


**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.

<b>MINE NAME:</b> Riverview Resource	<b>MINE/PROSPECTING ID#:</b> M-1999-098	<b>MINERAL:</b> Sand and gravel	<b>COUNTY:</b> Weld
<b>INSPECTION TYPE:</b> Monitoring	<b>INSPECTOR(S):</b> Peter S. Hays	<b>INSP. DATE:</b> June 28, 2018	<b>INSP. TIME:</b> 10:00
<b>OPERATOR:</b> Aggregate Industries - WCR, Inc.	<b>OPERATOR REPRESENTATIVE:</b> Connie Davis	<b>TYPE OF OPERATION:</b> 112c - Construction Regular Operation	

<b>REASON FOR INSPECTION:</b> Normal I&E Program	<b>BOND CALCULATION TYPE:</b> Complete Bond	<b>BOND AMOUNT:</b> \$155,480.00
<b>DATE OF COMPLAINT:</b> NA	<b>POST INSP. CONTACTS:</b> None	<b>JOINT INSP. AGENCY:</b> None
<b>WEATHER:</b> Clear	<b>INSPECTOR'S SIGNATURE:</b> 	<b>SIGNATURE DATE:</b> July 5, 2018

**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:** Hydrologic Balance

**PROBLEM:** The Operator failed to repair damaged sections of the northern bank of Cell 3 resulting in increased flood water flows into the Vom Baur property. Therefore, the Division believes Aggregate Industries failed to maintain the prevailing hydrologic balance in the area as required by Rule 3.1.6 and Section 34-32.5-116(4)(h) of the Colorado Land Reclamation Act for the Extraction of Construction Materials.

**CORRECTIVE ACTIONS:** The Operator must repair the breaches in the northern bank of Cell 3 within 30 days, resurvey the section of Cell 3 to verify the topography is consistent with the approved Reclamation Plan, notify the Division of the breach repair completion and submit the new survey results to the Division.

**CORRECTIVE ACTION DUE DATE:** 8/6/18

**INSPECTION TOPIC:** Financial Warranty

**PROBLEM:** The Division currently holds a financial warranty in the amount of \$155,480.00. The Division recalculated the required reclamation bond based on this inspection at \$270,000.00, an increase of \$114,520.00 pursuant to Rule 4.2.1(2).

**CORRECTIVE ACTIONS:** The Division will allow the Operator 14 days to review and comment on the estimate prior to issuing the financial warranty increase (SI) notice. The Operator will be required to provide the increased financial warranty amount within 60 days of the notice date pursuant to Rule 4.2.1(2).

**CORRECTIVE ACTION DUE DATE:** 7/19/18

**INSPECTION TOPIC:** Signs & Markers

**PROBLEM:** The mine identification sign was not posted at the entrance of the mine site. This is a problem for failure to post a mine identification sign as required by Rule 3.1.12(1).

**CORRECTIVE ACTIONS:** The Operator shall, at the entrance of the mine site, post a sign which shall be clearly visible from the access road with the following: the name of the Operator, a statement that a reclamation permit for the operation has been issued by the Colorado Mined Land Reclamation Board; and the permit number. The Operator shall submit photo documentation that a proper sign has been posted by the corrective action date.

**CORRECTIVE ACTION DUE DATE:** 8/6/18

## **OBSERVATIONS**

The Riverview Resource site was inspected by Peter Hays with the Division of Reclamation, Mining and Safety (Division/DRMS) as part of the Division monitoring inspection program. Mrs. Connie Davis with Aggregate Industries - WCR, Inc. was present during the inspection. The site was previously inspected by the Division on July 12, 2016 for a complaint (CT-02) investigation. An inspection map created based on the observations from this inspection is attached for reference.

The Riverview Resource 112c permit was issued by the Division on July 13, 2000. The site is permitted for 496 acres with 253 acres of mining disturbance. The site was amended in 2008 to add 156 acres to the site. The Operator submitted an acreage reduction request on May 22, 2018 to remove the 63 acre - Cell 4, Phase 1 from the permit. The acreage reduction request is currently under review by the Division.

### **Mine Plan:**

The site was inactive during the inspection, however the Operator is preparing the site for operations within the next year. A new pad for a portable processing plant was constructed west of the remaining mining area in the northeast section of Cell 3. The northeast portion of Cell 3 was being dewatered during the inspection. The water was pumped into the southeast portion of Cell 3, which will be used as a fresh water source when mining activities resume at the site. A section of the regraded north slope in Cell 3 failed recently. The Operator believes the cause is irrigation water from the agricultural fields located north of O Street saturating the slope material. The failure area is being evaluated by the Operator to stabilize the area. An erosion gully was observed the southeast corner of the regraded Cell 3 slope. The gully needs to be repaired and measures should be taken to control stormwater discharge down the Cell 3 slope. Cell 4 located north of O street will be mined following the completion of Cell 3, before Cell 2 is mined, due to the proximity of Cell 4 to the processing area.

### **Reclamation Plan:**

The approved post-mining land use for the site is wildlife habitat. Final reclamation of Cell 1 and the southern portion of Cell 3 are ongoing. The southern portion of Cell 3 is reclaimed to wetlands. Stockpiles of topsoil were located north of the concrete batch plant adjacent to O St. A weed control contractor was on-site during the inspection. A patch of Canada thistle was observed at the dewatering inlet channel into Cell 3. The thistle patch should be treated to prevent the spread of Canada thistle throughout the site. The Operator has been recycling the old processing plant and conveyors located between the concrete and asphalt batch plants. The concrete batch plant is operated occasionally according to the Operator. The Operator is in discussions with the City of Greeley to sell a section of undisturbed land located south of Cell 3 and north of the Poudre River as an historical preservation area.

#### Overdue Corrective Action:

There is one overdue problem at the site to complete the complaint investigation (CT-02) corrective actions. The Division cited the following problem after the July 12, 2016 inspection, the Operator must repair the breaches in the northern bank of Cell 3 within 60 days, resurvey the section of Cell 3 to verify the topography is consistent with the approved Reclamation Plan, notify the Division of the breach repair completion and submit the new survey results to the Division. On February 3, 2017 and June 30, 2017 the Operator requested extensions to the corrective action due date. The current overdue corrective action date is August 31, 2017. The Division will extend the corrective action date until August 6, 2018 to allow the Operator to submit the survey results for the repaired breach areas.

#### Groundwater:

The Operator has obtained a decreed plan for augmentation in water court case no. 1990CW23 to cover evaporation from up to 60 acres of exposed water surface area in one or more unlined ponds remaining at the site post mining. All current groundwater evaporation and usage by the Operator is replaced under an approved SWSP.

#### Financial Warranty:

The Division currently holds a financial warranty in the amount of \$155,480.00. The Division recalculated the required reclamation bond based on this inspection at \$270,000.00, an increase of \$114,520.00 pursuant to Rule 4.2.1(2). The Division updated the financial warranty calculation for AM-01. A copy of the financial warranty estimate is attached. The Division will allow the Operator 14 days to review and comment on the estimate prior to issuing the financial warranty increase (SI) notice. The Operator will be required to provide the increased financial warranty amount within 60 days of the notice date pursuant to Rule 4.2.1(2).

#### Sign:

As cited as a problem above, the mine identification sign was not posted at the entrance of the mine site. This is a problem for failure to post a mine identification sign as required by Rule 3.1.12(1). The Division will require the Operator to post a sign which shall be clearly visible from the access road with the following information: the name of the Operator, a statement that a reclamation permit for the operation has been issued by the Colorado Mined Land Reclamation Board; and the permit number. The Operator shall submit photo documentation that a proper sign has been posted by the corrective action date.

#### Spillway:

A spillway was observed in the southeast corner of Cell 3 during the previous inspection. The spillway is not part of the approved reclamation plan for the site and is not approved by the Division. On February 3, 2017, the Operator reported a contractor installed the spillway, riprap channel, to serve as a discharge point outfall, not an engineered spillway. The Operator stated the channel will be removed during final reclamation when pit dewatering ceases. Due to the recent and frequent flooding event at the site, the Division believes the site should be evaluated for installation of inlet/outlet structure by completing a flood water impact study for the site to prevent the site capturing the Poudre River post-reclamation and release of the permit.



## PHOTOGRAPHS



Flood Repair area in SW section of Cell 3 looking NE



Flood Repair area in SW section of Cell 3 looking north





View of southern portion of Cell 3 from SE permit boundary looking NW



View of the silt pond berm in northern portion of Cell 3





Erosion gulling in SE slope in the northeast portion of Cell 3



View of northeast portion of Cell 3 from SE corner looking NW





View of northeast portion of Cell 3 from NE corner looking NW at slope failure



View of northeast portion of Cell 3 from east side looking west



### 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----- <b>PB</b>	(RD) ROADS----- <u>N</u>
(HB) HYDROLOGIC BALANCE----- <b>PB</b>	(BG) BACKFILL & GRADING----- <u>N</u>	(EX) EXPLOSIVES----- <u>N</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>N</u>	(FW) FISH & WILDLIFE----- <u>N</u>	(RV) REVEGETATION---- <u>N</u>
(SM) SIGNS AND MARKERS----- <b>PB</b>	(SP) STORM WATER MGT PLAN---- <u>N</u>	(RS) RECL PLAN/COMP-- <u>N</u>
(ES) OVERBURDEN/DEV. WASTE----- <u>N</u>	(SC) EROSION/SEDIMENTATION--- <u>N</u>	(ST) STIPULATIONS----- <u>N</u>
(AT) ACID OR TOXIC MATERIALS----- <u>N</u>	(OD) OFF-SITE DAMAGE----- <u>N</u>	

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

#### Inspection Contact Address

Connie Davis  
Aggregate Industries - WCR, Inc.  
1687 Cole Blvd., Ste. 300  
Lakewood, CO 80401

Enclosure – Inspection Map, Bond Estimate

Ec: Michael Cunningham, DRMS














# Riverview Resource

M-1999-098

June 28, 2018 Inspection Map

## Legend

-  Agg Ind Riverview Resources
-  Approx Permit Boundary
-  Approx. City of Greeley land purchase area
-  Asphalt Plant
-  Concrete Plant
-  Erosion Feature
-  New Processing Plant Location
-  Repaired Flood Damage Area
-  Silt Pond
-  Slope Failure Area
-  Topsoil Stockpile

St 64

Concrete Plant

Asphalt Plant

Agg Ind Riverview Resources

27

83rd Ave

Google Earth

© 2018 Google

Poudre River Trail

Poudre River Rd

2000 ft





## COST SUMMARY WORK

Task description: \_\_\_\_\_

Site: Riverview Resource Permit Action: June 2018 Bond Estimate Permit/Job#: M1999098

### PROJECT IDENTIFICATION

Task #: 001 State: Colorado Abbreviation: None  
Date: 7/3/2018 County: Weld Filename: M098-001  
User: PSH

Agency or organization name: DRMS

### TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
002	BackSloping	DOZER	1	174.78	\$35,245.00
003	Topsoil - 50 Acres, 6" Depth	SCRAPER1	1	99.99	\$109,310.00
004	Revegetation and Weed Control - 50 Acres	REVEGE	1	0.00	\$70,820.00
005	Conveyor Removal	DEMOLISH	1	0.00	\$1,250.04
006	Mob / Demob	MOBILIZE	1	3.14	\$10,760.00
<b><u>SUBTOTALS:</u></b>				<b>277.91</b>	<b>\$227,385</b>

### INDIRECT COSTS

#### OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	\$4,593.18
Performance bond:	1.05	Total =	\$2,387.54
Job superintendent:	0.00	Total =	\$0.00
Profit:	10.00	Total =	\$22,738.50
		TOTAL O & P =	\$29,719.22
		CONTRACT AMOUNT (direct + O & P) =	\$257,104.22

#### 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		\$12,855.21

CONTINGENCY: 0.00 Total = \$0.00

TOTAL INDIRECT COST = \$43,074.43

**TOTAL BOND AMOUNT (direct + indirect) = \$270,000.00 (Rounded)**



**BULLDOZER WORK**Task description: **BackSloping**

Site: **Riverview Resource** Permit Action: June 2018 Bond Estimate Permit/Job#: M1999098

**PROJECT IDENTIFICATION**

Task #: 002 State: Colorado Abbreviation: None  
 Date: 7/3/2018 County: Weld Filename: M098-002  
 User: PSH

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:	\$83.81	NA
Operating Cost/Hour:	\$66.17	100
Ripper own. Cost/Hour:	\$7.55	NA
Ripper op. Cost/Hour:	\$3.61	50
Operator Cost/Hour:	\$40.52	NA
Total unit Cost/Hour:	\$201.66	
Total Fleet Cost/Hour:	<b>\$201.66</b>	

**MATERIAL QUANTITIES**

Initial Volume: 74,000  
 Swell factor: 1.000  
 Loose volume: **74,000 LCY**

Source of estimated volume: Permit File  
 Source of estimated swell factor: Cat Handbook

**HOURLY PRODUCTION**

Average push distance: 100 feet  
 Unadjusted hourly production: 852.6 LCY/hr

Materials consistency description: **Loose stockpile 1.2**

Average push gradient: 10 %  
 Average site altitude: 4,700 feet

Material weight: 2,900 lbs/LCY

Weight description: Sand and gravel - Dry

**Job Condition Correction Factor****Source**

Operator Skill:	1.000	(EXCL.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	0.786	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4966

Adjusted unit  
production: 423.40 LCY/hr  
Adjusted fleet  
production: **423.4** LCY/hr

### **JOB TIME AND COST**

Fleet size: 1 Dozer(s)  
Unit cost: \$0.476/LCY

Total job time: **174.78** Hours  
Total job cost: **\$35,245**

**SCRAPER TEAM WORK**Task description: Topsoil - 50 Acres, 6" DepthSite: Riverview Resource Permit Action: June 2018 Bond  
EstimatePermit/Job#: M1999098**PROJECT IDENTIFICATION**Task #: 003 State: Colorado Abbreviation: None  
Date: 7/3/2018 County: Weld Filename: M098-003  
User: PSHAgency or organization name: DRMS**HOURLY EQUIPMENT**COSTShift basis: 1 per day

Equipment Description	
-Scraper:	Cat 627G
-Dozer:	NA
Support Equipment -Load Area:	Cat D8T - 8SU
-Dump Area:	CAT 14M
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	100	100	NA	NA
Ownership cost/hour:	\$93.72	NA	\$83.81	\$54.68	NA	NA
Operating cost/hour:	\$115.38	NA	\$66.17	\$46.99	NA	NA
%Utilization-ripper:	NA	NA	50	NA	NA	NA
Ripper own. cost/hour:	NA	NA	\$7.55	\$0.00	NA	NA
Ripper op. cost/hour:	NA	NA	\$3.61	\$0.00	NA	NA
Operator cost/hour:	\$41.46	NA	\$40.52	\$38.16	NA	NA
Unit Subtotals:	\$250.56	NA	\$201.66	\$139.83	NA	NA
Number of Units:	3	0	1	1	0	0
Group Subtotals:	Work: \$751.68		Support: \$341.49		Maint:	\$0.00

Total work team cost/hour: \$1,093.17**MATERIAL QUANTITIES**Initial volume: 80,000 CCY Swell factor: 1.000  
Loose volume: 80,000 LCYSource of estimated volume: Permit FileSource 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: 4700 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	2000.00	5.00	3.00	8.00	1381	1.49

Haul Time: 1.49 minutesReturn Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2000.00	-5.00	3.00	-2.00	2938	0.73

Return Time: 0.73 minutesTotal Scraper team cycle time: 3.52 minutesAdjusted for job conditions: 266.68 LCY/HourSelected Number of Scrapers: 3 Scraper(s)Adjusted single scraper team (unit) hourly production: 800.05 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 800.05 LCY/HourUnadjusted unit production/hour: 321.31 LCY/Hour

Optimal Number of Scrapers per push dozer: \_\_\_\_\_

**JOB TIME AND COST**Fleet size: 1 Team(s)Total job time: 99.99 HoursUnit cost: \$1.366 /LCYTotal job cost: \$109,310

**REVEGETATION WORK**Task description: **Revegetation and Weed Control - 50 Acres**Site: **Riverview Resource**Permit Action: June 2018 Bond  
EstimatePermit/Job#: M1999098**PROJECT IDENTIFICATION**

Task #: 004 State: Colorado Abbreviation: None  
 Date: 7/3/2018 County: Weld Filename: M098-004  
 User: PSH

Agency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
0-20-20, 4-8-12, 10-10-10	200.00	pound	\$0.21	\$42.00
			<b>Total Fertilizer Materials Cost/Acre</b>	<b>\$42.00</b>

**Application**

Description	Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)	\$144.62
<b>Total Fertilizer Application Cost/Acre</b>	<b>\$144.62</b>

**TILLING**

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$106.29
<b>Total Tilling Cost/Acre</b>	<b>\$106.29</b>

**SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Blue Grama - Hachita	2.95	48.15	\$48.00
Indiangrass - Cheyenne	0.70	2.13	\$12.04
Big Bluestem - Native	0.70	2.09	\$7.18
Buffalograss - Cody	0.59	0.57	\$7.08
Switchgrass - Pathfinder	0.70	6.25	\$6.98
Sand Dropseed	0.23	27.46	\$2.49
Little Bluestem - Native	0.59	3.52	\$9.29
Sideoats Grama - Butte	2.36	7.75	\$22.82
Western Wheatgrass - Arriba	2.36	5.96	\$19.07
Needlegrass, Green - Lodorm	0.47	1.95	\$2.29

Spike Muhly	0.11	4.04	\$1.06
<b>Totals Seed Mix</b>	11.76	109.87	<b>\$138.29</b>

**Application**

Description	Cost /Acre
	\$
<b>Total Seed Application Cost/Acre</b>	<b>\$0.00</b>

**MULCHING and MISCELLANEOUS****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Hay, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$261.00	\$522.00
<b>Total Mulch Materials Cost/Acre</b>				<b>\$522.00</b>

**Application**

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$66.02
Weed spray, truck, non-aquatic area, nox. [DMG]	\$71.50
Weed spray, truck, non-aquatic areas, ann. [DMG]	\$23.35
<b>Total Mulch Application Cost/Acre</b>	<b>\$160.87</b>

**NURSERY STOCK PLANTING**

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

**JOB TIME AND COST**

No. of Acres:	50	Cost /Acre:	\$1,114.07
Estimated Failure Rate:	30%	Cost /Acre*:	\$1,007.78
*Selected Replanting Work Items:	FERTILIZING,SEEDING,MULCHING		
Initial Job Cost:	\$55,703.50		
Reseeding Job Cost:	\$15,116.70		
Total Job Cost:	\$70,820		
Job Hours:	0.00		



## DEMOLITION WORK

Task description: Conveyor Removal

Site: Riverview Resource Permit Action: June 2018 Bond  
Estimate Permit/Job#: M1999098

### PROJECT IDENTIFICATION

Task #: 005 State: Colorado Abbreviation: None  
Date: 7/3/2018 County: Weld Filename: M098-005  
User: PSH  
Agency or organization name: DRMS

### UNIT COSTS

Location adjustment: 94.70 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Conveyor	2000' Length	Conveyor, demolition, off-site disposal in approved landfill, 30 mile haul	2,000.00	CF	\$0.66	\$1,320.00

Job Hours: 0.00 Subtotal (unadjusted): \$1,320.00 Total Cost (adjusted for location): \$1,250.04

**EQUIPMENT MOBILIZATION/DEMOBILIZATION**Task description: **Mob / Demob**

Site: **Riverview Resource** Permit Action: **June 2018 Bond Estimate** Permit/Job#: **M1999098**

**PROJECT IDENTIFICATION**

Task #: **006** State: **Colorado** Abbreviation: **None**  
 Date: **7/3/2018** County: **Weld** Filename: **M098-006**  
 User: **PSH**

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:**

<b>Available Rig Capacities</b>	<b>0-25 Tons</b>	<b>26-50 Tons</b>	<b>51+ Tons</b>
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	\$91.36	\$125.45	2	\$433.62	\$250.90	\$500.00
Cat 627G	41.80	\$93.72	\$117.55	6	\$1,267.62	\$705.30	\$1,500.00
CAT 14M	23.57	\$54.68	\$88.67	2	\$286.70	\$177.34	\$500.00

Subtotals: **\$1,987.94** **\$1,133.54** **\$2,500.00**

**ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
---------------------	---------------------	------------	--------------------------	----------------------------

Subtotals: **\$0.00** **\$0.00**

**EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region:	<u>GREELEY, CO</u>	
Total one-way travel distance:	<u>10.00</u>	miles
Average Travel Speed:	<u>35.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$10,759.58</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>0.29</u>	<u>0.29</u>
Return Time (Hours):	<u>0.29</u>	<u>0.29</u>
Loading Time (Hours):	<u>0.50</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.50</u>	<u>NA</u>
Subtotals:	<u>1.57</u>	<u>0.57</u>

**JOB TIME AND COST**

Total job time:	<u>3.14</u>	Hours
-----------------	-------------	-------

Total job cost:	<u>\$10,760</u>
-----------------	-----------------