

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:		MINE/PROSPECTING ID#:	MINERAL:	COUNTY:
West Farm Pit		M-2008-078	Gravel and sand	Prowers
INSPECTION TYPE:		INSPECTOR(S):	INSP. DATE:	INSP. TIME:
Preoperation Inspection		Amy Eschberger	November 29, 2018	13:30
OPERATOR:		OPERATOR REPRESENTATIVE:	TYPE OF OPERATION:	
Prowers Aggregate Operators, LLC		Roy Cue	112c - Construction Regular Operation	
REASON FOR INSPECTION:		BOND CALCULATION TYPE:	BOND AMOUNT:	
Preoperation Inspection		Complete Bond	\$575,000.00	
DATE OF COMPLAINT:		POST INSP. CONTACTS:	JOINT INSP. AGENCY:	
NA		None	None	
WEATHER:	INSPECTOR'S SIGNATURE:		SIGNATURE DATE:	
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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>N</u>	(BG) BACKFILL & GRADING Y	(EX) EXPLOSIVES <u>N</u>
(PW) PROCESSING WASTE/TAILING Y	(SF) PROCESSING FACILITIES N	(TS) TOPSOIL <u>Y</u>
(MP) GENL MINE PLAN COMPLIANCE- <u>N</u>	(FW) FISH & WILDLIFE <u>N</u>	(RV) REVEGETATION Y
(SM) SIGNS AND MARKERS Y	(SP) STORM WATER MGT PLAN <u>N</u>	(RS) RECL PLAN/COMP Y
(ES) OVERBURDEN/DEV. WASTE <u>N</u>	(SC) EROSION/SEDIMENTATION \underline{Y}	(ST) STIPULATIONS <u>N</u>
(AT) ACID OR TOXIC MATERIALS <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 was a pre-operation inspection of the West Farm Pit (Permit No. M-2008-078) conducted by Amy Eschberger of the Division of Reclamation, Mining and Safety (Division) in response to the Amendment application (Revision No. AM-1) filed for the site on November 5, 2018. The public comment period for AM-1 closed on December 26, 2018. The Division received two timely comments on AM-1, including an objection from the City of Lamar expressing concerns about their existing sewer lagoons and monitoring wells located within 200 feet of the northern permit boundary, and comments from History Colorado indicating one previously recorded site located within the proposed project area (Atchinson, Topeka & Santa Fe Railroad Segment). On January 3, 2019, the operator submitted a response addressing History Colorado's comments on the application, including confirmation that the existing rail spur will continue to be operated as a shipping and receiving load-out, and that there are no modifications planned for the rail spur. The City of Lamar formally withdrew their objection to the application in a letter dated January 4, 2019, after reaching an agreement with the operator regarding their structures.

Submittal of the amendment application is a corrective action required by the Mined Land Reclamation Board (Board) in the Order mailed on October 11, 2018 for Violation No. MV-2018-016. The application must include, at a minimum, the affected lands outside the approved permit boundary and an updated operational plan for the wash plant and associated facilities. By submitting AM-1 by January 9, 2018, the operator has complied with the first part of the corrective actions imposed by the Board. Once all materials for AM-1 have been submitted in an approvable form (all adequacy items identified by the Division have been satisfied), the operator will have complied with the second part of the corrective actions. The current decision date for the application is set for February 4, 2019.

The West Farm Pit is located just east of Lamar, Colorado in Prowers County. The site is situated south of the Arkansas River, with the closest point at approximately 820 feet from the river. The main entrance to the site is from the south off Co Rd HH.5. The site operates under a 112c permit with a current permit area of 233.4 acres (see enclosed Google Earth image of site) to dry mine sand and gravel for road base and construction aggregate use. The site will be mined in two main cells, the North Mining Area and the South Mining Area, which are separated by an existing irrigation lateral and Co Rd HH 8/10. The operation will complete mining in the North Mining Area prior to mining the South Mining Area. The deposit is dry mined with dewatering trenches excavated around the perimeter of each mining phase prior to excavating the area. The mining depth is approximately 65-70 feet. Mining slopes are to be maintained at a 3H:1V gradient. Mined material is processed and temporarily stored on site. Salvaged topsoil and overburden are stored separately in the southern portion of the permit area.

AM-1 proposes an increase of 49.2 acres, for a total permit area of 282.6 acres. The proposed expansion in the permit area is to the northwest (to cover a parking/equipment storage area and ditch), the west (to cover a sediment pond adjacent to the wash plant, a portion of the access road, the scale house, a portion of the material and overburden stockpiles, and a future conveyor), and to the southwest (to cover a sand stockpiling and load-out area adjacent to the railroad). AM-1 proposes a maximum disturbance at any time of 272.6 acres.

The AM-1 mining plan (see enclosed mining plan map) proposes a total of 17 mining phases, separated into the two primary mining cells. Phases 1-12 are located in the North Mining Area and phases 13-17 are located in the South Mining Area. This proposed phasing plan removes one phase from the current plan, so that the main wash plant area will no longer be mined. AM-1 provides a revised plan for managing mine water and stormwater on site, which includes a series of sediment ponds, ditches, and pipelines. AM-1 also includes a comprehensive stormwater management plan which details the sediment control measures to be utilized on site, the maintenance schedules for these measures, and the discharge monitoring requirements of the discharge permit

maintained with the Colorado Department of Public Health and Environment, Water Quality Control Division (CDPHE, WQCD).

AM-1 proposes a maximum groundwater exposure of 4.79 acres from temporary dewatering trenches and sediment ponds. According to the operator, all depletions from the operation, including evaporative losses from the dewatering trenches, sediment ponds, moisture content of mined material, dust control, and aggregate washing have been fully replaced within LAWMA's augmentation plan originally decreed in Water Court Case No. 02CW181. The operator has submitted a Substitute Water Supply Plan (SWSP) renewal request to the Division of Water Resources (DWR), requesting the evaporative losses from the dewatering trenches, sediment ponds, and moisture content of mined material be augmented under the SWSP, while dust control and aggregate washing be augmented within LAWMA's augmentation plan. The most recent SWSP the Division has on file for this site was approved for the period of May 1, 2011 through April 30, 2013. It is the Division's understanding that the operation has not renewed the SWSP since that time. Moving forward, a copy of the renewed SWSP shall be provided to the Division on an annual basis to demonstrate compliance with Rule 3.1.6(1)(a), which requires the operator to be in compliance with applicable Colorado water laws and regulations governing injury to existing water rights. The operator has committed to providing the Division with a current SWSP once it has been approved by the DWR.

The proposed post-mining land use for the site is primarily developed water resources, with some rangeland and general agriculture use of smaller portions of the permit area. The AM-1 reclamation plan (see enclosed reclamation plan map) proposes leaving a total of three (slurry wall) lined water storage reservoirs, two in the North Mining Area and one in the South Mining Area. This is different from the current approved plan which calls for leaving only two lined reservoirs. The post-mining overall water surface proposed in AM-1 is slightly reduced from the current plan, from 166.39 acres to 159.5 acres.

Slurry walls have already been installed in the North Mining Area around phases 1-4 and phases 5-12. Mining is complete in phases 1-4, and the lined pit is filled with water. The two existing slurry wall enclosures have been tested and accepted by the DWR. The operator has provided the Division with the DWR approval letters and the final construction drawings for these slurry walls. The operator has committed to providing the Division with design specifications for the South Mining Area slurry wall prior to its installation. All disturbed land surrounding the reservoirs, including reservoir slopes down to water line and the Parcel B load-out area near the railroad, will have a minimum of 6 inches of topsoil replaced, and be revegetated with a native grass seed mixture. No permanent structures are proposed for the operation which would require demolition for reclamation.

The site was active during the inspection. A public notice sign for AM-1 was posted at the main site entrance in accordance with Rule 1.6.2(1)(b) (**Photo 1**). The proposed expansion areas were delineated with wooden stakes. The operation is currently mining in phases 8 and 11 of the North Mining Area (**Photos 2-4**). The pit is approximately 60 feet deep. A series of settling ponds have been constructed on the pit floor from which water is pumped out to an adjacent farm ditch that ultimately discharges to the Arkansas River. This discharge activity is covered by the operator's discharge permit. Some portions of the pit highwalls have been graded to 3H:1V, while other portions have slope gradients at approximately 0.5H:1V. AM-01 proposes mining at a 3H:1V slope and therefore, does not include costs in the bond estimate for grading pit slopes to 3H:1V for reclamation. If the operation does not intend to mine slopes at 3H:1V, costs for grading a maximum length of active highwall to 3H:1V will need to be included in the bond estimate.

Phases 5-7 and 10 in the North Mining Area currently have minimal disturbance, mostly from the slurry wall installation (**Photo 5**). The crushing/screening plant is operated in phase 9 (**Photo 6**). Processed material is currently stored in phases 9 and 12 (in the North Mining Area; **Photos 7 and 8**) and phase 17 (in the South

Mining Area; **Photo 9**). As mentioned above, mining in phases 1-4 is complete, and the lined reservoir is filled with water (**Photo 10**). A floating pump station is installed in the reservoir. The slopes of the phase 1-4 reservoir are graded to the final reclamation configuration of 3H:1V down to the pit floor. Since the Division's last inspection on June 14, 2018, the operator has retopsoiled, mulched, and seeded the northern, western, and southwestern slopes of this reservoir above the waterline, and also the strip of land between the reservoir and the main access road (**Photos 11 and 12**). The Division observed grass seedlings poking up through the straw mulch in these areas indicating revegetation is off to a great start.

The Division observed the wash plant area located in the western portion of the site. This plant was active during the inspection. The wash plant sediment ponds, which were filled in with sediment during the Division's last inspection, had been cleaned out and were being utilized by the operation (**Photos 13 and 14**). The larger pond that was being constructed to the north of these ponds (outside the affected land boundary), has been graded, retopsoiled, mulched, and seeded (**Photo 15**). The Division observed grass seedlings in this area.

The Division observed the proposed western permit boundary along the western edge of the wash plant area (**Photo 16**). In its preliminary adequacy letter for AM-1, the Division had expressed some concerns about the unusual shape of the permit boundary in this area and its closeness to the mine activities, which could create a situation where land is disturbed outside the boundary. However, after observing this boundary during the inspection, the Division's concerns have been allayed. The concave shape of this portion of the permit boundary is due to it following the outside edge of a crop circle created by a center-pivot irrigation sprinkler. Additionally, this portion of the permit boundary is delineated with an earthen berm (**Photo 17**), which should help keep mining activities within the approved boundary.

The roadside ditch that was previously used to discharge wastewater from the wash plant to the river (resulting in Violation No. MV-2018-016) had been backfilled, retopsoiled, mulched, and seeded (**Photo 18**). The portion of the ditch located north of the parking/equipment storage area was not backfilled as it was an existing farm ditch. The parking/equipment storage area had been cleared off and also graded, mulched, and seeded (**Photo 19**). The Division observed grass seedlings in these areas (**Photo 20**).

The Division observed the mine discharge sampling point permitted by the operator's discharge permit (**Photo 21**). This point is located near the northeastern corner of the permit area, where an existing north-south oriented farm ditch (aligned with the eastern permit boundary) drains into an existing east-west oriented farm ditch located beneath the City's sewer lagoons. This ditch flows around the perimeter of the sewer lagoons to discharge into the river. Water quality samples are collected from the discharge point twice a month and the results reported to CDPHE, WQCD in accordance with the discharge permit.

The Division observed the four new sediment ponds constructed in phase 13 in the South Mining Area (**Photos 22 and 23**). At this time, only the western three ponds are in use by the operation. The west wash plant receives fresh water from a well to wash mined material. The discharge from the wash plant is directed to two sediment ponds which drain to the east where flows enter a ditch and are collected in a pond in the phase 12 area. Water from this pond is pumped through a pipe to the three sediment ponds in phase 13. Discharge from the smaller wash plant located near the active pit is directed to a sediment pond on the pit floor then also pumped via pipeline to the three sediment ponds in phase 13. When the sediment has settled in the three sediment ponds in phase 13, the clean water is recycled by the operation by pumping it back to the smaller wash plant. The fourth sediment pond in phase 13 (**Photo 24**) will be used when one of the primary three ponds is being cleaned, to ensure that three sediment ponds are utilized to treat wash plant discharges at all times. A maintenance plan for all sediment ponds was included in AM-1. The fines removed from sediment ponds will be stockpiled either adjacent to the phase 13 ponds or in phase 15.

The Division observed the field located west of the scale house, where AM-1 initially discussed plans to construct a conveyor for transporting product from the wash plant south to the load-out area near the railroad (**Photo 25**). AM-1 has since then removed plans for constructing the conveyor and commits to submitting a permit revision with more details on the conveyor and a revised reclamation cost estimate prior to its construction. No other uses of this area have been proposed by AM-1.

The Division observed the load-out area near the railroad, referred to in AM-1 as Parcel B. This area is currently being utilized by the operation. Several sand stockpiles are stored along the southern edge of the parcel (**Photo 26**). A topsoil stockpile is stored along the eastern edge of the parcel, and is stable with vegetative growth (**Photo 27**). This topsoil will be used for reclamation of the area after mining is complete. In its recent adequacy review letter, the Division asked the operator to include this stockpile on the Exhibit C mining plan map and the Exhibit L reclamation phasing map.

The Division discussed with the operator the possibility of proposing a post-mining industrial/commercial land use for Parcel B. According to the operator, this parcel has previously been used as a load-out for non-mining related materials such as wind turbine parts, and could potentially continue to be used for this purpose after mining is complete. AM-1 proposes an agricultural post-mining land use for this parcel. However, the post-mining land use could be changed to industrial/commercial at any time through submittal of the appropriate permit revision. The revision would need to include demonstration that the parcel is zoned for such use, and a revised reclamation plan for the parcel.

There are numerous permanent, man-made structures located to the south and east of Parcel B, as identified on the Exhibit C-2 map submitted with AM-1. One of these structures is the Lamar Canal, which runs north-south across the western edge of the parcel (**Photo 28**). AM-1 proposes the Parcel B permit boundary be inset to the east of this canal so as not to include this structure in the permit area. Therefore, the Parcel B permit area does not include the entire parcel. The operator has demonstrated that structure agreements were attempted for all structures located within 200 feet of the proposed permit area. However, at this time, executed agreements have only been reached for structures owned by the City of Lamar, Prowers County, Sutphin Petroleum, LLC, and GP Irrigated Farms, LLC. Therefore, pursuant to Rule 6.4.19(b), the Division has accepted an engineering evaluation submitted by the operator to demonstrate such structures will not be damaged by activities occurring at the mining operation.

As described in this report, the operator has reclaimed some disturbed areas since the Division last inspected the site on June 14, 2018. These areas include the larger sediment pond that was being constructed north of the wash plant area, the roadside ditch and adjacent areas, the parking/equipment storage area, the strip of land between the phase 1-4 reservoir and main access road, and the northern, western, and southwestern slopes of the phase 1-4 reservoir. Due to the reclamation work that has been completed in these areas, the Division will only require revegetation costs for these areas at this time. To release these areas from the permit, the revegetation must meet the requirements of Rule 3.1.10(1) which requires all land to be revegetated in such a way as to establish a diverse, effective, and long-lasting vegetative cover that is capable of self-regeneration without continued dependence on irrigation, soil amendments, or fertilizer, and is at least equal in extent of cover to the natural vegetation of the surrounding area.

The Division observed no problems during the inspection. There was no evidence indicating the mine has continued discharging wastewater from the wash plant directly to the river. In fact, the mine has been reconfigured so as to prevent this from happening again in the future. Additionally, the mining plan has been revised to better manage mine water and stormwater on site.

The operation appears to be maintaining compliance with the Cease and Desist Order issued by the Board for Violation No. MV-2018-016, which ordered no further mining activity to occur outside the approved boundary,

not to include activities necessary to and for using the rail load-out and scale facility, except those activities approved by the Division. The operator has paid the unsuspended portion of the Civil Penalty assessed by the Board for Violation No. MV-2018-016 in the amount of \$10,849.60 (on October 28, 2018).

The Division sent the operator a second adequacy letter for AM-1 on January 17, 2019. Given the minor adequacy items remaining, the Division does not foresee any issues preventing the operator from complying with the Board Ordered corrective action to have "all materials in an approvable form within statutory deadlines". Pursuant to Rule 1.4.1(9), the operator may request that the Division's review time (for an application) be extended and the decision date reset, not to exceed 365 days from the date the application was filed. In this case, the 365-day (statutory) deadline would be November 5, 2019. Therefore, if more time is needed past the current AM-1 decision date of February 4, 2019 to address adequacy items, the operator may request an extension and still be in compliance with the Board Order, as long as the extension does not exceed the 365-day deadline given above.

This concludes the report.

PERMIT #: M-2008-078 INSPECTOR'S INITIALS: AME INSPECTION DATE: November 29, 2018

PHOTOGRAPHS



Photo 1. View of public notice sign posted at main entrance to site in accordance with Rule 1.6.2(1)(b).



Photo 2. View looking southwest across active pit located in phases 8 and 11 of North Mining Area.



Photo 3. View looking south across active pit located in phases 8 and 11 of North Mining Area. Note settling ponds on pit floor from which water is pumped to adjacent farm ditch.



Photo 4. View looking southeast across active pit located in phases 8 and 11 of North Mining Area. Note mining wall (at left) with slope gradient of ~ 0.5 H:1V.



Photo 5. View looking southwest across phase 5 in North Mining Area, from top of slurry wall berm.



Photo 6. View looking northwest at crushing/screening plant operating in phase 9 of North Mining Area.



Photo 7. View looking northeast, showing processed material stockpiled in phase 9 of North Mining Area.



Photo 8. View looking east, showing processed material stockpiled in phase 12 of North Mining Area.



Photo 9. View looking northeast from main access road, showing processed material stockpiled in phase 17 of South Mining Area.



Photo 10. View looking northeast across phase 1-4 reservoir. The reservoir slopes are graded 3H:1V, and its northern, western, and southwestern slopes have been retopsoiled and seeded.



Photo 11. View looking east across area northwest of phase 1-4 reservoir which was graded, retopsoiled, mulched, and seeded since June of 2018.



Photo 12. View looking east across area west of phase 1-4 reservoir which was graded, retopsoiled, mulched, and seeded since June of 2018.



Photo 13. View looking south across one of two sediment ponds located north of wash plant which is currently in use by the operation.



Photo 14. View looking southwest across one of two sediment ponds located north of wash plant which is currently in use by the operation.



Photo 15. View looking northwest across area where new sediment pond was being constructed north of wash plant ponds during last inspection. This area was graded, retopsoiled. mulched. and seeded since June of 2018.



Photo 16. View looking northwest along proposed western permit boundary west of wash plant area, delineated with berm. Note boundary follows edge of crop circle.



Photo 17. View looking south along proposed western permit boundary west of wash plant, delineated with berm.



Photo 18. View looking south along roadside ditch which was backfilled, retopsoiled, mulched, and seeded since June of 2018.



Photo 19. View looking north across parking/equipment storage area which was graded, retopsoiled, mulched, and seeded since June of 2018.



Photo 20. View of ground in parking/equipment storage area, showing grass seedlings poking up through mulch.



Photo 21. View of mine discharge sampling point located just outside of northeastern corner of permit boundary, south of sewer lagoons.



Photo 22. View of one of four sediment ponds constructed in phase 13 of South Mining Area. This pond is currently being used by the operation.



Photo 23. View of one of four sediment ponds constructed in phase 13 of South Mining Area. This pond is currently being used by the operation.



Photo 24. View of one of four sediment ponds constructed in phase 13 of South Mining Area. This pond will be used as a back-up pond when one of the other three ponds are being cleaned.



Photo 25. View looking east across proposed permit area west of main access road and south of wash plant, where a conveyor may be installed in the future.



Photo 26. View looking west across Parcel B, showing sand stockpiles stored along southern edge of parcel, near railroad.



Photo 27. View looking east across Parcel B, showing topsoil stockpile stored at eastern edge of parcel. This stockpile appeared to be stable with vegetative cover.



Photo 28. View looking north, showing Lamar Canal which runs north-south at the western edge of Parcel B. The proposed permit area does not include this structure.

Inspection Contact Address

Karl Nyquist Prowers Aggregate Operators, LLC 7991 Shaffer Parkway, Suite 200 Littleton, CO 80127

- Encls: Google Earth image of site Exhibit C-1 – Mining Plan Map, submitted with AM-1 Exhibit F – Reclamation Plan Map, submitted with AM-1
- CC: Roy Cue via email at: <u>roy@prowersag.com</u> J.C. York via email at: <u>jcyork@j-tconsulting.com</u>

Michael Cunningham, DRMS

M2008-078 / West Farm Pit / Prowers Aggregate Operatorsm LLC

Red Outline = 233.40 acres = Current Approved Permit Area Yellow Outline = 37.52 acres = Off-Site Affected Lands (Included in AM-1 Proposed Permit Area) (Image data from 6/12/2017)





