



COLORADO


Division of Reclamation,
Mining and Safety

Department of Natural Resources

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: Houchin Gravel Pit	MINE/PROSPECTING ID#: M-1980-249	MINERAL: Sand and gravel	COUNTY: El Paso
INSPECTION TYPE: Monitoring	INSPECTOR(S): Timothy A. Cazier	INSP. DATE: March 16, 2016	INSP. TIME: 09:50
OPERATOR: Charles W Houchin	OPERATOR REPRESENTATIVE: Curt Houchin	TYPE OF OPERATION: 110c - Construction Limited Impact	

REASON FOR INSPECTION: Normal I&E Program	BOND CALCULATION TYPE: Complete Bond	BOND AMOUNT: \$3,500.00
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None
WEATHER: Windy	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: February 10, 2017

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: Availability Of Records

PROBLEM/POSSIBLE VIOLATION: Problem: No utility structures agreement for the powerline and/or phone line on the east side of the pit.

CORRECTIVE ACTIONS: Within 60 days of this report the Operator must submit a notarized letter on utility letterhead or agreement in accordance with Rule 6.4.19 addressing the potential for damage to the powerline and/or phone line.

CORRECTIVE ACTION DUE DATE: 4/11/17

OBSERVATIONS

This inspection was conducted as part of the Division's regular monitoring program. The Operator (Charles W Houchin) was represented during the inspection by Mr. Curt Houchin. The Houchin Gravel Pit is accessed from Hwy 24 approximately 8.5 miles southeast of Woodland Park. This is a 110c sand & gravel mine. It was not operating at the time of the inspection. Approximately two inches of fresh snow fell on the site the night before the inspection.

Availability of Records: Annual fees are paid through February 2017. There are no open infractions. However, in the three previous inspection reports (from inspections on 10/28/2011, 10/7/2005, and 10/3/2000) the Division has requested a letter from the utility company that owns the power pole and/or phone line (see **Photo 1**) on the crest of the east highwall. The following is an excerpt from the previous inspection report:

"During the last inspection (10/7/2005), the Division had notified the operator to submit a notarized agreement between the operator and the persons having an interest in the structures that the operator provide a compensation agreement for any damage to structures within 200 feet in accordance with Rule 6.4.19(a) for the power pole and the phone line along the north east side of the permit and affected area To date the Division has not received the agreement."

The Division has no record of having received the requested notarized agreement. **The lack of agreement is cited as a Problem on page 1 of this report.**

On August 24, 2005 when the Division approved Technical Revision 1 (TR-01) allowing the operator to change the final high wall configuration from 3H:1V to highwall and benches.

Financial Warranty: The \$3,500 bond held by the Division is inadequate for the observed mine disturbance as it has not been updated since 1993. Because the Division approved the final reclamation plan to reflect the adjacent released 111 permit with high walls and benches and only the bench area to be reclaimed the current warranty there may be appropriate adjustments made to the attached bond estimate. Please review the estimate and provide comments to the Division by March 16, 2017. If no comments are received, the Division will assume the proposed \$8,454.00 is acceptable and we will send a surety increase letter after that date.

Fish and Wildlife: No impact on wildlife was observed.

Hydrologic Balance: No standing water was observed in the pit and no exposed groundwater was observed.

Gen. Compliance with Mine Plan: The operation appeared to be in compliance with the approved mine plan. The pit highwall was benched (see **Photo 2**). Google Earth was used to measure the disturbed area, which was estimated to be approximately 3 acres.

Revegetation: Mr. Houchin indicated no areas had been revegetated. The snow prevented an inspection for noxious weeds.

Sediment Control: Minor erosion was observed on the exposed slope. BMPs may be necessary.

Support Facilities On-site: A screen and conveyor were observed on site (see **Photo 3**).

Signs and Markers: The permit sign was properly posted (see **Photo 4**) and boundary markers were observed to delineate the permit boundary.

Permit Stipulations: No. 1: Final bench and highwall designs will be submitted as a technical revision, along with documentation of supporting geotechnical observations. The designs must be approved by DMG prior to topsoiling and revegetation operations on the benches (required with approval of TR-01).

Storm Water MGT Plan: No oil or fuel spills were observed. Mr. Houchin indicated the stormwater is captured on the pit floor.

Please contact Tim Cazier (303-866-3567, ext. 8169) if you have any questions regarding this report.

PHOTOGRAPHS



Photo 1. Power and/or phone poles (looking NE).

PHOTOGRAPHS (cont.)



Photo 2. Benched highwall (looking NE).



Photo 3. Screen & conveyor.

PHOTOGRAPHS (cont.)



Photo 4. Permit sign.

GENERAL INSPECTION TOPICS

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

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

Curt Houchin
Charles W Houchin
P.O. Box 162
Green Mountain Falls, CO 80819

Enclosure

ec: DRMS file

COST SUMMARY WORK

Task description: Cost Summary

Site: Houchin Gravel Pit

Permit Action: 2016 Update

Permit/Job#: M1980249

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 2/9/2017

County: El Paso

Filename: M249-000

User: TC1

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Reduce Highwalls	NA	1	5.00	\$796.00
002	Replace Topsoil	DOZER	1	3.97	\$610.00
003	Reveg 3 acres	REVEGE	1	4.00	\$4,067.00
004	Mob/Demob	MOBILIZE	1	1.90	\$1,516.00
<u>SUBTOTALS:</u>				14.87	\$6,989

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02
Performance bond: 1.05
Job superintendent: 2.00
Profit: 10.00

Total = \$141.18

Total = \$73.38

Total = \$148.96

Total = \$698.90

TOTAL O & P = \$1,062.42

CONTRACT AMOUNT (direct + O & P) = \$8,051.42

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): 0.00

Total = 0.00

Engineering work and/or contract/bid preparation: 0.00

Total = \$0.00

Reclamation management and/or administration: 5.00

\$402.57

CONTINGENCY: 0.00

Total = \$0.00

TOTAL INDIRECT COST = \$1,464.99

TOTAL BOND AMOUNT (direct + indirect) = \$8,453.99

DOZERGRADER WORKTask description: **Reduce highwall slopes**Site: **Houchin Gravel Pit**Permit Action: **2016 Update**Permit/Job#: **M1980249****PROJECT IDENTIFICATION**Task #: **001**State: **Colorado**Abbreviation: **None**Date: **2/9/2017**County: **El Paso**Filename: **M249-A01**User: **TC1**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D7R DS XR Series II**

Horsepower: _____

Blade Type: _____

Attachment: **3-shank ripper**Shift Basis: **1 per day**

Data Source: _____

Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	\$54.81	NA
Operating Cost/Hour:	\$59.01	100
Ripper own. Cost/Hour:	\$5.24	NA
Ripper op. Cost/Hour:	\$0.35	10
Operator Cost/Hour:	\$39.87	NA

Total unit Cost/Hour: **\$159.28**Total Fleet Cost/Hour: **\$159.28****JOB TIME AND COST**Fleet size: **1 Dozer(s)**Unit cost: **\$159.28/LCY**Total job time: **5.00 Hours**Total job cost: **\$796**

BULLDOZER WORKTask description: **Replace Topsoil**Site: **Houchin Gravel Pit** Permit Action: **2016 Update** Permit/Job#: **M1980249****PROJECT IDENTIFICATION**

Task #: **002** State: **Colorado** Abbreviation: **None**
 Date: **2/9/2017** County: **El Paso** Filename: **M249-002**
 User: **TC1**

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

Basic Machine: **Cat D7R DS XR Series II**
 Horsepower: **240**
 Blade Type: **Semi-Universal**
 Attachment: **NA**
 Shift Basis: **1 per day**
 Data Source: **(CRG)**

Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	\$54.81	NA
Operating Cost/Hour:	\$59.01	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$39.87	NA
Total unit Cost/Hour:	\$153.69	
Total Fleet Cost/Hour:	\$153.69	

MATERIAL QUANTITIES

Initial Volume: **2,420**
 Swell factor: **1.115**
 Loose volume: **2,698 LCY**

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

HOURLY PRODUCTION

Average push distance: **150 feet**
 Unadjusted hourly production: **518.9 LCY/hr**

Materials consistency description: **Consolidated stockpile 1.0**

Average push gradient: **-30 %**
 Average site altitude: **7,600 feet**

Material weight: **2,100 lbs/LCY**Weight description: **Earth - Loam**Job Condition Correction FactorSource

Operator Skill:	0.750	(AVG.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.200	(SLOT)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	1.000	(DOZ-OC)
Push gradient:	1.601	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.095	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 1.3096

Adjusted unit
production: 679.55 LCY/hr
Adjusted fleet
production: **679.55** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.226/LCY

Total job time: **3.97** Hours
Total job cost: **\$610**

REVEGETATION WORKTask description: Reveg 3 acresSite: Houchin Gravel PitPermit Action: 2016 UpdatePermit/Job#: M1980249**PROJECT IDENTIFICATION**Task #: 003State: ColoradoAbbreviation: NoneDate: 2/9/2017County: El PasoFilename: M249-003User: TC1Agency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Sodium nitrate, 16-0-0	50.00	pound	\$0.80	\$40.00
Superphosphate, 0-20-0 with 12% S	50.00	pound	\$0.24	\$12.00
			Total Fertilizer Materials Cost/Acre	\$52.00

Application

Description	Cost /Acre
Truck whirlwind spreader (MEANS 32 01 90.13 0140)	\$13.93
Total Fertilizer Application Cost/Acre	\$13.93

TILLING

Description	Cost /Acre
Chisel plowing {DMG}	\$88.76
Total Tilling Cost/Acre	\$88.76

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Little Bluestem - Pastura	2.00	11.94	\$31.68
Sideoats Grama - Vaughn	4.00	13.13	\$45.04
Smooth Brome - Manchar	3.00	9.99	\$5.91
Pubescent Wheatgrass - Luna	2.00	4.13	\$4.48
Western Wheatgrass - Arriba	4.00	10.10	\$14.76
Totals Seed Mix	15.00	49.29	\$101.87

Application

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

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Hay, 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}	\$66.02
Total Mulch Application Cost/Acre	\$66.02

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:	3	Cost /Acre:	\$1,084.58
Estimated Failure Rate:	25%	Cost /Acre*:	\$1,084.58
*Selected Replanting Work Items:	FERTILIZING,TILLING,SEEDING,MULCHING		
Initial Job Cost:	\$3,253.74		
Reseeding Job Cost:	\$813.44		
Total Job Cost:	\$4,067		
Job Hours:	4.00		

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Mob/Demob**Site: **Houchin Gravel Pit**Permit Action: 2016 UpdatePermit/Job#: M1980249**PROJECT IDENTIFICATION**Task #: 004State: ColoradoAbbreviation: NoneDate: 2/9/2017County: El PasoFilename: M249-004User: TC1Agency or organization name: DRMS**EQUIPMENT TRANSPORT RIG COST**Shift basis: 1 per dayCost Data Source: CRG DataTruck 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 D7R DS XR Series II	32.01	\$54.81	\$117.55	1	\$172.36	\$117.55	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$30.65	\$88.67	1	\$119.32	\$88.67	\$250.00

Subtotals: **\$291.68** **\$206.22** **\$500.00****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:	<u>WOODLAND PARK</u>	
Total one-way travel distance:	<u>9.00</u>	miles
Average Travel Speed:	<u>40.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$1,515.74</u>
** two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$0.00</u>
** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>0.23</u>	<u>0.23</u>
Return Time (Hours):	<u>0.23</u>	<u>0.23</u>
Loading Time (Hours):	<u>0.25</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.25</u>	<u>NA</u>
Subtotals:	<u>0.95</u>	<u>0.45</u>

JOB TIME AND COST

Total job time:	<u>1.90</u>	Hours
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Total job cost:	<u>\$1,516</u>
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