86	LCY/Hour
Optima	Unadjusted unit pro l Number of Scrapers pe	duction/hour er push dozer	r: <u>1,308.27</u> r:	LCY/Hour		
JOB TI	ME AND COST					

Fleet size:	1	Team(s)	Total job time:	45.69	Hours
Unit cost:	\$2.067	/LCY	Total job cost:	\$102,552	-

Task # 005

Page 1 of 2

SCRAPER TEAM WORK

Task #: 005 State: Colorado Abbreviation: None Date: 12/13/2024 County: Adams Filename: M044-005 Ver: NCG	Site: <u>Tucson South Res</u> <u>PROJECT IDENT</u>	ource	Permit	t Action:	2024 Inspection	ern Pern	nit/Job#: <u>M2004</u>	4044
Date: IN13/2024 County: Adams M044-003 Agency or organization name: DRMS HOURLY EOUIPMENT COSTShift basis: 1 per day Equipment Description -Scraper: Cat 037 cat 097 - 98U Support Equipment -Load Area: NA -Dozer: Cat 07 - 98U Support Equipment -Load Area: NA -Dourp Area: NA -Road Maintenance-Motor Grader: CAT 16M -Water Truck: Water Tanker, 10,000 Gal. Cost Breakdown: Scraper Dozer Load Area Dump Area %Utilization-machine: 100 100 NA NA %Utilization-machine: 100 100 NA NA Ripper op. cost/hour: \$\$281.32 \$\$253.16 %Utilization-ripper: NA 0 NA 0 NA NA Ripper op. cost/hour: \$\$319.35 \$164.35 NA Ripper op. cost/hour: NA \$000 NA NA 0 NA NA<	Task #: 005	S	tate: (Colorado		Abbrev	viation: None	005
Agency or organization name: DRMS HOURLY EQUIPMENT COSTShift basis: 1 per day -Scraper: Cat 637G w/push-pull -Dozer: Cat 097 - 9SU Support Equipment -Load Area: NA -Domp Area: NA Road Maintenance -Motor Grader: CAT 16M -Water Truck: Water Tanker, 10,000 Gal. Cost Breakdown: Scraper Work Team -Water Truck: Water Tanker, 10,000 Gal. Ownership cost/hour: \$281.32 \$253.16 NA Ownership cost/hour: \$281.32 \$253.16 NA Operating cost/hour: \$319.35 \$164.35 NA NA 0 Ripper own. cost/hour: NA Sourc ost/hour: NA S17.52 \$40.04 Number of Units: 2 1 0 0 Ordin Subtotals: \$658.19 S476.34 NA NA Mumber of Units: 2 1 0 Orace of estimated ovolum: \$1,792.72 Support: \$0.00	User: NCG	<u>024</u> Cot	inty:	Adams		F11	ename: <u>M044-0</u>	103
Agency of organization name:	A conquior o	manization name:	עסט	IC .				
HOURLY EQUIPMENT COSTShift basis: 1 per day Equipment Description -Scraper: Cat 637G w/push-pull -Dozer: Cat D97 - 9SU Support Equipment - Dozer: NA -Dump Area: NA Road Maintenance - Motor Grader: CAT 16M -Water Truck: Water Tanker, 10,000 Gal. Maintenance Equipment Scraper Dozer Load Area Dump Area Motor Grader Water Truck: %Utilization-machine: 100 100 NA NA 25 Ownership cost/hour: \$281.32 \$253.16 NA NA 29.91 \$21 Ownership cost/hour: \$319.35 \$164.35 NA NA 29.91 \$22 %Utilization-ripper: NA 0 NA NA 0 \$31 Operating cost/hour: S57.52 \$40.04 NA NA \$31 Mumber of Units: 2 1 0 0 1 1 Group Subtotals: Work: \$1,792.72 Support: \$0.00 Maint:	Agency of 0	rgamzation name.		15				
Equipment Description -Scraper: Cat 637G w/push-pull -Dozer: Cat 097 - 9SU Support Equipment -Load Area: NA -Dump Area: NA Road Maintenance -Motor Grader: CAT 16M -Water Truck: Water Tanker, 10,000 Gal. Cost Breakdown: Scraper Dozer Load Area Dump Area Motor Grader Water Tru %Utilization-machine: 100 100 NA NA 25 Ownership cost/hour: \$281.32 \$253.16 NA NA 25 Ownership cost/hour: \$319.35 \$164.35 NA NA 25 %Utilization-ripper: NA 0 NA NA 52 %Utilization-ripper: NA 0 NA \$57.55 \$6 Ripper own. cost/hour: NA \$18.79 NA NA \$57.55 \$6 Qerator cost/hour: \$57.52 \$40.04 NA NA \$271.75 \$18 Number of Units: 2 1 0 0 1 0 1 Group S	HOURLY EQUIP	<u>MENT</u>			COSTS	hift basis: <u>1 per d</u>	<u>ay</u>	
Scraper: Cat 637G w/push-pull Obzer: Cat D7 - 9SU Support Equipment -Load Area: NA -Dump Area: NA Road Maintenance -Motor Grader: CAT 16M -Water Truck: Water Tanker, 10,000 Gal. Cost Breakdown: Scraper Work Team Support Equipment Maintenance Equipment %Utilization-machine: 100 100 NA NA %Utilization-machine: 100 100 NA NA Ownership cost/hour: \$281.32 \$253.16 NA NA \$29.91 %Utilization-machine: 100 100 NA NA \$29.91 \$22 Ownership cost/hour: \$281.32 \$253.16 NA NA \$29.91 \$22 %Utilization-ripper: NA 0 NA NA \$29.91 \$22 %Utilization-ripper: NA 0 NA NA \$316 \$317 \$4000 \$4000 Ripper own. cost/hour: S57.52 \$40.04 NA NA \$271.75 \$188 Number of Units: 2 1 <td< td=""><td></td><td></td><td></td><td>Equipme</td><td>ent Description</td><td></td><td></td><td></td></td<>				Equipme	ent Description			
-Dote: Car D91 - 930 Support Equipment -Load Area: NA -Dump Area: NA -Dump Area: NA Cost Breakdown: Car Dozer Cod Area Dump Area MA -Water Truck: Water Tanker, 10,000 Gal. Cost Breakdown: Scraper Work Team Support Equipment Maintenance Equipment Mater Truck: Water Truck: Water Truck: Water Truck: Water Truck: Water Truck: Water Truck: Water Truck: Water Truck: Water Truck: Water Truck: Water Truck: Water Truck: Water Truck: Water Truck: Water Truck: Water Truck: Oozer Load Area Dump Area Motor Grader Water Truck Ovarting cost/hour: \$\$283.16		-S(craper:	Cat 637	<u>G w/push-pull</u>			
Initial volume: Dump Area: NA Road Maintenance -Motor Grader: CAT 16M -Water Truck: Water Tanker, 10,000 Gal. Cost Breakdown: Scraper Work Team Support Equipment Maintenance Equipment %Utilization-machine: 100 100 NA NA 25 Ownership cost/hour: \$281.32 \$253.16 NA NA \$11 Operating cost/hour: \$319.35 \$164.35 NA NA \$29.91 \$22 %Utilization-ripper: NA 0 NA NA \$29.91 \$22 %Utilization-ripper: NA 0 NA NA \$29.91 \$22 %Utilization-ripper: NA 0 NA NA \$29.91 \$22 %Utilization-ripper: NA \$164.35 NA NA \$29.91 \$22 %Utilization-ripper: NA \$164.35 NA NA \$29.91 \$22 %Utilization-ripper: NA \$0.00 NA NA \$29.91 \$33 Ripper op. cost/hour: \$57.52 \$40.04 NA	Suppor	- t Equipment -Load	l Area:	NA	1 - 950			
Road MaintenanceMotor Grader: -Water Truck: CAT 16M Water Tanker, 10,000 Gal. Cost Breakdown: Scraper Work Team Support Equipment Maintenance Equipment %Otilization-machine: 100 100 NA NA 25 Ownership cost/hour: \$281.32 \$2253.16 NA NA \$179.39 \$111 Operating cost/hour: \$319.35 \$164.35 NA NA \$229.1 \$22 %Utilization-ripper: NA 0 NA NA \$29.91 \$22 %Utilization-ripper: NA 0 NA NA \$29.91 \$22 %Utilization-ripper: NA 0 NA NA \$29.91 \$22 %Utilization-ripper: NA 0 NA \$29.91 \$22 %Utilization-ripper: NA \$18.79 NA NA \$20 Ripper own.cost/hour: NA \$1000 NA \$21 \$319 Quertari Cost/hour: \$57.52 \$40.04 NA NA \$271.75 \$180 Number of Units: 2 1 0 0		-Dump	Area:	NA				
-water Truck: Water Tanker, 10,000 Gal. Cost Breakdown: Scraper Work Team Support Equipment Maintenance Equipment %Utilization-machine: 100 100 NA NA 25 Ownership cost/hour: \$281.32 \$253.16 NA NA \$179.39 \$111 Operating cost/hour: \$319.35 \$164.35 NA NA \$229.1 \$22 %Utilization-ripper: NA 0 NA NA \$29.91 \$22 %Utilization-ripper: NA 0 NA NA \$29.91 \$22 %Utilization-ripper: NA 0 NA NA \$29.91 \$22 %Utilization-ripper: NA \$164.35 NA NA \$29.91 \$22 %Utilization-ripper: NA \$0.00 NA NA \$5.75 \$6 Ripper own.cost/hour: NA \$0.00 NA NA \$271.75 \$18 Number of Units: 2 1 0 0 1	Road Mai	ntenance – Motor C	Brader:	CAT 16	5M	1		
Cost Breakdown:Scraper Work TeamSupport EquipmentMaintenance EquipmentScraperDozerLoad AreaDump AreaMotor GraderWater Trans%Utilization-machine:100100NANA25Ownership cost/hour:\$281.32\$253.16NANA\$179.39\$111Operating cost/hour:\$319.35\$164.35NANA\$29.91\$22%Utilization-ripper:NA0NANA\$29.91\$22%Utilization-ripper:NA0NANA\$29.91\$22%Utilization-ripper:NA0NANA\$29.91\$22%Utilization-ripper:NA0NANA\$29.91\$22%Utilization-ripper:NA\$18.79NANA\$6\$65Ripper op. cost/hour:NA\$0.00NANA\$56.70\$33Unit Subtotals:\$658.19\$476.34NANA\$271.75\$186Number of Units:21001\$451.94Group Subtotals:Work:\$1,792.72Support:\$0.00Maint:\$451.94MATERIAL QUANTITIESInitial volume: $2,420$ CCYSwell factor:1.000\$451.94LCYCCYSwell factor:1.000Support: $2,420$ CCYLoose volume: $2,420$ CCYSwell factor: 1.000		-Water	I ruck:	Water	lanker, 10,000 Ga	11.		
Scraper Dozer Load Area Dump Area Motor Grader Water Tri %Utilization-machine: 100 100 NA NA 25 Ownership cost/hour: \$281.32 \$253.16 NA NA \$179.39 \$111 Operating cost/hour: \$319.35 \$164.35 NA NA \$22.91 \$22 %Utilization-ripper: NA 0 NA NA \$29.91 \$22 %Utilization-ripper: NA \$164.35 NA NA \$29.91 \$22 %Utilization-ripper: NA \$18.79 NA NA \$6.70 \$33 Ripper op. cost/hour: \$57.52 \$40.04 NA NA \$271.75 \$180 Number of	Cost Breakdown:	Scraper Wor	k Team		Support Equip	oment	Maintenance	Equipment
%Utilization-machine: 100 100 NA NA 25 Ownership cost/hour: \$281.32 \$253.16 NA NA \$179.39 \$11 Operating cost/hour: \$319.35 \$164.35 NA NA \$29.91 \$29 %Utilization-ripper: NA 0 NA NA 0 0 Ripper op. cost/hour: NA \$18.79 NA NA \$30.00 \$40 Operator cost/hour: \$57.52 \$40.04 NA NA \$31.90 \$41 Operator cost/hour: \$57.52 \$40.04 NA NA \$271.75 \$186 Number of Units: 2 1 0 0 1 \$451.94 <t< th=""><th></th><th>Scraper</th><th>Doz</th><th>zer</th><th>Load Area</th><th>Dump Area</th><th>Motor Grader</th><th>Water Tru</th></t<>		Scraper	Doz	zer	Load Area	Dump Area	Motor Grader	Water Tru
Ownership cost/hour: \$281.32 \$253.16 NA NA \$179.39 \$11 Operating cost/hour: \$319.35 \$164.35 NA NA \$29.91 \$22 %Utilization-ripper: NA 0 NA NA 0 Ripper own. cost/hour: NA \$18.79 NA NA \$57.55 \$6 Ripper op. cost/hour: NA \$0.00 NA NA \$56.70 \$33 Operator cost/hour: \$57.52 \$40.04 NA NA \$56.70 \$33 Unit Subtotals: \$658.19 \$476.34 NA NA \$271.75 \$186 Number of Units: 2 1 0 0 1 \$451.94 Total work team cost/hour: \$2,420 CCY Support: \$0.00 Maint: \$451.94 Loose volume: 2,420 CCY Swell factor: 1.000	%Utilization-machine:	100		100	NA	NA	25	
Operating cost/hour: \$\$319.35 \$164.35 NA NA \$\$29.91 \$\$2' %Utilization-ripper: NA 0 NA NA 0 Ripper own.cost/hour: NA \$\$18.79 NA NA \$\$5.75 \$\$0 Ripper op. cost/hour: NA \$\$0.00 NA NA \$\$5.75 \$\$0 Operator cost/hour: \$\$57.52 \$\$40.04 NA NA \$\$56.70 \$\$33 Unit Subtotals: \$\$658.19 \$\$476.34 NA NA \$\$271.75 \$\$180 Number of Units: 2 1 0 0 1 \$\$451.94 Group Subtotals: Work: \$\$1,792.72 Support: \$\$0.00 Maint: \$\$451.94 Total work team cost/hour: \$\$2,244.66 \$\$24.66 \$\$24.66 \$\$27.75 \$\$28 Initial volume: 2,420 CCY Swell factor: 1.000 \$\$27.75 Loose volume: 2,420 LCY Swell factor: 1.000 \$\$27.40 \$\$27.40 \$\$27.40 <td>Ownership cost/hour:</td> <td>\$281.32</td> <td colspan="2">\$253.16</td> <td>NA</td> <td>NA</td> <td>\$179.39</td> <td>\$11</td>	Ownership cost/hour:	\$281.32	\$253.16		NA	NA	\$179.39	\$11
%Utilization-ripper: NA 0 NA NA 0 Ripper own. cost/hour: NA \$18.79 NA NA \$5.75 \$4 Ripper op. cost/hour: NA \$0.00 NA NA \$5.75 \$4 Operator cost/hour: \$57.52 \$40.04 NA NA \$5.70 \$33 Operator cost/hour: \$57.52 \$40.04 NA NA \$56.70 \$33 Unit Subtotals: \$658.19 \$476.34 NA NA \$271.75 \$186 Number of Units: 2 1 0 0 1 1 Group Subtotals: Work: \$1,792.72 Support: \$0.00 Maint: \$451.94 Total work team cost/hour: \$2,244.66	Operating cost/hour:	\$319.35	\$	164.35	NA	NA	\$29.91	\$29
Ripper own. cost/hour: NA \$18.79 NA NA \$5.75 \$6 Ripper op. cost/hour: NA \$0.00 NA NA \$0.00 \$6 Operator cost/hour: \$57.52 \$40.04 NA NA \$56.70 \$33 Unit Subtotals: \$658.19 \$476.34 NA NA \$271.75 \$180 Number of Units: 2 1 0 0 1 1 Group Subtotals: Work: \$1,792.72 Support: \$0.00 Maint: \$451.94 Total work team cost/hour: \$2,244.66	%Utilization-ripper:	NA		0	NA	NA	0	
Ripper op. cost/hour:NA\$0.00NANA\$0.00\$6Operator cost/hour:\$57.52\$40.04NANA\$56.70\$33Unit Subtotals:\$658.19\$476.34NANA\$271.75\$186Number of Units:21001Group Subtotals:Work:\$1,792.72Support:\$0.00Maint:\$451.94Total work team cost/hour:\$2,244.66	Ripper own. cost/hour:	NA		\$18.79	NA	NA	\$5.75	\$0
Operator cost/hour: \$\$57.52 \$40.04 NA NA \$\$56.70 \$33 Unit Subtotals: \$658.19 \$476.34 NA NA \$271.75 \$180 Number of Units: 2 1 0 0 1 Group Subtotals: Work: \$1,792.72 Support: \$0.00 Maint: \$451.94 Total work team cost/hour: \$2,244.66	Ripper op. cost/hour:	NA		\$0.00	NA	NA	\$0.00	\$
Unit Subtotals: \$658.19 \$476.34 NA NA \$271.75 \$180 Number of Units: 2 1 0 0 1 0 0 1 Group Subtotals: Work: \$1,792.72 Support: \$0.00 Maint: \$451.94 Total work team cost/hour: \$2,244.66	Operator cost/hour:	\$57.52		\$40.04	NA	NA	\$56.70	\$3
Number of Units: 2 1 0 0 1 Group Subtotals: Work: \$1,792.72 Support: \$0.00 Maint: \$451.94 Total work team cost/hour: \$2,244.66	Unit Subtotals:	\$658.19	\$	476.34	NA	NA	\$271.75	\$180
Group Subtotals: Work: \$1,792.72 Support: \$0.00 Maint: \$451.94 Total work team cost/hour: \$2,244.66	Number of Units:	2		1	0	0	1	
Total work team cost/hour: \$2,244.66 MATERIAL QUANTITIES Initial volume: 2,420 Loose volume: 2,420 Source of estimated volume: Exhibit L Source of estimated awall factor: Cot Up all solv	Group Subtotals:	Work:	\$1,79	02.72	Support:	\$0.00	Maint:	\$451.94
	Total work team cost/ <u>MATERIAL QUA</u> Initial volume: Loose volume: Sour	hour: <u>\$2,244.66</u> <u>NTITIES</u> <u>2,420</u> <u>2,420</u> ce of estimated vo	lume: _	CCY LCY Exhibit I	Swell fact	or: <u>1.000</u>		
	<u>HOURLY</u> PRODU	UCTION						
HOURLY PRODUCTION					Scraper Bo	owl (volume) Bas	is:	
HOURLY PRODUCTION Scraper Bowl (volume) Basis:	Material weight	1 600 lbs/I CV			Struck	Volume: 24.00	T	$^{\circ}\mathrm{V}$
HOURLY PRODUCTION Scraper Bowl (volume) Basis: Material weight: 1.600 lbs/I CY Struck Volume: 24.00	Material description:	Top Soil			Heaped	Volume: 34.00	L(CY
HOURLY PRODUCTION Material weight: 1,600 lbs/LCY Struck Volume: 24.00 LCY Material description: Top Soil Heaped Volume: 34.00 LCY	Rated Payload:	81,600 pounds			Average	Volume: 29.00	L	CY
HOURLY PRODUCTIONMaterial weight:1,600 lbs/LCYStruck Volume:24.00LCYMaterial description:Top SoilHeaped Volume:34.00LCYRated Payload:81,600 poundsAverage Volume:29.00LCY	Pavload Canacity	51.00 LCY			Adjusted C	Canacity: 29.00	Τ	γV

Cycle Time:

Scraper Loading Time: Maneuver and Spread Time: <u>1.00</u> Minutes <u>0.60</u> Minutes

Job Condition Correction:

Site Altitude: 4960 feet

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

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	300.00	0.00	3.00	3.00	2800	0.32

Haul Time: **0.32** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade	Roll. Res	Total Res	Velocity (fpm)	Travel Time		
		(%)	(%)	(%)		(min)		
1	300.00	0.00	3.00	3.00	2949	0.25		
				Return Time:	0.25 r	ninutes		
		team cycle time:	2.17	minutes				
			Adjusted for	or job conditions:	1,331.06	LCY/Hour		
		nber of Scrapers:	2	Scraper(s)				
	Adjusted	d single scrap	per team (unit) h	ourly production:	1,331.06	LCY/Hour		
	Adjusted m	ultiple scrap	er team (fleet) he	ourly production:	1,331.06	LCY/Hour		
Optima	Unadjusted unit production/hour: <u>1,603.69</u> LCY/Hour Optimal Number of Scrapers per push dozer:							
JOB TI	ME AND COST							
Fleet	size: 1	Team(s)	To	otal job time:	1.82	Hours		

Unit cost: \$1.686 /LCY

Total job cost: ______\$4,081_____

Task # 006

Page 1 of 2

SCRAPER TEAM WORK

Site: Tucson South Res	ource	Permit	t Action:	2024 Inspection	Perr	mit/Job#: <u>M2004</u>	4044
PROJECT IDENT	TIFICATION						
Task #: 006	S	State: (Colorado		Abbrev	viation: None	
Date: 12/13/2	024 Co	unty:	Adams		Fil	ename: M044-	006
User: NCG							
Agency or o	rganization name:	DRM	S				
HOURLY EQUIP	<u>MENT</u>			COSTSI	hift basis: <u>1 per d</u>	<u>ay</u>	
			Equipme	ent Description			
	-5	Scraper:	Cat 637	<u>G w/push-pull</u>			
Suppor	t Equipment -Loa	d Area:	NA	1 - 930			
	-Dum	p Area:	NA				
Road Mai	ntenance – Motor	Grader:	CAT 16	6M	-		
	-Water	Truck:	Water	l'anker, 10,000 Ga	ıl.		
Cost Breakdown:	Scraper Wo	rk Team		Support Equir	oment	Maintenance	Equipment
	Scraper	Doz	zer	Load Area	Dump Area	Motor Grader	Water Tr
%Utilization-machine:	100		100	NA	NA	25	
Ownership cost/hour:	\$281.32	\$	253.16	NA	NA	\$179.39	\$11
Operating cost/hour:	\$319.35	\$	164.35	NA	NA	\$29.91	\$2
%Utilization-ripper:	NA		0	NA	NA	0	
Ripper own. cost/hour:	NA		\$18.79	NA	NA	\$5.75	\$
Ripper op. cost/hour:	NA		\$0.00	NA	NA	\$0.00	\$
Operator cost/hour:	\$57.52		\$40.04	NA	NA	\$56.70	\$3
Unit Subtotals:	\$658.19	\$	476.34	NA	NA	\$271.75	\$18
Number of Units:	2		1	0	0	1	
Group Subtotals:	Work:	\$1,79	2.72	Support:	\$0.00	Maint:	\$451.9
Total work team cost/	hour: <u>\$2,244.66</u>						
<u>MATERIAL QUA</u>	NTITIES						
Initial volume:	8,200		CCY	Swell fact	or: <u>1.000</u>		
Loose volume:	8,200		LCY				
Sour	ce of estimated vo	olume:	8-in over	7.7 acres, Rec Pl	an and Rec Cost		
Source o	f estimated swell	factor:	Cat Hand	abook			
HOURLY PRODU	JCTION						
				Scraper Ro	wl (volume) Ras	is [.]	
Maturial and 14				<u>Seraper De</u>	Valence 24.00	<u>15.</u> T	CV
Material description:	Top Soil			Struck Heaned	Volume: 24.00 Volume: 34.00	L/ 	CY CY
Rated Payload:	81,600 pounds			Average '	Volume: 29.00	L	ĊŶ
2				0			

Cycle Time:

Scraper Loading Time: Maneuver and Spread Time: <u>1.00</u> Minutes <u>0.60</u> Minutes

Job Condition Correction:

Site Altitude: 4960 feet

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

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2000.00	0.00	3.00	3.00	2800	0.93

Haul Time: **0.93** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2000.00	0.00	3.00	3.00	2949	0.83
				Return Time:	0.83 1	ninutes
			Total Scrape	r team cycle time:	3.36	minutes
			Adjusted f	for job conditions:	859.64	LCY/Hour
			Selected Nu	mber of Scrapers:	2	Scraper(s)
	Adjuste	d single scrap	per team (unit) h	ourly production:	859.64	LCY/Hour
	Adjusted n	nultiple scrap	er team (fleet) h	nourly production:	859.64	LCY/Hour
Optimal	Unadjusted unit pro l Number of Scrapers pe	duction/hour er push dozer	:	LCY/Hour		
JOB TI	ME AND COST					

Fleet size:	1	Team(s)	Total job time:	9.54	Hours
Unit cost:	\$2.611	/LCY	Total job cost:	\$21,411	

Task # 007

Page 1 of 2

SCRAPER TEAM WORK

Site: <u>Tucson South Res</u>	ource	Permi	t Action:	2024 Inspection	Perr	mit/Job#: <u>M200</u>	4044
PROJECT IDENTTask #:007Date:12/13/2User:NCGAgency or o	<u>TFICATION</u> <u>024</u> Co rganization name:	State: unty: DRM	<u>Colorado</u> Adams		Abbrev Fil	viation: <u>None</u> ename: <u>M044-</u>	007
HOURLY EQUIP	MENT			COSTS	hift basis: <u>1 per d</u>	ay	
Suppor	-S t Equipment -Loa	Scraper: -Dozer: d Area:	Equipme Cat 637 Cat D97 NA	ent Description 7G w/push-pull T - 9SU			
Road Mai	-Dum ntenance –Motor -Water	p Area: Grader: Truck:	NA CAT 10 Water 7	5M Γanker, 10,000 Ga	ıl.		
<u>Cost Breakdown</u> :	Scraper Wo Scraper	<u>rk Team</u> Doz	zer	Support Equip Load Area	oment Dump Area	Maintenance Motor Grader	Equipment Water Truck
%Utilization-machine:	100		100	NA	NA	25	2
Ownership cost/hour:	\$281.32	\$	253.16	NA	NA	\$179.39	\$111.6
Operating cost/hour:	\$319.35	\$	164.35	NA	NA	\$29.91	\$29.6
%Utilization-ripper:	NA		0	NA	NA	0	NA
Ripper own. cost/hour:	NA		\$18.79	NA	NA	\$5.75	\$0.0
Ripper op. cost/hour:	NA		\$0.00	NA	NA	\$0.00	\$0.0
Operator cost/hour:	\$57.52		\$40.04	NA	NA	\$56.70	\$38.9
Unit Subtotals:	\$658.19	\$	476.34	NA	NA	\$271.75	\$180.1
Number of Units:	2		1	0	0	1	
Group Subtotals:	Work:	\$1,79	2.72	Support:	\$0.00	Maint:	\$451.94
Total work team cost/ MATERIAL QUA Initial volume: Loose volume: Source o	Another \$2,244.66 NTITIES 4,033 4,033 4,033 tree of estimated vector 1 f estimated swell 1	olume:	CCY LCY <u>Exhibit I</u> Cat Hand	Swell fact L dbook	or: <u>1.000</u>		
HOURLY PRODU	UCTION			Scraper Bo	owl (volume) Bas	is:	
Material weight: Material description: Rated Payload:	1,600 lbs/LCY Top Soil 81,600 pounds			Struck Heaped Average	Volume: 24.00 Volume: 34.00 Volume: 29.00	L L L	CY CY CY

Cycle Time:

Scraper Loading Time: Maneuver and Spread Time: <u>1.00</u> Minutes <u>0.60</u> Minutes

Job Condition Correction:

Site Altitude: 4960 feet

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

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	300.00	0.00	3.00	3.00	2800	0.32

Haul Time: **0.32** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)	
1	300.00	0.00	3.00	3.00	2949	0.25	
				Return Time:	0.25 r	ninutes	
			Total Scrape	r team cycle time:	2.17	minutes	
			Adjusted f	or job conditions:	1,331.06	LCY/Hour	
		2	Scraper(s)				
	Adjuste	d single scra	per team (unit) h	ourly production:	1,331.06	LCY/Hour	
	Adjusted n	nultiple scrap	per team (fleet) h	ourly production:	1,331.06	LCY/Hour	
Unadjusted unit production/hour: 1,603.69 LCY/Hour Optimal Number of Scrapers per push dozer:							
JOB TI	ME AND COST						
Fleet	size: 1	_ Team(s)	Te	otal job time:	3.03	Hours	

Unit cost: \$1.686 /LCY

Total job cost: _____\$6,801_____

DEMOLITION WORK

Т	ask description:	Remove Re	maining Conve	yor		
Site:	Tucson South Resource		Permit Action:	2024 Inspection	Permit/.	Job#: <u>M2004044</u>
<u>PROJEC</u>	CT IDENTIFICATION	1				
Task #:	016	State:	Colorado		Abbreviation:	None
Date:	12/13/2024	County:	Adams		Filename:	M2004044
User:	NCG					
	Agency or organizat	ion name:	DRMS			
UNIT CO	STS				Location adju	stment: 100.00 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Conveyor	8582' x6' x 3'	Conveyor, demolition, off-site disposal in approved landfill, 30 mile haul	154,476.00	CF	\$0.96	\$148,296.96

				Total Cost	
		Subtotal		(adjusted for	
Job Hours:	80.00	(unadjusted):	\$148,296.96	location):	\$148,296.96

REVEGETATION WORK

]	Fask descrip	otion:	Revegetation of	Affected La	nd		
Site:	Tucson S	outh Resourc	e Pe	mit Action:	2024 Inspection	Permit/Joł	o#: M2004044
<u>P</u>]	ROJECT	IDENTIFIC	ATION				
	Task #:	017	State:	Colorado		Abbreviation:	None
	Date:	12/13/2024	County:	Adams		Filename:	M2009044
	User:	NCG					
	Age	ency or organiz	ation name: DF	RMS			

FERTILIZING

Materials

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

Application

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

TILLING

Description		Cost /Acre
Chisel plowing {DMG}		\$102.41
Weed control spraying (MEANS 31 31 16.13 3100)		\$338.80
	Total Tilling Cost/Acre	\$441.21

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Big Bluestem - Kaw	1.70	5.07	\$26.68
Blue Grama - Hachita	0.30	4.90	\$8.59
Switchgrass - Blackwell	2.00	17.86	\$26.44
Sideoats Grama - Vaughn	1.00	3.28	\$24.59
Western Wheatgrass - Arriba	4.80	12.12	\$43.36
Needlegrass, Green - Lodorm	1.50	6.23	\$12.97
Totals Seed Mix	11.30	49.47	\$142.63

Application

Description		Cost /Acre
Drill Seeding (DRMS Survey Cost)		\$236.64
	Total Seed Application Cost/Acre	\$236.64

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	1.00	TON	\$492.78	\$492.78
Total Mulch Materials Cost/Acre				\$492.78

Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$85.37
	Total Mulch Application Cost/Acre	\$85.37

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
Chokecherry	0.39	Container, 1 gallon (MEANS)	\$21.44	\$2.40	\$8.36
Cottonwood, Plains	0.35	Container, 5 gallon (MEANS)	\$69.55	\$2.40	\$24.34
Willow, Sandbar	0.39	Container, 1 gallon (MEANS)	\$24.04	\$2.40	\$9.38
		Totals	Nursery Stoc	ek Cost / Acre	\$42.08

JOB TIME AND COST

Estimate *Selected Replanti	No. of Acres: ed Failure Rate: ng Work Items:	103 15% SEEDING	Cost /Acre: Cost /Acre*:	\$1,440.71 \$379.27
Initial Job Cost:	\$148,393.13			
Reseeding Job Cost:	\$5,859.72		_	
Total Job Cost:	\$154,253			
Job Hours:	80.00			

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Tucson South B	 20000000	Dilization	Action: 2024	Inspection	I	Permit/Joh#• M	2004044
Tucson South F	lesource		Action. <u>2024</u>	Inspection		renniu joo#. <u>M</u>	2004044
PROJECT IDEN	TIFICATI	<u>ON</u>					
Task #: 018		State: Co	olorado		Abbre	viation: None	
Date: 12/1.	3/2024	County: Ac	lams		Fi	lename: M202	4044
User: NCG	ŕ						
Agency or	organization	name: DRMS					
QUIPMENT TI	RANSPOR'	<u>T RIG COST</u>					
					Shift ba	sis' 1 per da	V
				C	ost Data Sou	ce: CRG Da	ta
				C	obi Data Soa		
Truck '	Tractor Desc	ription: GENE	RIC ON-HIGH	WAY TRU	CK TRACTO	OR, 6X4, DIESEL	POWERED,
_ 1				400 HP	(2ND HALF,	2006)	
Truck	Trailer Desc	ription: G	ENERIC FOLD	DING GOO	SENECK, DF	ROP DECK EQUI	IPMENT
			-	IRAILER (25T, 50T, AN	ND 100T)	
Cost Breakdown:							
Available Rig Ca	pacities	0-25 Tons	26-50 Tons	51+	Tons		
Ownership (Cost/Hour:	\$10.44	\$22.18	\$2	3.94		
Operating (Cost/Hour:	\$26.48	\$54.55	\$5	5.65		
Operator (Cost/Hour:	\$22.52	\$22.52	\$2	2.52		
Helper (Cost/Hour:	\$0.00	\$23.53	\$2	3.53		
Total Unit (Cost/Hour:	\$59.44	\$122.78	\$12	25.64		
JON ROADARI	E EOUIPN	/ENT·					
			11 1 D'	F1 (TT 177'	Potum Trin	DOT Domnit
Description	weight/	Owner ship	Haul Kig	Fleet	Haui Irip	Cost/hr/ fleet	Cost/ fleet
Description	(TONS)	Cost/III/ unit	t	Size	float		
Drill/Broadcast	(10NS)	\$41.02	ι \$59.44	2	\$200.92	\$118.88	\$500.00
Seeder with	25.00	\$41.02	\$J 7. ++	2	\$200.92	\$110.00	\$500.00
Tractor							
CAT 16M	28.73	\$185.14	\$122.78	2	\$615.84	\$245.56	\$500.00
Cat 637G w/push- pull	59.59	\$281.32	\$125.64	2	\$813.92	\$251.28	\$1,000.00
Cat D9T - 9SU	66.13	\$271.95	\$125.64	2	\$795.18	\$251.28	\$500.00
Cat 740	36.49	\$108.25	\$122.78	4	\$924.12	\$491.12	\$1,000.00
CAT 990H high lift	83.34	\$115.73	\$125.64	1	\$241.37	\$125.64	\$250.00

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Water Tanker, 10,000 Gal.	\$269.02	2	\$538.04	\$538.04
			[I

Subtotals: \$538.04 \$538.04

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	BRIGHTON	
Total one-way travel distance:	1.00	miles
Average Travel Speed:	45.00	mph
Total Non-Roadable Mob/Demob Cost * '* two round trips with haul rig:	\$38,898.48	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	\$23.91	

Transportation Cycle Time:

	Non-	
	Roadable	Roadable
	Equipment	Equipment
Haul Time (Hours):	0.02	0.02
Return Time (Hours):	0.02	0.02
Loading Time (Hours):	2.17	NA
Unloading Time (Hours):	2.17	NA
Subtotals:	4.38	0.04

JOB TIME AND COST

Total job time: **8.77** Hours

Total job cost: \$38,922