




MINERALS PROGRAM INSPECTION REPORT
PHONE: (303) 866-3567

The Division of Reclamation, Mining and Safety 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: Green/Croissant Property Sand and Gravel M	MINE/PROSPECTING ID#: M-2001-022	MINERAL: Sand and gravel	COUNTY: Weld
INSPECTION TYPE: Surety Release Inspection	INSPECTOR(S): Peter Hays	INSP. DATE: May 5, 2021	INSP. TIME: 10:00
OPERATOR: Loveland Ready-Mix Concrete, Inc.	OPERATOR REPRESENTATIVE: Stephanie Fancher-English	TYPE OF OPERATION: 112c - Construction Regular Operation	
REASON FOR INSPECTION: Surety Release Requested/Complaint	BOND CALCULATION TYPE: None	BOND AMOUNT: \$209,700.00	
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None	
WEATHER: Cloudy	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: May 28, 2021	

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>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>Y</u>	(FW) FISH & WILDLIFE----- <u>N</u>	(RV) REVEGETATION---- <u>Y</u>
(SM) SIGNS AND MARKERS----- <u>Y</u>	(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 / N = Not inspected / NA = Not applicable to this operation / PB = Problem cited / PV = Possible violation cited

OBSERVATIONS

The Green/Croissant Mine was inspected by Peter Hays with the Division of Reclamation, Mining and Safety (Division/DRMS) to evaluate the final financial and performance warranties release request (SL-01) filed with the Division on April 1, 2021 and in response to a citizen complaint (CT-01) received by the Division on April 7, 2021 and May 5, 2021 from Dustin and Jamie Christensen. Mrs. Stephanie Fancher-English with Loveland Ready Mix and Dustin and Jamie Christensen were present during the inspection. The Division previously inspected the site on June 6, 2019 for a monitoring inspection to address the Christensen's concerns regarding the south shoreline. A copy of the inspection map based on the latest available Google Earth image for Cell 4 of the site is attached for reference.

The Division will deny the final financial and performance release warranties request (SL-01) based on the observations from this inspection due to the lack of well-established vegetation in Cell 4 of the site.

The site is an 112c operation permitted for 92.90 acres. The site is divided into two (2) parcels, one owned by Loveland Ready-Mix Concrete, Inc. (LRM) - 48.0 acres and the leased property owned by the Christensen's - 44.9 acres. The Division approved a permit amendment to change the post-mining land use to industrial/commercial for the LRM owned portion of the site on January 3, 2017. The post-mining land use for the Christensen's property is pasture and wildlife habitat. The LRM property is divided into three (3) cells; Cells 1, 2 and 3 and the Christensen's property contains Cell 4. The Division currently holds a financial warranty in the amount of \$209,700.00, which appeared adequate to perform reclamation at the site based on the observations from this inspection. The mine identification sign and boundary markers were observed as required by Rule 3.1.12.

LRM Property – Cells 1, 2 and 3

Mining activity is complete in Cells 1, 2 and 3. Cell 1 is used as a source for water for the concrete batch plant operations. Cell 2 is divided into 3 sections. The western portion of Cell 2 is completely backfilled and is used for the recycled concrete operation and recycled concrete stockpile storage. The middle portion of Cell 2 is being backfilled with wash fines. The eastern portion of Cell 2 is used as a settling pond with a dewatering pump located in the northeastern corner of the pond. The southern end of the eastern portion of Cell 2 was backfilled with recycled concrete to allow access to an existing well head by an oil and gas company. Cell 3 has been reclaimed as a 5.51 acre open-water lake.

The vegetation along the upland area and shorelines of Cells 1, 2 and 3 not being utilized for the concrete batch plant operation are well-established and consisted of the approved Reclamation Plan seed mixture and volunteered wetland species along the shoreline. The reclaimed slopes were estimated at a 3H:1V slope. The slopes were stable with no erosion features observed during the inspection.

The Division recommends the Operator submits an acreage release request for the 48.0 acre LRM owned portion of the site based on the observations from this inspection.

Christensen's Property – Cell 4

The mining activity in the cell is complete and the cell is in final reclamation. A significant portion of the upland area surrounding the lake was interseeded and mulched the week before this inspection. As stated above the Division will deny the final release request based on the lack of well-established vegetation in Cell 4.

Shoreline cutting typical of wave action erosion, approximately six (6) to twelve (12) inches in height was observed along the shorelines of the lake. These areas were not saturated and the slopes were stable. The Operator will not be required to repair these features, since they appear to be resulting from typical wave action.

Two (2) of the five (5) grass species included in the approved Reclamation Plan seed mixture were observed during the inspection; blue grama and pubescent wheatgrass. Four (4) species of grasses were observed during the last site inspection in 2019. The Division believes it is too early in the growing season for the other reclamation grasses to develop and be identified by staff. One (1) annual weed, kochia, was observed during the inspection. No noxious weeds were observed during the inspection.

As stated in the previous inspection report, the vegetation in the northeast portion of the Cell near the oil and gas well is poorly established with areas of bare ground. The Division recommends the Operator conduct soil samples to determine if soil amendments are needed to establish vegetation in the area.

The approved Reclamation Plan requires the Cell 4 slopes to be reclaimed to a 3H:1V slope. The lake was full of water preventing the Division from observing and verifying the slope during the last inspection. The Operator provided survey data for the Cell 4 slopes on April 15, 2021 and July 23, 2019. The survey data provided by the Operator is acceptable for the slopes above the waterline and typical of the slope grading verification submitted to the Division for reclaimed reservoir and open-water lakes. However, LRM will need to provide documentation the below water slopes have been graded to the required 3H:1V ratio.

The Christensen's stated a new access road would need to be constructed along the western side of the property for access to the residence they are planning to build. Additionally, the landowners would like to install a boat ramp and boat dock to allow access to the lake. The Operator will need to submit a technical revision to update the Reclamation Plan to incorporate the changes made to the property by the landowners.

The Division's response to the two (2) complaints received from the Christensen's to the final release request are listed below. A copy of the complaint emails are attached for reference.

Objection/Complaint CT01 - April 7, 2021 Responses

1. The current approved Reclamation Plan Map was approved with Amendment No. 1, it was received by the Division on August 25, 2016. The map was drawn by CCWRE and d2CAD Consulting, consulting firms hired by the Operator. Rule 6.2.1 does not specifically require maps be prepared for reclamation permit applications to be drawn by registered land surveyors, they may be prepared by other qualified people. Regarding former pits reclaimed as open groundwater lakes or water resource sites, DRMS may or may not be able to inspect the site before the Operator fills the pit with water. In these instances it is incumbent on a mine operator to provide documentation to DRMS to affirm the mining slopes have been reclaimed in accordance with the approved Reclamation Plan. In this case LRM has provided such documentation for the slopes above the waterline on July 23, 2019 and further documentation on April 15, 2021. Based on LRM's April 15, 2021 letter, these drawings were generated based on elevation point measurement collected on January 2, 2019 by CDS Engineering Corporation. LRM will need to provide DRMS documentation the below waterline slopes have been graded to the required 3H:1V angle.

2. DRMS does not track state survey license numbers. As indicated above, the Operator provided documentation the overall slopes above the water line have been reclaimed to the required 3H:1V angle. DRMS believes this documentation is accurate and only observed isolated areas or points along the slope that may be greater than 3H:1V. There may be isolated areas where slopes are greater than 3H:1V, these slight undulations are typical in gravel pit reclamation, unless these areas occur over significant stretches of the slope, these isolated instances are acceptable. Also, it appears wave action erosion occurred along the water line. This is not atypical for a natural or created open groundwater pond. These features often stabilize as vegetation establishes.
3. All of the steps to complete reclamation must be finished by November 1, 2022. This includes grading, topsoiling, and seeding. It appears LRM has completed these activities and are conducting normal maintenance of the site prior to full bond release. When DRMS staff received the Christensen's complaint/objection to the full bond release request it was determined an inspection of the site was warranted within thirty days, not five working days per MLRB policy 20.7.1.1. Regarding the corrective actions from the June 24, 2019 inspection, LRM submitted the documentation DRMS required for a survey to document the overall slopes were graded to a 3H:1V angle. The letter did not specifically state all the slope repair work was completed. It has been found the survey submitted by LRM did not document the below waterline slopes, therefore DRMS will require LRM to provide this additional documentation.
4. During this inspection, noxious weeds were not observed at the site, however it is early in the season. LRM will be required to treat noxious weeds as appropriate. It does appear Kochia, a common annual forb introduced to Colorado, has grown in areas throughout the site. This species is weedy and invasive, however it is not a state listed noxious weed. In Colorado, Kochia typically establishes early in the reclamation process and can be thick. Kochia can actually be helpful in soil stabilization and erosion control initially. Over the course of several years the desired vegetation usually becomes established and outcompetes the Kochia. Given the vegetation established on the site currently, DRMS believes this outcome is likely.
5. It is DRMS' position LRM has completed the steps of reclamation required in the Reclamation Plan and that vegetation is becoming established at the site, however is not established well enough for final release. Therefore DRMS will deny LRM's bond release request. The slope repair work completed in 2019 was reasonable and necessary. Additional slope work to correct wave action cutting is not required, DRMS and the MLRB cannot require LRM to pay for the additional slope work the Christensen's feel is necessary.
6. The approved Reclamation Plan for Cell 4 has not substantially changed from 2001, the post-mine land use was not designated for recreation nor were the slopes designed to accommodate such uses. DRMS cannot required LRM to backfill and grade the slopes conducive to recreation. DRMS cannot force LRM to conduct any work that would be in conflict with the approved Reclamation Plan.
7. Permit M-2001-022 does not require LRM to mow weeds at any specific time or frequency. LRM is required to control weeds. Based on DRMS' inspection, weeds have been managed at the site, and as indicated above, Kochia is not a state listed noxious weed.
8. DRMS received a letter from LRM's attorney on April 20, 2021 and they provided documentation of LRM's legal right to enter and conduct operations at the site. This documentation is found to comply with the requirements of Rule 6.4.14.

9. A hearing before the Mined Land Reclamation Board is premature at this time. Should the complainants disagree with DRMS staff decisions they may appeal these decisions to the Mined Land Reclamation Board in accordance with Rule 1.4.11.

Objection/Complaint CT01 - May 5th, 2021 Responses

1. The Green/Croissant Sand and Gravel Mine is an 112c operation with a required inspection frequency of every four years per MLRB Policy 20.7.4.3. The site was inspected on June 6, 2019, the next required inspection would have been due June 6, 2023. The July 17th, 2019 corrective action documentation provided by LRM provided a survey of the post-mine slopes, this documentation did not insinuate the required maintenance of the southern slope of Cell 4 was complete. Upon review of the documents you provided, DRMS did not find a violation of the Act and Rules.
2. DMRS agrees with the landowner there are slight variations in the above water slopes surrounding the lake. The Division believes these variations are acceptable for the post-mining land use of wildlife habitat and the overall slope above the waterline is acceptable at the approved 3H:1V grade as demonstrated by LRM. LRM will need to provide documentation the below waterline slopes have been graded to the required 3H:1V ratio. The landowner submitted pictures of the typical culvert erosion at the location of the dewatering discharge point from the cell. The dewatering activities at the site have concluded and no additional erosion will be caused by the activity. The landowner states there are sink holes at the site. The Division observed depressions in the upland areas of the site. These depressions are typical of mining reclamation and are potentially beneficial for the approved post-mining land use of wildlife habitat.
3. The Christensen's have indicated that they had a survey conducted of the Cell 4 slopes, DRMS would be interested in these results and will take them into consideration.

The Division received a comment letter from the Division of Water Resources regarding SL-01 on April 19, 2021. A copy of the letter is attached.

Photographs taken during the inspection are attached. If you need additional information or have any questions, please contact me at the Division of Reclamation, Mining and Safety, 1313 Sherman Street, Room 215, Denver, CO 80203, by telephone at 303.866.3567 x 8124, or by email at peter.hays@state.co.us.

Inspection Contact Address

Stephanie Fancher-English
Loveland Ready-Mix Concrete, Inc.
P.O. Box 299
Loveland, CO 80539

Enclosures – Inspection Map, April 7th and May 5th Complaint Submittals, DWR comment letter

Ec: Jared Ebert, DRMS
Dustin and Jamie Christensen at jam2finance@yahoo.com

PHOTOGRAPHS



Green Croissant Mine Sign



View of the north shoreline from the northwest corner looking east in Cell 4



View of the west shoreline from the northwest corner looking south in Cell 4



View of well-established vegetation in the northwest corner of Cell 4



View of recently interseeded shoreline in the northwest corner of Cell 4



View of the west shoreline looking north in Cell 4



View of the west shoreline looking south in Cell 4



View of the vegetation in the southwest corner of Cell 4



View of the recently interseeded south shoreline looking southeast in Cell 4



View of the recently interseeded south shoreline looking east in Cell 4



View of the shoreline erosion along the south shoreline in Cell 4



View of the upland area in the southeast corner of the cell looking east in Cell 4



View of the recently interseeded south shoreline looking west in Cell 4



View of the vegetation in the southeast corner of Cell 4



View of the recently interseeded east shoreline looking north in Cell 4



View of the recently interseeded east shoreline looking north in Cell 4



View of the north shoreline from the northeast corner of the cell looking west in Cell 4



View of the east shoreline from the northeast corner of the cell looking south in Cell 4



View of the north shoreline looking west in Cell 4



View of the area of bare ground around the former oil and gas facility in Cell 4



View of the north shoreline looking west of Cell 4



View of the recently interseeded north shoreline in the northwest corner of Cell 4



View of the “sink hole” identified by the landowners in the northwest corner of Cell 4



View of the vegetation along the east shoreline of Cell 3



View of the eastern cell of Cell 2 from the northeast corner looking west



View of the middle cell of Cell 2 being backfill with fines



View of Cell 1 from the eastern shoreline looking west