


**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: Dahlia North Resources Pit	MINE/PROSPECTING ID#: M-1994-093	MINERAL: Sand and gravel	COUNTY: Adams
INSPECTION TYPE: Surety Release Inspection	INSPECTOR(S): Jared L. Ebert	INSP. DATE: October 10, 2018	INSP. TIME: 09:00
OPERATOR: Aggregate Industries - WCR, Inc.	OPERATOR REPRESENTATIVE: Connie Davis and Joel Bolduc	TYPE OF OPERATION: 112c - Construction Regular Operation	
REASON FOR INSPECTION: Surety Related	BOND CALCULATION TYPE: Partial Bond	BOND AMOUNT: \$744,000.00	
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None	
WEATHER: Cloudy	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: October 23, 2018	

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>Y</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>NA</u>	(SF) PROCESSING FACILITIES----- <u>NA</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>	(RS) RECL PLAN/COMP-- <u>Y</u>
(ES) OVERBURDEN/DEV. WASTE----- <u>NA</u>	(SC) EROSION/SEDIMENTATION--- <u>Y</u>	(ST) STIPULATIONS----- <u>N</u>
(AT) ACID OR TOXIC MATERIALS----- <u>NA</u>	(OD) OFF-SITE DAMAGE----- <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

OBSERVATIONS

This was an inspection of the Dahlia North Resources Pit, Division of Reclamation, Mining and Safety (DRMS or Division) permit number, M-1994-093, operated by Aggregate Industries - WCR, Inc. (AI). I, Jared Ebert and Patrick Lennberg with DRMS conducted the inspection. Ms. Connie Davis and Joel Bolduc with AI accompanied us during the inspection. Also, Josh Redman with the City of Thornton accompanied us during the inspection.

This is an 89.16 acre 112c operation. The post mining land use approved for the site is Developed Water Resources. The site consists of three distinct areas. Area 1 located at the south end of the site which consists of an open groundwater pond. Area 2A/2B consists of the lined water storage reservoir. Area 2C is located in the northeast portion of the site and consists of an industrial area where landscape material is sold and an open groundwater wetland area. With the approval of AR02, the reservoir water surface area was removed from the permit boundary within Area 2A/2B.

On September 14, 2018, the Division received an application for full site release (SL01). This inspection was conducted to evaluate if the site is eligible for release in accordance with Rule 4.17.

Backfilling and Grading:

Area 1 pit slopes are vegetated and stable. The Area 2A/2B reservoir pit slopes are armored with rip-rap and were stable. Area 2C consisted of a pit excavation that has been backfilled with inert material and the area is now being used as a storage/sales yard for various landscaping and construction materials. A portion of Area 2C consists of the former pit excavation that is now an open groundwater wetland.

Hydrologic Balance:

The groundwater pond located in Area 1 is covered under a plan of augmentation (Case No. 2007CW198). The exposed groundwater within the wetland area located in Area 2C is not currently covered under an approved augmentation plan according to the Colorado Division of Water Resources. This area was excavated after this permit was issued. Given this, AI will need to obtain a permanent plan of augmentation for this area prior to the approval of this area for site release. This issue was discussed with the AI representatives at the time of this inspection. The Division would consider a partial approval of the SL01 site release request and exclude the area encompassing the exposed groundwater in Area 2C. The Division estimates this area to be 5.21 acres in size. Prior to the partial approval, AI will need to submit a reclamation plan map depicting the area to remain within the permit area.

Gen. Compliance With Mine Plan:

Mining is complete at the site.

Roads:

An access road remains around the Area 2A/2B water storage reservoir.

Reclamation Success:

The Division finds that Area 1 has been reclaimed. This area was originally planned to be backfilled, instead the area consists of an open groundwater pond covered by an approved permanent plan of augmentation. The area appears stable and vegetated. Some noxious weeds were observed in the area such as knapweed,

Russian olive and Tamarisk. According to Mr. Redman, upon release, weed control will be undertaken by the City in accordance with their weed management standards for areas near water storage reservoirs. Given the condition of Area 1, the Division will approve this area for release.

The area remaining within Area 2A/2B consists of the above water level slopes and surrounding affected land. Aside from the access road around the reservoir, the affected land has been revegetated with native grasses. The approved reclamation plan for this area includes a very specific tree and shrub planting plan. Also included was a requirement for AI to demonstrate to the Division that at least 50% of the planted trees and shrubs have survived. There does appear to have been some tree planting that has occurred around the site and based on the 2001 annual report some tree planting was documented. However details confirming the plantings of the required number and types of trees and shrubs could not be found. Also, AI did not make the survival demonstration in accordance with the approved reclamation plan. Given that a slurry wall encompasses the reservoir, trees and shrubs are often discouraged from growing in these areas as their root system can damage the slurry wall. Mr. Redman with the City of Thornton indicated they would prefer that trees and shrubs not be planted. Given this, AI will need to submit a Technical Revision to the reclamation plan removing the tree and shrub planting requirement. This Technical Revision would need to be submitted and approved by the Division before this area can be release from reclamation liability. Otherwise, the vegetation established around the reservoir is adequate.

The reclamation plan indicates that Area 2C was to be backfilled and used for urban development. As discussed above, this area has been partially backfilled and is being used for industrial uses. A small wetland area about 5.21 acres in size remains within this area. Permanent augmentation of the remaining exposed groundwater within this area will need to be addressed prior to the Division's release of this area.

Revegetation:

Please see the Reclamation Success section of this report regarding the vegetation that has established at the site.

Conclusion

The Division will consider a partial approval of the bond release application (SL01). However, several items will need to be addressed prior to approval. First, AI will need to submit and receive approval of a Technical Revision to remove the tree and shrub planting requirements for the site. Second, the Division estimates about 5.21 acres of land will need to remain with the permit area within Area 2C until a permanent plan of augmentation is obtained for the exposed groundwater in this area. The Division is required to issue a decision to deny the bond release application within 60 days of the inspection unless these items can be addressed in accordance with Rule 4.17.2(4). Given this, AI will need to address these issues prior to December 9, 2018 or request an extension of the decision date.

PHOTOGRAPHS



Figure 1. From the southeast corner of the reservoir looking north (Area 2A/2B) .



Figure 2. From the north end of the Area 1 pond looking southeast.



Figure 3. From the west side of the reservoir looking north.



Figure 4. From the north side of the reservoir looking east.



Figure 5. View of Area 2C from the west side of the Bull Seep ditch looking east.

Inspection Contact Address

Connie Davis
Aggregate Industries - WCR, Inc.
1687 Cole Blvd. Suite 300
Golden, CO 80401

Enclosure

EC: Joel Bolduc, AI, joel.bolduc@aggregate-us.com