

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:
Midwestern Farms	M-1993-059	Sand and gravel	Prowers
INSPECTION TYPE:	INSPECTOR(S):	INSP. DATE:	INSP. TIME:
Monitoring	Amy Eschberger	April 04, 2014	08:00
OPERATOR:	OPERATOR REPRESENTATIVE:	TYPE OF OPERAT	TION:
Midwestern Farms Resource dba Eastern	Joe Baxter and Baxter Kirkland	112c - Construction Regular Operation	
Colorado Aggregates			
DEASON FOD INSDECTION.	BOND CALCULATION TYPE.	BOND AMOUNT.	

REASON FOR INSPECTION:	BOND CALCULATION TYPE:	BOND AMOUNT:
Normal I&E Program	Complete Bond	\$718,752.00
DATE OF COMPLAINT:	POST INSP. CONTACTS:	JOINT INSP. AGENCY:
NA	None	None
WEATHER:	INSPECTOR'S SIGNATURE:	SIGNATURE DATE:
Clear	(Imy Sichberger	May 5, 2014

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/POSSIBLE VIOLATION: 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 Operator shall submit adequate financial warranty, as determined by the Division. The Division will be sending a separate surety increase notice to the Operator regarding the increase of the financial warranty. The Operator will have 60 days from the date on the surety increase notice to post the additional financial warranty.

CORRECTIVE ACTION DUE DATE: 07/04/2014

INSPECTION TOPIC: Gen. Compliance With Mine Plan

PROBLEM/POSSIBLE VIOLATION: Problem: The current mine plan needs to be updated and clarified pursuant to C.R.S. 34-32.5-112 (1)(c)(VI). The Operator must provide sufficient information to describe or identify how the Operator intends to conduct the operation.

Failure to follow approved reclamation plan, or current reclamation plan needs to be updated and clarified pursuant to C.R.S. 34-32.5-116 (1). The Operator must follow approved reclamation plan or provide sufficient information to describe or identify how the Operator intends to conduct reclamation.

CORRECTIVE ACTIONS: The Operator shall submit a Technical Revision, with the required \$216 revision fee to update and clarify the current approved mine plan and reclamation plan to reflect existing and proposed activities by the corrective action date.

CORRECTIVE ACTION DUE DATE: 07/04/2014

OBSERVATIONS

This inspection was conducted by Amy Eschberger, Tyler O'Donnell, and Tony Waldron of the Division of Reclamation, Mining and Safety (Division). Also present were Midwestern Farms Resources dba Eastern Colorado Aggregates representatives Baxter Kirkland and Joe Baxter. The Midwestern Farms operation is located about 2 miles south and west of Holly, Colorado, between U.S. Highway 50 and the Arkansas River. The site is mined by floating suction dredge method with the waste sand being backfilled behind the active mining. Approximately 1.9 to 2.0 million tons of material is reported to be excavated annually, with 23-28% sold. Mining occurs to an average depth of 60 feet.

During inspection, it was clear, sunny and cool, and the ground was a little moist from rain on the previous day. The mine entrance sign (Photo 1) and permit boundaries were in place. The site is currently active and was accessed by vehicle. Active mining is in Phase 2 of the approved Mining Plan, and the Operator stated that currently, they do not plan on continuing the operation past Phase 2. A large overburden pile of sand located in the central portion of the site (Photo 2) covers approximately 12 acres with an average height of 20 feet. During inspection, the Division agreed to use the Operator's volume estimate of 325,000 CY for the sand pile. The Operator stated that they will use this sand to backfill the Phase 2 pond just to the east of the pile (where the dredge is presently located) as soon as possible.

Topsoil is stockpiled along the northern permit boundary. Some of the topsoil is stable (Photo 3), but other parts are not stable (Photo 4) and will require seeding with the approved seed mixture if it will not be used for final reclamation shortly. The approved Mining Plan calls for all topsoil stockpiles to be immediately broadcast seeded with a mixture of smooth brome, western wheat, and intermediate wheatgrass in equal proportions at a rate of 19 PLS per acre. An elevated conveyor (Photo 5) approximately 1,750 feet in total length crosses the railroad tracks to the north, and was constructed to bring material from the active excavation area at the center of the site to the haul area north of the railroad tracks. This conveyor was not in operation during inspection. A material processing and stockpiling area (Photos 6 and 7) located at the center of the affected area covers approximately 40 acres according to the Division's analysis of recent aerial images.

There are two ponds in the permit area, the western pond and the eastern pond, which together comprise approximately 94 acres of surface area. According to the State Engineer, this amount of exposed groundwater is in compliance with their regulations. The Lower Arkansas Water Management Association (LAWMA) indicated that the Midwestern Farms operation has permanent augmentation rights that allow them to have up to 98.40 acres of exposed groundwater (as decreed in case no. 02CW181). The western pond (Photos 8 and 9) currently contains a Colorado Parks and Wildlife (CPW) sign and is being used as public fishing access. The Division does not have record of release for this area on file or in the permit system. The Operator was informed during inspection that they will need to submit a Technical Revision with the Division to change the post-mining land use of the CPW pond area to recreational use. Using recent aerial images of the site, the Division has estimated the surface area of this pond to be approximately 23 acres, with a perimeter of approximately 6,877 feet.

The eastern pond (Photos 10 and 11) is part of the Phase 2 dredge operation and will need to be backfilled once mining ceases. Using recent aerial images of the site, the Division has estimated the surface area of this eastern

pond to be approximately 71 acres, with a perimeter of approximately 13,421 feet. The eastern and southern banks of this pond have a 1H:1V slope, rising approximately 6 feet above the water line.

The approved post-mining land use of this site was for industrial, general agriculture, rangeland, and wildlife habitat. A Technical Revision was approved by the Division on April 25, 2012 that changed the post-mining land use of 64.2 acres located on the northwestern portion of the permit area to dryland farmland. During inspection, the Division observed this area to have been topsoiled with weedy vegetation growing (Photo 12). The Operator believes this area has been released from the permit, but no records of that release were found in the Division's file or permit system. If the Operator would like to release the 64.2 acres, he must first initiate a crop rotation to demonstrate the post-mining land use as dryland farmland. Once this has been achieved, the Operator must fill out and submit to the Division the attached Request for Full or Partial Release of Permit Area form.

The permit area is recorded as being 1,479.2 acres, with approximately 141 acres reported as being currently affected. However, after inspection, the Division believes the currently affected area to be more than the maximum of 141.8 acres allowed to be disturbed at any one time per the approved Mining Plan. During inspection, the Operator estimated the currently affected area to be approximately 150 acres; however, he agreed to allow the Division to determine actual affected acreage using aerial images of the site. In doing this (Figures 1 and 2), the Division estimates the total affected area to be approximately 387 acres, of which, approximately 94 acres consist of surface area of exposed groundwater (the two ponds), and approximately 293 acres consist of affected land. Of the 293 acres of affected land, 64.2 acres are the topsoiled dryland farmland, approximately 179 acres are in use by the operation and will require reworking and topsoil replacement, and approximately 50 acres (located around the outer edges of the affected area) should not require topsoil replacement, but will require seeding. The Division has recalculated the bond estimate to account for this increase in affected area (Figure 3) from 141.8 acres to 387 acres (an increase of approximately 245 acres), with a new bond amount of \$1,583,000.00. This new estimate is \$864,248, more than the current bond amount of \$864,248.

The approved Reclamation Plan for this site states that each mining phase will have two lakes, one left after approximately ½ of each phase is mined, and the other after final reclamation of the phase. The lakes will have a maximum depth of approximately 60 feet, and will receive water through the alluvium in the floodplain. The side slopes of the lakes shall be no steeper than 2H:1V in all portions, and a shallow shelf area 40 feet wide will be created along the shoreline of each lake. This shelf will be installed at a 6H:1V slope.

Also, all grading shall be conducted to create a final site topography consistent with the wildlife habitat and dryland farmland (agricultural) use. Grading will be done in a manner to control erosion and siltation and to protect areas outside the affected land from slides and other damage. There will be no highwalls left within the site. Backfilling and grading will be completed as soon as possible during or after the mining process for each phase of mining. The Operator will make every reasonable "good faith" effort to minimize overburden stockpiling and exposed, unreclaimed mine areas.

After final grading of the surface to be soiled, topsoil will be placed to a depth of 12-24 inches, with an average depth of 18 inches. The soil will be obtained from the stockpiles created from the initial lake excavation in each mining phase. According to the Division's estimates (above), currently, the total area that will require topsoil replacement consists of approximately 179 acres. At an average depth of 1.5 feet (18 inches) x 7,797,240 SF (179 acres x 43,560 feet), the amount of topsoil needed for final reclamation will be approximately 433,180 CY (11,695860 CF/27 CF).

The revegetation plan will be based on having wetlands along the shores of the lakes and dryland farmland for the rest of the permit area. The original plant area located north of the railroad tracks and south of U.S. Highway 50 is restored to industrial use and will not be revegetated. Prior to seeding, the soils will be ripped or disced to relieve compaction. Since the entire site will have grades of 6H:1V or less, drill seeding or broadcast seeding will be used. Drill seeding may be used at ½ the broadcast rate. Prior to seeding, the Operator will collect samples of the redistributed soil, have it analyzed, and add fertilizers specifically designed for the actual soil conditions and proposed revegetation plan. This will be done before any fall seeding. When the soils and any suitable fine material have been spread, the surface will be smoothed and worked until moderately fine where the seed is to be drilled; the surface will be left fairly rough where seed is to be broadcast.

For seeding of the dryland farmland (agricultural) areas, the approved Reclamation Plan calls for a seed mixture recommended by the Division of Wildlife (Figure 4). Seeding time will be late fall or early winter when the soil is dry and cold and seeds will remain dormant until they are able to take advantage of spring moisture. Mulching with weed-free straw, manure, or grass hay will be used to protect the soil surface following seeding. The mulch rate will be 2 tons per acre.

The plan for revegetating the shoreline areas is expected to establish a diverse, effective, and long-lasting vegetative cover capable of self regeneration without continued dependence on irrigation, soil amendments, or fertilizer. In order to establish a more diverse habitat for wildlife and waterfowl, tree and shrub planting will be introduced along the shores of the lakes (Figure 5). The approved Reclamation Plan includes a list of plant material that has been selected for wildlife habitat by the Division of Wildlife (Figure 6). The tree/shrub saplings/seedlings to be planted will mainly be placed along the reclaimed shoreline in areas of 2/10 acre utilizing numerous short rows instead of fewer, longer rows. In-row spacing between shrubs will be less than 8 feet and between row spacing will be less than 10 feet. One of these 2/10 acre thicket areas will be used for each 1.5 acres of the upper shelf areas. Since the shelves are 40 feet wide, the upper shelf width (above water) is 20 feet. This provides for 13.3% of the upper shelf areas planted with shrub/tree thickets. The remaining upper shelf areas will be seeded with 50% grass mix as described in the seed mix for the dryland farmland areas, and 50% wetland mix as described in the approved Reclamation Plan (Figure 7). A tree/shrub nursery or holding area could be established on-site to provide plant material for reclamation of the lake areas which will become future wildlife habitat. Seedlings for spring planting can also be obtained from the Colorado State Forest Service in quantities large enough to revegetate a lake area in one planting.

In conjunction with the grass seeding and tree/shrub planting, wetland species (Figure 7) will be introduced along the shoreline of the proposed lakes once final grading has been accomplished. An underwater terrace area of approximately 20 feet wide immediately along the edge of each lake shoreline will allow for public safety as

well as an area for introduction of wetland plants. This area will be a section of shelf approximately installed at a grade of 6H:1V. The wetland plants will be introduced in the 20 feet wide underwater part of the shallow shelf, and will comprise 50% of the seed mix for the upper (above water) part of the shelf that contains the shrub/tree thickets. Native plant material on-site and especially species for trees, shrubs, and wetland plants can be found along the Arkansas River and can be transplanted to the proposed lake areas.

The approved Reclamation Plan states that the Operator will take measures to ensure that the reclaimed land is free of weed infestations. Problem weeds will be monitored closely each spring for the first two years following reseeding to determine if they are invading the area. Weed control will be initiated if the problem becomes serious. The Operator plans to use assistance from the local Natural Resources Conservation Service (NRCS) office to determine the perennial cover of the reclaimed land.

In conclusion, the Operator will need to submit a Technical Revision to the Division that includes updated Mining Plan and Reclamation Plan maps. This Technical Revision shall also include a change in post-mining land use for the western pond which is currently being used as public fishing access by the CPW.

In addition, the Operator shall submit a new financial warranty with the Division in the amount of \$864,248 to cover the difference between the current bond amount of \$718,752 and the new bond amount of \$1,583,000 calculated by the Division after conducting the April 04, 2014 inspection.

Finally, once mining activities have ceased at this site, final reclamation shall be completed within five years, pursuant to C.R.S. 34-32.5-116(4)(q)(I).

PHOTOGRAPHS



Photo 1. Permit sign posted at entrance to site from U.S. Highway 50.



Photo 2. View looking west, showing part of large overburden pile of sand located in central portion of site, just west/northwest of current dredge pond.



Photo 3. View looking south, showing stabilized topsoil stockpile lining northern boundary of permit area.



Photo 4. View looking south, showing topsoil stockpiles that need seeding.



Photo 5. View looking west, showing elevated conveyor that crosses the railroad tracks to the north of the site.



Photo 6. View looking north, showing material processing and stockpiling area located at center of site.



Photo 7. View looking northwest, showing material processing and stockpiling area located at center of site.



Photo 8. View looking south, showing western pond with DOW sign posted (at far right). This pond is being used for public access fishing.



Photo 9. View looking east across western pond, with material processing and stockpiling area shown in the background.



Photo 10. View looking west, showing eastern pond in foreground and processing and stockpiling area in background. Floating suction dredge is shown at far right.



Photo 11. View looking southwest across eastern pond.



Photo 12. View looking north across the 64.2 acres of dryland farmland located on northwestern portion of site.

Midwestern Farms

PERMIT #: M-1993-059 INSPECTOR'S INITIALS: AME INSPECTION DATE: April 4, 2014



Figure 1. Aerial photograph of the Midwestern Farms site (DRMS File No. M-1993-059), showing an affected area of 387 acres.

Midwestern Farms



Figure 2. Aerial photograph of the Midwestern Farms site (DRMS File No. M-1993-059), showing the affected area, including the western pond, the eastern pond, the vegetated dryland farmland, and the area that will need to be retopsoiled for final reclamation.

COST SUMMARY WORK

Task description:	Reclaim the Midwest Farms Pit
r don debeription.	rectain the minute of a and a re

Site:	Midweste	ern Farms		Permit Action:	April 2014 Inspection	Permit/J	ob#: <u>M1993059</u>
Ī	PROJEC1	IDENTIFICA	TION				
	Task #:	999	State:	Colorado		Abbreviation:	None
	Date:	4/21/2014	County:	Prowers		Filename:	M059-999
	User:	TOD					
	Ag	ency or organizati	ion name: DR	MS			

TASK LIST (DIRECT COSTS)

Tock		Form	Fleet	Task	
Task	Description	Used	Size	Hours	Cost
001	Demo conveyor belt over railroad tracks 1750 feet	DEMOLISH	1	45.00	\$45,302.09
	total				
002	Remove sand pile	TRUCK1	1	365.71	\$382,181.84
003	Grade banks of the eastern pond to 3H:1V 5000ft	DOZER	1	8.42	\$1,668.00
	shoreline				
004	Rip plant area	RIPPER	1	57.39	\$12,109.00
005	Replace 1.5 feet of topsoil over178 acres	SCRAPER1	1	452.79	\$534,594.34
006	Revegetation 228.8 acres	REVEGE	1	455.00	\$250,727.05
007	Plant trees 20 acres	REVEGE	1	80.00	\$11,088.00
008	Mobilization Demobilization of equipment	MOBILIZE	1	10.18	\$19,613.66
		1474.49	\$1,257,283.98		

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02%		Total =	\$25,397.14		
Performance bond:	1.05%		Total =	\$13,201.48		
Job superintendent:	80.00 hrs		Total =	\$5,232.80		
Profit:	10.00%		Total =	\$125,728.40		
			TOTAL O & P =	\$169,559.82		
	CON	TRACT AMOUNT	(direct + O & P) =	\$1,426,843.80		
LEGAL - ENGINEERING - PROJECT MANAGEMENT:						
Financial warranty process	ing (legal/related costs):	0.00	Total =	0.00		
Engineering work and/or	contract/bid preparation:	6.00%	Total =	\$85,610.63		
Reclamation manageme	nt and/or administration:	5.00%		\$71,342.19		
	CONTINGENCY:	0.00	Total =	\$0.00		
		TOTAL IN	NDIRECT COST =	\$326,512.64		
	TOTAL BO	OND AMOUNT (d	irect + indirect) =	\$1,583,796.62		

Figure 3. New bond estimate for Midwestern Farms operation (DRMS File No. M-1993-059), calculated by DRMS after the April 04, 2014 inspection.

DEMOLITION WORK

PERMIT #: M-1993-059 INSPECTOR'S INITIALS: AME INSPECTION DATE: April 4, 2014

r	Task description:	Demo conv	eyor belt over ra	ailroad tracks 1750 feet to	otal	
Site:	Midwestern Farms		Permit Action:	April 2014 Inspection	Permit/Jo	b#: <u>M1993059</u>
PROJE	CT IDENTIFICATION	N				
Task #: Date: User:	001 4/21/2014 TOD	State: County:	Colorado Prowers	Abb	Filename:	None M059-001
	Agency or organization	tion name:	DRMS			

UNIT COSTS

Location adjustment: 94.10 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Demo conveyor belt Section on ground	1050 feet	Conveyor, overland, including supports - 5 ft. W x 6 ft. H housing	1,050.00	LF	\$17.07	\$17,923.50
Demo conveyor belt over railroad tracks	700 ft	Conveyor, elevated, including supports - 5 ft. W x 6 ft. H housing	700.00	LF	\$43.17	\$30,219.00

				Total Cost	
		Subtotal		(adjusted for	
Job Hours:	45.00	(unadjusted):	\$48,142.50	location):	\$45,302.09

TRUCK/LOADER TEAM WORK

Site: Midwestern Farr	ns	Permit	Action:	April 2014	inspection	Permit/Job#:	M1993059
PROJECT IDEN	TIFICATION	N					
Task #: 002 Date: $4/22/2$ User:TOD	State: <u>C</u> County: <u>P</u>	olorado rowers			Abbreviation: _ Filename: _	None M059-002	
Agency or	organization na	me: DRMS	5				
HOURLY EQUI	PMENT COS	Т			Shift	basis: <u>1 per day</u>	
			Equ	ipment Descr	ription		
T	ruck Loader Tea	am -Truck:	Cat 773	BF	1		
-Loader: CAT 990H high lift							
Suppo	rt Equipment -I	Load Area:	NA Cat D8	T 8811			
Road Ma	aintenance – Mor	tor Grader:	CAT 14	4M			
	-W	ater Truck:	Water '	Fanker, 3,500	Gal.		
Cost Brookdown.	Truck/Lo	adar Taam		Support	Equipment	Mainte	nance Equinment
<u>cost breakdown</u> .	Truck	Loader	L	oad Area	Dump Area	Motor Grad	ler Water Truc
%Utilization-machine:	100	100		NA	100	50	50
Ownership cost/hour:	\$60.64	\$112.96		NA	\$56.69	\$37.98	\$10.68
Operating cost/hour:	\$119.47	\$158.40		NA	\$104.03	\$33.87	\$18.12
Ripper op. cost/hour:	NA	\$0.00		NA	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$25.66	\$35.82		NA	\$37.41	\$27.55	\$0.00
Unit Subtotals:	\$205.77	\$307.17		NA	\$198.13	\$99.40	\$28.80
Number of Units:	2	1		0	1	1	1
Group Subtotals:	Work:	\$718.71		Support:	\$198.13	Mai	nt: \$128.20
Total work team cos	t/hour: <u>\$1,045</u>	.04					
MATEDIAL OIL	A NTITIES						
Initial and home	225.000		COV	C11	frater 1.0	<u> </u>	
Loose volume: 344 500 LCY Swell factor: 1.000							
Loose voranie.	<u> </u>	1 1		· · ·			
Source	of estimated sw	a volume:	Operator	dbook			
Source	Material Purch	ase Cost: 5	\$0.00	UUUUK			
	Т	otal Cost:	\$0.00				
	1	otal Cost.	¥0.00				

Truck Payload (weight) Bas	is:	
Material weight:	2,400	Pounds/LCY
Description:	Sand - Dry, loose	
Rated Payload:	122,520	Pounds
Payload Capacity:	51.05	LCY

Truck/Loader Worksheet Cont'd

Truck Bed ((volume)) Basis:

Struck Volume:	35.00	LCY
Heaped Volume:	46.50	LCY
Average Volume:	40.75	LCY
Adjusted Volume:	46.50	LCY

 Final Truck Volume Based on Number of Loader Passes:
 43.88
 LCY

Site Altitude (ft.): 3400 feet

Loading Tool Capacity

		Bucket Size Class: NA
Rated Capacity:	11.250	LCY (heaped)
Bucket Fill Factor:	0.975	Loose material - uniform aggregates to 1/8" (95-100%) 0.975
Adjusted Capacity:	10.969	LCY

Job Condition Corrections:

TruckLoaderSourceAltitude Adj:1.0001.000(CAT HB)Job Efficiency:0.8300.830(CAT HB)Net Correction:0.8300.8300.830

 Loading Tool Cycle Time:
 Number of Loading Tool Passes Required to Fill Truck:
 4
 passes

Excavators and Front Shovels:

 Machine Cycle Time vs. Job Condition Rating:
 NA

 Selected Value within this Basic Rating:
 NA

Track Loaders – Material Description:

Cycle Time Elements (min.):

Load:	NA	Maneuver:	NA	Dump:	0.100
-		-		-	

 Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver):
 0.600
 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Material 1/8" to 3/4" diameter -0.02	-0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
	Net Cycle Time Adjustment:	-0.100	minutes
	Adjusted Loader Cycle Time:	0.500	minutes
	Net Load Time per Truck:	1.600	minutes

Truck Cycle Time:

Truck Exchange Time:	0.70	Minutes	Adjusted for site altitude:	0.700	Minutes
Truck Load Time:	1.600	Minutes	Adjusted for site altitude:	1.600	Minutes
Truck Maneuver and Dump Time:	1.10	Minutes	Adjusted for site altitude:	1.100	Minutes

Truck Travel (Haul & Return) Time:	
maintained 3.0	

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

Truck/Loader Worksheet Cont'd

	Haul Rou	te:						INSPECTIC	ON DATE: April 4, 2
Γ	Seg #	Haul I	Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel	
	•	(Ft)			(%)	(%)	(fpm)	Time	
_	1	525.00	2	0.50	2.00	2.50	2449	(min)	
	1	525.00)	-0.50	3.00	2.50	3448	0.864	
						Haul Time:	0.864	minu	tes
_	Return Ro	oute:				_			
	Seg #	Haul I	Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel	
		(Ft)			(%)	(%)	(fpm)	Time (min)	
	1	525.00)	0.50	3.00	3.50	3540	0.375	
						Return Time:	0.375	mir	nutes
					Total Tru	ck Cycle Time:	4.639	mir	nutes
L	oading Too	l unit							
2	Produ	iction	1,144.57	LCY/Hour		Adjusted for j	ob efficiency:	949.9	9 LCY/Hour
Truck	Unit Produ	iction							
		-	567.47	LCY/Hour		Adjusted for j	ob efficiency:	471.0	0 LCY/Hour
Optima	al No. of Tr	ucks:	2	Truck(s)		Selected Num	per of Trucks:	2	Truck(s)
				Adjuste	d hourly truc	k team production	on: 942	.00 L	.CY/Hour
				Adjusted sing	le truck/loade	er team production	on: 942	.00 I	.CY/Hour
				Adjusted multip	le truck/loade	er team production	on: 942	.00 I	.CY/Hour
	JOB TIN	ME AN	D COST						
	Fleet	size:	1	Team(s)	r	Fotal job time:	365.7	/1	Hours
	Unit	cost:	\$1.109	/LCY	,	Total job cost:	\$382,18	1.84	

PERMIT #: M-1993-059 INSPECTOR'S INITIALS: AME INSPECTION DATE: April 4, 2014

BULLDOZER WORK

Task description:	Gra	de banks of th	ie eastern p	oond to 3H:1V 5000ft sh	noreline	
: Midwestern Far	ms	Perm	it Action:	April 2014 Inspection	Permit/Job#:	M1993059
PROJECT IDEN	TIFICAT	ION				
Task #: 003 Date: $4/21/2$ User:TOD	2014	State: County:	Colorado Prowers		Abbreviation: Filename:	None M059-003
Agency or	organizatio	n name: DRM	MS			
HOURLY EQUI	PMENT C	<u>COST</u>				
Basic Machine: Horsepower: Blade Type: Attachment: Shift Basis: Data Source:	Cat D8T - 310 Semi-Uni NA 1 per day (CRG)	8SU versal				
Cost Breakdown: Ownership Cost/H Operating Cost/H Ripper op. Cost/H	our: our:	\$56.69 \$104.03 \$0.00		Utilization % NA 100 0		
Operator Cost/H	lour:	\$37.41		NA		
MATERIAL OU Initial Volume: Swell factor: Loose volume: Source of estimated Source of estimated	ANTITIES 10,000 1.230 12,300 LC volume: swell factor	S Y : <u>5000 ft of s</u> Cat Handb	– – shoreline Sl ook	lopes roughly 1H:0.5V F	1:6 feet	
HOURLY PROD	DUCTION					
Average push distar Unadjusted hourly p	nce: production:	50 feet 1,400.0 LCY	/hr			
Materials consistent	cy descriptio	n: Consolic	lated stockp	bile 1.0		
Average push gradio Average site altitude	ent: -15 e: $3,40$	% 0 feet				
Material weight:	2,10	0 lbs/LCY				
Weight description:	Eart	h - Loam				
Job Condition Corre Ope Material co	ection Factor rator Skill: onsistency:	<u> </u>	00	Source (AB.AVG.)(CAT HB)		
Dozir	ng method:	1.2	00	(SLOT)		

Bulldozer Worksheet Cont'd	Tas	k # 003 IN
Visibility:	1.000	(AVG.)
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:	1.095	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	1.0436	
Adjusted unit production: 1,	461.04 LCY/hr	
Adjusted fleet production: 14	461.04 LCY/hr	

JOB TIME AND COST

Fleet size:	1 Dozer(s)
Unit cost:	\$0.136/LCY

Total job time:	8.42 Hours
Total job cost:	\$1,668.00

BULLDOZER RIPPING WORK

PERMIT #: M-1993-059 INSPECTOR'S INITIALS: AME INSPECTION DATE: April 4, 2014

Site:	Midwestern l	Farms	Perm	it Action:	April 2014 Ins	pection P	ermit/Job#	: <u>M19930</u>	59
Ī	PROJECT ID	ENTIFICAT	FION						
	Task #: 00	4	State:	Colorado		Abb	previation:	None	
	Date: 4/2 User: TO	21/2014 DD	County:	Prowers			Filename:	M059-00	14
	Agency	v or organizatio	n name: DRN	MS					
I	HOURLY EO	UIPMENT (COST						
-	Basic	Machine: C	Cat D8T - 8SU			Horsepower:		310	
	Ripper At	tachment: 3	-Shank Ripper			Shift Basis:	11	per day	
						Data Source:	(CRG)	
<u>(</u>	Cost Breakdown	<u>ı:</u>				Utilization %			
		Ownership	Cost/Hour:	\$63	3.00	NA			
		Operating	Cost/Hour:	\$10	4.03	100	_		
	Rip	per Operating	Cost/Hour:	\$6	.53	100	_		
		Operator Total Unit	Cost/Hour: Cost/Hour:	\$37	0.98	NA	_		
		Total Fleet	Cost/Hour	\$21	0.98				
T	MATEDIAL (÷=-		.1 1 A			
1		VUANTITIE	20	Sele	ected estimating	method: Are	a		
,	A 1/	1.							
A	Alternate Metho	<u>ds:</u>							
<u>/</u> mic:	Alternate Metho	<u>ds:</u>	Bank	Volume:	NA	BCY	120.067	NA	DCV
mic: rea:	Alternate Metho NA 40.00	ds: acres	Bank Rip D	Volume: epth (ft):	NA 2.00	BCY Volume:	129,067	NA	BCY or
nic: rea:	Alternate Metho NA 40.00	ds: acres Source of es	Bank Rip D timated quantity	Volume: epth (ft): :	NA 2.00 S estimate modifi	BCY Volume: fying AM06 Exl	129,067 nibit L	NA	BCY or
mic: rea:	Alternate Metho NA 40.00 HOURLY PR	ds: acres Source of es ODUCTION	Bank Rip D timated quantity I	Volume: epth (ft): :	NA 2.00 S estimate modif	BCY _ Volume: _ fying AM06 Exl	129,067 hibit L	NA	BCY or
<u>/</u> mic: rea:	Alternate Metho <u>NA</u> 40.00 HOURLY PR Seismic:	ds: acres Source of es ODUCTION	Bank Rip D timated quantity I	Volume: epth (ft): : <u>DRMS</u>	NA 2.00 S estimate modifi	BCY _ Volume: fying AM06 Exl	129,067 nibit L	NA	BCY or
nic: rea:	Alternate Metho NA 40.00 HOURLY PR Seismic:	ds: acres Source of es ODUCTION	Bank Rip D timated quantity <u>I</u> Seismic Veloc:	Volume: epth (ft): :	NA 2.00 S estimate modif	BCY Volume: fying AM06 Ext	129,067 hibit L	NA	BCY or
<u>/</u> nic: rea: <u>1</u> <u>2</u>	Alternate Metho <u>NA</u> 40.00 HOURLY PR Seismic: Area:	ds: acres Source of es ODUCTION	Bank Rip D timated quantity <u>I</u> Seismic Veloc:	Volume: epth (ft): : <u>DRMS</u> ity:	NA 2.00 S estimate modif NA	BCY Volume: fying AM06 Exl	129,067 nibit L	NA	BCY or
<u>/</u> nic: rea: <u><u>1</u> <u>5</u></u>	Alternate Metho <u>NA</u> 40.00 HOURLY PR Seismic: <u>Area:</u>	ds: acres Source of es ODUCTION	Bank Rip D timated quantity Seismic Veloc: age Ripping Dep	Volume: epth (ft): : ity: oth:	NA 2.00 S estimate modif NA 2.56	BCY Volume: fying AM06 Exl feet/sec mph	129,067 hibit L	NA	BCY or
<u>/</u> nic: rea: <u>1</u> <u>2</u>	Alternate Metho <u>NA</u> 40.00 HOURLY PR Seismic: <u>Area:</u>	ds: acres Source of es ODUCTION Aver Aver	Bank Rip D timated quantity Seismic Veloc age Ripping Dep age Ripping Wic	Volume: epth (ft): : ity: oth: ith:	NA 2.00 S estimate modif NA 2.56 7.08	BCY Volume: fying AM06 Exl feet/sec feet/sec	129,067 hibit L cond	NA	BCY or
<u>/</u> nic: rea:	Alternate Metho <u>NA</u> 40.00 HOURLY PR Seismic: Area:	ds: acres Source of es ODUCTION Aver Avera	Bank Rip D timated quantity Seismic Veloc: age Ripping Dep age Ripping Wic ge Ripping Leng	Volume: epth (ft): : DRMS ity: ity: oth: th:	NA 2.00 S estimate modif NA 2.56 7.08 999.00 88.00	BCY Volume: fying AM06 Exl feet/sec feet/sec feet feet feet	129,067 hibit L cond	NA	BCY or
<u>/</u> nic: rea:	Alternate Metho <u>NA</u> 40.00 HOURLY PR Seismic: Area:	ds: acres Source of es ODUCTION Aver Avera Avera Avera Avera	Bank Rip D timated quantity Seismic Veloc: age Ripping Dep age Ripping Wid ge Ripping Leng erage Dozer Spe	Volume: epth (ft): : ity: oth: dth: gth: eed:	NA 2.00 S estimate modif NA 2.56 7.08 999.00 88.00 0.25	BCY Volume: fying AM06 Exl feet/sec feet/sec feet feet feet feet	129,067 nibit L cond	NA	BCY or
<u>/</u> nic: 	Alternate Metho <u>NA</u> 40.00 HOURLY PR Seismic: Area:	ds: acres Source of es ODUCTION Aver Avera Avera Avera Produ	Bank Rip D timated quantity Seismic Veloc age Ripping Dep age Ripping Wic erage Dozer Spe ge Maneuver Tin uction per unit ar	Volume: epth (ft): : _ DRMS ity: tity: oth: gth: ed: rea:	NA 2.00 S estimate modif NA 2.56 7.08 999.00 88.00 0.25 0.840	BCY Volume: fying AM06 Exl feet/sec feet/sec feet feet feet feet feet feet feet feet feet feet	129,067 hibit L cond	NA	BCY or
<u>4</u> nic: rea:	Alternate Metho <u>NA</u> 40.00 HOURLY PR Seismic: <u>Area:</u> Job Condition C	ds: acres Source of es ODUCTION Aver Avera Avera Avera Produ	Bank Rip D timated quantity Seismic Veloc age Ripping Dep age Ripping Wic ge Ripping Leng erage Dozer Spe ge Maneuver Tin uction per unit ar Drs	Volume: epth (ft): DRMS	NA 2.00 S estimate modif NA 2.56 7.08 999.00 88.00 0.25 0.840	BCY Volume: fying AM06 Exl feet/sec mph degrees feet feet feet feet feet acres/h	129,067 hibit L cond	NA	BCY or
<u>/</u> nic: rea: <u>1</u> <u>5</u> <u>7</u>	Alternate Metho NA 40.00 HOURLY PR Seismic: Area: Job Condition C	ds: acres Source of es ODUCTION Avera Avera Avera Produ orrection Facto nadjusted Hour	Bank Rip D timated quantity Seismic Veloc: age Ripping Dep age Ripping Dep age Ripping Leng erage Dozer Spe ge Maneuver Tin uction per unit ar <u>ors</u>	Volume: epth (ft): : DRMS ity: oth: gth: gth: rea: on:	NA 2.00 S estimate modif NA 2.56 7.08 999.00 88.00 0.25 0.840 0.840	BCY Volume: fying AM06 Exl feet/sec mph degrees feet feet feet feet feet acres/h	129,067 hibit L cond s our	NA	BCY or
<u>/</u> nic: rea: <u>1</u> <u>5</u> <u>7</u>	Alternate Metho NA 40.00 HOURLY PR Seismic: Area: Job Condition C	ds: acres Source of es ODUCTION Aver Avera Avera Produ orrection Facto nadjusted Hour	Bank Rip D timated quantity Seismic Veloc: age Ripping Dep age Ripping Wic ge Ripping Leng erage Dozer Spe ge Maneuver Tin uction per unit ar <u>ors</u> :ly Unit Producti Site Altitu	Volume:	NA 2.00 S estimate modified NA 2.56 7.08 999.00 88.00 0.25 0.840 0.840 3.400	BCY Volume: fying AM06 Exl feet/sec feet/sec feet feet feet feet feet acres/h feet	129,067 hibit L cond s our	NA	BCY or
<u>/</u> nic: rea: <u>1</u> <u>5</u> <u>7</u>	Alternate Metho NA 40.00 HOURLY PR Seismic: Area: Job Condition C	ds: acres Source of es ODUCTION Avera Avera Avera Produ orrection Facto nadjusted Hour	Bank Rip D timated quantity Seismic Veloc: age Ripping Dep age Ripping Dep age Ripping Leng erage Dozer Spe ge Maneuver Tin uction per unit ar <u>ors</u> thy Unit Producti Site Altitu Altitude A	Volume: epth (ft): : _ DRMS ity: oth: dth: rea: on: de: adj:	NA 2.00 S estimate modif NA 2.56 7.08 999.00 88.00 0.25 0.840 0.840 3,400 1.00	BCY Volume: fying AM06 Exl feet/sec mph degrees feet feet feet feet acres/h Acres/h feet (CAT H	129,067 nibit L cond s our nr	NA	BCY or
<u>4</u> nic: rea: <u>1</u> <u>5</u> <u>4</u>	Alternate Metho NA 40.00 HOURLY PR Seismic: Area: Job Condition C	ds: acres Source of es ODUCTION Aver Avera Avera Avera orrection Facto nadjusted Hour	Bank Rip D timated quantity Seismic Veloc: age Ripping Dep age Ripping Wic age Ripping Leng erage Dozer Spe ge Maneuver Tin uction per unit ar <u>ors</u> ty Unit Producti Site Altitu Altitude A Job Efficien	Volume: epth (ft): DRMS ity: tity: oth: th: ed: me: rea: on: de: cy:	NA 2.00 S estimate modif NA 2.56 7.08 999.00 88.00 0.25 0.840 0.840 3,400 1.00 0.83	BCY Volume: fying AM06 Exl feet/sec feet/sec feet feet feet feet feet acres/h feet feet feet feet feet feet feet feet feet feet feet feet feet feet	129,067 hibit L cond s our nr HB) /day)	NA	BCY or
<u>/</u> mic: rea: <u>1</u> <u>5</u> <u>7</u>	Alternate Metho NA 40.00 HOURLY PR Seismic: Area: Job Condition C	ds: acres Source of es ODUCTION Avera Avera Avera Produ orrection Facto nadjusted Hour	Bank Rip D timated quantity Seismic Veloc: age Ripping Dep age Ripping Dep age Ripping Leng erage Dozer Spe ge Maneuver Tin uction per unit ar <u>ors</u> thy Unit Producti Site Altitu Altitude A Job Efficien Net Correcti	Volume: epth (ft): :	NA 2.00 S estimate modified NA 2.56 7.08 999.00 88.00 0.25 0.840 0.840 3,400 1.00 0.83 0.83	BCY	129,067 hibit L cond s our hr HB) /day) ier	NA	BCY or
<u>A</u> nic: rea:	Alternate Metho <u>NA</u> 40.00 HOURLY PR Seismic: Area: Job Condition C	ds: acres Source of es ODUCTION Aver Aver Avera Avera Avera Avera orrection Facto nadjusted Hour	Bank Rip D timated quantity Seismic Veloc age Ripping Dep age Ripping Wic ge Ripping Leng erage Dozer Spe ge Maneuver Tin uction per unit ar Drs ty Unit Producti Site Altitu Altitude A Job Efficien Net Correcti	Volume: epth (ft): :	NA 2.00 S estimate modified NA 2.56 7.08 999.00 88.00 0.25 0.840 0.840 3,400 1.00 0.83 0.83 0.70	BCY	129,067 hibit L cond s our nr HB) /day) ier	NA	BCY or
<u>A</u> nic: rea: <u>1</u> <u>5</u> <u>4</u> <u>1</u>	Alternate Metho <u>NA</u> 40.00 HOURLY PR Seismic: Area: Job Condition C U1	ds: acres Source of es ODUCTION Aver Aver Avera Avera Avera orrection Facto nadjusted Hour	Bank Rip D timated quantity Seismic Veloc: age Ripping Dep age Ripping Dep age Ripping Leng erage Dozer Spe ge Maneuver Tin uction per unit ar <u>ors</u> ty Unit Producti Site Altitu Altitude A Job Efficien Net Correcti ed Hourly Unit P d Hourly Fleet P	Volume: epth (ft): : DRMS	NA 2.00 S estimate modified NA 2.56 7.08 999.00 88.00 0.25 0.840 0.840 3,400 1.00 0.83 0.83 0.83 0.70 0.70 0.70	BCY Volume: fying AM06 Exl fying AM06 Exl feet/sec feet feet feet feet feet acres/h feet (CAT I (1 shift multipl Acres/hr Acres/hr	129,067 nibit L cond s our nr HB) /day) ier	NA	BCY or
<u>/</u> mic: rea: <u>1</u> <u>5</u> <u>7</u> <u>1</u> <u>1</u>	Alternate Metho NA 40.00 HOURLY PR Seismic: Area: Job Condition C U	ds: acres Source of es ODUCTION Avera Avera Avera Produ orrection Facto nadjusted Hour Adjuste Adjuste	Bank Rip D timated quantity Seismic Veloc: age Ripping Dep age Ripping Dep age Ripping Leng erage Dozer Spe ge Maneuver Tin uction per unit ar <u>ors</u> ty Unit Producti Site Altitu Altitude A Job Efficien Net Correcti ed Hourly Unit P d Hourly Fleet P	Volume: epth (ft): : DRMS	NA 2.00 S estimate modified NA 2.56 7.08 999.00 88.00 0.25 0.840 0.840 3,400 1.00 0.83 0.83 0.83 0.70 0.70 0.70	BCY	129,067 nibit L cond s our nr HB) /day) ier	NA	BCY or
<u>/</u> mic: rea: <u>1</u> <u>2</u> <u>1</u>	Alternate Metho NA 40.00 HOURLY PR Seismic: Area: Job Condition C U JOB TIME AI Fleet size:	ds: acres Source of es ODUCTION Avera Avera Avera Produ orrection Facto nadjusted Hour Adjuste Adjuste MD COST 1	Bank Rip D timated quantity Seismic Veloc: age Ripping Dep age Ripping Dep age Ripping Leng erage Dozer Spe ge Maneuver Tin uction per unit ar <u>ors</u> thy Unit Producti Site Altitu Altitude A Job Efficien Net Correcti ed Hourly Unit P d Hourly Fleet P	Volume: epth (ft): DRMS	NA 2.00 S estimate modified NA 2.56 7.08 999.00 88.00 0.25 0.840 0.840 3,400 1.00 0.83 0.83 0.83 0.70 0.70 0.70 Total job time	BCY	129,067 hibit L cond s our hr HB) /day) ier 57.39	<u>NA</u>	BCY or

SCRAPER TEAM WORK

Site: Midwestern Farm	S	Permi	t Action:	April 2014 Insp	ection Per	mit/Job#: <u>M19</u>	993059
PROJECT IDENT	IFICATION						
Task #: 005	S	state:	Colorado		Abbre	viation: None	e
Date: 4/21/20 User: TOD	<u>14</u> Cou	unty:]	Prowers		Fi	lename: M059	9-005
Agency or o	rganization name:	DRM	IS				
HOURLY EQUIP	<u>MENT</u>			COSTSI	nift basis: <u>1 per c</u>	<u>lay</u>	
			Equipme	ent Description			
	-S	craper:	Cat 657	7G			
Suppor	- t Equipment -Loa	d Area:	NA				
	-Dumj	p Area:	Cat D8	T - 8SU			
Road Mai	ntenance – Motor (-Water	Truck	CAT 14 Water 7	4M Fanker, 3 500 Gal			
		inen.	,, ater				
Cost Breakdown:	Scraper Wor	rk Team		Support Equip	oment	Maintenand	ce Equipme
	Scraper	Do	zer	Load Area	Dump Area	Motor Grader	r water
%Utilization-machine:	100	N	A	NA	50	50	5
Ownership cost/hour:	\$121.28	N	А	NA	\$63.00	\$37.98	\$10
Operating cost/hour:	\$286.51	N	А	NA	\$52.02	\$33.87	\$18
Ripper op. cost/hour:	NA	N	A	NA	\$3.27	\$0.00	\$0
Operator cost/hour:	\$30.02	N	A	NA	\$37.41	\$27.55	\$21
Unit Subtotals:	\$437.81	N	A	NA	\$155.70	\$99.40	\$49
Number of Units:	2	()	0	1		
Group Subtotals:	Work:	\$875	5.62	Support:	\$155.70	Maint	. \$14
	110ur. <u>\$1,100.00</u>						
MATERIAL QUA	<u>NITTIES</u>						
Initial volume:	431,728		CCY	Swell fact	or: <u>1.115</u>		
Loose volume.	401,577						
Source o	ce of estimated vo	lume:	Division Cat Han	of Reclamation, N	Mining & Safety		
Source 0		act01	Cat Hall	GUUUK			
HOURLY PRODU	JCTION						
				Scraper Bo	owl (volume) Bas	sis:	
Material weight:	2,100 lbs/LCY			Struck V	Volume: 32.00		LCY
Material description:	Earth - Loam			Heaped Y	Volume: 44.00		LCY
	101000 1			A	V_{0}		LCV

1.00 Minutes 0.60 Minutes

Cycle Time:

Scraper Loading Time: Maneuver and Spread Time:

Job Condition Correction:

	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: 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	2225.00	-0.50	3.00	2.50	2940	1.03

Haul Time: **1.03** minutes

Site Altitude: 3400 feet

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2225.00	0.50	3.00	3.50	2920	0.93
					0.00	•

Return Time: 0.93 minutes

Total Scraper team cycle time:	3.56	minutes
Adjusted for job conditions:	531.57	LCY/Hour
Selected Number of Scrapers:	2	Scraper(s)
Adjusted single scraper team (unit) hourly production:	1,063.15	LCY/Hour
Adjusted multiple scraper team (fleet) hourly production:	1,063.15	LCY/Hour

Unadjusted unit production/hour: <u>640.45</u> LCY/Hour Optimal Number of Scrapers per push dozer:

JOB TIME AND COST

Fleet size:	1	Team(s)	Total job time:	452.79	Hours
Unit cost:	\$1.111	/LCY	Total job cost:	\$534,594.34	

REVEGETATION WORK

r	Fask descrip	otion:	Revegetation 228	8.8 acres			
Site:	Midweste	ern Farms	Peri	mit Action:	April 2014 Inspection	Permit/Job#:	M1993059
]	PROJECT	T IDENTIFIC	CATION Status	Calamda		A h h	Mana
	Date: User:	4/21/2014 TOD	County:	Prowers		Filename:	M059-006
	Ag	ency or organi	zation name: DR	RMS			

FERTILIZING

Materials

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

Application

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

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$98.01
Total Tilling Cost/Acre	\$98.01

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alfalfa - Common	0.50	2.41	\$1.28
Alkali Sacaton	0.10	3.90	\$2.28
Indiangrass - Holt	4.70	14.33	\$43.19
Blue Grama - Native	0.35	5.71	\$3.62
Buffalograss - Native/Plains	1.00	0.96	\$13.46
Little Bluestem - Native	1.20	7.16	\$17.14
Sideoats Grama - Butte	0.50	1.64	\$5.57
Sandberg Bluegrass - VNS	0.20	4.25	\$1.74
Milk Vetch, Cicer - Monarch	0.70	2.33	\$3.58
Western Wheatgrass - Native	0.50	1.26	\$1.52
Sunflower (or daisy), Oxe-eye	0.70	1.95	\$28.60

	Totals Seed Mix	10.45	45.91	\$121.97
Application				
Description				Cost /Acre
Drill seeding (DRMS Cost Data)				\$88.20
	Total Seed	Application	n Cost/Acre	\$88.20

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$265.00	\$530.00
Total Mulch Materials Cost/Acre				\$530.00

Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$65.89
Power mulcher (MEANS 32 91 13.16 0250)		\$86.68
То	tal Mulch Application Cost/Acre	\$152.57

NURSERY STOCK PLANTING

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

JOB TIME AND COST

Estimate *Selected Replanti	No. of Acres: ed Failure Rate: ng Work Items:	228.8 50% SEEDING	Cost /Acre: Cost /Acre*:	\$990.75 \$210.17
Initial Job Cost: Reseeding Job Cost: Total Job Cost: Job Hours:	\$226,683.60 \$24,043.45 \$250,727.05 455.00			

REVEGETATION WORK

PERMIT #: M-1993-059 INSPECTOR'S INITIALS: AME INSPECTION DATE: April 4, 2014

Midwostown Forms	Darmi	t Action: An	ril 2014 Inspection	Dormit/Loh#	· M1002050
Who western Farms	1 Farms Permit Action: April 2014 Inspection				. 1011993039
PROJECT IDENTIFIC	CATION				
Task #: 007	State:	Colorado		Abbreviation:	None
Date: 4/21/2014	County:	Prowers		Filename:	M059-007
User: TOD					
Agency or organiz	zation name: DRM	IS			
EDTH IZING					
<u>PERTILIZING</u> Matarials					
141011413		Units /			
Description		Acre	Unit	Cost / Unit	Cost /Acre
				\$	\$
				Total Fertilizer	
				Materials	
				Cost/Acre	\$0.00
Application					
Description					Cost /Acre
					\$
		Tota	al Fertilizer Appli	cation Cost/Acre	\$0.00
<u>FILLING</u>					
Description					Cost /Acre
					\$

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
			\$
Totals Seed Mix	0.00	0.00	\$0.00

Application

Description	Cost /Acre
	\$

Total Seed Application Cost/Acre\$0.00

MULCHING and MISCELLANEOUS

Materials

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

Application

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

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
Buffaloberry, Russet	50	Tubling, 3 cu. in. container (MEANS)	\$0.96	\$0.00	\$48.00
Chokecherry	50	Tubling, 3 cu. in. container (MEANS)	\$0.96	\$0.00	\$48.00
Cottonwood, Plains	20	Bare root seedling, 11-16 inch ht. (MEANS)	\$1.62	\$0.00	\$32.40
Hackberry, Common	20	Bare root seedling, 11-16 inch ht. (MEANS)	\$1.62	\$0.00	\$32.40
Pine, Ponderosa	20	Bare root seedling, 11-16 inch ht. (MEANS)	\$1.62	\$0.00	\$32.40
Willow, Sandbar	20	Bare root seedling, 11-16 inch ht. (MEANS)	\$1.62	\$0.00	\$32.40
Rose, Wood's	50	Tubling, 3 cu. in. container (MEANS)	\$0.96	\$0.00	\$48.00
Saltbush, Four Wing	50	Tubling, 3 cu. in. container (MEANS)	\$0.96	\$0.00	\$48.00
Sumac, Smooth	50	Tubling, 3 cu. in. container (MEANS)	\$0.96	\$0.00	\$48.00
	\$369.60				

JOB TIME AND COST

Job Hours: 80.00

	No. of Acres:	20	Cost /Acre:	\$369.60
Estimate	ed Failure Rate:	50%	Cost /Acre*:	\$369.60
*Selected Replanti	ng Work Items:	NURSERY		
Initial Job Cost:	\$7,392.00		_	
Reseeding Job Cost:	\$3,696.00		_	
Total Job Cost:	\$11,088.00			

EQUIPMENT MOBILIZATION/DEMOBILIZATION

1	ask description: M	Iobilization 1	Demobilization	n of equipme	ent		
: -	Midwestern Farms	I	Permit Action:	April 2014	Inspection	Permit/Job#	: <u>M1993059</u>
<u>P</u>	ROJECT IDENTIFICA	TION					
	Task #: 008	State	e: Colorado			Abbreviation:	None
	Date: 4/21/2014	Count	y: Prowers			Filename:	M059-008
	User: TOD						
	Agency or organizati	ion name:	DRMS				
Ē	QUIPMENT TRANSPO	ORT RIG C	OST				
						Shift basis	1 per day
							CPC Data
					Cost D	ata Source:	
	Truck Tractor De Truck Trailer De	escription:	GENERIC O	N-HIGHWA 4 OLDING GO	Cost D AY TRUCK T 400 HP (2ND OSENECK, I (25T, 50T, 4	ata Source: RACTOR, 6X4, 1 HALF, 2006) DROP DECK EQ AND 100T)	DIESEL POWERED
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Machine	Weight/	Owner ship	Haul Rig	Fleet	Haul Trip	Return Trip	DOT Permit
Description	Unit	Cost/hr/ unit	Cost/hr/unit	Size	Cost/hr/	Cost/hr/ fleet	Cost/ fleet
	(TONS)				fleet		
Cat D8T - 8SU	53.08	\$63.00	\$125.45	2	\$376.91	\$250.90	\$500.00
Cat 657G	78.88	\$121.28	\$125.45	2	\$493.47	\$250.90	\$500.00
CAT 14M	23.57	\$41.37	\$88.67	1	\$130.04	\$88.67	\$250.00
Cat 773F	49.74	\$60.64	\$117.55	2	\$356.38	\$235.10	\$500.00
CAT 990H high lift	97.95	\$112.96	\$125.45	1	\$238.41	\$125.45	\$250.00

Subtotals: \$1,595.21 \$951.02 \$2,000.00

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Water Tanker, 3,500 Gal.	\$68.08	1	\$68.08	\$68.08
		Subtotals:	\$68.08	\$68.08

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	LAMAR	
Total one-way travel distance:	30.00	miles
Average Travel Speed:	55.00	mph
Total Non-Roadable Mob/Demob Cost *	\$19,539.39	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	\$74.27	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.55	0.55
Return Time (Hours):	0.55	0.55
Loading Time (Hours):	2.00	NA
Unloading Time (Hours):	2.00	NA
Subtotals:	5.09	1.09

JOB TIME AND COST

Total job time: 10.18 Hours

Total job cost: \$19,613.66

Exhibit E - Reclamation Plan (continued)

Agricultural Area Seed Mix

	<u>lbs. PLS/</u>	Seeds/	Percent of
	acre	ft.2	mix/ft ²
Buffalograss	1.0	١	.7
Blue grama grass	0.35	6	4.6
Alkali sacaton	0.1	4	3.1
Little bluestem	1.2	6	4.6
Sandberg bluegrass	0.2	4	3.1
Cicer milkvetch	0.7	2	1.6
Western Wheatgrass	0.5	3	2.3
Side Oats Grama	0.5	8	6.2
Switchgrass	4.9	47	36.2
Indiangrass	4.7	48	37.0
Alfalfa	0.5	0.4	0.3
Native Sunflower	0.7	0.4	0.3
Totals	14.95	129.8	100.0

Seeding time will be late fall or early winter when the soil is dry and cold and the seeds will remain dormant until they are able to take advantage of spring moisture. Mulching with weed-free straw, manure, or grass hay will be used to protect the soil surface following seeding. The mulch rate will be 2 tons per acre. Changes were made to the seed mix to incorporate recommendations of the Division of Wildlife.

Tree/Shrub Planting

In order to establish a more diverse habitat for wildlife and waterfowl, tree and shrub planting will be introduced along the shores of the lakes. In cooperation with the Colorado Division of Wildlife, the following list of plant material has been selected for wildlife habitat.

39

		INSPECTION DATE: April
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PERMIT #: M-1993-059

TREES			
<u>Common Name</u>	Botanical Name	<u>Size</u>	Remarks
Lacebark Elm	Ulmus parifolia	10-30"	Seedling/BR
Hackberry	Celtis Occidentalis	10-30"	Seedling/BR
Hybrid Cottonwood	Populus deltoides var.' noreaster	10-30"	Seedling/BR
Golden Willow	Salix alba vitellina	10-30"	Seedling/BR
Eastern Red Cedar	Juniperus virginiana	5-12"	Seedling/BR
Ponderosa Pine	Pinus ponderosa	5-12"	Seedling/BR

Exhibit E - Reclamation Plan (continued)

SHRUBS			
Common Name	Botanical Name	<u>Size</u>	<u>Remarks</u>
Chokecherry	Prunus virginiana	5-12"	Seedling/1" pot
American Plum	Prunus americans	5-12"	Seedling/1" pot
Qual Bush (sumac)	Rhus trilobata	5-12"	Seedling/1" pot
Serviceberry	Amelanchier alnifolia	5-12"	Seedling/1" pot
Buffalo Berry	Shepherdia agrentea	5-12"	Seedling/1" pot
Woods Rose	Rosa woodsi	5-12"	Seedling/1" pot
Fourwing Saltbush	Artiplex canscens	5-12"	Seedling/1" pot

The tree/shrub saplings/seedlings to be planted will mainly be placed along the reclaimed shoreline in areas of 2/10 acre utilizing numerous short rows instead of fewer, longer rows. In-row spacing between shrubs will be less than 8 feet and between row spacing will be less than 10 feet. One of these 2/10 acre thicket areas will be used for each 1.5 acres of the upper shelf areas. Since the shelves are 40 feet wide, the upper shelf width (above water) is 20 feet wide. This provides for 13.3% of the upper shelf areas planted with shrub/tree thickets. The remaining upper shelf areas will be seeded with 50% grass mix described above and 50% wetland mix described below.

Mid-Western Farms Resources Pit Amendment 3/98

40

Figure 6. List of trees and shrubs for wildlife habitat along lake shores, as provided in the approved Reclamation Plan for the Midwestern Farms operation (DRMS File No. M-1993-059).

Exhibit E - Reclamation Plan (continued)

A tree/shrub nursery or holding area could be established on-site to provide plant material for reclamation of the lake areas which will become future wildlife habitat. Seedlings for spring planting can also be obtained from the Colorado State Forest Service in quantities large enough to revegetate a lake area in one planting.

Seeding of Wetland Areas

In conjunction with the grass seeding and tree/shrub planting, wetland species will be introduced along the shoreline of the proposed lakes once final grading has been accomplished. An underwater terrace area of approximately 20 feet wide immediately along the edge of each lake shoreline will allow for public safety as well as an area for introduction of wetland plants. This area will be a section of shelf approximately installed at a grade of 6:1. See Exhibit E-2 of this section.

The following list of wetland species should be introduced along the shorelines:

WETLAND PLANT LIST		
<u>Common Name</u>	Botanical Name	<u>Remarks</u>
Dwarf Spikerush	Eleocharis parula	Tuber/root/rhizome
Arrowhead	Sagitarrialatifolia	Tuber/rooVrhizome
Marsh Smartweed	Polygonum muhlengergii	Tuber/root/rhizome
Bullrush	Scirpus amricanus	Tuber/root/rhizome or Seed
Soft Rush	Juncus eff usus	Tuber/root/rhizome
Canary Reed Grass		Seed

The plants will be introduced in the 20 feet wide underwater part of the shallow shelf as shown on Exhibit E-2 and will comprise 50% of the seed mix for the upper (above water) part of the shelf that contains the shrub/tree thickets.

Mid-Western Farms Resources Pit Amendment 3/98

41

Figure 7. Wetland plant list for lake shores, as provided in the approved Reclamation Plan for the Midwestern Farms operation (DRMS File No. M-1993-059).

GENERAL INSPECTION TOPICS

The following list identifies the environmental and permit parameters inspected and gives a categorical evaluation of each

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

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

Inspection Contact Address

Joe C. Baxter Midwestern Farms Resource dba Eastern Colorado Aggregates P.O. Box 580 Rye, CO 81069

Enclosure:

CC: Tony Waldron, DRMS Tom Kaldenbach, DRMS Tyler O'Donnell, DRMS COLORADO DIVISION OF RECLAMATION, MINING AND SAFETY

1313 Sherman Street, Room 215, Denver, Colorado 80203 ph(303) 866-3567

REQUEST FOR FULL OR PARTIAL RELEASE OF PERMIT AREA

Please indicate if you are requesting FULL/FINAL RELEASE OF ENT	g: IRE PERMITTED AREA
ACREAGE REDUCTION (PARTI If you are requesting an acreage red from the existing permit under this You will also need to submit update proposed acreage to be released from	AL RELEASE)
File No.: M	_ Site Name:
County:	
Permittee:	_
Operator (If Other than Permittee):	
Permittee Representative:	
Certified Mail#	
In accordance with Rule 4.17.1(2) t of all owners of record to the affect required.	he Operator shall include the names, addresses and phone numbers ed land. Please attach additional sheets for this information if
In accordance with Rule 4.17.1(4) t the following statement: "All applic	he Operator or their agent MUST sign that they have complied with cable portions of the Reclamation Plan requirements have been

satisfied in accordance with these Rules and all applicable requirements under the Act."

Signature of Permittee, Operator or their authorized agent Date

Important: In accordance with Rule 4.17.1(3) This release request must be submitted to the Division via certified mail and separate from any other correspondence to the Division.