COLORADO
Division of Reclamation, Mining and Safety
Department of Natural Resources

1313 Sherman Street, Room 215
Denver, CO 80203

November 27, 2018

Jim Miner
Builder's Aggregate, Inc.
510 Dahlia Street
Fort Morgan, Colorado 80701

RE: Builder's Aggregate, M-1981-112
Technical Revision No. 1 (TR01), Adequacy Review No. 1

Dear Mr. Miner,

The Colorado Division of Reclamation, Mining, and Safety (DRMS or Division), received your response to the Division's adequacy review on November 19, 2018. The Division has reviewed the response and have identified several issues that will need to be addressed prior to the Division's approval of the application. The adequacy items identified in the Division's first review letter are listed below. If an item has been resolved, it is not included. If additional information or revisions are needed, they are discussed under each applicable item.

Exhibit C – Rule 6.4.3 – Pre-Mining and Mining Plan Map

2. Please provide a map or maps that meet the requirements of Rule 6.4.3 and 6.2.1(2).
    a. **Builder's Agg. Response:** The premining map and mining map is provided here in.
    b. **DRMS Response:** Please address the following issues with the map
        i. Please clearly depict where the current 1.5 acre pond/dredge operation is situated and the direction the operation will move overtime.
        ii. Please depict where the two acre stockpile area will be located.
        iii. The map must be signed by the registered land surveyor, professional engineer or other qualified person who prepared it.

Exhibit D – Rule 6.4.4 - Mining Plan

5. Please provide the information required by Rule 6.4.4(f). This information can be either presented as a narrative or provided on the revised Exhibit C map discussed above.
    a. Builder's Agg. Response: 4, 5 - The affected land is going to be mined less than 180 days per year, so it will be an intermittent operation.
    b. DRMS Response: The response to item number 5 of the adequacy review was not provided. A map (in Exhibit C – Pre-mining and Mining Plan Maps(s) of Affected Lands, subsection 6.4.3 may be used along with a narrative to present the following information:

i. Nature, depth and thickness of the deposit to be mined and the thickness and type of overburden to be removed.
ii. Nature of the stratum immediately beneath the material to be mined in sedimentary deposits.

Rule 6.4.6 – Exhibit F – Reclamation Plan Map

7. Please address the following issues with the reclamation plan map:
    a. The person who prepared the map must sign it.
    b. Please depict the 25 foot buffer zone on the new reclamation plan map.

Rule 6.4.12 – Exhibit L – Reclamation Cost

8. The Division has conducted a reclamation cost estimate for the site based on the information you have provided. The cost estimate is enclosed for your review. Please let the Division know if you concur with the estimate. Once the technical revision is approved, the operator will have sixty days to post the additional bond.

The Division is required to issue a decision on the TR01 application on December 2, 2018. If you need additional time to address the adequacy review items noted above, please request an extension of the decision date. If you have any questions feel free to contact me at (303) 866-3567, extension 8120.

Sincerely,

Jared Ebert
Environmental Protection Specialist III

Enclosure: *1.) CIRCES Reclamation Cost Estimate, M-1981-112, TR02, November 27, 2018*

EC: Tara Schutter, Tessara Water, Inc. tara@tessarawater.com
Jim Miner, Builder's Agg. jminer149@hotmail.com

COST SUMMARY WORK

Task description: **Cost Summary**

Site: **Builders Aggr Pit** Permit Action: TR01 Permit/Job#: M1981112

PROJECT IDENTIFICATION

Task #: 000 State: Colorado Abbreviation: None
Date: 11/27/2018 County: Morgan Filename: M112-000
User: JLE

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Backfill and Grade Pond Area	LOADER	2	82.26	$16,105.00
002	Place Rip-rap	DEMOLISH	1	8.00	$3,000.00
003	Revegetation of buffer zone	REVEGE	1	1.00	$755.00
004	Mobilization	MOBILIZE	1	0.85	$1,196.00
	SUBTOTALS:			**92.11**	**$21,056**

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	$425.33
Performance bond:	1.05	Total =	$221.09
Job superintendent:	0.00	Total =	$0.00
Profit:	10.00	Total =	$2,105.60
		TOTAL O & P =	$2,752.02
		CONTRACT AMOUNT (direct + O & P) =	$23,808.02

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		$1,190.40
CONTINGENCY:	0.00	Total =	$0.00
		TOTAL INDIRECT COST =	$4,442.42
		TOTAL BOND AMOUNT (direct + indirect) =	**$25,498.42**

Total Proposed Liability amount = $25,500.00

WHEEL LOADER – LOAD AND CARRY WORK

Task description: **Backfill and Grade Pond Area**

Site: **Builders Aggr Pit** Permit Action: TR01 Permit/Job#: M1981112

PROJECT IDENTIFICATION

Task #: 001 State: Colorado Abbreviation: None
Date: 11/27/2018 County: Morgan Filename: M112-001
User: JLE

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: CAT 950H Horsepower: 197
Attachment 1: ROPS Cab Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$26.14	NA
Operating Cost/Hour:	$30.84	100
Operator Cost/Hour:	$40.90	NA
Total Unit Cost/Hour:	$97.89	
Total Fleet Cost/Hour:	$97.89	

MATERIAL QUANTITIES

Initial volume: 35,000 CCY Swell factor: 1.000
Loose volume: **35,000** LCY

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

HOURLY PRODUCTION

Loader Cycle Time:

Unadjusted Basic Cycle Time (load, dump, maneuver): 0.500 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Bank or broken material 0.04	0.040	(Cat HB)
Stockpile:	Dumped by truck 0.02	0.020	(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:	-0.020	minutes
	Adjusted Basic Cycle Time:	0.480	minutes

Rolling Resistance – Road Conditions

Haul: Loose sand or gravel 10
Return: Loose sand or gravel 10

Haul and Return Time

	Length (feet)	Grade Res. (%)	Rolling Res. (%)	Total Res. (%)	Travel Time (minutes)	Source

Haul Route:	200	0.00	10.00	10.00	0.2699	(Cat HB)
Return Route:	200	0.00	10.00	10.00	0.2315	(Cat HB)

Total Travel Time: 0.5014 minutes
Total Cycle Time: **0.9814** minutes

Load Bucket Capacity

Rated Capacity: 4.30 LCY (heaped)
Bucket Fill Factor: 0.975 Sand and gravel (95% - 100%) 0.975
Adjusted Capacity: **4.19** LCY

Job Condition Correction Factors
Site Altitude: 4260 feet

		Source
Altitude Adj:	1.00	(CAT HB)
Job Efficiency:	0.83	(1 shift/day)
Net Correction:	0.83	multiplier

Unadjusted Hourly Unit Production: 256.31 LCY/Hour
Adjusted Hourly Unit Production: 212.74 LCY/Hour
Adjusted Hourly Fleet Production: **212.74** LCY/Hour

JOB TIME AND COST

Fleet size: 1 Loader(s) Total job time: **164.52** Hours

Unit cost: $0.460 /LCY Total job cost: **$16,105**

DEMOLITION WORK

Task description: **Place Rip-rap**

Site: **Builders Aggr Pit** Permit Action: TR01 Permit/Job#: M1981112

PROJECT IDENTIFICATION

Task #: 002 State: Colorado Abbreviation: None
Date: 11/27/2018 County: Morgan Filename: M112-002
User: JLE

Agency or organization name: DRMS

UNIT COSTS **Location adjustment: 100 %**

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Rip-rap south boundary	1672.4 feet	USER PROVIDED ITEM	1.00	1	$3,000.00	$3,000.00

Job Hours: 8.00 **Subtotal (unadjusted): $3,000.00** **Total Cost (adjusted for location): $3000**

REVEGETATION WORK

Task description: **Revegetation of buffer zone**

Site: **Builders Aggr Pit** Permit Action: TR01 Permit/Job#: M1981112

PROJECT IDENTIFICATION

Task #: 003 State: Colorado Abbreviation: None
Date: 11/27/2018 County: Morgan Filename: M112-003
User: JLE

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
Chisel plowing {DMG}	$92.77
Weed control spraying (MEANS 31 31 16.13 3100)	$193.60
Total Tilling Cost/Acre	**$286.37**

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Blue Grama - Hachita	0.40	6.53	$6.66
Switchgrass - Blackwell	0.40	3.57	$3.92
Sideoats Grama - El Reno	1.80	5.91	$17.82
Western Wheatgrass - Arriba	9.60	24.24	$79.49
Totals Seed Mix	12.20	40.25	**$107.90**

Application

Description	Cost /Acre
Broadcast seeding [DMG]	$267.22
Total Seed Application Cost/Acre	**$267.22**

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:	1	Cost /Acre:	$661.49
Estimated Failure Rate:	25%	Cost /Acre*:	$375.12
*Selected Replanting Work Items:	SEEDING		

Initial Job Cost:	**$661.49**
Reseeding Job Cost:	**$93.78**
Total Job Cost:	**$755**
Job Hours:	**1.00**

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description: **Mobilization**

Site: **Builders Aggr Pit** Permit Action: TR01 Permit/Job#: M1981112

PROJECT IDENTIFICATION

Task #: 004 State: Colorado Abbreviation: None
Date: 11/27/2018 County: Morgan Filename: M112-004
User: JLE

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 950H	20.13	$26.14	$88.67	2	$229.62	$177.34	$500.00
Subtotals:					**$229.62**	**$177.34**	**$500.00**

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 3/4 T.	$40.03	1	$40.03	$40.03
Subtotals:			**$40.03**	**$40.03**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	FORT MORGAN	
Total one-way travel distance:	2.00	miles
Average Travel Speed:	45.00	mph
Total Non-Roadable Mob/Demob Cost *	$1,192.32	
'* two round trips with haul rig:		
Total Roadable Mob/Demob Cost **	$3.56	
** one round trip, no haul rig:		

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.04	0.04
Return Time (Hours):	0.04	0.04
Loading Time (Hours):	0.17	NA
Unloading Time (Hours):	0.17	NA
Subtotals:	0.43	0.09

JOB TIME AND COST

Total job time:	**0.86**	Hours
Total job cost:	**$1,196**	