




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: Lamar East Pit	MINE/PROSPECTING ID#: M-1977-572	MINERAL: Sand and gravel	COUNTY: Prowers
INSPECTION TYPE: Monitoring	INSPECTOR(S): Amy Eschberger	INSP. DATE: March 27, 2019	INSP. TIME: 10:40
OPERATOR: City of Lamar	OPERATOR REPRESENTATIVE: John Sutherland	TYPE OF OPERATION: 112c - Construction Regular Operation	
REASON FOR INSPECTION: Normal I&E Program	BOND CALCULATION TYPE: None	BOND AMOUNT: \$0.00	
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None	
WEATHER: Clear	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: July 19, 2019	

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>N</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>N</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>Y</u>	(RS) RECL PLAN/COMP-- <u>Y</u>
(ES) OVERBURDEN/DEV. WASTE----- <u>N</u>	(SC) EROSION/SEDIMENTATION--- <u>Y</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

OBSERVATIONS

This inspection of the Lamar East Pit (Permit No. M-1977-572) was conducted by Amy Eschberger of the Division of Reclamation, Mining and Safety (Division) at the request of the operator to assess reclamation of the site. Mr. John Sutherland represented the operator, City of Lamar (City) during the inspection. The site is located at the northern edge of Lamar, CO in Prowers County, just south of and adjacent to the Arkansas River. The site can be accessed by turning east off Hwy 50 onto Crystal St., then heading north on Valco Rd., which dead-ends at the site. The approved post-mining land use for the site is a combination of wildlife habitat and recreational (city park). **Photos 1-12** taken during the inspection are included with this report.

At the time of the inspection, the weather was sunny, warm, and dry. A permit sign was posted at the southern entrance to the site off Valco Rd. The site is currently open to the public for recreational use as the North Gateway Park, with access restricted (via signage) in areas that are undergoing revegetation. The permit was mined by the previous operator, Valco, Inc, which completed the reclamation earthwork and initial seeding in 2012 prior to transferring the permit to the City in 2013 (under Revision No. SO-1) for final reclamation. The site was mined from west to east, leaving a series of four ponds (see enclosed Google Earth image of site). The second pond was backfilled in 2012. The site now consists of three ponds (the eastern two are connected by a small channel) and a relatively flat area where the pond was backfilled. A gravel road encircles the site. Several structures associated with the site's recreational use have been installed by the City in recent years, including parking lots, a waterless restroom facility, a fishing dock, and a shade structure. The installation of these structures was approved in 2014 under Technical Revision No. 4 as part of the added recreational use.

The Division estimates the total pond surface area on site to be 32.07 acres (9.31 acres for west pond + 22.76 acres for eastern ponds). According to the Division of Water Resources (DWR), the site has a valid well permit (Permit No. 52184-F) and augmentation plan (Case No. 13CW3060) in place that cover up to 25.87 acres of post-1981 exposed groundwater. An additional 7 acres of exposed groundwater is considered pre-1981 exposure, which does not require augmentation. Therefore, the site is covered for a total groundwater exposure of 32.87 acres, which is 0.8 acre more than the current pond surface calculated by the Division. The most recent Substitute Water Supply Plan (SWSP) on file for this permit was received on January 9, 2017, and covers depletions for the period of June 1, 2016 through March 31, 2017. This SWSP states that in 2013, the City made application to their office for approval of a plan for augmentation and appropriative right of exchange to transfer the water rights from Valco, Inc. to the City. The City proposes utilizing water provided by Colorado Parks and Wildlife (CPW) from their water portfolio available from the Lower Arkansas Water Management Association (LAWMA). This was not listed as a source of replacement water in the plan for augmentation and appropriative right of exchange decreed in Division 2 Water Court case no. 13CW3060. Therefore, the City proposed to amend the SWSP in early 2017 to include additional replacement water. The Division has received no further documentation on this matter. A copy of the current SWSP for the site must be submitted to the Division to demonstrate maintained compliance with DWR with regard to the amount of exposed groundwater on site.

The primary focus of this inspection was the area along the northern shoreline of the western pond where some erosional damage was observed during the November 27, 2017 inspection, and the areas south of the eastern ponds where the City has focused their revegetation efforts in recent years.

The northern edge of the western pond is 60-70 feet from the adjacent Arkansas River. The berm separating the pond from the river is approximately 8-10 feet in height from the current water level in the pond. A 12" overflow pipe to the river is installed in this berm. The flattened top of the berm is approximately 15 feet in width. During the Division's 2017 inspection of the site, some erosional damage was observed along a portion of the northern shoreline. The operator indicated they had encountered difficulties repairing the erosion damage

given the limited access to the area (via the gravel walkway) for trucks and equipment needed to backfill and grade the shoreline. The Division understood the operator's concerns, but reminded the operator that Rule 3.1.5(3) requires all grading to be done in a manner to control erosion and siltation of the affected lands, to protect areas outside the affected land from slides and other damage. The Division also expressed concerns about the overall stability of the berm if the erosion were allowed to continue. Given the additional importance of the berm in flood control for the site, efforts to maintain its stability should be a priority. The Division informed the operator in its last inspection report (sent May 16, 2018) that if the erosion problem had not been addressed by the next site inspection, a problem would be cited for this issue.

During the current inspection, it appeared that dirt and rock material had been placed in the gullies that were previously observed along the northern shoreline of the western pond. The northern shoreline has slopes of approximately 2.5H:1V for the top 5-6 feet, and flatter slopes for the lower few feet (below the high water line). Because the operator has repaired the erosion damage, a problem will not be cited in this report. However, continued erosion control efforts on this shoreline/berm will be necessary for protecting the stability of this critical flood control feature. The Division recommends the operator review the erosion control/bank stabilization methods provided in Technical Revision No. 2 (approved January 11, 2012) for flood mitigation and reclamation grading at the site. If the operator wishes to propose alternative erosion control measures from what has been approved, this proposal must be submitted in the form of a Technical Revision.

During the 2017 inspection of the site, the Division observed all portions of the site requiring revegetation for reclamation to have achieved the required grass cover, except for areas located south and southeast of the eastern ponds. In 2014, the operation imported 6,000 tons of clean topsoil to the site and spread it across these areas, then seeded the areas in early fall of that year. The City's water department ran city water to the areas south of the eastern ponds, installing three fire hydrants for irrigation purposes. The areas around the hydrants which were irrigated in 2014 showed much more successful grass growth than areas located further from the hydrants, at the southeastern edge of the permit area. According to annual reports submitted by the operator, 6.4 acres south of the eastern ponds were hydroseeded and mulched in 2016. During its 2017 inspection, the Division noted that overall, revegetation of the areas south of the eastern ponds was off to a great start, especially west of the small parking lot. However, some areas showed little to no grass cover, particularly along the southeastern edge of the eastern pond.

During the current inspection, the Division re-evaluated revegetation success in the areas south and southeast of the eastern ponds. The section of land located west of the small parking lot (south of the middle pond) had a good establishment of grasses with very minimal weed growth. The section of land located east of the parking lot (south of the eastern pond) had good grass growth on the half closest to the pond (approximately 50-60 feet out from the pond). However, grass growth in the half closest to the road was sparse. The section of land located southeast of the eastern pond had very little to no grass growth and more weedy vegetation present. It appears the 2016 reseeding event was not fully successful. During the inspection, the operator indicated they would consult with the City's agronomist to figure out what could be done (other than reseeding) to increase the revegetation success in these areas. Any proposed changes to the approved reclamation plan would need to be submitted in the form of a Technical Revision.

The operator inquired during the inspection about releasing portions of the site which have been successfully reclaimed. The Division agrees that some portions of the site are releasable at this time. However, the revised permit area would need to remain contiguous and include access for continued reclamation efforts, which in this case, would include the main access off Valco Rd. and any roads connecting this road to the areas proposed to remain in the permit area. The revised permit area would also need to be easy to delineate in the field, in accordance with Rule 3.1.12(2), which requires the boundaries be marked by monuments or other markers that are clearly visible and adequate to delineate such boundaries.

The Division would like to remind the operator that Rule 3.1.3 requires all reclamation be carried to completion with all reasonable diligence, and each phase of reclamation be completed within 5 years from the date the operator informs the Division that such phase has commenced. According to annual reports submitted by the operator, mining activities ceased at the site and final reclamation was initiated in 2012. Therefore, the site has been in final reclamation for 7 years now, which exceeds the 5-year period established by Rule 3.1.3. At this point in time, remaining reclamation at the site primarily includes revegetating the areas located south and southeast of the eastern ponds. The Division strongly encourages the operator to complete final reclamation of the site as soon as possible and submit a full release request once the desired vegetation has established.

This concludes the report.

Any questions or comments regarding this inspection report should be forwarded to Amy Eschberger at the Colorado Division of Reclamation, Mining and Safety, 1313 Sherman Street, Room 215, Denver, CO 80203, via telephone at 303-866-3567, ext. 8129, or via email at amy.eschberger@state.co.us.

PHOTOGRAPHS



Photo 1. View looking west along northern shoreline of western pond, where erosion damage was repaired since 2017 inspection. Top 5-6 feet of pond slopes at approx.. 2.5H:1V, with flatter slopes along bottom few feet (below high waterline).



Photo 2. View looking west along northern shoreline of western pond (at a point further west than in Photo 1), where erosion damage was repaired since 2017 inspection.



Photo 3. View looking east along northern shoreline of western pond, where erosion damage was repaired since 2017 inspection.



Photo 4. View looking down northern shoreline of western pond. Top 5-6 feet of pond slopes at approx. 2.5H:1V, with flatter slopes along bottom few feet (below high waterline).



Photo 5. View looking east across top of berm separating western pond (at right) from Arkansas River (at left, not shown). Flattened top of berm is approx. 15 feet wide.



Photo 6. View looking west across land southeast of eastern pond, showing area with little to no vegetative cover.



Photo 7. View looking southwest across land southeast of eastern pond, showing area with sparse grass growth.



Photo 8. View looking east across land south of eastern pond, showing area closer to road with sparse grass growth.



Photo 9. View looking west across land south of eastern pond, showing area closer to road with sparse grass growth.



Photo 10. View looking north across land south of eastern pond, showing area closer to road with sparse grass growth.



Photo 11. View looking northwest across land south of eastern pond, just east of parking lot, showing sparse grass growth.



Photo 12. View looking northwest across land south of middle pond, just west of parking lot, showing good grass cover in this area.

Inspection Contact Address

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Lamar, CO 81052

Encl: Google Earth image of site

CC: Michael Cunningham, DRMS

M-1977-572 / Lamar East Pit / City of Lamar

Red Outline = 72.2 acres = Approved Permit Area (location approximated based on permit maps)

Blue Outline = 32.07 acres = Total Pond Surface Area (9.31 acres west pond + 22.76 acres eastern ponds)

Purple Outline = 9.6 acres = Areas Undergoing Revegetation

(Image data from 6/12/2017)

