

**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.

Prowers Aggregate Operators, LLC	Ron Peterson	112c - Construction Regular Operation	
OPERATOR:	<b>OPERATOR REPRESENTATIVE:</b>	TYPE OF OPERATION:	
Monitoring	Amy Eschberger	June 14, 2018	13:45
<b>INSPECTION TYPE:</b>	<b>INSPECTOR(S):</b>	INSP. DATE:	INSP. TIME:
West Farm Pit	M-2008-078	Gravel and sand	Prowers
MINE NAME:	MINE/PROSPECTING ID#:	MINERAL:	COUNTY:

None	\$575.000.00
	φ575,000.00
POST INSP. CONTACTS:	JOINT INSP. AGENCY:
Colorado Parks & Wildlife	Colorado Parks & Wildlife - Jim Ramsay
CTOR'S SIGNATURE:	SIGNATURE DATE:
5	July 12, 2018
my achluger	
	Colorado Parks & Wildlife

#### The following inspection topics were identified as having Problems or Possible Violations. OPERATORS SHOULD READ THE FOLLOWING PAGES CAREFULLY IN ORDER TO ASSURE COMPLIANCE WITH THE TERMS OF THE PERMIT AND APPLICABLE RULES AND REGULATIONS. If a Possible Violation is indicated, you will be notified under separate cover as to when the Mined Land Reclamation Board will consider possible enforcement action.

**INSPECTION TOPIC:** Hydrologic Balance

**POSSIBLE VIOLATION:** The operation had an unauthorized release of pollutants to the surface drainage system. Specifically, sediment-laden wastewater from the wash plant was discharged to the Arkansas River. This activity was not authorized by the CDPHE, WQCD or by the mine permit. The unauthorized discharge of pollutants to the river is a possible violation of C.R.S. 34-32.5-116(4)(h) and Rule 3.1.6(1) for failure to minimize disturbances to the prevailing hydrologic balance of the affected land and of the surrounding area and to the quantity or quality of water in surface systems during the mining operation.

**CORRECTIVE ACTIONS:** This possible violation will require a hearing before the Mined Land Reclamation Board (MLRB). A Reason to Believe a Violation Exists and Notice of Board Hearing letter with details for the MLRB hearing will be sent to the operator separately via Certified Mail.

**CORRECTIVE ACTION DUE DATE:** MLRB meeting to be held on August 22-23, 2018

**INSPECTION TOPIC:** Unpermitted Mining (Off-site Damage)

**POSSIBLE VIOLATION:** The operation has affected land outside of the approved permit boundary. This is a possible violation of C.R.S. 34-32.5-109(1) for failure to first obtain from the MLRB or Office a reclamation permit prior to engaging in a new operation.

**CORRECTIVE ACTIONS:** This possible violation will require a hearing before the MLRB. A Reason to Believe a Violation Exists and Notice of Board Hearing letter with details for the MLRB hearing will be sent to the operator separately via Certified Mail.

**CORRECTIVE ACTION DUE DATE:** MLRB meeting to be held on August 22-23, 2018

# **INSPECTION TOPIC:** Gen. Compliance With Mining and Reclamation Plans

**PROBLEM:** The current mining and reclamation plans and maps need to be updated and clarified pursuant to C.R.S. 34-32.5-112(1)(c)(VI), (VII), and (2), and Rules 6.4.3, 6.4.4, 6.4.5 and 6.4.6. The operator must provide sufficient information to describe or identify how the operator intends to conduct the operation and reclaim all affected lands. The operation has disturbed more than the approved maximum disturbed area, is not following the approved mine phasing, and has installed a new slurry wall with a different configuration than what is in the approved mining and reclamation plans.

**CORRECTIVE ACTIONS:** The operator shall submit either a Technical Revision or Amendment, to update and clarify the current approved mining plan, reclamation plan, and maps to reflect existing and proposed activities by the corrective action date. The Technical Revision or Amendment should also include a revised Exhibit L - Reclamation Costs to account for the additional disturbed land, and mining and reclamation plan revisions.

**CORRECTIVE ACTION DUE DATE:** September 10, 2018

# **OBSERVATIONS**

This inspection of the West Farm Pit (Permit No. M-2008-078) was conducted by Amy Eschberger of the Division of Reclamation, Mining and Safety in response to a complaint received from Colorado Parks and Wildlife (CPW) on June 11, 2018 (**see enclosed complaint**). The complaint indicated the operation's discharge to the Arkansas River was causing increased turbidity downstream for several miles, a potential threat to fish health. CPW was particularly concerned about potential impacts to the state-endangered suckermouth minnow, for which critical habitat exists in this section of the river. Mr. Jim Ramsay with CPW accompanied the Division during the inspection. Mr. Ron Peterson represented the operator during the inspection. The site is located east of Lamar, CO, just south of the Arkansas River. The main entrance to the site is from the south off County Road HH.5. The affected lands are owned by the operator.

## **Operation Summary:**

This is a 112c operation permitted for 233.40 acres to dry mine sand and gravel to a maximum depth of approximately 70 feet. The approved mining plan includes mining the site in two main cells, the North Mining Area and the South Mining Area, which are separated by an existing irrigation lateral and County Road HH 8/10. The two main cells are comprised of a total of 18 mining phases, with phases 1-13 located in the North Mining Area, and phases 14-18 located in the South Mining Area (**see enclosed mining plan map**). The operation will construct a slurry wall enclosure around the mining area and dewater the pits prior to mining below the groundwater table. Mining slopes will be maintained at a 3H:1V gradient down to the pit floor.

The approved post-mining land use for the site is developed water resources. The reclamation plan calls for leaving two separate slurry wall-lined reservoirs (North and South Mining Areas) with a total surface area of 166.4 acres (**see enclosed reclamation plan map**). Topsoil will be replaced at a depth of 12 inches on all disturbed land surrounding the pits and on pit slopes down to the expected reservoir water level. Retopsoiled areas will be revegetated with a native grass mixture. Some haul roads will remain for reservoir access.

## Follow-up on Complaint:

The Division and Mr. Ramsay observed the Arkansas River both upstream (near Hwy 287; **Photo 1**) and downstream (off Co Rd 13; **Photo 2**) from the mine operation, where the photos sent with CPW's complaint had been taken. CPW's photos show clear water in the river upstream from the mine site, and silty water downstream from the mine site. These photos were taken approximately two weeks prior to this inspection, during regular flows. During the inspection, the river was running high due to water being released from the John Martin Reservoir, and no visual differences in water quality were observed in the river upstream versus downstream from the mine site.

During the site inspection, Mr. Peterson explained the operation had, at least on one occasion, released wastewater from the material wash plant to the Arkansas River via a trench located along the western edge of the primary haul road. The approved mining plan allows for discharge of water pumped from pits to the river, but not the discharge of wastewater from the wash plant. According to the Division's recent conversations with CDPHE, WQCD, this activity is also not covered by the discharge permit currently held for the site, and is considered an unauthorized outfall. The release of sediment-laden wastewater from the wash plant appears to have been caused by the operation's failure to maintain sufficient capacity in the settling ponds. The Division observed the two settling ponds to be completely silted over (**Photos 3 and 4**). The operator was digging out one of the ponds during the inspection (**Photo 5**). A third settling pond was being constructed just north of the others (**Photo 6**). The wash plant was not in operation during the inspection (**Photo 7**). The Division observed no evidence of continued discharge from the plant area. However, the trench along the western edge of the haul

road still contained silty water and sludge (**Photos 8 and 9**). The Division and Mr. Ramsay walked the trench northward from the wash plant to the river. Portions of the trench had been dredged, with the material piled along its edges (**Photo 10**). The section of the trench closest to the river (**Photo 11**) was not holding water, but still contained wet sediment.

Mr. Peterson committed to not continuing the unauthorized discharge from the wash plant. The operator must demonstrate compliance with Rule 3.1.6(1)(b) by obtaining the necessary permit(s) from CDPHE, WQCD for all discharge activities. Additionally, the operator will need to revise the mining plan to provide more details on the wash plant and associated facilities, including a plan for maintaining the settling ponds. The operator must demonstrate the wash plant facilities are appropriately designed to prevent any unauthorized release of wastewater and/or offsite damage. This information will need to be included in a Technical Revision or permit Amendment. A Possible Violation is cited in this report for failure to minimize disturbances to the prevailing hydrologic balance of the affected land and of the surrounding area and to the quantity or quality of water in surface systems during the mining operation. This Possible Violation will require a hearing before the Mined Land Reclamation Board. Details for the Board hearing will be mailed separately via Certified Mail.

### **Off-Site Damage:**

The Division estimates the operation has disturbed a total of 177 acres (see enclosed Google Earth images of site). Disturbance in the North Mining Area includes two slurry wall installations, two mined pits, a material crushing/screening plant, a material wash plant and associated facilities (i.e., settling ponds, ditches), material stockpiling areas, equipment/truck storage areas, and haul roads. Disturbance in the South Mining Area includes material stockpiling areas, topsoil/overburden storage areas, a scale house, and haul roads. The Division estimates 37.52 acres of the disturbance occurred outside of the approved permit boundary. The off-site disturbance includes at least one of the settling ponds, the ditch in which the wash plant wastewater was released to the river, an equipment/truck storage area located north of the mine (Photo 12), the scale house area (Photo 13), the western edge of the material and topsoil/overburden stockpiles in the South Mining Area (Photo 14; also shown in Photo 13), haul roads (agricultural roads widened for mine traffic), and a 26.8 acre area located just southwest of the mine site where sand is being stockpiled adjacent to the railroad (Photos 15 and 16).

The Division considers the amount of off-site damage to be substantial pursuant to C.R.S. 34-32.5-123(2). All affected lands must be incorporated into the permit area through submittal of a permit Amendment. <u>A Possible Violation is cited in this report for failure to first obtain from the MLRB or Office a reclamation permit prior to engaging in a new operation as required by C.R.S. 34-32.5-109(1). This Possible Violation will require a hearing before the Mined Land Reclamation Board. Details for the Board hearing will be mailed separately via Certified Mail.</u>

#### **Compliance with Mining and Reclamation Plans:**

The operation has disturbed 177 acres, which is 60 acres more than the approved maximum disturbed area of 117 acres. Additionally, the operation is not following the mine phasing plan approved by Technical Revision No. 4 (TR-4), which proposed disturbances only in phases 1-4 and 13-18 at this time. The operation has created major disturbances (new pit, processing plant, large material stockpiles) in phases 8, 9, 11, and 12 (**Photos 17-19**), and minor disturbances (slurry wall installation) in phases 5, 6, 7, and 10. TR-4 authorized mining to occur only within the slurry-wall enclosed area of phases 1-4 (now filled with water; **Photos 20 and 21**). However, the operation completed mining the phase 1-4 area, and has begun excavating another pit in phases 8 and 11. The operation is pumping water from two pit floor sumps in the new pit and discharging the water to an adjacent ditch (**Photos 22 and 23**) which discharges to the river northeast of the mine site (east of the Lamar

Sewer Lagoons). This discharge activity is covered by the current discharge permit.

During the inspection, the Division found that an additional slurry wall had been installed in the North Mining Area (**Photo 24**), creating an L-shaped enclosure adjacent to the existing slurry-wall enclosed pit now being utilized as a reservoir. At the time of the inspection, the Division had not received any information on the new slurry wall, including design plans, specifications, or a quality assurance program. According to Mr. Peterson, the slurry wall was completed last year, and since then, the 90-day leak test was completed and the liner accepted by the SEO. However, at the time of the inspection, the Division had not received a final construction report including the results of any post-construction testing or as-built drawings of the slurry wall. The Division also had not received a copy of the SEO acceptance letter.

Furthermore, the Division's approval of TR-4 included a stipulation that, prior to mining outside of the slurry wall enclosed area (phases 1-4), the operator would be required to post additional bond for the approved final configuration of the slurry wall in the North Mining Area. However, the operator has begun mining outside of the phase 1-4 area and has installed an additional slurry wall without posting additional bond. This means the current reclamation bond may not be sufficient to assure the completion of reclamation of affected lands as required by C.R.S. 34-32.5-117(4)(b) and Rule 4.2.1(1).

After the inspection, the operator emailed a copy of the SEO letter, dated January 31, 2018, stating the measured outflow due to pumping indicates the site has been lined to the design standard. The letter details three terms and conditions associated with the approval regarding the requirement for an Augmentation or Substitute Water Supply Plan (SWSP), and the requirement for continued accounting of all water inflows and outflows for the site. It should be noted, the permit file does not include a current SWSP at this time. The most recent SWSP on file is from August 20, 2012. The operator should provide a copy of the current SWSP for the site as soon as possible to demonstrate compliance with Rule 3.1.6(1)(a).

After the inspection, the operator also emailed the Issued for Construction drawings for the new slurry wall enclosure. Based on the drawings submitted, the operator is now proposing to leave two slurry wall enclosed reservoirs in the North Mining Area. The approved reclamation plan calls for leaving only one slurry wall lined reservoir in the North Mining Area. Additionally, the approved reclamation plan map shows phase 13 (the wash plant area) to be included in the lined area. However, the new slurry wall enclosure does not include phase 13. The operator will need to revise the mining and reclamation plan maps to show the proposed operational and final configuration of the slurry walls.

<u>A Problem is cited in this report for failure to comply with the approved mining plan and reclamation plan. The operator will have 60 days to submit a Technical Revision or Amendment to update and clarify the mining and reclamation plans and maps to reflect existing and proposed activities.</u>

At a minimum, the Technical Revision or Amendment should include the following:

- Increase the maximum disturbed area at any time
- Clarify the mine phasing plan
- Show the location(s) of existing and proposed slurry wall installations
- Provide the final construction report and as-built drawings for all existing slurry walls
- Provide a revised Exhibit L Reclamation Costs to account for the additional disturbed land and mining and reclamation plan revisions

While the operator has the option of submitting a Technical Revision or Amendment for the Problem cited in this report, only an Amendment could be submitted to incorporate off-site affected lands into the permit. The

Division believes that all issues identified in this report could be addressed through submittal of a single Amendment application. If the operator chooses to address all issues in an Amendment application, it will be the operator's responsibility to request an extension of the corrective action date set for the Problem, if needed.

This concludes the inspection report.

#### PERMIT #: M-2008-078 INSPECTOR'S INITIALS: AME INSPECTION DATE: June 14, 2018

#### **PHOTOGRAPHS**



**Photo 1.** View looking downstream in Arkansas River at a location approximately 1.2 miles upstream from mine site (near Hwy 287). Note high water level in river due to release of John Martin Reservoir.



**Photo 2.** View looking upstream in Arkansas River at a location approximately 5 miles downstream from mine site (off County Road 13). Note high water level in river due to release of John Martin Reservoir.



**Photo 3.** View looking north across wash plant settling pond, showing pond filled in with sediment. Approximate edges of pond indicated with yellow dashed line.



**Photo 4.** View looking west across wash plant settling pond, showing pond filled in with sediment. Only a small pool of water remains at the southern edge of the pond. Approximate edges of pond indicated with yellow dashed line.



**Photo 5.** View looking west across wash plant settling pond filled in with sediment, which operation was digging out during inspection. Approximate edges of pond indicated with yellow dashed line.



**Photo 6.** View looking south across new wash plant settling pond under construction (outside of approved permit boundary).



**Photo 7.** View looking northwest across material wash plant located in phase 13, not in operation during inspection. No continued wastewater discharge from plant was observed.



**Photo 8.** View looking south, showing material wash plant (at right; not in operation during inspection) and ditch (at left) in which wastewater was released to the river. Note ditch still holding silty water and sludge during inspection.

#### PERMIT #: M-2008-078 INSPECTOR'S INITIALS: AME INSPECTION DATE: June 14, 2018



**Photo 9.** View looking north from wash plant area, showing ditch in which wastewater was released to the river. Note ditch still holding silty water and sludge during inspection.



**Photo 10.** View looking south across ditch in which wash plant wastewater was released to the river. Note material dredged from ditch piled along its edges. Also note this portion of the ditch (closer to river than in Photo 9 and outside of approved permit boundary) was not holding water during inspection.



**Photo 11.** View looking south across ditch in which wash plant wastewater was released to the river. This portion of the ditch (closer to river than in Photo 10 and outside of approved permit boundary) was not holding water during the inspection, but still contained wet sediment.



**Photo 12.** View looking north across equipment/truck storage area located north of mine site (outside of approved permit boundary).



**Photo 13.** View looking south, showing main access road, scale house (at background right), and material stockpiles partially located outside approved permit boundary.



**Photo 14.** View looking northeast across main access road, at material and topsoil/overburden stockpiles partially located outside approved permit boundary.



**Photo 15.** View looking southeast across 26.8 acre disturbed area where operation is storing sand near the railroad. Area is located just southwest of mine site and outside of approved permit boundary.



**Photo 16.** View looking east across 26.8 acre disturbed area where operation is storing sand near the railroad. Area is located just southwest of mine site and outside of approved permit boundary.



Photo 17. View looking southwest across new pit excavation in phases 8 and 11.



**Photo 18.** View looking southeast showing material crushing/screening plant operating in phase 9, just south of lined reservoir (in background).



Photo 19. View looking east across material stockpiles stored in phases 9 and 12.



**Photo 20.** View looking northwest from southern edge of slurry wall lined pit in phases 1-4, now filled with water. Pit is approximately 65 feet deep with 3H:1V slopes down to pit floor.



**Photo 21.** View looking west from eastern edge of slurry wall lined pit in phases 1-4, now filled with water. Pit is approximately 65 feet deep with 3H:1V slopes down to pit floor.



**Photo 22.** View looking west across new pit excavation, showing two pit floor sumps from which operation is pumping water to a nearby ditch for discharge to the river.



**Photo 23.** View looking east across ditch in which operation is currently discharging water from new pit excavation (shown in Photos 17 and 22). This activity is authorized by the current discharge permit.



**Photo 24.** View looking west from southern edge of new pit excavation, showing new slurry wall installation (outlined by berm) that encloses phases 5-12. Metal stake in foreground marks outside edge of slurry wall.

#### **GENERAL INSPECTION TOPICS**

The following list identifies the environmental and permit parameters inspected and gives a categorical evaluation of each

(AR) RECORDS <u>N</u>	(FN) FINANCIAL WARRANTY <u>N</u>	(RD) ROADS <u>N</u>
(HB) HYDROLOGIC BALANCE <u>PV</u>	(BG) BACKFILL & GRADING <u>N</u>	(EX) EXPLOSIVES <u>NA</u>
(PW) PROCESSING WASTE/TAILING <u>N</u>	(SF) PROCESSING FACILITIES <u>N</u>	(TS) TOPSOIL <u>N</u>
(MP) GENL MINE/RECLAM PLAN COMPLIANCE-	(FW) FISH & WILDLIFE <u>N</u>	(RV) REVEGETATION <u>N</u>
(SM) SIGNS AND MARKERS <u>N</u>	(SP) STORM WATER MGT PLAN <u>N</u>	(ST) STIPULATIONS <u>N</u>
(ES) OVERBURDEN/DEV. WASTE <u>N</u>	(SC) EROSION/SEDIMENTATION N	
(AT) ACID OR TOXIC MATERIALS <u>N</u>	(OD) OFF-SITE DAMAGE <u>PV</u>	

Y = Inspected and found in compliance / N = Not inspected / NA = Not applicable to this operation / PB = Problem cited / PV = Possible violation cited

#### **Inspection Contact Address**

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

Enclosures:	Complaint submitted by CPW on June 11, 2018
	Mining Plan Map, last revised with Technical Revision No. 4
	Reclamation Plan Map, last revised with Technical Revision No. 2
	Google Earth image of site showing permit area and disturbed areas
	Google Earth image of site showing close-up of permit area

EC: Karl Nyquist, Prowers Aggregate Operators, LLC at: <u>karl@cacompanies.com</u> Todd Lambert, C&A Companies at: <u>todd@cacompanies.com</u> Ron Peterson at: <u>ron@prowersag.com</u>

> Travis Black, CPW at: <u>travis.black@state.co.us</u> Joe Campbell, CDPHE WQCD at: <u>joseph.campbell@state.co.us</u>

Michael Cunningham, DRMS at: michaela.cunningham@state.co.us





# **Gravel Operation Discharging to the Arkansas River**

2 messages

#### **Black - DNR, Travis** <travis.black@state.co.us> To: Amy Eschberger - DNR <amy.eschberger@state.co.us>

Mon, Jun 11, 2018 at 4:19 PM

Amy, we have a potential issue with a gravel operation discharging into the Arkansas River near Lamar. It seems Prowers Aggregate Operators gravel pit is discharging directly into the Arkansas River and causing increased turbidity downstream for several miles. CPW has concerns regarding fish health. This section of river is critical habitat for state endangered suckermouth minnows. One mile above the operation the river runs clear. Two miles below the gravel operation, the river is the color of chocolate milk.

Can you tell me if they have a discharge permit for discharging directly into the river? Are there stipulations of their gravel mining permit that can address this issue?

I would appreciate a quick response one way or the other. We cannot seem to get CDPHE to respond until mid July. Feel free to give me a call on my cell phone (719-688-9241).

Travis Black Area Wildlife Manager Area 12



COLORADO

Parks and Wildlife

P 719.336.6603 | F 719.336.6623 | C 719.688.9241 2500 South Main Street, Lamar, CO 81052 travis.black@state.co.us | cpw.state.co.us

Black - DNR, Travis <travis.black@state.co.us> To: Amy Eschberger - DNR <amy.eschberger@state.co.us>

Mon, Jun 11, 2018 at 4:30 PM

Amy, I am attaching a few photos for reference. The two clear photos show the river above the gravel operation at Highway 287. The muddy ones are below at Prowers County Road 13.

Travis Black Area Wildlife Manager Area 12



COLORADO Parks and Wildlife

Department of Natural Resources

P <u>719.336.6603</u> | F <u>719.336.6623</u> | C <u>719.688.9241</u> 2500 South Main Street, Lamar, CO 81052 travis.black@state.co.us | cpw.state.co.us

# 4 attachments



**IMG\_0615.JPG** 1770K



**IMG\_0614.JPG** 1898K



IMG\_0613.JPG 1523K



**IMG\_0612.JPG** 1706K





# M2008-078 / Prowers Aggregate Operators, LLC / (Image data from 6/12/2017)

1.0

Red Outline = 233.40 acres = Approved Permit Area Dark Blue Outline = 37.77 acres = Old Slurry Wall Enclosure (Phases 1-4) Light Blue Outline = 81 acres = Approx. Location of New Slurry Wall Enclosure (Phases 5-12) Yellow Outline = 37.52 acres = Off-site Affected Lands



# M2008-078 / Prowers Aggregate Operators, LLC / (Image data from 6/12/2017)

Red Outline = 233.40 acres = Approved Permit Area Dark Blue Outline = 37.77 acres = Old Slurry Wall Enclosure (Phase 1-4) Light Blue Outline = 81 acres = Approx. Location of New Slurry Wall Enclosure (Phases 5-12)

