



COLORADO DIVISION OF RECLAMATION, MINING AND SAFETY
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: Ordway Pit	MINE/PROSPECTING ID#: M-2006-054	MINERAL: Sand and gravel	COUNTY: Crowley
INSPECTION TYPE: Surety-Related Inspection	INSPECTOR(S): Amy Eschberger	INSP. DATE: January 13, 2016	INSP. TIME: 11:00
OPERATOR: Carder, Inc.	OPERATOR REPRESENTATIVE: None	TYPE OF OPERATION: 112c - Construction Regular Operation	

REASON FOR INSPECTION: Surety Related	BOND CALCULATION TYPE: Complete Bond	BOND AMOUNT: \$50,146.00
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None
WEATHER: Clear	INSPECTOR'S SIGNATURE: <i>Amy Eschberger</i>	SIGNATURE DATE: January 25, 2016

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----- <u>N</u>	(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----- <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>Y</u>
(SM) SIGNS AND MARKERS----- <u>Y</u>	(SW) STORM WATER MGT PLAN---- <u>Y</u>	(CI) COMPLETE INSP---- <u>Y</u>
(ES) OVERBURDEN/DEV. WASTE----- <u>Y</u>	(SC) EROSION/SEDIMENTATION--- <u>Y</u>	(RS) RECL PLAN/COMP-- <u>Y</u>
(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

OBSERVATIONS

This was a surety-related inspection of the Ordway Pit (Permit No. M-2006-054) conducted by Amy Eschberger of the Division of Reclamation, Mining and Safety (Division) in response to a Succession of Operators application (Revision No. SO-01) that was received by the Division on 01/06/2016. The current operator, Mr. Ron Peterson of Carder, Inc. was notified of the inspection, but was unable to attend. The prospective successor, Mr. Adam Larson of Ordway Feedyard Ltd. Liability Co. was present during the inspection. The site is located approximately 4.5 miles northwest of Manzanola, Colorado. The site can be accessed by taking a private dirt road southwest off of Co Rd B for approximately 0.5 mile. The affected land is owned by the prospective successor. The approved post-mining land use is rangeland.

This is a 112c operation permitted for 98 acres to mine sand and gravel for use in road construction and maintenance. The site is situated on an old Arkansas River terrace located north of the present river channel. The operation is extracting material from the top of the terrace at a maximum depth of approximately 10 feet. This is a phased operation which will mine generally from east to west in 20 acre phases, with concurrent reclamation. Material is processed on site using mobile equipment. The approved reclamation plan calls for grading all disturbed slopes to a 3H:1V or flatter gradient, replacing topsoil on disturbed land at an average depth of 6 inches, and revegetating the site with a rangeland seed mixture.

At the time of the inspection, the weather was clear, sunny and cool. No standing water was observed on site. A permit sign was posted at the eastern entrance to the site. The northern and western permit boundaries were delineated by property fencelines, and most of the southern permit boundary was delineated by the existing road. The eastern permit boundary was relatively parallel to an adjacent dry creek bed. However, the Division did not observe a marker for the southeastern corner of the permit boundary, which would help delineate the eastern and southern permit boundaries near the area of disturbance. The Division recommends the operator be sure to mark the southeastern corner of the permit boundary in accordance with Rule 3.1.12(2), which requires the boundaries of the affected area to be marked by monuments or other markers that are clearly visible and adequate to delineate such boundaries. The site was not active during the inspection, and no equipment was stored on site. A small trailer was present at the top of the terrace near an area that appeared to be used as a scale when the operation was active (**Photo 1**).

No additional structures (not included in the original permit application) were observed during the inspection. The original permit application included the following structures inside or within 200 feet of the permit area: private/field roads, a concrete-lined irrigation ditch along the southeastern and southern edges of the permit area, an earthen water intercept trench and associated irrigation ditch along the southern border of the permit area, a small groundwater pond located southeast of the permit area, a small reservoir located east of the permit area, and a small hay barn located southwest of the permit area. It appears that the hay barn has been removed, and a portion of the concrete-lined irrigation ditch along the southern edge of the permit area has been covered by stockpiled material. In the original permit application, the operator stated that all of these structures were owned by the landowner. If ownership of any of these structures has changed, the prospective successor (landowner) will need to submit structure agreements for these structures before the permit transfer can be approved. Otherwise, no new structure agreements will be required since the prospective successor owns all structures located inside of and within 200 feet of the permit boundary.

The Division estimates current disturbance inside the permit area to cover 27.5 acres (see enclosed Google Earth images of site), including a relatively flat pit floor with no highwalls (where the ridge top was removed; **Photos 2 and 3**), low-lying topsoil berms stored along the northern (**Photo 4**) and eastern (**Photo 5**) perimeter of the pit, and a large sand stockpile stored along the southern permit boundary (**Photos 6 and 7**). The sand stockpile is approximately 20-25 feet in height and occupies a footprint of approximately 2 acres.

Approximately 7.5 acres along the western edge of the pit has been graded to 3H:1V or flatter, and appears to have had topsoil replaced (**Photos 8-10**). Some native grasses, shrubs, and annual weeds are volunteering across this graded area. The Division would like to remind the operator that the approved maximum allowed disturbed acreage at any time is 20 acres, with reclamation of disturbed areas to occur as the operation advances. Areas that have been graded and retopsoiled will not be included in the maximum allowed disturbed acreage; however, the Division will still be required to include in the required financial warranty costs for revegetating these areas. Prior to disturbing more than 20 acres, a Technical Revision would need to be submitted to increase the maximum allowed disturbed acreage (see enclosed form). At that time, the Division would reassess the required financial warranty.

During the inspection, the Division observed approximately 3.4 acres of disturbance outside of the southern permit boundary, which included a large gravel stockpile that is located partially inside of and partially outside of the permit area (**Photos 11 and 12**). This stockpile is approximately 20-25 feet in height and occupies a footprint of approximately 1.7 acres. The adjacent disturbance also includes an area that appears to have been stripped of topsoil, including a topsoil berm and a small sand stockpile (located west of the haul road; **Photo 13**) and a small stockpile of reclaimed asphalt pavement (RAP; located east of the haul road; **Photo 14**). According to the operator, this disturbance was created by a temporary asphalt batch plant that was operated adjacent to the permit area in 2011 by Lafarge. The landowner allowed Lafarge to operate the batch plant on 10 acres located just south of the permitted mine site for approximately 3 months to fulfill a construction contract for a road project located south of La Junta. The operator (and successor operator) should be aware that disturbance such as this (including a large stockpile) which is located directly adjacent to the permit boundary could easily be mistaken by the Division as off-site damage associated with the current permitted operation. In such case, a possible violation would be cited, requiring a hearing before the Mined Land Reclamation Board. To reduce any confusion over the matter in the future, the Division recommends the stockpiled material either be removed from the site, relocated to within the approved permit area, or incorporated into the permit area through the submittal of a permit Amendment.

The Division has recalculated the required financial warranty for this site based on 27.5 acres of disturbance (see enclosed bond estimate). This calculation included costs for grading 20 acres, retopsoiling and revegetating 20 acres, and only reseeding the western 7.5 acres which appear to have already been graded and retopsoiled. The Division has found the required financial warranty at this time to be in the amount of \$60,883.00. This is an increase of \$10,737.00 from the currently held financial warranty of \$50,146.00. The prospective successor will need to submit to the Division a properly executed financial warranty in the amount of \$60,883.00 before the permit transfer (Revision No. SO-01) can be approved. If the succession of operators application is withdrawn or denied, the current operator will be required to post the additional financial warranty of \$10,737.00.

PHOTOGRAPHS



Photo 1. View looking south from pit floor, showing small trailer and scale area located near center of pit. Note a portion of large sand stockpile stored along southern edge of pit shown behind trailer.



Photo 2. View looking west from eastern edge of pit, showing relatively flat pit floor where ridge top was removed. No highwalls present.



Photo 3. View looking east from western edge of pit, showing relatively flat pit floor where ridge top was removed. No highwalls present.



Photo 4. View looking west along northern edge of pit, showing low-lying topsoil berm stored along northern pit perimeter.



Photo 5. View looking south along eastern edge of pit, showing low-lying topsoil berm stored along eastern pit perimeter.



Photo 6. View looking south from center of pit, showing north side of large sand stockpile stored along southern edge of pit, covering approximately 2 acres, with height of approximately 20-25 feet.



Photo 7. View looking north from access road located south of permit boundary, showing south side of large sand stockpile stored along southern edge of pit.



Photo 8. View looking southeast across northern portion of western 7.5 acres that was graded to 3H:1V or flatter and retopsoiled. Note some native grasses and shrubs volunteering into this area.



Photo 9. View looking west across central portion of western 7.5 acres that was graded to 3H:1V or flatter and retopsoiled. Note some native grasses volunteering into this area.



Photo 10. View looking south across southern portion of western 7.5 acres that was graded to 3H:1V or flatter and retopsoiled. Note some native grasses and shrubs volunteering into this area.



Photo 11. View looking east, showing western side of large gravel stockpile located east of haul road, partially inside of and partially outside of permit boundary. Note vehicle for scale (parked at far right). This stockpile was associated with the temporary asphalt batch plant that Lafarge operated here in 2011.



Photo 12. View looking northwest from access road located south of permit boundary, showing southern side of large gravel stockpile located partially inside of and partially outside of permit boundary. This stockpile was associated with the temporary asphalt batch plant that Lafarge operated here in 2011.



Photo 13. View looking north, showing disturbance (topsoil berm and small sand stockpile) located south of permit boundary associated with temporary asphalt batch plant operated by Lafarge in 2011.



Photo 14. View looking east, showing small stockpile of what appears to be unprocessed reclaimed asphalt pavement (RAP) millings associated with temporary asphalt batch plant operated by Lafarge in 2011.

Inspection Contact Address

Ron Peterson
Carder, Inc.
32625 County Road 3.75
P.O. Box 732
Lamar, CO 81052

Enclosure(s): Google Earth image of site showing approved permit area
Google Earth image of site showing close-up of disturbed area
Technical Revision form
Bond estimate calculated by Division on 1/19/16

CC: Wally Erickson, DRMS

Adam Larson
Ordway Feedyard Ltd. Liability Co.
19424 Hwy 96
Ordway, CO 81063

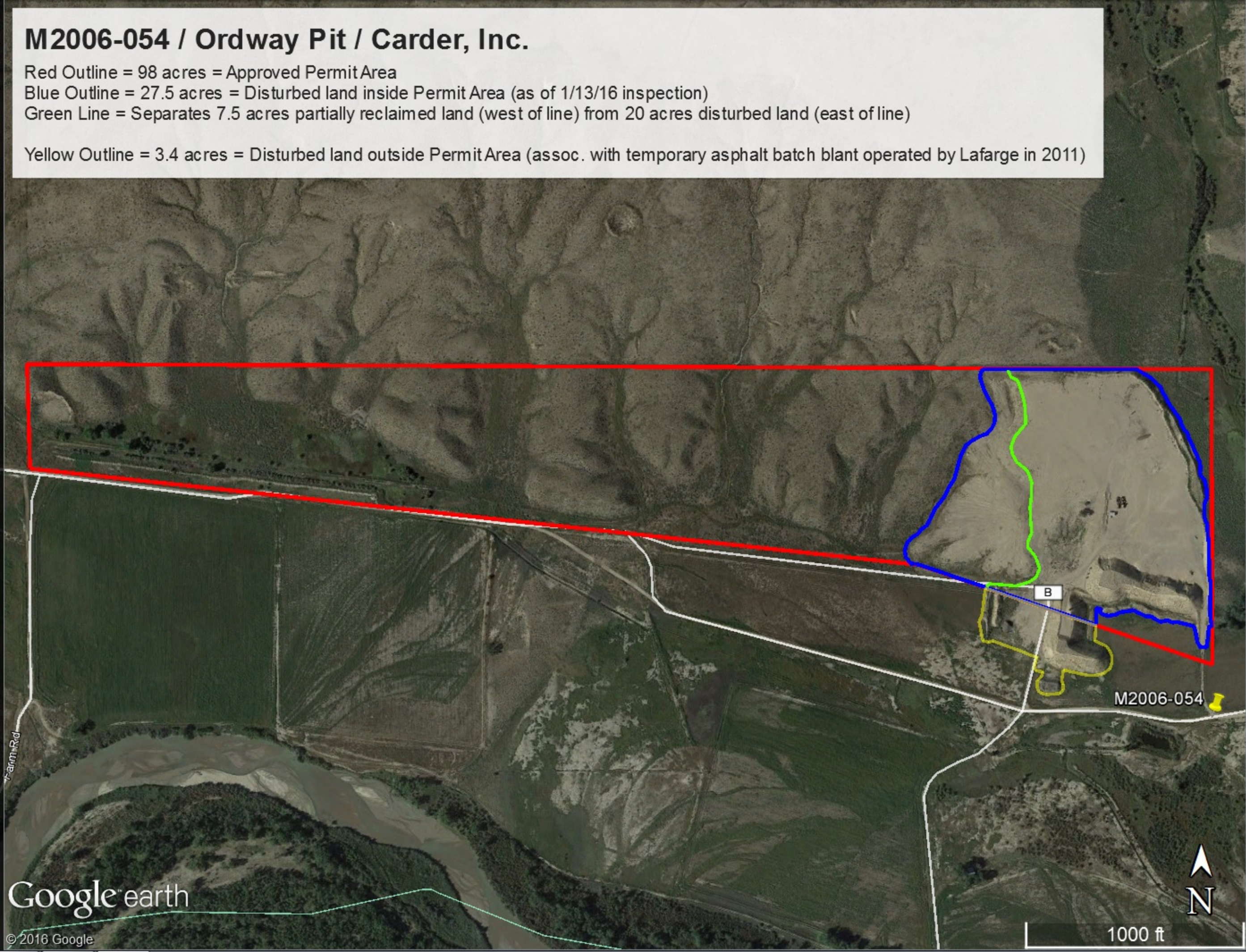
M2006-054 / Ordway Pit / Carder, Inc.

Red Outline = 98 acres = Approved Permit Area

Blue Outline = 27.5 acres = Disturbed land inside Permit Area (as of 1/13/16 inspection)

Green Line = Separates 7.5 acres partially reclaimed land (west of line) from 20 acres disturbed land (east of line)

Yellow Outline = 3.4 acres = Disturbed land outside Permit Area (assoc. with temporary asphalt batch plant operated by Lafarge in 2011)



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COLORADO DIVISION OF RECLAMATION, MINING AND SAFETY

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

REQUEST FOR TECHNICAL REVISION (TR) COVER SHEET

File No.: M- _____ Site Name: _____

County _____ TR# _____ (DRMS Use only)

Permittee: _____

Operator (If Other than Permittee): _____

Permittee Representative: _____

Please provide a brief description of the proposed revision: _____

As defined by the Minerals Rules, a Technical Revision (TR) is: “a change in the permit or application which does not have more than a minor effect upon the approved or proposed Reclamation or Environmental Protection Plan.” The Division is charged with determining if the revision as submitted meets this definition. If the Division determines that the proposed revision is beyond the scope of a TR, the Division may require the submittal of a permit amendment to make the required or desired changes to the permit.

The request for a TR is not considered “filed for review” until the appropriate fee is received by the Division (as listed below by permit type). Please submit the appropriate fee with your request to expedite the review process. After the TR is submitted with the appropriate fee, the Division will determine if it is approvable within 30 days. If the Division requires additional information to approve a TR, you will be notified of specific deficiencies that will need to be addressed. If at the end of the 30 day review period there are still outstanding deficiencies, the Division must deny the TR unless the permittee requests additional time, in writing, to provide the required information.

There is no pre-defined format for the submittal of a TR; however, it is up to the permittee to provide sufficient information to the Division to approve the TR request, including updated mining and reclamation plan maps that accurately depict the changes proposed in the requested TR.

Required Fees for Technical Revision by Permit Type - Please mark the correct fee and submit it with your request for a Technical Revision.

<u>Permit Type</u>	<u>Required TR Fee</u>	<u>Submitted</u> (mark only one)
110c, 111, 112 construction materials, and 112 quarries	\$216	<input type="checkbox"/>
112 hard rock (not DMO)	\$175	<input type="checkbox"/>
110d, 112d(1, 2 or 3)	\$1006	<input type="checkbox"/>

COST SUMMARY WORK

Task description: Cost Summary

Site: Ordway Pit

Permit Action: SO-01 2016_2

Permit/Job#: M2006054

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 1/19/2016

County: Crowley

Filename: M054-000

User: AME

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Spread topsoil across 20 acres, 6 inches deep	SCRAPER1	1	10.89	\$10,064.00
002	Revegetate 20 acres to rangeland	REVEGE	1	80.00	\$25,138.00
002B	Reseed 7.5 acres	REVEGE	1	15.00	\$7,011.00
003	Grade 20 acres	DOZER	1	12.08	\$2,645.00
004	Mobilization/Demobilization	MOBILIZE	1	4.81	\$6,002.00
<u>SUBTOTALS:</u>				122.78	\$50,860

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$1,027.37

Performance bond: 1.05

Total = \$534.03

Job superintendent: 0.00

Total = \$0.00

Profit: 10.00

Total = \$5,086.00

TOTAL O & P = \$6,647.40

CONTRACT AMOUNT (direct + O & P) = \$57,507.40

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

\$2,875.37

CONTINGENCY: 0.00

Total = \$0.00

TOTAL INDIRECT COST = \$10,022.77

TOTAL BOND AMOUNT (direct + indirect) = \$60,882.77

SCRAPER TEAM WORKTask description: Spread topsoil across 20 acres, 6 inches deepSite: Ordway PitPermit Action: SO-01 2016_2Permit/Job#: M2006054**PROJECT IDENTIFICATION**Task #: 001State: ColoradoAbbreviation: NoneDate: 1/19/2016County: CrowleyFilename: M054-001User: AMEAgency or organization name: DRMS**HOURLY EQUIPMENT**COSTShift basis: 1 per day

Equipment Description	
-Scraper:	Cat 637G
-Dozer:	Cat D8T - 8SU
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	50	NA	NA	NA	NA
Ownership cost/hour:	\$107.02	\$69.05	NA	NA	NA	NA
Operating cost/hour:	\$239.91	\$54.11	NA	NA	NA	NA
Ripper op. cost/hour:	NA	\$1.86	NA	NA	NA	NA
Operator cost/hour:	\$33.56	\$38.01	NA	NA	NA	NA
Unit Subtotals:	\$380.50	\$163.03	NA	NA	NA	NA
Number of Units:	2	1	0	0	0	0
Group Subtotals:	Work:	\$924.03	Support:	\$0.00	Maint:	\$0.00

Total work team cost/hour: **\$924.03****MATERIAL QUANTITIES**Initial volume: 14,340

CCY

Swell factor: 1.125Loose volume: **16,133**

LCY

Source of estimated volume: 20 ac x 6 in = 16,133 CYSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION****Scraper Bowl (volume) Basis:**

Material weight:	<u>2,650 lbs/LCY</u>	Struck Volume:	<u>24.00</u>	LCY
Material description:	<u>Decomposed rock - 25% Rock, 75% Earth</u>	Heaped Volume:	<u>34.00</u>	LCY
Rated Payload:	<u>81,600 pounds</u>	Average Volume:	<u>29.00</u>	LCY
Payload Capacity:	<u>30.79 LCY</u>	Adjusted Capacity:	<u>29.00</u>	LCY

Cycle Time:Scraper Loading Time: 0.80 MinutesManeuver and Spread Time: 0.60 MinutesJob Condition Correction:

Site Altitude: 4300 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: Hard, smooth, stabilized, surfaced, watered, maintained 2.0Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	300.00	2.00	2.00	4.00	2394	0.35

Haul Time: 0.35 minutesReturn Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	300.00	-2.00	2.00	0.00	2965	0.20

Return Time: 0.20 minutesTotal Scraper team cycle time: 1.95 minutesAdjusted for job conditions: 740.62 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 1,481.23 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 1,481.23 LCY/HourUnadjusted unit production/hour: 892.31 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 1 Team(s)Total job time: 10.89 HoursUnit cost: \$0.624 /LCYTotal job cost: \$10,064

REVEGETATION WORKTask description: Revegetate 20 acres to rangelandSite: Ordway PitPermit Action: SO-01 2016_2Permit/Job#: M2006054**PROJECT IDENTIFICATION**Task #: 002State: ColoradoAbbreviation: NoneDate: 1/19/2016County: CrowleyFilename: M054-002User: AMEAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Ammonium nitrate, 33-0-0	121.00	pound	\$0.36	\$43.44
Triple superphosphate, 0-46-0	87.00	pound	\$0.50	\$43.15
			Total Fertilizer Materials Cost/Acre	\$86.59

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 - Hachita	3.00	48.97	\$31.95
Sand Dropseed	1.00	119.38	\$6.98
Little Bluestem - Pastura	7.00	41.78	\$110.67
Sideoats Grama - El Reno	9.00	29.55	\$101.16
Totals Seed Mix	20.00	239.67	\$250.76

Application

Description	Cost /Acre
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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: 20 Cost /Acre: \$1,172.16
 Estimated Failure Rate: 25% Cost /Acre*: \$338.96
 *Selected Replanting Work Items: SEEDING

Initial Job Cost: **\$23,443.20**
 Reseeding Job Cost: **\$1,694.80**
 Total Job Cost: **\$25,138**
 Job Hours: **80.00**

REVEGETATION WORKTask description: Reseed 7.5 acresSite: Ordway PitPermit Action: SO-01 2016_2Permit/Job#: M2006054**PROJECT IDENTIFICATION**Task #: 002BState: ColoradoAbbreviation: NoneDate: 1/20/2016County: CrowleyFilename: M054-002BUser: AMEAgency 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 - Hachita	3.00	48.97	\$31.95
Sand Dropseed	1.00	119.38	\$6.98
Little Bluestem - Pastura	7.00	41.78	\$110.67
Sideoats Grama - El Reno	9.00	29.55	\$101.16
Totals Seed Mix	20.00	239.67	\$250.76

Application

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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:	7.5	Cost /Acre:	\$934.85
Estimated Failure Rate:	0%	Cost /Acre*:	\$338.96
*Selected Replanting Work Items:	SEEDING		

Initial Job Cost:	\$7,011.38
Reseeding Job Cost:	\$0.00
Total Job Cost:	\$7,011
Job Hours:	15.00

BULLDOZER WORKTask description: **Grade 20 acres**Site: **Ordway Pit** Permit Action: **SO-01 2016_2** Permit/Job#: **M2006054****PROJECT IDENTIFICATION**

Task #: **003** State: **Colorado** Abbreviation: **None**
 Date: **1/20/2016** County: **Crowley** Filename: **M054-003**
 User: **AME**

Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**

Basic Machine: **Cat D8T - 8SU**
 Horsepower: **310**
 Blade Type: **Semi-Universal**
 Attachment: **3-shank ripper**
 Shift Basis: **1 per day**
 Data Source: **(CRG)**

Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	\$69.05	NA
Operating Cost/Hour:	\$108.22	100
Ripper op. Cost/Hour:	\$3.73	50
Operator Cost/Hour:	\$38.01	NA

Total unit Cost/Hour: **\$219.00**
 Total Fleet Cost/Hour: **\$219.00**

MATERIAL QUANTITIES

Initial Volume: **16,133**
 Swell factor: **1.000**
 Loose volume: **16,133 LCY**

Source of estimated volume: **Division of Reclamation, Mining & Safety**
 Source of estimated swell factor: **Cat Handbook**

HOURLY PRODUCTION

Average push distance: **50 feet**
 Unadjusted hourly production: **1,400.0 LCY/hr**

Materials consistency description: **Loose stockpile 1.2**

Average push gradient: **-5 %**
 Average site altitude: **4,300 feet**

Material weight: **2,650 lbs/LCY**Weight description: **Decomposed rock - 25% Rock, 75% Earth****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	1.000	(EXCL.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.100	(50% SL)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)

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

Net correction: 0.9543

Adjusted unit production: 1,336.02 LCY/hr

Adjusted fleet production: **1336.02** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.164/LCY

Total job time: **12.08** Hours

Total job cost: **\$2,645**

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Mobilization/Demobilization**Site: **Ordway Pit**Permit Action: **SO-01 2016_2**Permit/Job#: **M2006054****PROJECT IDENTIFICATION**Task #: **004**State: **Colorado**Abbreviation: **None**Date: **1/20/2016**County: **Crowley**Filename: **M054-004**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	\$500.00
Cat 637G	57.28	\$107.02	\$125.45	2	\$464.95	\$250.90	\$500.00
Drill/Broadcast Seeder with Tractor	25.00	\$39.59	\$88.67	1	\$128.26	\$88.67	\$250.00

Subtotals: **\$787.71 \$465.02 \$1,250.00****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:	LA JUNTA	
Total one-way travel distance:	25.00	miles
Average Travel Speed:	55.00	mph

Total Non-Roadable Mob/Demob Cost *	\$6,001.98
** 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):	0.45	0.45
Return Time (Hours):	0.45	0.45
Loading Time (Hours):	1.00	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	2.41	0.91

JOB TIME AND COST

Total job time:	4.82	Hours
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Total job cost:	\$6,002
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