



COLORADO

Division of Reclamation,
Mining and Safety

Department of Natural Resources
1313 Sherman Street, Room 215
Denver, Colorado 80203

July 31, 2015

Frank Leone, Jr.
Leone Sand and Gravel, LLC
2400 E. Main St.
Trinidad, CO 81082

Re: Leone Gravel Pit #2, Permit No. M-2006-085, Amendment Approval, Revision No. AM-01

Mr. Leone, Jr.:

On July 31, 2015 the Division of Reclamation, Mining and Safety (Division) approved your amendment application submitted to the Division on April 30, 2015, addressing the following:

Add 327.50 acres to existing permit area for a total permit area of 507.50 acres.

This amendment also changes the maximum allowed disturbed acreage at any time from 20 acres to 60 acres.

The terms of the Amendment No. 1 approved by the Division are hereby incorporated into Permit No. M-2006-085. All other conditions and requirements of Permit No. M-2006-085 remain in full force and effect.

The estimated liability amount of \$87,509.00 exceeds the \$57,664.00 performance bond currently held. If you have not already done so, please submit additional bond in the amount of \$29,845.00. The revision will not be final until the bond is approved by the Division.

Any questions regarding submitting the financial warranty should be directed to Barbara Coria. You can contact her by telephone at 303-866-3567, extension 8148, or by email at barbara.coria@state.co.us.

If you have any questions, please contact me at the Division of Reclamation, Mining and Safety, 1313 Sherman Street, Room 215, Denver, CO 80203, by telephone at 303-866-3567, extension 8129, or by email at amy.eschberger@state.co.us.

Sincerely,

Amy Eschberger
Environmental Protection Specialist



Enclosure(s): Bond estimate for AM-01

CC: Steve O'Brian
Environment, Inc.
7985 Vance Dr., #205A
Arvada, CO 80003

Wally Erickson, DRMS



COST SUMMARY WORK

Task description: Cost Summary

Site: Leone Gravel Pit #2 Permit Action: AM-01 2015 Permit/Job#: M2006085

PROJECT IDENTIFICATION

Task #: 000 State: Colorado Abbreviation: None
Date: 7/20/2015 County: Las Animas Filename: M085-000
User: AME

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Cut/fill highwall from 0.5H:1V to 3H:1V slope	DOZER	1	6.12	\$1,278.00
002	Rip processing/stockpiling area, 16.85 ac	RIPPER	1	24.52	\$5,462.00
003	Replace topsoil on 32.05 ac, 6 in depth	SCRAPER1	1	62.52	\$17,998.00
004	Revegetate 32.05 ac to rangeland	REVEGE	1	96.15	\$40,761.00
005	Reseed 23.85 acres	REVEGE	1	71.55	\$4,002.00
006	Mobilization/Demobilization	MOBILIZE	1	4.58	\$3,786.00
<u>SUBTOTALS:</u>				265.44	\$73,287

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02%	Total =	\$1,480.40
Performance bond:	1.05%	Total =	\$769.51
Job superintendent:	0.00 hrs	Total =	\$0.00
Profit:	10.00%	Total =	\$7,328.70
		TOTAL O & P =	\$9,578.61
		CONTRACT AMOUNT (direct + O & P) =	\$82,865.61

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	500.00	Total =	500.00
Engineering work and/or contract/bid preparation:	0.00%	Total =	\$0.00
Reclamation management and/or administration:	5.00%		\$4,143.28

CONTINGENCY: 0.00 Total = \$0.00

TOTAL INDIRECT COST = \$14,221.89

TOTAL BOND AMOUNT (direct + indirect) = \$87,508.89

BULLDOZER WORKTask description: Cut/fill highwall from 0.5H:1V to 3H:1V slopeSite: Leone Gravel Pit #2Permit Action: AM-01 2015Permit/Job#: M2006085**PROJECT IDENTIFICATION**Task #: 001State: ColoradoAbbreviation: NoneDate: 7/20/2015County: Las AnimasFilename: M085-001User: AMEAgency or organization name: DRMS**HOURLY EQUIPMENT COST**

Basic Machine: Cat D8T - 8SU
 Horsepower: 310
 Blade Type: Semi-Universal
 Attachment: NA
 Shift Basis: 1 per day
 Data Source: (CRG)

Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	<u>\$62.67</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$108.22</u>	<u>100</u>
Ripper op. Cost/Hour:	<u>\$0.00</u>	<u>0</u>
Operator Cost/Hour:	<u>\$38.01</u>	<u>NA</u>

Total unit Cost/Hour: \$208.90Total Fleet Cost/Hour: **\$208.90****MATERIAL QUANTITIES**

Initial Volume: 2,912
 Swell factor: 1.250
 Loose volume: **3,640 LCY**

Source of estimated volume: Operator: 15 ft H x 1,000 ft LSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 60 feetUnadjusted hourly production: 1,246.9 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push gradient: -5 %Average site altitude: 5,900 feetMaterial weight: 2,650 lbs/LCYWeight description: Decomposed rock - 25% Rock, 75% Earth**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	<u>0.750</u>	<u>(AVG.)</u>
Material consistency:	<u>0.900</u>	<u>(CAT HB))</u>
Dozing method:	<u>1.100</u>	<u>(50% SL)</u>
Visibility:	<u>1.000</u>	<u>(AVG.)</u>
Job efficiency:	<u>0.830</u>	<u>(1 SHIFT/DAY)</u>
Spoil pile:	<u>0.800</u>	<u>(FND-RF)</u>

Push gradient:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4772

Adjusted unit production: 595.02 LCY/hr

Adjusted fleet production: **595.02 LCY/hr**

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.351/LCY

Total job time: **6.12 Hours**

Total job cost: **\$1,278**

BULLDOZER RIPPING WORK

Task description: Rip processing/stockpiling area, 16.85 ac

Site: Leone Gravel Pit #2

Permit Action: AM-01 2015

Permit/Job#: M2006085

PROJECT IDENTIFICATION

Task #: 002

State: Colorado

Abbreviation: None

Date: 7/20/2015

County: Las Animas

Filename: M085-002

User: AME

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D8T - 8SU
Ripper Attachment: 3-Shank Ripper

Horsepower: 310

Shift Basis: 1 per day

Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$69.05	NA
Operating Cost/Hour:	\$108.22	100
Ripper Operating Cost/Hour:	\$7.46	100
Operator Cost/Hour:	\$38.01	NA
Total Unit Cost/Hour:	\$222.73	
Total Fleet Cost/Hour:	\$222.73	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 16.85 acres Rip Depth (ft): 1.00 Volume: 27,185 BCY or CCY

Source of estimated quantity: Operator provided in Adequacy Review Response-01

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth: 2.56 mph
Average Ripping Width: 7.08 degrees
Average Ripping Length: 600.00 feet
Average Dozer Speed: 88.00 feet
Average Maneuver Time: 0.25 feet
Production per unit area: 0.828 acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.828 Acres/hr
Site Altitude: 5,900 feet
Altitude Adj: 1.00 (CAT HB)
Job Efficiency: 0.83 (1 shift/day)
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.69 Acres/hr
Adjusted Hourly Fleet Production: **0.69** Acres/hr

JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: **24.52** Hours

Unit cost: \$324.161 Per acre Total job cost: **\$5,462**

SCRAPER TEAM WORKTask description: **Replace topsoil on 32.05 ac, 6 in depth**Site: **Leone Gravel Pit #2**Permit Action: AM-01 2015Permit/Job#: M2006085**PROJECT IDENTIFICATION**Task #: 003State: ColoradoAbbreviation: NoneDate: 7/20/2015County: Las AnimasFilename: M085-003User: AMEAgency or organization name: DRMS**HOURLY EQUIPMENT**COSTShift basis: 1 per day

Equipment Description	
-Scraper:	Cat 627G
-Dozer:	NA
Support Equipment -Load Area:	NA
-Dump Area:	NA
Road Maintenance -Motor Grader:	NA
-Water Truck:	NA

Cost Breakdown:

	Scraper Work Team		Support Equipment		Maintenance Equipment	
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	NA	NA	NA	NA	NA
Ownership cost/hour:	\$69.99	NA	NA	NA	NA	NA
Operating cost/hour:	\$184.31	NA	NA	NA	NA	NA
Ripper op. cost/hour:	NA	NA	NA	NA	NA	NA
Operator cost/hour:	\$33.56	NA	NA	NA	NA	NA
Unit Subtotals:	\$287.87	NA	NA	NA	NA	NA
Number of Units:	1	0	0	0	0	0
Group Subtotals:	Work:	\$287.87	Support:	\$0.00	Maint:	\$0.00

Total work team cost/hour: **\$287.87****MATERIAL QUANTITIES**Initial volume: 21,280

CCY

Swell factor: 1.215Loose volume: **25,855**

LCY

Source of estimated volume: Operator provided in Adequacy Review Response-01Source of estimated swell factor: Cat Handbook**HOURLY PRODUCTION****Scraper Bowl (volume) Basis:**

Material weight:	<u>1,600 lbs/LCY</u>	Struck Volume:	<u>15.70</u>	LCY
Material description:	<u>Top Soil</u>	Heaped Volume:	<u>22.00</u>	LCY
Rated Payload:	<u>52,800 pounds</u>	Average Volume:	<u>18.85</u>	LCY
Payload Capacity:	<u>33.00 LCY</u>	Adjusted Capacity:	<u>18.85</u>	LCY

Cycle Time:Scraper Loading Time: 0.70 MinutesManeuver and Spread Time: 0.60 MinutesJob Condition Correction:

Site Altitude: 5900 feet

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

Travel Time:Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	900.00	3.00	3.00	6.00	1855	0.57

Haul Time: 0.57 minutesReturn Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	900.00	-3.00	3.00	0.00	2921	0.40

Return Time: 0.40 minutesTotal Scraper team cycle time: 2.27 minutesAdjusted for job conditions: 413.54 LCY/HourSelected Number of Scrapers: 1 Scraper(s)Adjusted single scraper team (unit) hourly production: 413.54 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 413.54 LCY/HourUnadjusted unit production/hour: 498.24 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 1 Team(s)Total job time: 62.52 HoursUnit cost: \$0.696 /LCYTotal job cost: \$17,998

REVEGETATION WORKTask description: **Revegetate 32.05 ac to rangeland**Site: **Leone Gravel Pit #2**Permit Action: AM-01 2015Permit/Job#: M2006085**PROJECT IDENTIFICATION**Task #: 004State: ColoradoAbbreviation: NoneDate: 7/20/2015County: Las AnimasFilename: M085-004User: AMEAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Ammonium nitrate, 33-0-0	3.00	pound	\$0.36	\$1.08
Potassium nitrate, 13-46-0	200.00	pound	\$1.25	\$249.20
Superphosphate, 0-20-0 with 12% S	100.00	pound	\$0.23	\$23.20
			Total Fertilizer Materials Cost/Acre	\$273.48

Application

Description	Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)	\$52.71
Total Fertilizer Application Cost/Acre	\$52.71

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
Blue Grama - Lovington	0.30	4.90	\$3.26
Indian Ricegrass - Paloma	1.80	5.83	\$15.68
Little Bluestem - Pastura	1.10	6.57	\$17.39
Sideoats Grama - El Reno	1.80	5.91	\$20.23
Western Wheatgrass - Arriba	4.80	12.12	\$17.66
Needlegrass, Green - Lodorm	1.00	4.16	\$5.39
Totals Seed Mix	10.80	39.47	\$79.61

Application

Description	Cost /Acre
Drill seeding (DRMS Cost Data)	\$88.20
Total Seed Application 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
Total Mulch Application Cost/Acre	\$65.89

NURSERY STOCK PLANTING

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

JOB TIME AND COST

No. of Acres:	32.05	Cost /Acre:	\$1,187.90
Estimated Failure Rate:	50%	Cost /Acre*:	\$167.81
*Selected Replanting Work Items:	SEEDING		
Initial Job Cost:	\$38,072.20		
Reseeding Job Cost:	\$2,689.16		
Total Job Cost:	\$40,761		
Job Hours:	96.15		

REVEGETATION WORKTask description: **Reseed 23.85 acres**Site: **Leone Gravel Pit #2**Permit Action: **AM-01 2015**Permit/Job#: **M2006085****PROJECT IDENTIFICATION**Task #: **005**State: **Colorado**Abbreviation: **None**Date: **7/20/2015**County: **Las Animas**Filename: **M085-005**User: **AME**Agency or organization name: **DRMS****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
	\$
Total Tilling Cost/Acre	\$0.00

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Blue Grama - Lovington	0.30	4.90	\$3.26
Indian Ricegrass - Paloma	1.80	5.83	\$15.68
Little Bluestem - Pastura	1.10	6.57	\$17.39
Sideoats Grama - El Reno	1.80	5.91	\$20.23
Western Wheatgrass - Arriba	4.80	12.12	\$17.66
Needlegrass, Green - Lodorm	1.00	4.16	\$5.39
Totals Seed Mix	10.80	39.47	\$79.61

Application

Description	Cost /Acre
Drill seeding (DRMS Cost Data)	\$88.20
Total Seed Application Cost/Acre	\$88.20

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
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres:	23.85	Cost /Acre:	\$167.81
Estimated Failure Rate:	50%	Cost /Acre*:	\$0.00
*Selected Replanting Work Items:	NONE		
Initial Job Cost:	\$4,002.27		
Reseeding Job Cost:	\$0.00		
Total Job Cost:	\$4,002		
Job Hours:	71.55		

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Mobilization/Demobilization**Site: **Leone Gravel Pit #2**Permit Action: **AM-01 2015**Permit/Job#: **M2006085****PROJECT IDENTIFICATION**Task #: **006**State: **Colorado**Abbreviation: **None**Date: **7/20/2015**County: **Las Animas**Filename: **M085-006**User: **AME**Agency or organization name: **DRMS****EQUIPMENT TRANSPORT RIG COST**Shift basis: **1 per day**Cost Data Source: **CRG Data**Truck Tractor Description: **GENERIC ON-HIGHWAY TRUCK TRACTOR, 6X4, DIESEL POWERED,
400 HP (2ND HALF, 2006)**Truck Trailer Description: **GENERIC FOLDING GOOSENECK, DROP DECK EQUIPMENT TRAILER
(25T, 50T, AND 100T)****Cost Breakdown:**

Available Rig Capacities	0-25 Tons	26-50 Tons	51+ Tons
Ownership Cost/Hour:	\$16.63	\$18.37	\$22.33
Operating Cost/Hour:	\$44.38	\$46.13	\$50.07
Operator Cost/Hour:	\$27.66	\$27.66	\$27.66
Helper Cost/Hour:	\$0.00	\$25.39	\$25.39
Total Unit Cost/Hour:	\$88.67	\$117.55	\$125.45

NON ROADABLE EQUIPMENT:

Machine Description	Weight/ Unit (TONS)	Owner ship Cost/hr/ unit	Haul Rig Cost/hr/unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet	DOT Permit Cost/ fleet
Cat D8T - 8SU	53.08	\$69.05	\$125.45	1	\$194.50	\$125.45	\$250.00
Cat 627G	41.80	\$69.99	\$117.55	1	\$187.54	\$117.55	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$39.59	\$88.67	1	\$128.26	\$88.67	\$250.00

Subtotals: **\$510.30** **\$331.67** **\$750.00****ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
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Subtotals: **\$0.00** **\$0.00**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	TRINIDAD	
Total one-way travel distance:	8.00	miles
Average Travel Speed:	55.00	mph

Total Non-Roadable Mob/Demob Cost *	\$3,786.14
** two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	\$0.00
** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.15	0.15
Return Time (Hours):	0.15	0.15
Loading Time (Hours):	1.00	NA
Unloading Time (Hours):	1.00	NA
Subtotals:	2.29	0.29

JOB TIME AND COST

Total job time:	4.58	Hours
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Total job cost:	\$3,786
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